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The Westray Story

A Predictable Path to Disaster

Report of the Westray Mine Public Inquiry
Justice K. Peter Richard, Commissioner

Volume Two

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Department of Natural Resources

To inquire into . . .

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

(f) whether there was compliance with applicable statutes, regulations, orders, rules, or directions

The role of the Department of Natural Resources (formerly the Department of Mines and Energy[1]) was important to the regulatory environment in which Westray Coal operated. The department exercised regulatory authority over the mine-planning and approval process. Over the course of the public hearings, the Inquiry heard evidence from a number of departmental witnesses who were in the thick of the Westray project. The Inquiry also heard evidence from numerous other witnesses, including experts, who commented on the involvement of the Department of Natural Resources. As the testimony unfolded, the reality became clear – the Department of Natural Resources had failed to carry out its statutory duties and responsibilities as they related to the Westray project.

Mandate of the Department of Natural Resources

Fundamental to assessing the involvement of the Department of Natural Resources (DNR) is understanding the department's mandate. The evidence before this Inquiry about the department's regulatory mandate is inconsistent. To some degree, such inconsistency emerges from the testimony of DNR staff themselves. The department provided mixed views on fundamental regulatory issues, such as whether it was within its mandate to regulate for "safety," or whether its duty included monitoring the Westray operation to ensure that it was in conformity with the approved mine plan. It is important to state at the outset that the mandate of the Department of Natural Resources vis-à-vis the Department of Labour, in particular, was not formally defined in any meaningful way. The transition and changes affecting the departments over their history contributed to this lack of definition. An understanding of the mandate of the Department of Natural Resources therefore requires a historical review of the responsibilities of the department, in terms of both its legislative responsibilities and its day-to-day functioning.

History

Prior to 1986, both the mining engineering unit and the mine inspection unit were part of the Department of Mines and Energy. The duties of the two units, as defined by the *Mineral Resources Act* and the *Coal Mines Regulation Act,* overlapped somewhat on a daily basis. Pat Phelan was director of mining engineering with the department when the Westray project began. From 1979 until January 1986, he had been heavily

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1 The Department of Mines and Energy officially became the Department of Natural Resources in September 1991. It will be referred to as the Department of Natural Resources, or simply "the department," throughout most of this chapter.

involved in mine inspections.[2] Phelan testified that, when the engineering group and the mine inspectorate worked in the same department, the engineers regularly assisted the inspectorate. The converse was also true; the mine engineers often asked the inspectors to note specific items during their underground site visits.[3] Under that regime, the engineering and mine inspection functions had overlapped to some extent in the review of mine plans.[4] Aside from meetings, which were encouraged between staff members, there had been no formal arrangement for cooperation and information exchange between these units.[5]

Defining the responsibilities for each of these units was not crucial as long as the two coexisted within the same department. In 1986 however, the mine inspection unit was transferred to the Department of Labour. The initiative for the transfer of the inspectorate came from the federal government's decision to move all its inspectors to the federal Department of Labour (now Human Resources Development). Following in the footsteps of the federal government, the province appointed Dr Tom McKeough to review the provincial situation. The Report of the Special Committee on Occupational Health and Safety made the following recommendation: "It is recommended that the Department of Labour and Manpower be the lead agency in the administration and enforcement of occupational health and safety. This will require the absorption by the Department of Labour and Manpower of mine inspectors from the Department of Mines and Energy."[6]

Dr John Laffin, then deputy minister of mines and energy, testified that, at the time of the release of the McKeough Report, the idea of generic inspection or inspectors was current. Laffin, though, felt there was a need to maintain the concept of specific mine inspection with inspectors trained appropriately.[7] He spoke out against the absorption of the mine inspectorate by the Department of Labour.[8] In a December 1984 memorandum to the Honourable Joel R. Matheson, then minister of mines and energy, Laffin wrote:

> Mining engineering expertise, which is essential to an effective mine inspection program, has been provided to the Inspection Group by the Mining Engineering Section. This arrangement has worked very well and has been an extremely cost-effective method of providing mine inspection services in a small Province like Nova Scotia. The arrangement has also provided considerable efficiency within the Engineering Group since mine inspectors are very often asked to review an engineering or resource

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2 Hearing transcript, vol. 51, p. 11071. Phelan joined the department as a mining engineer in June 1979. When he was promoted to director in December 1981, the mine inspectorate reported to him.

3 Hearing transcript, vol. 51, p. 11076.

4 Hearing transcript, vol. 53, p. 11591.

5 Hearing transcript, vol. 51, p. 11077.

6 Exhibit 122.04, p. 2. The special committee reported to David Nantes, then minister of labour and manpower, in October 1984.

7 Hearing transcript, vol. 70, pp. 15407–08.

8 Hearing transcript, vol. 70, p. 15399.

> management problem at a particular mine. *Since such considerations relate directly to safety aspects in most cases, this liaison is beneficial to all parties.*[9]

The mine inspectorate was transferred to the Department of Labour in 1986 in the face of clear opposition. Laffin testified that no formal process was devised to maintain any liaison between the Department of Mines and Energy's engineering section and the Department of Labour's inspectorate.[10] At the time, Laffin was not too concerned that senior labour employees did not have any coal mining experience, since Walter Fell, who had been in charge of the Department of Mines and Energy's inspection services, had also been transferred to the Department of Labour; Laffin felt he was competent. It appeared that the situation was in good hands and that there would be a good relationship between the departments.[11] Fell remained with the department for only a short time, however, leaving about a year and a half later.[12] It seems that any reasonable anticipation of interdepartmental cooperation, so essential to the safety mandate of each department, ended with the departure of Walter Fell.

There was clearly some concern within the Department of Labour about the lack of resources available to it. In a memorandum dated 8 October 1991, Claude White, director of mine safety for the Department of Labour, expressed his concerns to his immediate superior, Jack Noonan, the executive director of occupational health and safety. White was of the view that staff changes were required: a mine safety engineer was needed within the Department of Labour's safety division. He provided the following rationale for such additional technical assistance:

> Since 1986, the Department of Labour has relied on the Department of Mines to provide technical assistance. This arrangement, although workable since 1986 is not adequate now that the province is once again responsible for monitoring the safety of a major coal mining operation. The Department of Mines mandate is to administer policy with respect to mineral development, not health and safety.[13]

The Department of Labour never received the additional technical assistance that it admittedly required to handle the Westray operation competently.[14]

The record indicates that very little cooperation and communication existed between the Department of Natural Resources and the Department of Labour:

- It was the view of Fred Doucette, an inspector with the Department of Labour, that the inspectorate "did not get too much cooperation from the

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9 Exhibit 141.14.004. Emphasis added.

10 Hearing transcript, vol. 70, p. 15497.

11 Hearing transcript, vol. 70, p. 15474.

12 Pat Phelan (Hearing transcript, vol. 51, p. 11082).

13 Exhibit 141.01.066.

14 This is just the first example of the performance of Jack Noonan.

Department of Natural Resources." He testified that staff there did not let them know of changes to the mine plan; the Department of Natural Resources failed to advise them of a tunnel deviation by Westray Coal.[15]

- Pat Phelan testified that he recalled Don Jones, DNR manager of mining engineering, making an observation about the duct tubing not being close enough to the working face of the mine. He could not recall, however, if it was reported to the Department of Labour.[16]
- White testified that Phelan had asked him whether he wanted a copy of the approved mine plan. White responded that he did not require the "approved mine plan" in order to fulfil his responsibilities, since the operator kept a copy of the "actual mine plan" at the mine site. White did not accept any responsibility for monitoring for compliance with the approved plan.[17]

A review of the evidence reveals that no real liaison existed between the inspectorate and the engineering section. The evidence further reveals that no discussion, formal or otherwise, took place clarifying the responsibilities of the engineering section or the inspectorate. The boundaries of those overlapping responsibilities, once shared by the mine inspectorate and the engineering section, were not formally delineated. This situation contributed to the failure of the Department of Natural Resources to assume responsibility for the enforcement of particular aspects of its regulatory regime.

Finding

After the transfer of the inspectorate from the Department of Natural Resources to the Department of Labour in 1986, there was little or no communication between these departments even though communication and cooperation were essential for the proper conduct of their respective statutory regulatory duties.

A review of the *Mineral Resources Act* will help define the role of the department in the development of the Westray project, but the legislative regime cannot be viewed in isolation. The mandate of the department and the perception of that mandate by staff and officials of the department can only be understood if one considers the statutory duties of the department in conjunction with the job descriptions, credentials, background experience, and attitudes of those charged with regulating the Westray operation.

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15 Hearing transcript, vol. 62, pp. 13597–98.

16 Hearing transcript, vol. 53, pp. 11509–10.

17 "[W]e did not consider that our role, to monitor their approved plan" (Hearing transcript, vol. 63, pp. 13990–91). Phelan felt that the day-to-day monitoring of Westray *did* fall within the inspectorate's responsibility: "Our main concern is with utilization of the resource . . . The Department of Labour, since 1986, is . . . the department that carries out inspections" (vol. 51, p. 11244).

Legislative Regime

The *Mineral Resources Act* sets out the statutory duties and responsibilities of the Department of Natural Resources. The act, pursuant to which Westray Coal applied for a mining lease, provided as follows:[18]

> **Report and plan of claim**
>
> **83(1)** Before an application for a lease is accepted, the applicant shall submit to the Minister for approval reports and plans of the claim or tract proposed to be operated on which shall be shown
>
> (a) the known locations and boundaries of the mineral deposit;
> (b) the place at which it is proposed to sink or drive any shaft or slope, or making any opening or surface pit;
> (c) the location of all surface buildings and installations, tailings and waste disposal areas;
> (d) the number of openings proposed to be made and the size of each;
> (e) the method by which work is to be carried on and the method of roof support;
> (f) the method of ventilation;
> (g) the proposed method of restoration, reclamation and rehabilitation of the surface lands; and
> (h) *any other engineering plans as the Minister determines.* [Emphasis added.]
>
> **Modification of plan**
>
> **84(1)** If any unforeseen difficulty arises during the progress of the mining operation in carrying out any approved plan, and the lessee can show to the satisfaction of the Minister why the plan approved should be modified to permit the more economical and efficient prosecution of the work *while preserving safety to life and property*, the Minister may approve of such modification. [Emphasis added.]

The *Mineral Resources Act* was revised in 1990.[19] The revised legislation makes provisions for the issuance of mining permits by the department, the conditions under which mining permits must be reviewed by the minister, and the manner in which the permit holder shall conduct mining operations:

> **Issue of permit by Minister**
>
> **90(1)** Where an applicant for a mining permit . . . files with the Registrar
>
> (a) an application in the prescribed form;
> (b) the prescribed documentation;
> (c) evidence of a valid lease;
> (d) a mining plan as approved by the Director of Mines; and
> (e) evidence of the surface rights title or lease agreement with the owner of the surface rights,
>
> *and the Minister is satisfied that the project will result in efficient and safe mining,* the Minister shall issue a mining permit in the prescribed form. [Emphasis added.]

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[18] *Mineral Resources Act,* RSNS 1989, c. 286.

[19] The revised act, *Mineral Resources Act*, SNS 1990, c. 18, came into force on 6 March 1991.

executive director.[24] Phelan held a bachelor of mining engineering degree and a masters degree in business administration, but he had never worked in a coal mine. He testified that he had been responsible for "ensuring that the province's mineral resources were developed and managed in an efficient, safe, and environmentally acceptable manner." He had been responsible for reviewing Westray's application for a mining lease and making recommendations to the minister with respect to the issuance of the lease and other related action. He had relied on his staff both in making such recommendations and in ensuring that the Westray project was monitored.[25]

Dr Don Jones was the manager of mining engineering from April 1988 to 1993. He testified that his responsibilities included the administration of the *Mineral Resources Act* relating to bulk sample permits, as well as the review of applications for mining leases under the old *Mineral Resources Act* and of applications for mining leases and permits under the new legislation introduced in 1991. Jones was further responsible for administering the Mineral Development Agreements (MDAs) between the provincial and federal governments and monitoring and reviewing annual reports from mining operators.[26] Jones had a bachelor of engineering degree in mining engineering, a masters degree in business administration, and a PhD in mining engineering. He had never been employed in an underground coal mine, and the Westray application was the first application for a mining lease he had reviewed.[27]

John Campbell was a mining engineer with the Department of Natural Resources from 1984 until the fall of 1993. He had a bachelor of engineering degree in mining and received his professional engineering designation in 1985 or 1986.[28] He had no coal mining experience.

Coal Section

Both Robert Naylor and Kevin Gillis were employed in the coal section of the department as geologists. Naylor was a project geologist responsible for geological applications to coal – resource assessment, geological

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[24] Hearing transcript, vol. 51, pp. 11055–57. Phelan took on other roles while maintaining his position within the Department of Natural Resources. In late 1987, he became a director of the provincial crown corporation Novaco, and at the time of testifying before the Inquiry held the position of chairman of the board (vol. 51, p. 11094). As well, for a period of time, Phelan had been secretary to the Board of Examiners. When the inspectorate was transferred to the Department of Labour, the chairman of the board requested that Phelan continue to attend board meetings to provide a liaison between the Department of Mines and Energy and the board. Phelan fulfilled this role, though not as an official member, until his appointment as executive director (vol. 51, pp. 11097–98). To clarify one bit of terminology here, "executive director" is the new term in Nova Scotia government for "assistant deputy minister."

[25] Hearing transcript, vol. 51, pp. 11058–62. The extent of the monitoring conducted by the department will be discussed in a subsequent section.

[26] Hearing transcript, vol. 48, pp. 10424–25. At the time of testifying before the Inquiry, Jones was the director of mines and energy utilization.

[27] Hearing transcript, vol. 48, pp. 10429–32.

[28] Hearing transcript, vol. 48, pp. 10177–78. At the time of testifying before the Inquiry, Campbell held the position of manager of the mining engineering section of the department.

mapping, and the analysis of coalfields in the province.[29] His role with respect to Westray declined when the project moved into the development phase; he testified that it then became the responsibility of the engineering division.[30] Gillis was essentially involved with coal exploration, mainly in the Pictou coalfield; he was very familiar with the Foord seam. His responsibilities were "to keep up to date on what was happening in the province related to coal [and] maintaining a database on coal-related aspects in the province."[31] Gillis testified that, once Westray took over the project, he would respond to the company's requests for information. In the early stages, he received requests weekly; that tapered off to monthly requests as the company got going. Gillis had no other direct involvement in the Westray project.[32]

Duty to Ensure Safety

The Department of Natural Resources maintained that the day-to-day operational safety of the mine was the responsibility of the inspectorate in the Department of Labour. Section 48(1) of the *Occupational Health and Safety Act* provided that "[a]ny regulation, order or direction made under . . . *Mineral Resources Act* or under any Act related to occupational health and safety may be enforced as if the regulation, order or direction were made pursuant to this Act."[33] Pursuant to that act, the Department of Labour became responsible for occupational health and safety. The Department of Natural Resources, therefore, maintained that its role in ensuring a safe operation was peripheral, at best.

The *Occupational Health and Safety Act* in and of itself did not relieve the Department of Natural Resources of any responsibility for "safe mining." Indeed, the position description for the Manager, Mining Engineering, explicitly sets out on page 4 the "specific accountabilities" of the manager:

- ensuring "that mining operations are conducted within the mining acts in a safe, efficient and environmentally acceptable manner by *reviewing proposals from industry* . . .";
- assisting "the mining industry to operate in a safe, efficient manner by *providing engineering and technical assistance* . . .";
- assisting "with the safe and efficient operation of the mining industry by *reviewing the mining legislation and recommending improvements* . . .";
and

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29 Hearing transcript, vol. 46, p. 9915.

30 Hearing transcript, vol. 46, p. 9934.

31 Hearing transcript, vol. 46, pp. 10071–72.

32 Hearing transcript, vol. 46, pp. 10075–76.

33 *Occupational Health and Safety Act*, RSNS 1989, c. 320.

- ensuring the "safety of mining operations by *providing technical assistance to the mine inspection* and mine rescue units, Department of Labour."[34]

It also speaks (on page 3) to the safety mandate of the mining engineering section in a more general way:

> The Engineering Section operates in an environment in which the general public are rapidly becoming more interested in and concerned with the health and safety of workers in mines, the effect of mining operations on the natural and social environment, and efficient utilization of the province's mineral resources. . . . The Manager, Mining Engineering faces a major challenge working within this changing environment to ensure that government and industry are provided with the most up-to-date information and analysis to enable them to effectively deal with these concerns.

It is true that the Department of Natural Resources could not ensure that the mine was being operated safely on a daily basis. However, the department could ensure, and was mandated to ensure, that any mining plan receiving the department's stamp of approval was inherently safe, that such a plan could foster an efficient and safe operation, and that such a plan would not support an unsafe operation. It naturally follows as a corollary that a mine plan would be inadequate and unacceptable if it lacked sufficient detail to allow the department to make such a determination.

As noted at the beginning of this chapter, the views of those in the department with respect to their mandate for safety were not entirely consistent. Ex-deputy minister Mullally testified that he was not aware the department had any responsibility relative to safety; he thought "the primary responsibility for safety matters was with the Occupational Health and Safety Branch in the Department of Labour." He saw safety as a "concern" of the department – he supposed one could say that there were always "concerns for safety in every respect" – but he was unaware of any specific responsibility that was part of the department's primary mandate.[35]

Phelan testified that his department had "an overall interest in safety." His department was responsible for safety in those areas where it had expertise, such as the barrier pillar, and could assist the Department of Labour.[36] Phelan was of the view that, while the mining engineering division would assist the Department of Labour if so requested, the Department of Labour inherited the responsibility to deal with the engineering aspects of the safety regulatory regime. His evidence was less clear as to what responsibility, if any, the Department of Natural Resources retained or assumed for safety issues that were integral to

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[34] Position description, Manager, Mining Engineering, Department of Mines and Energy (5 October 1987), p. 4. Emphasis added.

[35] Hearing transcript, vol. 54, pp. 11733–34.

[36] Hearing transcript, vol. 52, p. 11417.

engineering. Phelan's department did consider some safety concerns when reviewing such things as mining methods and equipment; for example, deciding whether a project was viable included a consideration of whether it could be done safely.[37] He testified, however, that, if the department had realized that people were looking to it for safety information, the department would have acted differently.[38]

Jones testified that the operational safety of a working mine was not addressed by the *Mineral Resources Act*; rather, it was addressed by other pieces of legislation entirely.[39] The department was only interested in a "general overall view" of safety;[40] the department's mandate was to review the mine plan to be satisfied that it would be safe "in general principles."[41] The department looked at two issues relating to safety – the barrier pillar to the Allan mine and subsidence (lowering of the earth's surface above the mining area). Jones reluctantly agreed with Inquiry counsel that, by accepting the design put forward by specialists in establishing the safety of the mine, the department was deferring to others. If the department were to exercise a greater level of review and re-engineering, it would require "incredibly more resources."[42]

Campbell expressed a similar view. He testified that, pursuant to the *Mineral Resources Act*, his department was responsible for ensuring the safe and efficient extraction of minerals "in an overall sense." He understood the act to state that the department had the responsibility to ensure that the mine plan as approved was safe and efficient; however, he did not believe that monitoring the mine's daily operations was part of his department's mandate.[43] None of the witnesses clarified what it meant to be concerned with safety "in general principles" or "in an overall sense" or "in every respect."

In a pre-hearing interview with Inquiry counsel, Nancy Ripley-Hood, solicitor for the Department of Natural Resources, discussed her understanding of what is encompassed by project safety and efficiency.[44] Ripley-Hood took a somewhat different approach to the department's responsibility for safety. She suggested that, if the engineering section reviews a mine plan that is not inherently safe, it will not approve the plan. She further commented: "It's not directed as at the micro-management of safety. It's more of a global thing. You send this in, I look at it. It doesn't look safe to me. Take it back; we're not approving it." Ripley-Hood

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37 "If it can't be done safely, you can't do it. That's a basic premise" (Hearing transcript, vol. 53, pp. 11594–97).

38 Hearing transcript, vol. 52, pp. 11416–17.

39 Jones specifically mentioned the *Environmental Act* and the *Occupational Health and Safety Act* (Hearing transcript, vol. 48, p. 10445).

40 Hearing transcript, vol. 48, p. 10500.

41 Hearing transcript, vol. 48, p. 10442.

42 Hearing transcript, vol. 48, pp. 10439–46.

43 Hearing transcript, vol. 47, pp. 10332–33.

44 Exhibit 138.121–24.

further stated that, if the submitted mine plan was not detailed enough, it went back to the operator for more precision.

Laffin testified that, as a general rule, everything had to be done in a safe and efficient manner.[45] When asked whether that guideline covered worker and employee safety, Laffin responded, "Not exactly, no. To ensure. We had an obligation to ensure that somebody else did the inspection."[46] Laffin further testified:

Q. But, for instance, if your people are looking at a mine plan, obviously, they want to make sure that it's going to be a safe environment for people to work in?

A. Sure, but, you know, you can't – You can't ensure a safe environment for people to work in from a mine plan.[47]

. . .

Q. . . . Would you not agree that there are some safety features that are inherent in a mining plan?

. . .

You know, do you have an escape route? Do you have the fan in – blowing in the right direction? Do you have it at right angles to the slope?

. . .

And who would be responsible under – after the split up of the two – of the mining section and the inspection section? Would be responsible to look at those sorts of things after –

A. Well, our department would be looking at them initially, sure. I mean –

. . .

Q. Is there an escape route? Is the ventilation –
. . . adequate?

A. – sure. Oh, yeah, we would look at that –

Q. Okay.

A. – in the initial plan. And once you start to mine, I mean, if they decide not to put an escape route, you know, and, you know, every so many feet in where you have moving vehicles, you have to have access so people can get off – out of the way, I mean, that's a requirement of the Act.

Q. Certainly.

A. Well, you can't decide that until you get into the mine.

Q. Fair enough.

A. And if people don't adhere to it, well, somebody has to watch it. But, I mean, you can't tell from the plan.

Q. Certainly.

A. There's no way you can tell from the plan.

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45 It is important to keep in mind that Dr Laffin left the department in May 1991.

46 Hearing transcript, vol. 70, p. 15440. This is consistent with a comment made by Ripley-Hood, in a memorandum to John Mullally and Pat Phelan dated 12 May 1992, just three days after the Westray explosion: "Coal Mines Regulation Act is enforced by Labour but our minister is still minister responsible for that act and the standards set out therein" (Handwritten memo on file with Inquiry [not catalogued]).

47 Hearing transcript, vol. 70, p. 15441.

Q. All right. In your view, was the mine – the Labour Department, at this point, the mine inspector, they were the ones that were supposed to be looking for those sorts of things?
A. They would be looking at those things; sure, they would.[48]

Laffin further testified that the term "safe," as contained in the *Mineral Resources Act,* had no special meaning:

Q. . . . I just wanted to get from you the point that you did agree with, that . . . "safe" didn't have any –
A. Not – not any –
Q. – special meaning?
A. No.
Q. And that in fact, whether you cannot – *as you said, you cannot ensure that a mine will be mined safely merely on the basis of a plan, but you can ensure that it would be mined unsafely if the plan itself is not a safe plan, correct?*
A. *No question.*
Q. Right. And that's what you're trying to determine when you approve plans? That's among the thing you try to determine?[49]

The evidence of Laffin on this point is credible and reasonable. It is true that the department could not ensure the existence of a safe mining environment on the basis of a plan. However, it could ensure the inherent safety of a plan, and it could ensure that a plan was not unsafe; this responsibility clearly fell within the mandate of the department.

Finding

The various officials in the Department of Natural Resources either misunderstood or overlooked the overriding responsibility to ensure that Westray's mine plans were inherently safe. The department also failed, either through the Department of Labour inspectorate or through its own initiative, to ensure that any inherent safety concerns were being met by the company.

Duty to Monitor for Compliance with Approved Plans

In the view of the Department of Natural Resources, its responsibility for monitoring the Westray operation to ensure that it was developing in compliance with the approved mine plan was limited to an annual review of plans submitted by the operator. Section 93 of the *Mineral Resources Act* is explicit: the permit holder "shall conduct mining operations in conformity with the approved mining plan." Section 94 sets out the consequence of failing to do so: when the permit holder fails to conduct operations in accordance with section 93, "the Minister shall review" the permit. Section 94 further mandates a review where the permit holder fails to submit an annual information report to the department. It is interesting to note that the legislation deals with the failure to submit an annual plan

[48] Hearing transcript, vol. 70, pp. 15480–82.

[49] Hearing transcript, vol. 70, p. 15496. Emphasis added.

and the failure to operate in conformity as two separate and distinct issues. As well, the department's position description for the manager of the division provides as follows:

> The Mining Engineering Division *monitors all operations within the province to ensure that they continue to meet the requirements of the government in their day-to-day operations and for any major modifications or shut down of their facilities.* The Mining Engineering staff also provide engineering services to the mine inspection and mine rescue personnel in the Department of Labour on complicated inspection or rescue problems.[50]

For the act to hold any real meaning, the department must have had some responsibility for monitoring the Westray project to ensure that the operator was complying with section 93. Although department staff testified that the monitoring was done annually, based on plans submitted pursuant to section 61 of the act, the department should have assumed a more rigorous role in light of the situation at Westray.

Again, the evidence of the witnesses responsible for monitoring the operation is not entirely clear. Although Mullally, the deputy minister, testified that he had expected the department to ensure that the approved plan was being followed, he did not specify the extent of the department's monitoring role.[51] As far as Gillis, the geologist, knew, it would have been the responsibility of the engineering section of the department to ensure that Westray was mining in accordance with approved plans and maintaining a proper barrier between it and the Allan mine.[52]

Phelan testified that the department's monitoring activity consisted of a review of the annual mine plan, which the operator was required to submit, and that the department did not have any responsibility to inspect mines on a regular basis.[53] Like Phelan, Jones testified that it was not necessary for a regulator that was responsible for monitoring for compliance with approved mine plans to check that the underground development was actually proceeding in conformity with that plan through site visits or other means. The annual plans provided the department, as resource extraction manager, with full knowledge to carry out its duties. Jones felt that a review of the annual plan was an adequate check, *as long as the company was following the overall mine plan.*[54] John Campbell was of the view that it was the responsibility of the Department of Natural Resources to ensure on an annual basis – using the "as-built" mine plan submitted by the operator – that the mine was developed in conformity

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50 Position description, Director, Mining Engineering, Department of Mines and Energy (28 September 1987), p. 3 (Inquiry file, DOL Box 4A 33). Emphasis added.

51 Hearing transcript, vol. 54, pp. 11738–40.

52 Hearing transcript, vol. 47, p. 10157.

53 Hearing transcript, vol. 51, pp. 11239–40.

54 Hearing transcript, vol. 50, p. 10908. Although this approach is, on its face, preposterous, it is not unique in the Westray mine experience. One need look no further than the mine inspectorate's interpretation of its role in the administration of the so-called internal responsibility system (see Chapter 12, Department of Labour).

with the approved mine plan. The department had a *further obligation to address any deviation from the plan that came to its attention.*[55]

Laffin commented that "there's a trust in the people . . . that they would not do something that they shouldn't have done" and that the mine inspectors "should have known what was happening."[56] Laffin testified that, as far as the resource management was concerned, the department had to accept and approve a plan once a year. He assumed that the mine inspectors continued to check whether the operator was following the approved mine plan.[57] He thought that Phelan would assume that the Department of Labour inspectors were checking for compliance with the approved mine plan.[58] Claude White, director of mine safety for the Department of Labour, said that this check for compliance did not fall within the mandate of the inspectorate. Laffin commented that, when the inspectorate left the department, it was assumed that a lot of things were automatically being done.[59] In so testifying, he identified the root of the confusion surrounding the mandate of the inspectorate and the engineering division: within the department, an awful lot was being assumed.

Finding

The transfer of the inspectorate from the Department of Natural Resources to the Department of Labour created serious gaps in the inspection and approval process, which neither department attempted to address. Officials in each department were satisfied to eschew any responsibility for these matters, assuming that the other department would fill the gaps. Those responsible for the regulation of Westray did not turn their minds to the issues until the mine blew up, at which time they were forced to seek some explanation for the failure of the regulatory regime.

Ripley-Hood stated that it was incumbent on the operator to comply with the approved mine plan and that the act allowed the department to withdraw the mining permit or get the operator to change the plan if it did not comply. If the department found out that the company was not mining in accordance with the plan, it could take whatever action was permissible under the act. In response to whether there was some positive obligation on the department to ensure compliance, Ripley-Hood commented that she never actually thought about it because, in practice, the department visited almost all the mines, and the operators contacted the department on a regular basis, providing production statistics and filing work reports; it was in this manner that the department received its information.[60]

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55 Hearing transcript, vol. 47, pp. 10334–35.

56 Hearing transcript, vol. 70, pp. 15445–46. In his pre-hearing interview, Laffin stated that Jones visited the mine site periodically to monitor the development of the Westray project for compliance with the approved mine plan.

57 Hearing transcript, vol. 70, pp. 15475–76.

58 Hearing transcript, vol. 70, p. 15500.

59 Hearing transcript, vol. 70, p. 15477.

60 Exhibit 138.124–26.

Ripley-Hood believed the legislation to be permissive, not mandatory, with respect to enforcement. She believed it was incumbent on the company first and foremost to live up to the terms of the lease and the *Mineral Resources Act*. If the regulator found out that the company did not, her response was, "you're dead in the water. You were gone."[61]

The *Mineral Resources Act* clearly prescribed that a "mining permit holder shall conduct mining operations in conformity with the approved mining plan." Despite the repeated violations and instances of non-compliance by the company,[62] the department accepted no responsibility for monitoring for compliance with the plan, except on an annual basis.

Finding

The Department of Natural Resources failed to accept responsibility for enforcing provisions of the *Mineral Resources Act* and to perform its regulatory role with the rigour required to ensure that Westray was running a safe and efficient operation.

Current Initiatives

It is important to note that Phelan briefly mentioned that he had been instrumental in promoting the development of the "one-window approach for industry" wherein technical people and regulators from the Department of Natural Resources, the Department of Labour, and the Department of the Environment meet to review common interests and review particular operations.[63] As well, in the fall of 1996, the Department of Natural Resources released a policy statement, "Minerals – A Policy for Nova Scotia." It reads in part: "6.1 *Encourage cooperation among the mining industry, labour and government agencies in developing a framework for health and safety in the workplace. . . .* The Department will continue to work closely with the Department of Labour and other departments to assist as needed in the fulfillment of the government's responsibilities to support workplace health and safety."[64] Both Jones and Phelan assisted with this publication.

RECOMMENDATIONS

47 **The mandate of the Department of Natural Resources should be formally reviewed and clarified vis-à-vis the mandate of the Department of Labour to ensure that there are no gaps in the regulatory process.**

48 **A formal procedure should be put in place to provide for adequate communication and cooperation between the Department of Natural Resources and the Department of Labour to ensure that there is adequate provision for all aspects of the regulatory process.**

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61 Exhibit 138, p. 138.

62 This issue will be addressed at length later in this chapter.

63 Hearing transcript, vol. 51, p. 11078.

64 Minerals – A Policy for Nova Scotia, 1996, p. 21. Emphasis added.

49 **The *Mineral Resources Act* should be amended to identify clearly the role of the Department of Natural Resources in monitoring mine planning in the province. Such a role should encompass the duty to make site inspections to ensure that an operator is mining in conformity with plans approved by the department.**

50 **The *Mineral Resources Act* should be amended to identify clearly the role of the Department of Natural Resources in ensuring the "safe" operation of mines in the province.**

Geological Background

The Pictou County coalfield has been the subject of much interest and research over the years. Indeed, by the time Westray had become a specific proposal, considerable background work had been performed by both the Department of Natural Resources and mining consulting companies. The issue to be considered here is whether the studies and data available to the company, and to the department as regulator, were adequate. Was the available information sufficient for the department to give Westray Coal the go-ahead with confidence? Department staff expressed mixed views on this issue. At the time the Westray proposal was coming to fruition, however, one person in particular – the DNR geologist Robert Naylor – was more outspoken than any other.

On 30 March 1987, Naylor wrote to manager of mining engineering Pat Hannon with his comments on a geological section of Suncor's mine feasibility study.[65] Suncor had performed seismic studies, drilling, and related work in the Pictou County coalfield. Naylor criticized the study for failing to recognize or include major faults that appeared to have been intersected in a number of its drill holes. He felt that Suncor had given a simplified view of the geology and had omitted much of the structural complexity from its cross-sections. Naylor listed the factors he would look for in a new geological report.

On 4 May 1987, Naylor wrote to Ed Bain, manager of the department's coal group, and advised him of meetings with Hans Bielenstein, chief geologist with Associated Mining Consultants Limited (AMCL), and others to discuss the structure and stratigraphy of the area being considered for potential mining of the Foord seam. Bielenstein was to prepare a geological report for the Placer Development feasibility study. Naylor stated in that letter:

> Following the meeting, I had a chance to discuss in general terms with Hans his feelings on the Foord seam project. The following in my opinion [was] his most interesting [comment]:
>
> - The geology of the mine area as portrayed by Suncor in their most recent report is incomplete and based on an erroneous approach.
>
> . . .

[65] Exhibit 76.18.047–48. Hannon was the manager of mining engineering prior to Jones. Volume 1: Geology, of the Suncor feasibility study, is in Exhibit 7.

> It is unfortunate that he [Hans] is now in the unenviable position of trying to evaluate a large amount of information in a short period of time. As a result, I feel that the coal section geologists should do an indepth review of Hans final report as his work continues.[66]

In his testimony at the Inquiry, Naylor was asked if he agreed with Bielenstein's "erroneous approach." Naylor replied: "I agreed it was incomplete and I wouldn't say it was based on a totally erroneous approach. . . . an incomplete approach would have been a fair way of saying it, I think."[67] Naylor testified that his concerns of 1987 had been addressed subsequently in a satisfactory manner. Given both the data available through drilling and the data generated by the department, Naylor thought that Bielenstein had conducted a good review of faulting in his report. Naylor testified, however, that some additional drilling to test Bielenstein's model would have been beneficial.[68]

In a memorandum to Bain dated 9 March 1988, five days before Westray Coal applied to the Department of Natural Resources for a mining lease, Naylor again expressed his concerns about the Foord seam project:

> Curragh-Westray is taking over a project which they have had no input into through the exploration stage. For this reason, many procedural mistakes (e.g. coal sampling methods) made by Suncor may be overlooked. In all likelihood, Curragh-Westray will retain some Suncor staff and, although it will be very helpful to them, the former Suncor people are not likely to be very objective re potential problems with the project.[69]

Naylor's memorandum was strongly worded and unequivocal – he did not support the development of the Foord seam project without further drilling. Naylor was not quite as adamant about his position eight years later when he testified at the Inquiry:

> I was trying to say that it's implicit that we . . . keep an eye on this project, I guess, is what I was trying to say . . . and maybe I . . . chose a somewhat dramatic way of doing it there that may not have been most appropriate . . .
>
> . . . I think what I'm saying is, I felt that – the last sentence summarizes it. I said, "I feel, however, that with all the expertise we have in the Pictou coalfield, it is implicit that we ensure the Foord seam project proceeds in the best possible fashion. That means that we continue to give them a high level of service in terms of providing them information and assistance." That's really . . . the nuts and bolts of what the memo was intended to be. The rest of it, I think, was a little over dramatic.[70]

Naylor testified that his criticism of coal-sampling methods may have been overstated. He was not exactly sure what he had meant by his comment that the former Suncor people would not likely be very objective; and he thought it would be an overstatement to say that his

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66 Exhibit 76.18.049–50.

67 Hearing transcript, vol. 46, p. 9962. Hans Bielenstein would have been a significant witness to speak to the early planning stages of the Suncor (Westray) mining project. Unfortunately he had died before the Inquiry got underway.

68 Hearing transcript, vol. 46, pp. 9958–59.

69 Exhibit 72.18.051.

70 Hearing transcript, vol. 46, pp. 9970–71.

concern related to the possibility that the Suncor people would not pay adequate attention to some of the potential problems.[71]

Naylor had also written, somewhat prophetically, in this 9 March 1988 memorandum: "In my personal opinion, the Foord Seam Project is very high risk with respect to the geology as it is presently understood and further drilling is definitely required." When it was suggested to Naylor that this sentence was quite explicit and clearly stated, his response to the Inquiry was weak: he stated that in his memo he was referring to the fact that Bielenstein's model required further testing, and that "high risk" was not intended to mean a safety risk. Naylor elaborated with the following interpretation of "high risk":

> I guess in a general sense what I meant by "high risk" there was that given the knowledge that I had, which was, again, geologically-based, and without the benefit of the mining engineering that was going to be applied to that, I felt that not understanding the geology [or] . . . not having tested Hans Bielenstein's model would certainly constitute a potential risk, yes.[72]

In his 9 March memo, Naylor also made a point of ensuring that the mining engineering section would be made aware of his concerns:

> In the past, the mining engineering section has tended not to consult the coal section geologists re the Foord Seam Project. To ensure the Department has a comprehensive understanding of the Foord Seam Project before mining begins, I would suggest 1) a meeting between Pat Phelan's group and our own; 2) a series of meetings with Curragh-Westray's engineers and geologists with their respective counterparts at Nova Scotia Department of Mines and Energy; and 3) a joint review of Curragh-Westray's mine planning by the engineering department and coal section.

The "indepth review" of Hans Bielenstein's final report, which Naylor had suggested was necessary in his 4 May 1987 memorandum, was completed; the information was passed on to the mining engineering section in the spring of 1988. In a memorandum to Phelan dated 6 April 1988, Naylor and Bill Smith, a geologist with the department, again expressed some opinions and concerns about the Foord seam project.[73] The memorandum was written approximately three weeks following the submission by Westray of an application for a mining lease, but well before the department's ultimate approval in the fall of 1988. This 6 April 1988 memorandum had been written for discussion purposes at a meeting to be held the same day. Naylor recalled that he, Phelan, Campbell, Gillis, and possibly Jones and Bain attended the meeting.[74] The memorandum reiterated some of the concerns Naylor had previously outlined. The structural geology of the mine area was represented as the primary worry:

> The structural geology of the mine area represents the single biggest concern with respect to the minability [*sic*] of the Foord seam. Suncor in many instances didn't adequately recognize faulting while logging drill

71 Hearing transcript, vol. 46, pp. 9965–69.

72 Hearing transcript, vol. 46, pp. 9971–72.

73 Exhibit 76.18.052–54.

74 Hearing transcript, vol. 46, pp. 9984–85.

> core. As a result the most accurate method of detecting faults is through recognition of missing coal and oil shale-bearing sequences in drill holes.

Naylor made the following recommendation with respect to the Foord seam project: "Finally, we feel this is a project which should be entered into cautiously by experienced persons with a high degree of prior knowledge of the geological and engineering parameters involved." In testimony, Naylor agreed that it was fair to assume that at this meeting he would have reiterated his position that further drilling was required to test Bielenstein's model.[75] Naylor testified that he understood that the department had taken this information to the company, "and I don't know what happened after that."[76] He qualified his position, however, by stating that it was based on the geology alone; he did not have the engineering background to determine whether it had been necessary to do more drilling before the mine could proceed. The company and the department might have felt they could overcome geological problems with engineering applications.

Arden Thompson, the geologist for Westray, did not agree that Naylor had stated his earlier position accurately. He testified that Naylor had always been fairly pessimistic about the coalfield and was always advocating more drilling. Thompson stated that at that point he felt Naylor was being overly cautious.[77]

Phelan testified that Naylor had been the only person suggesting that further investigation was required. The company, reports submitted by the company, and other geologists in the department supported the view that, although this seam was structurally complex, there was sufficient information to proceed with the project. It was Phelan's understanding that Naylor's concerns had been with the interpretation of geology in the deep part of the mine and the company had not yet reached that area.[78] Phelan further testified that, fairly early on, everyone had recognized that the coal seam was structurally complicated, with faults and folds; it was no surprise when faults and geology differing slightly from what had been expected were encountered. Phelan disagreed that further investigation would have enabled the company to identify more clearly the location of the coal horizon and faults, so that subsequent changes in the mine plan could have been avoided.[79]

Kevin Gillis testified that, although he agreed with some of Naylor's comments, he did not feel the deficiencies were such that the company could not start mining. He did not agree with Naylor's comment that the "Foord seam project is very high risk with respect to the geology as it is presently understood." Gillis felt that the one geological report he had reviewed contained "enough information, in my opinion, that they could

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75 Hearing transcript, vol. 46, p. 9987.

76 Hearing transcript, vol. 46, p. 9943.

77 Hearing transcript, vol. 40, p. 8928. Thompson had worked on the Suncor and Placer feasibility studies prior to joining the Westray staff.

78 Hearing transcript, vol. 51, pp. 11156–58.

79 Hearing transcript, vol. 51, pp. 11152–53.

have gone underground with the mine." He did agree, though, that more information was always beneficial.[80]

The main problem Gillis had identified was the need for good roof support. He had mentioned the weak strata to the mining engineering section; he advised them to watch the roof strata when approving mine plans or exercising regulatory authority over a mining proposal. Gillis went on to say that he had seen no indications that the mining engineering section was doing anything extra to ensure that Curragh was aware of the concern about the weak strata and was taking suitable precautions.[81] Gillis did testify that he had been satisfied that the company was aware of the type of roof it had in the tunnel driveage.[82]

Don Jones joined the department in April 1988, around the time that Naylor had sent the last of his four memoranda. Jones had not been aware of Naylor's memoranda in 1988, but he had seen them in preparation for his appearance at the Inquiry. He stated that he had not been aware of Naylor's taking the position that further geological work was required. Jones testified that "until very recently I thought his issues had been addressed."[83]

It was around the time of the 6 April 1988 meeting that Naylor was reassigned to a mapping project in the Debert coalfield, north of Truro.[84] Phelan testified that he was not aware of the details of Naylor's reassignment to the Debert coalfield; he was unaware of any information to suggest that Naylor had deliberately been removed from work related to Westray.[85] After April 1988, Naylor had no involvement in evaluating any applications for approval of Westray mine plans or changes.[86]

Years later, Gillis, Naylor, and John Calder were to comment on the need to know more about geological implications in mining. In a paper entitled "Geological Hindrances to Mining the Foord Seam," dated February 1993, they wrote: "Geological hindrances to effective resource evaluation and efficient mining also impact on safety issues; *poor or incomplete understanding of the resource can divert attention from immediate safety concerns and stymie prediction of mining problems.*"[87] It is unfortunate that Naylor's repeated expressions of concerns were largely ignored, for the "poor or incomplete understanding of the resource" diverted attention from safety at the Westray Mine.

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80 Hearing transcript, vol. 46, pp. 10085–88.

81 Hearing transcript, vol. 46, pp. 10078–81.

82 Hearing transcript, vol. 47, p. 10135.

83 Hearing transcript, vol. 48, pp. 10461–63.

84 Hearing transcript, vol. 46, pp. 9935–36.

85 Hearing transcript, vol. 51, p. 11159.

86 Hearing transcript, vol. 46, pp. 10011–13.

87 Exhibit 79.2.011. Emphasis added. It was just this sort of concern that seemed to preoccupy Westray people. The chronic ground control problems, combined with high incidence of roof falls and rib collapses, dominated the attention of company officials to the detriment of other important safety considerations, such as stonedusting. Even the miners seemed more concerned with the potential hazards of roof falls than with other safety matters.

Although it is true that Naylor's views may not have had the full support of the Department of Natural Resources, his memoranda should have sent a clear message to the department – the development of the Foord seam project was premature. Naylor modified his position somewhat in his testimony to the Inquiry, but his concerns as expressed in 1987–88 were clear.[88] The Department of Natural Resources failed to heed this warning.

Finding

The strongly expressed position of Robert Naylor, a Department of Natural Resources geologist, that further geological work was required before the Westray project was approved, appears to have been well founded. It deserved more attention than it was accorded by more senior professionals in the department. By not addressing his concerns, Pat Phelan and Don Jones were remiss in their duty to take reasonable measures to ensure that the Westray mine plan would "result in efficient and safe mining."

Westray Mining Proposal

The decision of the Department of Natural Resources to approve the mining proposal submitted by Westray Coal was ill-advised. This imprudence was not an isolated incident. The approval of Westray's application for a mining lease marked the first in a series of questionable departmental decisions. It is difficult to understand how and why seemingly qualified and competent professionals repeatedly permitted Westray to ignore the rules put in place to ensure the efficiency and safety of mining operations.

Finding

The lack of a final mine plan was a significant factor in the overall planning of Westray. The department should have insisted that the company prepare a mine plan that addressed the issues of safe and efficient mining.

Provincial Approval Process

Submission and Review of Westray's Application

On 14 March 1988, Westray Coal submitted documentation to the Department of Natural Resources in support of its application for a mining lease.[89] The company's submission was not a formal application; it was obvious that further information was required. The department began to review the package of information as if it were considering an application. On 6 April 1988, the department met with the company to discuss its

[88] After some 19 years as a justice of the Supreme Court, I have developed a healthy and justifiable scepticism when a witness, for whatever reasons, attempts to put a different spin on previously made statements that were clear and unequivocal.

[89] Exhibit 35c.0030–95.

submission. According to Don Jones, it was at this time that Westray offered to provide further supporting documentation.[90]

On 18 April 1988, Jones requested by letter that Westray submit specific supporting information in relation to a number of issues, one of which was "Detailed Mining Plans, including Ventilation Plans and Equipment Selection."[91] Three days later, on 21 April 1988, Curragh's group vice-president, Marvin Pelley, wrote to Phelan and provided him with additional information on the Pictou County coal project.[92] According to Adrian Golbey, an expert mining consultant retained by the Inquiry, the additional information submitted by Westray did not respond to the issues raised by Jones in his letter of 18 April. The requested items and the items enclosed did not correspond.[93] In fact, Phelan subsequently agreed that the letter written by the company on 21 April was not a response to the department's letter of 18 April. Rather, Westray's letter resulted independently of, and merely crossed in the mail with, the letter from the department.[94] The department never received a response to the letter of 18 April 1988.[95]

Westray's application was reviewed by various members of the DNR engineering and geology staff. Don Jones reviewed those portions relating to the economics, subsidence, and layout of the project; John Campbell reviewed the portion dealing with coal reserves, and, according to Jones, Gillis reviewed the geology.[96] Jones had no prior experience or training in what documentation to look for; he relied on the department's guidelines on the information required to satisfy the legislation.[97] In conducting the review, Jones noted that Westray's proposal had been "backed" by a number of experienced and competent consulting firms, including Golder Associates, Norwest Consultants, Dames & Moore, and AMCL.[98] According to Jones, the manager of the engineering section, it was not the department's responsibility to take the proposal and re-engineer or recalculate the work. Rather, the role of the department was limited to reviewing the Westray submission based on general engineering principles that seemed reasonable to the department at the time.[99] It was Jones's view that, following receipt of the material submitted by the company on

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90 Hearing transcript, vol. 48, pp. 10487–92.

91 Exhibit 35c.0096.

92 Exhibit 35c.0098.

93 Hearing transcript, vol. 3, pp. 551–53.

94 Hearing transcript, vol. 51, p. 11125.

95 Golbey had been asked to locate and identify any documents that might be of use to the Inquiry. When asked about communications between the company and the department after 21 April and prior to the lease being granted in October 1988, Golbey testified that he had "not been able to find any intervening reports, letters, correspondence, or any material" (Hearing transcript, vol. 3, p. 554).

96 Hearing transcript, vol. 48, pp. 10426–27.

97 Hearing transcript, vol. 48, pp. 10432–33.

98 Hearing transcript, vol. 48, p. 10435.

99 Hearing transcript, vol. 48, pp. 10436–37.

21 April 1988, "we had information that would support an application for a mining lease."[100]

John Campbell's examination of the coal reserves consisted of a review of Westray's March submission, the Kilborn submission, and the Placer and Suncor reports. In conducting the review, Campbell did not attempt to verify whether the reserves submitted reflected the actual reserves along with accurate projections. Rather, he considered only whether the provided information satisfied the requirements of the act. And in his view, the legislative requirements had been met.[101] Campbell's review appears to have been procedural rather than substantive.

The engineering section of the Department of Natural Resources did not consult with the coal section in reviewing Westray's application. Naylor testified that he had no direct involvement in evaluating the application for the mining lease. The documentation used for the mining lease submission had basically mirrored Hans Bielenstein's work. Although Naylor had evaluated that work, he had no actual part in the application process.[102] Gillis, too, testified that he was not consulted when Westray submitted its application for a mining lease. He had been given a geological report to study but had not been made aware that it might have been part of the submission in support of an application.[103] One can only wonder why the two geologists with responsibility for coal geology in the Pictou coalfields were not brought into the application review process.

The Kilborn Feasibility Study

The mine plan submitted by Westray as part of its application for a mining lease was based on the Kilborn layout. The Kilborn layout was not a final mine design. It was clear at the outset that, if Westray intended to use the Kilborn layout as its final plan, there would be a gap of some magnitude in the mine-planning process.[104] Much of Kilborn's work – based on studies by other consultants – was not original. Kilborn acknowledged in its report that it had been constrained by a shortage of time; neither Kilborn nor Dames & Moore had examined exploratory drill cores, interpreted geological data, or separately calculated reserves; nor had they done original work on mine design, planning, or scheduling. Rather, they had used the information provided by Suncor, Placer Development, AMCL, Norwest, and Golder Associates.[105] Dr Miklos Salamon, the expert on ground control retained by the Inquiry, testified that Kilborn's layout should not have been viewed as a final design. Acknowledging that the Kilborn layout was an exact copy of what was presented in the Placer

100 Hearing transcript, vol. 48, p. 10493.

101 Hearing transcript, vol. 47, pp. 10183–87.

102 Hearing transcript, vol. 46, p. 10011.

103 Hearing transcript, vol. 46, p. 10082.

104 Golbey (Hearing transcript, vol. 3, pp. 547–50).

105 Exhibit 1, ss. 2.6, 3.1.

document, Salamon was wary of the conclusions drawn by Kilborn: "And now two of the advocates of room-and-pillar mining claim to have been working under time pressure, so when was a real proper consideration given to this decision? It's not clear."[106] According to Golbey, the Kilborn study was at a level between a pre-feasibility and a feasibility study: it did not even contain all the elements of a feasibility study, let alone a proper mine plan.[107]

The testimony of DNR staff causes concern. Although the department agreed that the Kilborn layout could not be viewed as a final mine plan, the layout *was* sufficient to meet the requirements of the legislation for a mining lease. According to the staff, it was not the department's responsibility to ensure that the final engineering work was completed prior to issuing the lease.

Phelan readily accepted that the Kilborn study was a feasibility study and that further engineering work was required before actual development of the mine could commence. He testified that the operating practice of the department required an applicant to submit the information set out in the legislation and in departmental guidelines, and such information did not necessarily include the operator's actual mine plan.[108] Phelan agreed that nothing prevented the department from requiring the company to file the final mine plan prior to the start of development. It was within the authority of the department to do so, but this possibility was never considered by the regulator. Although the department did run the risk that the additional engineering work would not be completed by the company, Phelan explained that this risk was addressed because the new *Mineral Resources Act*, passed in March 1991, provided for some increased scrutiny.[109] As we will discuss later in this chapter, Westray was never required to undergo any increased scrutiny, since the department promptly "grandfathered" Westray under this new legislation.[110]

Jones was of a similar mind. Although the Kilborn report was sufficient to meet the requirements of the provincial legislation, the company required "a level of detailed engineering and 'previewed analysis documents' and a lot of additional work" before designing the operating plans. Jones agreed that there would be a significant gap if Westray went ahead to develop the mine based on the feasibility study. He further agreed that, given the lack of evidence suggesting that additional planning had been done, it was fair to say that there *had been* a critical gap in the

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106 Hearing transcript, vol. 14, p. 2381.

107 The reader should be aware that Golbey testified that he agreed that the Westray proposal for a lease was based on the final Kilborn submission of 1988 (Hearing transcript, vol. 6, p. 988). The draft he reviewed (an earlier 1988 version) was less than a feasibility study. Golbey based his report, however, on the January 1989 Kilborn layout, which he felt was essentially the same as the final 1988 one.

108 Hearing transcript, vol. 51, pp. 11127–31.

109 Hearing transcript, vol. 51, pp. 11134–37.

110 The department issued a mining permit to Westray on the basis that Westray was supposedly mining saleable coal in March 1991, when the new act came into effect (see the discussion on mining permits later in this chapter).

planning for Westray.[111] Notwithstanding this fact, Jones felt the department had discharged its responsibility under the legislation.[112] He did not consider it the department's responsibility to look at detailed engineering work or become an absolute review agency for all that was submitted to it; the province simply could not afford to do so.[113] The bare fact remains that the Westray plan as submitted was not sufficient to ensure reasonably that "the project will result in efficient and safe mining." This view is supported by the evidence of the experts, notably Salamon and Golbey.

Jones and John Campbell commented on the adequacy of the Kilborn ventilation plan. According to Jones, the company had anticipated the airflows "within general engineering principles, and that will adequately do the job to deliver the safe mine and the efficient mine."[114] He was further satisfied that the company's submission indicated that enough air would be entering the mine and that the air would be distributed adequately.[115] Campbell testified that, at the time, information was considered sufficient if requirements of the act were met. He acknowledged that the act did not require detailed levels of information. Because of his experience since the explosion and of having learned from comments made during the Inquiry process, Campbell's appreciation of whether the ventilation information was sufficient had changed significantly by the time of his testimony.[116] However, at the time, the department was satisfied that the Kilborn guidelines on ventilation would provide for an efficient and safe mine.[117] Experts in the field did not share this view. Dr Malcolm McPherson, a mine ventilation expert, assessed the Kilborn plan as a very simplistic treatment of ventilation issues.[118]

The department's review of Westray's application for a mining lease was less than rigorous. Golbey found no evidence of any correspondence between the department and the company, during the period 21 April to 13 September 1988, that would explain why the lease was granted without a more detailed mining and ventilation plan, as requested by Jones in his 18 April letter. All Golbey could surmise was that there was information he was unable to locate and review.[119] No such information surfaced over the course of these hearings.

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111 Hearing transcript, vol. 48, pp. 10495–98. This phrase "previewed analysis documents" appears to have no clearly defined meaning. Perhaps I was remiss for not requesting further clarification from Jones.

112 Hearing transcript, vol. 48, pp. 10498–500.

113 Hearing transcript, vol. 48, p. 10452.

114 Hearing transcript, vol. 48, p. 10512.

115 Hearing transcript, vol. 50, pp. 10975–76.

116 "I would have other questions now that I wouldn't have had then" (Hearing transcript, vol. 47, pp. 10209–10).

117 Exhibit 1, s. 3.5. The Kilborn review of ventilation consisted of five brief paragraphs. I refer again, for comparison purposes, to the Jim Walter Resources, Inc. Ventilation System and Methane and Dust Control Plan, discussed in Chapter 7, Ventilation. It consists of some 75 pages of detailed descriptions, diagrams, and charts. This, in my view, is a ventilation plan.

118 The discussion in Chapter 7, Ventilation, reflects McPherson's views.

119 Hearing transcript, vol. 3, p. 556.

On 13 September 1988, an Order in Council authorized "the Minister of Mines and Energy to issue a Special Mining Lease for coal to Westray Coal Inc."[120] On 3 October 1988, Lease of Minerals No. 88-1 was issued to Westray.[121] By issuing a lease, the Department of Mines and Energy effectively approved the Kilborn layout.[122]

The issuance of the mining lease based on the Kilborn layout must be viewed in the entire context of the Westray project. Even if one were to accept, which Golbey clearly did not, that the Kilborn layout met the minimum legislative requirements, was it appropriate for the department to accept that standard of regulatory review? It was within the legislative authority of the department to require further documentation from Westray before issuing a mining lease. The department did not have to issue a lease based on the minimum requirements. The legislation was unequivocal: before an application for a mining lease was accepted, an applicant was obliged to submit particular plans and reports, as well as "any other engineering plans as the Minister determines."[123] Given that the Westray operation *appeared* to be stretching the limits of technology, the department was in a position to request a final mine layout prior to issuing a lease.[124] In fact, the director of mining engineering had some responsibility to do so:

> The major challenge to the Director of Mining Engineering is to ensure that the *policies and operating practices of the department* and of the mining companies operating in the province are *continually maintained at a high level and improved to keep pace with the ever changing technology of the industry and social expectations which are continually becoming more stringent.*[125]

Finding

The Department of Natural Resources issued a mining lease without satisfying the overriding provisions of section 90(1) of the *Mineral Resources Act* – namely, that "the project will result in efficient and safe mining." The department was wrong to do so.

Phelan testified that, at the time, he had been quite satisfied that the review of the application was adequate.[126] It does not appear that any thought was given to whether additional safeguards and more rigorous regulatory review was required in the case of Westray. The department's failure to do so proved to be ill-advised.

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120 Exhibit 35e.0003.

121 Exhibit 35e.0004–09.

122 Exhibit 1, figure 3.3.

123 *Mineral Resources Act* (1989), s. 83(1)(h).

124 See the discussion in the section that follows on the federal government review.

125 Position description, Director, Mining Engineering, p. 3. Emphasis added.

126 Hearing transcript, vol. 51, p. 11143.

Finding

The review of the Westray application by the Department of Natural Resources was inadequate. The director of mining engineering infringed his own responsibilities by not maintaining the department's operating practices at a high level to keep pace with changing technology. Westray was a so-called high-tech mining operation, using mining techniques and equipment new to the Nova Scotia regulators. Before approving the Westray application, the department should have familiarized itself with this new technology in order to judge its suitability in the context of the Foord seam. The department's approach was not acceptable, and the expressed view that the application met the basic requirements of the legislation cannot rationalize that approach.

Federal Government Review

In the fall of 1988, Curragh Resources sought the financial support of the federal government for the Westray project. As a result, Industry Canada requested that the Canada Centre for Mineral and Energy Technology (CANMET) review the documents submitted by Westray. Simply put, CANMET's mandate was to determine whether the Westray proposal was feasible.[127] The review was conducted by Bruce Stewart, the manager of mining research at the time. Dr Thomas Brown, the director of research of CANMET's Coal Research Laboratories, testified that Stewart's major concern as a mining engineer was the lack of detail in the documents submitted by Westray.[128] After a brief technical review of the Westray proposal, CANMET's forecast was far from promising:

> Technically, the proposal has no major failings. A more [in]depth geological mining, processing and economic evaluation of the type conducted by commercial lending institutions would be needed to accurately assess what on the surface is a project with some expectation of financial success in spite of numerous technical uncertainties.[129]

Brown concluded that, although the components of the Westray mining proposal were quite typical, the proposal in its entirety was not, because the factors combined to create a complex mining environment. He thought that the situation "was stretching the limits of technology, rather than being at the leading edge."[130] Brown's evidence clearly suggested that any experienced mining engineer or regulator should have come to the same conclusion:

> Q. . . . that was your view . . . based on the information provided to you, I take it? We will go in a minute to the report and the views expressed there. Do you believe that is a view that anybody with reasonable, practical experience in mining, a mining engineer with some

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127 Dr Thomas Brown (Hearing transcript, vol. 52, pp. 11264–65).

128 Hearing transcript, vol. 52, p. 11285.

129 Exhibit 137.07.45.

130 Hearing transcript, vol. 52, pp. 11268–70.

reasonable, practical experience, would be able to come to relatively easily, having looked at all of these components?

A. I think any mining engineer who had a good breadth of experience would have come to a similar kind of conclusion.

Q. [I]s that a view that you would have expected anybody charged with the responsibility of regulating that mine, a regulator should also have been able to form?

A. Yes, I think that – I think that given the same condition of breadth of experience, they would come to a similar kind of conclusion.[131]

It was Brown's considered opinion that, when a project stretches the limits of established technology, additional safeguards may be needed:

A. If, indeed, one then saw from that kind of analysis that you were moving towards something that was either stretching well established technologies to the limits of experience around the mining world, then there might be need for a more extravagant involvement in the management of safety in the mine, for the inspection of it, for all of the mining operations.

It's a kind of problem which I think a new technology experiences, whether it's in mining or in process engineering. You're moving into a territory that you do not have the background of experience to back you up and an additional safeguard might be needed. I should comment, these are personal views. These are – this is the way it appears to me as an individual, not in any way reflecting any other – any other involvement.

Q. No, I appreciate that. But what you say has a ring of common sense to it, but if I'm understanding you correctly, I guess . . . you're saying that everybody has to be cranked up those notches. And if we were to look at one part of it, and let's take, for example, the regulatory aspect, that we have to have a regulatory regime which can be cranked up those extra levels when they are faced with that kind of a scenario?

A. Yes, I think that's – that summarizes a view.[132]

CANMET employees continued to view the Westray project as far from trouble free. Almost a year later, on 25 August 1989, Brown wrote a memorandum to M.D. Everell, assistant deputy minister of the mineral and energy technology sector (of Energy, Mines and Resources Canada), commenting on an article in the Halifax *Chronicle-Herald* entitled "Caution Urged in Working Coal Mine." Brown testified that the article referred to the complicated geological structure of the Pictou coalfield and the possibility of spontaneous combustion due to the release of large volumes of gas.[133] Brown wrote in part:

> 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 curve/teething period should be expected.[134]

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131 Hearing transcript, vol. 52, pp. 11270–71.

132 Hearing transcript, vol. 52, pp. 11320–21.

133 Hearing transcript, vol. 52, pp. 11289–90.

134 Exhibit 137.07.01.

In reaching this conclusion, Brown relied on discussions with George Haslett, the group leader of the Cape Breton Coal Research Laboratory. In a follow-up memorandum to Brown dated 31 August 1989, Haslett commented on safety aspects of the Westray proposal. He cautioned as follows:

> The attached mine plan as outlined does not define coal thickness. . . .The plan as presented is redolent of the worst features of the operation of Smoky River Coal Company formerly McIntyre Mines Coal Division.
>
> . . .
>
> Without the following plans and drawings being made available [Haslett's list is detailed and substantial] . . . the task of assessing the safety and health of the operations is obscured.[135]

Following the explosion of the Westray mine, Haslett wrote to the Association of Professional Engineers of Nova Scotia (APENS), advising the association of his involvement in the Westray project. Haslett was explicit in stating that the "submission by Curragh Resources included only a single plan for the mine on a scale that . . . was possibly 1:5000." He went on to state: "A plan of this size did not reveal to me any basis on which to judge the applicant's knowledge of the hazards of underground coal mining."[136] He had recommended to Brown that further detailed plans and drawings with accompanying text were required and that, until they were provided, consent should not be given to the operation. Haslett noted that "with the application of technology appropriate to the conditions encountered in the Westray mine the mine was technically feasible."[137] He then concluded: "However, with the present world supply position for coal and the supplementary financial investment necessary to maintain the appropriate technology, the financial analysis of the planned project would reveal unsatisfactory levels of return on investment."

CANMET was sceptical about the Westray proposal: more detailed engineering and planning was required before Westray got the go-ahead. Ironically, the Department of Natural Resources expressed a similar view; it too felt that further planning was required before Westray could begin development. Instead of adopting the approach advocated by Brown and accepting that monitoring a project like Westray required additional safeguards, the department decided that the feasibility study submitted by Westray was sufficient to meet the requirements for a lease pursuant to the legislation. In the eyes of the department, its responsibility had been discharged. The department's responsibility to ensure that its own practices and those of the mining operators were "continually maintained at a high level and improved to keep pace with the ever changing technology of the industry" apparently fell by the wayside.

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135 Exhibit 137.07.04–05.

136 Exhibit 137.07.34.

137 Exhibit 137.07.35 Brown testified that the federal government likely lent its support to the project on this basis. He was referring specifically to Stewart's report, in which Stewart said: "Technically, the proposal has no major failings" (Hearing transcript, vol. 52, p. 11335).

Development and Operation of the Westray Mine

Mine Plan Changes

Westray's mine plan saw numerous changes over the course of its short life. A few of these changes were approved by the Department of Natural Resources (see map 10, Approved Mine Layouts, in Reference). Other changes, including the development of the Southwest 2 section, were initiated by the company without the department's approval. In testifying before the Inquiry, employees of the department maintained that they were not aware of unapproved changes to the Westray mine plan. They further maintained that there was no reason why they should have been aware of such unapproved workings. It is clear that Westray was repeatedly in violation of the *Mineral Resources Act.* It is just as clear that the Department of Natural Resources knew or ought to have known that this was the case.

Tunnel Realignment 1

In January 1989, Westray submitted the revised Kilborn layout to the Department of Natural Resources. The revision altered the alignment of the two main access tunnels. There is conflicting evidence about how the department first learned of the realignment. According to Phelan, the new Kilborn plan first alerted the department that Westray was not driving its main entries in accordance with the approved plan.[138] Campbell also thought that the change to the alignment had been noted in the Kilborn revision; he did not recall any discussion in the department of the change being revealed during a site visit.[139] Gillis testified that while on site, he noted that Westray was not following the approved plan. He learned from Arden Thompson that the company had altered the direction of the tunnels in order to decrease the angle of the slope. In speaking with Phelan later that day, Gillis discovered that Phelan had not previously been aware of the change.[140] Thompson's recollection was that Phelan himself had come on site and noted the realignment. Thompson recalled that Phelan was "perturbed . . . that we had a different alignment and that he wasn't aware of it."[141] According to Phelan, the fact that the company failed to point out the change to the Department of Natural Resources was the most significant issue.[142]

At that point, Phelan wrote to the company to inform it that any changes to the mine plan had to be approved by the department. In a letter to Gerald Phillips dated 26 January 1989, Phelan stated, "Any alterations or additions to the mine shall not be started until they have been approved by the Minister under Section 84 of the Act."[143]

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138 Hearing transcript, vol. 51, p. 11148.

139 Hearing transcript, vol. 47, p. 10223.

140 Hearing transcript, vol. 46, pp. 10125–26.

141 Hearing transcript, vol. 40, p. 8862.

142 Hearing transcript, vol. 51, p. 11148.

143 Exhibit 35a.0004.

It was Phelan's view that the revision to the Kilborn plan "probably reflects some of the [operator's] thinking . . . between the feasibility study and the detailed planning.[144] Jones believed the change to be a response to some detailed engineering work and pre-bid analysis from prospective contractors. He had not considered whether the company should have planned such an alignment at an earlier stage; he felt it was the company's responsibility to determine its own approach. If the plan used general engineering principles and an approach that would provide for a safe and efficient mine, it would meet the department's review.[145]

On 15 February 1989, Phillips wrote to Phelan requesting official approval for an alteration in the direction of the main rock tunnels.[146] Phillips explained that the alteration "[c]ould provide for access into coal at drill hole #269, if the projected fault is not present at that location." Thompson's evidence on this point is worth mentioning. He testified that there was no coal in drill hole 269: "It was very, very, very poor quality there and definitely nothing that you would mine."[147]

On 17 March 1989, Jones responded to Phillips on behalf of the department. Jones assessed the proposed realignment. It was the department's view that the new tunnel alignment would generate substantially different conditions from those anticipated in the original tunnel alignment. Jones warned the company that "[t]here may be three intersecting faults in the area of the main access tunnels. . . . The original tunnel alignment intersected these major faults at only one location. The proposed new alignment will intersect the fault at four locations." Jones was also concerned about the extent of drilling; nine holes were drilled to test the original tunnel alignment while only two, located at the extreme ends of the tunnel, had been drilled to test the proposed alignment. Jones made it clear that the issues he discussed "are considered to be a significant change to the existing plans" and that the issues "should be investigated and discussed with our Department prior to approval of the revised plan."[148] In testimony, Inquiry expert Adrian Golbey agreed with the issues that Jones had raised and that Jones had rejected the proposal until further technical detail for the realignment was made available.[149]

On 23 March 1989, AMCL's Hans Bielenstein commented on Westray's proposed new tunnel alignment.[150] Bielenstein's assessment appeared to take only one fault into consideration. It seemed that AMCL did not consider relevant, or was not alerted to, the existence of other faults. Bielenstein wrote: "The projected fault zone . . . will have to be traversed in either case. The new alignment has the advantage that the fault

144 Hearing transcript, vol. 51, p. 11148.

145 Hearing transcript, vol. 48, pp. 10546–47.

146 Exhibit 35a.0005.

147 Hearing transcript, vol. 40, p. 8865. In light of Thompson's comments, one wonders what was on Phillips's mind when he requested this change.

148 Exhibit 35a.0209–10.

149 Hearing transcript, vol. 3, pp. 563–68.

150 Letter to Gerald Phillips (Exhibit 35a.0007–08).

will be intersected at almost right angles." AMCL recommended that a drillhole be scheduled in the vicinity of the turn in the new alignment and that original geophysical data be reprocessed and reinterpreted. Bielenstein left Phillips with a few words of caution: "Gerald, remember that the geology interpretation for Placer Development was carried out under rather stringent time constraints. Now that the Pictou project is a reality, the geological data base and its re-interpretation must be high on your priority list."

Golbey suggested that there may have been new information or possibly that AMCL was providing the best information it could on the data, but that Phillips was being warned to do his homework.[151] Golbey testified that Bielenstein's comments could have constituted a warning about the background of the information, for AMCL echoed the comments made by Naylor in March 1988.

On 27 March 1989, Phillips responded to the concerns expressed by Jones in his letter of 17 March.[152] Phillips stressed that Westray and AMCL did not feel that the new alignment would intersect any more faults than the original alignment. He enclosed AMCL's 23 March review of the new alignment. Phillips went on to address Jones's concern about the extent of drilling. In his view, the drill holes from the original alignment could be transferred along strike onto the proposed new alignment – Westray felt the proposed new tunnel alignment was well defined with 13 drill holes.

Phillips then outlined the advantages of the new alignment, including the possibility of earlier access to coal with more rapid and less costly development. He concluded by stating: "Westray Coal Inc., along with its consultants AMCL and Dames and Moore do not feel the proposed new alignment will be substantially different than the structure and conditions anticipated from the original tunnel alignment." Golbey testified that, in his view, Westray in this letter did not provide the department with a satisfactory answer to the matters raised by Jones. Golbey found it "difficult to believe that AMCL in fact provided any geotechnical input."[153] With the exception of at least a couple of boreholes seen in Exhibit 68, Golbey reported that he had seen "no geological report or support or even internal notes of any re-evaluation."[154]

On 18 May 1989, Phillips sent Jones copies of a drawing signed by a professional engineer.[155] On 23 May 1989, Phelan wrote to Dr Richard Potter, the assistant deputy minister, recommending that the minister give

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151 Hearing transcript, vol. 3, pp. 571–72.

152 Exhibit 35c.0106–07.

153 Hearing transcript, vol. 4, p. 592.

154 Hearing transcript, vol. 6, p. 1178. Jones testified that AMCL had subcontracted Geo-physi-con to reinterpret the geophysics (Hearing transcript, vol. 48, p. 10551). Geo-physi-con produced a report entitled "Interpretation of Reprocessed Reflection Seismic Data, Pictou Coal Field," dated February 1990 (Exhibit 76.18.056), although it is not clear specifically if Jones was making reference to this report.

155 Exhibit 35c.0109.

formal written approval for tunnel alignment under section 84 of the *Mineral Resources Act*:

> After reviewing the Company's plans, we asked them to have their geological consultant review the alignment and to have the tunnel plans approved by a professional engineer. Westray Coal Inc. had Associated Mining Consultants Ltd. (AMCL) conduct a geotechnical evaluation of the tunnel alignment. AMCL determined that ground conditions for the new tunnel alignment will be substantially the same as for the currently approved tunnel alignment. Based on our review of the project and this additional information, we gave Gerald Phillips verbal approval to begin the construction work which is now underway. We have now received copies of the plans signed by a professional engineer.[156]

On 26 May 1989, DNR minister Jack MacIsaac advised Phillips that the tunnel realignment had been approved.[157]

Finding

Westray Coal failed to advise the Department of Natural Resources of its first tunnel realignment. When the department learned of the change and informed the company of the proper channels to be followed, the company proceeded to request departmental approval. Although the department appeared to express valid concerns about the realignment, the record indicates that the department approved the change without the company's first having addressed those concerns.

Tunnel Realignment 2 – "Turn North Sooner"

In early 1991, Westray Coal again decided that the main access tunnels were to be realigned. On 25 February, Kevin Atherton wrote to Phelan requesting approval for a further change in the tunnel alignment.[158] This time, the company intended to "turn north sooner." Atherton explained that the "revised alignment has been developed after considering the latest geological information available from drill holes 425 and 428, geologic mapping in the tunnels, and the latest geological interpretations." The department was assured that the new alignment maintained the 100 m barrier pillar to the Allan mine.

Jones testified that the "turn north sooner" change came about when the company intersected a fault that put them into the coal horizon; the department became aware of this change through conversations with company officials.[159] Jones was not concerned about the company's making a second change to its access tunnels; rather, he felt the company was "reacting to situations as they developed and I think they were reacting fairly reasonably."[160]

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156 Exhibit 35a.0011.

157 Exhibit 35a.0012.

158 Exhibit 35a.0013–14.

159 Hearing transcript, vol. 48, pp. 10553–54. The "coal horizon" refers to the strata in which the Foord seam occurs.

160 Hearing transcript, vol. 48, p. 10556.

On 7 March 1991, Phelan wrote to Atherton approving the mine plan pursuant to section 93 (2a) of the revised and newly enacted *Mineral Resources Act*.[161] Golbey testified that there was no technical report of any sort submitted in support of this application for change.[162] Despite this fact, the department's approval came promptly. The approval of the Department of Natural Resources for both the first and second realignment sent a clear message to the Westray operator: the department was not at all critical when it came to the regulation of the Westray mine. The lenient pattern set by the department at this early stage continued.

Mining Permit

In August 1991, the Department of Natural Resources issued Westray Coal a mining permit pursuant to the newly enacted *Mineral Resources Act*. The regulatory review conducted by the department was indifferent.

Westray had acquired a mining lease pursuant to the old *Mineral Resources Act*. On 6 March 1991, the new act came into force. It required an operator to acquire both a mining lease and a mining permit. Under this legislative regime, a developer could acquire a mining lease upon demonstrating to the department that there was something to be leased. It was incumbent on a developer to provide the department with detailed mine plans before obtaining a mining permit. This two-step process provided the leaseholder with the "comfort . . . and ability" to go into more detail in devising a mine plan to be submitted for a mining permit.[163]

Section 181 of the new act provided a means by which a lessee under the old legislation could bypass the permit application process:

> **Permits for existing mines**
>
> **181(1)** Subject to subsection (1) of Section 92, a mining permit shall be issued pursuant to this Act to all lessees, gypsum operators, limestone operators and operators mining abandoned minerals in respect of the *mine in production* at the coming into force of this Act. [Emphasis added.]

Section 2(ah) of the act defines "production":

> **Interpretation**
>
> **2 (ah)** "production" means the *winning, taking or carrying away for sale or exchange of a mineral*, mineral-bearing substance, gypsum, limestone, tailings or any product thereof, except for the purpose of assaying, sampling or metallurgical testing. [Emphasis added.]

The issue is whether Westray was "in production" on 6 March 1991, thus qualifying automatically for a mining permit, or whether Westray should have been required to apply to the Department of Natural Resources for a mining permit pursuant to the newly enacted *Mineral Resources Act*.

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161 Exhibit 35a.0015.

162 Hearing transcript, vol. 5, pp. 877–78.

163 Phelan (Hearing transcript, vol. 51, pp. 11135–36).

Atherton, the Westray employee responsible for tracking coal production from the mine, testified that Westray had not reached saleable coal until June 1991 at the earliest.[164] It was the view of the department that, as of 6 March 1991, Westray was well down into the coal seam. The operator had turned north into the coal seam and was producing coal that, according to Phelan, "we considered could be saleable – or would be sold eventually."[165] The department had been advised that Westray was stockpiling coal for the commissioning of its wash plant. The coal, therefore, would produce a saleable product.[166] The testimony of Jones revealed that the department's exclusive source of information was Gerald Phillips, Westray's mine manager. The Department of Natural Resources did not question or make any effort to verify Phillips's word.[167] On this basis, the department decided that the Westray project would be "grandfathered" under section 181 of the newly enacted legislation.

It was Golbey's opinion that, as of 6 March 1991, Westray Coal was not "in production"; Westray was some two to three hundred metres away from any coal that could be stockpiled.[168] He could not find any proper basis pursuant to either sections 90 or 181 of the new act for the Department of Natural Resources to have issued a mining permit to Westray Coal.[169]

On cross-examination, Golbey testified that he interpreted "production" to mean the winning of coal for sale through mining, as opposed to chance encounter while driving the mains.[170] He acknowledged that Westray had asked for the second realignment in order to get into coal earlier and that various records indicate that Westray was in fact into coal as a result of the "turn north sooner" realignment in approximately February 1991. It should be noted, however, that the department's approval for the "turn north sooner" change was not sent until 7 March.

Whether the department properly concluded that Westray was in production as of 6 March 1991 is but the first of two troublesome issues. The second, and perhaps more important, issue is the manner in which the department came to conclude that Westray was to be "grandfathered" pursuant to section 181 of the new legislation: it accepted the operator's word without any supporting documentation, verification, or even simple inquiries.

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164 Hearing transcript, vol. 35, pp. 7517–18.

165 Hearing transcript, vol. 53, p. 11532. Phelan was emphatic: "They were in production, as far as that clause [s. 181(1)] goes, by no stretch of the imagination" (pp. 11532–33).

166 Don Jones (Hearing transcript, vol. 50, p. 10959).

167 Hearing transcript, vol. 50, p. 11036. Again, this fact strongly suggests a further abdication of the department's duty to ensure that the resource was being exploited *efficiently* and *safely*.

168 Hearing transcript, vol. 5, p. 827.

169 Hearing transcript, vol. 5, p. 840. Section 90 of the act deals with application for a mining permit.

170 Hearing transcript, vol. 6, p. 1142.

More Mine Plan Changes

On 7 March 1991, the same day the department approved the second change to Westray's tunnel alignment, Phelan wrote to Phillips as follows:

> As we discussed today, the mine layout as shown on your drawing, "Mine Development Plan – Showing 1991 Production," dated December 1, 1990, which you gave us informally during our recent visit to your property, *differs substantially* from the mining layout as shown in Figure 3.3 of your report, "Technical and Cost Review of the Pictou County Coal Project, Volume 1," by Kilborn Limited, which you submitted with your Mining Lease Application.[171]

Phelan further advised that, if Westray intended to develop a new layout, the department would require new drawings and supporting documentation. This letter indicated that the Department of Natural Resources was aware that Westray was not operating in compliance with the approved mine plan.

On 5 April 1991, Phillips sent what appeared to be a response to Phelan's letter of 7 March 1991.[172] Phillips advised the department that Westray's engineering department was updating its geological interpretation of the Foord seam based on the results of recent drilling and mapping. He further reported that the reinterpretation would require a revision to the mining layout and that a new mine plan would be submitted to the department for approval as soon as it was complete. Golbey testified that he was unable to identify any such exploration, drilling, or mapping work in the records of the Inquiry.[173] Westray did not forward a revised mine plan to the department as promised. And the Department of Natural Resources, seemingly aware that Westray was not complying with approved plans, failed to follow up with the operator.

On 6 September 1991, Phillips wrote to the department, this time requesting approval under the *Mineral Resources Act* to revise the mine plan to include the Southwest block.[174] Phillips forwarded to the department a map of the proposed Southwest mining block. He explained that the revision to the plan enabled the company to monitor subsidence in this block. Although the proposed plan created only a 40 m barrier pillar to the flooded Allan workings, Phillips assured the department that the company would be taking precautions to ensure that it did not encounter high water pressures. The department failed to respond to Westray's proposed changes.

It is clear that subsidence monitoring was not the driving force behind the company's decision to alter its mining course. According to Atherton, by the time Phillips had written to the department, development had in fact commenced in the Southwest district. Atherton testified that, while testing for subsidence may have been "in the back of our minds at the time," the

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171 Exhibit 35a.0032. Emphasis added.

172 Exhibit 35a.0033.

173 Hearing transcript, vol. 4, p. 606.

174 Exhibit 76.04.

reason for entering the Southwest area was simple – Westray needed coal.[175] Thus, this request for approval to revise the plan suggests another instance of Westray management's misleading the regulators.

In testimony, Phelan and Jones commented on the department's knowledge of Westray's proposed mine change. Phelan was uncertain whether his department had been aware that the company had begun mining the Southwest district at this time.[176] In his opinion, the company had not been given approval to operate in accordance with this revised plan.[177] It was Phelan's understanding that part of the reason for going into the Southwest area had been to test for subsidence. He was aware that the company was also interested in getting into coal production sooner than planned.[178]

Jones learned in October 1991 that Westray was mining the Southwest section. He was advised on a site visit that the company was mining according to its September submission to the department. According to Jones, the company was still adhering to the Kilborn layout – the plan had just been reoriented. The department reviewed the plan, but did not see anything that required an approval or rejection. Nor did it see any problem with the company's proceeding in that manner.[179] The department's position is difficult to accept in light of the fact that the new plan encroached on the 100 m barrier pillar to the Allan mine. The manner in which the company actually mined the Southwest section did not correspond to the September plan. Jones said he had not been aware of the discrepancy.[180]

The Department of Natural Resources did not formally respond to Westray's request for approval to revise the mine plan to include the Southwest block. Despite this fact, it was Phelan's view that there had not been a relaxation of the regulatory regime.[181] The department, according to Phelan, did not have time to respond to Phillips's letter prior to receiving a letter and revised mine plan on 3 October 1991, the feather plan.[182]

Feather Plan

Almost a month after the Department of Natural Resources received the company's supposed "subsidence testing plan" (6 September 1991), the department received a proposed mine plan from Phillips. Jones assessed and summarized the changes being proposed by the company in a

175 Hearing transcript, vol. 34, p. 7377.

176 Hearing transcript, vol. 51, pp. 11166–67.

177 Hearing transcript, vol. 52, p. 11409.

178 Hearing transcript, vol. 51, p. 11161.

179 Hearing transcript, vol. 50, pp. 10887–91.

180 Hearing transcript, vol. 50, pp. 10897–98.

181 Hearing transcript, vol. 51, pp. 11173–74.

182 Hearing transcript, vol. 53, pp. 11443–44. "Feather plan" was a term devised post-explosion; it was not a term known to the department or the company prior to the Westray explosion. It is descriptive of the appearance of the mine plan. Map 11 in Reference shows a small portion of the feather plan.

memorandum to Phelan dated 20 November 1991.[183] He expressed the following concerns:

- Westray had made revisions in the main access slopes without fully realizing the implications of these realignment changes
- Westray had moved into the Southwest section in order to expedite coal production without properly considering the factors that may have been incorporated into the mine plans by AMCL; the plan was devised without any new geotechnical investigations
- Westray had revised its original plan for the east main entries from a three-entry to a two-entry system, increasing the potential for subsidence in the area of the Trans-Canada Highway
- Westray had revised the orientation of other mining sections, although the original alignment appeared to be a more logical orientation
- Westray had provided only generic plans for its depillaring operations.

In his testimony, Jones backtracked and trivialized the concerns he had expressed more than four years before. In relation to his comments about realigning the Southwest block without due consideration of the factors incorporated by AMCL, he testified that he strongly suspected that AMCL did not incorporate in its planning the high horizontal stress later identified by Golder Associates.[184] Jones testified that his memorandum had been intended merely to express the fact that Westray would have to pay attention to the planning of its depillaring operation with diligence, as would any mining company.[185] Jones had not intended to suggest that the company's planning was inadequate; rather, his concern was with the barrier pillar. He intended to send a loud signal to the company that intrusion into the barrier pillar was a fundamental issue.[186]

At the time, Phelan clearly accepted that the observations and reservations in Jones's memorandum were serious. Two days later, on 22 November 1991, Phelan wrote a letter to Phillips and a memorandum to John Mullally, the deputy minister of the department. Both the letter and the memorandum dealt with Westray's proposed "feather plan"; neither offered departmental support for the proposed mine changes. The internal memorandum to the deputy minister was unequivocal in its message:

> Before starting construction of the slopes, the Company submitted a revised plan showing a new location for the main slopes. I approved this plan but, in hindsight, realignment of the tunnels has not been in the best interest of the Company. Since then, the Company have proceeded to develop the mine in a manner that differs from the approved plan. *Westray are clearly in violation of the Mineral Resources Act which could lead to the forfeiture of their Mining Permit.* We believe Westray are making important decisions

183 Exhibit 35a.0036.

184 Hearing transcript, vol. 50, p. 10798.

185 Hearing transcript, vol. 50, p. 10869.

186 Hearing transcript, vol. 48, p. 10567.

> regarding the mine plan without sufficient input from professional mining engineers who have sufficient experience in this type of operation.[187]

Phelan's letter to Westray was weak and mild in comparison:

> We note that the mine plan has not been approved by a person licensed to practise professional engineering in the Province of Nova Scotia . . . and is therefore not acceptable.
>
> . . .
>
> When you resubmit the plan, please include a report that notes the major changes from the previously approved plan and which provides information to support or justify the revised plan.
>
> . . .
>
> In the absence of information explaining the changes you are proposing, it is difficult to provide *specific comments in this letter but our concerns relate to the safety of mine workers, the affects [sic] of subsidence and the efficient operation of the mine.*[188]

In his testimony, Phelan attempted to diminish the significance of his statements of earlier years, when he had been director of mining engineering. Phelan testified that he was concerned that the company had strayed from the approved mine plan and that the new plan showed Westray operating inside the 100 m barrier pillar. In retrospect, though, he was uncertain whether Westray was "clearly in violation of the *Mineral Resources Act*. . . . I wasn't so sure that I could win a case on that if it ever got to be a serious discussion with the company and they ever challenged me on that." For this reason, he softened his letter to Phillips.[189] When Inquiry counsel pointed out that both the memorandum and the letter were written on the same day, Phelan then said he did not agree that the letter to Phillips had been a soft document. Rather, Phelan saw no significant change between the wording of the memorandum to Mullally and the letter to Phillips.[190] According to his testimony, he was certain Phillips had understood through their discussions that, if "he continued down this road . . . he would be in violation [of the act]."[191] Mullally himself agreed that the letter to Phillips took a much softer tone than the memorandum sent to him.[192]

The testimony of Mullally, the deputy minister at the time, was unimpressive and not insightful. Mullally recalled that, in the fall of 1991, senior staff had brought to his attention a difficulty with the mine plan change.[193] He testified that he had not fully appreciated the seriousness of the situation at the time.[194] Mullally did not recall whether he had

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187 Exhibit 35a.0039. Emphasis added.

188 Exhibit 35a.0040. Emphasis added.

189 Hearing transcript, vol. 51, pp. 11176–77.

190 Hearing transcript, vol. 53, pp. 11628–29.

191 Hearing transcript, vol. 51, p. 11180.

192 Hearing transcript, vol. 54, pp. 11708–09.

193 Hearing transcript, vol. 54, p. 11672.

194 Hearing transcript, vol. 54, p. 11700.

discussed the 22 November memorandum with Phelan;[195] whether this memorandum had been discussed with the minister; or whether, prior to a discussion with counsel shortly before his testimony, he had been familiar with either section 93 or section 94 of the *Mineral Resources Act.* Mullally testified that he had not been aware in 1991 that Westray was out of compliance with section 93. He did not recall whether he was aware in 1991 that the minister of the department had a statutory obligation to act on a recommendation for review of a mining permit pursuant to section 94 of the act. Mullally did not agree that a deputy minister would be expected to be familiar with all the legislation relating to the mandate of his department, or those portions that impacted on the minister's actions.[196] Mullally believed that a deputy minister should have some knowledge depending on the circumstances, but that he relied on staff and solicitors to bring such information to his attention. Mullally did agree that it was reasonable to expect that the deputy minister would seek advice from staff on the details of pertinent legislation upon receipt of such a memorandum. He further agreed that it was reasonable to expect that the memorandum would have generated discussion between himself and Phelan.[197]

Mullally recalled discussing the changes to the mine plan with his staff from time to time. Although he did not recall the specifics of these discussions, his impression was that Westray was sometimes difficult to deal with and slow or hesitant to respond to the department's requests.[198] In fact, in a pre-hearing interview with Inquiry counsel John Merrick, Mullally stated that "generally after some discussions, negotiations, maybe a bit of arm-twisting, they complied."[199] In testimony, he noted that the use of the word "negotiation" or "arm twisting" was too "descriptive." Mullally felt that, in the case of a professional difference of opinion with respect to mine plans, it was reasonable to work things out with the operator. There might be times, however, when the regulator had to use its powers to enforce compliance rather than negotiate or persuade.[200]

Mullally's evidence and action starkly contrast with the approach of John Laffin, the former deputy minister of the department. Laffin testified that, if he had received the memorandum of 22 November 1991, he would have said: "You just stop the operation until we find out where we are."[201]

The evidence of Don Jones on this point is difficult to accept. Jones did not consider the company's failure to advise the department of changes or to address the concerns expressed in his memorandum a sufficient basis

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195 Hearing transcript, vol. 54, p. 11688.

196 Hearing transcript, vol. 54, pp. 11695–704. Again, this is in stark contrast with the perception of the duties of a deputy minister as held by Harry Rogers, deputy minister of Industry Canada.

197 Hearing transcript, vol. 54, pp. 11704–07.

198 Hearing transcript, vol. 54, pp. 11679–81.

199 Inquiry interview (12 March 1996).

200 Hearing transcript, vol. 54, pp. 11684–86.

201 Hearing transcript, vol. 70, p. 15499.

on which to terminate Westray's mining permit.[202] Jones did not agree with Phelan's view that Westray had been making decisions without sufficient input from professionals. He did not agree that it was in violation of the act. In his view, the company had begun to bring in a tremendous amount of skill from consultants.[203] Nancy Ripley-Hood's recollection of the event stands in glaring contrast to Jones's testimony. Ripley-Hood's impression was that Jones was "100 percent prepared to shut them [the company] down" if it did not provide plans that gained the approval of the department. She further stated that, at that point, Jones was aware that the company was not mining in accordance with the approved mine plan.[204] Jones did not recall the discussion with Ripley-Hood and did not believe he was of that view in December 1991.[205]

On 2 December 1991, Ripley-Hood wrote to Mullally and advised him that Phelan's letter to Phillips of 22 November 1991 had been forwarded to Westray's banker, the Bank of Nova Scotia, via the bank's solicitors.[206] This letter notified the bank that the company was in default and that its mining lease was in jeopardy.

Brian West, a representative of the Bank of Nova Scotia, testified before the Inquiry. His evidence revealed that the bank would have reacted much differently to the level of concern expressed in Phelan's memorandum to Mullally had it received a copy of the memorandum rather than Phelan's letter to Phillips. West testified that he would have been compelled to bring such a memorandum to senior bank executives.[207] The copy of Phelan's letter to Phillips did motivate the bank to increase contact and take a better look at the Westray situation. At a meeting in early January 1992 with the Department of Natural Resources, West sought assurance from Phelan and Jones that the mine plan had indeed been approved and that Westray was not continuing along a path that would jeopardize its lease. Phelan and Jones assured West that the plan was approved and reiterated that they wanted to improve communication lines with the company. In retrospect, West said he would have to conclude that the relationship between Phillips and the department was "not as healthy as it ought to be."[208]

Alan Craven, vice-president and general manager of AMCL, the Bank of Nova Scotia's engineering consultant, received the letter sent to the bank. Craven had no recollection of whether the Department of Natural Resources said it was going to take any action to ensure that Westray was mining in accordance with approved mine plans in the future. In light of the problems at Westray, he would have expected some action to be taken. Craven met with staff of the Department of Natural Resources in February

202 Hearing transcript, vol. 50, p. 10799.

203 Hearing transcript, vol. 48, pp. 10469–71.

204 Exhibit 138.129–31.

205 Hearing transcript, vol. 50, pp. 10874–75.

206 Exhibit 35c.0110–11.

207 Hearing transcript, vol. 49, p. 10726.

208 Hearing transcript, vol. 49, pp. 10737–42.

1992. The department did not disclose any knowledge of Westray's deviating from the approved plan. Craven was unaware of the company's non-compliance.[209]

RECOMMENDATION

51 The province should act to ensure that deputy ministers' positions are adequately described in detailed job descriptions. Such job descriptions should include but not be limited to the following requirements:

(a) Upon appointment, the deputy shall forthwith familiarize himself or herself with all the operations of the department set out in a current organizational chart.

(b) The deputy shall have a working knowledge of all the legislation and regulations the department is administering.

(c) Where there is more than one department with responsibilities for common projects or interests, the deputy shall ensure that proper procedures are instituted and maintained to provide adequate liaison with the other department or departments with the result that no gaps exist in the administration of the legislation.

Wongawilli and Short-Range Plans

On 17 December 1991, Phillips wrote to Phelan with a new mine development plan, the "Wongawilli" plan.[210] Although the new mine plan did not identify how the company would enter the Southwest section, the department accepted that the proposed plan was essentially the same as the room-and-pillar mining method shown in the Kilborn report.[211] Two days later, the department received a short-range plan (Alternative 2) for the Southwest section.[212] Prior to the department's receiving the short-range layout on 19 December 1991, Westray president Marvin Pelley made a 10- to 15-minute oral presentation to Jones on the proposed mining method. Pelley explained to Jones precisely how the revised plan conformed to the original Kilborn layout.[213] The company created a transparency of the pillar design found in the blueprint of the Kilborn study and superimposed it over the company's proposed short-range plan. When the pillars were split, those remaining were said to be the same width as those found in the Wongawilli plan.[214] Jones testified that he may have used some overlays subsequently to confirm that the proposed layouts reflected the original Kilborn plan, but that any concerns or

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209 Hearing transcript, vol. 49, p. 10667.

210 Exhibit 35a.0040. Like the feather plan, the Wongawilli plan is a term adopted post-explosion. The Wongawilli plan is named after a specific coal-mining system developed in Australia.

211 Phelan testified that Jones had explained the Westray plan to him. He believed it was "again, essentially, the room-and-pillar method as shown in the Kilborn reports on which we base the mining permit" (Hearing transcript, vol. 51, pp. 11208–09).

212 Exhibit 76.05. This plan is reproduced as map 12 in Reference.

213 Hearing transcript, vol. 50, pp. 10812–13.

214 Hearing transcript, vol. 50, pp. 10834–35.

outstanding issues he may have had were addressed by this brief oral presentation.[215]

The Department of Natural Resources did not conduct any real review of the Southwest plan. The plan was not reviewed to determine whether it was a safe and efficient layout for coal extraction. According to the company and the department, the layout was identical to the Kilborn layout.[216] On 20 December 1991, Phelan wrote to Phillips and approved both the revised mine development plan and the short-range plan for the Southwest block.[217] Jones himself agreed that the total communication over the submission and approval of this plan consisted of a relatively brief meeting, an oral explanation, a copy of the plan with no textual material, and the subsequent receipt of a copy of the plan signed by Phillips and Atherton.[218] Atherton had not felt any discomfort in putting his engineering stamp on the proposed layout, as he had considered and relied upon other professional expertise in doing so.[219] In his testimony, Atherton agreed that the changes to the main entries going up to the North block were required solely because of the earlier alterations; nothing about the geological data, faults, or ground conditions justified the changes.[220]

It is difficult to understand why top officials in the department shifted their positions in such a way, given that neither of the plans resubmitted by the company was supported by any documentation. The approved Mine Development Plan was put to Laffin during his testimony before this Commission. His reaction was quite telling:

> Q. . . . My question to you is whether or not you would have been satisfied with this type of a mining plan and would this type of a mining plan, at this stage, have been satisfactory to you?
> A. Well, is this . . . just a change or, you know, is this the proposed plan? There must have been a detailed – a more – you know, *this is a sketch.*
> Q. That's what was sent.
> A. Yeah.[221]

Inquiry ground control expert Dr Miklos Salamon commented on the adequacy of the short-range mine plan submitted to and subsequently approved by the Department of Natural Resources in December 1991:

> Q. Merely the submission of that plan then wouldn't give you an opportunity to evaluate what they were really intending to do and whether what they were intending to do would be safe or efficient.

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215 Hearing transcript, vol. 50, pp. 10813–15.

216 Phelan (Hearing transcript, vol. 51, p. 11172).

217 Exhibit 35a.0046.

218 Hearing transcript, vol. 51, p. 10817.

219 Hearing transcript, vol. 34, pp. 7390–91. Atherton's conduct in this instance clearly conflicted with his duties as a professional engineer. The Canons of Ethics for Engineers specifies: "A Professional Engineer: . . . shall sign and seal only such plans, documents or work as he himself has prepared or carried out or as have been prepared or carried out under his direct professional supervision" (Appendix to the By-laws of the Association of Professional Engineers of Nova Scotia, s. 5).

220 Hearing transcript, vol. 34, pp. 7403–04.

221 Hearing transcript, vol. 70, p. 15483.

A. Well, I must say, if one of my students would submit this, I would send it back.

. . .

A. And say "*Come back when you've got a plan.*"[222]

About the oral presentation made by the company in the presence of Jones, Salamon stated that it is unsatisfactory practice to give approvals for mine changes on the basis of verbal presentations when there is no adequate supporting documentation.[223] He went on to say that he was not convinced by the company's argument. There were fundamental differences between the Kilborn layout and the plan presented to the department; the plan was simply unacceptable. In Salamon's opinion, anyone competent in pillar mining would have deduced that, no matter how you turn the transparency, the Kilborn room-and-pillar method was not the same as the short-range plan for the Southwest section submitted by the company.[224] Salamon definitely would have expected a follow-up on the part of the Department of Natural Resources in circumstances where this kind of mine plan was approved.[225] There is no record of any such follow-up by the department.

The Department of Natural Resources, even with the benefit of hindsight, felt its actions were justified. Although Phelan would have preferred to see the company follow the original plan, he testified that each of the changes presented to the department had been justifiable and that there was no reason to have denied the company approval.[226] Jones similarly testified that Westray's original mine plan was a good plan. In his opinion, each of the changes presented to the department had been reasonable and appeared to be supported.[227]

Adrian Golbey expressed a different view. He made reference to section 63(1)(b)(v) of the Mineral Resources Regulations, which requires that an application for a mining permit include a mining plan containing engineering drawings and a description of ventilation for each phase of development.[228] Golbey did not find any mine plan filed with the department that contained engineering drawings and descriptions for ventilation during each phase of the mine.[229] He agreed that it would be prudent for a regulator to require this information in advance of issuing a mining permit, since it is needed to determine the efficiency and safety of

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222 Hearing transcript, vol. 7, pp. 1323–24. Emphasis added.

223 Hearing transcript, vol. 14, pp. 2481–82.

224 Hearing transcript, vol. 15, pp. 2766–69.

225 Hearing transcript, vol. 15, pp. 2773–74.

226 Hearing transcript, vol. 51, p. 11151. It is significant to note that Phelan, in his 22 November 1991 memorandum to Mullally, stated that "in hindsight, realignment of the tunnels has not been in the best interest of the Company."

227 Hearing transcript, vol. 48, p. 10522.

228 Mineral Resources Regulations made under the *Mineral Resources Act* (1989).

229 Hearing transcript, vol. 5, p. 833. Nor did he find engineering drawings and description for roof support, dewatering, distribution of services, or proposed methods, schedules, and procedures for development work – all of which is required under section 63.

a mining operation.[230] Golbey agreed that the minister had had an insufficient basis upon which to make a determination, pursuant to section 84 of the old *Mineral Resources Act*, that an unforeseen difficulty arising during the progress of the mining operation had necessitated a change in the mine plan; no such basis was ever presented to the department.[231] Based on the mine plans submitted to the department, according to Golbey, there was no basis for the minister to determine that the project would result in efficient and safe mining, as required by section 90 of the revised *Mineral Resources Act*.[232]

Bulk Sample Permit

It was in the fall of 1991 that the Department of Natural Resources expressed its concerns about Westray's non-compliance with the approved mine plan. It was also in the fall of 1991 that the Department of Natural Resources helped Westray obtain a bulk sample permit to mine an open pit. On 19 November, Phillips made a formal application to the minister to take a 200,000 to 500,000 tonne bulk sample of coal from the open-pit reserve. Two days later, on 21 November, Ripley-Hood wrote to Phelan about Westray's application for a bulk sample permit.[233] Ripley-Hood advised that Westray would need mineral rights to the surface coal before extracting anything from the area. She further advised:

- that a special licence or lease was required
- that taking 500,000 tonnes was, by definition, mining under the *Mineral Resources Act,* and therefore a mining permit was the appropriate document
- that excavation permits could not exceed 100 tonnes
- that there was no authority for the authorization of a bulk sample in excess of 100 tonnes.

That same day, Mullally sent a confidential briefing note to the minister advising, among other things, that the amount of coal involved was far in excess of what was normally considered a bulk sample and that a surface mining operation to extract 100,000 to 200,000 tonnes would have to be registered under the *Environmental Assessment Act*.[234] On 6 December 1991, Ripley-Hood again wrote to Phelan and evaluated the possible ways in which Westray could be authorized to commence actual mining. Ripley-Hood explored the options of issuing an excavation permit, a special lease, or a mining permit to Westray. The least desirable route was to issue an excavation permit. The issuance of a mining permit was the recommended course of action. Ripley-Hood concluded that she could

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230 Hearing transcript, vol. 5, p. 834.

231 Hearing transcript, vol. 5, pp. 878–79. This refers to Phelan's letter of 7 March 1991 to Atherton approving Westray's "turn north sooner" request.

232 Hearing transcript, vol. 5, p. 836.

233 Exhibit 137.04.39.

234 Exhibit 137.11.08.

not "find any other way around . . . the Mineral Resources Act's provisions."[235]

On 18 December 1991, Phelan wrote to Mullally enclosing documents for the minister's signature, including Mining Permit No. 0034 for a 200,000 tonne bulk sample.[236] Phelan noted that the cost to reclaim the area would be in excess of $1 million. He had been advised by Curragh that it was unable to provide a reclamation bond in this amount. Phelan further noted that Curragh had not obtained permission from the Department of the Environment to carry out the activity authorized by the mining permit. On 18 December 1991, following a meeting between Westray Coal and the Department of the Environment, Jones wrote to Phelan advising that the Department of the Environment would issue a 100,000 tonne bulk sample permit provided that a number of conditions were met.[237] It was concluded from the meeting that Westray would submit a revised application for the bulk sample permit by 20 December, and that the Department of the Environment would prepare the bulk sample permit for 100,000 tonnes.

By letter dated 17 December 1991, the minister of the Department of Natural Resources wrote to Phillips enclosing a mining permit (dated 19 December 1991) to extract a bulk sample of coal in the amount of 200,000 tonnes. He indicated that, once the amount of the reclamation security had been set by the department, it was a condition of the mining permit that Curragh submit and maintain the reclamation security in an acceptable manner. The record indicates that the reclamation security had not been posted by Curragh prior to the department's issuing the mining permit. In testifying before the Inquiry, Mullally agreed that, based on the documentation, it appeared that the licence and other documents were issued without a reclamation bond from Curragh.[238] Section 97(1) of the *Mineral Resources Act* (1990) clearly states the requirement for reclamation security:

> **97(1)** The applicant for a mining permit or excavation permit *shall* post cash or a negotiable bond or other security in a form satisfactory to the Minister and in an amount determined in accordance with the regulations to provide for the reclamation of any area that may be disturbed by the activities of the permit holder or an agent or assignee of the permit holder. [Emphasis added.]

This requirement had unquestionably been brought to the attention of Phelan. In a memorandum to Phelan dated 18 December 1991, Ripley-Hood made the following unequivocal statement respecting the need for a reclamation bond: "It is my legal opinion that a *mining permit cannot be issued unless and until a reclamation bond is posted.*"[239] Once again, the

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235 Exhibit 137.11.12–13.

236 Exhibit 137.11.18–19.

237 Exhibit 137.11.14–15.

238 Hearing transcript, vol. 54, pp. 11794–95.

239 Exhibit 137.11.16. Emphasis added.

Department of Natural Resources chose to ignore provisions of its own legislation in order to assist the Westray operators. On 8 January 1992, Phillips received Permit Approval No. 91-081 from the Department of the Environment for the extraction of a 100,000 tonne bulk sample of coal.

It was the opinion of Ripley-Hood that Westray wanted to operate a small mine without having to go through all the lease requirements and that the company therefore categorized its operation as a "bulk sample" rather than as a "mine." Ripley-Hood understood that Westray needed the permit to meet its production obligation to Nova Scotia Power Corporation.[240] Mullally was also of the view that the principal reason Westray sought the permit was to meet its contractual obligations.[241] Why then did the department bend the rules and allow Westray's application to be categorized as a "bulk sample," when it was in fact properly categorized as "mining" pursuant to the *Mineral Resources Act*? It was Mullally's impression that Phelan favoured Westray's obtaining its permit for the open pit operation.[242] Mullally went so far as to agree that the department gave Westray preferential treatment:

> A. . . . I think there was a disposition to try to assist Westray with the problems they were having in supplying coal. They were behind in their schedule, with their contract with the power company.
> Q. Why was there such a predisposition to help Westray with their problems?
> A. Well, I don't know in particular why there would be any more than to help any other company, if it was reasonable, to –
> Q. Because, certainly, it seems to me in reading those two memorandums that they wanted to help Westray to a point of giving them preferential treatment?
> A. [No audible response]
> Q. That's fair?
> A. Yes, I suppose.[243]

On 12 March 1992, Phelan wrote to Phillips reiterating that the company would be considered in violation of its mining permit and subject to forfeiture if more than 100,000 tonnes of coal were extracted.[244] Westray responded on 24 March 1992 by stating that the company found it presumptuous of the department to think that Westray would not follow the stipulations of the permit.[245] In my view, this is just another example of the company's aggressive attitude towards the provincial bureaucracy. It appears that Phelan's 12 March 1992 letter to Phillips was merely a belated response to the reality that Westray management was insensitive to legislative constraints and to the officials charged with enforcing them.

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240 Exhibit 138.79–80.

241 Hearing transcript, vol. 54, p. 11753.

242 Hearing transcript, vol. 54, pp. 11781–82.

243 Hearing transcript, vol. 54, pp. 11777–78.

244 Exhibit 137.10.01.

245 Exhibit 137.10.02.

Despite Phelan's apparent attempts to ensure that the company understood its obligations pursuant to the *Mineral Resources Act*, the department's actions spoke for themselves: the provincial government was prepared to continue to pave the way for the Westray mine operator. Perhaps Westray did not feel any pressure to comply with the *Mineral Resources Act* since the very regulator expressing concerns about the company operating out of compliance was providing the company with a licence to operate yet another mine in the province.

RECOMMENDATION

52 **The Department of Natural Resources should no longer act as both promoter and regulator of the development of mineral and energy resources in the province, since this dual mandate constitutes a conflict-of-interest situation. The department should assume the role of assisting the developer to formulate a plan that ensures both the safe and the efficient exploitation of the resource. The department must, first and foremost, work to ensure compliance with the general structure of the legislation in keeping with the purposes for which such legislation was enacted.**

Operating out of Compliance with Approved Mine Plans

On 31 December 1991, following the department's approval of Westray's proposed mine plan, Phelan again wrote to Phillips: "[W]e believe that it is the operator's responsibility to plan and operate the mine so we will not refuse a request to approve a change in the mine plan unless we believe the change will cause unsafe conditions, unreasonably affect other persons or unnecessarily reduce the life of the mine."[246]

Phelan went on to set out the rules to be followed by the company:

- Westray was to submit a revised mine plan and letter of explanation whenever changes were made to any feature of the "Mine Development Plan." The department would then advise if it considered the change to be significant enough for a "revised mine plan"; if so, it would contact Westray with its approval or comments.
- Westray was to submit a detailed plan for each mining block prior to entering the block. Again, if the procedure to develop the area was altered from the original layout, the department would consider the change and decide if approval was necessary.
- Periodically, but *not less than every three months*, Westray would submit an overall mine plan and a plan for each active mining block if the room-and-pillar workings were not shown on the overall plan.

Phelan felt it was necessary to write to the company and set out the rules because Phillips had expressed the view that the department was trying to

[246] Exhibit 35a.0047. It would seem, by this statement, that Phelan is acknowledging the integral responsibility of the department respecting the safety of the mine, a responsibility that heretofore the department did not acknowledge.

run this mine.[247] Since the *Mineral Resources Act* did not define what constituted a mine plan change, Phelan wished to deal with the uncertainty. He asked for plans every three months so that the company would have changes approved without going out of compliance with the legislation.[248]

According to Phelan, both he and Jones were led to believe that "the company had, in fact intended to comply" with the procedure established by the department in the 31 December 1991 letter.[249] It is difficult to grasp how Phelan and Jones could hold such a belief, given Westray's record of non-compliance and defiance of legislated rules and regulations. The Department of Natural Resources had initiated guidelines and procedures on other occasions; the company failed to comply, and the department inevitably failed to follow through with its initiatives:

- In January 1989, when the department became aware that Westray had changed its tunnel alignment without approval, it informed Westray that all changes to the mine plan had to be approved and that revised plans and supporting documentation had to be submitted to the department. In March 1989, Jones raised valid concerns in response to the company's request for approval of the tunnel realignment. The realignment was approved in May 1989 without Jones's concerns having been addressed.
- In March 1991, the department began to doubt that Westray was operating in compliance with its mine plan and advised the company that it must work within the approved plan.
- In April 1991, Phillips advised the department that the company needed to change its mine plans yet again. The department did not hear from the company for months, nor did it follow up.
- In September 1991, the department received a request for approval of a new mine plan. The department learned that Westray had begun to develop the Southwest section in accordance with the revised, unapproved plan. The department failed to respond formally.
- In October 1991, the company submitted a new mine plan, which the department found unacceptable. In November 1991, Phelan informed the deputy minister that Westray was clearly in violation of the *Mineral Resources Act*. Westray resubmitted plans with virtually no supporting documentation. Shortly thereafter, Westray's mine plan was approved.

From the development of the access tunnels to the development of the unapproved Southwest 2 section, there were many clear indicators that the company was in violation of the act and guidelines set down by the department. Westray management was simply not to be trusted. But the Department of Natural Resources routinely deferred to the mine operator.

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247 Hearing transcript, vol. 51, p. 11224. **Comment** Phillips's attempt to put his own negative spin on efforts by the department to have Westray comply with the legislation is another example of his aggressive posturing. To the discredit of the department, it seems that this sort of posturing was effective.

248 Hearing transcript, vol. 51, p. 11227.

249 Hearing transcript, vol. 51, p. 11238.

It is difficult to understand why the department placed such trust in Westray in light of the company's apparent decision to mine according to its own rules.

Laffin commented on the trust to be placed in a mine operator:

> Q. You said, Mr Laffin, that there's a certain trust that the operator is mining in accordance with the plan?
> A. That's correct.
> Q. If there is a basis that such trust is misplaced and your Department had information, you know, more than one indication, say two or three indications that an operator was not operating in accordance with the plan or developing in accordance with the plan, would you expect that that might alert them that they have to monitor it more closely?
> A. Well, probably, but I mean if they weren't monitoring, they immediately should have been stopped and fined.
> Q. Uh-huh.
> A. I mean, that's the . . . best way to put them on hold, eh? You know, if you're really brought to court about it, you don't do it the next time, do you?
> Q. Because the evidence before this Inquiry, Mr Laffin, is that
> . . .
>
> there were at least two, I think three occasions when the Mining Engineering section, Phelan, Mr Jones, became aware that Westray was not developing in accordance with the approved mine plan. And with that knowledge, their evidence is that they took no action, subsequent to that, to ensure that Westray was mining in accordance with the plan because they relied on the operator to tell them.
>
> And I guess my question is, doesn't there come a point in time when, as a regulator, you no longer should accept the word of an operator who has let you down?
> A. *Don't accept the word – the first time it happens, that's where you stop it. You don't let him go the second time. There's no – no leniency in this.*
> Q. And when you find out for the second time, and you find out for the third time, wouldn't that up the monitoring that you were going to do of that operator?
> A. Well, you know, I can't hypothesize because I don't know. . . . if there were that many instances or what have you. I can't –
> Q. Well, there were.
> A. . . . okay, I accept what you say.[250]

Ripley-Hood was of a similar mind. In a memorandum dated 20 January 1993, she wrote to Jones concerning the requirements of the *Mineral Resources Act*. She advised the department to reiterate to the company that any change or alteration, however insignificant, had to be approved in advance of its implementation. She went on to say: "In the Curragh case I suggest this is morally and legally mandatory."[251] Ripley-Hood elaborated on this advice in an interview with Inquiry counsel. She said that she had been aware that Curragh had gone outside its mine plan on at least one other occasion and she no longer had any faith in the

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[250] Hearing transcript, vol. 70, pp. 15446–48. Emphasis added.

[251] Exhibit 137.01.01–07.

company. Ripley-Hood's approach was to make it absolutely clear to Curragh that it could not decide to change its plan to get around a glitch while underground. The change had first to be approved by the department.[252]

It appears that the only person within the department who did not trust the Westray operators before the explosion was Gillis, a geologist who was not consulted respecting mine plan changes and approval. In a memorandum to file from John Campbell dated 22 January 1993, Campbell noted that Gillis "doesn't trust Curragh and hasn't for a while now."[253] Gillis explained this comment in his testimony before the Inquiry. He had noticed in early 1989 that Westray was not developing its tunnel alignment in accordance with the approved Kilborn layout. He considered it unprofessional for the company to make changes without advising the engineering staff of the department. Gillis stated: "And it just kind of leaves you with a kind of an impression that, hey, these fellows, maybe you'd better watch them a little closer or something like that. That is basically why I didn't trust them too much."[254]

One thing is certain – Westray defied the methodology for ensuring compliance with the act as set out by the department in Phelan's 31 December 1991 letter to Phillips. In fact, Westray was in violation of the rules set down by the department before Phelan's letter was sent. Westray mined as it saw fit and did not feel it necessary to await approval. By the end of December, not only had the company commenced mining the northern portion of the Southwest section, but it was mining in a manner that did not comply with the mine plan approved on 20 December 1991. The company had developed "finger pillars"[255] in the Southwest 1 area of the mine, and would be chased out of the section by bad roof conditions just a few months later.[256]

Westray Mine Site Visits

In early 1992, mineral development agreements (MDAs) were put in place at Westray as a joint provincial-federal government initiative. The MDA

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252 Exhibit 138.127–28.

253 Exhibit 79.03.003.

254 Hearing transcript, vol. 46, pp. 10125–26. Gillis made 12 site visits between May 1989 and September 1991. In September 1991, Gillis went underground, as he was asked to lead a group of delegates to the 48th Mine Ministers' Conference. On that visit, Gillis observed the continuous miner sparking when it came near the roof of the seam. That was Gillis's last visit underground. He knew there were a lot of problems with the roof and would not have gone underground without "a real good reason" (vol. 46, pp. 10108–12).

255 The term "finger pillars" was used during the Inquiry to describe the long, narrow pillars developed in Southwest 1. The term has no other significance.

256 Robert Naylor testified, in reference to geological maps showing faulting, that the faulting in the Southwest had probably not been reflected in the anomalies observed back in 1988. The shorter and smaller faults going more westerly would not have been reflected in any of the drilling; the larger fault going almost north-south might be recognized in cores. Naylor would not have predicted that from the work he had done (Hearing transcript, vol. 46, pp. 9951–52). The accounts of the efforts to remove equipment from the Southwest 1 section as it was collapsing are further testimony to the determination of Westray management to mine coal at any cost. (See the section on Southwest 1 in Chapter 10, Ground Control, for details.)

contracts included a program to set up surface monitoring stations to establish the initial data or evaluation of the area and to monitor vertical movement (subsidence). A second program dealt with the underground monitoring of rock mechanics; this was to be carried out mainly by CANMET.[257] Don Jones was the provincial representative at meetings dealing with the MDA contracts. In January 1992, John Campbell was asked to take Jones's place as the provincial representative. That February, Campbell also began site visits to the open-pit operation.[258]

In testifying before the Inquiry, Campbell attempted to diminish his role as a mining engineer with the Department of Natural Resources and to distance himself from any part he may have played in the regulation of the Westray project. His answers were evasive. Campbell testified that his involvement began in 1988 when Westray first submitted an application for a mining lease. He had ensured that the information provided by the company with respect to the boundaries of the resource and the description of the coal reserve met the requirements of the legislation; he did not accept responsibility for actually determining what the reserves were projected to be.[259] Campbell testified that, following the issuance of the lease in 1988, he had no recollection of being involved with any mine-plan changes.[260] He had no opinion on whether the information provided by Westray to the department had been adequate and appropriate.[261] He did not believe that he had been aware of the "turn north sooner" change.[262] He had not been present when the mine plan now referred to as the feather plan had been submitted to the department.[263] He was not aware of Jones's assessment of, and concerns about, the plan.[264] He was not aware of the view within his department that Westray was in violation of the act.[265] He was not aware of Phelan's concerns that Westray was making important decisions without sufficient input from professional engineers.[266] He could not recall any feeling in the department that Westray was not going to play by the rules.[267] He did not remember being involved in the consideration of the mine plan submitted by the company in December 1991, nor was he involved or present for any oral presentations made by the company.[268] He did acknowledge that the letters and memoranda indicate that there was a growing concern within his department about the Westray project and that

257 John Campbell (Hearing transcript, vol. 47, p. 10320).

258 Hearing transcript, vol. 47, pp. 10238–39.

259 Hearing transcript, vol. 47, pp. 10182–83.

260 Hearing transcript, vol. 47, p. 10219.

261 Hearing transcript, vol. 47, pp. 10221–22.

262 Hearing transcript, vol. 47, pp. 10228–29.

263 Hearing transcript, vol. 47, p. 10231.

264 Hearing transcript, vol. 47, p. 10231.

265 Hearing transcript, vol. 47, p. 10232.

266 Hearing transcript, vol. 47, p. 10233.

267 Hearing transcript, vol. 47, pp. 10230–31.

268 Hearing transcript, vol. 47, p. 10235.

Westray had not been forthcoming with its mine plan changes.[269] Yet, according to his testimony, Campbell had no knowledge whatsoever of the Westray situation at that time. It is baffling that a mining engineer with the Department of Natural Resources could know so little.

Campbell made four underground visits to Westray in the months preceding the explosion – in late January, late February, and early April, and on 1 May 1992, just eight days before the explosion. Campbell testified quite adamantly that it was never his understanding that his superiors had sent him to Westray to monitor the company's progress. Rather, he had been asked only to do the assigned work on the MDA contracts.[270]

In response to whether it would have been reasonable for one of the regulators to attend the site to determine if the actual mining was in accordance with approved plans, given that the department was having difficulty getting Westray to comply with the act, John Mullally testified: "That sounds reasonable, whether they had to do that, I can't really say."[271] Nancy Ripley-Hood told Inquiry counsel that, from January 1992 onward, she understood the Department of Natural Resources would be watching the company. She elaborated: "Watching, it would include site visits, phone calls, letters."[272]

Campbell and Jones went underground at Westray on 23 January 1992. According to a summary of site visits made by department staff, one of the reasons for this visit was "to discuss progress underground."[273] Campbell testified, however, that he had been asked to go on the trip so that he could become familiar with the mine and the mine personnel in relation to his role with the MDA contracts.[274]

On 28 February 1992, Campbell and Naylor toured underground with Westray engineering superintendent David Waugh and mine geologist Jim Reeves. It was Naylor's final visit underground at Westray. Naylor had been interested in looking at the faults encountered underground to get some measurement of their orientation and movement.[275] Following this visit, Naylor became aware that Westray geologist Arden Thompson himself would no longer go underground because of bad roof conditions. As a result, Naylor felt his concerns were confirmed and he never again went underground at Westray.[276]

On 8 April 1992, Jones and Campbell paid their second last underground visit to Westray. During this visit, they learned that an area in the Southwest had collapsed. According to their testimony, neither Jones nor Phelan realized, until after the Westray mine exploded, that the

269 Hearing transcript, vol. 47, pp. 10234–38.

270 Hearing transcript, vol. 47, p. 10239.

271 Hearing transcript, vol. 54, p. 11731.

272 Exhibit 138.135.

273 Exhibit 79.06.001.

274 Hearing transcript, vol. 47, pp. 10250–51.

275 Hearing transcript, vol. 46, p. 10016.

276 Hearing transcript, vol. 46, p. 10027.

company had abandoned the entire Southwest 1 section in a dangerous retreat.[277]

On 1 May 1992, Campbell made his final underground visit to the Westray mine. Campbell recalled travelling the Southwest 2 section. He was unaware that he was in an unapproved section of the mine. He had not reviewed the mine plan before going underground. Campbell defended his view that, in light of the work that he had been assigned under the MDA contracts, there was no reason or requirement to look at an approved mine plan before going underground. Even with the benefit of hindsight, he maintained his position.[278] Campbell's testimony before the Inquiry was unsettling:

> Q. Did you know on May 1st, 1992, that you were in an unapproved section of mine?
> A. No, I didn't.
> Q. You had no idea that Westray was mining in an area that had not been approved by your Department?
> A. No, I didn't.
> Q. You're a mining engineer with that Department?
> A. That's right.
> Q. I would think that you would have been one of the best individuals to know that you were in an unapproved section of the Westray Mine on May 1st, 1992.
> A. I had no reason to know that.
> Q. Did you look at a mine plan before you went underground?
> A. On those trips? No, not that I remember.[279]
>
> . . .
>
> Q. You are a mining engineer and were at that time with the Department of Natural Resources?
> A. Yes.
> Q. And we now know that this company was mining in a totally unapproved area?
> A. Yes.
> Q. And we've heard evidence that this is the likely area of the source of the ignition. So I – I'm putting aside what the purpose of your visit is. You're a mining engineer. I assume you go in to a coal mine, and you went into that coal mine, with your eyes wide open –
> A. Yes.
> Q. – to observe whatever was there to be observed?
> A. With a defined purpose, I guess, in these cases, but, yes.
> Q. So are you telling me then that you went in for that defined purpose associated with the MDA contracts and you didn't turn your mind to anything else?
> A. My focus was on what we were there to look at or discuss. You would see other things, but whether you take note of them or not, I guess it would have to be depend on what else was going on at the time.
> Q. You didn't take note that they were working in an unapproved area.
> A. No, I didn't.[280]

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277 Jones (Hearing transcript, vol. 50, p. 10950); Phelan (vol. 53, pp. 11456–57).

278 Hearing transcript, vol. 47, pp. 10254–56.

279 Hearing transcript, vol. 47, pp. 10255–56.

280 Hearing transcript, vol. 47, pp. 10259–60.

It was the testimony of Laffin, ex-deputy minister and a seasoned mining engineer, that no one should go into a coal mine without some familiarity with the mine plan. Mullally, the deputy minister responsible for the management and coordination of the activities of his department, was asked whether it was odd that Campbell did not know he was in an unapproved section of the mine: "Well, I wouldn't know – I'm not knowledgeable enough to know whether that's odd or not, to be honest. . . . I'm not sure what a mining engin – you know, whether he has to be aware of all of those things or not."[281]

While underground, Campbell did not recall "ever doing anything to address or gain any information on ventilation in the mine."[282] He did not know anything about the stoppings for the gob in the Southwest section.[283] He did not recall seeing the conveyor belt.[284] He did not recollect anything about the absence or presence of stonedust in the Southwest section.[285] Simply put, Campbell did not believe it was part of his job to take any note of these issues.[286] One conclusion can be drawn from the evidence – John Campbell's conduct was unprofessional and ill-advised. Another conclusion that could reasonably be drawn is that Campbell attempted – by being evasive and non-committal in his evidence – to distance himself from Westray and the inadequate performance of his department. In either case, his conduct was inimical to the proper discharge of his duty as a public servant.

Extent of the Department's Responsibility

At the beginning of this chapter, I outlined the statutory duties and responsibilities of the Department of Natural Resources as given in the *Mineral Resources Act*. Both the 1989 act and the 1990 revised act specify the conditions under which a leaseholder and permit holder shall conduct mining operations and what the department's responsibilities are. To repeat what I said at the outset, the provisions of the act specify that the department had a duty to ensure that the project result in "efficient and safe mining" and that Westray conduct operations in conformity with the approved mine plan. We discussed the extent of the department's responsibility vis-à-vis the Department of Labour – in particular its responsibility to monitor the Westray project to ensure that it was operating in conformity with approved mine plans.

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281 Hearing transcript, vol. 54, p. 11733.

282 Hearing transcript, vol. 47, p. 10271.

283 Hearing transcript, vol. 47, p. 10273.

284 Hearing transcript, vol. 47, p. 10270.

285 Hearing transcript, vol. 47, p. 10266.

286 Hearing transcript, vol. 47, pp. 10279–80. Campbell made note of dust material on the floor in the North mains, although he had not been sure it was coal dust at the time (p. 10264). On 6 May 1992, Campbell spoke to Albert McLean at the Westray site. He discussed his underground observations with McLean, at which time he became aware that the Department of Labour had issued an order to the company to clean up the coal dust (p. 10287).

Finding

The Department of Natural Resources had a statutory duty to ensure that the mine plans provided for safe and efficient mining. In light of the inadequacy of the mine plans submitted by Westray and the ineffectual reviews of these plans by the department, it was in breach of this "safety" responsibility.

Monitoring for Compliance with Approved Plans

The mining engineering section was of the view that its responsibility for monitoring was limited to an annual review of an as-built mine plan submitted by the company. Any further monitoring was to be conducted by the inspectorate in the Department of Labour.

The record indicates that *any* monitoring the Department of Natural Resources conducted or attempted to conduct failed. By early 1992, the operator was well into its "finger pillar" development in the Southwest 1 section. And by April 1992, the company began to develop the Southwest 2 section. Both sections were unapproved. The Department of Natural Resources *claimed* that it was not aware of either development until after the Westray mine exploded. According to a 9 April briefing note from Jones to the minister, the company had promised the department a further mine plan at the end of April 1992:

> Our main concern is that the Company has not yet defined reliable design criteria for room spans or pillar widths that are suitable for the mining system they have in place. Even though the mine is at an early stage of operations, the Company should be achieving improved stability of their mine openings. *Westray officials have advised that they are undertaking re-evaluation of their mine plans and they will be submitting a request to change their existing layout by the end of April.*[287]

It is clear that Westray was already into the Southwest 2 section by the time Jones wrote this briefing note.

On 6 May 1992, Jones went to the mine site and asked the company for a new mine plan. He was informed that the task force had scheduled its final meeting immediately following a pending visit to an operation in the United States.[288] At this point, the company was clearly in violation of the methodology set out by Phelan in his letter of 31 December 1991. The department accepted Westray's excuse. It was this plan that the department was awaiting when the Westray mine exploded.

At the public hearings of this Inquiry, the department pleaded ignorance. Campbell was in the unapproved Southwest 2 section just days before the mine exploded, yet claimed he did not know that the section was unapproved. Jones testified that he did not learn about the southwest

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287 Exhibit 64.03.0018. We know that Jones wrote this note because he referred to it in testimony (Hearing transcript, vol. 50, pp. 10924, 10954), but he was not examined on its contents. Emphasis added.

288 Hearing transcript, vol. 50, p. 10927. The task force referred to comprised company personnel and various consultants (including AMCL, Dames & Moore, Golder Associates, and others).

"finger pillars" or the Southwest 2 section until 9 May 1992.[289] Phelan testified that he did not become aware of the operator's actions until 11 May 1992 – two days after the Westray disaster.[290] Phelan agreed that it was quite possible that the Department of Natural Resources – the department responsible for the regulation and approval of mine plans – did not know what the company was doing from September 1991 to May 1992.[291]

The department officials testified that, had they known, the situation would have been different.[292] Phelan agreed that, had he discovered the unapproved development on 8 May 1992, he would have taken action.[293] Jones testified that, had such a plan for the Southwest section been submitted to the department, he would not have approved such long thin pillars without the technical backup to support the plan.[294]

The Department of Natural Resources' response at the Inquiry was inadequate and disappointing. It must have been disillusioning to the people of Nova Scotia, who expected and deserved a candid reappraisal of the events leading up to the explosion. According to the department, it was not responsible for monitoring the Westray mine; it was not aware that the company was operating out of compliance with approved mine plans, but it certainly would have taken action had it known this to be the case. I find it difficult to accept the evidence of the department officials. There is evidence that the department should have been monitoring the Westray operation. And there is cogent evidence that the Department of Natural Resources knew, or ought to have known, that Westray was in violation of the *Mineral Resources Act.*

By the time the Department of Natural Resources wrote to Westray on 31 December 1991, it was obvious that the company had failed repeatedly to operate in compliance with the approved mine plan. In light of this, the department should have played a more appropriate role – a more interventionist and rigorous role – in monitoring the Westray project. As mentioned earlier, Jones testified that an annual check was sufficient *provided the company was conforming to the plans as approved.* Campbell testified that an annual check was sufficient, *but that the department had a further obligation to address any deviation from the plan that came to its attention.* How then can the Department of Natural Resources contend that its responsibility was limited to an annual review in light of the company's actions? Even if one accepted that it was usual practice for the department to monitor solely on an annual basis, the Westray situation clearly required more than the department's usual practice. If one accepts

289 Hearing transcript, vol. 50, p. 10899.

290 Hearing transcript, vol. 51, p. 11232.

291 Hearing transcript, vol. 52, pp. 11414–15.

292 Judging from the established track record of the department in its dealings with Westray management, I assume that "different" in this context would not necessarily mean "better."

293 Hearing transcript, vol. 51, p. 11233.

294 Hearing transcript, vol. 50, pp. 10902–03.

that the company was "clearly in violation of the *Mineral Resources Act*" – to echo the words of Pat Phelan in his 22 November 1991 memo to the deputy minister – one must also accept that the Department of Natural Resources' actions with regards to monitoring Westray were inadequate.

Jones was of the view that, for his department to have caught the development of the Southwest 2 section, it would have been necessary to visit the mine every six weeks, and it was not the department's role to police or inspect the mine.[295] Campbell *had* been in the mine at least that often. It should have been simple for the Department of Natural Resources to catch the Southwest 2 development prior to the explosion.[296] Notwithstanding Jones's testimony about the role of his department, there is evidence that Jones felt it was necessary to watch over Westray. In a statement to the RCMP dated 18 August 1992, Jones said:

> In the delivery of our resources management, I found it fairly difficult to get Gerald Phillips to initiate advising us or keeping us up to date. However, he did welcome us on site to talk to himself or staff. He didn't volunteer any information to us so *we felt we had to increase our visits to keep up to date on the development.*[297]

This statement is supported by comments made by Ripley-Hood. In response to whether Jones was going to monitor the Westray project to ensure that the company followed the plan in the future, Ripley-Hood said: "It wasn't a matter of he intended, he actually did."[298] She further commented that either Jones or Phelan was going to contact the company and advise that it would have to get a professional engineer. This was not just a matter of getting someone to draw up a plan and advise the department how they were going to realign a tunnel. According to Ripley-Hood, the department "wanted to know a P.Eng. had signed off . . . from an engineering standpoint, which implies safety. All engineering implies safety."[299]

There is also convincing evidence that Jones learned of the development of the Southwest 2 section approximately one month prior to the Westray disaster. Trevor Eagles's evidence was that, on 10 April 1992, Jones requested and received the company's mine plans while at the mine site. Eagles testified that it was more than likely that he had given Jones a plan of the development of the Southwest 2 section.[300] Eagles's evidence is supported by a memorandum he sent to Waugh on 10 April 1992, noting that Eagles had given Jones a map of the Southwest block dated 9 April 1992.[301]

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295 Hearing transcript, vol. 50, p. 10954.

296 Exhibit 79.06 is the department's own record of DNR staff visits to the Westray site. Campbell had toured the underground on 23 January, 28 February, 8 April, and 1 May 1992.

297 Exhibit 89.3.2. Emphasis added.

298 Exhibit 138.131.

299 Exhibit 138.132.

300 Hearing transcript, vol. 76, pp. 16584–86.

301 Exhibit 143.01.144.

Two days before, on 8 April 1992, Jones and Campbell had been briefed by Dave Waugh about the ground problems in the Southwest.[302] That led to Jones's briefing note to the minister on the following day, 9 April, in which he reported "significant . . . roof and pillar failures in the mine production areas" and the consequent drop in production.[303] It is improbable that Jones did not have a clear picture of what was going on in that mine, despite his testimony to the contrary.

The evidence supports a conclusion that the Department of Natural Resources knew or, at the very least, ought to have known that Westray was not operating in accordance with the approved plan. It ought to have known in early April, and it certainly ought to have known in early May. Golbey testified that it was fair to conclude that the department did know that the company was mining in the Southwest 2 section.[304] Officials of the department testified that had the department learned of the development of the unapproved area of the mine, it would have taken action.

Finding

It is highly probable that officials of the Department of Natural Resources knew of the unapproved changes to the mining plan at Westray but declined to take any action to ensure compliance with the legislation.

Westray failed to comply with departmental rules and regulations. The Department of Natural Resources failed to react. The department should have been concerned about the company's actions and should have monitored its operation. Instead, months lapsed during which representatives of the Department of Natural Resources were underground and failed to detect that Westray was working an unapproved section of the mine. The department's explanation was that such day-to-day monitoring was the responsibility of the Department of Labour. What the Department of Natural Resources did not explain was why it failed to stop a company that was undeniably in violation of the *Mineral Resources Act* – an action that fell squarely within the department's mandate.

Finding

The Department of Natural Resources failed to monitor the Westray mine operation to ensure that the mining permit holder was conducting the mining operations at Westray "in conformity with the approved mining plan as revised from time to time."

An overview of the evidence of the professionals in the Department of Natural Resources leads to the conclusion that the people of Nova Scotia have not been well served. Indeed, the people deserve more and should

302 Hearing transcript, vol. 50, p. 10924.

303 Exhibit 64.03.0018.

304 Hearing transcript, vol. 5, pp. 890–91.

demand more. The disingenuous responses of Don Jones, the evasiveness of John Campbell, and the after-the-fact rationalizations of Pat Phelan support this conclusion.

The officials of the Department of Natural Resources are not responsible for the explosion that blew up the Westray mine and killed 26 miners. But they must bear some of the responsibility for the lax and ineffectual discharge of their duties. The evidence of these officials is replete with examples of neglect of duties, submissiveness to Westray management, and just plain apathy. No one at the department, at any time, and in spite of all the indicators that things at the mine were very wrong, had the will to say "shut it down until there is compliance." In this way, the department sent a message to Westray management that directives, regulations, and statutory provisions could be ignored with impunity. Mine management received that message and continued along a path that could only end in some sort of accident. It is in this sense that the department must bear some responsibility for what happened at Westray. It is in this sense that the people of Nova Scotia were let down by the department. It is in this sense that the Westray miners were let down by the department.

The evidence I heard compels me to conclude that the people of Nova Scotia, to whom this Commission of Inquiry is mandated to report, have lost faith in those officials charged with the stewardship of our natural resources. I am of the view that this faith cannot be restored while those responsible for regulating Westray remain in positions of regulatory supervision.

RECOMMENDATION

53 **The structure and staff of the Department of Natural Resources should undergo a complete and intensive review, preferably by an outside agency, with the objective of establishing an efficient and responsible mechanism for the supervision and husbanding of our natural resources.**