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Organization and Management at Westray

Although the development of the Westray project has been set out in detail in Chapter 2 of this Report, a brief chronology should help to set the scene for the commentary that follows on the organization and management of 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

Chronology of Underground Development

For the underground workers, the Westray story began early in 1989 with the driving of the main access roads. The Department of Natural Resources had processed and approved Curragh's application for the mine permit. In January 1989, the first compliance issue surfaced as the department discovered that the tunnel alignment had been changed from the approved layout.

Site preparation was completed early in 1989, however, and the official start of underground development was later commemorated in a ground-breaking ceremony on 10 April 1989.

The development of the tunnels was subcontracted to Canadian Mining Development (CMD), with some project supervision by Kilborn Limited. Westray management was already on site. The company had committed to supply coal to the new Trenton power plant, scheduled for completion in 1991. Both companies hired a few local workers, but many of the 34 development workers came from CMD hard-rock mining crews. The workers understood that CMD was going to provide them with employment driving the main tunnels to the limits of the planned workings. Westray would later take on the development of coal-producing sections off the mains.

The maps reproduced in Reference illustrate various aspects of the underground development. Map 1, The Westray Mine, Post-Explosion, depicts the basic structure of the mine, and map 2, Development Chronology, shows the progress made from 1989 to May 1992. By the end of May 1989, No. 1 Main had advanced 75 m to a point ahead of the first cross-cut between the two tunnels; No. 2 Main had advanced 30 m. The rate of advance declined as the first section of the main conveyor system was installed in No. 2 Main. The main ventilation system was developed, the fans being installed at the No. 2 Main portal.

Meanwhile, several provincial government departments were engaged in continuing negotiations with Curragh, negotiations that were proving both long and inconclusive. The Department of the Environment became concerned about suspended solids in the settlement pond and the possibility of damage around the proposed rail spur across the East River to the new power plant. The Department of Labour was concerned about training and certification, equipment approvals, plans for emergencies, and

delays in setting up a workplace safety committee. The Department of Natural Resources was concerned about the possibility that the new tunnel alignment would intersect major geological faults at oblique angles, resulting in extensive zones of main tunnel development through bad ground. Roof conditions in the earliest days of tunnel development gave credence to that concern. By mid-July 1989, the two tunnels had encountered ground problems, which CMD anticipated would persist for the duration of the driveage. There were three zones of bad ground where steel arches had to be used in addition to roof bolts, straps, and screen. CMD began to spray a shotcrete shell after blasting, followed by roof bolting and more shotcrete. (Westray would later discontinue the practice of shotcreting.) The roof above the first intersection collapsed in July, resulting in construction of an unconventional concrete pillar to support the roof.

In late July 1989, when the funding for the project had not been finalized, development was suspended. Only a skeleton maintenance and security crew was left on site. On 18 October, there were 42 employees, with nine men working underground on each of three 8-hour shifts per day. In February 1990, the mine inspector noted two underground workers carrying out maintenance. The mine manager told the inspector that construction was slated to restart around the middle of April. By May 1990, blasting had resumed and both tunnels were advanced to 270 m, but only one shift per day was working at the site.

Construction resumed fully in the fall of 1990 when the federal government guaranteed financing for the project, less than a year before the mine was contracted to begin shipping coal to the new Trenton power plant. By December, the mains were passing through thin bands of coal. That same month, the mine inspector issued the first of the Department of Labour's four orders to Westray, requiring that a certified mine examiner test for methane to reduce the risk of working and blasting in the presence of the gas. By February 1991, No. 1 Main had advanced 730 m.

Roof conditions emerged as a major concern early in 1991. Senior staff from the mine inspectorate came to look at the roof in mid-February, and the company hired an engineering consulting firm to monitor conditions. Westray took over tunnel development from CMD in early April 1991, stopped blasting, and began using mining machines to drive the mains. The company also stopped reinforcing the tunnels with shotcrete. A decision was also made to scrap the original mine layout and change direction to tap into the coal seam sooner, despite concerns that this would have a negative impact on both roof conditions and coal quality.

CMD workers had expected CMD to finish the tunnel work. Some were able to transfer to jobs with Westray, which needed experienced miners to meet project deadlines under challenging mining conditions. Efforts were made to recruit experienced miners from other room-and-pillar coal mining operations. Local workers were applying for what was described as long-term employment at good wages, and more workers

were hired every month. Underground workers were organized into four crews working 12-hour shifts, four days on, four days off.

Although the engineering consultants and the mine inspector reported in April 1991 that roof conditions were improving, a large section of No. 2 Main collapsed during the night shift on 23 May 1991, narrowly missing several miners. Some miners spotted signs of movement in the roof before the fall and retreated from the area in defiance of a supervisor's orders. This incident led to a confrontation between miners and the manager, who angrily dismissed the miners' concerns and implicity threatened their jobs. Shortly thereafter, the incident was cited in the Legislative Assembly by members of the opposition.

Both mains were advanced more than 1,200 m by 28 June 1991. The coal preparation plant was commissioned early in August 1991. Underground development was well into the Foord seam coal, and No. 10 Cross-cut was completed. On 13 August, however, there was another major roof collapse.

Other aspects of development were also not going well. The company had decided to make a turn into an area of coal in the direction of the old Allan workings, a change that took development into the Southwest section of the mine. Development also continued down into the North mains, splitting the mine into two distinct sections, each with its own crews and supervisors. Workers without adequate coal mining experience were promoted to newly created supervisory positions. No workers were trained in safe work methods or in recognizing dangerous roof conditions.

By the end of August, crews had advanced 120 m into the Southwest. The two mains had been advanced 1,430 m each. The growth and splitting of the mine into sections meant that there were not enough experienced coal miners to ensure that each working group included at least one experienced miner. It also meant that routines for basic safety measures, such as stonedusting, were being ignored or performed inadequately. Despite the vital importance of stonedusting to safety, the company's solution to the problem of coal dust accumulation was to ask for volunteers to work overtime stonedusting between shifts.

The inspectorate's ineffectual attempts to have the company plan and implement a proper stonedusting program continued sporadically throughout the short life of the mine. Other violations of regulations or poor mining practice were noted by the inspectors. The electrical inspector, for example, noticed an injured worker on light duty with bandaged hands, and had to issue an official order before the company gave an account of the electrical accident that had burned the worker's hands. The company was slow to report roof falls and was frequently reminded of reporting requirements.

The official grand opening of the mine was held on 11 September 1991. The mine was cleaned and stonedusted for the occasion. More than a thousand people toured the site on the weekend after the ceremony.

Four more roof falls were reported in September and October. The mine manager minimized the seriousness of roof problems, claiming that

the falls were controlled and that they posed little threat either to the miners or to production. Realistic accounts of the miners' experiences, however, revealed a series of near misses and increasing danger. The company's engineering consultants noted that the shotcreted portion of the mains was showing signs of deterioration. They recommended a study to pinpoint causes and plan solutions. The inspectorate also warned the company that a roof support plan was needed to decrease risks to the workers.

There were approximately 160 employees at the site by October, most of whom were working shifts underground. Major and minor roof falls had occurred throughout the mine. Management dismissed the concerns of workers who left jobs at the mine, claiming that those workers were hard-rock miners who could not adjust to the different environment of a coal mine. Production seemed to be the imperative at Westray, even at the expense of safety.

Union organizers had not garnered much support from the transient CMD workers. With the increase in experienced miners at the mine, however, or because of the poor working conditions, organizers began to find growing support for a union. The first drive to unionize the workforce at Westray was officially started on 2 October 1991 by local 26 of the United Mine Workers of America.[1] The union had to apply for certification by January 1992. Miners voiced their concerns about working conditions at a number of organizing meetings throughout the fall. The required number of workers signed union cards and a vote on union status was held in January, but the union was defeated by 20 votes. Organizers attributed the loss to the inclusion of surface workers in the bargaining unit and to other workers who did not appreciate the worsening conditions underground. Other factors may have influenced the vote, including company anti-union tactics and traces of a local historical bias against the United Mine Workers of America. In the spring of 1992, the United Steel Workers of America began a certification drive at Westray. This union had strong representation in the hard-rock mining industry in Ontario and had also organized the Curragh operations in Yukon. This drive was a success, albeit a somewhat hollow one since certification was not granted by the Nova Scotia Labour Relations Board until after the 9 May explosion.

Between 29 September and 12 October 1991, there were three major rock falls even though the roof in those areas had already been supported with bolts or arches. The miners were getting increasingly worried about the roof, and the mine inspector asked his department to engage an independent expert to assess conditions and evaluate the company's response. Instead, the Department of Labour borrowed an engineer from the Department of Natural Resources to sit in on meetings of the company and review the consultants' reports.

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[1] This is the same local that had represented the miners at Devco and its predecessor DOSCO in Cape Breton. The principal UMWA organizer for the Westray workers, Bob Burchell, was from the Glace Bay office.

By November, despite numerous undertakings by management, the company had not provided roof support and monitoring plans to the inspectorate. The mine inspector wrote another order requiring that roof support plans be produced by mid-month, but the company simply did not accept the registered letter containing the order and was able to put off supplying the plans until the end of the month. A plan for stonedusting was deferred again and again, and even the inspectorate seemed confused about what was being sought.[2]

In late November 1991, Curragh let it be known that Westray was available and on the market for sale. The company alleged that the production problems were of a temporary nature, but there is no record of any serious interest by potential buyers at the time.

The northern part of the Southwest section was plagued with roof problems. Senior officials from Curragh took an active role in working out alternative mine plans. A task force was struck to deal with ground conditions, and various consultants recommended a variety of solutions. The company hired a geologist from the potash mining industry who worked out terms for investigating and reporting roof falls.[3] At informal sessions, the engineers explained their roof support and ground control plans to the underground workers.

In December, Westray was at odds with the Department of Natural Resources. The decision to drive into the Southwest section was proving a mistake. Both the levels of production and the quality of the coal were less then anticipated, and roof conditions were hazardous. Natural Resources staff expressed concern about proximity to the old Allan mine workings, a greater risk of subsidence, and deviations from the approved mine plan. (Map 10, Approved Mine Layouts, in Reference shows the location of the Allan mine.) Yet the department, having suggested that non-compliance could threaten the company's mining permit, retreated by the end of the month. Skeletal new plans were approved, and the department worked to help the company develop a surface mining operation to help meet its coal supply obligations. Federal and provincial money and expertise met most of the costs of technical studies for monitoring roof conditions and subsidence.

Despite the decision in the summer of 1991 to turn into the Southwest district to reach minable coal sooner than originally planned, coal production remained behind schedule. The wait for funding guarantees and the persistent roof problems in both sections of the mine only exacerbated the problem. The company was not able to meet its 1991 commitments to supply coal.

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2 See the section on the actions of mine inspectors in Chapter 9, Dust, for commentary on director of mine safety Claude White's confusing testimony about stonedusting and coal-dust sampling.

3 There was general agreement among Inquiry experts that potash mining presents an entirely different array of ground control problems than does coal mining, the conclusion being that expertise in potash is not entirely applicable to underground coal.

Meanwhile, members of the underground workforce at Westray were bringing their concerns both to management and to the inspectorate. At the urging of the Department of Labour, the company had recruited representatives from the crews to serve on a workplace safety committee. On 27 January 1992, three members of the committee met with inspector Albert McLean to discuss the miners' safety concerns. Individual miners also expressed concerns to the inspector; one even called him at home in Cape Breton to try to get something done about safety problems at Westray. Nothing changed.

By early February, development in the Southwest had moved into what would became the Southwest 1 section. Coal from a nearby open-pit mine helped the company nearly double coal production for February and March 1992. Production from Southwest 1 in February and March was initially promising, but the mining methods proved to be extremely risky. The workers were offered incentives under a production bonus scheme, but were only able to make bonus quotas for one month. Miners frequently experienced physical symptoms resulting from the presence of high concentrations of methane.

By the end of March, roof collapses forced the company out of Southwest 1. Men were put at risk to pull out the equipment, and the abandoned area, although still producing methane, was left unsealed as the company turned its attention elsewhere in the Southwest section. Supervisors heard that the company planned to delay construction of adequate stoppings at the entries to the abandoned Southwest 1 until stoppings could be placed to seal off the entire Southwest section. Gas readings in the abandoned section showed very high levels of methane. The mine inspector himself recorded up to 4 per cent methane coming out of the abandoned area – the *Coal Mines Regulation Act* requires workers to be removed from areas where methane exceeds 2.5 per cent – but he allowed the company to determine how to deal with it.

The North mains were also experiencing problems. Major faulting occurred inbye No. 10 Cross-cut. The entire intersection of No. 2 Main and 3 North Main had a major fall early in February, followed by a fall at the intersection of 2 North Main and North 4 Cross-cut, and then by another major fall at 3 North Main and North 3 Cross-cut on 10 March. Falls continued in April 1992.

The steep grades of the roadways created additional problems The floors of the roadways generally consisted of coal, and vehicles driving and spinning their wheels on the grades produced coal dust. Left untreated, this additional dust added to the danger of a coal-dust fire or explosion.

In April, the company sought approval to continue taking coal from the surface mine, at a rate of 200,000 tonnes per year. The underground mine was not producing enough to meet contract commitments with the power corporation. There was pressure on the company, its workers, and management. Curragh sent a corporate executive, Colin Benner, to take charge of the project. The mine planning task force was reorganized

to study ground control problems in a systematic and orderly manner. Changes were planned not only in management staff but in management style as well.

On-site conditions were in fact worse than they appeared in reports and in financial projections. Roof falls continued to delay operations, and they posed risks to the underground miners. Methane was being released into the workplace and was layering at the roof. Unsafe mining practices, such as the unapproved use of non-flameproof vehicles, presented potential sources of ignition. The poorly planned ventilation system could not deal with the accumulations of gas. The planning and operation of both the main and the auxiliary ventilation was substandard, increasing the danger. Coal dust was allowed to accumulate untreated.

Near the end of April, mine manager Gerald Phillips and miner Eugene Johnson, whose name had been drawn by lot, travelled to Montreal with their spouses to accept the 1991 John T. Ryan trophy, an award given annually by the Canadian Institute of Mining, Metallurgy, and Petroleum to Canadian mines with the best safety record.[4] Selection for the Ryan trophy was based on company records of lost time, supported by the recommendation of the chief inspector – in this case, Claude White.

On the morning of 29 April, three inspectors arrived on site to inspect the Westray mine. As a result of that inspection, orders were issued requiring that the coal dust in the mine be immediately cleaned up or rendered inert with stonedust, as required by law. The company was also given until 15 May to file the stonedusting and dust sampling programs promised since the previous year. There was no follow-up on the orders, even though inspector McLean was back at Westray within the week. Ten days later, the mine blew up.

Organization and Management

Westray's management hierarchy began in the offices of Curragh Resources Inc. in Toronto:

- Clifford Frame, president and chief executive officer, unquestionably called the shots for all Curragh undertakings; and
- Marvin Pelley, executive vice-president, corporate development and coal, was president of Westray Coal.

At the mine site in Plymouth, Nova Scotia, were:

- Gerald Phillips, vice-president and general manager;
- Roger Parry, underground manager;
- supervisors; and
- mine workers.

[4] The award was presented at a dinner on 28 April 1992.

The Underground Workers

The term "underground workers" includes the underground mechanics and electricians as well as the production workers. The underground production workers were organized into four shifts labelled A, B, C, and D. Each group worked 12-hour shifts in sets of four days on and four days off, alternating between day shifts starting at 8 AM and night shifts starting at 8 PM. After mine development branched into different sections, the shifts were divided into crews that were regularly assigned to particular sections, either Southwest or North mains. Each section crew was headed by a supervisor referred to variously throughout the evidence as a first-line supervisor, foreman, shifter, shift boss, or fire boss. For consistency and clarity we refer to all these designations simply as "foreman." An extension from the North mains eventually became another designated working section, the Southeast (see the area on the far right of map 3 in Reference), which had its own foreman on some shifts and shared one with the North mains on others. The crews were subdivided into working groups of three, assigned to a particular task or piece of equipment. Each shift also had workers assigned to deliver materials and supplies throughout the mine. The conveyor maintenance and roof support crews, nominally the training groups, worked five 8-hour day shifts per week in small groups under the direction of leadhands.[5]

Mechanics and electricians were assigned to 12-hour shifts with a specific crew, alternating with periods of day shifts at the maintenance shop. The tradesmen had their own foremen, senior foremen, and maintenance superintendent. They were also subject to direction by production supervisors, especially when they were on 12-hour shifts with production crews. Statutory requirements for the appointment of a chief electrician under section 85(2), rule 6, of the Nova Scotia *Coal Mines Regulation Act* were not met prior to the explosion. The electrical engineer-in-training, who was responsible among other tasks for the underground environmental monitoring system, was supervised by the general electrical foreman and the maintenance superintendent.

Tradesmen were required to file written reports each shift, covering both their activities and the condition of equipment. The written record did not accurately reflect conditions or activities, as tradesmen had learned not to put safety concerns in writing. Repeated reports of problems either went unanswered or the tradesmen faced unpleasant consequences for recording safety concerns. Electrician Mick Franks described the futility of reporting concerns such as burning cables or malfunctioning communications lines in the underground environmental monitoring system:

> Q. And what was the point of completing the belt run report and outlining the state of the problems?
>
> A. There didn't seem to be too much of a point to it because I brought up maybe three or four different safety infractions that I thought should be

[5] Because much of the information that follows is dealt with in detail throughout the Report, only testimony and evidence not cited elsewhere will be referenced in this chapter.

repaired, and after maybe seven or eight times putting it down on the sheets . . . you just give up. All I need to do is check off that everything is good and let it go. Just a piece of paper, basically.[6]

Mechanic Wayne Cheverie explained omissions in his 8 May shift report:

Q. Now I don't see anywhere on here, Mr. Cheverie, where you've noted that the continuous miner was operating without a methanometer.
A. I believe I stated before that writing things about safety on reports would only bring undue hardships to you . . . I always reported things to my first line or second line supervisor, but I made a rule not to write safety concerns on my report.[7]

Westray's Operation and Maintenance Employee Handbook outlined the responsibilities of workers in regard to occupational health and safety:

It is the personal responsibility of each employee to ensure:

- that safe and productive work procedures are known and practised;
- that all accident prevention measures, directives and regulations are strictly adhered to; and
- that support and assistance be given to the Health and Safety Program to ensure that the goal of a safe and productive operation can be achieved.[8]

The handbook further instructed the workers to use all required protective clothing and gear, and to correct or report any unsafe conditions or practices to their supervisor as soon as it was practical.[9]

The Foremen

Section 38 of the *Coal Mines Regulation Act* requires that the manager of a coal mine appoint a sufficient number of persons certified as competent mine examiners "*whose sole duty it shall be* to make such inspections and carry out such other duties as to the presence of gas, coal dust, ventilation, state of roof and sides, as are required by this Act and by any special rules" [emphasis added]. The examiners are expected to play an important role in ensuring the safety of mine workers by:

- examining all working faces within 4 hours before the start of a shift;
- reporting on conditions to the mine workers and management;
- placing "danger-boards" to warn of any dangerous condition (workers are not to work in areas so marked until the dangers are removed and the place reported safe);
- checking for noxious gases with an approved gas tester, assessing the adequacy of ventilation, and noting readings of the barometer, the thermometer, and the water gauge before miners go into the mine; and
- keeping daily written "true and correct" records of observations made in the area of the mine that is in their charge.

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6 Hearing transcript, vol. 21, pp. 4115–16.

7 Hearing transcript, vol. 21, pp. 4026–27.

8 Exhibit 119.156 These responsibilities are generally consistent with the duties of an employee while at work, as described in section 12 of the *Occupational Health and Safety Act*, RSNS 1989, and c. 320.

9 Exhibit 119.192.

Westray chose to combine the role of mine examiner with the role of first-line production supervisor. The foremen were charged with ensuring that each crew met the production goals set by management. The Westray employee handbook set out each supervisor's personal responsibility to ensure:

- that employees have received adequate training in work procedures so maximum productivity can be achieved within a safe work environment;
- that employees follow safe work procedures and related accident prevention directives; and
- that all accident-prevention directives and regulations are consistently enforced.[10]

All the witnesses who had acted as mine examiners at Westray saw a conflict between their statutory responsibilities and their assignments as production supervisors, despite the handbook's reference to safety standards. Fraser Agnew stated:

> It was a conflict; that's for sure. You're looking at trying to keep your men safe. That . . . it should have been your first priority, to try to keep your guys safe. And then you got guys upstairs that's pushing you, trying to get more production. And for me to get more production, it would be for me to put my men in greater risk than what they was already in. And I don't think I've ever asked anybody or any of my guys to do anything that I wouldn't have done myself.[11]

The foremen who had worked in other coal mines found it unusual that the mine examiner and the production supervisor roles were combined at Westray. Bryce Capstick, qualified as a mine examiner even though he had no coal mining production experience, had expected from his examiner training that he would exercise some control and would be expected to rectify unsafe conditions:

> Well, I understood a person would have control over their section. They would be able to make decisions, you know, as to how to keep your section in good working order. But you had no control. You had to do exactly what they said. If you didn't, you would be replaced.[12]

Agnew thought he had been appointed to the mine examiner role only to satisfy provincial regulations, "because I was never called to any of the supervisory . . . or production meetings . . . to me, I was one of the workers. . . . I went down my shift just like the rest of the men. I had no contact, other than in deployment when Roger [Parry] would come down and tell me what was supposed to be up.[13]

The foremen were given production plans on the first of each set of four shifts, or sometimes more often as management changed immediate objectives. They were also given oral instructions by the underground manager and the overmen. Workers were assigned to tasks or equipment

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10 Exhibit 119.155.

11 Hearing transcript, vol. 37, pp. 8057–58.

12 Hearing transcript, vol. 42, p. 9299.

13 Hearing transcript, vol. 42, pp. 8014–15.

by the underground manager. Shift foremen had no discretion to reassign workers to address safety problems – stonedusting or removing coal dust or installing additional roof support. Only the underground manager could shut down a working face.[14] Even temporary withdrawals from hazards such as high methane concentrations could prompt criticism from management if production goals were not met.

There were no negative repercussions for failure to maintain or improve safety in the mine. There was no barometer, thermometer, or water gauge to check before entering the mine, no methanometer extension probe for gas checks at roof height. Some examiners were told not to include high gas readings in shift reports. A number of examiners told the Inquiry that it was pointless to write up safety hazards.

Mine examiners are supposed to play a key part in the statutory scheme for mine safety. Monitoring ventilation is a major part of their duties. Clearly, most of the foremen tried to do their jobs to the best of their knowledge and abilities, but they were hampered by insufficient experience, training, and technical support – and by management.

The Overmen

Section 25 of the *Coal Mines Regulation Act* requires that underground workings be under the charge of a properly certified mine official. Although the mine manager and underground manager at Westray were somewhere on site much of the time, they could not be present at all times. An additional tier of mine officials, overmen, was eventually added, as is generally required in larger operations.

Until the development of the Southwest section, the Westray mine was a fairly straightforward operation. Once the crews were expanded and split into different sections, however, three of the original foremen were promoted to overman positions, and some of the miners were moved to shift supervisor jobs. One of the new overmen, Glyn Jones, became the assistant underground superintendent, working 12-hour day shifts Friday through Monday, while the underground manager, Roger Parry, worked day shifts Monday through Friday. The underground manager and his assistant shared the job of company representative on the safety committee. The other two new overmen alternated four-day sets supervising the mine on permanent 12-hour night shifts.

Section 37 of the *Coal Mines Regulations Act* sets out the qualifications, duties, and the responsibilities of the overman, who is required:

- to attend personally to duties in the mine, to carry an approved gas tester, and to see that the act is enforced in its entirety;

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[14] When engineer-in-training Trevor Eagles was asked by Inquiry counsel if he clearly understood that management personnel or underground supervisors believed that they had to go to Roger Parry before they could decide to shut down, Eagles replied: "I believe so, yes. That includes mine examiners and people from the engineering department" (Hearing transcript, vol. 76, p. 16602).

- to carry out all management instructions and to report all violations to the underground manager, subject to the requirement to enforce the act;
- to perform the underground manager's duties in his absence;
- to visit and inspect daily the workings in his charge, with daily written reports;
- to examine the ventilation system to ensure that the air supply is adequate and that all stoppings, regulators, doors, and air crossings are in good condition;
- to be familiar with the mine plans and draw the attention of the manager to any errors or omissions; and
- to withdraw workers immediately from any unsafe area and remedy defects if possible.

Overman Jay Dooley testified that the Westray second-line supervisors did not have company authority to exercise their statutory duties. He had been instructed not to make the daily written report required by statute. He could correct short-term safety hazards, but was not permitted to interfere with production to deal with coal-dust accumulations or inadequate stonedusting. The underground manager gave detailed instructions to the overmen and foremen, and also gave assignments directly to the underground workers. No one ranked lower than the assistant underground superintendent could attend production meetings. This hierarchical system surprised miners accustomed to a more consultative approach to mine planning and operations. According to Dooley, when he spoke to Parry about Westray practices compared with those of other mines, Parry bluntly told him, "'You work for us and . . . that's not our method and we do not do it like that. You do it like I say or you won't be here.'"[15]

Finding

The foremen and overmen at Westray had little or no opportunity to perform their duties as set out in the *Coal Mines Regulation Act*. They had little or no say in the day-to-day operation of the mine and were expected only to carry out the orders of Westray mine manager Gerald Phillips as delivered to them by him personally or through his underground manager, Roger Parry.

Miners and their supervisors reported safety concerns up the chain of command as well as directly to the managers. Jay Dooley had expected to act as a link between workers and managers, but said he was frustrated by the lack of any meaningful response when he reported workers' concerns. Rather than remedies for unsafe conditions provided by management, he found only bad examples, instructions that neglected safety concerns, and directions to hide matters from the inspectors. The supervisors received the same message as the miners: anyone caught making complaints outside the mine would be fired. There were confrontations between

[15] Hearing transcript, vol. 38, p. 8420.

supervisors and more senior management, described by Dooley as "screeching matches," when supervisors questioned unsafe practices.[16] The options for supervisors were to accept the company's approach, to work towards fulfilling their statutory duties as best they could, or to quit.

It is clear that senior on-site management – Phillips, Parry, Jones, and the maintenance superintendent, Bob Parry – made all the decisions at Westray. Referred to by some as "the four horsemen," they ran the mine. Foreman Don Dooley said:

> [T]hese four . . . they ran the mine. Now, no doubt, they probably had some input from David Waugh and other engineers, but these were the four that the working men would deal with, myself included . . . supervisor/mine examiner, whichever you want to call me. These were the people that all direction came from.
>
> They would never seek your input on a decision before, during or after it was being made or implemented. If they made a decision to turn a road somewhere, you . . . found out about it eight o'clock that morning when you went to work. I mean, you were not consulted, period.[17]

Finding

Management at Westray was closed, and four of the senior staff – Gerald Phillips, Roger Parry, Glyn Jones, and Bob Parry – ran the mine with little or no input from others. Input was not sought, and when offered was usually disdainfully rejected. It is probable that Phillips, as vice-president and general manager, would be the most influential of the four.

The Underground Manager

Section 33 of the *Coal Mines Regulation Act* requires an underground manager to ensure that the act is enforced and that deviations are dealt with as the law directs. Section 36(3) states that the underground manager "shall, at all times, exercise every possible precaution to protect the lives and property entrusted to his care, and insist upon all rules and regulations being strictly adhered to." According to section 35 of the act, the duties of the underground manager include:

- ensuring that the roof support method set by the manager is carried out and that the ground is secured properly in all working places;
- arranging for necessary supplies for ground support and ventilation work;
- seeing that all working places are kept in a safe and orderly manner;
- seeing to the regular inspection of the condition of airways, escape ways, and stoppings, the examination of gobs and unfenced old workings, the placement of stoppings on the lower side of openings, and the construction of self-closing doors in stoppings;
- ensuring that inspections are done by competent persons, and that records of conditions and any unusual occurrences are kept;

[16] Hearing transcript, vol 38, p. 8487.

[17] Hearing transcript, vol. 37, p. 8125.

- reading and initialling daily reports of overmen and examiners;
- ensuring that conditions are reported to the manager daily, and that unusual occurrences are reported promptly;
- making sure that all requisite safety notices are properly posted, and that all required caution signs and "danger-boards" are placed where necessary;
- weekly recording of anemometer readings and daily acquaintance with readings of barometer, thermometer, and water gauge;
- daily consultation with overmen;
- keeping personal acquaintance with all airways, working places, and ventilation;
- carrying an approved gas tester underground; and
- assuming the duties and responsibilities of the manager in the manager's absence.

The Nova Scotia *Occupational Health and Safety Act* places further responsibilities on employers. These responsibilities became part of Roger Parry's job at Westray, with duties to consult and cooperate with the safety committee and to take every reasonable precaution to ensure the health and safety of those in the mine. The Westray employee handbook set out the responsibilities of each member of management:

- that safe and productive work procedures are developed and followed;
- that the necessary education and training are provided to equip all employees to encourage a zero accident rate while reducing possible threats to good health and safety;
- that buildings, structures, equipment, and surface/underground work areas are developed and maintained to a high standard; and
- that a high standard of housekeeping is established and maintained.[18]

Parry was usually present at both shift changes, staying after the evening shift change to talk with the night overman, and returning by 7 AM to be briefed on what had happened overnight. He was in the mine on night shifts for events such as conveyor moves, and he consulted by telephone or returned to the mine for any night-shift emergencies. Trevor Eagles, the engineer-in-training who made ventilation measurements and observations, reported to him, and Parry generally made decisions about auxiliary ventilation as well as other aspects of underground operations. Capstick described Parry's behaviour: "You didn't know when he was going to be there. That man would appear any hour of the day and night. He just materialized . . . no matter where you were in the mine, all of a sudden Roger Parry would be there. . . . He kept control that way."[19]

The volatile manner with which Parry related to workers, his colleagues, and the regulators is dealt with at length elsewhere in this Report. Deficiencies in his ability and competence were subject to much testimony at the Inquiry. Witnesses generally said that the job was beyond

[18] Exhibit 119.155.

[19] Hearing transcript, vol. 42, pp. 9335–36.

his ability, but some showed sympathy for his position. As former Westray surveyor Ray Savidge said:

> Well, he is a pretty tough individual. He was very hard on the men. But in some respects I felt sorry for him because he had what I considered an impossible task which was possibly the reason why he was in such a foul mood and, really, he didn't get a great deal of help. And he spent a horrendous amount of time in that mine. I'm not trying to make excuses for anybody.
>
> But there is more to it than meets the eye. . . . how could he get any help because you had an office full of people with no previous coal mining experience?[20]

The physical challenges underground, the various pressures, the mine manager's growing preoccupation with other business matters, the self-imposed limits on delegation of authority and consultation, the limited coal mining experience or qualifications of the technical people – factors such as these made Parry's job extremely onerous and stressful.

The Mine Manager

The mine manager carries the heaviest responsibility for mine conditions and operations under the *Coal Mines Regulation Act.* The manager has charge and control of the mine, with personal responsibility for its supervision. The manager must "at all times, to the best of his power, knowledge and ability, enforce observance" of the act and all of its rules and regulations. He must appoint qualified persons as the mine officials required by law and must also appoint "as many competent persons as may be necessary" to carry out the act. He must maintain a detailed mine plan and make mandatory reports to the inspectorate.[21]

The manager appointed under the act must hold a certificate of competency. In Nova Scotia, the manager is not required to be a professional engineer. In the United Kingdom, in contrast, where Gerald Phillips began his coal mining career, a mine manager must hold a first-class certificate of competency; even to sit for the examination, candidates must have mine management and engineering qualifications – a degree in mining and a higher national diploma from a recognized mining institution – and have the required number of years of work experience in a position of authority in a coal mine.

In Nova Scotia, the mine manager must carry out statutory duties set for the employer under the *Occupational Health and Safety Act*, and "take every precaution that is reasonable":

- to ensure the health and safety of persons at or near the workplace;
- to provide and maintain equipment properly furnished with safety devices;
- to supply such information, instruction, training, supervision, and facilities as are necessary to the health or safety of the employees;

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[20] Hearing transcript, vol. 22, pp. 4352–53.

[21] Sections 21–32.

- to conduct his undertaking so that employees are not exposed to hazards;
- to consult and cooperate with the joint occupational health and safety committee and with any person performing a duty or exercising a power conferred by the *Occupational Health and Safety Act;* and
- to comply with, and ensure that employees at the workplace also comply with, the *Occupational Health and Safety Act.*"[22]

Modern safety programs emphasize the critical role of management, not just in establishing and enforcing safe practices but also in leading by example. The manager carries the duty to set a good example, as well as the other responsibilities for workplace safety set by statute and by company policy.

At Westray, all lines of authority through engineering, operations, maintenance, surface plant, and general administration led to the mine manager. Senior Curragh officials played some role in operations – in hiring middle management and consultants, in mine planning, and in making applications for regulatory approvals – but Phillips managed on site.

The autonomy exercised by Westray's manager was appropriate for the development stage of a project, but the skills necessary to promote and develop a project are not the same as those required to manage an ongoing concern. According to Benner, as a project moves from new project status to be a regular operation, it needs a more orderly structure, as well as routine, team play, and delegation of both authority and responsibility.[23] A manager must keep informed and be in charge, but one person cannot retain direct control of everything. Safe production is enhanced by separating functions and by balancing authority. This equilibrium had not been achieved at Westray.

Phillips played multiple roles instead of establishing the usual pattern for mine administration and technical support. He was the safety officer of record in the John T. Ryan trophy application. He acted as ventilation engineer, as senior mine planner, and as senior production manager. He had a hand in personnel work, from new employee orientation to mediating differences between miners and Roger Parry. He responded to the union drive, and he dealt with government and community relations, communications with regulators, and the media contacts. He did marketing and contract negotiations, and promoted the open-pit project.

Phillips ran underground operations, both through the underground manager, and in person. He sometimes took part in underground operations, not just directing the crews but also working on conveyor moves with the miners or going up in the bucket of a Scooptram to help with roof support. Tradesmen who tried to take a lunch break during a conveyor move were quickly and crudely sent back to work. When Savidge refused to mark cutting lines for development without an approved development plan for the layout, Phillips went underground and

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22 Sections 9(1) – 9(2).

23 Hearing transcript, vol. 73, p. 15907.

painted the lines himself.[24] The manager involved himself in every aspect of the operation, at every level.

There was little consultation with workers or supervisors. Production supervisors were chastised for criticizing, or for urging correction of, unsafe mining practice where that would interfere with management directives. Information and advice in conflict with management opinions or directives were poorly received, and staff might be berated when things did not work out as the manager expected.[25] Fiery arguments with mine inspectors sometimes arose when the manager disagreed with them. The inspectors were not immune to verbal abuse from Phillips.

Control was tightly centralized. Staff in different departments got information about each other's work through the manager, including production projections that were more optimistic than accurate. Phillips was the conduit for information that was permitted to flow to the parent company. He even reprimanded his own staff for speaking about their work with Phillips's own boss, Marvin Pelley.[26] Professional and technical staff were not permitted to correspond directly with regulators, only through Phillips. Control at times seemed obsessive.

Phillips played a central role in bringing the Westray project into existence; he had been working for Suncor when Curragh took over the project. He was under pressure to produce a successful coal mine, despite the geological challenges. He had to meet coal supply contractual commitments, develop an open-pit mine, and generate a profit for Curragh.

Qualifications – The Westray Managers

There was much comment, both at the Inquiry hearings and in the media, about the background and qualifications of the manager and the underground manager at Westray. Some relevant evidence came out during the aborted criminal proceedings.

According to British coal mining expert and Inquiry witness Andrew Liney, mine manager Gerald Phillips had neither an engineering degree nor a higher national diploma. He held a higher national certificate, which, Liney assumed, was roughly equivalent to a fire boss (first-line supervisor or foreman in Canada).[27] This information was confirmed to the Inquiry by the British Coal Corporation: "We have confirmed through this Government Office that Gerald James Phillips of Telford, Shropshire, was

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24 Hearing transcript, vol. 22, pp. 4346–47.

25 In one example, Ray Savidge recalled the manager's oral abuse of mine geologist Arden Thompson when the coal seam dipped steeply where Phillips had expected it to be level. Phillips would not accept that the dip had been obvious from the beginning to anyone able to work it out from the geological drawings (Hearing transcript, vol. 22, pp. 4383–84).

26 Thompson had been in a meeting with Phillips and Pelley about the mine geology. Phillips later made it clear to Thompson that he wasn't to tell "them" anything (Hearing transcript, vol. 40, pp. 8838–40).

27 Hearing transcript, vol. 19, pp. 3594–95.

authorized as a deputy and shotfirer in 1974, which was after he left employment with the National Coal Board."[28]

In his own resume, Phillips makes the following anomalous entry under the education heading: "North Staff Poly-tech. Mining Engineer." At page 5 of the resume, he indicated that he joined the National Coal Board in 1965 (he was 15 years old in 1965) and served for ten years successively as a "Miner, Shot Firer Deputy, Overman, Assistant to Underground Manager."[29]

Phillips did receive certification as underground manager in Alberta after successfully completing examinations in 1978. There is no record of his receiving any higher academic or technical designation before coming to Nova Scotia. In his resume, he describes positions held variously as chief mine engineer (1987–88), chief mine engineer – mine development (1985–87), and mine manager/project manager (1980–85). In this same resume, Phillips lists responsibility for "safety" in four of the positions he held.

On the strength of his Alberta certification, Phillips was able to satisfy Nova Scotia competency requirements as a mine manager by successfully completing one examination dealing with Nova Scotia coal mine legislation and regulations.

Roger Parry became authorized as a deputy and shotfirer while still in the employ of the National Coal Board.[30] Although he did not receive this designation until 1972, he listed his employment with the Coal Board from 1971 to 1974 as foreman and senior mine foreman, neither of which title appears to be used in the UK coal mine regulatory regime. Parry came to Alberta from the United Kingdom in 1974 and joined the Smoky River Coal mine at Grande Cache. In 1983, he received his certificate as assistant underground mine manager after completing the requisite examinations.

In December 1990, Parry was granted a Nova Scotia provisional certificate of competency on the strength of his being a holder of "a certificate of competency as an underground manager from the Province of Alberta (Certificate No. 502)." In February 1991, Parry received full certification as underground manager from Claude White, secretary of the board of examiners.

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28 Fax from Mike McNamara, head of administration, British Coal Corporation, Technical Services, 6 February 1996.

29 This description is confusing. Phillips was authorized as deputy and shotfirer in 1974, after he left the National Coal Board. Yet, in his resume, he claims status as an overman and as "assistant to underground manager."

30 With respect to both Phillips and Parry, the British Coal Corporation report stated: "This means that neither of these men have, as far as we can establish, gained significant mining managerial qualifications in this country. They have not qualified at either 1st or 2nd class certificate of competency level which would be a statutory pre-requirement in this country before they could be appointed to an Undermanager or Managers position."

Finding

The evidence raises serious questions as to the qualifications of the mine manager and the underground manager at Westray. Gerald Phillips represented himself (at least in his resume) as having attained standing as a "mining engineer," and he listed several such positions held. This representation is clearly misleading.

Roger Parry was granted a provisional certificate by the director of mine safety, Claude White, even though there is no authority for such action. Parry's resume also listed employment as "underground manager" in Alberta, despite his having attained only the assistant underground mine manager certificate.

RECOMMENDATIONS

1 **No provisional mining certificates should be issued in any circumstance. The process of granting certification based on status in other jurisdictions must be refined to ensure that qualifications are consistent with provincial requirements. The burden should be on the applicant to establish that his or her qualifications are sufficient to support the requirements for the certification sought. Any person granted certification based on status in another jurisdiction should be required to be examined in Nova Scotia for such certification at the earliest reasonable time.**

2 **Every position in a mine should have a written job description setting out the duties and responsibilities of that position, with particular reference to safety. Each employee should be provided with a copy of his or her job description. A copy of all job descriptions should be prominently displayed in an area frequented by employees.**

Curragh – The Parent Company

Curragh purported to be heavily involved in managing Westray. When Curragh claimed equity of 20 per cent in the project in order to satisfy eligibility requirements for federal financial assistance under the Atlantic Enterprise Program, deferred management fees of $6.5 million made up a significant portion of this total.[31] Moreover, in a response to federal questions about the services that were to be provided in return for these fees, the company's agent wrote:

> 4. a) Senior management at Westray who have had significant coal mining experience (Smoky River, Quintette) will be heavily involved in all levels of senior management of the project including general, engineering and finance, throughout the construction and development stages. Westray management, in conjunction with Kilborn Engineering Ltd., will be responsible for ensuring that the construction proceeds on a timely and efficient schedule.
>
> b) Senior Westray management because of their past coal experience and their involvement in the construction and development stages will be

[31] See Chapter 2, Development of Westray, for details.

> required to manage the project over its life. Specifically, they will have executive mine responsibilities in all phases of the mine operations.[32]

C.H. Frame Consulting Services Inc. (Frameco), wholly owned by Curragh chairman and chief executive officer Clifford Frame, executed a management agreement with Westray Coal Inc. to provide "management and development services, liaison services with government agencies, labour negotiations, contract negotiations, financial, legal and engineering related services and such other related services" for fees of $8,275,000, to be paid after achievement of commercial production, subject to prior claims of lenders and investors in the project.[33]

The involvement of Curragh officials in the acquisition of the site and financing of the project are dealt with in Chapter 2. As mine development proceeded, Frame appointed Marvin Pelley as Curragh's executive vice-president of corporate development and coal. Pelley, later titled president of corporate development and projects, was responsible for Westray, among other projects, and reported directly to Frame. Pelley was very involved in the process of applications for leases and permits, and with presentations to provincial regulators concerning approval of Westray's mine plans. His predecessor as president, Kurt Forgaard, had already hired Phillips from Suncor to head up on-site management at Westray, with a bonus promised for bringing the project in under budget.[34] The on-site management at Westray included people with coal mining backgrounds. After Forgaard's departure in mid-1990, none of Curragh's more senior officials had any experience in the development or operation of underground coal mines. Pelley visited the site a few times during development, and more frequently as ground control problems led to his involvement in the task force set up to address that concern.[35] He claimed to have had little to do with day-to-day operations at the mine, though he was in almost daily telephone communication with the manager, and indicated in a post-explosion interview that he had believed on-site management was doing the right things.[36]

There were some exceptions to this arm's-length approach. At a time of growing concern about ground conditions, Frame took a more active role in mine planning, and Pelley's involvement also intensified. In January 1992, Pelley wrote a memo to the senior on-site staff, directing them to establish and follow layout and sequencing controls designed to improve roof conditions, on pain of discipline or dismissal.[37] Pelley later

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32 Exhibit 35d.0005.

33 Exhibit 64.16. This agreement was subsequently assumed by Curragh from Westray when Westray was voluntarily restructured by Curragh as a subsidiary of Curragh rather than as an independent corporation. The agreement was then assigned to a numbered Ontario company owned by Frame.

34 RCMP statement of M. Pelley, 28 April 1994.

35 The task force is addressed in the section on experience and expertise at Westray in Chapter 10, Ground Control.

36 RCMP statement, 28 April 1994.

37 Exhibit 35b.0189.

reported that he had directed the mine manager to have the location of the old Allan workings confirmed more exactly by advance drilling before Westray encroached on the barrier. He had also directed an improvement in housekeeping standards in the mine after an April 1992 visit.

On that April visit, Pelley was accompanied by Colin Benner, the Curragh executive designated to take over responsibility for Westray after Pelley moved on to other projects. Benner was given the job of guiding the project during its transition from development to full-scale production. He said it was common to make changes in management during this sort of transition, since different skills and styles are required at different stages in the life of a mine. There are indications that Curragh senior officials were realizing that all was not well at Westray. There was concern that ground control problems would interfere with production goals. During his April 1992 visits to Westray, Benner wrote to Frame to rectify any optimistic expectations that Westray would be able to meet a commercial production test on schedule.[38]

There were other indicators of troubles at Westray. Pelley had been embarrassed by the condition of the mine site when he and Benner toured. He was annoyed to discover that Phillips had introduced a production bonus scheme without his approval.[39] Benner was aware of problems with the manner in which Phillips neglected Curragh procedures for corporate communications and decision making. Benner addressed a number of administrative issues in a 17 April memo to Curragh's vice-president of administration, Diane Webb. He referred to a number of flaws in the bonus scheme. His greatest concern lay in the general administration of the mine, where he cited "a desperate need for a more open style of management at the site."[40] He saw an immediate need for a competent underground superintendent to oversee, and then replace, Parry, whose manner of dealing with workers was unacceptable. The new position required a person with coal mining experience, good people skills, and the ability to understand geomechanics and the need for systems and standards. The person hired must be capable of replacing the mine manager, or at least substituting for him for a long period of time. The manager was not to be replaced immediately, just relieved of some responsibilities, but might eventually have to go if he could not adapt to necessary changes in the way the mine was managed.

Benner saw the mine manager as overextended and autocratic. It was a shock for Benner to discover that even he, as a senior official and Phillips's superior, could not get a congratulatory memo out to employees because the manager's secretary would not release a communication

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38 Exhibit 35b.0196. Only open-pit production left some chance of satisfying the commercial test.

39 Benner (Hearing transcript vol. 73, pp. 15976–77).

40 Exhibit 120.051.

without Phillips's approval.[41] Benner thought it highly unusual that professional and technical staff were not allowed to communicate directly with regulatory agencies, that everything had to be channelled through the manager.[42]

Benner thought the manager was occupied with matters such as the coal contract and open pit development to the detriment of the underground. In his memo to Webb, Benner described Phillips as doing a good job in some areas but neglecting two key aspects: "people and underground. It is the writer's opinion that given the proper direction he will come around – we will see."[43] Benner planned to hire an assertive, no-nonsense human resources supervisor who would require the manager to address workforce problems. He insisted that Phillips chair the revitalized ground control task force, to focus on the ground problems so that the group's work would not falter again. This would also ensure that the manager would continue to be involved before decisions were made.

Benner was concerned that decisions had been made without consultation with those affected.[44] He initiated a system of meetings to encourage the contribution of middle managers. Benner's memo to Webb noted that Phillips had "had his own way for so long that he will have a bit of difficulty at first working in a team environment. He is extremely domineering of his staff and has the answers before he even talks to them. He is not indispensable."

Where matters lay in Benner's areas of personal and professional competence, he took some first steps to address deficiencies. Unfortunately, Benner, like the rest of Curragh's senior officials, had no coal mining training or experience. His early observations of underground conditions did not impress on him the deadly hazards building up in the mine. He seemed to have a responsible and pragmatic approach to the problems at Westray. His first priority was to get the mine roof under control, followed by efforts to improve labour-management relations in the face of the recent union certification drive. Colin Benner had the program and the ability to turn Westray around, but he was not given the time.

After the 9 May explosion, and following the cessation of rescue activities at Westray, Frame, in a press release directed "especially for our employees, their families, and their friends," expressed his personal grief. He also said:

> It is too early to speculate on the reasons for Saturday's explosion. But whether they are natural or human, we are committed to determining the causes. We will take every step available to us to ensure that the lessons of this explosion can be understood.

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41 Hearing transcript, vol. 73, pp. 15901–02.

42 Hearing transcript, vol. 74, p. 16158.

43 Exhibit 120.052.

44 Hearing transcript, vol. 73, pp. 15904–05.

This Inquiry had been announced earlier that same day by Premier Cameron. Frame said:

> [W]e wholeheartedly welcome the announcement of a provincial public inquiry under Mister Justice Richard which will provide an understanding on how to avoid this kind of accident. *We will devote our energy and our resources to cooperating fully with this inquiry.*[45]

From my perspective, the only "energy" and "resources" devoted by Frame to this Inquiry, have gone into mounting numerous and relentless legal challenges to efforts to have him and Pelley appear before the Inquiry to give evidence.[46]

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[45] Curragh media release, 15 May 1992. Emphasis added. As a measure of Frame's sincerity and concern, contrast this statement with his later shrugging off any responsibility for the Westray disaster by terming it a "simple accident" (*Globe and Mail*, 17 February 1997).

[46] These efforts are detailed in the section on the legal environment in Chapter 16, The Inquiry.