4

Training at Westray

To inquire into . . .

(c) whether any neglect caused or contributed to the occurrence;

(g) all other matters related to the establishment and operation of the Mine which the Commissioner considers relevant to the occurrence

A comprehensive and ongoing training program is essential to the safe operation of any mine. It should be a mix of classroom and hands-on preparation for the work underground, as well as continuing retraining and upgrading in safe operational standards. It should involve all employees, including technical and supervisory staff. In his testimony before the Inquiry, expert witness Dr Miklos Salamon commented on the importance of training:

> I think it's a very important, very fundamental aspect of our industry, because you are taking people into an environment which . . . need not be dangerous, but it can be very dangerous.
>
> Now, for example, no one would really seriously think to put the population into motor cars without any training and say, well, you chum, go and drive. We all accept that – although people sometimes break the law, but we all accept that people need to be trained to drive a motor car. Well, I think if that is so, then . . . people need to be trained how to be a miner, how to be a safe miner.[1]

The mining experts agreed that education, training, and supervision were essential to instil correct attitudes about safety in the miners and to maintain standards for operational safety. They said it was imperative that both management and the regulators set a good example and always insist on safe practices. According to Salamon, regulatory agencies must ensure that "training is carried out by the company and that training meets reasonable, generally accepted standards."[2]

The regulatory framework in Nova Scotia requires that almost every person employed in underground coal mining hold a certificate of competency. Section 11 of the *Coal Mines Regulation Act* sets out the education and work experience required for the various certificates. The act also requires the applicable minister to appoint a board of examiners responsible for advising the minister on the certification of applicants. The board delegates the administration of certification for mine rescue and for competency as a coal miner to the Department of Labour, which is generally responsible for the enforcement of the act. In some jurisdictions, the details of training required for underground work are laid out in the legislation, but in Nova Scotia the company is responsible for training miners.[3] The role of the regulator is to ensure that the company complies

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1 Hearing transcript, vol. 14, pp. 2457–58.

2 Hearing transcript, vol. 14, p. 2454. Except for the Westray experience, such standards are widespread. Underground mines in the United States must provide comprehensive training programs that meet or exceed the requirements of Title 30 of the *Code of Federal Regulations* [30 CFR]. Devco provides modular training programs for underground supervisors.

3 In the United States, Part 48 of 30 CFR details the requirements for training and retraining underground miners.

with the *Coal Mines Regulation Act* and the *Occupational Health and Safety Act*.

At Westray, it is clear that both the company and the regulator were derelict in their respective obligations for training. The testimony of the miners shows that training fell far short of need. Don Mitchell, mining consultant for the Department of Labour, concluded from his post-explosion investigation that the mine "had no program that was appropriate to the needs of that mine."[4] And expert witness Dr Malcolm McPherson referred to inadequate training of mine workers as one of the non-technical matters that had "contributed in an equally potent manner towards the propagation of a mine explosion"[5] as the ventilation engineering deficiencies.

A Mixed Workforce

At Westray, the demands of the site and the varied work experience of the employees added to the challenge of designing and implementing suitable training programs. A crew with different levels and types of work experience creates a number of problems in the development of a safe mining operation. Quite simply, each member requires different educational and training programs. Experts agree that it is imperative that mine management maintains a genuine safety mentality at all times. This mind-set requires supervisory behaviour to counteract the nonchalant attitude often encountered in more experienced workers, who may have adopted hazardous shortcuts and a dangerously complacent approach to occupational risks. The training requirements for workers new to mining are different but just as important, as lack of knowledge and experience makes them hazardous both to themselves and to others. Salamon described the kinds of problems arising with these two groups:

> [O]ne, I will refer to as the experienced miner, a man who should know better. I've seen people who have been handling explosive for 20 years do things that you're terrified to watch. And he really should know better, but . . . "familiarity breeds contempt" . . . Now it's not an issue which can be ignored, and if the management is not devoting a lot of effort, it's going to become more and more prevalent in a mine. So there is this problem . . . even among the experienced miners that they will do things which they should know better not to do.
>
> Then there are the other people who have the other extreme, who have no background. Now there you have an overwhelming responsibility to make sure . . . that they get training, exposure, experience and [that] they work under supervision initially.

Salamon suggested that there was a third major category, the hard-rock miners, who were "probably the most dangerous ones because they think they know mining, but they're not aware of . . . specific hazards that arise in coal mining. And because they're familiar with other types of mining,

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4 Hearing transcript, vol. 17, p. 3103.

5 Hearing transcript, vol. 9, p. 1705.

they may not appreciate the significance, or may not even [be] willing to be too concerned about it."[6]

Mitchell emphasized the need for "an intensive training program to make them [miners] sensitive to the specific conditions that must be maintained in a gassy coal mine." As he explained:

> The most important thing I've learned from this disaster is that if I were a mine operator . . . at Westray, I would want to have had a education and training program. I would start, really, with the training program[, b]ecause I had miners from a wide variety of backgrounds and with different concepts of mining, quite different concepts of mining, few of whom had experience in room-and-pillar mining in gassy coal mines where the roof conditions were suspect.[7]

The underground workers at Westray ranged from miners with more than 20 years of underground coal mining experience to new workers fresh out of school. About one-third of the Westray underground workers hired by 1992 had some previous coal mining experience, about one-third had previous underground work experience in hard-rock mining, and about one-third had no prior underground work experience.[8] Westray reported a total of 188 employees as of 27 January 1992.[9]

The testimony of Westray miners demonstrated the accuracy of the assessment of the multiple safety problems in a mixed crew. The resulting hazardous practices will be addressed later in this Report. Among the many examples was the roof bolting crew who continued bolting in a blind heading with the fan turned off even after the safety committee representative told the workers that they were in 2 per cent methane. There were stories about an experienced coal miner who drove an unapproved dozer within 2 m of the working face, and a mine rescue trainer who altered the set point on a methane detection instrument to keep equipment in production despite the presence of methane at levels higher than statutory limits.[10] Fraser Agnew told of one novice miner, half-buried by a roof fall, who seems to have stood there watching the roof work loose while others on his crew ran from the spot.[11] Inexperienced miners simply did not know enough about underground work to avoid common hazards. When experienced coal miner David Matthews was asked about the new miners, he testified:

> Q. Did you have any concerns about the type of training new recruits were getting, Mr Matthews?
> A. Yeah, we talked about it as a crew.
> Q. And what would you talk about?

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6 Hearing transcript, vol. 14, pp. 2451–52.

7 Hearing transcript, vol. 17, pp. 3091–92.

8 Based on information from interviews and employment application forms filled out by the workers themselves. Workers include miners, labourers, skilled tradesmen and apprentices, foremen, and some surface workers, such as welders, whose duties took them underground at times.

9 Exhibit 76.17.063.

10 These examples are cited elsewhere.

11 Hearing transcript, vol. 35, pp. 7672–73.

A. New hires that never worked in a coal mine before going second operator on the miner and didn't know what to look for, didn't know what to do actually with the cable.
Q. And why would that concern you as a coal miner?
A. Because I was driving shuttle car coming into the miner, and these guys would be standing anywhere. They didn't even know which side to stand where I could see them.[12]

An additional component of the Westray situation was management's repeated dismissal of legitimate safety concerns expressed by hard-rock miners, on the basis that these miners knew nothing about coal mining.[13] Hard-rock miner Bryce Capstick recounted how the miners had become concerned about roof conditions in No. 2 Main in May 1991 and had approached Gerald Phillips, the mine manager:

A. And we told him, "The back is getting pretty heavy . . . the plates are starting to pop off the bolts and whatnot. We've got to do something about that." And I will quote what he said, "You fucking hard rock miners just don't know your sedimentary rock"
. . .
Q. That's what Mr Phillips reply was?
A. That was his reply. Well, the next day he almost lost three quarters of a crew of men because we almost all got killed.[14]

Early Assessments of Training Needs

The need for training the Westray workforce had been predicted well in advance of the start-up of the mine. This need was accentuated by the geology of the mine site. The technical review of the project carried out by the Canada Centre for Mineral and Energy Technology (CANMET) described the implications of training needs in the challenging work environment that was to be created at Westray. Federal research staff there warned:

> Room and pillar mining forces face workers to make frequent value judgements (particularly in depillaring) that impact coal recovery, safety and the like. To initiate such mining in a new set of site specific conditions you must expect to have a lengthy learning curve even with experienced people. There are no experienced thick seam room and pillar miners in Canada except for miners who have worked in the western Rockies. Some of them originally came from Nova Scotia and recruitment of them must be a priority.
> . . .
> There is always some risk associated with thick seam room and pillar mining. With time and site specific experience, thick seam room and pillar

12 Hearing transcript, vol. 31, pp. 6597–98.

13 William MacCulloch, Westray's training officer, explained safety complaints by ex-employees as the failure of hard-rock miners to adjust to coal mine conditions (Hearing transcript, vol. 41, p. 9204). It seems that management, while acknowledging that hard-rock miners and others did not know coal mining, made little or no attempt to remedy this deficiency by sufficient training.

14 Hearing transcript, vol. 42, p. 9333. Doug Macleod recalled that incident from the perspective of the rookie miners, who were called "dummies" and threatened with replacement by other workers (vol. 27, pp. 5684–85).

> mining should work in Pictou conditions. The real question is whether this property can wear the cost of the learning curve to get to a routine development/extraction practice. That routine took many years to establish in western Canadian underground coal mines.[15]

Dr Thomas Brown, then director of CANMET's Coal Research Laboratories staff who reviewed Westray's project proposal in 1989, added the caution:

> The extent to which western Canadian experience is relevant and transferable to Westray's conditions is very uncertain.
>
> What is clear is that the likelihood of Westray developing a routine and relatively trouble-free mining method in the short term is very low. Methane (the coal is very gassy), faulting, depth, seam thickness, and the lack of experience with mechanized room and pillar mining in this geological environment all indicate that a lengthy learning curve/teething period should be expected.[16]

Brown told the Inquiry that this combination of factors, each "individually and independently capable of being addressed," interacted to provide a complex mining environment, a conclusion that would have been apparent to "any mining engineer who had a good breadth of experience."[17]

To compound the problem further, Westray had no experience in developing or mining in the conditions expected in the Pictou project, though some of Westray's on-site managers had some experience in western Canadian thick-seam room-and-pillar operations. Combined safety and operational training for employees who lacked adequate experience in comparable coal mining conditions should have been a paramount consideration. In his memo, Brown observed that "[t]o succeed, the workforce *and* management must be well trained, observant, and committed to safety."[18]

The provincial government had also shown an interest in training issues in the early stages of the project's development. When the project was first proposed, there were discussions in the Department of Mines and Energy (later the Department of Natural Resources) about the need for training and the responsibility for a training program. The Department of Labour recognized that proper training was essential for working in the hazardous environment of a coal mine, with Westray no exception. The history of coal mining in Pictou County, the new technology proposed for the Westray project, and the scarcity of miners experienced in the type of mining operations planned made training programs even more crucial. In a 14 November 1988 meeting, staff from both departments apparently regarded training as top priority for "everyone" involved with the Westray project.[19]

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15 CANMET review, Exhibit 137.07.41–44.

16 25 August 1989 memo to M.D. Everall, assistant deputy minister (Exhibit 137.07.01).

17 Hearing transcript, vol. 52, p. 11270.

18 Exhibit 137.07.01. Emphasis added.

19 Memo from John Smith to Claude White (Exhibit 139.07.006).

On 12 June 1989, John Laffin, deputy minister of mines and energy, wrote a memo to his assistant deputy minister: "Will you please have staff discuss training of miners for the Westray mine with Gerald Phillips as soon as possible. I told the minister that if he gets a question to advise them [media] that we were discussing it with Mr Phillips of Westray."[20] Deputy minister Richard Potter replied on 7 July 1989: "Gerald Phillips['s] remarks to Pat Phelan [Mines and Energy director of mining engineering] reflect Cliff Frame's *modus operandi*. He always maintains that local workers *stick*! I am sure Westray's training programs will be first class."[21]

Feasibility studies for the project referred to statutory requirements that the mine be safely operated by properly qualified, trained, and experienced personnel, albeit in the same sketchy manner that ventilation engineering was outlined. The 1989 Kilborn review, which was Westray's planning document, included a few paragraphs on statutory training and certification requirements and noted briefly: "A detailed training program will be developed for the personnel required to fully man the mine."[22] Although Westray and Curragh were aware of the necessity to plan and implement training programs for Westray's workforce, it is not clear that they appreciated the problems in expecting a Pictou County mine to replicate coal mining operations in western Canada either quickly or closely.[23] The company's 1990 training proposal referred to the need for a thorough training program if the company was to make maximum use of the *local* workforce, who were mostly new to modern room-and-pillar coal mining.[24]

Westray intended to build up to a workforce of 241 people. The company sought to recruit experienced and certified coal miners for about a quarter of this total, "to provide initial underground practical training to inexperienced recruits."[25] Few local workers were qualified. The company reported that only 24 of the 680 applicants from the Pictou County area who had contacted Westray by May 1990 had the required certification as underground coal miners. And even those 24 had little or no recent coal mining employment or experience with the highly mechanized room-and-

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20 Exhibit 141.15.009.

21 Exhibit 141.15.011.

22 Exhibit 4, s. 3.9.1.

23 George Klinowski, CANMET ventilation and mine environmental specialist, had worked as project engineer at an Alberta mine where both Phillips and Roger Parry had been employed. In a 12 January 1994 statement given to the RCMP, he described how he later quit a job at Westray after only two days because he felt there was no way to mine it safely. He explained: "I felt that Roger Parry had the mind set that they could mine in Westray as they did in Smoky River and it couldn't be done as the geology was different."

24 Clifford Frame, chief executive officer of Westray and Curragh, implicitly acknowledged the necessity of training. In a letter to Harry Rogers, deputy minister of regional economic expansion, of 9 November 1988, Frame said that Westray was "prepared to cope" with several anticipated problems, including "unskilled and inexperienced personnel." Presumably, some budget amount was factored into Westray cost estimates to remedy this problem, along with the others listed in the Frame letter.

25 Exhibit 141.01.018.

pillar mining planned for Westray.[26] Jobs for an area of high unemployment had been an important selling point for the project. The company indicated that it would recruit experienced thick-seam room-and-pillar miners from western Canada, but would train local workers for many of the remaining jobs.[27] The company also expressed its desire to develop a training program jointly with the federal and the provincial government, to facilitate hiring from the local workforce.[28]

Yet no new government programs were developed to train local workers to meet the requirements for work at the mine.[29] It was left to the company to provide a suitable training program, with some federal funding assistance possible if the company met federal guidelines. The Department of Labour remained responsible for ensuring that the mine workers were qualified and certified, as part of its general occupational health and safety mandate and, more specifically, as dictated by subsection 11(11) the *Coal Mines Regulation Act*.

The certification process basically requires only that a coal miner be a minimum age and "has had at least twelve months experience in a coal mine, of which at least six months shall have been at a working face; or . . . has had six months systematic training at a working face approved by the Minister as a training place, and is recommended for a certificate of competency as a coal miner by the supervisor of such place." Other subsections deal with certification of mine officials (1–3), mine surveyors (4), electricians (5–6), stationary engineers (7–9), mine examiners (10), and firemen (12). Complete training for safe operations would also include other matters, such as the use of particular pieces of equipment, to complement the certification training. The scheme assumes that a company will see to the proper training of workers as they acquire the necessary periods of work experience set for the various certificates. The issue of training was raised in early meetings between regulators and the company. But the Department of Labour, rather than taking the initiative in assuring compliance with the safety and training requirements, chose instead to await the company's proposal as to how this essential matter would be addressed.

The Training Proposal

Phillips submitted a training proposal to the Department of Labour in July 1990. Westray's training officer, William MacCulloch, testified that it

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26 Exhibit 119.053.

27 Exhibit 119.082.

28 Exhibit 119.052.

29 Staff from the Department of Labour discussed a training program for underground miners with the Department of Advanced Education and Job Training, which had been given much of the Department of Labour's old role in trades training administration. Labour had retained only more limited safety-related training. In 1989, the deputy minister of training, Hugh Macdonald, wrote a letter to the other department's deputy supporting the idea of a coal mining vocational training program for Nova Scotia (Exhibit 141.01.015), but there is no record of follow-up on the proposal. The company also slowly and intermittently pursued the possibility of training programs through Advanced Education.

looked as if it "was sort of adopted from the Alberta people," with no consideration for Westray's different circumstances.[30] In August 1990, Westray's proposal was presented to the board of examiners by Allen Karasiuk, Westray's supervisor of human resources. It was a modular training program with a core set of modules that all new underground employees would be required to take, regardless of experience, and a supplementary set of modules on various aspects of safe underground operations. The supplementary modules would be in packages tailored to the needs of trainees with different work backgrounds. Each module set out an amount of classroom training in an aspect of occupational safety or mining operations, followed by a period of practical training under the close personal supervision of a qualified miner. In the supplementary modules, the time to be worked under close supervision might vary depending on the trainee's background and experience.

The core training proposed an orientation covering mine safety basics and company regulations, followed by a short course on emergency first aid and modules on the workplace hazardous materials identification system (WHMIS), fire prevention, fire fighting, and mine survival. This last module related to emergency procedures, including self-rescuers, as well as basic information on mine ventilation and hazardous mine gases. The supplementary modules included more detail on mine ventilation and mine gases, together with such topics as fires and explosions, roof support, underground electrical hazards, conveyors, coal haulage, materials handling and operation of supply vehicles, operation of continuous miners, mine rescue, and maintenance of mine rescue equipment. The modular training program seemed consistent with conventional patterns of training for underground miners: new workers would receive classroom instruction and then work under the supervision of experienced miners as they progressed through a series of assignments before being allowed to work in coal extraction at the working face.[31]

The board of examiners was not impressed with the training proposal and criticized it for failure to provide levels of training specific to the certification requirements under provincial legislation, especially for mine examiners.[32] The board recommended that the company develop modules specifically for certification purposes and offered to supply the company with guidelines to assist in preparing these modules, including a list of subjects required for examinations set by the board. It questioned how the company would conform with statutory requirements while personnel were obtaining the training and work experience needed for certification. It was concerned about Westray's ability "to manage training in relation to safety concerns and production requirements." It rejected Phillips's

30 Hearing transcript, vol. 40, p. 9030.

31 The various experts who were asked to comment in testimony on the Westray proposal saw nothing out of the ordinary.

32 A training proposal from a small independent coal mine in Cape Breton was submitted at that same board meeting. It outlined 60–90 hours of training for candidates with the required years of experience, in preparation for testing for certification as mine examiners (Exhibit 119.078).

proposal to relieve the board of the burden of certification by establishing Westray's own board – to consist of a provincial inspector, a Westray certified miner, and Phillips himself. The board retained responsibility for examinations for certification of more senior job classifications and delegated responsibility for certification of miners and mine rescue trainees to the inspectorate.[33] The inspectorate was also responsible for determining which of Westray's job classifications would require certification in accordance with the *Coal Mines Regulation Act.*

Karasiuk reported to Phillips that he had taken the position with the board that the company had never been apprised of the training requirements under the *Coal Mines Regulation Act.* In Karasiuk's opinion, his August 1990 meeting with the board had been sidetracked from its proper agenda – Westray's training proposal – by the persistent emphasis on certification issues.[34]

There is no record that the board considered whether the standards for certification had kept pace with developments in mining technology, and whether they would be appropriate or sufficient for the Westray mining operation. Roy Elfstrom noted in his 1979 inquiry into a Cape Breton mine fire that "[c]hanging mining technology has meant that mine environmental conditions can no longer be evaluated by persons whose training has not kept pace with the changes."[35] He recommended that standards for certification as a mine examiner be brought up to date and that certification be for terms of two to five years, with appropriate retraining before re-examination. Training on such matters as methane layering or the effect of modern production methods on gas release rates would have been appropriate for Westray examiners. Department of Labour inspector Albert McLean did demonstrate the use of hand-held methanometers to mine examiner candidates at Westray. But instruction and testing on such things as extension probes and environmental monitoring systems were also needed, and standards for other certification levels should have been reviewed and updated.

The board of examiners, in December 1990, approved the training proposal for certificates of competency as coal miners, based on 58 days of formal training for miners with previous underground work experience and 199.5 days for new employees with no previous mining experience. Claude White, director of mine safety, and also a member of the board, informed Phillips by letter on 17 December that the board had approved Westray's training proposal "for certificates of competency as coal miners in accordance with the Common Core Modules and Training Summary Table" (see table 4.1).

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33 Exhibit 119.095–99. Mine rescue training, testing, and certification did not exhibit the pattern of problems associated with operational and occupational safety training at Westray.

34 Exhibit 119.095–96.

35 Commission of Inquiry into Explosion in No. 26 Colliery, Glace Bay, Nova Scotia, on February 24, 1979, *Report* (Canada: Department of Labour, 1980) (Chairman Roy Elfstrom) [Elfstrom Report], 83.

Table 4.1 Westray Training Proposal Summary, in Days

Content		Classroom training	Close personal supervision	Total
Common core modules				
1	Orientation: safety and administration	2.0	1.0	3.0
2	Emergency first aid/CPR	1.0	–	1.0
3	WHMIS training[a]	0.5	–	0.5
4	Fire prevention and fighting	2.0	0.5	2.5
5	Mine survival training	1.0	0.5	1.5
	Subtotal	6.5	2.0	8.5
Supplementary modules				
6	Mine ventilation	2.0	5.0	7.0
7	Mine gases	1.0	0.5	1.5
8	Fires and explosions	1.0	0.5	1.5
9	Roof support	2.0	15.0	17.0
10	Electrical hazards in U/G coal mining	1.0	1.0	2.0
11	Conveyors	1.0	10.0	11.0
12	Coal haulage	2.0	10.0	12.0
13	General	1.0	5.0	6.0
	Subtotal	11.0	47.0	58.0
14	Continuous miner and Roadheader	3.0	130.0[b]	133.0
	Grand total: certified miner	20.5	179.0	199.5

Source: Westray training proposal submitted July 1990, table II (Exhibit 19.067).

Note: Within each module, the amount of close personal supervision time required may vary depending on the trainee's past background and experience.

a Workplace Hazardous Materials Identification System

b Westray was to develop a training package for its specialized equipment, based on its own mining methods. These 130 days were to be broken down as follows:
a) roof support, 30 days
b) continuous miner operation, 20 days
c) shuttle car operation, 40 days
d) maintenance of the face (would include work in a, b, c), 40 days.

Westray presented essentially the same proposal to staff of the Departments of Labour and of Mines and Energy in January 1991. On 5 April 1991, the board of examiners was advised by the Department of Labour that the tunnels at the Westray mine had been designated by the minister as an approved training facility in accordance with section 11(11b) of the *Coal Mines Regulation Act*.[36] This approval meant that new miners could be certified as competent coal miners after only six months of systematic training underground instead of the usual requirement for twelve months' underground work experience, including six months at a working face. The modules of the training proposal that were supposed to precede coal miner certification were presumably going to be provided within the halved time frame.

[36] Inquiry files, NSDL42 Tab4.

Resolution of the board's concerns about the content of the training proposal, especially for more senior levels of *Coal Mines Regulation Act* certification, is not documented in the records of the Inquiry. The issue of mine examiners' qualifications resurfaced regularly. The Department of Labour reminded the company several times during the mine's development that it was essential to train workers in the hazards of coal mining and to have qualified persons perform important safety checks, especially those the act required to be done by certified mine examiners.[37] The reminders were not particularly forceful or effective, and compliance by the company was not monitored in any meaningful way.[38]

Resolution of the board's concerns about the implementation of the proposal – issues such as compliance with statutory requirements for certification during the early stages of training, or managing training along with production requirements – is similarly not documented. It appears that the board left open the possibility that it would check for problems as the training proposal was put into practice, but the check never happened.

Training Records

The board reserved the right to monitor training when Westray's proposal for training miners was approved, and it instructed the company to keep logs documenting each individual's training. These training logs were to be presented for review by the inspectorate when the application for certification was submitted. The approval of a shortened period of underground work experience as a prerequisite for miner-level certification made it even more critical that training logs be submitted to the inspector examining candidates, so he could check on their "systematic training." In a 6 September 1990 memo to Phillips, Karasiuk referred to a comment made during his presentation of the training program to the board by Pat Phelan, to the effect that "things stated to happen were in fact not taking place"[39] – a suggestion that the board had been concerned for the actual implementation of the proposal as well as critical of its contents.

Westray agreed to keep training logs for each trainee. Following a meeting on 17 October 1991, at which Phillips assured White that training was going on every day, White reminded him about the company's commitment to document all the training given to the miners.[40] There is no evidence that logs were kept by the company or examined by the

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37 Exhibit 139.05.003.

38 On 12 December 1990, for example, McLean issued an order for Westray to use a certified mine examiner to test for methane, but his director, Claude White, immediately helped solve the difficulty this might cause the company by issuing a provisional certificate to Roger Parry that same day (Exhibit 139.02.10).

39 Exhibit 119.096.

40 White's letter of 29 October to Phillips concerning Westray's production of training logs and stonedust plans came just after newspaper accounts referred to training, dust problems, and roof conditions, as well as Westray's embarrassing failure to meet coal supply commitments (Exhibit 119.204).

inspector,[41] though some records of training were produced at Westray in support of applications for federal funding assistance with training costs.[42]

The record suggests that the inspectorate and the board of examiners had persistent concerns about training at the mine, and that they continued to discuss the need for both training and documentation. At a February 1992 meeting between inspectors and Westray management, Phillips and Roger Parry reported on the training policy and program in place.[43] Parry had training officer MacCulloch draft a letter to Albert McLean on 5 March 1992, outlining the company's training program.[44] MacCulloch recalled that the company had not been able to implement the original training proposal, and that the letter to McLean intended to identify a training method that would permit certification "under the six-month rule."[45] The letter purported to describe Westray's miner training program as it existed at that time – a thorough orientation for all new underground employees followed by up to a year of intensive training, tailored to the individual trainee's work history.

Phillips made an oral presentation on Westray's training program to the board of examiners on 10 April 1992, covering much the same material as in Parry's letter and expanding slightly on the proposal that had been presented in 1990. The board asked again for documentation on each individual worker's training and experience, and for this information to be made available for assessment by the examining inspector. Fewer concerns with the contents of the training program were recorded at the 1992 presentation than in 1990.[46]

Finding

Westray management, from the chief executive officer down, paid little attention to the requirement for adequate training in underground coal mine safety and operations. The several training proposals produced by Westray seem to have been formulated to satisfy the inspectorate and the board of examiners while the company sent insufficiently trained persons into the mine. The record shows that the inspectorate did little to monitor compliance with the training proposals.

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41 McLean's testimony about his knowledge of the requirement for training logs to be shown to the examining officer was equivocal (Hearing transcript, vol. 57, pp. 12495–96).

42 Exhibit 119.275–80. As we will see later, miners' testimony shows that these records were inaccurate, inflating the hours of actual training provided.

43 Exhibit 73.08.025. According to a January 1992 site visit report by the lender's engineers, the company had told them that a shortage of experienced miners, due to the lack of opportunity for training, had contributed to production shortfalls, but that the problem had been largely overcome, as miner training was "now progressing well" (Exhibit 136.072).

44 Exhibit 119.116.

45 Hearing transcript, vol. 40, p. 9030.

46 Exhibit 76.17.063–64.

Actual Training

The training proposal outlined in the presentations and proposals never materialized. Training could not be documented as the board of examiners advised, simply because only a small fraction of the proposed training ever took place. Despite the miners' complaints to the managers, the company did not resolve the problem. And despite reports of inadequate training passed to the inspectorate, the regulators did not demand an effective training program. The inspectorate did not review records of training or check directly on the existence and quality of training during the operation of the mine. Mining consultant Don Mitchell testified to the necessity for a major training program to prepare the Westray workers for the kind of mining planned:

> Q. But have you seen any signs of them making any effort to do education on this form of mining?
> A. No . . . we didn't see any real education program that was going to be meaningful.[47]

Miner Rick Mitchell, who had himself been extensively trained in Alberta, reported the lack of training at Westray to mine inspector Albert McLean in January 1992:

> Q. What else did you and Mr McNeil and Mr Facette tell Mr McLean?
> A. Well, the training program that was promised was never started. . . . we actually had a mine full of inexperienced miners.[48]

Randy Facette also testified that the miners' concern about inadequate training had been taken to the inspector.[49] Both Facette and Rick Mitchell described how they had brought that concern to the attention of management, with little effect. Facette had raised the issue during a joint worker and management committee "safety walk" through the mine:

> I just made the recommendation that there should be a proper training program set up for new employees who were just coming into the mine, especially ones that never had any coal mining experience. Operators, for instance, that were being brought in, just given . . . a week, a few days even in some cases[,] and then put onto a machine and expected to operate it proficiently.[50]

That complaint did not appear in the company's record of the safety walk, and nothing was done about it. Rick Mitchell raised the concern about inadequate training with the underground mine manager:

> Q. What did Mr Parry say when you raised your concern about new recruits to him?
> A. He was telling me that there was going to be a proper training program set up soon and there never was.
> Q. Did you ever go back to Mr Parry and ask him why a proper training – the proper training program he told you would be set up wasn't set up?

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47 Hearing transcript, vol. 17, p. 3056.

48 Hearing transcript, vol. 31, p. 6728.

49 Hearing transcript, vol. 33, p. 7213.

50 Hearing transcript, vol. 33, p. 7190.

A. Yeah. And he just told me more or less it was in the works.
Q. So 13 months after the mine opened, it was still in the works?
A. Yeah.[51]

The model for Westray's 1990 proposal demanded a commitment of resources, time, and money to the teaching of safe operational skills. It proposed classroom facilities, trained and experienced instructors, and a defined curriculum with appropriate teaching and testing resources. The reality is striking: a cursory orientation program that was almost cynical in its operation, a little-used lunchroom for "classes," an unqualified training supervisor, MacCulloch, who claimed only to "administer" the program, and deployment of new unqualified workers based on production imperatives rather than job training.

Hard-rock miner Carl Guptill described his first day and week underground as "crazy":

Q. Do you recall making that statement? You were wandering around a lot down there?
A. Yeah.
Q. What were you alluding to there? What did you mean by that? Was it management wasn't assigning you to any particular job or –
A. Well, I felt that I should have tagged in and be told on surface where I was going, not go underground and be the last guy on the tractor, and then be "Who are you?" or "Where are you supposed to be?" by a stranger who I didn't know if he was a boss or not, then send me to do something when I was lost.

. . . it was a ball of confusion at Westray, where I didn't know who my boss was. They didn't know who I was, and I didn't know what I was supposed to do. And no one knew I was underground because I didn't tag in or out.

Q. Did that last throughout those entire 13 shifts? I mean, did you ever hook up to –
A. Towards the end of it, I got so I could recognize that okay, he's a boss, and he's the big boss, and he's a miner, and he's a new guy. Yes, I slowly caught onto who was who, but not at first. It was very, very confusing of where am I – the whole thing. Who's this guy? If this guy tells me to do this and that guy tells me, no, to go do something else, who do I listen to because who are they? I had no idea of anything that was going on.[52]

The bare outline of content in the training proposal was never developed, and only a modicum of training materials was acquired. The underground training crews were taught only the skills necessary to the roof support and belt maintenance labour they performed, plus whatever training and advice more experienced miners might supply. Miners' testimony consistently revealed the absence of a training program of the sort Westray's managers had represented was in place at the mine.

The board never exercised its right to monitor the training. The inspectorate did little or nothing to ensure that the training described in

51 Hearing transcript, vol. 31, pp. 6684–85.

52 Hearing transcript, vol. 29, pp. 6275–76. Guptill had spent years in hard-rock mining. It must have been even more confusing for new workers with no underground mining experience.

Westray's proposal was ever implemented. The traditional testing of candidates for certification as competent coal miners degenerated to a perfunctory formality, revealing nothing of the candidates' lack of training or experience.[53] As we have seen, the problem was made known to the inspector by a number of Westray miners before January 1992, but the only indications of follow-up on the complaints are the few sparse records of discussion about training at meetings between the inspectorate and Westray management.

Training Subsidy Records

One indication of the company's failure to provide the proposed training can be found in the records of its training subsidy applications. In February 1991, Westray applied to the local Canada Employment Centre for a federal 25 per cent wage subsidy for classroom training for 134 underground workers, 52 hours each for 42 workers with some coal mining experience, and 116 hours each for novices and hard-rock miners. The total amount requested for 1991 was $56,337.[54] The company negotiated five contracts under the Canadian Jobs Strategy program of Employment and Immigration Canada, the federal department that administered the subsidy program, whereby Westray proposed to provide training for 60 people for 152 hours per person, and 5 people for 208 hours each, including mine rescue training, totalling 10,160 hours spread over five terms of several years each.[55] Westray was to document that training and submit reports to obtain the negotiated financial assistance. The government required the documentation of distinct hours dedicated to training rather than to production. Westray did not comply and was unable to access much of the wage subsidy. According to Westray's own generous assessment, only 1,678 hours of training had been done from start-up to 30 March 1992, including training for individuals in addition to those covered by the five subsidy contracts.[56]

Mine Rescue Training

About two-thirds of the training that actually took place at Westray was documented as mine rescue training, and a portion of the remaining third was first-aid and CPR training provided to mine rescue trainees as part of their certification requirements.[57] The quality of Westray's mine rescue

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53 John Lanceleve received a certificate of competency after having worked only about 12 days as a coal miner (Hearing transcript, vol. 27, pp. 5536–38).

54 Exhibit 119.101.

55 Exhibit 119.276–80.

56 Westray Training Summary Startup – 30 March 1992 (Exhibit 119.281–88). The company records of training are sketchy and include such inaccuracies, probably typographical, as training recorded for a worker on a date half a year before the start date for his employment. The length of training sessions was inflated: one hour of watching a fire extinguisher demonstration became four hours of fire-fighting training, while less than one day filling out forms and watching videos got reported as 16 hours of orientation.

57 Of the 1,678 hours of training done, 1,093 hours were mine rescue training.

training is not at issue.[58] However, mine rescue training was no substitute for training in the safe operation of a mine, despite some overlap in topics that must be addressed in both.[59] Mine rescue trainee Steven Cyr suggested that some of their training course, especially the video on methane and coal dust explosions, should have been given to all underground workers, if only to increase the general level of appreciation for the risks involved in unsafe mining practices.[60] By the spring of 1992, mine rescue trainees were becoming increasingly aware of the hazards in coal mining, but were not getting training in the skills or workplace practices essential to the safe management of those hazards.[61]

Orientation

Employees at Westray were told by the company that they could expect 15 or more years of steady work at decent wages. Some among them were attracted by descriptions of opportunities for promotion in this expanding operation. The mine was described as a state-of-the-art operation where workers would advance as they acquired the necessary skills and proved their abilities. The faster they learned, the faster they would move up the pay scale. Very few details were supplied. Some miners assumed they would receive the necessary training, because they knew that to be the practice at other mines, or because they had signed forms related to the federal training subsidy. Other workers were told they would be assigned to a training crew and would work up to be coal miners. New employees were not shown the training proposal, or any other training course outline. There was scant discussion of training, and they had little idea what to expect. Novice miner Ted Deane's grasp of the training he was to receive was typical: "I had no direction as to what we were going to do. We just went underground and I watched what we did."[62]

Every underground employee at Westray, regardless of work history, was entitled to receive a basic orientation in mine safety and in the particular operation. Every employee covered by the federal training subsidy contracts was to receive 16 hours of orientation. None of the Westray underground workers received the full two-day orientation

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58 There is no evidence that it was not top notch (see Chapter 15, Rescue Efforts).

59 As Lenny Bonner told the Inquiry, mine rescue training "will teach you about gases," but "does not go into detail about ground conditions and how to operate a mine or how to do it safe" (Hearing transcript, vol. 24, p. 4837). Doug MacLeod didn't learn about stonedusting or methane layering in mine rescue training (vol. 27, p. 5669). Shaun Comish didn't think that mine rescue training would prepare a person for work in an underground coal mine (vol. 28, p. 5762).

60 Hearing transcript, vol. 25, p. 5172–73. Salamon also spoke to the salutary effect of showing miners coal and methane explosions (vol. 14, p. 2455).

61 **Comment** One wonders why a disproportionate amount of time was spent in mine rescue training at the apparent expense of safety training aimed at keeping the miners alive and healthy. An obvious, though somewhat cynical explanation may be the public relations benefits accruing from performances at the various mine rescue competitions. Whatever the reason, it is suggestive of a dysfunctional set of priorities.

62 Hearing transcript, vol. 26, p. 5340.

described in the proposal submitted to the government, much less the three-day orientation proposal laid out in September 1991.[63]

Electrician Mick Franks's response to the description of a three-day orientation program was that of all the items listed – films, lectures, handouts, demonstrations, workshops, tours – he had probably filled out payroll forms and received a copy of the company handbook: "That's all I see there . . . I had lunch. That's all I got there."[64] The lack of organized introduction to his new work environment increased the hazards. It was two months before one of Franks's co-workers explained the miners' signalling system for underground communications, whereby miners convey basic information by particular movements of their lamps. Miners had been attempting to communicate with Franks, but he had not known "what they were flashing about."[65] Like other new underground employees, Franks was dependent on the informal acquisition of knowledge and skills from co-workers on an ad hoc basis. Some new employees did get training in lamp communications during their first days of work, but there was no consistent program to ensure that every new worker knew the lamp communication system and other similarly important information prior to work underground.[66]

Underground workers hired early in 1991 got little orientation; they merely completed administrative routines, picked up their gear, and went to work. Hard-rock miners who switched to Westray from jobs with the tunnel development contractor (CMD) were assigned tasks without appropriate training or any instruction on the special requirements of coal mining. They didn't even get the safety orientation common to hard-rock mines. Hard-rock miner Bryce Capstick said, "Every mine, even every contractor that goes onto a mine site has to go through an orientation as to . . . occupational health and safety, what their regulations are on site, fire regulations, what safety equipment is being used."[67] Hard-rock miner Wayne MacPhee switched from CMD to Westray on 1 April 1991:

> Q. What, Wayne, when you moved over to Westray, what training did you receive from Westray?
> A. None.
> Q. . . . What kind of introduction were you given to the company?
> A. None
> Q. Were you told anything about working in a coal mine, as opposed to hard rock mining?
> A. That was probably taken as general knowledge, that I would have picked that up through the grapevine, I guess. But as far as any classroom training or anything like that, or any handouts or anything like that, no, there was nothing.[68]

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63 Exhibit 119.148.

64 Hearing transcript, vol. 21, p. 4105.

65 Hearing transcript, vol. 21, pp. 4107–08.

66 Johnathan Knock recalled learning lamp signals from Aaron Conklin shortly after starting work underground (Hearing transcript, vol. 26, p. 5318).

67 Hearing transcript, vol. 42, pp. 9343–44.

68 Exhibit 116.1A, pp. 6–7.

Shaun Comish and the other hard-rock miners who started at Westray in September 1991 received no orientation for coal mining – even though they weren't familiar with the site, as the hard-rock miners from CMD were:

Q. Now what type of orientation did you receive for your work at the mine?
A. Prior to going underground?
Q. Prior to going underground, yes.
A. We got dressed, went out into the waiting area and then went underground. Told us who to go with and we went.
Q. That was your orientation?
A. That was my orientation.[69]

Wyman Gosbee, who started the same day as Comish, recalled that the orientation also included a brief meeting with Roger Parry, who discussed the mining method and asked about their work experience before assigning them to their new jobs. The miners who that started that day were not taught the use of their self-rescuers; they were merely told to read the instructions.[70]

Coal miners who had been trained and certified in older, less-mechanized operations, or who had been out of the industry for many years, were expected to start in production work immediately. Ed Estabrooks had been out of mining for nine years. Like other underground workers, he was given a self-rescuer:

Q. Did anyone ask you if you needed . . . a refresher course, if you will, with respect to the use of it?
A. No, I was handed one and said, well, you don't need any training on this; you already know it.[71]

Coal miner Fraser Agnew started at Westray in April 1991 and did not receive the proposed orientation package for experienced coal miners:

Q. When you started at Westray, did you have any type of orientation or training?
A. No, I didn't.
Q. None whatsoever?
A. No, other than sign papers. That's all I did.[72]

That was typical for experienced miners. For workers new to the underground, the orientation for most of 1991 consisted of paperwork and the issue of mining gear. A few were fortunate enough to get instructions on self-rescuers or a few tips on mine hazards. Aaron Conklin, who left a job with the surface construction company at the site to start with Westray on 1 April 1991, had no underground mining experience. He recalled that his foreman, John Bates, talked to him for a couple of hours, demonstrated the self-rescuer, briefed him on a mine map, and showed him the working

69 Hearing transcript, vol. 28, pp. 5763–64.
70 Hearing transcript, vol. 25, pp. 4953–54.
71 Hearing transcript, vol. 24, p. 4870.
72 Hearing transcript, vol. 35 p. 7645.

face, before putting him to work with another miner at the feeder-breaker in No. 5 Cross-cut.[73] That was the most thorough introduction to underground work at Westray described in any miner's testimony.

Perhaps the most telling example of Westray's treatment of employees is the experience of Matthew Sears, a new worker who started on 6 August 1991. He spent an afternoon filling out paperwork and collecting his gear. He was told he initially would be a labourer on the belt crew, and would be a certified miner by the end of his training period. He was given no explanations or demonstrations of any equipment until the next morning, when the underground mine manager, Parry, briefly described a self-rescuer. Parry issued a self-rescuer to him, with instructions to put it on when methane levels became too high, and to walk slowly out of the mine while wearing the device or he would be "fucking dead."[74] Parry then took him to the portal of the mine, pointed out the lights belonging to a crew working several hundred feet down the tunnel, repeated his comment over the noise of the main fan, and shut the door behind the new recruit. Sears explained, "Well, to be honest, I thought there might be some lights underground. I was that naive that I didn't realize that it was going to be complete darkness. And I was rather shocked to just be more or less dropped off, and there you go, go to it." At that point, Sears did not even know how to turn on his cap lamp.[75]

Sometime during the fall of 1991, an abbreviated version of the orientation program was put together. New underground employees viewed several hours of videos related to topics covered in the course description. There was a film on the self-rescuer and a sample unit to inspect, though still no chance to practise with it. The actual orientation program never reached the standard proposed in plans submitted to the inspectorate. William MacCulloch, the training officer who administered the new and improved orientation, had no mining experience or mine safety training. He was unqualified and unable to supplement the materials or to answer questions about the underground operation. In compensation for MacCulloch's inexperience, trainees were supposed to be given a brief talk by the managers – if and when available.[76]

Lorne McLean began employment as a labourer with Westray in April 1992. He was the last "new hire" and received a cursory version of an orientation program:

> A. We had an orientation day. And that consisted of perhaps, four or five films. One about safety boots, one about [ear] protection. One was a

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73 Exhibit 115.1, pp. 4–5.

74 **Comment** If this is an accurate recollection of Parry's comments, it reveals a disturbing lack of understanding about the function of the self-rescuer. If an explosive air-methane mixture is present, no one should be there in the first place. The self-rescuer is effective against smoke and carbon monoxide, but only if there is sufficient oxygen in the air to sustain life.

75 Hearing transcript, vol. 29, p. 6045–48. Sears was seriously injured after only 12 shifts at Westray, owing chiefly to the company's failure to ensure safe lockout procedures on the conveyor. See Chapter 5, Working Underground at Westray, for details of this accident.

76 Hearing transcript, vol. 41, pp. 9157–61.

Curragh Resources overview, a company tribute type thing. One was the use and deployment of your self-rescuer. And one was the use of the different types of fire extinguishers. Other than that, Allen [Karasiuk] who was the human resources director at that time, said we would have a chance to talk to Roger Parry that day. But Roger was busy that day. So the only actual time we talked to Roger, perhaps, five minutes the morning – the next morning, prior to going underground.

Q. Who did you understand Roger Parry to be?
A. Oh, the boss, the main cheese, I guess.
Q. And what was the nature of your . . . conversation with him?
A. That morning, he told us some various methane levels that we should be aware of. Which he said at the time, "You'll forget as soon as you walk away." And he was right, we did. It was just basically a conversation, you know, good luck type thing.[77]

Despite representations to the Department of Labour as late as Parry's letter to McLean of 5 March 1992, there is no indication that orientation sessions ever covered mining and safety legislation. Miners testified to the difficulties they experienced in obtaining copies of the *Coal Mines Regulation Act*. Mick Franks resorted to "acquiring" his copy from a supervisor's office when he could not obtain one on request.[78] Copies of the *Occupational Health and Safety Act* were distributed to some workers, but without discussion or explanation. Company handbooks were also dispensed, but not reviewed beyond a description of employee benefits; Jonathan Knock recalled that he had been given the employee handbook:

Q. Did you read that book?
A. No.
Q. Did they explain to you when you received it what it was about?
A. Yes.
Q. What did they tell you?
A. Just gave an overall view of what your health care was and dental plan, stuff like that.
Q. And you didn't read it?
A. No.
Q. Did they tell you that it contained any policy, procedures or anything of that nature that you would be responsible to follow while employed at Westray?
A. No.[79]

Company codes of practice for such matters as diesel operation existed but were not issued. Operators said they had never seen the Code of Practice for Non-Flameproof Diesel Equipment while employed at the mine before the explosion.[80] The orientation did not adequately cover

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77 Exhibit 116.1A, pp. 9–10.

78 Hearing transcript, vol. 21, pp. 4103–04. On being asked if he had also been able to liberate a copy of the *Occupational Health and Safety Act*, Franks responded, "Well, if they treated this the way they treated the Coal Mines Act, I don't think there's much point looking for this either" (vol. 22, pp. 4232–33).

79 Hearing transcript, vol. 26, p. 5231.

80 Neither Knock (Hearing transcript, vol. 26, p. 5247) nor Deane (vol. 26, pp. 5350–51) had seen the code (Exhibit 69b.004), which came into effect in September 1991. Both men regularly drove the diesel-powered boom trucks.

mining terminology, coal mining hazards, safe work procedures, or underground emergencies:

> Q. Were there any other safety things that were introduced? Safety devices or procedures that you were introduced to by Westray?
> A. No, there wasn't even a . . . discussion, as far as I'm aware, of – on evacuation in case of fire or explosion or what was to take place. Everybody was just kind of . . . in the dark about what the main plan was to do, if something did happen, you know. It was only in the latter part of the year there that we even seen a fire hose.[81]

The Westray miners had to rely on their own initiative and resourcefulness to acquire the knowledge necessary to perform their jobs. The skills they did pick up came mostly through hands-on experience and the assistance of the more experienced members of their teams.

Self-Rescuers

Training newcomers to a mine in the use of emergency breathing devices is an industry practice.[82] At his first mining job in Alberta, Rick Mitchell, for example, had sufficient training on the self-rescuer before going underground that he could put it on properly in the dark.[83] Many jurisdictions even require that miners go through annual practice in donning the self-rescuer within an acceptable time limit. Mine mechanic Clive Bardauskas described the training in the United Kingdom:

> Well, one of the things that they did yearly, once a year, every person that worked underground, they took into a room, they gave them a self-rescuer and they turned the lights off, and they gave them 15 seconds to put it on, to give them some idea what it would be like underground. And if somebody failed, they made him do it again and again until they could actually open the rescuer, get it on the mouth in 15 seconds. Once they achieved that, they'd give them a small obstacle course to go through because when the self-rescuer is working, it gets hot. So they wanted to give everybody a good idea what it would be like to use this. And that was done every year to everybody.[84]

Expert witness Andrew Liney had this to say about self-rescuers: "They are an easy thing to put on when you're taught how to do it, but an extremely complicated looking thing if you're not really sure. And I doubt anybody who hadn't got through training could even conceive of putting one on."[85] Yet Westray management simply issued the equipment, mostly without explanation of its function and use. Sometimes a cursory explanation or a demonstration or video was provided, but there was no opportunity to practise. Some workers did not know the purpose of the

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81 Pre-hearing interview with Wayne MacPhee, undated (Exhibit 116.1A, p. 8).

82 The self-rescuer that was issued to every underground worker at Westray is shown in photograph 9 in Reference.

83 Hearing transcript, vol. 31, p. 6847.

84 Hearing transcript, vol. 23, p. 4578.

85 Hearing transcript, vol. 19, p. 3674.

self-rescuer.[86] Robbie Doyle, one of the miners killed in the explosion, had earlier reported that he thought the self-rescuer was a first-aid kit.[87] Rick Mitchell reported that a novice coal miner sent to the face for training as a continuous miner operator surmised that his self-rescuer was a band-aid holder.[88] Underground electrician Harvey Martin remained unaware of the use of his self-rescuer for three months. Then he witnessed a mishap where another miner's self-rescuer accidentally broke open, giving those present an opportunity to examine the device.[89]

Some recruits were instructed by more experienced co-workers or supervisors. Jay Dooley thought it was a joke when a miner in his crew asked what the self-rescuer was for. He was appalled to realize that the miner was serious and that others on his shift were similarly uninformed, including Nova Scotia–certified coal miners:

> A. Well, it was total amazement to me that someone could get in this underground mine carrying this here exhibit here on the far right there on their belt, and (1), not knowing why they're carrying it; (2) not knowing what is in it; and most importantly, how this man was ever in this mine without this training was unbelievable. I just – I couldn't fathom that. I wasn't used to anything like that.
> Q. Approximately when did that happen? Can you recall?
> A. We were in the Southwest district, because when it was brought up to me, the whole crew was stopped at the C-1 Main intersection. And I proceeded to give a demonstration about the W65 and its use and when to wear it, and how to don the apparatus, and that kind of a procedure, but I was more interested in getting to the surface to find out who the man was that gave him this W65 and nothing else to go with it.
> Q. And did you . . .
> A. I certainly did that. I had approached Mr Roger Parry.
> Q. Tell me about it.
> A. Well, he was in the understanding that Mr Karasiuk had – this man didn't know the self-rescuer and that maybe he was pulling your leg. I said "Well, he may have been, but there was others on that crew that admitted that they had no knowledge of this W-65 either." And I believe there was four people on that crew that didn't know why they were carrying that on their belt.
> Q. Something that basic?
> A. Not that basic. Your life depends on that little box.[90]

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86 Steven Cyr told the Inquiry about an incident in March 1992, while he and some other Westray employees were waiting to be tested for their miner certification: "Romeo Short was there, and it kind of surprised me because he came up and he asked what this thing does and he was shaking his self-rescuer. And I said, 'That's your self-rescuer.' He said, 'I know . . . but what does it do?' I told him" (Hearing transcript, vol. 25, p. 5116).

87 Doyle had been talking to Bob Burchell, the United Mine Workers organizer (Hearing transcript, vol. 44, p. 9642).

88 Hearing transcript, vol. 31, p. 6681.

89 Hearing transcript, vol. 23, pp. 4435–36.

90 Hearing transcript, vol. 38, pp. 8403–04. Tom MacKay had been given a certificate of competency in May 1991, before being hired on by Westray. He had underground experience but was never trained in using the self-rescuer. He finally saw one opened up "around Christmas time" (vol. 32, pp. 7005–10).

Classroom Training

Westray's training proposal identified appropriate amounts of classroom training for workers with varied work experience, in addition to the two days of classroom orientation to be given to every new worker before underground deployment. Total amounts were to range from 6.5 days of classroom training for experienced coal miners to 11.5 days for former hard-rock miners, to 16.5 days for new employees with no underground experience (see table 4.2).

According to the company's training summaries, classroom training after workers had started their underground assignments consisted of a single short session on the company's approach to ground control, a WHMIS session for a few workers, and courses for mine rescue trainees or new supervisors.[91] Few of the classroom hours outlined in the proposal ever happened. Some workers had a four-hour session on conveyor belt repair, and tradesmen had training sessions on the repair and maintenance of equipment. Fire-fighting and fire prevention training, described in the training proposal as 16 classroom hours and a half-day of close personal supervision, was actually a one-hour surface demonstration of fire extinguishers.[92]

Electrical and Mechanical Trades Training

Electrical and mechanical tradespeople had their trades training programs, but they were not given adequate training on the requirements for safe performance of their trades underground. Harvey Martin had no underground experience when he signed on with Westray as an electrician. Allen Karasiuk led him to believe that he "would be trained in all aspectsof underground coal mining."[93] Mechanic Wayne Cheverie, then an apprentice, described his preparation for the underground:

> Q. So what direction – or what guidelines were you provided before you went underground?
>
> A. None whatsoever. I was given manuals for the mining equipment that I would be responsible to look after, told to go home and read them over for three or four days and that I would be the shift mechanic in four days' time on night shift.[94]

Although electricians and mechanics were given some workshops on maintenance and repair of particular pieces of the underground equipment, they did not get any more general orientation than the miners did. Cheverie was left to acquire information on special risks in the coal mine from other mine workers "only as things came up in conversation or in our

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91 Exhibit 119.281–88.

92 Ed Estabrooks described this minimal "fire training" (Hearing transcript, vol. 24, p. 4867). Steven Cyr was one of the "three or four of us . . . out of . . . probably 20 or 25 guys there" to extinguish a sample fire (vol. 25, pp. 5108–09).

93 Hearing transcript, vol. 23, pp. 4431–32.

94 Hearing transcript, vol. 20, p. 3926.

Table 4.2 Proposed Training Times by Level of Experience, Mine Operations, in Days

Previous level of experience	Classroom training	Close personal supervision	Total
Underground coal experience			
Core modules only	6.5	2.0	8.5
Underground hard-rock mining experience			
Core modules	6.5	2.0	8.5
Supplementary modules			
7 mine gases	1.0	0.5	1.5
8 fires and explosives	1.0	0.5	1.5
10 electrical hazards	1.0	1.0	2.0
11 coal haulage	2.0	5.0	7.0
Total	11.5	9.0	20.5
No underground experience			
Core modules	6.5	2.0	8.5
Supplementary modules (6–13)	10.0	24.0	34.0
Total	16.5	26.0	42.5

Source: Westray Coal Training Proposal draft, 26 June 1990, Table IV (Exhibit 119.045).

situations."[95] Cheverie recalled that he had first learned about the prohibition of electrical jumper cables underground only by a chance meeting with experienced coal miners as he was carrying a set of cables to use down in the mine – as he had been directed to do by the maintenance superintendent.[96] Franks described the electricians' dependence on advice from co-workers in lieu of training, and the lack of guidance by his supervisors:

> A. I found that if you went and talked to the supervisors, they'd just ridicule you for not knowing what was going on. And after a while you got sick of being ridiculed so you'd go talk to . . . the miners, you know, and they'd set you straight usually.
> Q. Well, how would they expect you to know what was going [on]? What to do.
> A. My impression of it they didn't want you to know what was going on; they wanted to keep you in the dark.[97]

Martin's experience was much the same:

> A. [T]he carry on was that if you didn't work for the British Coal Board or work in a coal mine before that you were – he [Brian Palmer, the electrical foreman] always told us we worked in a panty hose factory.
> Q. A what?
> A. A panty hose factory.
> Q. Why would he tell you that?

[95] Hearing transcript, vol. 21, p. 4077.

[96] Hearing transcript, vol. 20, p. 3981.

[97] Hearing transcript, vol. 21, pp. 4114–15.

A. Oh, we just brushed it off as a joke, but . . . to me it was more or less an insinuation that we had no experience and just – you know, grab onto his apron and follow him around type of thing.
Q. Did you find Mr Palmer safety conscious?
A. No, not really. Not to what . . . my experience was working in other industry for safety practices. We never did have any lockout systems like as what I knew as a lockout system. We had no lockout procedures and . . . I always thought "Well, I never worked in an underground coal mine. Maybe this is the way they do things." You know, I figured well, these guys have been working in this stuff for years. Maybe they know what they're doing.
Q. But the safety procedures in place didn't seem to square with your previous industry experience?
A. No, not as far as locking out stuff before you'd work on it or anything like that. It didn't seem to . . . be what I had experienced before. [98]

Journeymen with no mine experience and apprentices with very little work experience of any sort were sent into sections of the mine on their own.[99] Martin was called in at 11 pm one night to cover a shift by himself, although he had never worked underground alone before. Despite his uneasiness, Martin agreed to do it to relieve his supervisor, who had been on duty for 15 hours and needed someone to relieve him: "Yeah, well . . . I told him [Brian Palmer] on the phone that I didn't want to come in because I was by myself and I . . . was nervous being there by myself because if something went wrong, I didn't know really what to do."[100]

The attitude of management and the rush for production had an adverse effect on the training of tradesmen; it also hampered the development of any program for consistent reinforcement of workplace safety. The tradesmen were required to fill out daily reports on their work and the condition of the equipment, but safety concerns noted were not addressed in a timely fashion.[101] According to Franks, when electricians and mechanics reported problems such as communications failures in the environmental monitoring system, a cable slowly burning on the main conveyor drive, or a slow leak causing a compressor to overheat, no attempt was made to find a solution:

> So Bob's [Bob Parry, maintenance superintendent] answer to the [compressor] situation was get a bunch of rock dust, throw rock dust under it to soak up the oil, get some fire extinguishers, put three fire extinguishers on the wall and set up a water hose just – well, I assumed in case she went on fire. I mean, he never used those words. But to repair it – they never did repair it.
>
> Wayne and I used to go back . . . every set of shifts and add oil to it . . . It was never repaired. It was just – instead of shutting the compressor down and repairing it – it was only a gasket that was blown, they'd rather just

98 Hearing transcript, vol. 23, pp. 4472–73.

99 Bardauskas (Hearing transcript, vol. 23 p. 4576); Franks (vol. 21, p. 4100).

100 Hearing transcript, vol. 23, p. 4445.

101 Franks suggested the reports were never read. Larry James had even written a shift report in Welsh that went through the system unnoticed by his supervisors (Hearing transcript, vol. 21, p. 4120).

keep it running and prepare for a fire was my idea of the way he was doing it anyway. That was Bob's way of running things.[102]

Practical Training Underground

Workers on training crews were shown what they needed to know to complete their current assignments in roof support or belt conveyor maintenance, but they were not systematically instructed in mine hazards, safety requirements such as stonedusting and ventilation, or emergency response.[103] Novice miner Ted Deane described his bolting crew's response to smoke from an overheated conveyor belt roller: After senior miners had told them to "head out and go down to the fresh air," they were confused about which way to go – they were not sure where the fresh air route was.[104] A worker with no previous mining experience might be assigned to the working face within weeks of hiring on, if underground management was satisfied with his attitude and work habits, or if the press of work demanded more workers than were qualified.[105] New miner Lorne McLean described his assignment to clean-up work after a roof fall in the Southeast section:

A. . . . we just drove in and – actually, that was the day they had a little bit of roof fall down in southeast. And then Bryce took the other trainee and I – I think it was the fifth day we worked there, the sixth day maybe. It was in our second set. And he took us down there to help weld arches together at the roof fall, which I thought was a little strange to have two guys there with five days experience at a roof fall bolting arches together. We were beyond terrified. Nelson LeDrew took off running and I just slapped the guy to get on with me and it was right on his heels.

Q. Why did you take off?

A. I just took off because Nelson did. I figured he was an experience[d] miner and I was right on his heels.

Q. And why did Nelson take off?

A. There was rock fall behind us and he . . . explained to us, you don't want to be in the middle, which makes perfect sense sitting here around the table. But when you're down there and we just heard some rock fall, and me and the other guy were just, you know, "Wow, there's more coming down." But Nelson caught on really quickly. And like I say, we were like the three musketeers, just zoom, gone. But that was, you know – we had no idea. And Bryce had said he would be there with us. He would be personally responsible. Nelson would be with us all the time we were there, he told Aaron.

Q. . . . was Bryce there?

A. No, I have no idea where he went after that. He was personally responsible for us, I guess.[106]

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102 Hearing transcript, vol. 21, pp. 4117, 4129–30.

103 Jay Dooley, referring to the "non-existent" training on the bolter, miner, and shuttle car, said: "But . . . we had no facility that trained people in those areas" (Hearing transcript, vol. 38, p. 8399).

104 Hearing transcript, vol. 26, pp. 5409–10.

105 Bryce Capstick (Hearing transcript, vol. 42, pp. 9340–41).

106 Exhibit 116.1A, pp. 116–17.

Some of the foremen were concerned about the assignment of inexperienced miners. Fraser Agnew explained at the Inquiry:

> Q. Did you feel that men were receiving proper training before being deployed to a production crew?
>
> A. No. I don't think they were, a lot of the young fellows. Some of them were young guys that never had any mining experience at all.
>
> And then there was guys that had hard rock experience. At least somebody with hard rock experience, if they didn't have the methane and knowing what methane is about, at least they had the roof conditions down that they knew enough to get out of the way of a piece of falling rock or whatever.
>
> But when you've got a green boy off the street, and he's down in the North Mains, and he's setting arches for a few weeks, and he's at the face, I don't think that's very fair to put him there.[107]

Initially, an experienced coal miner was put in charge of the training crew, but as mine conditions deteriorated and the original trainer moved to a different job, the training crew became an arching and labour crew.[108] Even with the first leaders, training beyond the fundamental skills for the work at hand consisted of an informal collection of anecdotes and conversations.[109]

By 1992, the leadhands responsible for training new employees on the belt crews included workers who had only their Westray experience to draw on. Belt crew leadhand Aaron Conklin described how he had learned from the men he was supposed to be training that the flashing lights on the environmental monitoring system were meant to warn of hazardous gas levels:

> I didn't know that, so the trainee told me. . . . four new trainees . . . were told some safety stuff and they had films and what not, eh? And Joey Fenton, I believe, or Ron told me what this flashing light was. I didn't know what it was. I thought it was something the engineers had there flashing to figure out how much movement there was . . . he said I hear the CO, the methane tester started flashing, you were to get out of there. I didn't let on I didn't know, mind you.[110]

Conklin, who had no mining experience except at Westray, explained that trainees got nothing from him regarding mine safety: "As far as what I was teaching them about the belts, I feel competent that what I was teaching them was good. But . . . I wasn't doing coal mining, so I couldn't . . . teach them anything about coal mining."[111]

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107 Hearing transcript, vol. 35, p. 7671.

108 Don Dooley had definite opinions on the "training crew": "It was just a farce" (Hearing transcript, vol. 36, p. 7760). "It was a labour crew . . . Once we started setting arches, that was mainly what the training crew did" (vol. 37, pp. 8230–31).

109 Steven Cyr worked on John Bates's training crew for a month: "No, he never taught us that stuff [about methane and coal dust] . . . there was no training or anything, no" (Hearing transcript, vol. 25, p. 5096).

110 Pre-hearing interview, 6 August 1992 (Exhibit 115.1, p. 145).

111 Hearing transcript, vol. 28, p. 6009.

Close Personal Supervision

Gerald Phillips attended a meeting of the board of examiners on 10 April 1992. He informed the members that initial practical training from six weeks to three months was provided, always "under close supervision." Later training for work at the face was also said to be followed by six months of close supervision.[112] After classroom training, workers were supposed to work with qualified coal miners to observe and practise safe mining under the guidance of more experienced co-workers. Andrew Liney described the British version:

> I had to spend 20 days underground on what's called "close personal supervision" which means I wasn't allowed to do any task on my own. I had to move within arm's reach of an approved person who signed for me on a daily basis. So I did what he did. He showed me how to do it, then he let me do it, but . . . I was never doing it on my own.[113]

This practice was not followed at Westray. New workers were not consistently deployed under the close supervision of experienced coal miners. Inexperienced and inadequately trained workers were given work in the mine that should have been assigned to qualified miners, sometimes without the benefit of working alongside more experienced co-workers. There were too few qualified coal miners to provide adequate close supervision of the new worker. This may not always have been the case, but, as the mine expanded and split into several separate working sections, inexperienced workers were advanced to complete the crews at the face.

Section 50(2) of the *Coal Mines Regulation Act* requires that "no person shall be employed at any work at a working face in a coal mine" unless certified as a coal miner, under the control and direction of a certified miner, or employed at a working face approved by the minister as a training place. The April 1991 designation of the entire Westray mine as a training place may well have permitted Westray management to avoid the more stringent requirements for close supervision of uncertified workers, although that would certainly not have been the original purpose of that provision in the act. Generally accepted industry standards, the company's own representations, and good safety common sense would dictate that novice miners learn their skills under the supervision of experienced coal miners. The fact is, there were not enough experienced underground coal miners to fulfil this mandate, and inexperienced underground workers were left to learn what they could from experience – with little or no safety indoctrination at the face.[114]

Hard-rock miner Wyman Gosbee worked from November 1991 to March 1992 on a bolting crew without a certified miner, until he and

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112 Exhibit 76.17.064.

113 Hearing transcript, vol. 18, pp. 3267–68.

114 Jay Dooley told the Inquiry about the problems of mining with inexperienced people. Even *before* the mine was split into two working sections, with nine people in a crew, "you know that four of these people are certified coal miners. You know that the other five . . . are not certified coal miners" (Hearing transcript, vol. 38, p. 8396).

others hired at the same time became eligible for certification themselves. During a shift working under difficult roof conditions, he complained to his foreman, Arnie Smith:

A. And I had told him, I said, "by law . . . we're not even supposed to be in here bolting . . . none of us are certified." And then he had come back with the answer that, "Well, I'm certified and I'm in here all the time with you."
Q. And was Mr Smith in there all the time with you?
A. No . . .[115]

Certification as a Competent Coal Miner

During the rock tunnel driveage, Westray had been given an exemption from the *Coal Mines Regulation Act* requirements for certified miners. Once the mine got into coal, the requirement was reinstated.

Overman Jay Dooley estimated that, even as late as the spring of 1992, one in ten workers underground were properly trained coal miners.[116] Bryce Capstick reported that he had only one experienced coal miner working on his crew, along with a few hard-rock miners, and that the balance had no mining experience before Westray.[117] Neither Dooley nor Capstick considered that those who received their training and certification at Westray were properly trained and qualified.

Westray workers said that the testing of miners for Nova Scotian certification often consisted of only one or two questions, sometimes not even related to mining. John Lanceleve described his testing for certification as a coal miner:

Q. And what did the test consist of?
A. Two questions that I recall.
Q. And what were they?
A. What would you do in the case of an underground fire? And I just told him [Albert McLean] I would put on my self-rescuer. And he asked me what way I would escape or evacuate the mine. I told him up the fresh air.
Q. And were those the only two questions?
A. The third one was do you have $20.[118]

This superficiality was in stark contrast with descriptions of certification tests in other Canadian jurisdictions. In Alberta, Doug MacLeod, for example, had undergone lengthy oral questioning conducted by a panel of management, inspectorate, and labour representatives, covering all aspects of underground coal mining. He was even required to demonstrate proper

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115 Hearing transcript, vol. 25, pp. 4967–68.

116 Hearing transcript, vol. 38, p. 8399.

117 Hearing transcript, vol. 42, p. 9340.

118 Hearing transcript, vol. 27, p. 5535. Westray miner Normand Lavigne related a possibly apocryphal tale about a certificate applicant who was asked, " 'where you from, Bud?' He said, 'Cape Breton.' Then the guy said that's good enough for me and he got his ticket" (Statement to RCMP, 9 June 1992, p. 6).

ventilation of a five-road system on a mine plan. In Nova Scotia, he was asked one question.[119]

Albert McLean, the Department of Labour mine safety officer who administered coal miner certification, said that Nova Scotia regulations do not require the testing of candidates for certification at the coal miner level. The work history on the application form and the supervisor's signature were sufficient to satisfy the requirements of the act. His cursory testing was merely "doing a favour," asking a few questions that he thought "might have been [of] some interest to the miners." He was not aware of any requirements for establishing that candidates under the six-month rule actually received systematic training.[120] He did not believe that any inspectors examined training logs, and could not say when he had learned of the board requirement for training logs to be submitted for review:

> Q. But did you know that this was the way it was supposed to be operating?
> A. I – right offhand, I don't – I can't recall it. It might have been discussed somewhere, but I never got a copy of this letter to the Board.
> Q. But if it's possible that it might have been discussed so that you knew it, why didn't you or somebody check to see if it was being complied with?
> A. Sir, I was under the impression the same thing, conditions at Westray was what took place at Donkin Mine.
> Q. And was that the same condition?
> A. That's – six months, the application would be filled out by the management and said the man, person, worked that and was given a certificate.[121]

Nova Scotian certification "testing" did not confirm any appropriate level of knowledge in the candidates. The process did not verify that candidates had the minimum work experience or training. Many of the miners certified at Westray did not meet basic conditions of length and type of work history necessary for certification. The testing did not detect these deficiencies. It does not appear that there was confirmation by the inspectorate of the information in miner candidates' application forms. The inspectorate did not confirm with the candidates that they had received the training or worked the reduced six months. The application forms had been prepared by the company from drafts filled out by the miners. There were indications that some forms had been adjusted to bolster the credentials of applicants. They were signed by senior management rather than by the direct supervisors. The applications were not scrutinized to detect such inconsistencies as Aaron Conklin's supposed work history of 24 months as a "trainer as belt man" at Westray when he had started there only eight months prior to the certification application

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[119] Hearing transcript, vol. 27, pp. 5625–28. Randy Facette (vol. 33, pp. 7226–27) and Rick Mitchell (vol. 31, pp. 6667–70) also testified to the rigorous testing they went through in Alberta and BC.

[120] Inquiry interview, 13 December 1995 (Exhibit 86.1, pp. 131–35).

[121] Hearing transcript, vol. 57, pp. 12495–96.

date. Phillips had signed the verification of work experience.[122] Evidence of deficiencies was not pursued. Lanceleve, for example, was asked how long he had worked underground and responded that he had five years in hard-rock mining. He was not asked about his time in coal mining. At that point, he had been employed by Westray for only 25 days and had worked about 12 shifts in whatever coal was encountered during the Westray tunnel driveage to 8 May 1991.[123]

William MacCulloch, the Westray training officer, had no mining experience and did no underground training. He regarded himself as a training "administrator." He kept no records about underground training beyond certification application forms. He knew little of what took place in the mine other than the program description Westray had sent to the Department of Labour.[124] He could not name the three persons characterized as underground trainers in that program description.[125] He claimed it was the underground supervisors' job to train the workers, the workers' responsibility to ensure that certification applications accurately represented their training and experience, and the inspectors' function to test the workers.[126]

The underground supervisors understood that their job was to oversee coal production. They were critical of the trainees' inadequate preparation for production work. They regarded that preparation as the responsibility of the so-called training crews, or the training officer. The training crew supervisors taught the conveyor maintenance and ground support work, and in some cases did not have the work background necessary for training others in coal mining safety.

Many applicants placed little value on the certificates. Aaron Conklin was certified even though he had minimal experience at a working face. He was asked a single question, "What would you do in case of a fire?"[127] He spoke of his lack of regard for the certification process:

> Well, I was told before that the test wasn't that hard. And I can't remember who had told me, but it was more or less relayed to me through the miners that even if I did get that – when I got that paper, as far as they were concerned, it didn't mean squat. I still had a lot to learn. . . . I never placed any big emphasis on that certificate, except the fact that it meant the company was going to give me a raise. It was a piece of red tape, as far as the government was concerned.[128]

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122 Hearing transcript, vol. 28, pp. 5955–57. Conklin was a trainer for the belt crew within months of his being hired as a complete newcomer to mining himself, and well before his own certification.

123 Hearing transcript, vol. 27, pp. 5536–37.

124 Hearing transcript, vol. 40, pp. 9018–31. This program description was in the 5 March 1992 letter from Parry to Albert McLean (Exhibit 119.116). MacCulloch made an interesting attempt to use this letter, which he had drafted himself from Parry's information, as support for his contention that underground training must have happened as described.

125 Hearing transcript, vol. 41, p. 9227.

126 Hearing transcript, vol. 40, pp. 9028–29. **Comment** I wonder, in light of all this delegation of responsibilities, what the "training administrator" actually did.

127 Hearing transcript, vol. 28, p. 5960.

128 Hearing transcript, vol. 28, p. 6014.

Many applicants were not aware of the requirements for certification, or of any false or misleading information in the final version of their applications. Little effort was made to correct misleading information. The inspectors gave approval for certification, assuming that the company training proposal had been implemented. The test administered by the inspector was a farce. The Department of Labour relied on the company acting according to its own proposals and representations.

Doug MacLeod had worked as a surface labourer for CMD and had about a month of underground experience by the time Westray hired him on 1 April 1991. Within two weeks, he was second operator on the Dosco Roadheader. On 17 April 1991, he received his certificate of competency as a coal miner. He understood this rapid promotion reflected the company's need for a certain percentage of certified miners. His application form contained misleading information, inflating his CMD underground work to a year and omitting to mention that his two years' previous mining experience had been in a surface gold mine. The form had been signed by both Phillips and Parry, and by MacLeod himself. He could not recall if he had read the final version before signing.[129] His coal mining experience consisted of 12 shifts in whatever coal had been encountered in the tunnel driveage during March and the first half of April 1991. He was tested by a single question addressed to a group of six candidates:

Q. And what did the test consist of?
A. He asked me – I believe it was one question. It was about ventilation. I don't know if I answered it or not. And he said "Good."
Q. What do you mean you don't know if you answered it or not?
A. I think I said "yeah," or because I didn't know nothing about ventilation after, what, eight days in a coal mine. I know if you get air, you're all right, you know, by that time.

. . .

Q. When you were in this room with Mr Parry and Mr McLean and the other individuals, did Mr McLean ask you anything at all about what your background was as far as coal mining went?
A. I believe he said something about "Did you ever work in a coal mine before?" And Roger Parry answered that for me. He said "Yes."
Q. Roger Parry answered the question?
A. Yes, he did, yes.
Q. Do you remember that, as you're sitting here today?
A. I remember that as I'm sitting here today because I just looked at him and didn't say a word.
Q. Why didn't you say anything? Why didn't you correct him?
A. Oh, I don't really know that, why I didn't correct him. It was just that I got a piece of paper for nothing.[130]

There was an effort to increase the percentage of workers with certification. In an Inquiry interview, miner Rick Mitchell described how

[129] Hearing transcript, vol. 27, pp. 5610–15.

[130] Hearing transcript, vol. 27, pp. 5616–18.

he had looked for a certified miner to represent the North mains crews on the safety committee:

> A. . . . anyway, we found one in the southwest section, Ferris' crew, Trevor. Well, we worked out west with him. But we went down there [in the North mains] and there wasn't one black tag in both sections.
> Q. So there were two sections working and there wasn't a qualified miner in the whole crew?
> A. But when we told Roger, all of a sudden the black tags were coming out like Rice Krispies, you know.[131]

The certification process did not monitor for the improper assignment of new employees or check directly on the actual experience of trainees. At Westray, an increase in the percentage of certified miners did not mean an improvement in the qualifications of the workforce.

Claude White suggested to the Inquiry that an improved process for verifying the existence and effectiveness of company training programs was one of the major ways in which the performance of the inspectorate could be improved. He suggested that inspectors sit in on training sessions to audit the program and that this classroom contact would open the possibility for more frequent and better communications with the workers.[132] The certification testing process could be made into a more reliable demonstration of candidates' knowledge and skills. The checking of qualifications could be more rigorous than the few oral questions asked of applicants for miner's papers.[133]

To White's list should be added the review of qualifications necessary for the various jobs in a coal mine so as to make certification more reflective of the knowledge and skills necessary in modern mining. The certification process did little to ensure that Westray miners had the training and experience necessary to perform their jobs safely.

Training for Mining Equipment

Pay scales in the mine were tied to the underground manager's assessment of workers' abilities to operate the three major pieces of equipment – the continuous miner, the shuttle car, and the roof bolter.[134] Assignments that gave the opportunity to learn from crew mates and to practise on this machinery were largely made by the underground manager, based on his

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131 Exhibit 115.1, pp. 155–56. "Black tag" is the miners' term for the certificate of competency as a coal miner.

132 Hearing transcript, vol. 63, pp. 13808–09.

133 **Comment** These suggestions are a startling commentary coming from *the* man whose responsibility it was to ensure safety in the mine. White was, after all, a mining engineer and had been director of mine safety since 1988, after wide experience in mining, including a term as instructor in mining at the University College of Cape Breton. His suggestions seem to have been offered as though they were new ideas aimed at improving the qualifications of miners. It was always within White's power and indeed was *his* responsibility, to ensure that *his* inspectorate, at *his* direction, was enforcing conformity with the certification requirements of the *Coal Mines Regulation Act*. My impression is that White viewed his job as seeing that the system worked and that others were discharging their responsibilities. White's comments at this time and in this context suggest nothing more than a shallow attempt to deflect attention from the grossly incompetent performance of the inspectorate he directed.

134 Photographs 1–7 in Reference illustrate the large equipment in use at the mine.

assessment of ability and on the production schedule. Opportunities to acquire these skills were an additional enticement to work overtime. Setting the pay scale in this fashion provided an incentive to learn new skills quickly – skills perhaps not consistent with safe practice.

In some Canadian mining jurisdictions, everyone must participate in an extensive training and testing program before being permitted to use the equipment at a mine site. Bryce Capstick explained one system that he was familiar with:

> Every mine, even every contractor that goes onto a mine site has to go through an orientation as to . . . occupational health and safety, what their regulations are on site, fire regulations, what safety equipment is being used.
>
> And a lot of the mines now, you have to have what's called a common-core ticket. And a common-core ticket is an extensive program in which you have a licence, it's like a driver's licence, for everything . . . you're to do in that mine. If you were to use a drill to drill a hole, you had to have a licence to operate that drill. To operate any piece of equipment, for that particular piece of equipment you must have a driver's licence. And there's no grandfather clauses. In other words, if you have 20 years' experience around that equipment, nothing's rubber stamped. You've got to take the course the same as a new fellow. You've got to prove that you can operate that equipment. You've got to prove it in order to get a driver's licence.[135]

Westray did not have such a program to prepare and test operators. Practical training for bolting or for operating coal production equipment consisted of opportunities to observe while others performed the tasks, and then to perform the work while those others offered comments and suggestions. There was no standardized program of instruction and testing by qualified trainers. As miner Wayne MacPhee said in an Inquiry interview:

> When I mentioned training, well, the men were sent down to take on a job, to train or whatever. But nobody, nobody was a qualified instructor as such. . . . they just sent this gentleman down with me and said "Okay. He's going on the bolter with you." I was never ever certified or checked out by anybody to say, okay, this man's a qualified instructor. If I got bad habits, I'm going to pass them on to him. You know what I mean? And this was the system. You know what I mean? You were left at the pity of some other poor bugger that was trying to do his job, you know? And the attitude, to me, was well, "You get this bolted and you get it done now as fast as you can to get into the other heading." Right? So . . . this gentleman here with me would pick up my habits. And it's the same thing on the miner. There was no particular person that went about the mine, checking guys out on the equipment, saying, "Okay. You are certified to operate this piece of equipment." Or, "You are certified to train personnel on this equipment." There was no such thing.[136]

There was little training for experienced miners from other mines, new to the layout and equipment at Westray. Experienced continuous miner operator Buddy Robinson testified that, on his first day at Westray, he was

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135 Hearing transcript, vol. 42, pp. 9343–44.

136 Exhibit 116.1(A), pp. 21–22.

assigned to unfamiliar and dangerous work from the bucket of a "much bigger" Scooptram than he was used to.[137] Miner Randy Facette, who had been out of the industry for several years, was put to work on a roof bolting crew. He had done similar work before, but described Westray's unfamiliar bolters as "quite the monsters; they were huge compared to what I was used to."[138] Miner Ed Estabrooks, who had also been out of mining for many years, was roof bolting within days of his arrival at the mine. The other men working the bolter trained him; as he described it, "They just proceeded to say this is the way it's done and showed me how it was done and that was it."[139] Hard-rock miner Carl Guptill found himself digging a hole in the floor of the mine when he had just been trying to level it with a Scooptram. The dusty air obscuring vision and the soft roadway material turned a familiar task into something for which he was not prepared.[140] David Sample talked to his supervisors about his discomfort with his assignment as first operator on a continuous miner when he had no depillaring experience.[141] He was given the job despite his misgivings. Hard-rock miner Lenny Bonner described his instruction on the use of the shuttle car:

> Well, I was told what made it go forward and backward. I was told: "This is the brake." I was told not to let off on, I guess you could call it the "gas pedal" because the machine would free-wheel. And that's basically all I was told, "Give it a try."[142]

In early 1991, some shuttle car training had apparently been done on surface.[143] As the mine enlarged, the cars and other equipment were required for production work, and surface training ceased. The shuttle car was tricky to handlè, and learning on the job meant that both men and machines were at risk of collision. Lanceleve had never driven a shuttle car before Westray. He described his training:

> A. Well, I was showed how to start the pump, and I was showed high tram, low tram, . . . how to run the conveyor and release the brake. And Glyn Jones was my fire boss at the time. He jumped in the car and said "Go ahead, drive it down to the miner" and that was it, I was gone from there.
> Q. How did you find it driving that car, Mr Lanceleve?
> A. Pretty hairy at times, starting out.[144]

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137 Hearing transcript, vol. 30, pp. 6292–93. Robinson told his foreman that "that's my last trip up there."

138 Hearing transcript, vol. 33, pp. 7152–53.

139 Hearing transcript, vol. 24, p. 4871.

140 Hearing transcript, vol. 29, p. 6167.

141 Hearing transcript, vol. 30, pp. 6480–81. Sample had spent about 2½ months under the tutelage of Robinson and knew that he was not yet experienced enough.

142 Hearing transcript, vol. 24, p. 4724.

143 According to Sample, "that was what I had considered the only formal training I had received" (Hearing transcript, vol. 30, p. 6515).

144 Hearing transcript, vol. 27, p. 5464.

Another concern was the number of electrical cables pinched and sparking as the shuttle cars moved along the roadways. The combination of big cars, sensitive controls, steep slopes, tight corners, and inexperienced drivers made cable damage and similar perils inevitable. Westray miner Kenny Evans told of teasing an inexperienced shuttle car driver who held a record for the number of electrical cables damaged at one time.[145] Malcolm McPherson commented on inadequate equipment training and consequent cable damage as a potential ignition source for a coal mine explosion.[146] Other equipment offered similar risks to ill-trained operators.

Training for Mobile Diesel-powered Equipment

Operators of mobile diesel-powered equipment, such as the Scooptram, got similar training – a few minutes of demonstration of controls, a practice run, and then to work.[147] There was no systematic training in the use of some of the mobile equipment, most notably the farm tractors, which were only to be operated subject to special permits that restricted their use. These vehicles were to be equipped with specified safety features. They were not to be used in return air, in air containing more than 0.25 per cent methane, on roadways with more than 15 per cent combustible matter in the dust, past the last open cross-cut, or within 100 m of the working face.[148] The safety features and restrictions on operation were key to the level of danger they created in the mine.

The inspectorate assumed that workers would be informed about the conditions, would always know which was return air, and would be able to assess 85 per cent non-combustible levels by visual inspection. The company gave assurances that the diesels would be used properly, that workers would be informed about the conditions, that supervisors would insist on strict adherence to the rules, and that signs would be posted at the limit of permitted use. Testimony from the miners largely contradicts those assurances and assumptions.[149]

Operators had a limited or erroneous knowledge of the conditions. Miner Wyman Gosbee testified to the only restriction he had known:

> No, no . . . the only condition that I know of was my shift boss had told me when you supply the bolter, don't leave the tractor in the heading with the

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145 "I seen a guy pile into five cables at once. Just about welded a car to the arch" (Exhibit 113.1, pp. 48–49).

146 Hearing transcript, vol. 9, pp. 1702–03.

147 Steven Cyr got "just a couple of minutes" of training on the boom truck from Aaron Conklin, who "wasn't very good at it himself" (Hearing transcript, vol. 25, p. 5098). Cyr, in turn, showed Ted Deane how to operate the boom truck, "so to speak," over the course of one or two shifts (vol. 26, p. 5347).

148 Exhibit 69b.173. This subject is covered in detail in Chapter 5, Working Underground at Westray, and Chapter 12, Department of Labour.

149 See Chapter 5, Working Underground at Westray, and Chapter 12, Department of Labour, for complete discussion.

> bolter. Take it back out to the first open crosscut in the intake side . . . And leave it parked there.[150]

Other drivers had been given similar and inadequate instructions. Jonathan Knock had been directed in April 1992 by Glyn Jones and Jay Dooley not to take the boom truck into the Southwest without a methane check by the foreman, but they didn't tell him why.[151] A sign had been posted at the limit of approved use of the non-flameproof diesels – at the last open cross-cut during development of the main slopes – but only for a few weeks about a year before the explosion. The drivers had not been told all the conditions for use of the mobile equipment, nor had they been given the background to appreciate the reasons for the restrictions. Liney commented on the need to prepare operators:

> Well, assuming that training was given to the operators in a normal, routine way, both when they first joined the mine and when they were trained to be vehicle drivers, obviously, I would have trained them, to some extent, on the importance and the significance of why they were being asked to keep out of the returns. Because I feel that people who came from, probably, rock mining backgrounds probably thought it was a relatively arbitrary distinction. I mean, it doesn't look any different. There's no sudden place you come to in the mine that suddenly looks like a dangerous place compared to the place you've just been.[152]

Workers could not have detected some instances of unacceptable use of tractors, since many lacked the expertise to recognize when they were in return air, particularly in the Southwest ventilation route. Knock, for example, had known he was not supposed to take the tractors in return air, but only learned of the return air route in the Southwest during the Inquiry hearings.[153] Electricians who used a tractor to retrieve gear during the retreat from Southwest 1 had not appreciated the risks. Michael Franks recalled at the Inquiry:

> A. Oh, yeah. I remember we . . . didn't know whether to take the tractor in or not, but we were never told that there was high gas there. So we kind of decided between ourselves to take the tractor in. We probably thought it was kind of a stupid move, but we took it in anyway. And when we got in there, Roger Parry came busting through the stoppings and shouted at us . . . "What are you guys, a bunch of fucking brain-dead cocksuckers" . . . And he said, "We've got a serious concern in here." So – and then he went raving on a little bit longer, and then he just stormed off and went about his business. So we got the tractor out of there pretty quick.
>
> Q. Now did you have any . . . idea that you were in an area of high gas?

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150 Hearing transcript, vol. 25, p. 5009.

151 Hearing transcript, vol. 26, pp. 5242–45. According to Knock, his foreman subsequently allowed him to drive the truck in an area where he had taken a reading of 1 per cent methane.

152 Hearing transcript, vol. 19, pp. 3609–10.

153 Hearing transcript, vol. 26, p. 5249.

A. Well, there was stoppings between where we figured they had a concern. So we felt we were okay. We were more or less in the fresh air we thought.[154]

Some employees were severely chastised for unwitting improper use of vehicles, even when it was done on the instruction of supervisors. Underground labourer Lorne McLean related one such incident:

A. Now, I wasn't really familiar enough with the roads to know where we were. But at one – I think it was probably on our last set in, Glyn instructed us to go down here about 1 East and . . . retrieve our belt equipment.
Q. That's in the southeast section.
A. That's in the southeast section, because we had to do a stitch up on the No. 2 belt I think it was. And we took the tractor – it was Aaron Conklin and the other trainee and I. We took a tractor through one of those canvas stoppings they had that hung down. And we just drove right through it like it was a . . . driveway. We didn't know any better. Bryce Capstick was down there. And Bryce was a little upset. Asked us if we had checked the gas before we went in there with the tractor. Nobody. We didn't know. He got pretty upset. Told us not to do it again. And again . . . Aaron was training us, and Aaron didn't know enough to have the gas readings checked before we went in there. By the same token, Glyn had told us to do it and hadn't said, "Get the readings checked or anything like that." And like I say, we just whipped down through like it was a driveway and gathered up our gear. And . . . it was when we were leaving, Bryce gaffled onto us and pretty much read us the riot act about not to do it again, which was great. I mean, we knew then and we wouldn't do it again.
Q. What did he tell you? Did he tell you any reason why you shouldn't do it again?
A. Well, it was just your basic farm tractor. It was not to be in there with it . . . I assume, the purpose of having that temporary stopping hanging there was to . . . keep the gas behind it, I would assume. I don't know.[155]

Training for the operation of mobile vehicles was inadequate. Operators got information from co-workers that was incomplete or inaccurate. Management did not reinforce standards by example. They set work schedules that could not be met with proper use of equipment. Workers were reprimanded at times for practices that were condoned or even required at other times. It was not a training that would establish and promote safe mining practices.

Finding

The miners, supervisors, and underground tradesmen at Westray were not provided with adequate training in safe underground work practices. They went into the mine with little or no safety orientation.

[154] Hearing transcript, vol. 22, p. 4202.

[155] Inquiry interview transcript, undated (Exhibit 116.1(A), pp. 114–15).

Finding

Lacking a proper appreciation for the special dangers inherent in underground coal mining, many of the tradesmen were prone to accede to directions to perform unsafe tasks or to take dangerous shortcuts in their work.

Occupational Health and Safety Training

Miners were not, in most cases, given copies of the *Coal Mines Regulation Act* and the *Occupational Health and Safety Act*; nor were their legal rights explained. Though management did seek workers to serve as representatives on the safety committee, it did not set up an effective committee or inform the members about their rights, roles, or responsibilities. The inspectorate quite properly raised these requirements in discussions with company management and provided the company with copies of the relevant acts. The Department of Labour did not directly confirm that miners received and understood the information, however, or that company practices conformed with the law. Nor did the department provide the safety committee with training or organizational assistance. Neither management nor the inspectorate sought input from the underground workers in decisions affecting safety, and they did not invite worker representatives to participate in the inspection tours conducted by inspectors. The company responded to legitimate concerns raised by the safety committee after its inspections with excuses, denial, or at most a selective clean-up of small problems with quick solutions. Inspectors did not adequately address complaints brought by the committee or by individuals. These matters have been addressed at greater length elsewhere in this Report, but it is worth repeating that this important aspect of safety training was neglected at Westray.

1993 Draft Training Proposal

In 1993, Westray management produced a draft training proposal that covered all aspects of work in a coal mine.[156] It called for:

1 introduction to the statutory rights of miners and their representatives, lines of authority and responsibility, introduction to operator's rules, and reporting hazards;
2 training in the use of respiratory devices, including practice in donning the units for all new employees, regardless of experience;
3 rules and controls for transportation and communications, including warning signals, the tagboard, and conditions for use of vehicles;
4 underground tours, with explanations of the work and the safety precautions;
5 review of the mine plan, locations of abandoned areas, instruction in the emergency evacuation plan, fire fighting, and barricading methods;

[156] Exhibit 79.05.001.

6 introduction to and instruction on the ground control plan and the ventilation plan;
7 instruction on health hazards such as dust and noise, the WHMIS, and first aid;
8 instruction on purpose and procedures for company stonedusting;
9 recognition and avoidance of hazards in the mine, with special instruction on detection and avoidance of the hazard associated with mine gases; and
10 instruction in the health and safety aspects of tasks to be assigned, safe work procedures, and the mandatory health and safety standards related to them.

Testimony from the witnesses revealed serious deficiencies in all aspects of training during the pre-explosion operation of the mine. This post-explosion draft proposal provides a catalogue of what was not done before May 1992.

The key to any successful regulatory regime is compliance, and the key to compliance is enforcement. As has been so graphically illustrated in the Westray experience, regulations, no matter how effective on paper, are worthless when they are ignored or trivialized by management and when their enforcement is largely ineffectual.

RECOMMENDATIONS

3 One regulatory organization (such as the Department of Labour or a board of examiners) should be responsible for certifying workers in underground coal mines in Nova Scotia.

4 Before approving the start-up of any underground coal mine, the regulator should review and amend the standards of certification to ensure the following:

(a) Standards of certification fit the mining methods and technology of the proposed mine.
(b) All positions in the mining operation are filled by people with the qualifications and experience necessary to do their jobs safely.
(c) The system of certification applies to every person required to work underground. Categories of certification should include (at a minimum) coal miner, electrical tradesperson, mechanical tradesperson, surveyor, engineer, mine rescue person, and the various levels of supervisors and managers.
(d) Trainers have the necessary qualifications and experience.

5 The regulator should establish a model curriculum consistent with established standards and practices in the coal mining industry.

6 **The mine operator should be required to have in place a training program, approved by the regulator, for every position in the workplace. The mine operator's training proposal must:**

(a) **conform to or be more rigorous than the model curriculum;**
(b) **show when, how, and what training will be done;**
(c) **incorporate annual refresher training and safety education;**
(d) **provide for adequate orientation to the mine for all new employees, including those with experience in coal mines; and**
(e) **include complete and sufficient training for operators of individual pieces of mining equipment prior to their being assigned operating positions.**

7 **The mine operator should be required to keep training and work history records for applicants for certification. The regulator should:**

(a) **check applicants' records, making sure that training is taking place; and**
(b) **test applicants for certification in a manner that establishes whether underground workers are trained sufficiently to work safely.**

8 **The mine's joint occupational health and safety committee should periodically review training standards, policies, and programs to make sure that they adequately reflect changing technology and mining conditions and practice within the mine.**

These recommendations merely present a minimal outline of the basics to ensure that workers are "safety trained." They are neither innovative nor unique, but they do reflect the kind of program that I have observed in operation. Jim Walter Resources, Inc. in Brookwood, Alabama, has a structured training and retraining program for its underground workers, and Devco has modular training programs for the various classes of underground workers. The National Mine Health and Safety Academy at Beckley, West Virginia, offers periodic training for miners [157]

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[157] The Inquiry library has copies of the JWR Annual Refresher Training manuals as well as similar material from Devco. Course outlines and other materials from the Beckley Academy are also in the library.