A STUDY OF THE IMPACT OF CONSTRUCTION CAMPS ON THE PEOPLE OF NORTHEAST ALBERTA

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ABSTRACT

This report deals with the impact on the construction workers living in camp and their families and the impact of the camp, camp organization, and camp occupants on the surrounding area. After outlining the methodology and terms of reference, the regional contexts, historical background, and regulatory environment are briefly reviewed. The design, organization, and functioning of camps are described, followed by a descriptive profile of camp personnel. An analysis follows of the way in which the functioning of the camp and the camp personnel impact the local communities. The way in which camp employment, camp organization, and camp location relate to the impact on the construction worker and his family is discussed and finally some observations and conclusions are presented with regard to future camps as well as some suggestions for future research.

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SUMMARY OF FINDINGS

In the past, the proximity of large construction camps to towns or villages spelled trouble. The migrant or "captured" worker was in many cases unskilled and time from the job was a period for seeking some diversion in the nearest town, in order to escape the usually terrible camp conditions. Thus, the presence of a construction camp created concerns to the local residents.

Much legislation and many regulations have been brought to bear on the construction and operation of modern construction camps. Most significant of these are included in the Public Health Act, Public Lands Act, and the Agreement between the Alberta Construction Association and the Alberta Provincial Building Trade Council. These in turn contain regulations governing the camp location, layout and construction of the facilities provided, and camp operation.

Modern camps bring to the area a mixture of skilled and unskilled labour in much improved conditions, including facilities to occupy leisure time. They also bring added business to the town, employment for the local people, and usually additional activity in the form of house construction to accommodate those who will rent individual or family accomodations in town. At the same time, however, depending on the size of camp and the size of and nearness to town, there can be a severe overloading of the local facilities and of health, social, and other services.

During the construction phases of both the Suncor Inc. (formerly Great Canadian Oil Sands) and of Syncrude Canada Ltd. plants, there were two parallel construction projects proceeding at the same time. One was the construction of the plant and the other was the construction of the housing and commercial establishments required to accommodate the increasing population of Fort McMurray and the permanent employees of first, Suncor and subsequently, Syncrude. Even if it were possible to determine the impact on the town by construction workers, apart from the impact by the general increase of population, it would be difficult to determine which construction workers, the ones living in the camp or the ones living in the town, were responsible.

To a significant degree, the impact of a construction camp on the surrounding community will depend on the relative size of the camp to the community. Since few of the impacts of a large construction camp on surrounding communities are positive, the Suncor camp may have impinged on Fort McMurray more than the Syncrude camp.

The Suncor camp was in operation from 1964 to 1966 and employed 2200 men at its peak. The work week consisted of 10 h days, six days a week. The town of Fort McMurray in 1964 had a population of only 1800. Recreational facilities at the camp were limited but improved during the operation of the camp. Latterly, there were billiards, shuffleboard, tennis courts, movies, card games, volleyball, and an arena with a recreation director to organize tournaments and the showing of films. Officially it was a dry camp, i.e., no alcohol allowed, although bootlegging was fairly common. In contrast to some modern day camps, women were not permitted in this camp.

The road from the camp to Fort McMurray, as well as from Fort McMurray to Edmonton, was in poor shape. Off-duty time tended to be spent in Fort McMurray, mostly in the bars. Management and administrative personnel stayed in Fort McMurray and were bussed to the camp daily. Some of their families also stayed in Fort McMurray. Housing was in short supply and recreational facilities were lacking. In 1964, Fort McMurray applied for and was granted status under the New Towns Act but the financing and planning for necessary services lagged behind the demand. Vandalism and fights were frequent in camp. Women in Fort McMurray, whose husbands may have been working 12 h a day, seven days a week, were bored and lonely. Many returned to Edmonton.

The Syncrude camp was in operation from 1973 to 1978 with 1976 and 1977 being the peak years. At maximum capacity, the camp at site held 6606 people and another 1000 or so came by bus from Fort McMurray daily. The town of Fort McMurray grew to 10 000 in 1974 and 20 000 in 1977. Obviously, with this increase in population, the construction force needed to build the town was considerable, but there is no record of numbers. There were, however, several commercially operated manpower camps spread about town.

One of the major differences between the Suncor camp and the Syncrude camp was that the latter had residence facilities provided for women. This was necessitated by the increasing presence of a female labour force at the Syncrude site, which resulted in the corresponding changes in management approaches.

Recreational facilities at the Syncrude camp were designed to be as attractive as possible, to make it unnecessary for the camp employees to go to Fort McMurray. The decision to open a tavern on site was deliberately taken to lessen the negative effects of the camp construction workers on the town, and had the support of the hotel operators in Fort McMurray. Other recreational facilities on site were well-used and a recreation director with three staff members organized programmes and tournaments. There was still a lot of free time. The working day ended at 1730 h Monday to Thursday and at 1530 h Friday. At 1530 h every Friday, about 80% of the occupants of the camp departed for Edmonton. The impact of this weekly exodus was viewed with concern by the local residents. But had the workers spent weekends in the camp, their impact may have focussed on Fort McMurray.

There were numerous economic impacts related to the existence of the Syncrude camp in the Athabasca Oil Sands region. Supplies for the camp were purchased mostly outside the local area; thus, the transportation sector of the local economy benefitted most. It benefitted from the hire of buses, air passage bookings, rail transport delivery of heavy machinery, and the sale of gasoline and servicing for private cars. Other impacts on the local economy were generated by the personal spending of camp occupants. Since much of the impact of the personal spending was experienced by the hotel industry, this was not always regarded as positive.

One of the most favourable features of the Syncrude camp was its largely self-contained operation. The existence of the tavern (Muskeg Club) and of other recreational facilities at the camp minimized the impact of camp residents on Fort McMurray. Town officials interviewed in the course of this study agreed that the tavern on site "was a godsend to Fort McMurray". The donations of profits from the camp's Nevada Club (licensed gambling) to non-profit organizations, such as

youth groups and athletic clubs in Fort McMurray, represented a positive impact, which was appreciated by these clubs.

Apart from the negative impact on the surrounding area caused by the weekly exodus of the camp workers to Edmonton on Friday afternoons and the return on Sunday afternoons, other negative impacts involved the effects on social services, health facilities, and banks, which were largely unprepared for the use by large numbers of camp residents. Additional difficulties were created also by transients, who were attracted to the community by the prospect of high wages in the construction industry. There was also a problem with young girls hoping for a good time: an easy prey for construction workers with money to spend and a long way from home.

The fact that construction camp workers were well-paid and that room and board in camp were provided free represented the major positive impact of the construction camp on the worker himself and his family. Other impacts, however, involved the degree of isolation, the hours of work, and the appearance and operation of the camp. Visually, construction camps are drab and monotonous. The degree of isolation, the hours of work, and the location of home base of employees are variables which, interacting with each other, determine the availability of labour, the rate of labour turnover, and the degree of stress experienced by the worker and his family. The greater the isolation, the longer the working week required to encourage recruitment. The longer the working week, the greater stress on families and thus, potentially, the higher labour turnover.

The Syncrude camp was not particularly isolated. It was possible for most camp residents to visit Edmonton at weekends. The recreational facilities and the operation of the tavern also made a positive contribution to the well-being of camp residents.

In summary, many improvements have been provided in contemporary camps, and it is apparent that more are still to come through joint management-union action. Many features are built into the physical facilities, working conditions, and hours of work. These include

comfortable quarters, good surroundings, recreational facilities, transportation, a bar, other entertainment, first aid and health facilities and security measures.

The better construction camps of the day must include all of these and many other outstanding features and attractions. But the factors most important in the operation of a successful camp are:

1. A good camp facility;
2. Good food in quantity and quality;
3. Security and policing which are forceful without being officious;
4. Varied and well-organized recreational and leisure-time activities program;
5. Good pay with opportunities for overtime; and
6. Regular breaks to get out of camp.

Existence of these features will minimize the negative impacts of construction camps. Moreover, a well-run self-contained camp will lessen the negative impacts on the local community as well as enhance the well-being of the resident construction workers.

1. INTRODUCTION

This study of the impacts of construction camps on the people of northeastern Alberta was undertaken for the Alberta Oil Sands Environmental Research Program (AOSERP). In addition to the preceding summary of findings this report has five sections. Section 1 deals with the purpose of the study, the data, and methodology used. Section 2 contains the regional context in which the Syncrude Canada Ltd. camp operated as well as some historical background, the regulatory framework, and a description of the design and functioning of the camp. Section 3 gives a profile of camp occupants and an assessment of the impact of construction camp life on the occupants and their families. Section 4 outlines the impact of the construction camp on the surrounding community. Section 5 contains recommendations and conclusions.

1.1 PURPOSE

The Alberta Oil Sands Environmental Research Program has a mandate to gather and make available information that will aid in ensuring an acceptable quality of the environment during, and after, operations for the recovery, transport, and processing of oil sands products. The research is also directed to the practical solution of social problems resulting from oil sands development.

The scale of development of oil sands projects is enormous and involves the construction of multi-billion dollar plants, each taking up to 5 years to complete and each requiring a construction work-force numbering in the thousands. The construction work-force correspondingly requires a "mega-sized" construction camp for its accommodation.

The purpose of this study was to determine the significance of construction camps in the development of resource communities and to identify their impacts on camp workers and on host communities in the Athabasca Oil Sands region. This information may assist in developing plans for minimizing negative effects of future construction camps, preserving positive features, and optimizing opportunities which such camps may present to the local region.

1.2 TERMS OF REFERENCE AND METHODOLOGY

The study methodology based on the terms of reference was planned as follows:

1. Review AOSERP reports which are relevant to the topic, particularly HS 30.3.1: Preliminary Conceptual Model for Impacts of Oil Sands Development. Review the literature on construction camps in resource communities;
2. Develop and apply a structured interview to data sources such as camp owners, trade unions, contractors, and community representatives;
3. Identify and define impact of construction camps on those living in them (intra-camp relations) and on the surrounding community (camp-community relations);
4. Identify and define pertinent socio-economic opportunities present within the camps and between the camps and the communities;
5. Assess the impact of construction camps on people in the Athabasca Oil Sands region;
6. On the basis of these analyses, recommend alternative implementation forms for preventative programs re: camp-community relations and intra-camp social conditions;
7. Identify means of optimizing the social and economic opportunities offered by the camp's presence in the oil sands region with respect to camp-community relations; and
8. Suggest a research methodology for identifying and evaluating impacts that may be associated with future construction camps.

The methodology was planned with a clear recognition of the need to combine historical and present data with projected social change when formulating recommendations for future construction camps.

An interim AOSERP report on Project HS 30.3.1 entitled "A Conceptual Model for Study of Impacts of Oil Sands Development in the Fort McMurray Area" was reviewed to determine which variables had been

identified by that study as the ones to monitor for future developments in the region. The components which were identified as most useful to municipal, provincial, and other decision-making bodies are:

1. Population;
2. Employment and labor force;
3. Housing;
4. Education;
5. Health;
6. Counselling and Welfare Services;
7. Culture and Recreation;
8. Protection;
9. Criminal Justice;
10. Municipal Administration; and
11. Physical Services and Regional Infrastructure.

Each of these categories is divided into sub-categories. For instance, the "Population" category is sub-divided into categories requiring information about age, sex, education, income, and marital status. From these can be deduced the staffing, spatial, and other requirements in the service-related categories.

For permanent residents of the oil sands region, this is a logical way to project future needs. It has less relevance to construction camp workers residing in a camp many miles from the main settlement. Being temporary employees, with their families located elsewhere, construction camp workers do not generate the same need for housing, education, or municipal administration as permanent residents do. However, they place demands on the Health Services, Counselling and Welfare Services, Culture and Recreation, Protection, and Criminal Justice.

As the study progressed, it became evident that there were other areas in which the existence of the camp impinged on the community and which were not covered by the categories listed in HS 30.3.1. Construction camp workers may not require housing, schools for their children, or municipal water and sewer services but they may require banking services, transportation, and some social and personal services.

There was a paucity of literature on construction camp life and on the impact of construction camps on surrounding areas. The publication by Rolf Knight (1975), "Work Camps and Company Towns in Canada and the U.S. - an annotated bibliography", was helpful in giving an overview of available literature. The most useful and detailed descriptions of camp operations in a historical setting were: "The Railway Navvies" by T. Coleman (1965) and "The Bunkhouse Man" by E. Bradwin (1928). Both of these dealt with railway construction, the former in Britain and the latter in Canada. Most of the rest of the literature dealt with company towns, logging camps, or camps for itinerant agricultural laborers. As a historical basis these were interesting and provided a contrast to the camps today.

Other literature sources which proved helpful were publications such as Business Life, Alberta Business, Oilweek, Northern Miner, Construction Alberta News, and the Bulletin of the Canadian Institute of Mining. These publications included news items with regard to the Syncrude camp in progress, reports of speeches given by senior Bechtel and Syncrude personnel during the construction phase, and some descriptions of other camps.

The paucity of literature on construction camps led to a heavy emphasis on field observations and interviews for information gathering. The interviews included key management personnel in Canadian Bechtel, Syncrude Canada Ltd. and Suncor Inc., and attempted to obtain statistical records of camp employees' age, marital status, home base, duration of employment, reasons for leaving, etc. While the interviewees were willing to be helpful, the results in terms of statistical data were disappointing. The firms did not have employee records of that type. They did have information about the operation of the camp, the nature of the construction industry, and offered their impressions about the way in which the "boom-bust" nature of the construction industry affects the expectations and behaviour of construction workers.

Further interviews were held with other representatives of Syncrude Canada Ltd., Suncor Inc., and Canadian Bechtel Ltd. Union representatives, such as those from the Alberta Buildings Trades

Council and Culinary Workers' Union, were also interviewed as were representatives of catering firms such as Domco Food Services Ltd. and Cal-van Camus Camp Services Ltd. Additional information was made available by representatives of ATCO, Dow Chemicals, James Bay Corporation, James Bay Energy Corporation, and operators of private industrial (non-union) camps in Fort McMurray. Camp residents, both past and present, in a variety of occupations, were interviewed with regard to facilities in camp, the operation of the camp, and their impressions of the impact of camp life on themselves, their families, and fellow workers. Both male and female camp residents were interviewed. Table 1 indicates the number of interviews in each category.

Since this study was not commissioned until May 1979, i.e., after the Syncrude construction phase was completed, great reliance had to be placed on the recollections of the people involved in the construction camp. The camps are still in operation at both Syncrude and Suncor but the peak operations are over. The Syncrude camp had only about 1000 occupants and the Suncor camp even fewer. A camp of 1000 workers has some similarities and some dis-similarities with that of 7000. Information on the camp at maximum capacity was dependent upon the memories and impressions of the people interviewed and, as already mentioned, on newspaper and periodical reports of speeches made at the time.

A structured interview was undertaken but most information in the final analysis was obtained by open interviews. The interview dealt with the operation of the camp, the facilities provided, the adequacy of the facilities, perceived problems, and methods of dealing with them. The people interviewed were as heterogenous in their positions and perspectives as was the subject matter.

The attempts to secure statistical information on deviant behaviour in construction camps was unrewarding. For instance, there were no statistical data on the incidence of vandalism, rowdyism, or other violent disturbances, whatever the cause. However, even without statistical data, and in spite of the "after the fact" investigation and the subjective nature of interview responses, it was possible to build up a body of knowledge about the functioning of the camp and

Table 1. Number of interviews by category.

Category	Number of Interviews
Representation of industry (Suncor, Syncrude, Bechtel, ATCO, Dow, Domco, Alberta Trades Council, etc.)	29
Camp residents (past and present)	34
Fort McMurray residents and representatives of organizations	26
Women (employees, camp residents, and wives)	17
Total	106

its impact on the camp worker. Obviously, when information depends on the recollection and opinions of interviewees, there is much room for inaccuracies and personal bias. These biases have been eliminated as far as possible. Thus, when a number of different interviewees from different branches of industry and with different roles to play had responded to the same question with corroborative answers, an assumption was made that the results were reasonably accurate.

Interviewing employees of Syncrude Canada Ltd., Suncor Inc., and Canadian Bechtel Ltd. involved visiting both the Syncrude and Suncor camps in the oil sands area. This provided the opportunity to observe the layout, design, and functioning of the camp as a whole as well as the individual bunkhouses. Opportunity was made to observe the functioning of ancillary operations such as the kitchen, dining room, health services centre, and recreation facilities.

Residents of Fort McMurray and representatives of organizations in Fort McMurray were interviewed to elicit information with regard to the impact of camps on the people and institutions in the area. In most cases it was difficult to isolate the construction camp population component from the records of social service and regulatory agencies in adjacent communities. The reasons for this were probably two-fold. First, in a "boom" or rapid growth situation, responsible agencies, both public and private, were more likely to concentrate on delivery of service at the expense of record-keeping. Second, it is quite probable that at the outset there was no appreciation of the possible relevance of such data.

An additional difficulty was posed by the coincidence of the construction of the Syncrude project, most of whose workers lived on the site, with the construction of the rapidly expanding residential sector of the Town of Fort McMurray. The construction workers building the town lived in town but they had many of the same characteristics as the camp construction workers: they were temporary residents, separated from their family, and highly paid. Agencies in the community, such as social service agencies, health services, banks, and hotels, did not necessarily make any distinction between camp construction employees and the residential construction employees. This made

for difficulty in assessing accurately the separate impact on the town of Fort McMurray by those construction workers who lived in the Syncrude or Suncor camps.

Discussions were also held with members of the Oil Wives Club. These women had various experiences relating to camp life which were valuable in indicating the type of stress employment in construction camps may place on family life. Some of the women had lived with their families in large camps connected with the oil or mining industry. Others had lived with their families in small camps which moved frequently. Still others had raised children alone while their husbands worked away from home and lived in camp. A few had placed children in residential schools while they themselves lived with their husbands in camp.

Lastly, although the purpose of the study was stated to be "to examine the experience of the Syncrude construction camp, to identify and analyze its impacts on the camp workers and on local communities and to identify both positive and negative lessons learned in the course of its operations", it was deemed advisable to learn as much as possible about the modern camps in order to estimate how the impacts change if variables such as location, camp layout, camp organization, hours of work, etc. are altered. As well as the Syncrude and Suncor camps at Fort McMurray, other camps visited included private industrial camps in Fort McMurray, the Alberta Gas Ethylene Co. camp at Joffre, a small drilling rig camp, and the James Bay camps at L.G. 2 and Radisson, Quebec. The visit to the James Bay Hydro site in Quebec was the only out-of-province field trip and was initiated both for comparative purposes and to gain some insight into the effects of providing married accommodation in a construction camp. From the literature survey, valuable comparative data were acquired about camp organization, hours of work, recruitment, motivation, and labour turn-over at the Cominco Mine in Greenland. The Black Angel Mine, as it is called, operates a large camp for the mining of lead and zinc in a remote, isolated area with a severe climate.

1.3 ORGANIZATION OF THE REPORT

From the literature review, interviews, and field trips, several variables were identified which seemed likely to contribute to the impact of construction camps on the construction workers and on the surrounding community. These were:

1. Rates of pay and income;
2. Hours of work and amount of leisure time;
3. Distance of camp from built-up community;
4. Availability of, and participation in, leisure time facilities within camp;
5. Opportunity for privacy within camp;
6. Population characteristics of camp personnel;
7. Accessibility of home base;
8. Design and layout of camp;
9. Quality of food; and
10. Availability of private cars at the camp site.

Certain possible problems were also identified. These included:

1. High labour turnover;
2. Rowdyism, vandalism, and drunkenness within the camp and in the local community;
3. Prostitution within the camp and in the local community;
4. Breakdown of family relationships;
5. Stress-related ailments among camp personnel;
6. Arrival of itinerant workers in the community attracted by the prospect of high-paying jobs; and
7. The incidence of automobile accidents and road safety.

As will be shown in the report, the interaction of these variables and problems is complex. No one variable can be changed without affecting the others and the amelioration of one problem may exacerbate another. Trade-offs may have to be made between goals which are both desirable but which may not be mutually attainable. For instance, the availability of private cars on site, and the accessibility of home base, combined with the hours of work, may ameliorate the problems of breakdown of family relationships and personal stress but increase

the incidence of automobile accidents. The way in which these variables and problem areas interact will be discussed in the context of the regional and regulatory framework with regard to the Athabasca Oil Sands region. Some alternative relationships which have been observed in other camps in other areas will be introduced for comparative purposes.

2. REGIONAL, HISTORICAL, AND OPERATIONAL DATA

2.1 REGIONAL CONTEXT

The town of Fort McMurray, which is the largest settlement within the Athabasca Oil Sands region, is located 435 km northeast of Edmonton. Other settlements in the AOSERP study area are Anzac, Fort MacKay, and Fort Chipewyan. These settlements are small, however. The largest is Fort Chipewyan with a population of approximately 1500. While the growth of Fort McMurray has been spectacular, very little growth has taken place in the other settlements.

Although oil has always been present in this area, the extraction of it had to wait for technological advances and favourable economic conditions. Although small experimental and pilot plants had been in operation prior to 1964, the first commercial venture was undertaken in 1964 by Great Canadian Oil Sands (GCOS), now Suncor Inc. Syncrude Canada Ltd. followed in 1974. The next oil sands extraction plant for the area is planned by Alsands. As the proposed location of the Alsands plant is 60 km north of Fort McMurray and as future plants are expected to be located even further north, there is a proposal to build a new town north of the Alsands plant to serve the permanent employees of Alsands and subsequent producers. The construction of the plant at Alsands will require the location of workers at a construction camp. The construction of the new town will also require living accommodations for construction workers. Operation details of these accommodation needs have not yet been decided.

The Suncor plant is located 32 km north of Fort McMurray and the Syncrude plant is 40 km north of Fort McMurray. The Suncor camp was in operation from 1964 to 1967, and the maximum camp occupancy was 2300. The Syncrude plant was constructed during the years 1974 to 1978 and the maximum construction camp occupancy was 7000. While the main, or north camp, at the Syncrude plant is the one which has been studied for this report, there were three other camps in existence for Syncrude construction workers. The south camp was in operation from

May 1975 to May 1978; the Poplar Creek camp operated from October 1974 to May 1976; and the west camp from February 1977 to September 1977. The west camp had approximately 500 beds, Poplar Creek 200, and the north and south camps approximately 3000 each.

During the periods when the Suncor and Syncrude construction camps were in operation, the population of Fort McMurray grew rapidly. Table 2 indicates the growth of the town of Fort McMurray and the Suncor and Syncrude construction dates. This population growth does not include the construction camp workers residing at the plant site because the plant sites are outside the municipal boundaries and therefore not included in the census data. Also, camp occupants are regarded as temporary residents. It would also be a mistake to attribute the growth of Fort McMurray to induced employment resulting from the presence of large numbers of construction camp workers in the vicinity. The camps were largely self-supporting and bought supplies directly from Edmonton. The coincidence of the rapid growth of the town during the construction years indicated that, while the plant was being built, the companies, Suncor and Syncrude, and the New Town of Fort McMurray were preparing for the operational phase.

In addition to the growing number of families moving to Fort McMurray as a permanent labour force for the companies, there were construction workers living in town and building houses for these new families. Also, there was induced employment, created by the multiplier effect, of municipal and provincial government employees and additional retail and service employment personnel. Thus, it would be a mistake to deduce a direct causal relationship between the presence of large numbers of construction camp workers and the rapid growth of the town of Fort McMurray. It is also not true to assume that the two camps, Suncor and Syncrude, had an equally negligible effect. As will be shown later in this report, the operation of the two camps differed greatly in ways that affected their impact on the local community. Moreover, the presence of 2300 men in camp can be expected to have a greater impact on a local town of about 3000 people than a camp of 7000, on a town of 20 000.

Table 2. Population statistics for Fort McMurray.[a]

Year	Population	Annual rate of growth	
1961	1 181		
1962	1 186	0.4%	GCOS permit obtained
1963	1 303	9.8%	
1964	1 804	38.4%	GCOS plant under construction
1965	2 515	39.4%	GCOS plant under construction
1966	3 378	34.3%	GCOS plant under construction
1967	4 984	47.5%	GCOS opens September 1967
1968	5 943	19.2%	
1969	6 132	3.2%	
1970	6 684	9.0%	
1971	7 146	6.9%	
1972	8 148	14.0%	
1973	9 942	22.0%	Syncrude obtains permit
1974	11 000	10.6%	Syncrude plant begins construction
1975	13 393	21.7%	Syncrude plant under construction
1976	15 300	14.2%	Syncrude plant under construction
1977	20 340	32.9%	Syncrude plant under construction
1978	24 500	20.5%	Syncrude plant begins operation
1979	26 500	8.2%	

[a] New Town of Fort McMurray

2.2 HISTORICAL BACKGROUND

Written accounts of construction camps refer to the periods of railway construction in Britain and Canada. Some of the myths about construction camps are inherited from that era. Stereotyped beliefs about back-breaking physical labour, unsanitary dwellings, and brawling workers arose from these periods of history.

2.2.1 The Railway Navvies

Railways were built in Britain between 1830 and 1870 by navvies, with picks, shovels, and gunpowder, not machines. "Navvy" was the name given to labourers who undertook the heaviest type of work, mostly excavation. They have been described as "an anarchic elite of labourers who worked in constant danger, miles from civilization and lived according to their own laws" (Coleman 1965).

The Report of the House of Commons Select Committee on Railway Labourers said in 1846:

> . . . scarcely any provision is made for their comfort or decency of living; they are worked hard, they are exposed to great risk of life and limb; they are too often harshly treated; and many inducements are presented to them to be thoughtless, thriftless and improvident.

Accounts of living conditions give details of 20 to 30 men sleeping in huts, sometimes up to three sharing a bed. Where navvies stayed in villages conditions were no better, and in many cases worse. All were crowded with as many as 120 men being crammed into a building that was meant for 60 to 80. When the work was pressing on and extra men taken on for a few weeks, the shanty-keepers did a great trade charging fourpence for a bed, a penny to sleep on the table, and a half penny for the floor.

To obtain work, navvies tramped to a place where they were not known, gave a false name, got work with no questions asked as long as they looked strong enough. Navvies did the hardest and most hazardous work, leaving the menial jobs to the boys and locally recruited casual labourers. They followed the rail, travelled with one contractor until he had no more work to offer, or until they heard of higher wages elsewhere.

Generally, the contractors not only paid their men but paid them well because they had to. Primarily because of the strong demand for labour (the navvies being the key to successful and profitable contracts), the better contractors looked after their people since they had no use for depressed, dispirited men. Food was plentiful though not varied, consisting mainly of large quantities of beef washed down by whisky.

The popular image of the navvies was that of depravity and violence but the truth seems to suggest they were more "drunken and fond of spending their time in a public house". The typical practice was to pay monthly wherein inevitable disorder would follow when the navvies were let loose with large sums of money to spend (Coleman 1965).

2.2.2 The Bunkhouse Man

Between 1903 and 1914, the construction of the Canadian Northern Railway and the National Transcontinental Railway required the establishment of camps for the crews of "navvies" engaged in the heavy work of preparing the rail beds. There were approximately 3000 of these camps housing about 200 000 men.

The conditions described have been drawn from Edmund Bradwin's book "The Bunkhouse Man" (Bradwin 1928). Edwin Bradwin was a labourer-teacher with Frontier College. He worked in the camps, labouring by day and teaching English or French and citizenship to immigrants in the evening.

Living conditions in these railway construction camps were unsanitary and uncomfortable. Poor construction often resulted in the buildings being less than weather proof. The bunks were double and two-tiered. They were arranged along both sides of the bunkhouse which was designed to hold about 40 people but occasionally additional people would have to be accommodated. The mattress was of hay and each bunk had two or three pairs of heavy blankets. The blankets, clean as the camp started, remained there till the camp broke up.

Food in these camps was plentiful and good but life was uncomfortable. Lice, nits, and skin diseases were picked up from the

filthy blankets. In the summer mosquitos and flies made life unbearable. The small windows kept the bunkhouses gloomy and dingy and the smell was atrocious.

The contract signed by camp employees usually offered $2 per day as wages, from which would be deducted $4.60 a week for room and board. The cost of travel to the work site and meals along the way were the responsibility of the employee but, if he stayed with the company 6 mo, his travel costs would be refunded. By the time the employee reached the distant work camp, he would owe the company his railfare and the cost of meals along the way. It was not uncommon for a man to owe $30 before he ever started work. If his clothing was unsuitable, he could buy from the company store, where a pair of boots cost more than three days' pay, a shirt one day's pay, and other smaller necessities equally expensive. No money was paid for Sundays or wet days when no work was possible. After 8 wk, it was possible for a man still to be in debt. If he decided to quit at this point he still had to make his way back down the line without any help from the company.

"Jumping camp" as it was called became fairly common. The monotony, the poor pay, the flies, the living conditions, the mud, and the isolation all combined to make the decision to leave attractive in spite of the difficulties and the cost of returning to civilization. Many of those who stayed were immigrants whose command of English was poor. Bradwin's unconscious descriptions of racial discrimination indicate that it was accepted without question as the normal state of affairs (Bradwin 1928).

In both these historical instances, men were expected to work hard in poor living conditions but were fed well. In the British situation they were well-paid because labour was scarce, but in the Canadian situation they were exploited.

2.2.3 Contemporary Construction Camps

Obviously the conditions described in the previous two sections would not be acceptable in construction camps today. Three separate movements have contributed to the improvements. One was the

emergence of unions whose leaders have been vocal and demanding on behalf of individual members; the second was the involvement of government regulatory bodies in matters relating to public health, safety, and food processing; the third was the realization that the management goal of achieving optimum labour productivity was not likely to be achieved if camp conditions were uncomfortable. The change has not been completed. New and improved facilities are being contemplated.

It is no longer sufficient that a worker be given a shelter of minimum standards in a communal bunkhouse. Instead, as recent Alberta union agreements demand, each worker must be provided with his or her own unshared room, allowing individual privacy so lacking in past settings. This agreement reached in 1970 has probably brought about as much individual improvement as the previous step from an open multi-resident bunkhouse to the "double room" concept of camp living. It only applies to unionized camps, however. Non-union camps still have some double rooms.

Much time and consideration has been given to the recreation and leisure time activity program by owners, contractors, consultants, unions, and camp occupants. From this a much improved facility and program have been developed for the modern camp. As a result, tremendous strides have been made in providing recreational and leisure time facilities for camp occupants. Gymansiums and many sporting facilities are provided in most camp complexes. Modern camps are usually provided with a Recreation Director who schedules athletic programs, runs daily films, and tends to the overall recreational activities in camp. As well, improved television facilities at the campsite have made camp life much easier and provided much leisure time enjoyment for most occupants.

Two major changes that have been provided in the relatively short period between the GCOS camp and the Syncrude camp are the bar and facilities for female camp occupants. It was not too long ago that liquor in construction camps was considered strictly illegal. It was felt that its presence would create problems therefore it was banned, its subsequent presence being sufficient grounds for dismissal of the owner or user. The Syncrude/Bechtel authorities provided their camp

facility with the "Muskeg Club" which is a most important innovation to camp life in Alberta. It is a well-organized and a welcomed leisure time activity among camp occupants. More will be said about the Muskeg Club later in this report.

Contemporary camp life is in sharp contrast to camp life as described in "The Railway Navvies" and "The Bunkhouse Man". There is still, however, much that is being asked for or demanded and much of which will, without doubt, find its way into the camps of the future.

2.3 ALBERTA REGULATORY ENVIRONMENT

In discussing the present regulatory/legislative environment of large scale construction camps in the Athabasca Oil Sands region, this report will not outline all the legislation and regulation which apply. Indeed, it could be stated all provincial statutes and regulations are applicable. There are nevertheless several regulations, particularly those pursuant to the Public Health Act, which are more important than others.

2.3.1 Public Lands Act

Since the vast majority of land in the Athabasca Oil Sands is crown "green" zone, a potential operator must obtain a miscellaneous lease (or permit) from the Alberta Forest Service to establish his camp operation. The procedure is fairly straight forward in that the operator would apply locally in Fort McMurray enclosing with his application all pertinent information about his camp. Upon receipt of the application, the Forest Service circulate the disposition to interested agencies and request comments. Given no opposition by the reviewing authorities, a miscellaneous lease is granted pursuant to Section 20 of the Public Lands Act and subject to a set of terms and conditions. Normally these conditions are environmentally related, a sample of which could include the following:

1. The lessee shall not construct any new roads or trails without written permission from an officer of the Minister;

2. The lessee shall exercise all precautions and safeguards necessary to avoid the inception of soil erosion or siltation of any water body or watercourse;
3. The lessee shall keep the lands free and clear of all refuse and garbage resulting from the operations;
4. Upon abandonment, all improvements must be removed by the lessee; and
5. The lessee or contractor shall have in his possession a copy of his authorization on the site during all phases of site preparation and construction.

In addition, other specific terms and conditions are attached related to the particular features of the lease, what its end use will be, and where it is located. The ongoing administration of the lease is the responsibility of the Alberta Forest Service who undertake regular inspections to ensure adherence.

2.3.2 Public Health Act

With regard to the physical structures of the camp, regulations under the Public Health Act are the most specific. These regulations apply to all camps to include "temporary or permanent structure, tent or mobile unit used for sleeping, eating, cooking or food storage". The operator must apply to the Provincial Board of Health who may at their discretion make an inspection or hear representation as deemed necessary. The passing by the Provincial Board of Health of the Alberta Regulation 572/57 amended by 265/58 in 1958 went a long way to establishing an industrial camp standard in Alberta with regard to cleanliness, sanitation, and health care (see Appendix 8.1 for the specific details of the regulations). Previous to this, no concrete standards prevailed and it is generally felt that camp operations were anything but adequate.

2.3.3 Camp Rules and Regulations

The period through the 1960's saw steady improvements in the quality of camps that were being used. Building codes were improved, and camp residents' complaints were being listened to by manufacturers

when upgrading and improving their industrial camp product lines. Union pressures and demand for improvements were also being felt by the owner/contractors which culminated in the signing of the first camp agreement in 1970. This agreement, covering the decade from 1970 to 1980, between the Alberta Construction Association and the Alberta Provincial Building Trade Council, outlines in specific detail the camp rules and regulations covering all union camp projects in the province. It should also be mentioned that the current agreement is now under review and is to be re-negotiated during 1980 (see Appendix 8.2).

Discussions with representatives of the Edmonton Construction Labour Relations Association indicate that, with some minor exceptions, both parties appear to be very close to reaching an agreement. Two features did arise from discussions with the Association which could have long-term implications in the Fort McMurray area. The first has to do with the supply of facilities. Under a union/management regulation and corresponding site labour agreement, facilities must be union made. Following this criterion, only two Alberta suppliers of facilities currently qualify--ATCO and Territorial Leasing. Industry management agrees that both manufacturers make a quality product, but at a premium price. Other manufacturers of camp facilities and shelter equipment, under the union label requirement, would be excluded from supplying products at a potentially lower price. This consideration may cause problems, not so much on the plant site as this undoubtedly will be a union project, but more so in the campsite which may be necessary for building the proposed new townsite where there are expected to be many contractors and many different trade groups not bound by an overall collective agreement. The second feature is a joint council consisting of representatives of union and management who assume an overall responsibility in administering the agreement and corresponding grievance procedure. This may be difficult to implement off the plant site. However, it has been the experience of the Alberta Construction Association that many potential problems and issues are diffused through this mechanism and the camp runs better and more smoothly if a strong joint council is in place.

Further features of the union camp agreement worthy of mention deal with:

1. Camp rules and regulations, grievance procedure;
2. Management rights;
3. Inspection and approval;
4. Living accommodation;
5. Recreation facilities and camp commissary; and
6. Catering specifications.

Further special features of the Camp Agreement are outlined in Appendix 8.2.

2.3.4 Hours of Work Legislation

Under the Alberta Labour Act, 1973 and Alberta Board of Industrial Relations Order No. 11, 1973, the permitted hours of work for employees shall be confined:

1. In cities; towns, villages, and hamlets housing a population of over 5000 within 10 hours immediately following the commencement of work; and
2. In all other parts of the Province, within 12 hours immediately following commencement of work; and no employer shall require hours of work of an employee to extend beyond such limits.

The Act, Section 23, Subsections (1) and (2), states also that overtime must be paid after an 8 h day, or a 44 h week. The regulations accept, however, that a 44 h week may be impractical for certain projects and application may be made to the Board of Industrial Relations for a relaxation of this condition and in such circumstances an Extended Hours of Work permit may be issued.

The Board of Industrial Relations Order No. 42, 1976, deals with hours of work and payment for overtime for field catering employees. It states that:

> "The maximum number of hours of work by an employee may exceed that prescribed under Section 23, Subsections (1) and (2) of the Act but shall not exceed
> a) 10 hours in a day, or
> b) 191 hours in a month,
> except where permitted under Section 23, Subsection (3) of the Act".

Section 23, Subsection (3) of the Labour Act (1975 Amendment) states:

> "The hours of work of an employee permitted under Sub-sections (1) and (2) may be exceeded
> a) where the Board approves employees working additional hours."

The order provided that where the above-mentioned hours are exceeded, overtime shall be paid after 10 h in any day and 191 h in a month. The regulations specify further that field catering employees must be given 1 d off in 7; or 2 d off in 14; or 3 d off in 21; or 4 d off in every 28 d.

2.4 OPERATION OF CONSTRUCTION CAMPS

A large construction camp may accommodate more people than a medium-sized town. Yet, because a camp constitutes temporary accommodation for people who have homes elsewhere and has a life expectancy usually limited to the duration of the construction phase, it has been traditionally considered unnecessary to give serious thought to the aesthetic appearance of the camp layout. Camps, however, are not as temporary as they used to be. After the construction phase, for large projects such as Syncrude, there is still a need for a camp to house maintenance workers, employees of subcontractors on the site for a brief period, newly recruited employees until they find housing for their families, and catering and security personnel whose hours of work and home location make it impractical for them to commute daily. While many of the buildings may not be required after the construction phase, a nucleus of the camp including the kitchen, dining room, and some recreation areas will have a longer tenure. This nucleus of the camp could be planned and constructed with permanency in mind.

2.4.1 Operational Perspectives

The larger industrial camp project and the running of the camp itself is a three-way partnership: the owner, the contractor, and the camp caterer.

In the case of the Syncrude project, Syncrude Canada Ltd. is the owner, Canadian Bechtel Ltd. was the contractor, and the caterer was Evergreen Ltd., a subcontractor of Bechtel. Both Syncrude and Suncor tended to play a passive role as far as the running of the camp was concerned. Their interest was at a broad management level ensuring that the camp ran smoothly and that costs were in line. The contractor, on the other hand, was in daily contact with the camp caterer.

It is the contractor who establishes the rules and regulations, administers discipline (through appropriate union channels), and establishes the overall tone of the running of the camp. The caterer is the organization directly on the "firing line" with the camp workforce. His staff are typically the people to whom the complaints are directed, whether it be the quality of the food or the nature of the janitorial service in the sleeping accommodation units.

Discussions with representatives of the catering industry resulted in several comments worthy of notation. The catering industry in Alberta is very fragmented with many firms of different sizes, typically all competing for the same market. Financial and managerial strengths vary as well, with some larger, well-established catering organizations, and many smaller owner-operated companies. Usually these latter firms are the result of the owners breaking away and establishing their own catering group. Both management skills and financial capitalization may be less than optimal and in the early stages this means that they must be content to accept the smaller, less profitable jobs. Any contract which requires camp accommodation in excess of 500 men is considered large, and it is acknowledged that only a few of Alberta's firms are capable of bidding for this type of job. The consortium concept so prevalent in the engineering/construction industry (where several firms pool their individual talents and resources to submit tenders for larger contracts) is unheard of, or at least not used by the catering industry.

The fragmented nature of the industry results in no formal association. Therefore, no organized lobby exists and as a consequence caterers typically have no, or at best very little, voice in

how a camp is run, or how facilities are designed and arranged on site. On a day-to-day basis, it is typically the caterer who is expected to enforce camp rules and regulations even though they have no input into what the rules should be and are given no authority if rules are broken.

Although it would appear relatively straightforward to supply the catering services under a Union camp contract, where conditions are spelled out in a clear concise manner, several management problems continually arise. The most difficult for the caterer to deal with are price and quality control. While price is an important factor for the owner and the caterer, quality is the most sensitive issue at the "kitchen table". Many a workforce has walked off or threatened to walk off the job because of poor quality of food. To this management problem there appears to be no apparent answer other than judicious inspection and buying by the catering management. The one key area the caterer does have control over and that is in the quality of cooks which he hires. To a large extent, the key to a successful camp operation lies with the cooking skills and attitudes of the cooking staff. Catering industry management believe the recruitment and retention of good quality cooks who are adaptable to the demands of an isolated camp environment are perhaps some of the most difficult challenges the industry faces.

Among the ongoing management problems, theft constitutes the most insidious. Typically, 15 to 20% of the overall contract tender price reflect theft--anything from the side of beef in the freezer to the bed sheets in the bunkhouse and the TV set in the common room are all fair targets. A myriad of efforts have been attempted over the years to control theft but with no practical or significant results.

2.4.2 Design of Camp Layout

Most construction camps consist of temporary, transportable, factory-built units of light-weight construction. These adaptable and well-designed buildings are all identical in outward appearance. They are arranged in long rows parallel to each other with geometric precision. Given the fire regulations which stipulate the minimum

distance between units, this maximizes the number of units in the available space. The only way a worker knows his bunkhouse from its neighbour is by counting (twelfth on the right, for example) or by remembering the number painted on the front of it. The camps at Syncrude, Suncor, and James Bay all have this symmetrical layout. The camp of the Alberta Gas Ethylene project at Joffre came as a refreshing change. At Joffre the layout has been varied (see Appendix 8.6). The bunkhouses have been arranged so that they are not all parallel to each other. Some are at an angle to the walkway and to other bunkhouses. The area, as well, has been landscaped with trees, flowers, and grass. The walkways are paved and there are walk lights to illuminate the principal approach road at night. The two private industrial camps in the town of Fort McMurray, while very much smaller, also have the advantage of having grass and trees around. The improved layout and landscaping not only provide a more attractive appearance, but also lessen the amount of dirt and dust and the drab uniformity. On some camp sites, however, landscaping may be difficult and costly to achieve. Grass grows only with difficulty at the site of the James Bay Camp on the Canadian Shield. At the Suncor and Syncrude sites on the Athabasca Oil Sands it might also be difficult, although grass and gardens grow quite well in the town of Fort McMurray only 40 km away. The Joffre camp has the advantage of being located in central Alberta where grass and flowers grow fairly well.

Any variation of the layout of the camp from the traditional parallel rows of bunkhouses will inevitably take up more space and add to servicing costs. This means not only more land to be cleared but farther for the occupants to walk to central dining facilities and recreation rooms. It means also that living accommodation will be, at least in some instances, further from the work site. This latter point may not be too significant in a large camp, however, as the distances between the camp site and the work site often necessitate the use of buses. While the layout and the appearance of the camp are only some of the many factors affecting worker morale and acceptance of camp life, there is certainly room for improvement in the outward appearance of most construction camps.

2.4.3 Design of Bunkhouse

The most commonly used bunkhouse in Alberta for large camps is 215 ft long and has 42 individual rooms. The agreement between the Alberta Provincial Building Trades Council and the Alberta Construction Association specifies that each occupant shall have a private room with an area of not less than 80 ft^2 (see Appendix 8.2). Each bunkhouse also has communal washing and toilet facilities and communal washers and dryers. There are no other communal areas. Each room has a closet, a bed, a bedside table, a chair, a mirror, and sufficient electrical outlets. Bed linen must be changed once a week and blankets changed and sterilized every 2 mo. These rooms are arranged on either side of a central corridor with exterior doors at each end of the corridor. This 215 ft corridor is not very wide or well lit. It looks a little like a dimly lit tunnel. An improvement suggested by a representative of the manufacturing firm was that a more welcoming atmosphere would be created if the passage were slightly wider and had better illumination, possibly with ceiling lights rather than wall lights. This last point is perhaps illustrative of the imperatives of an assembly-line produced camp. The individual units are 75 ft long and are built with exterior lights on the door or corridor side. The corridor roof and floor are fabricated on site. To incorporate ceiling lights would add cost and electrical code complications while the manufacturer would have to eliminate exterior lighting as an assembly line component for these particular units. Similarly, rather neutral color tones are used in individual rooms so that if not particularly appealing, they are at least not offensive. Residents who are in camp for any length of time, and particularly women residents, tend to personalize their rooms with some private possessions. Many residents have their own radio sets or small individual television sets.

While in most camps drinking is not permitted in public areas except in the tavern, if there is one, drinking in private rooms either alone or with a few friends is usually acceptable unless the noise created continues after 2300 h or is unacceptable to people in neighbouring rooms. In most construction sites, workers have to be up by 0530 h, so after 2200 h, most of them tend to be in bed.

However, there are always a few inconsiderate people in any crowd and in a bunkhouse holding 42 it takes only one to disturb the rest. It has been suggested that in the interest of greater privacy and quiet, the insulation between rooms could be increased in order to reduce the noise passing from one room to another.

Not all bunkhouses are of the 42 single room variety. It is possible to have smaller units and units with double rooms, though the double rooms would not be acceptable under the Alberta Union Agreement. The private industrial camps in Fort McMurray have a mixture of single and double rooms, and their units come in varying sizes usually smaller than the 42 room size.

By contrast, the camp at James Bay, not bound by the Alberta union agreement, differs in several significant ways. Firstly, bunkhouses are not uniform and individual rooms are not identical. Supervisory personnel or long-term employees can have superior accommodation. Secondly, bunkhouses are smaller. The maximum number of people in a bunkhouse is 24, although 12 to 15 is more likely. Thirdly, each bunkhouse incorporates a small communal sitting room which facilitates small groups socializing within the bunkhouse. There are three different types of accommodation--bachelor suites, single rooms, and double rooms, apart from the family accommodation in the town of Radisson. A bachelor suite, each with its own entrance, consists of a bed-sitting room, small kitchen, and bathroom, and is about 20 m^2. Occupants of these self-contained units are not expected to produce their own meals. The tiny kitchen provides a supplement or occasional alternative to the meals available in the communal dining room. Bachelor suites are arranged side-by-side, five to a trailer.

The single rooms are 12 m^2 and are the same size as the double rooms. The double rooms have a partition down the middle but do not have very much space for two people. There is room for two beds and two closets and not much more. The same room used as a single has the partition removed and is reasonably comfortable. These rooms are arranged in square bunkhouses, not the long narrow ones usual in Alberta. The bedrooms are arranged along the four outer walls and

in the centre of the square are all the communal facilities, including the small sitting room with TV, fridge, and hot plate. There are only 12 rooms in each bunkhouse, so the maximum occupancy, if all the rooms are double, is 24 people.

Different again is the experience in Greenland of the Cominco mine. In 1972 and 1973, about 14 houses and apartments were built at the townsite so that senior staff could bring their families with them to the mine but very few did. The camp also originally provided double rooms for the construction workers but this proved unacceptable and the rooms were converted for single use.

The design of the bunkhouse has an obvious impact on the construction worker. The privacy of a single room appears to be preferable to the companionship of a double. But in a large bunkhouse holding 42 people, with no space for socializing in a small group, there is only the alternative of being in one's own room or being part of the communal facilities for the whole camp. Smaller bunkhouses, with the addition of a sitting room, might be more socially acceptable and might provide a more livable environment, but the question of cost has also to be considered.

As for the cost of maintenance it is the custom in Alberta to assign one bullcook to each bunkhouse. A bullcook, roughly speaking, performs the services in a bunkhouse that a chambermaid would perform in a hotel. Usually the bullcook is male in a male bunkhouse and female in a female bunkhouse. Bullcook wages are presently about $9.00 an hour. They are guaranteed a 40 h week although they will admit privately that they only work 3 or 4 h a day. If smaller bunkhouses were to be considered, the present ruling of one bullcook to each bunkhouse would have to be revised.

2.4.4 Design and Functioning of Kitchen and Dining Room

The food served in work camps is of high quality and in ample quantities. The camp Rules and Regulations covering Alberta approved by the Alberta Provincial Building Trades Council and the Alberta Construction Association specify in great detail what foods are to be served, the variety and choice which is to be available,

the quality of the food to be served (Blue or Red Brand meats, "A" grade poultry, and Choice or Fancy quality canned goods), and the manner in which it is to be served. A caterer's specifications are included in the Appendix 8.3. These regulations appear to be effective because no complaints were heard about the food in any camp in any of the interviews. The nearest thing to a complaint was one comment that "food cooked in large quantity for large numbers of people tends to be rather bland" but that was said more as an explanation or apology than a complaint. More often the comment was "Man, you can't eat like this at home" or "Nobody could ever go hungry here." The high quality of food seemed to be a feature not only of the camps covered by the Alberta union agreement but also that private industrial camps in Fort McMurray, James Bay Camp, and certainly in Arctic Canada.

The Fort McMurray Health Unit has the responsibility of inspecting camp kitchens to ensure that food is being prepared in sanitary, healthy conditions under the Regulations relating to Industrial and Construction Camps (see Appendix 8.1). No major problems have been reported. Sanitary inspectors check the facilities for storing perishable goods as well as the methods and equipment used to ensure cleanliness. All food handlers are given periodic health check-ups. Unfortunately, once in a while, cases of food poisoning do occur in spite of all the precautions--perhaps once a year affecting 25 to 30 people. These are risks of catering anywhere and considering the number of meals served daily the incidence is low.

The design of the kitchen and dining room could be improved, however. A large kitchen in hot weather needs good provision for ventilation or air cooling. In most camp kitchens the ventilation was inadequate and the air conditioning non-existent. It was reported during an interview that in hot weather the temperatures in the kitchen of one large camp rose as high as 180°F, but this may have been an exaggeration as it was impossible to obtain corroboration. The cooks serving from the steam tables were unable to prevent the perspiration

dripping into the food they were serving. Installation of air conditioning or improved ventilation incorporated into the original design of the kitchen would provide more comfortable working conditions for the cooks and kitchen staff.

Camp dining rooms are large rooms capable of seating up to 1000 or 1500 people at a time. The tables can be of two types, either long tables with separate stacking chairs or shorter tables with attached benches, like picnic tables. The latter type has two advantages. The noise level in the dining room is reduced by not having chairs scraping the floor. Cleaning the floor is made simpler and easier because the chairs do not have to be piled on top of the tables before mopping, the usual practice in dining rooms with separate chairs.

The noise level in camp dining rooms is a factor which deserves some consideration. Long-term camp residents claimed they no longer heard it but to newcomers it was oppressive. Added to the bustle of constant movement in the dining room and the buzz of conversation there was the clatter, bangs, and squeaks of the metal trolleye used to remove dirty dishes. A silent moving conveyer belt to remove dirty plates as used in one camp dining room was a great improvement, from the point of view of reducing the noise level. Again, it would have to be incorporated into the design of the kitchen facilities as the use of a conveyer belt has implications for the system of washing-up and garbage collection, but it might save money over the life of the camp by reducing the number of staff required in the dining room.

Other methods of reducing noise in camp dining rooms which could be considered are the use of sound-absorbing partitions or sound-absorbing materials for walls and ceilings. Some camps have tried to reduce the overall vastness of the dining room by introducing partitions and adding some colour to the walls, with different colours for different sections. The result is more attractive and on a more human scale than the vast impersonal open room. From all the camps visited it was obvious that the quality of the food was of major importance to camp residents. The way in which it was served and the atmosphere in the dining rooms were less important but still significant to them.

2.4.5 Commissary and Other Facilities

For small camps located in or close to a town, there is less need to have commercial facilities in camp, but for the large isolated camp there is a need for a store which sells newspapers, magazines, tobacco, toilet articles, and some work clothing. A Post Office is also provided in some camps and a branch bank, although the bank usually finds that it cannot provide this service profitably. Requests have also been made for a snack bar to serve hot dogs, hamburgers, etc. This may seem strange when food in camp is plentiful but meal times are controlled and finite. In camps, where there are no hot plates, stoves, or fridges in the bunkhouses, a person who misses supper may have to wait until the next morning for a meal.

Since the construction camp becomes a temporary home while they are on the work-site, workers will be influenced by its appearance, facilities, and operation. The Camp Rules agreed to by the Building Trades Council and the Construction Association (see Appendix 8.2) ensure that accommodation in a union camp in Alberta shall be to a uniformly high standard, ensuring privacy, cleanliness, and plentiful food. The trade-offs for these advantages are firstly the uniformity. The minimum standard becomes the maximum also and the result is monotonous, lacking in variety. Secondly, the trader-off for privacy may be loneliness. The 42 room bunkhouse has no facility to encourage small group socializing.

2.5 LEISURE TIME FACILITIES

In an isolated camp, or even in one not so isolated but where workers cannot return to their family at night, there is a need for some form of recreation to fill in the non-working hours. The most popular form of recreation is television and workers who are long-term camp residents will probably have a small television set in their own room, but communal facilities for watching television are also desirable. The amount of recreation facilities and programmes needed will depend on the hours of work and the degree of isolation. It is generally agreed that good recreation facilities and programmes

will reduce labour turnover but as yet there is no way to measure this relationship, nor to measure which programmes are most effective.

2.5.1 Passive Recreation

Most camps provide communal television rooms. In James Bay these are in bunkhouses, in other camps they are usually in the recreation complex. As well there are reading rooms, card rooms, pool tables, shuffleboard, and ping pong. In the James Bay camp there are also two piano rooms, a handicraft centre, and a library. Large camps have at least one movie theatre which may double as a gymnasium. Movies are changed frequently, as often as every night. It is essential that the equipment and the projectionist be reliable. The frustration engendered by breaks in the film or sound failures does more damage to the harmony of the camp than if the facility were not available in the first place.

An innovation for camps in the last 10 years is the tavern. Syncrude has one, as have James Bay and the Cominco camp in Greenland. The Syncrude tavern--"The Muskeg Club"--seats 850 people and is open until 2200 h on week nights, 2300 h on Saturdays, and 1300 to 1600 h on Sundays. The tavern is closed, however, for an hour over the supper break, 1800 to 1900 h, to discourage patrons who might be prepared to forego their evening meal. Originally the Muskeg Club served only beer but the licence was extended as a satisfactory operating history developed. The Muskeg Club also provides a variety of entertainment, some of it live.

The hotel industry in Alberta and the Alberta Liquor Control Board are presently in favour of several smaller taverns seating only 200 to 250 people, instead of large ones of 850. The rationale is that the smaller ones are easier to control and have a more intimate, friendlier atmosphere. While these taverns are in communities and not in camps, it seemed possible that the same advantages might accrue if smaller taverns were instituted in camps. However, no one at Syncrude, who was asked their views on this, was in favour of having several small taverns instead of the Muskeg Club in its present form. The tavern at James Bay serves only beer, has no entertainment, and

shorter hours than the tavern at Syncrude. The reason given for having no entertainment was interesting. At James Bay the workers are away from their families for 60 days at a stretch. It was felt that music in the bar would lead to greater homesickness, more emotional upsets, and would lead to fights in the tavern. In contrast, most of the Syncrude workers left camp every weekend, either to go home or to visit the city.

2.5.2 Active Recreation

The most extensive recreational facilities were found in James Bay. Between the camp itself and the town of Radisson, there were four gymnasiums, two weight-lifting rooms, two bowling alleys, four tennis courts, an arena, curling rink, and a swimming pool, as well as ball diamonds, football fields, and ski hill.

The Syncrude camp had a gymnasium and a weight-lifting room with provision for fastball, baseball, soccer, volleyball, and floor hockey. There was no indoor or artificial ice. The Suncor camp during the construction phase had a curling rink but the building was subsequently converted to a theatre. The Alberta Gas Ethylene Project camp at Joffre had a gymnasium, weight-lifting room, two TV rooms, reading room, pool tables, shuffleboard, darts, ball diamonds, and football fields.

Interviews revealed that the most frequently expressed desire for additional recreation facilities was for a swimming pool. Some camp occupants expressed a desire for a curling rink, an arena, or tennis courts, but a swimming pool was more frequently desired than all the others.

A feature not normally associated with recreation or leisure time activities was the weekly pilgrimage to Edmonton for the weekend. About 80 to 85% of the labour force left at the weekend. Some of them had families there. Others went to enjoy the amenities of the big city. Frequent trips to the city were standard practice either by private automobile or by buses hired for the purpose. As many as a dozen buses, as well as all the private cars, might leave from the camp for Edmonton on Friday and return on Sunday.

Neither of the two modes of travel were without problems and impact. High speed travel was the rule and traffic southbound on the weekends to Edmonton was very dangerous, dangerous to the point that the RCMP, Fort McMurray detachment, were reluctant to enforce the speed limit for fear of causing multi-car pile ups. For Fort McMurray residents, the only safe thing to do was to stay clear of Highway 63 in either direction on the weekends.

2.5.3 Educational Courses

A number of camp occupants expressed interest in having facilities in camp to enable them to further their education during their non-working hours. Several were already taking courses by correspondence mostly to try to finish their Grade 12 diploma, and were working on their own without any supervision or guidance. Some hobby courses were also offered on site by skilled personnel. Engineers or technicians who wished to take courses leading to an MBA had facilities available to them. Keyano College in Fort McMurray had supplied some instructors and courses in reading blueprints, in personnel supervision, in business administration, and in cultural pursuits such as guitar playing and painting. The problem as Keyano College saw it was the lack of reasonable facilities in which to conduct classes. They were offered one adequate classroom and the use of some tables in the dining room, but the facilities were not quiet enough and not really suitable for a teaching situation. The students seeking academic upgrading were so diverse in their needs that only a small group could be handled by each teacher. In a confined or noisy space it was difficult to meet the needs of the students. Keyano representatives expressed confidence that the provision of teachers for these courses was not a major problem.

Frontier College, mentioned in Section 2.2.2 in relation to the Bunkhouse Man, is still in operation and played a part in the Syncrude camp. Frontier College is now celebrating its 80th year in providing adult education in remote camps. It still operates through field workers who are labourer-teachers. In the Syncrude camp, Frontier

College operated a class to teach English to immigrant and French Canadian workers. The largest class totalled 168 men (Bulletin of Frontier College 1979).

2.5.4 Recreation Program and Staff

The provision of facilities does not by itself ensure that they will be used and that a recreation program will develop. A good recreation director can stimulate interest, allocate facilities, organize competitions, and make sure that equipment is in good repair. During the peak occupancy of the Syncrude camp, the recreation director had three assistants and even produced a camp newsletter.

Judging by the number of people participating, the weekend in Edmonton was the most popular recreation opportunity offered by Syncrude. The next most popular was the Muskeg Club. The competitions, however, had a value over and above that measured by the number of participants. They provided a topic of conversation on the work-site and in the dining room. The newsletter helped to disseminate information about the competitions and other camp news and provided a common background of information and interest in a highly heterogeneous work force.

The value of the Muskeg Club was manifold. It provided a welcome leisure time facility for those in camp; it also decreased the traffic of private cars between the camp and Fort McMurray; it decreased the pressure on hotels and hotel bars in Fort McMurray; and, by keeping the construction workers on camp site, decreased the incidence of prostitution and juvenile deliquency in Fort McMurray.

In future camps, travel to Edmonton may not be so easy if the camp is more isolated, not so desirable if a greater proportion of the work force is non-Albertan or non-Canadian. In that case a tavern on site will be even more necessary.

2.6 PROVISION OF FIRST-AID HEALTH CARE FACILITIES

In an isolated large camp, first-aid and health care are generally provided around the clock. At Syncrude, there were nurses on duty 24 h a day at a first aid post and a doctor from Fort McMurray

visited twice a week. Hospital facilities were available at Fort McMurray 40 km away. Ambulances were available and so were private cars to take patients to hospital when necessary.

At James Bay, there is a 20 bed hospital staffed by nurses and two doctors. Patients who require more treatment than is available are flown by plane to Montreal 1000 km away.

The level of service required depends on proximity or otherwise of a back-up service and the types of injury or illness likely to be encountered. At neither Syncrude nor James Bay were there any old people. At Syncrude, though there were some women on site, there were no families and no children so there was no need for facilities to deal with maternity or pediatric problems.

The type of problems likely to be dealt with in any isolated camp will include:

1. Industrial accidents;
2. Stress-related ailments--alcoholism, drug abuse, depression;
3. Heart attacks;
4. Epidemic infections--e.g., flu;
5. Minor ailments--hangovers, colds, cuts, bruises; and
6. Occasional cases of food poisoning.

The safety record at the Syncrude plant was very good. In 1976, Bechtel Canada received the largest merit rebate (over $1 million ever given by the Alberta Workers' Compensation Board. This record is enviable and presumably helpful in recruitment. New camps being established in the future will no doubt try to attain the same standard, but it will depend on circumstances whether they are equally successful. New camps in the oil sands area will be further from Fort McMurray and may not have a paved road at the start of operations. Satisfactory means of getting an injured worker to hospital may involve specially equipped helicopters or planes instead of ambulance. Since transporting an injured patient to hospital can cause more permanent damage than the original injury if it is not done properly, it is essential that the stretchers and other equipment at the camp first-aid post should be

standardized with the equipment at the receiving hospital so that movement of the patient from emergency to hospital equipment is as easy as possible.

Hospital authorities in Fort McMurray reported that they had more patients from the camp with stress-related symptoms than with industrial injuries. Some of these were sent to the emergency room by ambulance, but others either found their own way there or were taken in by friends in private cars. Again, in future camps, the incidence of these cases cannot be assumed to be fewer and may be more numerous since for some people the greater the isolation the greater the stress. A method for getting these patients to hospital will be required but also a method of early identification. The dangerously depressed patient, the alcoholic, the potential suicide, or the drug-induced trauma state may be recognized by friends and associates before it is seen and recognized by doctors, nurses, or other authorities. Depending on whether or not there is a road, the distance from town, and the availability or unavailability of private cars, friends and associates may be relatively powerless to help. There is a further need for follow-up care for such patients in the camp if they return there after hospitalization.

2.7 SECURITY PERSONNEL AND FIRE PROTECTION

There is general agreement that the quality of the security personnel has great influence on the efficiency and livability of a camp. They can be recruited either directly by the general contractor as with Bechtel, or they can be employed by a subcontractor specializing in providing security personnel. In many ways the contractor has better control of the way in which security is enforced if the personnel are his own employees.

The quality of the security personnel is more important than their numbers. If they are well-trained and of good physique with an air of authority, they will command respect. If they are young, slight, and diffident, they will not. In any camp of several thousand men, particularly when they are a highly mobile impermanent population,

there is the probability of drunken brawls, vandalism, gambling, drug trafficking, prostitution, and other offences. It is the job of the security personnel to keep these incidents to a minimum or at least to prevent them from disturbing other people in camp and causing problems. The security personnel patrol the bunkhouses at night and are on duty in the tavern. A worker at the Syncrude camp is liable to lose his job for any infraction of camp rules or for arguing with the security forces.

Bechtel's practice was to recruit retired enforcement personnel for security and policing jobs. These people knew the techniques and tactics of policing but more importantly they knew people and were capable of wielding their power with discretion without being overly officious. The policing arrangements were accepted well by a vast majority of the work force. A good illustration of their judgment is reflected in the way in which liquor was handled. Although the official policy of the camp was "no alcohol"--except in the designated area, the "Muskeg Club"--the practical problems associated with implementing this policy were recognized early. As a result it was acknowledged that there would be illegal liquor on the premises. As long as the individuals responsible kept out of trouble, liquor was tolerated. Nevertheless, rowdyism, however it started, was not tolerated. Those responsible were fired immediately and "blackballed" from returning. It was suggested by an interview that at certain times of project construction there were more problems than at other times. This recognition resulted in the adoption by security policing personnel of a different stance, depending on which group or groups were in camp at any point in time. The overriding policy of the camp was the attitude to protect the individual's rights as a person and respect his privacy. This as a rule was accomplished. For major law-breaking offences the camp security personnel relied on the cooperation of the RCMP detachment in Fort McMurray. For maintenance of order within the camp the threat of dismissal was usually a sufficient deterrent.

A construction camp is a densely populated residential area. With the added risk of fire in the work site, fire protection services need to be better than for a town of the same size. There have been

major fires in construction camps in Alberta though there have been a number of minor ones which might have become major if they had not been dealt with in time. The common fire is a mattress fire caused by smoking in bed. There are some advantages the construction camp has which the town of a similar size would not have. The population is entirely able-bodied--there are no dependent old people or young children. Distances within the camp area are short so equipment can get there quickly. Volunteer firemen are recruited from the work force. They are given time off from work for training and are paid for training. They are usually all housed in the same bunkhouse near the fire hall so that they can reach the scene of the fire as quickly as possible.

2.8 CONCLUSION

The appearance of the camp and the way in which it is operated will obviously have an effect on the health, well-being, and morale of the workers living in it. A happy, efficiently run camp will hopefully contribute to productivity on the job site. It is more obviously true that an unhappy, inefficiently run camp will detract from the productivity on the job site. A stable work force is more productive than a work force with a high turnover. Unfortunately, the design and the operation of the camp are only two factors influencing the stability or otherwise of the work force. Other factors will be dealt with in later sections. It is unfortunate that there is not more hard data on the reaction of construction workers to their camp site and the influence it has in their decision to either stay in a job or leave it. In this section, we have tried to indicate some of the more frequently expressed opinions in interviews with camp personnel and managers.

3. PROFILE OF CAMP OCCUPANTS

3.1 COMPOSITION OF CAMP WORK FORCE

A typical construction camp comprises the construction workers and support staff. The support staff include the catering staff of cooks, kitchen helpers, and bullcooks and security personnel. Within the last 10 years, there has been a growing move among women to compete for the high paying jobs in construction camps. There has also been a move to employ more native people, Indians and Metis, in construction jobs. Added to these influences and social changes is the attraction that highly paid jobs in northern Alberta have for unemployed or under-employed people in other parts of Canada and the rest of the world. In future camps it seems likely that there will be more women and more non-Albertans and immigrants.

3.1.1 Construction Workers

In Section 2 it was shown that the early construction workers, whether railway navvies or bunkhouse men, were unskilled, unmarried, illiterate, immigrant, and sometimes exploited. Things have changed.

An examination of the skill mix of a project the size of Syncrude shows that almost all trades are represented (pipefitters, welders, electricians, carpenters, labourers, equipment operators), as well as professionals (engineers, geologists, administrators, health sciences, safety, security police) and service support personnel (caterers, cooks, janitors, etc.) It was estimated that about 80 to 85% of the personnel in camp at any one time were skilled but the nature of the skills varied with the stage of construction.

The conglomeration of skills and skill mixes manifests itself in a variety of ways. From an end mission point of view, the entire work force can be easily completion oriented--all groups are working to the completion of an end product, a visual identity. On the other hand, the complication of a jurisdiction-oriented work force can be very unsettling. Work activities of a common overall nature (i.e., those jobs which any particular trade of skill can perform) tend to be subdivided and allocated to members of a particular union. This

specialization of labour, characteristic of a large union project, entails constant care on the part of supervisors and duplication of effort at additional cost to ensure work continues.

3.1.2 Geography of Recruitment

A high percentage of the work force at the Syncrude site came from Alberta. Some were recruited from other parts of Canada and from overseas (see Table 3 for Syncrude and Bechtel employee statistics).

Table 4 provides the breakdown of home base for 34 896 Bechtel employees over the 4 years from 1975 to 1978, inclusive.

In a report prepared for Syncrude Ltd. by Canadian Bechtel Ltd. in January 1977, it was stated:

> An estimated 77% of the 1976 peak manual force of 5720 at Mildred Lake was met from Alberta source. For the 1977 year manual manpower peak requirements 70% were expected to be met from Alberta, with an estimated 27% coming from other parts of Canada (Canadian Bechtel Ltd., 1977).
>
> . . . During 1977 some skilled workers, pipefitters and pipefitter welders had to be recruited from international sources, but this totalled only 200 (Canadian Bechtel Ltd. 1977).

Some care must be taken in interpreting these statistics. Table 3 includes all employees, management as well as the construction force, with the project only half-completed. Table 4 refers only to Bechtel employees engaged in construction for almost the whole span of the construction phase. The definition of an Albertan in this context does not necessarily mean that the worker was born in the province and that he had lived most of his life in the province. It does not necessarily even mean a long-term resident. An address in Alberta and membership in a local union would qualify a worker to be counted as an Albertan. Since hiring was, in the main, through the union hall in Edmonton and preference was given to local members before jobs were offered to other parts of Canada or to members of the union on a "travellers" ticket from other provinces, there was an incentive for

Table 3. Recruitment location for Syncrude and Bechtel employees, 1976.[a]

	Syncrude Workforce	Canadian Bechtel Ltd. and subcontractors workforce
Albertans	78%	90%
Other Canadians	18%	3%
Non-Canadians	4%	7%

[a] Business Life (1976).

Table 4. Location of home base for Bechtel employees, 1975-1978.[a]

Location	Percentage
Alberta	67.27
British Columbia	9.14
Saskatchewan	1.16
Manitoba	1.44
Ontario	6.91
Quebec	7.08
Nova Scotia	1.88
New Brunswick	1.40
Newfoundland	2.53
Prince Edward Island	0.10
North West Territories	0.03
Yukon	0.06
U.S.A.	0.27
U.K.	0.46

[a] Canadian Bechtel Ltd.

those seeking work to pay local union dues and have a local address. So some of the workers listed as "Albertans" might have been in the province less than a month and might have no intention of staying after completion of the job.

At the James Bay camp, although no numerical breakdown was available, the statement was made that the construction workers were nearly all Quebecers or landed immigrants. At the Cominco mine in Greenland, original plans were to give preference to employing local labour. Only when there was a lack of sufficiently skilled Greenland or Danish miners was the decision taken to hire more skilled miners from Sweden and Norway (Canadian Institute of Mining Bulletin 1978).

From a political and economic point of view, it is obviously desirable to have as much provincial and Canadian labour as possible, partly to reduce unemployment and partly to benefit from the spin-off employment and economic activity generated by the earnings of the construction workers. However, sometimes particular skills cannot be recruited locally and sometimes there are jobs which the local population are not willing to take. In subsequent construction camps, it seems likely that a higher proportion of the work force will be non-Albertans, or even non-Canadians. This would have an impact on the spin-off economic benefits generated in the province, the proportion of workers who stayed in camp on weekends, the need for weekend recreation programs, and perhaps even on the length of the working week.

3.1.3 Earnings of Construction Workers

While it was agreed that the construction workers at the Syncrude camp were well-paid, many of the stories of extremely high earnings appear to be less than accurate. Estimates of average annual income for Syncrude construction workers can only be informed generalizations. Each trade has a different union agreement, different hourly rate, and may have a different agreement with regard to the length of working week (i.e., the number of hours worked before overtime rates apply); different trades were present at different periods of construction and for varying lengths of time; rates of pay increased

during the course of construction. Also, many construction trades do not work, and do not expect to work, on an annual basis. For all these reasons, arriving at an estimate of an average annual income is difficult.

Reports of earnings of $55 000 to $60 000 per annum were discounted as unlikely to be true by management personnel but a range of $25 000 to $30 000 for 1979 was accepted as possible and even likely. For short periods, however, it is entirely possible for a construction worker to work at the rate of $55 000 to $60 000 per annum.

3.2 CATERING STAFF

Because the construction workers generally work a 10 h day and because they require breakfast before they start and supper after they finish, the hours of work of the kitchen staff are very long. In addition, meals have to be prepared 7 d a week to cater for personnel who stay in camp over a weekend. Catering staff work a 10.5 h split shift day, 12 d on, and 2 d off. They start at 0530 h, work till 1330 h, start again at 1630 h, and work till 1900 h. When asked what, if any, recreation they enjoyed for the 3 h between 1330 and 1630 h, the unvarying response was "sleep". To give some indication of the magnitude of their task, the statistics of daily food consumption at the peak of the Syncrude construction period might indicate the work involved. Consumed daily at the camp were 11 800 lb. of meat, 4600 lb. of fresh produce, 3000 lb. of fresh fruit, 850 lb. of butter, 530 lb. of coffee, 3000 qt of milk, 1500 doz eggs, and 120 gal of ice cream. The camp employed about one member of the catering staff for every 10 construction workers (Construction Alberta News 1977).

3.2.1 Degree of Skill

The catering staff consists of chief cooks, first cooks, second cooks, kitchen hands or waitresses, and bullcooks. A chief cook has to be an administrator as well as skilled in his trade. Highly skilled hotel chiefs have not proved to be as good at this job as retired army cooks. First and second cooks should preferably be trained and experienced but the shortage of personnel is such

that a good kitchen had with some experience can probably work himself up to becoming a second or first cook. Kitchen hands, waitresses, and bullcooks need not be experienced.

Most of the catering staff are men. There are some women but catering for large numbers involves lifting heavy weights and often women are not strong enough or muscular enough to do the required jobs. Most women who want a job in this field can probably get one, however, but they have to be a member of the union and few women in the catering industry are unionized. A job as a bullcook would certainly be within the physical capacity of any women and it is well paid (currently $9.00 an hour for a guaranteed 40 h week, though the actual working hours are much less) but openings are limited by the industry decision that male bunkhouses shall have male bullcooks and female bunkhouses female bullcooks.

3.2.2 Geography of Recruitment

While no statistics are available with regard to the nationality or home base of the catering staff, it is generally agreed that a higher percentage are recent immigrants to Alberta than is the case for the construction staff. In the Joffre, Suncor, and Syncrude camps, there appeared to be a high proportion of Lebanese, Greeks, and Italians. The presence of a high proportion of immigrants among the catering staff was not apparent in the James Bay Camp.

3.3 WOMEN IN CAMP

During the operation of the original 1964 to 1966 construction phase for Suncor, there were 2200 workers in camp. There were no women in camp and no women applied for camp jobs. The Syncrude construction phase lasted from 1973 to 1978 and about 500 women were employed as labourers, truck drivers, heavy equipment operators, drafting personnel, supervisors, and clerical staff. Jobs were in the field as well as in the office (Western Miner 1973).

About 250 women lived in the Syncrude camp in bunkhouses reserved for women in a special fenced-off area. There were recreation facilities reserved for the exclusive use of women but the women could

also use the main facilities and the tavern. The dining room was used communally with no special sections for women.

Having women in camp was an innovation approached with some trepidation by those in authority. However, their fears proved unjustified. At the present time, while there are still separate bunkhouses for women, the fence is no longer considered necessary. At James Bay and Joffre, women have separate bunkhouses but at the Cominco camp in Greenland and at some other camps in Alberta, such as the Alberta Power Corporation camp at Forestburg, there are instances of men and women sharing the same bunkhouse.

There is some resistance both from men and women to the idea of "co-ed" bunkhouses. The resistance, however, seems to stem not so much from the idea of sharing the unit as of sharing communal washing and toilet facilities. In the Cominco camp, single rooms have private washroom facilities. There are three reasons for having "co-ed" bunkhouses. The first is that it seems to be the trend of the times, e.g., university residences are often "mixed". The second is that, where there are only a few women in camp, with 42 unit bunkhouses it may be uneconomic to allocate one whole unit and a full-time female bullcook for only a few women. This has been given as the primary reason for reluctance to employ women in construction camps. The third reason is that in some instances a husband and wife have both worked and lived in camp. This has happened at both Syncrude and James Bay. Under present regimes, the husband has to live in one bunkhouse and the wife has to live in another, and if either is discovered in the other bunkhouse they are both liable to instant dismissal. If each had a single room in a "co-ed" bunkhouse they could probably co-habit without disturbing anyone, provided there were separate washroom facilities. An instance was quoted of a husband and wife team at James Bay who shared the wife's single room for some time without any complaints from the other women in the bunkhouse as long as he returned to his own bunkhouse to shower. When he got tired of doing this, and after repeated requests still did not do so, the women complained and the couple were dismissed.

Very few men interviewed had any objection to women in camp. Most saw the trend towards greater participation by women in construction-type jobs as inevitable and admitted that with power machinery women were capable of handling them. A number of men sympathized with women who wanted to get into jobs that paid more money than the ones traditionally performed by women. Camp authorities found the presence of women in the dining rooms, recreation areas, and taverns a positive advantage. They stated that the presence of women reduced the noise level and improved the language and behaviour of the men.

The presence of women in the bunkhouse was another matter. The older men in particular, who had spent most of their working lives in camps, did not want to meet a female in the corridor on the way to the washroom. While they were not very articulate about their reasons, the impression gained was that it was not male chauvinism as much as embarrassment or shyness over a less-than-perfect physique.

Even if the principle of "co-ed" bunkhouse is acceptable it would not have to apply to the whole camp. Probably no more than a few bunkhouses would need to be so designated and they would probably be occupied by younger workers who have seen the same principle accepted by college and university residences. No doubt in such a situation it will not only be the couples who are legally married who will co-habit. Camp authorities will have to decide whether or not this is of any concern to them if it does not create a disturbance for other people in the bunkhouse. There is also the risk of prostitution, however, and if this created a problem the women would have to be dismissed.

3.4 NATIVE WORKERS

A positive attempt has been made by both Suncor and Syncrude in the Athabasca Oil Sands region to employ as many of the local native people as possible. Up to 800 native people, many of them women, were employed on the Syncrude project (Western Miner 1973). Many of them, although not all, lived in camp. Some, whose homes were nearby in Fort MacKay, would have preferred to commute daily but were unable to do so because of the lack of daily transportation to and from Fort MacKay.

Many of the native workers were unskilled though some training in skilled tasks was available. Keyano College in Fort McMurray offered an industrial worker's course for native people to teach the terminology, life skills, and basic industrial procedures. It was a 5 wk course and, on completion, graduates could apply for membership to Local 92 and were referred to Bechtel Canada for employment (Western Miner 1978). Native Outreach was the organization used to establish and maintain relationships with the native people and to help in recruitment. It reports progressively more native employment, particularly among young native women, and foresees more skills being acquired by them.

Bechtel Canada operated a welding school in the pre-assembly field operation site in Edmonton in conjunction with the provincial Department of Manpower and Canada Manpower. About 150 of the welders graduated from this school were native people. The labour relations staff report that, given equal training, equal opportunity, comparable conditions, and a breathing space to comprehend today's industrial work patterns, the treaty Indians and Metis adapted well to this type of employment (Western Miner 1978).

It would be a mistake, however, to assume that all the native people are assimilated into the industrial society of the oil sands region. As a Native Outreach counsellor stated, assimilation can take place only in so far as the native people want it and at the pace at which they can absorb it. Between the experience of those still living in a more-or-less traditional society and the experience of the completely urbanized Indian or Metis, there is a continuum or gradation of experience and acceptance of the industrial society. The native worker is no more a homogeneous product than his white counterpart. For most of them, life revolves around their family and their community. The objective in taking a job is to make some money so that he or she can return to the family and the community. In this they are not very different from other workers on the job or in the camp.

3.5 FAMILY LIFE

The fact that a man takes a job in a construction camp no longer indicates that he is unmarried. In a construction camp he has his board and room free while he may be supporting a wife and family elsewhere. Not all of them are married but the majority are, although there are no accurate data to indicate how high a proportion. In the Syncrude project, many of the families of construction workers lived in Edmonton or in the commuter towns surrounding Edmonton. Some families of workers in the Syncrude camp settled in small towns between Edmonton and Fort McMurray (e.g., Boyle and Lac La Biche). Some families tried to come to Fort McMurray but, as housing was scarce and was allocated to permanent employees, there was a tendency for some construction workers and their families to become "squatters".

This situation was in part a result of the policy of the managing contractor to pay a living-out allowance. Since all employees working in camp get free room and board (subject to provisions of the Income Tax Act), an incentive scheme must be devised whereby those personnel working on the project are compensated for not living in camp. The application of this policy became critical in the spring and summer of 1977 when the site work force exceeded the camp capacity. The payment by the managing contractor ($15/d) led to many individuals setting up their own accommodation in order to receive the extra payment. Much of the "accommodation" was in the form of trailers, campers, tents, and temporary shelters indiscriminately located near the site. This accommodation was "unauthorized" use of miscellaneous leases of Crown land. The practice became so widespread that at one point there were over 75 documented squatters occupying Crown land for dwelling purposes. Aside from the illegality of the practice, concerns were raised about the public health implications should squatting continue. Alternatives were actively sought (since enforcement was judged to be somewhat impractical) and finally led to the establishment of a minimally serviced campground. The campground, while initially enjoying modest success, did not prove to be the ultimate answer for three reasons: (1) its physical location some 55 to 60 km from the site was too far to travel; (2) by the time it

was established and available, the work force had diminished to the point where on-site camp accommodation was available; and (3) fall was approaching and the prospect by the work force of living in make-shift accommodations without any services throughout the winter was not worth the $15/d living-out allowance provided.

The Syncrude camp was not an isolated camp compared to many others. There was provision for private cars on the site, there was a paved road to Edmonton, and the working week of 48 h allowed a free weekend every weekend from 1530 h on Friday until Monday morning. In contrast, the Suncor camp, although located in the same area, was much more isolated because there was no adequate road to Edmonton during the construction phase. The Suncor hours of work were 60 h a week with only Sunday free so construction workers were in effect confined to the area. The Joffre camp is also not isolated. Situated in central Alberta and working a 40 h week, workers there can visit their families every weekend. Hiring for the AGEC camp at Joffre was undertaken in Calgary, Edmonton, or Red Deer, and the families for these workers are scattered throughout central Alberta.

In contrast, the James Bay workers are very isolated. There is a road to Montreal but it is used entirely for supplies. People fly in and out. There are no private cars on the site. The working hours are 60 h a week, with 8 wk on and 1 wk off. The company pays air fare at the end of every 8 wk period to the airport nearest to the employee's home. The Cominco mine in Greenland is even more isolated. Workers spend 4 mo on site and then have 1 mo off.

The impact of construction camps on family life and on the degree of stress experienced by the worker due to separation from family will obviously vary according to the location of the camp, the state of the road or other transportation arrangements, the hours of work, and the location of the home base of the worker. If future camps are likely to be more isolated and have a higher proportion of the work force who are either non-Albertans or non-Canadians then a longer working week or a longer spell in camp with correspondingly longer time off as experienced by the James Bay and Cominco camps might be worth considering.

During the summer months, a summer camp for visiting families might be feasible on a trial basis and would eliminate the need for squatters' camps. It should be well-equipped with toilet facilities, a sanitary water supply, and a system of garbage disposal. As this camp would not be catered to by the camp kitchen and communal dining facilities, transportation and a road into Fort McMurray to enable the purchase of groceries would be a necessity. It is difficult at this point in time to judge how popular such a camp would be in relation to future construction camps. To be close to future construction camps, it would be farther from Fort McMurray and a more isolated, wilderness camp. After a short stay in such a camp both women and children would probably complain that there was nothing to do. Present social trends encouraging, or making it necessary for wives and mothers to work outside the home would also mitigate against summer-long residence in a wilderness camp. However, a few families might spend the summer there and others might enjoy coming for weekends.

3.6 MOTIVATION

What would motivate men and women to take a job away from family and friends to live in camp with large numbers of other people in a remote location? The simple answer is money. But this is perhaps too simplistic.

For some workers this is their way of life. They have always earned their living working in construction camps and they expect to continue to do so. These are the hard core of construction workers who move from camp to camp. They have helped to construct most of the major projects in Canada and they move from province to province to do so. Their loyalty, if any, is to the union or the industry and not to any one project or any one employer. They will leave one project to go to another which is offering more overtime pay for a short period and then after the overtime period is over will move back to the first job or to a third depending on who is hiring. While camp construction jobs are their way of life, this does not mean that they will work all year long. Normally they will work 8 to 10 mo and then take 2 to 4 mo off, depending on how much money they have accumulated and what they want to do.

The next group may also be career construction workers but who do not intend to make camp jobs their way of life indefinitely. They recognize that a camp job with high wages, some overtime, and free room and board is an excellent way of saving money. Writing about the Black Angel Mine, in Greenland, Noakes (1978) states:

> The primary reason people would want to isolate themselves in such a location is to save a lot of money. Therefore the work schedules should be geared to giving the worker as much paying time as possible. In Denmark and Sweden and other Scandinavian countries the difficulties of saving money out of wages are eased and simplified considerably for people who are prepared to work in the isolated and undeveloped regions of these countries. In Denmark, for example, all personal income taxes, except for a small Greenland tax, are forgiven if the worker works continuously in the isolated region for at least two years. In Sweden the time limit is one year.

Hours of work are either 60 h a week for a miner or 84 h a week for a mill worker and "not many are expected to return after they have achieved their tax-exempt status" (Noakes 1978).

For many construction camp workers, the job is a method of earning enough money to make a down-payment on a house or some other major purpose. In a report on attitudes in the oil drilling industry it was stated in Drilling Industry Manpower Survey (1979):

> A large majority of rig employees on camp jobs prefer to work a 12-hour shift with 14 days in and 7 days out. They prefer this schedule because they feel it gives them more time with family and friends. They also prefer this schedule because it gives them the opportunity to increase their income through overtime pay. This is important to the large majority of employees who are currently saving money to buy a house, farm or business. Many feel they are unlikely to ever be able to afford a home or land of their own without the opportunity to earn overtime pay.

In this regard, the motivation of drilling rig employees is very similar to that of construction industry workers. A camp job is a means of earning enough money to enable some other goal to be reached. When the desired amount of money has been accumulated, they are likely to leave.

All other things being equal, the job offering the greatest amount of overtime will be the most attractive. But all other things are not equal and there are trade-offs which have to be made, particularly with regard to the degree of isolation. The greater the isolation, the more overtime tends to be offered. The Joffre camp in central Alberta in close proximity to families and urban amenities operated basically on a 40 h week; Syncrude, with a paved highway to Edmonton, albeit a 5 h drive, had a 48 h week; Suncor, in the same location but without paved access to Edmonton, operated on a 60 h week; James Bay has a minimum 60 h week, 8 wk in and 1 wk out; Cominco in Greenland has a 60 to 84 h week, 4 mo in and 1 mo out, but the month out is paid time and there are additional income tax benefits.

For the immigrants from overseas and Canadians from other provinces, money was again the incentive. If they had no family nearby, going to Edmonton for the weekend from the Syncrude camp represented an unwarranted expenditure. More often than not they stayed in camp at weekends. The immigrants might be building a nest-egg in order to start a new life in a new country, or might be saving hard to send for family members. Others might be hoping to return to open a business back home, but again the intention was to work hard for a short time and achieve some financial goal.

For a minority in camp jobs the camp itself is the goal or at least a refuge. There are some members of the camp society who have no goals whatsoever. One of these was a bullcook who described life in a construction camp as "like being in prison--a comfortable rut with no responsibility but no future either". For some like this the camp is their life. When they leave it, they cannot cope with the outside world. They get drunk, gamble away their money, or are robbed. Frequently they return to camp early, dead broke, and prepared to sink into the comfortable rut once again.

Other workers take camp jobs to escape. They may be escaping from their marriages, their families, or the law. Many of the men in camp reported that their marriages had failed but there is no evidence as to whether the marital breakdown was a result of camp living or whether camp living was a result of marital breakdown. Interviewees who were asked their opinion on this either had no opinion or stated that camp living tended to cause marital breakdown. There are, however, a great many broken marriages in the general population so it is very difficult to know whether or not the proportion among camp residents is significantly higher. In future, camps which probably will be more isolated and which may also have more non-Albertans in the work force, the amount of overtime offered may be a more important factor in recruiting and retaining members of the work force than it was for Syncrude.

4. IMPACT ON SURROUNDING COMMUNITIES

4.1 GENERAL

The economic impact of a construction camp on a neighbouring community can take several forms. If the camp buys any of its supplies of materials or food locally, businesses will benefit provided they are large enough to handle it. If employees are recruited locally, the area's employment situation may be improved. At minimum, some of the earnings of camp occupants may be spent locally and thus boost the local retail trade.

The impact of a camp on the surrounding communities will also depend partly on the relative size of the camp and the surrounding community. If the camp is large and the population of the nearby town or village is small, the impact may be overwhelming. On the other hand, even a large camp will not have any noticeable impact on a city of the size of Edmonton. The impact will also depend on the hours of work in the camp and the amount of time available for camp employees to go farther afield. The availability or otherwise of off-duty activities within the camp, as well as the accessibility of the outside world in terms of roads, an airport, public transport, or the use of private cars, will also affect the impact.

Negative impacts from construction camps include the destruction of incompatible economic patterns and the stresses and strains from short-term over-utilization of local services. These may include retail services, social services, health care facilities, law enforcement units, and transportation services. A construction camp may last from 2 to 5 years and then disappear. The peak work force may be on site for only 2 years. Not all facilities are capable of expanding to deal with this kind of expansion without leaving a residue of expensive overscale facilities after the construction phase is over. Even those operations which are capable of expanding and contracting without residual over-capacity probably do not do so in time because of lags in organization and planning and because of lack of communication and advance warning. Often, by the time the private or public

sector can react to the pressures exerted by peak employment of construction workers, the peak is past and the construction project may be winding down.

The impact on the town of Fort McMurray and on the surrounding small villages varied and the impact on each differed between the Suncor camp and the Syncrude camp. The impact of the Joffre camp on the city of Red Deer was different again, and the situations in James Bay, Radisson, and Greenland were also unique.

4.2 IMPACT ON THE TOWN OF FORT McMURRAY

During the construction phases of both Suncor and Syncrude, there were two parallel construction projects proceeding at the same time, one was the construction of the plants, Suncor and Syncrude, and the other was the construction of the housing and commercial establishments required to accommodate the increasing population of Fort McMurray and the permanent employees of Suncor and Syncrude. Even where it is possible to determine the impact on a town of construction workers apart from the impact of the general increase of population, it is not always easy to determine which construction workers, the ones living in the camp or the ones living in the town, are responsible.

4.2.1 Suncor Camp

This camp was in operation from 1964 to 1966 and employed 2200 men at its peak. The work week consisted of 10 h days, 6 d a week. The town of Fort McMurray in 1964 had a population of only 1800. Recreation facilities at the camp were limited but improved during the operation of the camp. Latterly, there were billiards, shuffleboard, tennis courts, movies, card games, volleyball, and an arena with a recreation director to organize tournaments and the showing of films. Officially it was a dry camp (i.e., no alcohol allowed) although bootlegging was fairly common. The road to Edmonton was in poor shape and the one to Fort McMurray not much better. Off-duty time tended to be spent in Fort McMurray, mostly in the bars. Management and administrative personnel stayed in Fort McMurray and were bused to the camp daily. Some of their families also stayed in Fort McMurray. Housing

was in short supply, recreation facilities were lacking, and the school system was still under the Northern School Division. In 1964, Fort McMurray applied for and was granted status under the New Towns Act but the financing and planning for necessary services lagged behind the demand. Vandalism and fights were frequent in camp. Women in Fort McMurray, whose husbands may have been working 12 h a day, 7 d a week, were bored and lonely. Many returned to Edmonton.

4.2.2 Syncrude

The Syncrude camp was in operation from 1973 to 1978 with 1976 and 1977 being the peak years. At maximum capacity, the camps at site held 6606 people and another 1000 or so came by bus from Fort McMurray daily (The Northern Miner 1979). The town of Fort McMurray grew to 10 000 in 1974 and 20 000 in 1977. Obviously, with this increase in population, the construction force needed to build the town was considerable, but there is no record of numbers. There were, however, several commercially operated manpower camps spread about town.

Recreation facilities at the Syncrude camp were designed to be as attractive as possible and to make it unnecessary for the camp employee to go to Fort McMurray. The decision to open a tavern on site was deliberately taken to lessen the negative effects of the camp construction workers on the town. The decision had the support of the hotel operators in Fort McMurray. Town officials in interview agreed that a tavern on site "was a godsend to Fort McMurray". The tavern in the camp site was probably the greatest positive impact on Fort McMurray. Other recreational facilities on site were well used and a recreation director with three staff members organized programmes and tournaments. There was still a lot of free time. The working day ended at 1730 h, Monday to Thursday, and at 1530 h, Friday. At 1530 h every Friday, about 80% of the occupants of the camp departed for Edmonton. This aspect of the operation of the Syncrude camp was viewed with concern by the people of Fort McMurray because of the crowding of the Highway 63, which came to be known as the "Bechtel 500." However, had the workers remained in the camp, their impact on the town during weekends would have been resented even more.

4.2.3 The "Bechtel 500"

By the time the Syncrude camp opened there was a paved highway to Edmonton 450 km away. For most of the length, it is a two-lane 24 ft carriageway with narrow shoulders and sharp edges. At 1530 h every Friday during construction period, several thousand people debouched in buses and private cars onto this road going south like a river in spate. Traffic coming in the other direction had little chance of survival. The only thing to do was to get off the road. On Sunday afternoons the tide reversed. The people of Fort McMurray learned to stay off the road every Friday and Sunday. Driving in either direction was dangerous. The RCMP personnel in interview have given the following comments and descriptions:

> "Driving down the road three abreast at 130 m.p.h."
> "No one drove at the speed limit. Anyone doing so would endanger himself and others".
> "Anyone with a flat tire could not pull off the road because there were no shoulders. Therefore he was liable to be creamed from behind".
> "No traffic tickets were issued unless the car was driving at least 11 miles over the speed limit. Even then the time taken to write out tickets meant that most offenders got off".
> "One hundred and eleven speeders stopped in 7 hours".
> "One weekend in May 1977, traffic tickets to the value of $17 000 written in two days".

The RCMP did what they could knowing that many of the occupants of the cars were drinking as well as speeding. It became customary for construction workers to send ahead one car with a C.B. radio to notify the others behind where the police cars were. If the scout was caught speeding his buddies were expected to help to pay the fine.

For most agencies in Fort McMurray at this time, understaffed and overworked, coping from crisis to crisis, keeping meticulous records of their operation became a secondary consideration and the RCMP admits

It was no exception. The following tables, one from a federal source (Table 5) and the other provincial (Table 6) are probably underestimates of the situation but they may act as illustrations.

4.2.4 Retail Trade

Little material required by the construction operation was bought in Fort McMurray. Food was required in vast quantities and arrived by truck from Edmonton. Heavy equipment was bought from all over the world. Occasionally some small item which had been forgotten would be bought locally. The transportation industry was the exception, particularly the hire of local buses to ferry people between the town and the camp site.

From the wages of the construction camp workers, some personal items might be bought in Fort McMurray and some money spent on transportation (gasoline, hiring buses to go to Edmonton, and air fares). Other money was spent in local restaurants, bars, hotels, and the liquor stores. Retail trade statistics show that, during the peak construction years, the number of outlets and the gross receipts increased more rapidly than the increase of town population would have warranted (Table 7). However, this may not be entirely attributable to the spending habits of camp occupants. Another explanation could be that, in the years 1976 to 1977, the retail trade was catching up with deficiencies that had existed prior to 1975.

In spite of the existence of the Muskeg Club at the Syncrude camp site, the hotel operators in Fort McMurray were aware that they did a lot of business with construction workers. Some of those who did not go to Edmonton for the weekend would rent a hotel room in Fort McMurray. Some going out by plane on Friday would wait for the plane in a local bar. Others just wanted to get out of camp for an evening. Friends, wives, and girl friends would come up to spend a weekend occasionally. One hotel manager, however, indicated that having a large clientele of construction workers was a mixed blessing. They tended to take their frustrations out on hotel furnishings and the fact that they might be there in large numbers inhibited the local population who might otherwise enjoy dining out.

Table 5. Summary of traffic accidents statistics by Fort McMurray RCMP.[a]

	Persons injured	Persons killed	Total Accidents
1972	22	-	126
1973	33	1	198
1974	78	1	368
1975	100	5	627
1976	83	3	542
1977	95	1	880

[a] Statistics Canada (1972-73, 1974, 1975, 1976, 1977).

Table 6. Traff accident analysis on Highway 63 from Fort McMurray to district boundary (19 m south of Wandering River), a distance of 144 mi.[a]

	Average Annual Daily Traffic	No. of Accidents	No. of People Killed
1970	855	41	-
1971	875	47	5
1972	875	49	1
1973	1020	68	1
1974	2980	129	3
1975	4725	164	9
1976	2980	120	3

[a] Planning Branch, Alberta Department of Highways and Transport.

Table 7. Retail trade statistics of Fort McMurray.[a]

Year	No. of Outlets	Gross Receipts	Pop.
1973	71	$ 15 164	9 942
1974	77	$ 25 647	11 000
1975	89	$ 46 841	13 393
1976	127	$ 79 881	15 321
1977	181	$112 077	20 373

[a] Alberta Treasury Bureau of Statistics.

4.2.5 Banking Services

Some of the most heavily used facilities in Fort McMurray by the construction workers were the banks. The banks were not overly enthusiastic about this increase in business. The most commonly required service was cheque cashing. In order to have enough cash on hand to meet the demand, banks needed a week's warning which, when there was an increase in personnel in the camp, they did not have. Bringing cash from Edmonton to meet these employee cheques was an expense to the bank and only a few of the cheques being cashed resulted in deposit accounts being opened. Even when deposit accounts were opened they were used mainly to facilitate a money transfer to some other part of the country. The large pressure of cheque cashing on a Friday afternoon necessitated hiring more tellers. But since more tellers require more space which was unavailable, the practical result was that the same number of tellers worked longer and harder. This increased the turnover of tellers, requiring hiring and training new inexperienced tellers which compounded the problem.

A survey of camp employees in November 1977 indicated that, while 80% were interested in having a bank on camp site, only 19% would deposit more than $100. When the construction phase at Syncrude was over, bank deposits in local banks had dropped by only 5% to 10%. While a bank on camp site would obviously be an advantage to the workers, it was estimated that whichever bank undertook the position would wish a subsidy to do so.

Towards the end of the Syncrude camp, the Credit Union opened a branch on camp site. The company supplied the premises and the Credit Union supplied the services and the personnel. Even then the Credit Union reported poor results.

At Radisson, the Royal Bank manager, who reported that they operated five branches in the James Bay territory, confirmed that these branches did not make money for the Royal Bank. Salaries were high. Partly because of the unusual hours at which the bank had to operate. Keeping an adequate cash flow on hand was expensive, and deposits were either small or ephemeral. On the other hand, the company provided

the space and equipment at no cost to the bank and the manager felt the bank was gaining valuable experience in how to provide a service in that environment efficiently.

4.2.6 Social Services

Social service agencies indicated that the construction camp personnel did not form a high percentage of their case load. Nevertheless, they had one or two concerns which they would like to see rectified in future camps or construction situations if possible.

One of the problems was the difficulty of contacting someone who was living in camp. If they had a request from another agency or from another province with regard to wife support, child maintenance, children being apprehended, or children being institutionalized, it was difficult to get in touch with the husband or father in camp. Security at the camp was tight. Unauthorized personnel were not allowed past the gate. The agency had to depend, therefore, on the security personnel or some other contact within the camp to find the employee with whom they were trying to get in touch to transmit a message. There are different interpretations of why it was difficult for a social service agency to contact an employee in camp. The agency thought that the authorities had difficulty finding any one man in a camp of 6000. It may also be true that the authorities did not specially want to pass on messages of this nature. Equally the man, if he did get the message, might decide to do nothing about it. Alternately, more probably if he did get the message, the employee might contact his family direct and simply by-pass the local agency. whatever the explanation, the social service agencies and hospital authorities did complain of difficulty in contact of individuals in the camp. Camp authorities, however, maintained that there was no difficulty in this regard.

Social workers also expressed concern about young girls from Fort McMurray and from the surrounding communities being picked up by transient and unidentifiable construction workers. If the girls were below the age of 18, under laws dealing with juvenile delinquency and

child neglect, they ran the risk of being taken from their homes and placed in an institution for delinquents or as "being in need of care and attention".

This same agency provided help for men from camp whose jobs had been terminated and who found themselves without enough money to get home. Transients in Fort McMurray were also helped by this provincial department. Innumerable transients arrived in Fort McMurray hoping to find work only to be disappointed as most of the hiring was done in Edmonton and a union ticket was necessary. Since accommodation and food in Fort McMurray were expensive, financial assistance was often needed to get back down south again.

The Preventive Social Services Department in Fort McMurray operated an "Aid and Distress" line. This was a telephone number manned throughout the day as a service to depressed and suicidal clients. This line was contacted often by depressed men living in camp and they were talked to for as long as necessary.

Unfortunately, accurate records of the incidence of clients who were construction camp workers are not available. During these years (1973 to 1978), the social service agencies were all under stress. Faced with a rapidly expanding town population, they were still staffed according to staffing policies which applied to the province as a whole. No account was taken of the additional work load imposed by construction workers who were not counted in population census data, nor was an account taken of the mobility of the town population (i.e., that an increase of 1500 probably meant that 2500 had moved in and 1000 had moved out). Nor was any account taken of the fact that this mobility affected the staffing of the agency itself. An agency with five employees might have had 300% turnover in a year. As a result, employees dealt with one crisis after another and the record keeping of what they had done was a very secondary consideration (Co-West Associates 1978).

4.2.7 Health Care Facilities

The two agencies which deal with the health of camp personnel are the Fort McMurray Health Unit and the Fort McMurray Hospital. The

Health Unit is responsible for many preventive health measures such as immunization, immunization records, early identification of tuberculosis, follow-up of venereal disease contacts, sanitary inspection, and sanitation.

Some of the responsibilities of the Health Unit with regard to the construction camp have been:

1. Inspecting the camp kitchens to approve the sanitary preparation of meals;
2. Testing all food service handlers for TB;
3. Follow-up of TB suspects;
4. Testing for VD and follow-up of known contacts;
5. Immunization procedures for epidemics;
6. Investigating incidences of food poisoning; and
7. Enforcing regulations for holiday camp sites.

Like all other agencies, the Health Unit had been short of staff during the peak construction period. For example, during the peak construction period, VD problems were dealt with by a nurse who came from Edmonton every 6 wk. It was not until 1979 after the peak construction period was over that a full-time position was created in the Fort McMurray Health Unit to deal with venereal disease and its follow-up.

Testing for TB among the kitchen staff proved to be problematic. Many of the immigrant workers reacted positively to the first skin test. The follow-up procedure is a chest x-ray and, if that is still positive, a prophylactic course of treatment is administered. All this takes time and, somewhere along the course of investigation and treatment, the worker may leave. It is the responsibility of the Health Unit to follow-up and make sure treatment continues but it is no one's responsibility to provide the Health Unit with an adequate follow-up address or even a permanent home address. Indeed it may be impossible to do so. The worker when he was hired may have given the company or the union the Edmonton address of some friends. He may have returned home to another province or alternately he may be in another camp job somewhere else where the whole process starts again.

The problem of squatters in the bush and in holiday campgrounds added to the workload of the Health Unit. Sanitary arrangements at holiday camp sites are their responsibility and on occasions they found it necessary to evict squatters with the help of the RCMP.

The Fort McMurray Hospital has also had its work load increased by the construction camp workers. At the height of the construction period, the hospital was seeing 4000 patients a month in the emergency department and administrative personnel estimated that about half of them were construction workers. Not all of these construction workers were from camp but some were and the others were constructing the town. Hospital authorities stated that they treated more patients for stress or stress-related ailments than for industrial accidents.

As reported by the social service agencies, hospital officials claimed that they experienced difficulty in contacting a patient after he returned to camp and also some difficulty in getting personal effects and clothing brought to the hospital for patients not returning to camp.

The "squatters'" camps affected the hospital too. Children living in these unsanitary and crowded conditions became sick and often spent most of the summer in hospital. Social service agencies and health care organizations did find their work load increased by the presence of the construction camp in the vicinity but no accurate record of the extent of the increased work load is available. The difficulty experienced by agencies trying to contact a worker in camp was probably exacerbated by the fact that everyone, both in the camp and in the community, was working hard and had little spare time. In addition, as mentioned earlier, a camp is an ideal place to hide for someone who does not want to be found. Greater isolation of future camps will lessen the impact on existing agencies, probably.

4.2.8 The Nevada Club

As well as the Muskeg Club, the Syncrude camp was given permission to establish a gambling casino called the Nevada Club. Proceeds from this club were used to provide entertainment in the Muskeg Club, thereby keeping down the price of beverages, and the

surplus was donated to non-profit organizations in Fort McMurray. Youth groups, athletic clubs, voluntary social service groups, and health organizations all benefited from donations from this source. It was a very positive contribution to the town by the construction camp.

4.3 IMPACT ON OTHER COMMUNITIES IN NORTHEASTERN ALBERTA

Other communities, such as Fort MacKay, Fort Chipewyan, Anzac, and Janvier, felt some impact from the construction camps. Their traditional way of life was hunting and fishing and, with the general activity in the area, residents felt that the animals tended to move farther away. Alternative employment available for both men and women was attractive to some but not to all of the Indian and Metis families who resided in these villages. In 1976, a report on Anzac (Van Dyke and Loberg 1978) stated:

> People generally agree present employment opportunities present a functional alternative to the modest incomes of the trapping era. The peace and quiet, on the other hand, has been destroyed by the resource exploitation and the accompanying tremendous increase in population. Indeed there is considerable ambivalence in the settlement in response to the question, Do you think oil sands development had had a positive or negative affect on Anzac?

Referring later to Fort MacKay, Van Dyke (1978) states:

> . . . some people have acculturated to a relatively great degree and appear to be close to accepting the new way of life of the Larger Society. Conversely, these people are the most marginal or deviant in terms of the way of life of tradition. They are truly on the periphery of their own society.

4.4 IMPACT OF AGEC CAMP AT JOFFRE ON CENTRAL ALBERTA

The location of the AGEC plant and the construction camp at Joffre in central Alberta was formerly agricultural land. The first economic impact came from taking agriculture land out of production. The second impact was on employment. Several subcontractors employed at the site were from Red Deer and some of the construction workers

were hired in Red Deer. The relative sizes of the camp and the city of Red Deer means, however, that the impact of the camp personnel on Red Deer was not as noticeable as the impact of the Syncrude camp on Fort McMurray. The camp at Joffre employed 900 people at its peak and the population of the city of Red Deer was approximately 35 000.

Recreation facilities at Joffre were good. There were TV rooms, an exercise room, pool tables, shuffleboard, and outdoor facilities for ball games. There was no tavern in the camp and the closest bars were at Red Deer and Blackfalds. The RCMP in Red Deer did not report any increase in traffic accidents or traffic violations as a result of the influx of construction camp personnel to the area. The RCMP had anticipated that a construction camp in the area would impose greater demands on the maintenance of law and order but in fact no greater demands materialized. The construction camp at Joffre had very little noticeable impact on the city of Red Deer.

4.5 JAMES BAY AREA AND RADISSOM

The economic relationship between the native population and the company is quite different in the James Bay project and the Syncrude project. While Syncrude makes positive efforts to employ individual native workers, the James Bay group deals with them on a contract basis. The native people of the James Bay area demanded and received compensation for land claims ($225 million). As a result, the native people have capital to start their own projects and set up their own companies which contract to perform certain services such as road maintenance or brush clearing for the James Bay Development Corporation. There are very few native people employed in the construction camp.

Assessing the impact of the camp on the town of Radisson is of doubtful relevance. The town is partly permanent and partly temporary. The temporary part is in the process of being moved (1979) to the next construction site at LG4 and LG3. But even the permanent section of town has a very mobile population, all of whom are connected in one way or another with the James Bay project. The town is a company town, owned and operated by the James Bay Development Corporation and the James Bay Energy Corporation, and has no other economic

base or reason for existence. The impact of a large construction camp on the neighbouring community will depend on the location of each in relation to the other, on the nature of the community, and the relative sizes of the camp and the community.

5. IMPACT ON THE WORKER AND HIS FAMILY

No camp employing several thousands of people can run without some problems. These may be problems for the organization, for the individuals in camp, or for their families living elsewhere. Some of these have been mentioned in other sections but will be dealt with in greater depth here.

5.1 LABOUR TURNOVER

While there is no accurate record of the labour turnover during the construction phase of the Syncrude camp nor the reasons for it, there are several estimates which are roughly consistent. A Bechtel spokesman estimated that 60 000 people had been recruited over the 5 year construction period to maintain a work force which peaked at 9000, including the preassembly plant in Edmonton (Ehrlich 1979). To reduce this to an annual turnover, assume an average work force of 6000 for the 5 year period. This means that each job was filled approximately 10 times in 5 year--an annual turnover of 200%. Verbal estimates of turnover were given as 18% per month and 15 to 20% per month, which is roughly consistent with an estimate of 200% per annum.

5.1.1 Reasons for Labour Turnover

Not all labour turnover can be avoided. Some of it is essential because of the nature of the job. Different skills are required at different stages of development. The original site clearing requires large numbers of heavy machine operators. After the site is cleared, many of these operators are no longer required and different skills are hired. As the work progresses, other skills become redundant and new ones are required.

Additional workers may be hired for short periods to catch up to production schedules when deadlines approach and critical sections of production lag behind schedule. These workers leave because they are no longer required and they were never intended to become part of the permanent work force. This situation adds to the apparent labour turnover but must be excluded when considering potentially avoidable labour turnover.

Some specialized skills may have only a small but essential part to play in the construction of the total project. Men with these specialized skills would be hired at the period of construction at which their skill was required and would then leave the project.

Mobility appears to be an integral part of construction work. Even when there is continuing work on a site, if a worker sees a better opportunity for himself elsewhere he will move to a different job even for a few weeks. The second job may be more attractive if it offers more hours of work and more overtime pay. When firms shut down their production operation in order to undertake annual maintenance, they may work 60 h a week for 3 to 4 wk in order to keep interruption of production to a minimum. After the shutdown is over, the 60 h week comes to an end and the worker may move back to the first job. This mobility seems to indicate a lack of commitment to the management, the project, the working team, or the crew. The method of hiring probably contributes to this. Workers are not hired individually on their record. A requisition is sent to the union hiring hall and those whose names are at the top of the union list applying for work are offered the job, whether they have built up a reputation as reliable or unreliable. The union has a responsibility to all its membership, providing they have paid their dues, and management are in a difficult position if they try to pick and choose between one union member and another.

Workers can and are dismissed for infraction of camp rules. This causes some dissension because, in a large city, if a man is rowdy in the bar, obnoxious to a cook or waitress, or obstreperous to a police officer, he may suffer the appropriate consequences but will probably not lose his job over it. But in camp any infringement of camp rules can lose a worker his job. The corollary to that is that, after a period of 2 to 3 mo, the worker can apply again and be reinstated, if jobs are available.

The hiring procedure is slightly different in the James Bay project. There, the contractors have a "protected" list of employees. If a worker has worked for a contractor a given length of time in any one year, he can be placed on a "protected" list by that employer and

contacted directly when the contractor has more work. The employee's relationship with his employer is, therefore, more important to him than his relationship with the union.

Another contributing factor to labour turnover is the tendency of those whose motivation in accepting a camp job was the achievement of a specific financial goal to leave their employment when that goal has been reached. However, all the above-mentioned reasons do not account for the entire labour turnover. One estimate of potentially avoidable labour turnover was 70 to 90% per annum.

Contributory factors to potentially avoidable labour turnover include the operation of the camp, family problems, and personal stress. It is generally agreed that labour turnover will be increased if a camp is poorly run but there is no firm data to indicate the extent to which labour turnover will be reduced by a well-run camp. Without actually leaving a job, workers can, and do, indicate dissatisfaction with camp conditions by a deliberate lowering of productivity on the job site, a manoeuvre which has been termed a "wobble". A "wobble" is not a strike, because the workers are still at work, but it is close to it.

Another contributing factor to labour turnover is the worker who does not return after a weekend or week's leave. Part of the reason for this may be that separation from family creates problems or hardships either for the worker or the family. Personal stress created in drab surroundings is another factor contributing to labour turnover.

It was Bechtel's experience that labour turnover was reduced for the worker who was recruited from other provinces of Canada. Part of the contractual agreement with these workers included the payment of return air fare after an agreed length of time. There was an incentive, therefore, for them to stay for that length of time. To the Cominco experience in Greenland, it was noted that workers did not stay beyond the 2 years needed to qualify for the tax reduction. The implication is that the tax-reduction incentive was influential in keeping a worker there for 2 years. At James Bay, the company pays return air fare at the end of each 8 wk period. They also

reported a relatively low labour turnover but they attributed this largely to the high unemployment in Quebec and the absence of other construction projects.

Bechtel's practical answer to high labour turnover and absenteeism was to hire 110 employees for every 100 vacancies. Admittedly this was expensive, especially as room and board had to be available for 110 employees to ensure the productivity of 100. If an increasing number of construction projects in Alberta creates a shortage of construction workers, this solution may become less feasible.

5.2 IMPACT ON FAMILY LIFE

The experiences of women with regard to camp life and their point of view with regard to it vary. In recent years, there have been both married and single women who have lived in camps as part of the work force. Traditionally, there have been mining and drilling camps which had a family camp as part of the total operation. These were usually reserved for senior officials of the firm and included wives who were not part of the work force as well as children. The James Bay Corporation operates such a camp at Radisson. In the early days of oil exploration at Drayton Valley, before the town was fully established, there were some families on site. Other drilling sites in Alberta have had families as part of the rig but as rigs move so frequently it is becoming less common. Lastly, there are company towns such as Uranium City, Flin Flon, and Radisson where the experience of wives and family is relevant to any consideration of women and camp life.

Family camps have to deal with the problem of providing facilities for children's education. At Radisson, there is a large school which caters for children of both the temporary and the permanent part of town. It provides complete education from kindergarten through high school. Other camps and company towns have provided school facilities for elementary school only, with higher grades provided by means of supervised correspondence courses. If the camp is not isolated, children from the camp can be bused to the local school. Where there is no school at all, women have to make the

decision either to move out of camp with their children or to stay in camp with their husband and send the children to residential boarding schools. Faced with this choice, the answer of most, but not all, Albertans has been for mother and children to stay together while the husband and father stays at the job site. Members of the Oil Wives Club who had had experience of living in camp stated, that for pre-school children, the experience of growing up in a camp environment was beneficial.

All the disadvantages of a single industry company town apply even more strongly to family camps. Social contacts are governed by the husband's position in the firm. The concerns and problems of the work place become the concerns and problems of social occasions also. Everyone knows everyone else extremely well, which can have advantages and disadvantages. Only by getting "out" can the family escape and relax. A disproportionate amount of income is spent on "getting-out".

Wives living in the family camp at Radisson, while gratified by the extensive facilities available, expressed the feeling that life in camp had an artificial quality about it. There was a feeling of insecurity, of being on vacation. Events happening outside Radisson tended to become more remote and local events assumed disproportionate importance (Hydro-Presse 1976).

For the family which is separated, however, life can be equally hard. The bringing up and discipline of the children becomes the entire responsibility of the mother. The role of the father becomes that of the occasional visitor, an intermittent occupier of the home, and the provider of financial support. This is not, however, an altogether unusual situation. In other cultures, other occupations, other ages, it is and has been the accepted way of life--for example, deep sea fishermen and the armed services. The informal arrangement practised by many long-term construction workers, whereby after 8 or 10 mo work a man will quit his job and take some months off, is probably an effective way of ensuring that family life has a chance of survival. If the family members are recent immigrants or arrivals from other parts of Canada, different customs and cultures may pose additional problems.

An organization such as the Oil Wives Club, which was started by lonely oil wives in order to support each other, might perform a useful role for wives, particularly immigrant wives, of workers in construction camps. Alternatively, the industry could employ a social worker whose job it would be to provide help, support, and information to the families of the firm's employees.

An additional method of approach would be to make it easier and more acceptable for families to be part of camp life. In an isolated camp it does not seem feasible to suggest a family camp with the attendant difficulties and high cost of providing education for children. But, during the summer months, a temporary camp could be established to allow families to spend the summer near the camp. With adequate provision for sewage and garbage collection, spaces for holiday trailers could be provided. If overcrowding and unsanitary conditions were prevented, camps such as this would fulfil the need being expressed by the "squatters" without the attendant problems. Just providing space is not enough, however. Some planning would be needed to deal with the problems of grocery shopping, recreation, and mobility of families, particularly if the location is isolated.

It seems probable that in future construction camps there will be more women as part of the work force. Some of them will be married to men who are also part of the work force. Facilities and regulations for men and women in camp should be as nearly equal as possible. Some women will prefer single-sex bunkhouses, but if a few "co-ed" bunkhouses can be made available it would make life easier and more pleasant for married couples. It would have to be clearly understood, however, that wives could not continue to live in camp if they ceased to be employed at the job site.

Lastly, it must not be forgotten that the major impact of the construction camp on the families of the workers derives from the earnings of these workers. At a time of rising costs for housing and food, the fact that construction camp jobs pay well while the breadwinner receives free room and board is a significant impact on family life.

5.3 PERSONAL STRESS FACTORS FOR INDIVIDUAL WORKERS

Although young male Albertans have been familiar with camp jobs through employment with drilling rigs in the oil industry, the construction camps in the Athabasca Oil Sands region are much larger and more densely populated. The oil industry usually works on a "2 wk in, 1 wk out" basis. Rigs move fairly frequently giving variety to the jobs. Operators try as far as possible to keep crews together. The oil industry, however, has a problem with high labour turnover also.

The large numbers of people in camp and the drabness and uniformity of the surroundings seemed to be one of the main causes of stress among camp occupants in large camps. Comments made by camp residents included the following:

"There's always such a mass of people".

"You get to feeling anonymous".

"If only there were some trees or something to look at".

"You can be alone in your own room but if you spend too much time alone you get to drinking too much and that's not good".

"You need a strong self-image to live in a construction camp".

"Sometimes I drive into Fort McMurray in the evening just to get away from camp for a few hours".

Individuals had worked out various ways of dealing with the situation. One man stated that it was essential to have a routine and to stick to it. For each night of the week he had an activity: Tuesday night he always did his washing: Wednesday night he always watched television; and so on. One or two others arranged to take correspondence courses. Some who were ostensibly living in camp did not in fact do so. Although allocated a room and a meal ticket, they bought campers, used the meal tickets, but after supper headed out into the bush and slept there. Not all the squatters were families or construction workers building the town. Some of them were camp employees who had a room in camp but preferred not to use it.

In a large number of interviews with camp residents, their awareness of the danger of becoming alcoholic was expressed. They

felt this danger was enhanced if they spent too much time alone in their own room, but the alternative was to be exposed to a large mass of people. Add to this the loneliness and, for some, fears about what their wives may be doing in their absence and there is a highly stressed individual. Workmates are often supportive but not always. There are always a few who like to "have some fun baiting Charlie".

The view was expressed that survival requires a strong self-image. For those who could go home every Friday night the stress was minimized, but for some people the stress was more than they could handle and they left the job.

Some suggestions which might be considered for future camps include:

1. More variety in the type of recreation offered and encouragement of small group activities;
2. A recognition by the recreation director and his staff that enhancing individuality is important as well as keeping people active and busy;
3. A few smaller bunkhouses might be introduced to see if they are more popular;
4. Some thought to landscaping or other visual impacts to break the monotony of the camp layout; and
5. If the location of the camp is isolated so that it is not possible for many employees to go home for the weekend then longer working hours could be considered.

6. OBSERVATIONS, CONCLUSIONS, AND RECOMMENDATIONS

6.1 OBSERVATIONS AND CONCLUSIONS

The large-scale construction camp appears to be a surprisingly little studied phenomenon. The literature is scant although parallels were not explored within the literature on large-scale institutions such as military camps or prisons because the important element of discretion would not apply. Comments made by people interviewed would perhaps suggest that the comparisons may be valid in examining stress factors attributed to monotony of surroundings, anonymity, 24 h regimen, etc.

Although many improvements have been provided in contemporary camps, it is apparent that more are still to come through joint management-union action. Many features are built into the physical facilities, working conditions, and hours of work. These include comfortable quarters, good surroundings, recreational facilities, transportation, a bar, other entertainment, first aid and health facilities, and security measures.

The better construction camps of the day must include all of these and many other outstanding features and attractions. But the factors most important in the operation of a successful camp are:

1. A good camp facility;
2. Good food in quantity and quality;
3. Security and policing which is forceful without being officious;
4. Varied and well-organized recreational and leisure-time activities program;
5. Good pay with opportunities for overtime; and
6. Regular breaks to get out of camp.

Existence of these features will minimize the negative impacts of construction camps. Moreover, a well-run self-contained camp will lessen the negative impacts on the local community as well as enhance the well-being of the resident construction workers.

6.1.1 Future Construction Camps in the Athabasca Oil Sands Area

Continued development of the oil sands area and heavy oil deposits in Alberta are likely to require more construction camps in the future. The impact of the camp on the surrounding community will depend on the size of the camp in relation to the nearest town, the leisure-time facilities within the camp, the distance and transportation facilities to the nearest town, and the home base of the employees.

If, because of full employment in Alberta, it becomes necessary to go farther and farther afield to find workers for construction projects, it may be necessary to pay more attention than has been necessary in the past to the welfare of the families of these workers. If the families are located in Edmonton or other points distant from the camp, then some supporting programs for families may be necessary. If more non-Albertans are recruited for camp jobs then more attention will have to be given to weekend recreational activities in camp. Future camps will probably have more women residents. Consideration will have to be given to the most acceptable way of integrating them into the residential life of the camp.

As the next phase of development of the Athabasca Oil Sands region may include the construction of a new town as well as the construction of the plant site, accommodations will be needed for the town construction workers as well. It might be feasible for the first residents of the new town to be those workers whose jobs will last for the entire construction period of both town and plant (e.g., supervisors, security personnel, catering staff). This would not be possible, however, until the new town had not only serviced lots and houses, but also an access road, grocery store, and schools.

The trend towards better living conditions and more relaxed leisure-time facilities within the camp will continue in order to attract skilled workers. The expressed desire for a swimming pool may become a reality in future camps although swimming pools are probably one of the most expensive recreation facilities, not only to construct but to maintain.

6.2 RECOMMENDATIONS

The study recommendations will deal with preventive programs with regard to community-camp relations, intra-camp social conditions, economic and social opportunities presented by camps, and, finally, future research methodologies.

6.2.1 Community-Camp Relations

Community-camp relations should be looked at firstly with an appreciation of the relative sizes and the relative impact one could have on the other. These anticipated impacts, insofar as citizens are aware of them, should be an integral part of the project public hearing-approval process. The anticipated range of community aspirations could vary from Fort McMurray wanting to be a major service centre for the camp to Anzac residents wishing oil sands activities to by-pass their community entirely. For some aspects it may be possible to manipulate the impacts in accordance with local wishes.

The impact of camp-community relations will also vary depending on the distance of the camp from the community, the state of the road, the availability of private cars, and the hours of work. A self-contained camp will minimize the negative impacts on the local community. If the hours of work are such that a weekend trip to Edmonton is possible then consideration should be given to encouraging participants to go by bus. The most effective, but unpopular, way to do this would be to ban private cars on camp site. The most positive impacts of the Syncrude camp on Fort McMurray were the Muskeg Club and the Nevada Club and these should be continued. Economic impacts on Fort McMurray were largely in transportation--air traffic, bus hire, gasoline sales, and these could be expected to expand with future developments.

The policy of Syncrude and Suncor to encourage the education and employment of native people should continue and expand. In particular, transportation should be available to enable residents of Fort MacKay to commute daily.

6.2.2 Intra-Camp Social Conditions

While it must be remembered that the reason for the facility is project- or work-oriented, to the extent that camp social conditions improve or maintain worker productivity and reduce labour turnover, such improvements will be owner/operator supported. For example, organized and publicized competitions within the camp in various games and sports can create interest not only among the competitors but also among the rest of the camp occupants. It provides a topic of conversation on the work site and in the diningroom.

While many of the causes of high labour turnover are inherent in the nature of the industry, others could be influenced by camp and company policy. Recommendations for further study would include:

1. The possibility of offering financial incentives for long-term employees and those fulfilling contractual agreements;
2. The provision of camp facilities which are as comfortable and attractive as possible;
3. The provision of "helping-hard" facilities for families separated from the bread-winner and living in unfamiliar surroundings; and
4. The recognition that camp living may be a stressful situation for some people and the provision of facilities which would help to minimize, prevent, or alleviate that stress.

6.2.3 Future Research Methodologies

The project owner has the greatest stake in examining and improving upon the contribution made to a project by a stable and productive work force. The project owner, with the prime contractor and operator, also has the greatest control over the opportunity to rigorously study the relative contributions of physical conditions such as food, camp and room layouts, recreation facilities, etc., and related social conditions.

Better records regarding employee terminations and perhaps some in-depth interview follow-ups would provide a means to evaluate and rank the various factors contributing to labour turnover and productivity.

A caution must be made in that "more" and "better" will not solve all the problems associated with housing, feeding, and otherwise accommodating a large heterogenous work force. Motivational factors are complex. For example, high morale does not necessarily equate with high productivity of a work force. The negative is more obviously true. Low morale will produce higher labour turnover and lower productivity.

It will not be sufficient in future construction camps in the future oil sands developments merely to duplicate the successful techniques of Syncrude and Suncor. As has been shown in the historical section, camps function in the social and economic milieu of their times. Some of the social changes which will impinge on future camps include the sexual revolution, the determination of women to compete for high-paying jobs, the two-salary family, and the desire of people from poorer parts of the world to share Canada's wealth.

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8. APPENDICES

8.1 ABSTRACT OF PUBLIC HEALTH REGULATIONS DIVISION 19-REGULATIONS RELATING TO INDUSTRIAL AND CONSTRUCTION CAMPS O/C 1388-58

1. DEFINITIONS

3. "Camp" shall mean one or more permanent or temporary tents, buildings or other structures or mobile units, together with the tract of land immediately appertaining thereto, established or maintained by an employer of labour, or by a contractor on behalf of the employer, as living quarters for his employees either with or without charge.

4. LOCATION

19-4-1. Every camp shall be located on a site which is free from excessive dampness, adequately drained, and its surroundings suitable and sanitary in every respect. No camp shall be located at a distance less than one hundred (100) feet from any stream, lake, creek, spring other water course or well, or in such a position as will or may cause pollution of any water supply.

5. BUILDING CONSTRUCTION

19-5-2. All buildings used for sleeping, eating or cooking purposes shall be provided with window lighting of an area at least one-tenth of the floor area, except as provided in sections 19-5-3 and 19-5-4.

19-5-7. All buildings used for sleeping, eating or cooking purposes shall be sufficiently well ventilated to prevent the accumulation of disagreeable odors and condensation, without the creation of draughts. Ventilation may be accomplished by the use of roof ventilators, gable ventilators or other means provided the object is attained.

6. BUNK HOUSES

19-6-1. Every bunk house shall contain at least four hundred (400) cubic feet of air space for each occupant except as provided in section 19-6-3.

19-6-7. A clean tick or mattress and clean blankets shall be supplied for each bunk (or bedstead) by the operator of the camp.

19-6-8. Bedding shall be thoroughly aired at frequent intervals, and beds (or bunks) shall be made up or bedding rolled when not in use.

19-6-9. All bunk houses shall be maintained in a clean and tidy condition at all times and the floors shall be scrubbed at least once a week.

7. ABLUTION FACILITIES

19-7-1. Adequate facilities for washing shall be provided, including hot water for ordinary ablution purposes, particularly before employees partake of meals. The use of the common or roller towel is prohibited. Employees shall provide their own individual towels.

8. DINING ROOMS, KITCHENS, FOOD STORE ROOMS

19-8-1. A kitchen and dining room shall be provided for the use of employees. The building or buildings provided for this purpose shall comply with the requirements of sections 19-5-1, 19-5-2 and 19-5-4 to 19-5-8 inclusive.

19-8-3. Cooks or other persons handling or preparing foods shall be free from any communicable disease, shall not be "carriers" and shall be scrupulously clean in their persons and habits.

19-8-7. Dining tables shall be covered with suitable non-absorbent washable material or shall be constructed with smooth board tops which can be scoured and kept in a clean, sanitary condition.

19-8-8. The design of all vessels and utensils used for the storage, preparation and serving of food and drink shall be such as to readily permit effective cleaning and bactericidal treatment.

19-8-13. No operator or cook in any camp shall provide or serve food that has been injured, tainted, spoiled or diseased. In any prosecution under this section, the operator and cook shall be jointly charged, provided, however, that the cook shall not be guilty of an offence if he establishes to the satisfaction of the justice of the peace that he was not willing to serve food that had been injured, tainted, spoiled or diseased, but had done so on instructions from the operator of the camp.

9. DISPOSAL OF WASTES

19-9-1. All waste water from sinks, tubs, wash-houses, etcetera, shall be conveyed by drain or received into water-tight containers and thereafter be removed to a distance that no nuisance will be occasioned thereby.

19-9-2. Garbage or refuse from kitchens or dining rooms shall be deposited forthwith into water-tight receptacles provided with covers, and removed daily, or be deposited in pits or trenches and completely covered, or disposed of in a manner satisfactory to the Local Board of Health.

10. WATER CLOSETS, PLUMBING

19-10-2. Where members of both sexes are employed in any camp, entirely separated adequately designated closets shall be provided for each sex.

19-10-3. Where a municipal or public system of sewage disposal is available to any camp, water closets shall be installed.

19-10-4. Where a municipal or public system of sewage disposal is not available to any camp, water closets connected to a private sewage disposal system constructed in accordance with the provisions of the Provincial Board of Health Regulations Regarding Plumbing and Drinage may be installed.

12. WATER SUPPLY

19-12-1. An adequate supply of potable, clean and safe water shall be provided at every camp, and where a municipal or public supply approved by the Provincial Board of Health is available, such supply shall be used exclusively.

19-12-4. Where men are employed at locations remote from camp, the operator of the camp shall make adequate provisions for a supply of water of sanitary quality for drinking at such locations.

8.2 CAMP RULES AND REGULATIONS COVERING ALBERTA, APPROVED BY THE ALBERTA BUILDING TRADES COUNCIL AND THE ALBERTA CONSTRUCTION ASSOCIATION, 1970-1980.

CAMP RULES AND REGULATIONS COVERING ALBERTA

APPROVED BY THE

ALBERTA

PROVINCIAL BUILDING TRADES COUNCIL

AND THE

ALBERTA

CONSTRUCTION ASSOCIATION

1970 - 1980

ARTICLE I — CAMP SITE

Every camo shall be located so that the best possible drainage can be provided to guard against year-round climatic conditions; prevailing winds carrying obnoxious odours and objectionable noises away from the site shall also be a determining factor.

ARTICLE II — INSPECTION AND APPROVAL

Section 1: Prior to the construction of a camp to be occupied by Building Tradesmen, the responsible authority will first submit plans, in duplicate, to the Joint Council for approval and such approval or rejection shall be given within fifteen days of application and shall be binding provided the approved standards are met. One copy of the approved plans, duly initialled by both parties, shall be retained by the Secretary of the Council.

A Joint Council shall be established and it shall be comprised of four (4) representatives of the Alberta Building Trades Council and four (4) representatives of the Alberta Construction Association. Each group will divide its representation on the basis of two from the North and two from the South.

Two Joint Council Sub-committees shall be established, one for the north and one for the south, and each shall be composed of two (2) members of the Alberta Building Trades Council and two (2) members of the Alberta Construction Association. The members of this sub-committee shall be the same persons appointed to the Joint Council by the respective parties.

Each of the Joint Council Sub-committees shall appoint a Chairman and Secretary, and these positions are to be alternated yearly between Union and Management.

Section 2: When the Joint Council Sub-committee has satisfied itself that the Camp has met all the specifications as herein provided, a certificate of approval shall be issued for that camp for that particular project only. The certificate shall carry the date of issue and shall be valid for the duration of the project provided that camp standards are maintained. The certificate shall indicate the maximum number of occupants that can be accommodated and shall be signed by the Chairman of the Joint Council Sub-committee and it shall also bear the names of the Local Building Trades Inspection Committee.

The foregoing shall apply to any and all additions.

Section 3: In the case of an existing or permanent type camp which is erected or is being erected primarily for the operational staff, the Joint Council Sub-committee shall exercise discretion bearing in mind the length of the project and other relevant matters before issuing a certificate of approval.

ARTICLE III — TEMPORARY QUARTERS

Section 1: If it is necessary to provide temporary quarters for men who are erecting the camp, such quarters will be subject to approval by the Joint Council Sub-committee, on the basis of reasonable standards, taking the circumstances into consideration.

Section 2: Camps already in existence, meeting with the approval of the local Building Trades Council as at June 30, 1970, or the specifications of the Provincial Building Trades Council as of June 30, 1969, will continue to operate in the same standard until the completion of that project.

Section 3: Camp structures put into existence July 1, 1970, shall adhere to the rules and regulations set out herein except for Articles 4 and 5 These structures will be acceptable if put into operation prior to January 1, 1972, and may not under any circumstances be utilized beyond January 1, 1975, without the special approval of the Joint Council. All camps put into use after January 1, 1972, shall comply with the camp rules and regulations contained herein in their entirety.

Section 4: All camps on site, shall be set up, altered, maintained, and/or repaired by members of Unions affiliated to the various Building and Construction Trades Councils.

ARTICLE IV — LIVING ACCOMMODATION

Section 1: Each occupant shall be provided with a single room of not less than eighty (80) square feet of floor space. The interior walls and ceilings of the room shall be covered with suitable material or, if wood, to be properly finished. The floor shall be covered with a suitable material such as tile or lino. The room shall be properly insulated to guard against year-round climatic conditions and sound. Each room shall be fully enclosed with a door and a mortise-type lock and the occupant shall be supplied with one key at no cost. There shall be a weather-proof window (6 sq. feet) in each room, which shall be covered by a screen and equipped with window blinds or drapes.

Section 2: The following furnishings and fixtures shall be supplied to each room:

1. A clothes closet of minimum dimensions of 24" depth and 30" width. The closet shall be of sufficient height to permit the hanging of overcoats and such-like personal belongings, have a shelf to serve as a luggage rack, and a drawer.
2. A single household-type bed of box spring and mattress construction. The bed shall not be less than 6'6" in length and not less than 36" in width, and shall be of good quality.

3. A table equipped with a drawer.
4. A radio shelf.
5. A waste basket and an ash tray.
6. A chair.
7. A least three (3) coat hooks on interior walls.
8. A mirror-type cabinet, a towel rack, soap dish and glass holder.
9. Electrical outlets and fixtures, i.e. a ceiling light with a wall switch, a bed light and wall plug.

Section 3:

1. Bed linen shall be changed once a week (two sheets and pillow cases).
2. Blankets to be changed every two months and sterilized before re-issue.

Section 4:

1. Individually controlled heat shall be provided for each room.
2. Corridors to be completely enclosed and heated. The floor shall be covered with adequate material to deaden objectionable noises, the corridors to be cleaned daily by members of the camp staff. Exterior doors shall be weather-proof and fitted with door closures, double doors 4' apart, which shall be screened from May 15th to October 15th.
3. Each bunkhouse shall have a heated laundry and drying room, and dual laundry tubs of sufficient size equipped with washing and drying machines for cost free use by the occupants. The ratio of one automatic washer and dryer for each 22 occupants of the bunkhouse shall prevail.
4. All camp cleaning shall be done by the camp staff.
5. Trailers must be closed from floor to ground by sheeting or banking from October 15th to May 15th.
6. There shall be at least 8' between banks (back to back) of trailers.
7. Washrooms to be separated from sleeping rooms by full partitions and doors; and to have separate ventilation with suction fan.
8. Raised walkways of wood or gravel from bunk house to dining room shall be provided.

ARTICLE V — ABLUTION UNIT

(1) Flush toilets shall be furnished at the following ratio:

1 toilet for 1 to 5 men	5 toilets for 31 to 45 men
2 toilets for 6 to 10 men	6 toilets for 46 to 60 men
3 toilets for 11 to 15 men	7 toilets for 61 to 75 men
4 toilets for 16 to 30 men	8 toilets for 76 to 90 men

with the addition of one toilet for each fifteen men thereafter.

(2) Urinals shall be furnished at the ratio of one per twenty-five men.

(3) A wash basin of stainless steel, porcelain, or its equivalent shall be provided at the ratio of one per five men with one mirror over each basin.

(4) Individual shower units with non-slip flooring shall be furnished at the ratio of one to eleven men.

(5) The ablution unit shall be cleaned daily by members of the camp staff. Washroom and toilets shall be part of the same building. Adequate supplies of paper towels, toilet tissue, and individual drinking cups shall be supplied in washrooms.

(6) A dressing cubicle adjacent to the shower shall be provided.

ARTICLE VI — RECREATIONAL FACILITIES

Section 1: Recreational facilities shall be provided by the prime contractor on the basis of at least three square feet of floor space per man, which may include a card room, TV room and rooms for such activities as pool and shuffleboard in addition to the use of the dining hall for lectures, films and meetings. Employer to supply recreational facilities bearing in mind camp size, location and length of job, all of which shall be determined by the Joint Council Sub-committee.

Section 2: As soon as possible, one pay telephone or other means of communication shall be made available. Pay telephones shall be installed on the basis of 1 to 250 men.

Section 3: The recreation space shall be in an insulated building; shall contain washroom facilities and shall be adequately heated.

Section 4: The recreation space shall be cleaned daily by members of the camp staff.

ARTICLE VII — CAMP COMMISSARY

A camp commissary shall be adequately stocked with tobacco supplies, soft drinks, magazines and newspapers, soaps and toilet articles, writing paper, postage stamps.

Work clothing, i.e. gloves and socks, bearing a Union label, shall be made available at prices not exceeding the retail rates of the area.

ARTICLE VIII — CATERING SPECIFICATIONS

Section 1: Quality of food purchased — meat must be Blue Brand or Red Brand. Turkeys, chickens and other fowl must be "A" grade. Dairy products (including eggs) must be "A" grade. Canned fruit and vegetables must be choice or fancy quality.

Section 2: Menu Requirements:

BREAKFAST:

Specific — three varieties of chilled juices, hot porridge, assorted dry cereals, bacon, fried and boiled eggs, white and brown toast, tea, coffee, milk.

Variables — One of stewed prunes, stewed rhubarb, ½ grapefruit, or other fruit. Ham and sausage at least twice a week and one other assorted meats on other days. One of scrambled, poached eggs or omelettes. One of hash brown, fried potatoes or baked beans. One of hot cakes, french toast, waffles.

LUNCH:

Specific — Soups (to include clam chowder on Fridays). First, second or third line meats (one of each but can substitute second line or third line). Boiled potatoes, two vegetables. Assorted cold cuts (must include cold roast beef and ham). Two types of salad. Salad dressings and oils. Pickles. Brown and white bread and rolls, cake, cookies and pastry. One type of pie. Tea, coffee, milk.

Variables — one mashed, baked, scalloped or french-fried potatoes. Two each of celery, carrot sticks, radishes, sliced tomatoes, sliced cucumbers, green onions, sliced boiled eggs, cheeses. One of jello or puddings. Canned fruit once per week. Ice cream twice per week. One of lemonade, Kool-aid, Freshie.

DINNER:

Specific — Same as lunch except as follows: First line meat must be beefsteak twice, roast beef twice, roast pork once, baked ham once, roast or fried chicken once and roast turkey once each week.

Variables — Same as lunch except as follows: Canned fruit three times per week. Ice cream twice per week.

Section 3: Cold Lunches

When circumstances warrant and sandwiches are required, they shall be prepared by the catering staff, and when practical, a pre-order system may be utilized if required by the caterer, and a good assortment of sandwiches must be available.

Sandwiches shall be prepared utilizing the following assortment of fills. A selection of four of these to be made available each day; cold roast beef, ham and pork, prepared meats, tonque, devilled eggs, fish, lettuce and cheese along with the appropriate dressings. Pickles plus three of the following must be provided for packing with lunches; celery, carrot sticks, radishes, sliced tomatoes, sliced cucumbers, green onions and sliced boiled eggs. Cakes pastries and pies plus tea, coffee and milk for thermos fillings must also be provided.

Section 4: Fresh Fruit

To be available for all packed lunches, or to be picked up in the dining room at the meal hours. This ensures that those who do not take a packed lunch have an opportunity for fresh fruit each day.

Section 5: First-line

Beefsteak, cutlets, roast beef, roast pork, baked ham, ham steak, chicken, turkey, pork chops, roast lamb and roast veal.

Second-line: Fish (must be served on Friday), short ribs, spare ribs, stews, meat pies, liver, curried dishes, spaghetti and meat balls, sausages, tongue, salisbury steak, swiss steak, ground beef and corned beef.

Third-line: Hot dogs, omelettes, chili con carne, baked beans, chicken and turkey turnovers, and dishes utilizing leftover meats.

Section 6: Coffee — In addition to meal hours, coffee shall be made available daily in the recreation hall or other appropriate camp facility during at least two evening hours.

Section 7:

(1) Trays and/or dishes are to be cleared by members of the culinary staff.

(2) Tables shall be not less than three feet in width. Settings at the table shall be not less than 30" per person with adequate width and space between tables.

(3) Subject to Provincial Health Regulations, kitchen facilities, equipment and food supplies shall be subject to inspection by the duly authorized representative of the Joint Council Camp Committee at any and all times.

(4) The menu shall be posted in the entrance hall in a conspicuous position.

(5) Dinner plates are to be kept warm prior to the serving of meals.

(6) The following stations shall be located so as not to impede serving of the steam tables:

(a) Beverage Station, i.e. tea, coffee, milk, cold drinks, etc.

(b) Fresh Fruit Station, i.e. apples, oranges, bananas, pears, plums, grapes, watermelon, etc.

(c) Cold Table, i.e. salads, cold meats, green vegetables, cheese, etc.

(7) The men shall not be required to stand outside of the entrance hall waiting for the line-up to go through.

(8) The entrance to serving lines shall be fully enclosed, heated and provided with clothes hooks and adequate shelves to accommodate the hanging of outer clothing and hard hats.

(9) To expedite meal service, meal hours may be staggered.

Section 8: For health reasons, the Council discourages the practice of food in any form being left in the living accommodation for a lengthy period (24 hours).

Section 9: The kitchen shall have at least one hot line so that plates and all breakfast foods may be served hot. It shall also have large enough grill space, ovens, bake ovens, dishwashing facilities, adequate refrigeration and storage, all of which shall be kept in a clean condition at all times.

Dining Room — Shall be of sufficient size and employ sufficient waiters or waitresses to adequately serve the camp occupancy in not more than two and one-half hour sittings per meal.

There shall not be any cracked or chipped dishes used.

Section 10:

(a) Garbage areas adjacent to kitchens shall be screened, sprayed and kept clean at all times.

(b) Garbage cans retained in the kitchen to be washed daily with steam or scalding water.

(c) Sufficient parking facilities shall be provided, with adequate plug-ins. Where plug-ins are not provided, provision will be made for starting cars in sub-zero weather.

(d) There shall be a night fire patrol.

(e) There shall be no discrimination between crafts on accommodation.

(f) Adequate room shall be available for all employees of sub-contractors.

ARTICLE IX — CAMP GRIEVANCE PROCEDURE

It is recognized that in the interest of all camp occupants, grievances should be dealt with as expeditiously as possible. If a grievance is not resolved satisfactory by the Job Stewards, the details shall be set forth in writing on the official Grievance Report and signed by all of the Job Stewards and the Report shall be dispatched to the Secretary of the Local Building and Construction

Trades Council. Upon receipt of a properly completed Grievance Report, the Secretary shall arrange a meeting of the Joint Council Sub-committee to deal with the Grievance Report. The Joint Council Committee member(s) shall be granted access to the project at all times.

Section 1: Chief Camp Steward

(1) The Job Stewards of all trades shall elect from their number, one Steward to serve as Chief Camp Steward. This position is to be rotated every three months, to another trade, if possible.

(2) The Chief Camp Steward shall arrange regular meetings during non-working hours, with all the Stewards of each trade attending. He will ensure that the Proceedings are recorded. He shall Chair the meetings and be the general spokesman in the presentation of Grievances to the Camp Management or its designated representative. It is understood that, where extenuating circumstances require immediate attention to a problem, then a meeting may be called during normal working hours.

(3) The Chief Camp Steward shall not have any jurisdiction over any matter not concerning the general comfort of the residents of the camp.

(4) The Chief Camp Steward may be replaced by a majority vote of those Stewards present at a regular meeting when it is evident that he has not acted in the best interests of the camp residents.

Section 2: Camp Management

(1) The person holding the responsibility for the management of the camp and the catering facilities shall co-operate with the Stewards by attending the camp meetings. He will endeavour, within his power, to answer all grievances as they are presented.

(2) The Camp Management shall be given an opportunity to present any grievances he may have concerning the camp residents, and he shall be entitled to answer, when possible, to his grievances, as they are presented.

Section 3: Grievances

(1) No resident of the camp shall complain directly to an employee of the catering staff. If a resident finds he has a grievance, he shall first present it in writing to his Job Steward.

(2) The Job Steward will discuss all grievances with the Chief Camp Steward, who will record same. The Chief Camp Steward will hold the grievances until the next regular meeting of the Job Stewards, provided, however, such grievances are not of an urgent nature.

(3) The Chief Camp Steward shall present the grievances to the Stewards at the meeting to examine the validity of the grievances. Decisions shall be determined by a majority vote of those present.

(4) When the Stewards have listed all the valid grievances, in their proper order, they shall present them to the Camp Management or its designated representative in seriatim, the disposition of each grievance shall be recorded.

(5) When all the grievances have been dealt with, the Chairman will have the record of grievances and disposition read out in the presence of the Camp Management before the meeting is adjourned.

(6) At the conclusion of the meeting, a copy of the proceedings shall be sent to the Secretary of the Local Building and Construction Trades Council and the Secretarry of the local Joint Council Sub-committee, by the Chairman.

(7) A grievance of an urgent nature may be dealt with by the Chief Camp Steward and at least two Stewards by going directly to the Camp Management and arranging a meeting for the specific purpose of discussing the urgent grievance.

Section 4: Local Camp Committee

(1) If a grievance is not resolved pursuant to Section 3 of this Article, the details shall be set forth in writing on the official Grievance Report by the Chief Camp Steward and signed by all of the Camp Stewards attending the meeting. The Report shall be dispatched to the Secretary of the Local Building and Construction Trades Council.

(2) Upon receipt of a properly completed Grievance Report, the Secretary shall arrange a meeting of the Joint Council Sub-committee to deal with the Grievance Report.

ARTICLE X — TERMINATION DATE

The provisions of these Camp Rules and Regulations shall remain in full force and effect from January 1, 1970 to December 31, 1979.

ARTICLE XI — CAMP CONDUCT AND PROCEDURAL RULES

In recognition of the great improvement of Camp conditions over the past few years, and in consideration of the efforts of Building Trades Councils, in co-operation with the various Employers' groups, to improve the standard of living for Building Tradesmen, certain regulations have to be laid down and adhered to in order to ensure that the camp conditions are maintained.

It must be realized that a camp and equipment costing many thousands of dollars, in some cases in excess of a million dollars, will soon deteriorate if subjected to the whims of vandals without any measure of control over such situations.

There are camps in existence today where the population is greater than many of the villages and towns in the Province and these communities have set up some form of authority such as a Town Council to govern the population.

Local Building Trades Council Camp Committees on construction projects are, for the most part, playing a very vital role in the Labor Management relationship which, through co-operation of both groups, are able to make a Building Tradesman's life away from home as pleasant as possible under the circumstances.

Their job is no small task. Therefore, with this in mind, the following Camp Regulations have been set forth to be administered by the Camp Committee, who shall have full authority to enforce these regulations.

1. The Camp Committee of Shop Stewards shall be responsible for the enforcement of the Camp Rules and Regulations.
2. All acts of vandalism shall be investigated and the responsible party or parties are to be exposed, and such acts together with the names of the party or parties, permanently recorded with the Local Building and Construction Trades Council. Repeated offences may result in expulsion from camps under the jurisdiction of the Local Building and Construction Trades Council.
3. Any occupant of the camp found guilty of wilful damage to camp property shall be made responsible for all costs as the result of such damage.
4. The Camp Committee shall have authority to recommend the dismissal of any occupant found guilty of wilful damage to camp property.
5. Occupants of the camp shall be co-operative with the Bullcooks in maintaining cleanliness of the rooms.
6. No resident of the camp shall complain directly to an employee of the camp or catering staff. If a resident finds he has a grievance he shall first present it in writing to his Job Steward.
7. Occupants of the camp shall show consideration for their neighbours in respect to the playing of radios or television sets or noisy conversation after 11:00 p.m.
8. Late night parties in rooms that disturb other occupants of the camp are prohibited.
9. No occupant of the camp shall utilize laundry facilities that are located in the same building as the living quarters after 11:00 p.m.

10. Fighting or violence of any sort in any part of the camp is grounds for instant dismissal.
11. Any camp occupant who is abusive to any member of the Shop Stewards Camp Committee or Catering staff, in the conduct of his duties, shall appear before the Shop Stewards Camp Committee to account for his behaviour. Refusal to appear before the Committee may result in instant dismissal.
12. The Shop Stewards Camp Committee shall be authorized to summon any resident of the camp to appear before them to deal with grievances raised by the Camp Management.
13. **Managements Rights**

    Notwithstanding the Rules and Regulations above, Management reserves the right to establish and enforce additional camp rules and regulations that may be required from time to time. Before such rules and regulations are enforced there will be prior consultation with the local Camp Committee.

CERTIFICATE OF APPROVAL

This is to certify that the camp and catering facilities of:

..... at .....

have been inspected and approved by the duly authorized Joint Council Camp Committee of

THE ALBERTA

BUILDING AND CONSTRUCTION

TRADES COUNCIL

AND THE

ALBERTA CONSTRUCTION ASSOCIATION

Date of Approval ....., 19.....

Maximum No. of Occupants .....

.....

Chairman, Camp Committee

INSPECTION COMMITTEE:

.....

.....

.....

MEMORANDUM OF AGREEMENT for Camp Rules and Regulations covering Alberta

SIGNED on this 25th day of March, A.D., 1970.

On behalf of the

ALBERTA CONSTRUCTION ASSOCIATION

E. S. SUNLEY, Chairman
L. CHIKINDA, Member (South)
J. CUNNINGHAM, Member (North)
J. HALLS, Member (North)
G. DESSERICH, Member (South)
A. BAST, Secretary

On behalf of the

ALBERTA BUILDING & CONSTRUCTION TRADES COUNCIL

E. H. STARK, President
JOHN FRAME, Member (South)
A. HEIDEBRECHT, Member (North)
FRED LEBOLD, Member (North)
J. NICOLLS, Member (South)
O. FLETCHER, Secretary (South)

8.3 ABSTRACT OF TECHNICAL SPECIFICATIONS FOR CATERING AND HOUSE KEEPING SERVICES.

A. GENERAL SPECIFICATIONS

1. Contractor shall supply all services, supervision, labour, equipment, material and supplies to perform catering services in accordance with this specification.

2. Contractor shall provide a complete catering and housekeeping service as set out in these specifications.

3. Contractor shall provide supervision, efficient and adequate catering and housekeeping personnel to the satisfaction of the Owner.

4. Contractor shall comply with all Federal, Provincial, Local and Municipal regulations applicable to the catering and housekeeping for all food and goods supplied.

5. Contractor shall provide sufficient food of first class quality, government inspected as necessary, consisting of three meals per man/day, for in-camp personnel and two meals plus a make-yourself-lunch for field personnel, seven days a week. Lunch and supper shall have a selection of two varieties of meat. Menues shall be submitted for approval, on a weekly basis, to Owner's representative. Meals shall be furnished on a two 12 hour shift basis.

6. Owner shall supply and maintain all equipment as listed at no charge and contractor shall supply and maintain all additional equipment necessary including but not limited to all housekeeping, kitchen and dining room smallwares; including but not limited to silverware, dishes, cutlery, pillow, blankets, sheets, pillow slips, towels, facecloths, bedcovers and additional kitchen equipment. All items shall be new or as new condition.

7. Contractor shall maintain the entire camp, including kitchen equipment, in a clean and sanitary condition to Owner's satisfaction, and as may be required by any applicable regulation, by-law or statute of any Federal, Provincial or Municipal Authority. Contractor shall allow any authorized representative of Owner or any Federal, Provincial or Municipal authority free access to any part of the camp at any reasonable hour to inspect the building, equipment, food, foodstuffs and other supplies, and contractor's food storage, handling, preparation and serving methods.

9. Contractor shall provide complete janitorial services for the camp buildings, including the kitchen and dining room area, living accomodation, recreation buildings, office, storage space, laundry and washrooms. Janitorial services shall include making of beds once daily, maintaining all the building, fixtures and rooms in a clean and sanitary condition to the satisfaction of Owner.

12. Contractor shall provide all sanitation and cleaning supplies required to carry out the janitorial and laundry service described above. Contractor shall specifically be responsible for the supply of such items as toilet paper, soap, detergents, disinfectants and the supply of like articles and materials. Hand soap and papertowels will be supplied in washrooms by Contractor (personal items such as laundry soap and such supplies of Owner's employees are excluded from the Contractor's supply).

13. Freight, transportation, storage and hauling of Contractor's provisions, personnel and supplies are to be included in the man day rates. Food will be shipped a minimum of once per week and more often if necessary as deemed by Contractor or Owner.

17. Contractor shall maintain all steps free of snow and ice. Bulk snow removal is excluded. Owner shall supply sand and salt for contractor's use in clearance of snow and ice.

18. Contractor shall submit a procedure covering the Camp management and operation including the methods proposed to record and control the man day unit costs. These procedures and methods are subject to the prior review and approval of Owner's Camp Administrator.

19. Owner shall certify to contractor the names of all Owner's employees and other personnel who shall be entitled to receive feeding and housing services at the project. Such lists of names shall be herein referred to as the "camp-list"; it is understood that the Owner will keep the Contractor advised as to anticipated additions or deletions from same.

21. Contractor will supply meals and lodging as follows: Contractor's charges will be based upon man day and casual meals. A man day is defined as 11:00 a.m. to 11:00 a.m. Casual meals are served to any authorized persons which may include persons who are not camp residents, and non Syncrude employees. Contractor must stipulate to Owner the price of a casual meal, and man day charge. No cash meals will be served.

24. In addition to meal hours, Contractor shall provide coffee, tea and juice daily on a 24 hour basis in the recreation hall and light snacks.

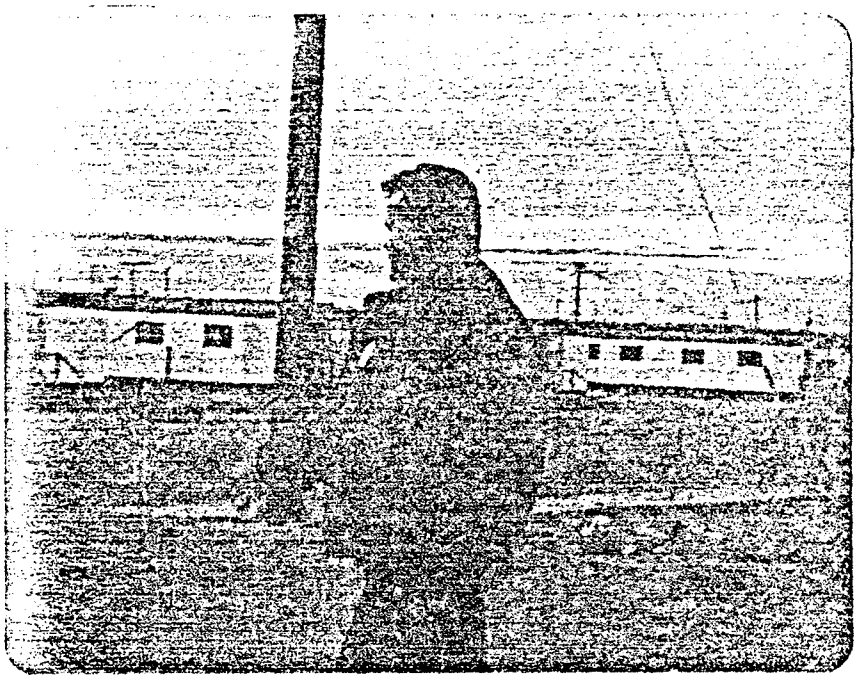
25. Contractor shall also provide coffee for filling thermos bottles at convenient urns, assorted non-carbonated beverages and carbonated beverages, i.e.: (soda pop) up to a maximum of 5 cans per day. Extra soda pop to be supplied upon request as per bid format.

28. Garbage disposal shall consist of all measures required to collect, contain and dispose of garbage from the camp buildings in containers provided by Contractor.

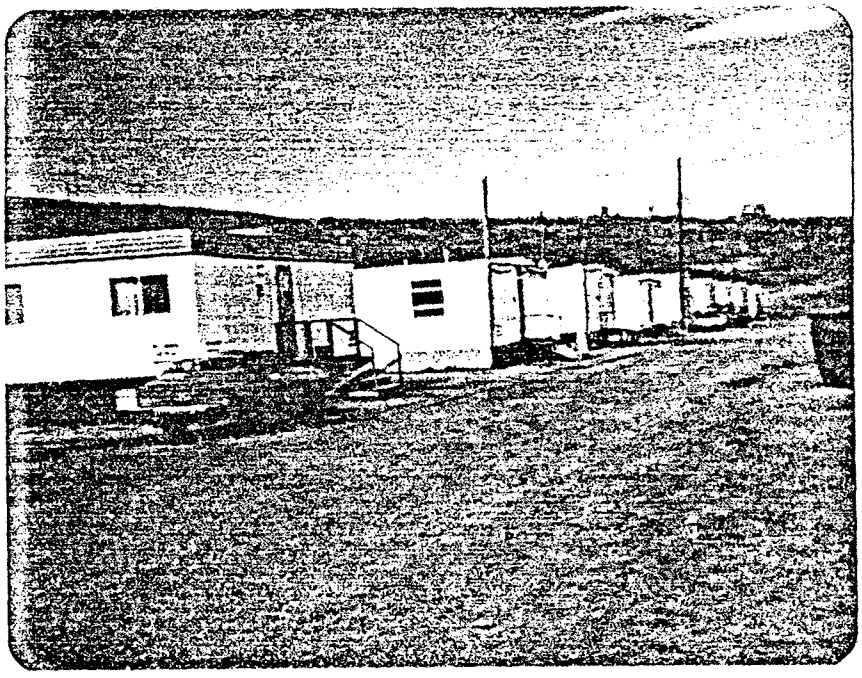
31. Due to accommodation restrictions, Contractor shall supply only male personnel kitchen staff, shall maintain a neat and hygenic condition, including a chief's hat and appropriate white wearing apparel. Smoking shall not be permitted during preparing and serving of food.

8.4 TYPICAL WEEKLY MENU FOR UNIONIZED INDUSTRIAL CAMP

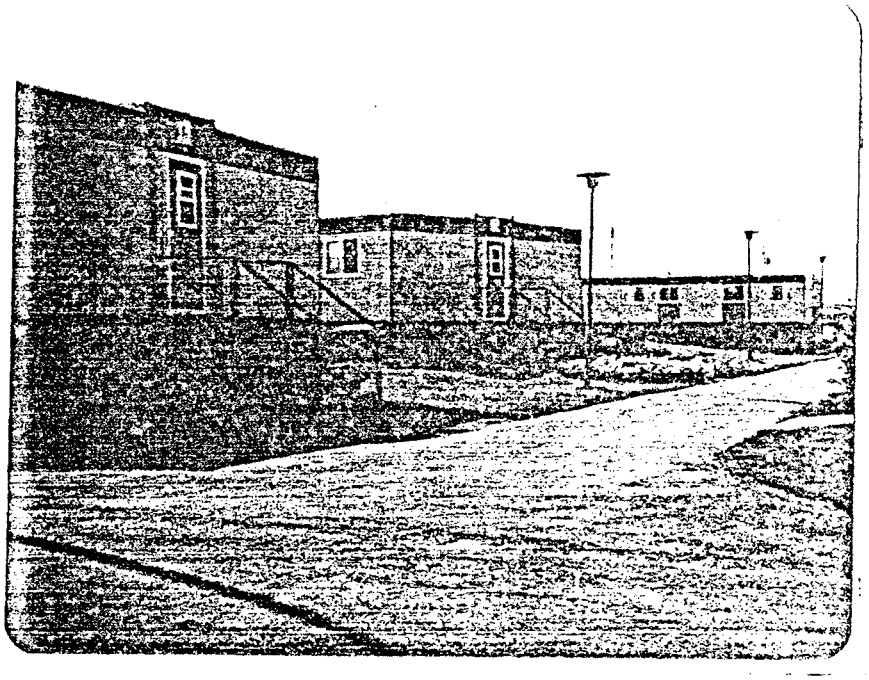
8.5 APPEARANCE AND FACILITIES PROVIDED IN LARGE INDUSTRIAL CAMPS



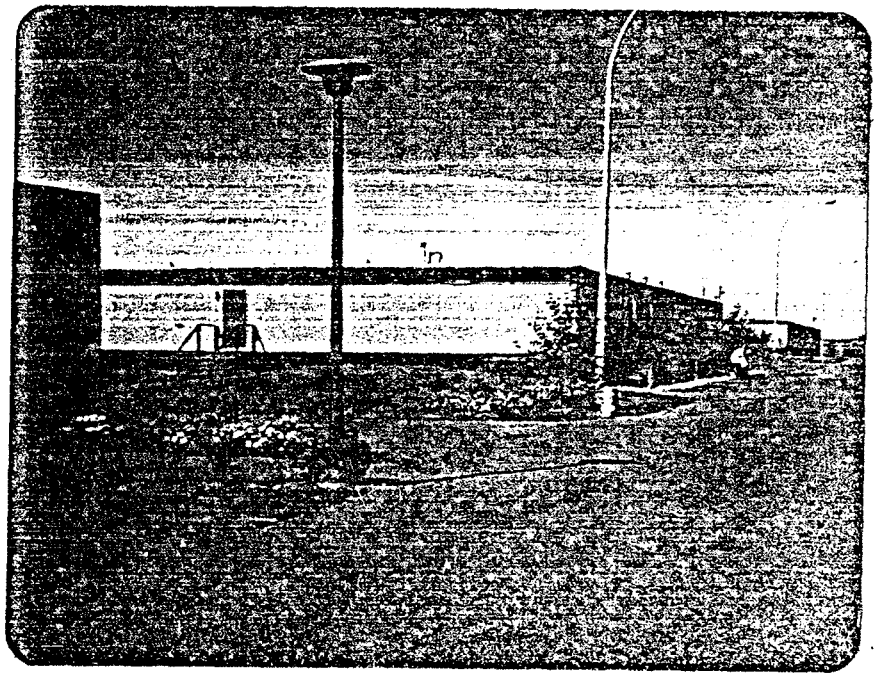
1. Syncrude Camp near Fort McMurray.



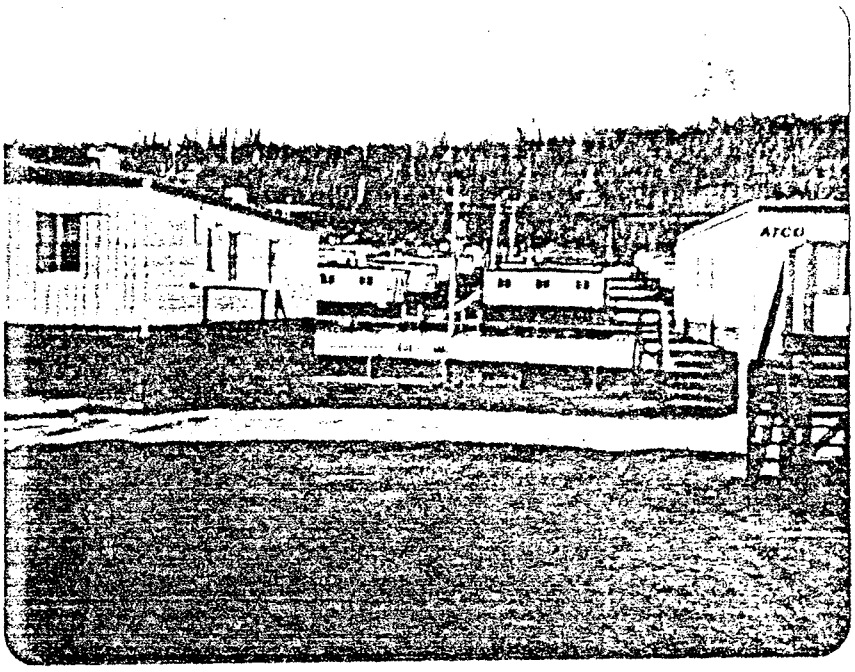
2. Suncor Camp near Fort McMurray.



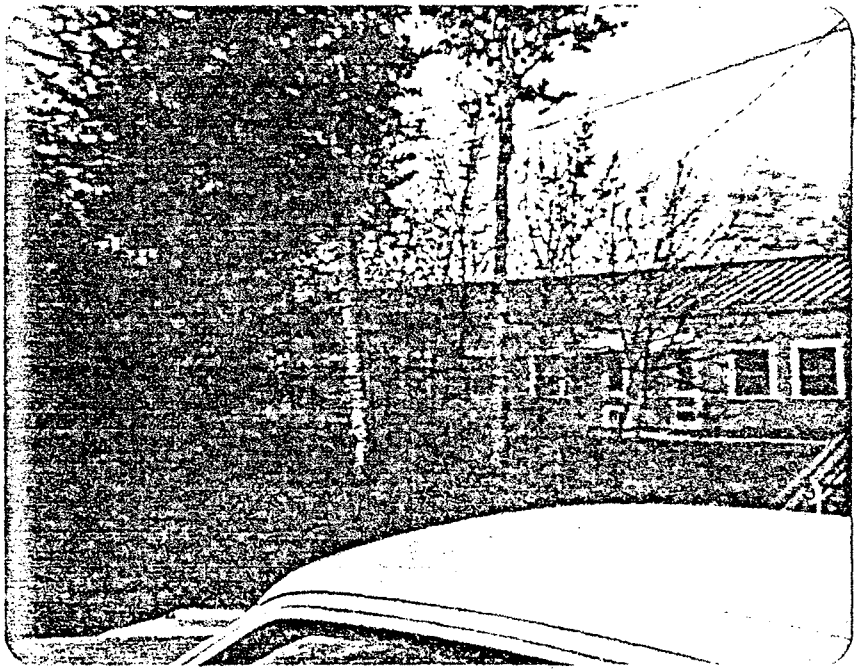
3. Alberta Gas Ethylene camp at Joffre, Alberta.



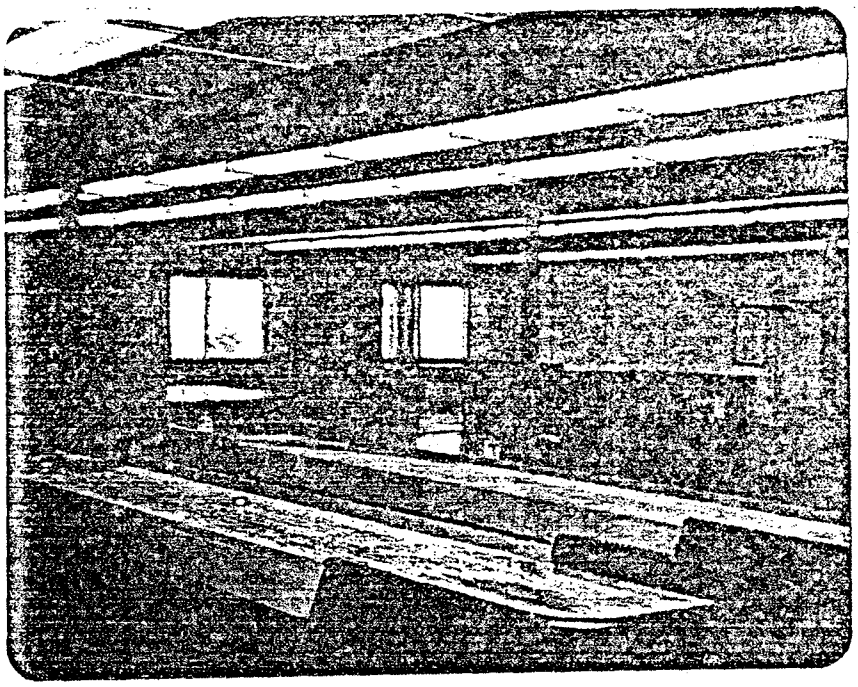
4. Another view of the camp at Joffre illustrating the landscaping and the design of the site.



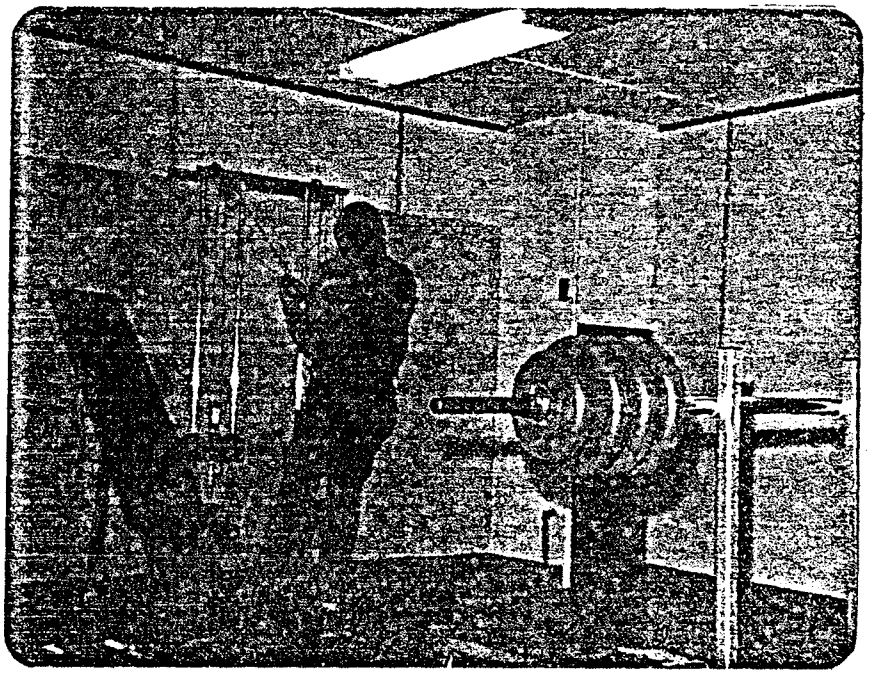
5. A view of the James Bay Energy camp at L.G. 2, near Radisson, Quebec.



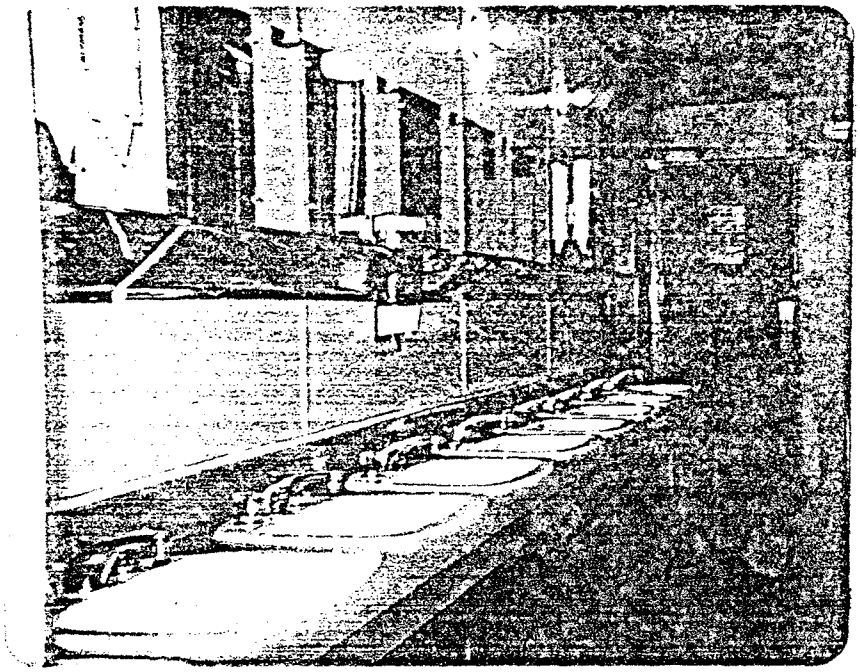
6. A private industrial camp in Fort McMurray.



7. A camp recreation room with shuffleboard and pool tables.

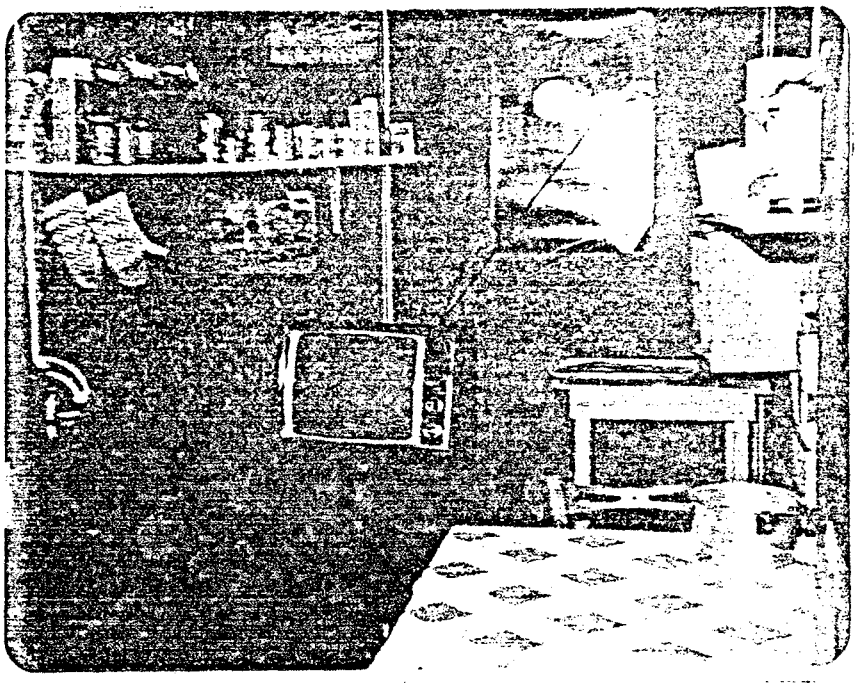


8. Most camps have an exercise room with equipment as shown here.



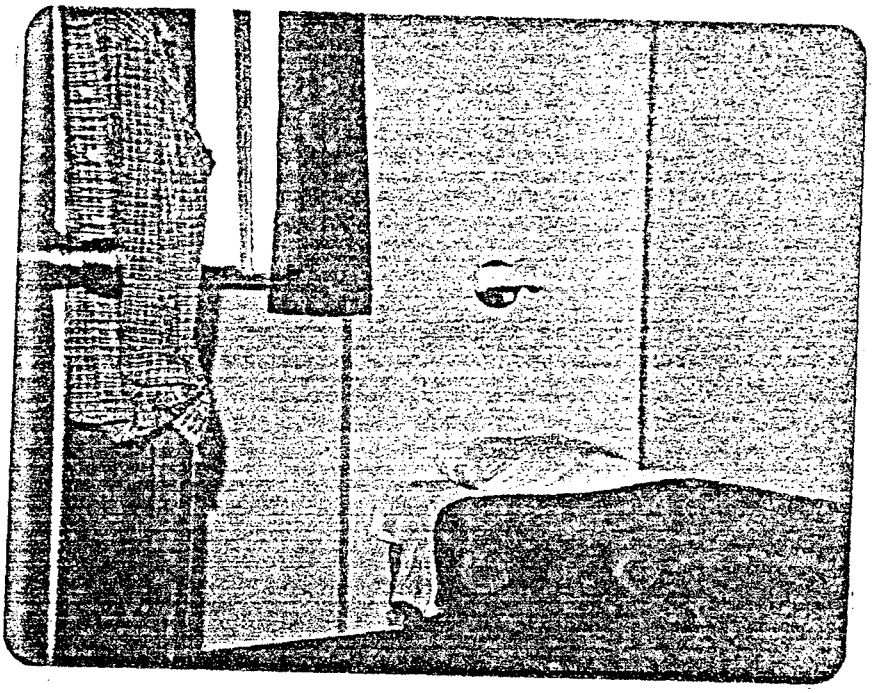
9. Typical communal washing facilities in a bunkhouse for forty-two men.

10. A view of the communal sitting room in a bunkhouse at the James Bay Energy Corporation camp at L.G. 2, Quebec.

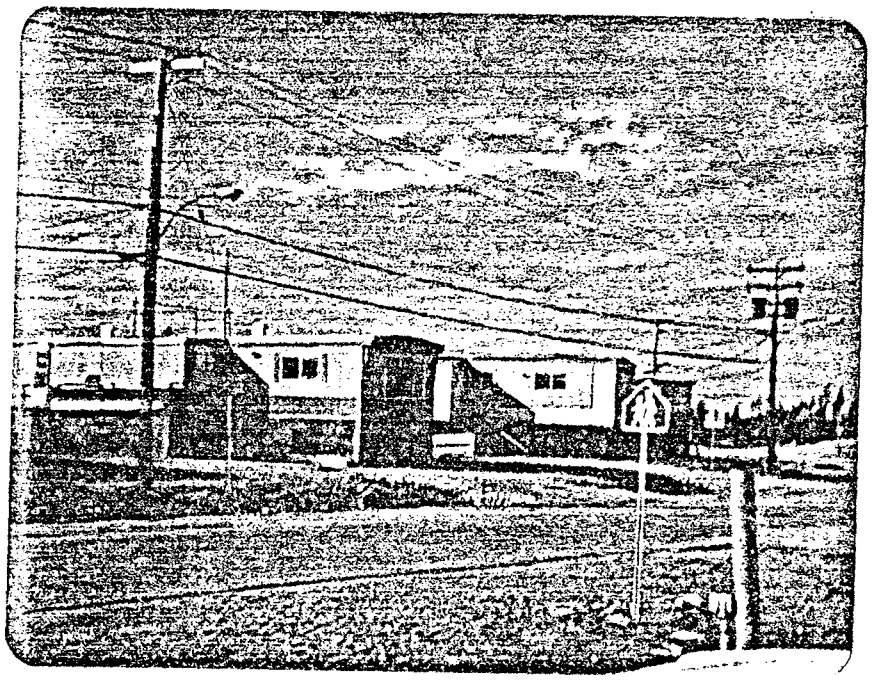


11. Another view of the communal sitting room in a bunkhouse at L.G. 2.

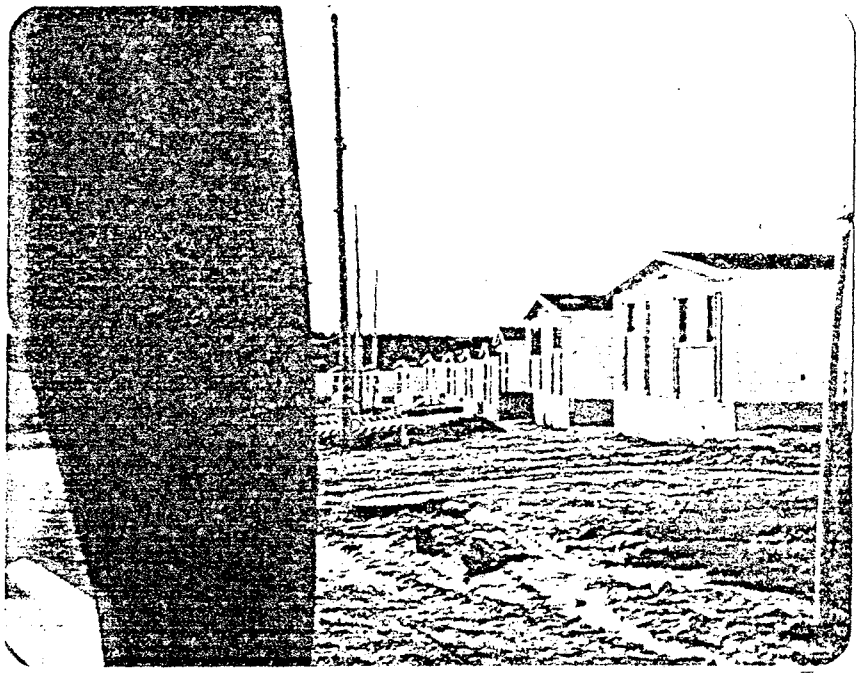
12. The interior of a bachelor suite at the James Bay Energy Corp. camp at L.G. 2, Quebec.



13. A typical bedroom in a bunkhouse.



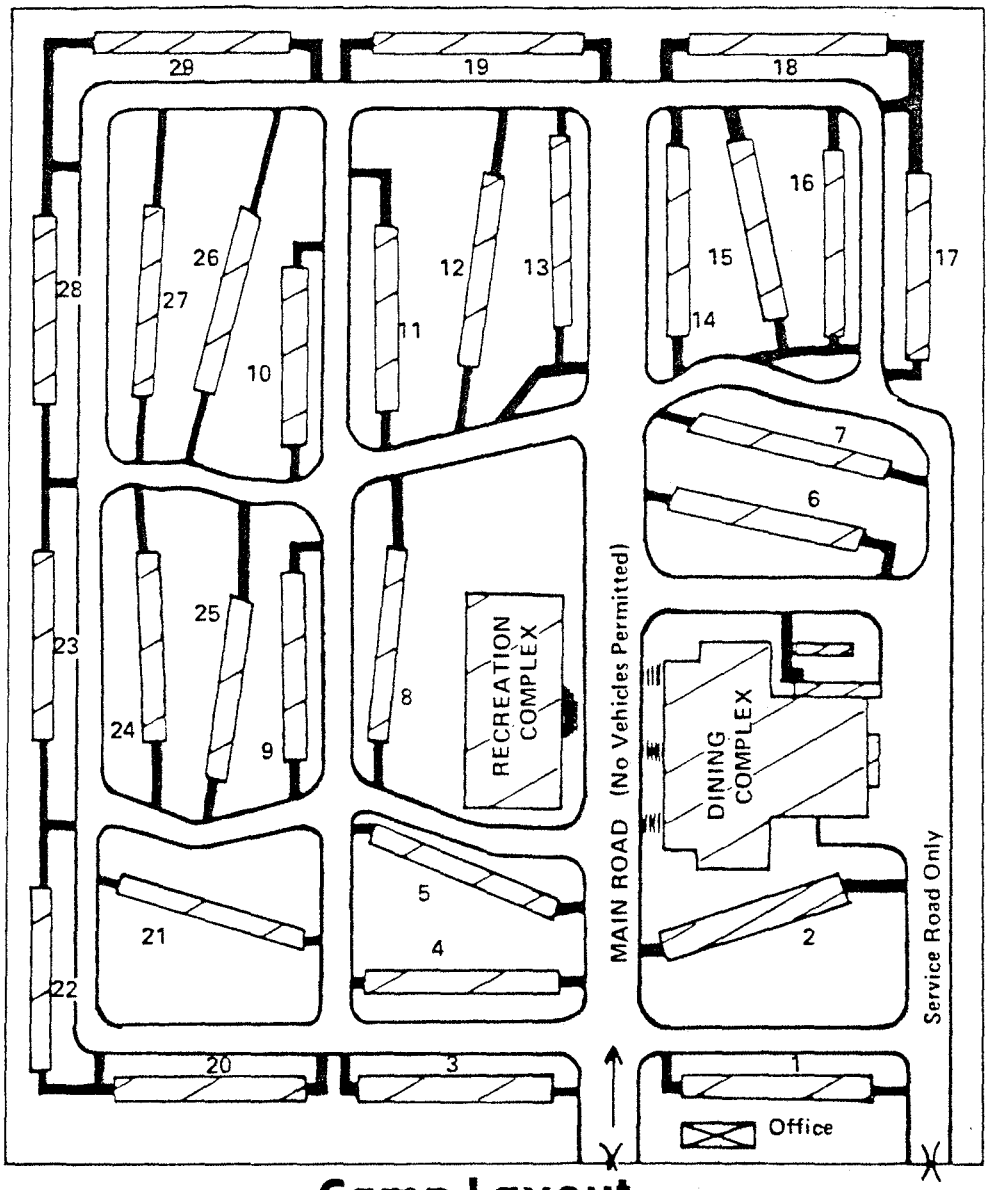
14. Temporary housing at the family camp at Radisson, Quebec.



15. Permanent housing at Radisson, Quebec.

16. A children's playground at Radisson, Quebec.

8.6 CAMP LAYOUT OF ALBERTA GAS ETHYLENE PROJECT, JOFFRE, ALBERTA



Camp Layout

ALBERTA GAS ETHYLENE PROJECT
Joffre, Alberta

9. LIST OF AOSERP RESEARCH REPORTS

1.		AOSERP First Annual Report, 1975
2.	AF 4.1.1	Walleye and Goldeye Fisheries Investigations in the Peace-Athabasca Delta--1975
3.	HE 1.1.1	Structure of a Traditional Baseline Data System
4.	VE 2.2	A Preliminary Vegetation Survey of the Alberta Oil Sands Environmental Research Program Study Area
5.	HY 3.1	The Evaluation of Wastewaters from an Oil Sand Extraction Plant
6.		Housing for the North--The Stackwall System
7.	AF 3.1.1	A Synopsis of the Physical and Biological Limnology and Fisheries Programs within the Alberta Oil Sands Area
8.	AF 1.2.1	The Impact of Saline Waters upon Freshwater Biota (A Literature Review and Bibliography)
9.	ME 3.3	Preliminary Investigations into the Magnitude of Fog Occurrence and Associated Problems in the Oil Sands Area
10.	HE 2.1	Development of a Research Design Related to Archaeological Studies in the Athabasca Oil Sands Area
11.	AF 2.2.1	Life Cycles of Some Common Aquatic Insects of the Athabasca River, Alberta
12.	ME 1.7	Very High Resolution Meteorological Satellite Study of Oil Sands Weather: "A Feasibility Study"
13.	ME 2.3.1	Plume Dispersion Measurements from an Oil Sands Extraction Plant, March 1976
14.		
15.	ME 3.4	A Climatology of Low Level Air Trajectories in the Alberta Oil Sands Area
16.	ME 1.6	The Feasibility of a Weather Radar near Fort McMurray, Alberta
17.	AF 2.1.1	A Survey of Baseline Levels of Contaminants in Aquatic Biota of the AOSERP Study Area
18.	HY 1.1	Interim Compilation of Stream Gauging Data to December 1976 for the Alberta Oil Sands Environmental Research Program
19.	ME 4.1	Calculations of Annual Averaged Sulphur Dioxide Concentrations at Ground Level in the AOSERP Study Area
20.	HY 3.1.1	Characterization of Organic Constituents in Waters and Wastewaters of the Athabasca Oil Sands Mining Area
21.		AOSERP Second Annual Report, 1976-77
22.		Alberta Oil Sands Environmental Research Program Interim Report to 1978 covering the period April 1975 to November 1978
23.	AF 1.1.2	Acute Lethality of Mine Depressurization Water on Trout Perch and Rainbow Trout
24.	ME 1.5.2	Air System Winter Field Study in the AOSERP Study Area, February 1977.
25.	ME 3.5.1	Review of Pollutant Transformation Processes Relevant to the Alberta Oil Sands Area

26.	AF 4.5.1	Interim Report on an Intensive Study of the Fish Fauna of the Muskeg River Watershed of Northeastern Alberta
27.	ME 1.5.1	Meteorology and Air Quality Winter Field Study in the AOSERP Study Area, March 1976
28.	VE 2.1	Interim Report on a Soils Inventory in the Athabasca Oil Sands Area
29.	ME 2.2	An Inventory System for Atmospheric Emissions in the AOSERP Study Area
30.	ME 2.1	Ambient Air Quality in the AOSERP Study Area, 1977
31.	VE 2.3	Ecological Habitat Mapping of the AOSERP Study Area: Phase I
32.		AOSERP Third Annual Report, 1977-78
33.	TF 1.2	Relationships Between Habitats, Forages, and Carrying Capacity of Moose Range in northern Alberta. Part I: Moose Preferences for Habitat Strata and Forages.
34.	HY 2.4	Heavy Metals in Bottom Sediments of the Mainstem Athabasca River System in the AOSERP Study Area
35.	AF 4.9.1	The Effects of Sedimentation on the Aquatic Biota
36.	AF 4.8.1	Fall Fisheries Investigations in the Athabasca and Clearwater Rivers Upstream of Fort McMurray: Volume I
37.	HE 2.2.2	Community Studies: Fort McMurray, Anzac, Fort MacKay
38.	VE 7.1.1	Techniques for the Control of Small Mammals: A Review
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