

Workforce Housing and Feeding Solutions for Health, Safety, Productivity and Morale

By Christopher Wanjek



Executive Summary

Remote and temporary worksites prevalent in the oil, gas and mining industries present a challenge for housing and feeding workers. The nearest town and accommodations might be hours away by car; often such worksites are fly-in operations. Hostile environments — extreme cold or heat — and inadequate roads and other infrastructure limitations compound the problem of providing adequate food and shelter. Inadequate accommodations can leave workers vulnerable to poor nutrition, sickness, inadequate rest, long-term health problems, low morale and general apathy about the work at hand. This, in turn, can lead to lower productivity and increased risk of accidents. This White Paper examines factors that affect worker health, safety and productivity in remote worksites and provides the rationale of how better feeding and relaxation programs can increase productivity and lower accident rates.

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In heavy industries such as the oil and gas industry, accidents are your worst nightmare. One wrong switch, one loose bolt, one missed safety check, and the entire system can blow. Workers' lives are at stake. And, depending on the severity of the accident, the life of the entire community is threatened, too, as well as the very life of the company and the broader business climate for years to come. Years of a carefully cultivated corporate social responsibility practice can evaporate overnight.

But you can't blame the weather...or bad luck. Approximately 90 percent of workplace accidents are caused by human error¹, whether originating in poor managerial decisions months and miles away from the site of the accident, or worker errors right then and there that have immediate and devastating effects. And the number-one cause of worker-initiated accidents is fatigue in its various forms, such as exhaustion, weakness or sleepiness.²

This means that approximately 90 percent of workplace accidents are preventable. Training is key, of course. Workers need to understand not only how to operate equipment but to make quick yet prudent decisions, when necessary. Yet no amount of training can prepare a sleepy, fatigued or otherwise unfocused or unmotivated worker from making a poor decision or a wrong move.

Companies that complement worker safety and training programs with adequate feeding and relaxation programs report lower accident rates and higher productivity and morale.³ Food and rest are, in essence, protective equipment, and they serve to lower the risk of serious workplace accidents. As such, food and rest should be viewed as essential to worker safety and health as goggles, ear protection or the sundry protective elements found at any industrial site.

¹ Feyer, A.M. & Williamson, A.M. (1998): Human factors in accident modelling. In: Stellman, J.M. (Ed.), Encyclopaedia of Occupational Health and Safety, Fourth Edition. Geneva: International Labour Organization.

² Chan, M. (2009) "Accident Risk Management in Oil and Gas Construction Projects in Mainland China," University of Sydney.

³ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

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Food, in this respect, needs to fit the workers and their environment. Carrying the earlier analogy further, just a simple pair of garden gloves cannot adequately protect a well operator in sub-40-degree weather; and, similarly, fast food or even typical diner food cannot sustain this same well operator for very long. Workers of heavy labor in extreme conditions — for example, in the bitter cold common to many North American drilling operations for at least several months a year — typically need upwards of 4,000 kcal per day in well-designed portions of proteins, fats and carbohydrates. This helps to ensure the proper energy, vitamins and minerals required not only to work 8- to 12-hour shifts but also to recover from the long workday and to stay healthy.⁴ How ironic, then, that the oil and gas industry, so focused on producing high-quality fuel to power the nation, runs the danger of overlooking the high-quality fuel needed to power the workers' bodies.

Rest and breaks during working hours are well articulated by state, provincial or federal statute, and most companies abide by such laws as a matter of reflex. In the context of remote worksites, however, there is an added necessity for relaxation. Workers need to decompress, and being away from home, in poor and inadequate shelter, can make this difficult for the worker.

Relaxation includes the comforts of home: a warm and clean bed, hot showers, computers with Internet access, TVs and DVDs, games, laundry facilities, private rooms and cooking equipment or access to food any time. Although less scientifically defined as nutrition and less regulated than work breaks, relaxation — that is, the aforementioned comforts during non-working hours — is seen increasingly as being as important as nutrition and work breaks in preventing accidents and in ensuring a healthy, motivated and rested workforce.⁵

What Workers Typically Get

In many parts of the world, remote industrial sites are synonymous with poor worker accommodations and vast environmental degradation. Think mining operations and shantytowns. Such sites can belittle an international company's global reputation.

⁴ FAO (1976) "The feeding of workers in developing countries," FAO Food and Nutrition Paper No. 6. Rome

⁵ Folkard, S. et al. (2006) "Modeling the impact of the components of long work hours on injuries and accidents," Am J Ind Med. 49(11):953-63.

“Those living in motels often are forced to eat at the same diner or fast-food restaurant for the duration of their contract...Imagine such an existence, all the while working 12+ hour days.”

Worker accommodations are far better in North America and other economically developed regions, but they still are far from ideal.⁶ In many remote-site operations, when the call for work goes out, workers must scramble for housing.⁷ Many workers pile up in local motels, if available, with the word "local" meaning anywhere within a two-hour drive from the worksite. Other workers tow trailer homes close to the worksite, and these are usually ill-suited for long-term use or for extreme heat or cold.

Securing food daily quickly becomes a problem. Even if these workers have access to a stove and know how to cook, they will have difficulty obtaining fresh foods, and their meals will likely be basic and nutritionally inadequate for optimal health. Those living in motels often are forced to eat at the same diner or fast-food restaurant for the duration of their contract, which could be months. Imagine such an existence, all the while working 12+ hour days.

For extremely remote sites, companies are obliged to provide basic food and shelter. This, too, however, tends to be suboptimal.⁸ Companies in the business of natural resource extraction often have a tendency to provide the most basic accommodations with the assumption that the largely male workforce is there to work and that these men expect to "rough it." This is what these workers are used to, after all. Food and shelter take on the feel of an army camp with just bearable accommodations and with the notion that, because this is temporary, it is acceptable. Food may seem hardy and pleasing — meat and potatoes — but ultimately this lacks essential vitamins and minerals needed by the worker to work at 100-percent efficiency during long, hard shifts.⁹ This is no "home away from home" but rather a no-frills accommodation that does nothing to attract the most talented labor.

⁶ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

⁷ Dragseth, D. (2011) "Help Wanted: The North Dakota Boom," *New Geography*, October 26, 2011.

⁸ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

⁹ Sherman W.M. & Lamb D.R. (1988) "Nutrition and Prolonged Exercise," In: Lamb DR, Murray R editor, *Perspectives in Exercise Science and Sports Medicine: Prolonged Exercise*, Indianapolis, Ind: Benchmark Press; p. 213–280.

What Workers Need

“For most workers at remote sites, anything the company can do to relieve the stress of long hours and great distances will be a plus for worker health and morale and, by extension, for company safety and productivity.”

Workers at remote and temporary worksites are a diverse crew. They might be college-educated engineers. They might be high-school-educated blue-collar workers. They are likely men, but they are often (and increasingly!) women. But they often have one thing in common: They likely are leaving their families and the comforts of home for hard work and long hours. As with the reader of this White Paper, their home — that is, family, friends and community — is not out there in the wilderness. Maybe they have children in school; maybe they have sick parents. Whatever the case might be, they have a life...and they are far away from that when they are at the remote worksite.

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What workers at remote worksites need, then, is as simple as this: a relaxing place to come home to.

The Economics of Comfort™

Successful food and housing programs at remote worksites — where "successful" means high morale, high productivity, low absenteeism, low turnover and few, if any, serious accidents — have just a few key ingredients:

- CEOs or upper management that truly care about worker safety and health on and off the job
- Thoughtful catering that takes into consideration the nutritional needs (and not just tastes) of the workforce
- Easy access to recreational activities
- Opportunities to relax with co-workers
- The feeling of a home away from home, as opposed to a bunker away from home¹⁰

¹⁰ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

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Catering will vary, but the daily menu must find a balance between tasty and healthy. Often meal programs strive for the former and not the latter. Consider, however, the unique nutritional needs of a heavy laborer at a drilling site. Most workers will burn more than 300 kcal/hour. Fast-food or a carbohydrate diet can leave the worker hungry or weak after just a few hours on the job. In general, the body in manual labor requires 1.2-1.7 grams of protein per kilogram of body weight.¹¹ The B-complex vitamins, found in meats and whole grains, are needed for tissue repair and energy conversion. Vitamins A and C, found in vegetables, are needed for immunity. Vitamin D, found in fatty fish (and sunshine, if available), is needed for calcium absorption.

Some enterprises also take into consideration the long-term health of the worker. Certain Canadian mining operations, for example, prepare special meals of whole foods (whole grains, vegetables, wild game) for a workforce largely comprising indigenous workers of the First Nations, who suffer disproportionately from diabetes compared to the rest of the nation.¹²

But the bottom line is that on-the-job weakness and fatigue translate to lower productivity and more accidents.

Comforts also can vary but, at the heart of the matter, is the feeling of hominess. Every comfortable bed, soft pillow, warm shower, lively pool room, exercise facility, clean laundry facility and so on will engender loyalty and good morale and reduce the risk of fatigue through the 5- to 10-day rotation of 10- to 12-hour shifts often expected from workers.

The choice between living out of a motel, living in a trailer (or car), or living in high-quality all-inclusive temporary housing is an easy choice to make. And among all the remote operations that do offer food and shelter, the choice between a "one-star" and "four-star" accommodation also is easy to make. Workers talk, and word will spread about which companies offer the best working conditions.

¹¹ Lemon, P.W.R. (1998) "Effects of exercise on dietary protein requirements," Int J Sport Nutr. 8, pp. 426–447.

¹² Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

“... the Canadian government estimates that wellness, in the form of better feeding, health promotion and relaxation programs, amounts to a CAN\$2 to \$6 return on investment”

It is this writer's opinion that facilities built and maintained by Target Logistics, and its "Economics of Comfort™" strategy, meet the very best qualities that I first identified in the book *Food At Work*, about worker feeding programs, published by the United Nation's International Labour Organization in 2005. These temporary facilities not only offer companies a competitive edge, but they reduce the number and severity of accidents by virtue of promoting a better-rested, better-nourished and better-dedicated workforce.

Return on Investment

Investments in feeding and wellness programs routinely yield profits in terms of higher productivity, fewer accidents, reduced absenteeism and less turnover.¹³ Husky Injection Molding Systems, Ltd., in Bolton, Ontario, has reported a US\$6.8 million in yearly savings from a US\$2.5 million investment in wellness. Coors Brewing Company has reported a \$6.15 productivity gain for every \$1 invested in food and fitness. Similarly, Travelers reports a \$3.40 gain for \$1 invested in nutrition and recreation; DuPont reports a \$2.05 gain for \$1 invested in nutrition and recreation; and the Canadian government estimates that wellness, in the form of better feeding, health promotion and relaxation programs, amounts to a CAN\$2 to \$6 return on investment.¹⁴

And food and housing is just that: an investment. No company is required to provide healthy food and comfortable accommodations. Yet it is little coincidence that the best companies to work for, as ranked by *Fortune* magazine, routinely have superior cafeterias and various recreational comforts.

¹³ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

¹⁴ Wanjek, C. (2005) "Food At Work: Workplace Solutions for Malnutrition, Obesity and Chronic Diseases," Geneva: International Labour Organization.

Every manager desires a skilled and motivated workforce that not only can do the job but can do the job well. Thus, the manager of a remote worksite must ask: Am I giving my workers what they need in terms of rest, motivation and nutritional energy? What is my food and housing solution? Will I offer no such accommodations and take what I can get in terms of workers? Will I allow my drivers to sleep in a truck in sub-zero temperature? Will I create temporary housing with poor preparation that might foul the land and worry the local community — a community already anxious about my being here in the first place? Or will I invest in superior food and housing solutions that will leave my workers well rested, nourished and motivated and leave the community or environment as pristine as we found it?

Conclusion

Remote-site food and housing accommodations, if planned well, can have numerous positive effects on profit and productivity. Tangible and immediate benefits can include well-rested and well-nourished workers with high morale and productivity levels and lower risk for serious accidents. Long-term benefits from such an investment can include community support and a positive corporate image.

About the Author

Christopher Wanjek is an author and freelance health and science writer based in Washington, D.C. His expertise is in health, medicine, environmental sciences, physics and astronomy. He holds a Master's of Public Health from Harvard School of Public Health and a degree in journalism from Temple University. Wanjek is the author of three books: *Hey, Einstein!* (2012), *Food At Work* (2005) and *Bad Medicine* (2003). He has also written more than 300 newspaper, magazine and web articles for periodicals such as *The Washington Post* and *Smithsonian* magazine. Wanjek is a columnist for LiveScience news website and for *Mercury* magazine and can be reached at wanjek@nasw.org.

About Target Logistics

Target Logistics, an Algeco Scotsman company, is the largest turnkey workforce housing provider in the United States. Based in The Woodlands, TX; and with offices in Boston; Williston, ND; Denver; Calgary; and Sydney, AU, the company provides cost-effective and customized site design, construction, operations, security, housekeeping and catering for temporary workforce lodging, mobile crew camps and extended-stay hotels. Named by *Inc.* magazine as one of "America's Fastest-Growing Private Companies," Target Logistics offers innovative housing solutions in the world's most remote locations. Visit www.TargetLogistics.net or call (800) 832-4242.