



CRIMINAL JUSTICE
COMMISSION

**REPORT BY
THE CRIMINAL JUSTICE COMMISSION
ON ITS PUBLIC HEARINGS
CONDUCTED BY
THE HONOURABLE R H MATTHEWS QC
INTO THE IMPROPER DISPOSAL
OF LIQUID WASTE
IN SOUTH-EAST QUEENSLAND**

**VOLUME 1
REPORT REGARDING EVIDENCE
RECEIVED ON MINING ISSUES**

JULY 1994

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CRIMINAL JUSTICE COMMISSION

Telephone: (07) 360 6060

Facsimile: (07) 360 6333

Your Ref.:

Our Ref.:

Contact Officer:

The Hon Dean Wells MLA
Minister for Justice and Attorney-General and
Minister for the Arts
Parliament House
George Street
BRISBANE QLD 4000

The Hon Jim Fouras MLA
Speaker of the Legislative Assembly
Parliament House
George Street
BRISBANE QLD 4000

Mr Ken Davies MLA
Chairperson
Parliamentary Criminal Justice Committee
Parliament House
George Street
BRISBANE QLD 4000

Dear Sirs

In accordance with section 26 of the *Criminal Justice Act 1989*, the Commission hereby furnishes to each of you Volume 1 of its Report on an investigation conducted by the Honourable R H Matthews QC in allegations of improper disposal of liquid waste in south-east Queensland. This Volume deals with the evidence received during the course of the investigation on mining issues.

The major aspects of the investigation will be dealt with in Volume 2 which I anticipate furnishing to each of you in October 1994.

Yours faithfully


R S O'REGAN QC
Chairperson



CRIMINAL JUSTICE COMMISSION

Telephone: (07) 360 6060
Facsimile: (07) 360 6333

Your Ref.:

Our Ref.:

Contact Officer:

502/06/01/066 BJT:cjh
Mr B Thomas

9 June 1994

Mr P M Le Grand
Director
Official Misconduct Division
Criminal Justice Commission
557 Coronation Drive
TOOWONG QLD 4066

Dear Mr Le Grand

By resolution of 9 September 1993, I was engaged by the Commission to investigate the improper disposal of liquid waste in south-east Queensland.

During the course of public hearings conducted in this matter, I received a limited amount of evidence concerning the mining industry.

I now forward to you a report of the investigation concerning that issue in order that, in the discharge of your responsibilities, you may report to the Chairman.

Yours sincerely

R H MATTHEWS QC

CONTENTS

	Page
BACKGROUND TO INVESTIGATION	1
LOGISTICS OF THE INVESTIGATION	2
SUMMONS TO DEPARTMENT OF MINERALS AND ENERGY	3
ANSWER TO SUMMONS	4
PUBLIC HEARING DAYS	5
EVIDENCE	6
South-East Queensland Area Mines	8
Agricola Gold Mine	8
Warroo Gold Mine	10
Cracow Gold Mine	11
Horn Island Gold Mine	12
Chariah	13
Mount Morgan	14
Mt Isa Mines	14
Mt Oxide Mine	15
Gunpowder Mine	16
Other Areas	16
COSTS OF DECOMMISSIONING AND REHABILITATION OF MINE SITES	17
RELUCTANCE TO ENFORCE LEGISLATION	19
CONFORMITY WITH POLICY	19
OFFICIAL MISCONDUCT	21
SUBMISSIONS RECEIVED	21
CONCLUSION	23

BACKGROUND TO INVESTIGATION

On 20 October 1993 the Criminal Justice Commission (the Commission) commenced a public hearing pursuant to section 2.17 (as it then was) of the *Criminal Justice Act 1989* (the Act) into the improper disposal of liquid waste in South-East Queensland.

For the purpose of the hearing and all subsequent hearings of the investigation, I constituted the Commission.

The investigation which led to these hearings arose from a complaint received by the Commission alleging the systematic, improper disposal of liquid wastes – comprising grease trap waste, hazardous and oily wastes in the Brisbane and Logan areas – by a particular commercial waste removal company. The complaint alleged that company employees had been threatened against failing to continue to take part in the scheme and also that public officials passed information to certain employees to assist them in avoiding detection when improperly disposing of liquid wastes. The complaint also asserted that improper disposal practices were common throughout the particular industry.

On 10 March 1993 the Chairperson of the Commission issued a directive to the Official Misconduct Division to conduct an investigation (pursuant to former section 2.20(2)(h) of the Act).

The investigation was directed to be conducted:

Into persons and entities engaged in the disposal of liquid waste in the Brisbane and Logan Council areas with particular reference to, but not limited to:

- (a) The improper disposal of liquid waste in ways which may constitute a breach of section 230 of the *Criminal Code (Common Nuisance)* or breaches of Queensland legislation, such as the *Clean Waters Act*, the *Health Act* and Regulations or other legislation enacted to protect the welfare of persons and the environment.
- (b) A conspiracy to defraud the public contrary to section 430 of the *Criminal Code*, or the systematic obtaining of money contrary to section 427 by the false pretence that liquid waste would be disposed of in an authorised manner.
- (c) Possible corruption of officers of the Queensland Public Service and Local Authorities to facilitate the unauthorised disposal of liquid waste.

- (d) Possible official misconduct by holders of offices in units of public administration in connection with the unauthorised disposal of liquid waste.

On 9 September 1993, as a result of the information gathered to date, the Commission resolved to expand the investigation beyond the Brisbane and Logan Council areas to the South-East Queensland area.

LOGISTICS OF THE INVESTIGATION

While numerous witnesses were called throughout the 40 days of public hearings, in all, only four persons were called and gave evidence about matters related to the mining industry and one statement was tendered from a Commission officer, Mr Dalrymple.¹

Further, various submissions were made to me which had relevance to the mining industry from the Department of Minerals and Energy (DME), the Department of Environment and Heritage (DEH) and Mr Drew Hutton.

On the first day of the public hearings, Hutton submitted that the investigation should expand to all of Queensland and take evidence from the mining industry. Hutton submitted that on his information:

- i. Unrehabilitated mine sites are in existence ... right around the State with resultant pollution and degradation of the waterways;
- ii. There had been breaches of the legislation; and
- iii. There was a clear reluctance on the part of the regulatory authorities to enforce the relevant provisions of those Acts and the lease provisions.

Hutton maintained that the situation still exists and submitted that it was a proper area for the investigation to examine.

Remembering this investigation was arising from restricted circumstances set out above and appreciating the extraordinary expansion, both geographically and topical which would be involved in the grant of assent to Hutton's application, the Commission declined to alter the applicable term of reference. This, it may be

¹ In the interests of economy and consistency, surnames are used without the customary "Mr" or equivalent honorifics and titles will be used only once. No discourtesy is intended.

noted, did not preclude the receipt of a deal of evidence not confined to those terms.

Nevertheless, it was clear that some mining was conducted in South-East Queensland in such a way as to suggest that the allegation by Hutton in combination with other information available to the Commission raised for consideration some areas of concern which were outside both the jurisdiction of the Criminal Justice Commission and the terms of the Chairperson's direction for this investigation. However, some of the matters were apparently within the terms of the direction. I concluded that I should initially take a limited amount of evidence to assess if this investigation should fully explore mining related matters.

SUMMONS TO DEPARTMENT OF MINERALS AND ENERGY

A Summons to Give Evidence and Produce was issued pursuant to section 3.6 (as it then was) of the Act and served on Mr Paul Breslin, the Director-General of the Department of Minerals and Energy on 20 January 1994 requiring the production of:

1. Environmental management plans, lease conditions and compliance audit reports in relation to plans of operation and lease conditions concerning:
 - 7 Gold Mining Leases;
 - 7 Coal Mining Leases; and
 - 2 Miscellaneous Leases.

The Summons also compelled the production of:

2. Copies of lease surrender reports in relation to mining leases surrendered in South-East Queensland since January 1990;
3. The list of contaminated land sites provided by the Department of Minerals and Energy to the Contaminated Lands Register; and
4. The internal Risk Assessment Report prepared for the Department of Minerals and Energy.

ANSWER TO SUMMONS

On 21 January 1994 the Director-General attended to give evidence before me and answered the Summons in part by producing a number of Mining Lease (ML) files; Special Covenants and Special Conditions for Mining Leases; Environmental Management Overview Strategy (EMOS) documents and Plans of Operations relevant to certain of the mining operations specified in the Summons.

The documents produced were tendered en masse together with an inventory prepared by the Department. Given the short time available, the volume of material produced was the result of considerable effort by departmental officers.

An examination of the files was then commenced by the Commission to determine if they contained references to improper disposal of liquid waste at mining sites within the South-East Queensland area or otherwise assisted in determining if I should require more evidence to be led concerning mining issues.

On 17 February 1994 the DME provided 92 surrendered mining lease files in partial compliance with the Summons (Item 2). The files covered mining leases voluntarily surrendered by lessees in South-East Queensland between 1990 and 1993.

On 21 March 1994 the DME provided an additional 88 files representing all mining leases cancelled by the department for non payment of rent or royalties in South-East Queensland between 1990 and 1993.

No list of contaminated land sites notified to DEH was produced in compliance with Item 3 of the Summons. The Director-General gave evidence that the department has yet to finalise its Code of Practice for the mining industry and, until such time as the Code is finalised and also the list of contaminated sites, the department has been excused by DEH from compliance with the relevant requirement of the *Contaminated Land Act 1991*.

In March 1994 the DME produced a copy of the *Internal Risk Assessment Report* required at Item 4 of the extant Summons. Production of the document - headed *Risk Management Report* - prepared by Paul Viciulis & Associates, Sydney satisfied the Summons fully.

PUBLIC HEARING DAYS

On 6, 7 and 8 April 1994 evidence was led before me specifically in relation to the liquid waste aspects of the mining industry in South-East Queensland and, of necessity, elsewhere in the State.

It was necessary to take evidence of matters outside the south east corner as the action of department officers towards mining activity elsewhere may have placed in context, matters relative to the less mined areas of South-East Queensland. A single example of alleged improper conduct in South-East Queensland is much easier to assess in its true light if displayed as part of a pattern of behaviour seen by reference to other examples albeit geographically removed from the area of investigation.

Three witnesses were called: James Leggate, John Bywater and Peter Curley. Statements by each were tendered.

- Leggate was employed by the Department as an Environmental Officer between 1986 and 1992 and has been involved in the mining industry since 1973.
- Bywater and Curley are currently employed by the Department: Bywater as Manager, Environmental, Management Branch, Minerals Division. Curley is a Senior Environmental Officer.

The evidence disclosed that the department is split into two commodity divisions: Minerals and Energy. The Minerals Division of the Department has four regional environmental officers based, respectively, in Brisbane, Rockhampton, Charters Towers and Mareeba. Brisbane-based field officer Curley is responsible for the Mt Isa area as well as the Brisbane Mining District.

It was logical for the Inquiry to take the evidence of the Environmental Branch Manager, the relevant District Field Officer and Mr Leggate, a former Departmental employee who was openly critical of the Department, to obtain information. Despite the publicity, no other Departmental witness or mining industry representative sought leave to appear as a witness.

Copies of each of the witness statements were provided to the Department's Director-General in advance of the hearing dates. On 6, 7 and 8 April 1994, DME was legally represented by Mr C Jones.

EVIDENCE

Leggate is now a forester in the Forestry Service of the Department of Primary Industries. He described his experience with (and observations of) mining operations and regulation in Queensland since 1973.

Leggate gave evidence of his concerns:

1. That non-compliance by mines with relevant operating conditions was rife resulting inevitably in the systematic discharge of water borne pollutants into the waterways;
2. A resultant legacy for the state of rehabilitation of mines which he spoke of being \$1B but which was disputed by the Department;
3. The disrespect for the legislative provisions which bear upon the Department's regulation of the industry, e.g. authorised officers not being permitted to act on their statutory power to issue notices.

Item 1 was corroborated by the evidence of Curley, particularly in relation to the mines Agricola and Horne Island and also by a concession made by Bywater of massive non-compliance by the industry with legislative provisions, at least up to January 1991.

Leggate stated he observed an increasing number of breaches of procedures across the State. He said he was concerned that these breaches would in all probability lead in part to the unlawful disposal of mining waste by mining operators. The operators ranged from large joint venture coal and gold mining companies to individual lessees working small gold mining tenements.

He said that dewatering because of economic reasons resulted inevitably in the systematic and unlicensed discharge of water-borne pollutants into local creeks. In support of his allegation that non-compliance with operational conditions was rife, he asserted that coal mine operators routinely dewatered coal pits into local creek systems in periods of heavy rainfall. He said that gold mine operators also released water from tailings dams and ponds after heavy rainfall particularly in the north of the State to enable existing liquid storage areas to cope with increased water levels.

Bywater in evidence acknowledged that the Department suspected but had no direct evidence that waste water and tailings was dumped by operators into local river and creek systems. Bywater agreed that dewatering was practised throughout the State for economic reasons mainly. He cited the operational costs of constructing larger storage capacity areas at metalliferous and coal mining sites as an incentive for

operators to dewater but added that poor operational water management practices also played a part.

Bywater said that he knew that surrounding landowners had lodged complaints about water quality in certain areas of the State and that they had asked for tests to determine water content. He said that the DEH normally carries out the testing and investigation of such complaints and therefore his Department had little, if any direct evidence available to it - except a strong suspicion that a given discharge had occurred.

In early 1991 Leggate compiled a list of clear examples of mining lessees who were allegedly not complying with relevant operational and lease conditions throughout the State. He prepared the list with the assistance of some of his Environmental Branch colleagues. Each officer apparently relied on his own field inspections and observations, notes and other source data in the compilation of a list of mining sites.

Leggate and his colleagues then had more than 35 years collective practical experience in the mining industry.

This list is Exhibit No: 3593/327. It sets out in tabular form brief details of alleged breaches of legislation at approximately 48 mine sites in Queensland and lists the alleged corresponding possible environmental consequences likely to occur at each site in the future.

Leggate said in evidence:

The list indicates just how widespread is industry non-compliance with procedural and other requirements. I wanted to show that it was just not a matter of technical non-compliance with procedural aspects but rather evidence of systemic collusion between industry and the Department over more than a decade.

There are seven entries in that Table directly relevant to the South-East Queensland area covered by the terms of the Direction to this investigation. The remaining 41 operations are or were physically outside that area.

There are (according to DME) currently some 800 - 1000 mining projects overall operating in Queensland. Those that are within the relevant area clearly constitute a small fraction of the total. Nevertheless, the problems experienced at these mining sites appear to have much in common with the operational problems noted elsewhere in the State and reflect the tensions between the regulation of the mining industry and its commercial facilitation.

South-East Queensland Area Mines

The seven South-East Queensland mining operations referred to in the Alleged Non-Compliance Table are as follows:

GOLD MINES	COAL MINES
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AGRICOLA	EBENEZER
BEAUMARK	JEEBROPILLY
	ABERDARE

MISCELLANEOUS

CONSOLIDATED RUTILE LTD; (CRL)
CLAY PITS (PGH)

Agricola Gold Mine

Agricola was a small open cut gold mine with a sizeable excavation situated in the Conondale ranges in a well developed forest close to a creek and national park. The mine was to be worked in accordance with an appropriate plan of operations.

The consequences of the alleged non-compliance with that Plan was not, according to Leggate, realised until some time after the mine was abandoned in December 1988 and monitoring of cyanide at various locations on site began. Departmental file comments included the fact that the eastern pit wall of No. 2 pit was crumbling and there was an unstable structure on the southern wall and below the cyanide mixing tanks. The possibility of cyanide and heavy metal pollution of the local waterway was real in 1991.

According to the evidence of Senior Environmental Officer Curley, who last inspected Agricola in December 1993, there was:

A possible danger of overflow of polluted waters from the now abandoned pit to Booloumba Creek during high to very high run-off following rainfall.

Curley stated that there was:

As yet no evidence from the department's water monitoring program of any pollution of the creek although there is the belief in the branch that cyanide

pollution may be occurring during periods of rainfall when no sampling can be undertaken due to the difficulties with site access.

Curley stated that sampling is now undertaken less than once every two months and no studies of the creek have been undertaken to measure the impact on creek water life. Curley also stated that significant erosion and slumping of the tailings dam cap has begun to take place on the now capped dam with the result that water is now ponding on the once domed cap and overflowing from there to the creek some 50 metres away.

Although the overflow is unlikely (according to Curley) to contain cyanide, he stated that the water level in the former tailings dam may rise as a result of ponding, and cyanide solutions buried below would then be brought to the surface - causing the pollution first identified as possible in 1991.

Bywater told the hearing that the Environment Branch is still overseeing the decommissioning and rehabilitation of the abandoned mine site. He said that the 1991 Table certainly did not exaggerate the position at Agricola. He stated that drilling by the Department at the mine in 1990 revealed cyanide readings well over 0.1 parts per million (ppm); the minimum level found to kill wildlife and pose a threat to people.

He cited an extract from a letter written by the Director-General to Treasury in February 1991 (requesting more money to fund the cost of Departmental decommissioning and rehabilitation of the mine). The letter in part stated that:

There is some concern that cyanide could find its way into a nearby creek and affect the downstream public camping area. Monitoring indicates that non-toxic levels of cyanide do exist in the groundwater outside the dam. Monitoring of the observation bores suggest that some leakage is occurring from the tailings dam ... traces of cyanide have always been detected in the groundwater samples. In 1990 tests for cyanide at the mine site showed cyanide levels in the slime itself and the slime itself showed cyanide content of approximately 300 ppm. The acceptable level is less than 1 ppm.

It was agreed in the course of evidence that Agricola was decommissioned very quickly.

Bywater stated that he believed that:

There is no liquid waste threat at Agricola even though cyanide was discovered in the groundwater in 1991 at non hazardous levels.

He said that he was satisfied with the progress of decommissioning, that the mine is stable and in a satisfactory condition even though, according to Curley, the pit walls are showing signs of slumping into the pit.

The decommissioning and rehabilitation exercise has cost the taxpayer just under \$290,000 on Bywater's evidence. The anticipated 1993/94 expenditure is \$5,500, with a like amount for the following year. Security retained by the Department from the former mine operators amounted to less than \$80,000 (based on the former \$2,000 per hectare formula).

DEH has so far declined to accept Agricola for inclusion in the Conondale National Park until it is satisfied that the mine is stable and in a satisfactory condition.

Warroo Gold Mine

The Warroo Gold Mine lessees reported a serious cyanide leak to the DME in December 1992. The Mine Manager reported an overflow of cyanide solution from the working pond to the overflow pond and that a considerable portion of overflow solution appeared to have escaped through the walls of the overflow pond to the immediate area outside the lease boundaries. This area forms part of the catchment of the Warroo Creek.

Total cyanide levels according to Bywater's evidence of 186 ppm and 195 ppm were reported. Warroo was then operating without an approved EMOS and was in breach of its operating lease in a number of areas. Leakage of water from the inadequately sealed overflow pond has been controlled only by a reduction in the permitted storage capacity.

The mine has been placed on a care and maintenance basis since August 1993. The mine operator is not actively working the mine. A caretaker does basic tasks on site.

Curley last inspected Warroo in January 1994. He took a sample of water from the Warroo Creek (only some 200 metres distant) and noted that the cyanide solution level stood at approximately 0.5ppm. He thought the leak had occurred within a few weeks because cyanide breaks down into harmless compounds under sunlight and the leak which apparently came from the storm pond on site adjacent to the Creek was measured at 200 ppm.

Curley produced photographs which he had taken of dead vegetation bordering the Creek downstream from the mine. He said that there had been a long history of

operator non-compliance with lease and plan conditions resulting in the present high risk of discharge (and actual discharge) of contaminated waters into the Creek.

Bywater confirmed Curley's evidence that Warroo has long had problems with waste discharge and acknowledged that the site had not yet reached acceptable cyanide limits; that the level could well be still above such limits.

In August 1993 Warroo cyanide levels were still being recorded in solution in the region of 700 mg/L (safe levels of cyanide are 5 micrograms per litre).

Cracow Gold Mine

Bywater stated that he was familiar with the Cracow Mining Venture at Cracow. He said that Cracow's biggest documented spill occurred in February 1992 when an estimated four million litres (megalitres) of water contaminated by 40 kilograms of cyanide and about 4000 - 6,000 cubic metres of slurry and liquor escaped from a breach in the wall of tailings dam No. 3. The dam had not been used since November 1991 and was due for decommissioning.

The 1992 emission which resulted from the fault and inadequacy of the tailings dam liner was confined to the headwaters of Orange Creek by an existing but empty stock watering dam. Orange Creek leads into the Dawson River. A containment dam was hastily constructed immediately downstream from the mine.

The off-site cyanide in the spill was treated and neutralised. It appears that the Water Resources Commission (WRC), which also has some responsibility in relation to certain dams, believed the tailings to be benign and that no environmental hazard resulted, apart from increased turbidity of the receiving waters. From the evidence before me it appears that the spill required the Department's close attention for some time.

The damaged wall of the tailings dam was repaired and a reduction in the dam storage capacity was ordered to ensure that "overtopping" could not occur in periods of heavy rainfall.

Cracow is now being wound down pending restructuring and proving of further reserves.

Decommissioning of the No 3 Tailings dam was estimated in 1992 to cost at least \$1 million; the No. 4 Tailings dam, a similar amount. The Department held only \$287,000 in security pending default of the operator in rehabilitating the site.

Curley stated in his evidence that he last visited Cracow Gold Mine in 1993 at which time he found clear evidence:

that acidic surface stockpiled waste material discharged polluted run-off and seepage to local waterways during and after rainfall. No catchment retention measures were in place.

Curley also saw:

burst tailings pipeline joints which allowed contamination by tailings to take place.

He said that he was aware of the long history of unlicensed discharge of mine waste waters to local creeks in the Cracow area including the tailings dam wall break referred to by the witness Bywater.

Curley said that the long history of unlicensed discharge referred specifically to the Cracow mine site; the break in the dam wall would have arisen from poor or unlicensed construction and, as the mine has not been decommissioned, the risk of further discharge of liquid waste pollutants from this mine site continues.

Horn Island Gold Mine

Although well outside the area covered by the Inquiry, Horn Island situated in Torres Strait was a mine of apparent concern.

Leggate's 1991 Table reported that the DME:

did not insist on proper compliance (by the lessee) with lease conditions, resulting in the lessee defaulting on key environmental commitments at the time of bankruptcy.

The Table foreshadowed that possible environmental consequences including:

Significant acid mine drainage could occur, mobilising heavy metal pollutants off the lease into marine waters. Control could necessitate elaborate decommissioning and may involve public cost.

Horn Island ultimately resulted in continuing acid mine drainage on a large scale into Torres Strait.

Bywater said that preliminary water sampling had confirmed the problem.

Bywater said that the total cost of work carried out by the WRC (under DME control) at Horn Island to date was \$2.1 million for the decommissioning of the former pyritic materials mine site. Treasury has funded \$1.23 million of the total cost, the balance comprising security of \$500,000 lodged by the former operator, and some \$600,000 gained from the sale by the DME of plant and equipment left on site.

Bywater said that anticipated on-going maintenance costs will be in the order of \$300,000 over the next three years. The Department undertook major rehabilitation works between October 1993 and January 1994 over the entire site. A rehabilitation assessment was to be undertaken in April this year to determine the extent to which the site had stabilised and a comprehensive water monitoring system is, in Bywater's words, to be implemented to determine whether the rehabilitation strategy has been successful in terms of preventing acid mine drainage and heavy metal build up.

This is a continuing operation. Annual site maintenance for the next decade may be necessary.

Chariah

Situated on the outskirts of Charters Towers, Chariah was a gold mine and, according to Leggate, is a disaster area. In his 1991 Table, Leggate wrote that the department had not insisted on the proper attention to and compliance with lease conditions requiring the planning of decommissioning. Leggate continued:

Decommissioning of the cyanide tailings dam will be very difficult due to the method of deposition. Ongoing maintenance of the emplacement, or even rehandling, may be necessary to avoid pollution on the outskirts of Charters Towers.

Bywater confirmed that the tailings dam on site which contained high levels of heavy metals such as copper, cadmium, lead and arsenic had become a source of dust between 1991 and January 1993. The Department was, according to Bywater, fortunate that there was a wet season that summer. Spray irrigation was placed on site to keep the surface wet to minimise dust pollution.

Bywater confirmed an amount of \$400,000 had been allocated for the decommissioning and rehabilitation of the mine site and that the department had taken over the decommissioning and rehabilitation of the site following the insolvency of the mine operator. It was possible that \$150,000 would be requested

in addition to the \$400,000 mentioned. The security deposit held by the department amounted to \$80,000.

Mount Morgan

There is, according to the evidence, a continuing acid mine drainage problem associated with the former copper and gold mine. Heavy metal pollution and over a century of accumulated sulphuric acid and other liquid wastes at the site now poses, in Leggate's view, a threat to downstream users of the water supply and also to the wildlife of the river. The solid waste, on his evidence, weathers with rain and oxygen and is transformed into sulphuric acid, the weathering process converting a sulphide present in the rock material into the acid. The sulphuric acid lowers the pH of the solutions and 'mobilises' the heavy metals present.

Curley agrees that Mount Morgan is well known as a pollution source. The River Dee (which drains into the Fitzroy River) is still heavily polluted with acid wash and heavy metals. Rehabilitation is non-existent. There are several pond areas containing acidic water including the main large open-cut pit that has acidic water with a pH level below 3. Not much aquatic life survives that level of acidity.

Mount Morgan costs the department about \$200,000 per year to control. The mine is not currently being operated although there is apparently some exploration activity underway which might result in the resumption of operations in the future.

Mt Isa Mines

Curley said Mt Isa Mines has a history of pollution of off-lease air, water and land. The company's management of seepage and run-off are an on-going problem with respect to the risk of polluting the Leichhardt River.

Curley stated that, immediately adjacent to Mt Isa itself, there are a thousand hectares of tailings dams and approximately another thousand hectares of mining activities and plant site and an unknown area of vegetation die-back caused by air pollution from the stacks.

He described Mt Isa Mines Limited as having, overall a very poor environmental planning policy further compounded by the company's minimalist position on environmental management, and exacerbated by the lack of resources within the Department.

He cited as an example the fact that DME was not told of a meandering tailings stream overflowing from tailings dam number "7" for some months after the event and then, not directly but as part of a company presentation on future tailings dam deposition plans. The witness is concerned that the company's tailings dam management and rehabilitation has not been adequately planned with a consequent high risk that the company's poor rehabilitation option will be forced onto the DME at the close of the mining operation.

Mt Oxide Mine

Curley last inspected the Mt Oxide copper mine north east of Mt Isa in March 1994. He states that the old mine workings at Mt Oxide (currently being operated by the operators of the nearby Gunpowder copper mine) have resulted in large volumes of acid mine and metals pollution entering the local creeks each wet season. According to the witness, department records show pollution has been a fact of life since the 1970s at least.

Mt Oxide has a large liquid waste problem, according to the witness, of highly acidic water with high concentrations of toxic metals.

Heap leach stockpiles (heaps of gold-bearing rock sprayed with cyanide and water to leach out the gold) have been formed at the site over the years. Drainage from these stockpiles and waste stockpiles has caused downstream pollution problems at the mine during this time. Leggate's 1991 Table alleged that inadequate steps had been taken to contain acid and metallic pollution.

In 1991 Leggate said possible environmental consequences were listed simply as massive on-going downstream pollution. Leggate said in evidence before me that:

The situation is unchanged. The site has accumulated waste over many years. It continues to be a problem in that acid mine drainage and associated metallic pollution is still affecting the downstream water course. The wastes have produced a lot of sulphuric acid which has mobilised copper into the creek.

Curley said that distinctive green copper salts line the creek beds in the dry season. During his March inspection, he saw green-coloured copper compounds flow from the mine site into the creek eco-system up to a kilometre downstream from the mine.

Gunpowder Mine

Curley's Brisbane-based inspection circuit includes the Gunpowder copper mine situated about two hours drive north-east of Mt Isa.

The Gunpowder mine is acknowledged by Bywater and DME as a potential threat to human health. There have been discharges of highly concentrated copper sulphate and acid mine drainage into the Gunpowder Creek, immediately above the old Gunpowder township which is now used as a tourist resort. The potential exists for that mine to pollute waters used by that resort. Curley's evidence established that special licences have been issued to the mine operator by DEH during the past several wet seasons to discharge many megalitres of untreated acid water to Gunpowder Creek.

The special licence is a recognition, according to Curley, that there is no other way to dispose of untreated acid water other than by discharge into the creek system during the wet season. DEH is, in fact, presented with a fait accompli by the mining operator. The special licence arrangement with the operators of Gunpowder mine was the only one known to Curley.

Other Areas

In addition to the above, I also heard evidence which could lead to a conclusion that coal mines are also generators of waste but the sorts of waste and the problems associated with coal mine waste differ from those which flow from metalliferous mining.

Curley concluded his evidence with the comment that:

There are other sites outside the geographical terms of reference of the Inquiry, naming Thalanga, Oakey Creek coal mine, Norwich Park coal mine, Lucky Break gold mine, Mt Hogan, Augold, Kidston gold mine, German Creek coal, Pacific Coal, Northcote gold and Chariah, some of which have or had inadequate capacity in their catchment areas to contain cyanide tailings in the wet season.

Conversely, those dams with adequate storage and containment capacity, often (according to the witness) have had that storage facility illegally or poorly constructed. The resultant seepage then causes the escape of contaminated material.

Curley states that over the years he has seen pollution entering or having already entered local water systems from high sediment in run-off from mine sites. He included the following sites as responsible for run-off pollutants, namely:

- The Ipswich coal mines (Rhonda, Aberdare and New Hope Collieries), the Ipswich Clay Pave operations (PGH) and the Rochedale operations of Austral Brick.

Curley said that testing of discharged waters was generally not carried out by the Department unless complaints had been (or were likely to be) received from downstream users or where there was a danger of pollution occurring. Monitoring is therefore usually left up to the leaseholder to conduct. Monitoring programs, in Curley's view, need to be scientifically designed and conducted and the test results evaluated if ground and surface water testing is to be meaningful. Untrained personnel, delays in sample collection and lack of refrigeration can distort the result and negates the point of monitoring.

Bywater however maintained that, since 1991, there has been significant progress at most mine sites. Weipa has, in the Department's view, an outstanding environmental management record; likewise Red Dome (north of Chillagoe) and Mt Leyshon (south-east of Charters Towers). He said that there is evidence of competent environmental management at Pajingo (near Charters Towers); Selwyn (south of Cloncurry); Disraeli (now called the Richton project - also near Charters Towers); Kidston; Golden Ant and Consolidated Rutile Limited.

COSTS OF DECOMMISSIONING AND REHABILITATION OF MINE SITES

Again, according to Leggate, a total of approximately \$3.6 million public monies has been provided by Treasury to pay for rehabilitation of failed mine sites. The amount of money required to fund clean up operations at former mining sites continues to grow. Leggate estimates a possible liability resulting from cleaning up the areas that are currently disturbed at upwards of \$1 billion. Leggate claimed in evidence that the \$1 billion figure is based on third party costs of \$20,000 per hectare on some 50,000 hectares disturbed.

Leggate estimated the billion dollar potential liability is growing at a million dollars each week. His estimate is based on 40 hectares of Queensland being dug up weekly.

The mining industry and the Department both challenged Leggate's estimates saying that his serious allegations are:

inaccurate and exaggerated.

The Chief Executive Officer of the Queensland Mining Council, Michael Pinnock, has been reported in the media as saying that:

The value of committed rehabilitation programs of the 3500 Queensland mines is \$800 million, a cost borne by the mining companies over the life of their operations. The claim of a \$1 billion liability is to presume a 100 per cent walk-off rate by companies.

Pinnock said that this presumes that all of the companies involved (including giant Australian enterprises such as BHP, CRA and MIM) will fail and walk away from their obligations.

Leggate cited the BHP Goonyella coal mining operation as an example of negligible rehabilitation despite some 20 years of mining at the site and the extraction of approximately 100 million tonnes of black coal from the site. He said the site was in a mess and doubted that the technology existed to stabilise the area involved.

He said in evidence that the company sought the removal of the threat of Notices to Show Cause proposed to be issued upon his recommendation; it further sought the Department's agreement to sensible time frames for negotiation and agreement in relation to its Plan of Operations with a specific request for a two-year moratorium or approval of a plan for two years to enable the plans, capital works and trial to be carried out. The company stated that it proposed "to spend \$5.3 million at Goonyella on water management, and \$1.4 million on consultants, studies and trials, particularly on spoil pile slope stability and water quality control.

After discussions between the Minister, the Department and company representatives, the Minister wrote to the Group General-Manager of BHP-Utah Coal Ltd on 7 November 1991 informing the company that:

It was not under threat of Show Cause or any other punitive action.

The Goonyella moratorium was effectively granted under the general moratorium referred to in the correspondence. The correspondence is Exhibit no. 3593/328.

Bywater said in evidence that the Department had recently calculated the gross security liability for the real cost of rehabilitating metalliferous and coal mines across the State as against the actual securities held by the Department.

- For Coal mining operations the gross security liability was \$480 million; and

- For Metalliferous mining operations the gross security liability was estimated at approximately \$220 million.

That is, a total gross security liability of approximately \$700 million.

The current securities held by the Department amount to \$50 million in bank guarantees and some \$12 million in cash: a total of \$62 million security held against a potential \$700 million liability.

RELUCTANCE TO ENFORCE LEGISLATION

Leggate said he was an authorised officer under the *Mining Act 1968* and was consequently authorised to inspect mining tenements throughout the State (mainly in the north) and provide technical advice in relation to applications for new mining leases.

Despite being empowered under section 71A(1) of the Mining Act to

have full and free access to all land ...to make such inspections and carry out such investigations as he thought fit, and do such other acts ordinarily connected with mining as he thought fit

Leggate was specifically told that he was not entitled to use the so-called directions powers given authorised officers under sub-section (3) of section 71.

Leggate gave evidence that he was informed by his supervisor that an administrative arrangement put in place by the executive arm of the Department (i.e. the Director-General) effectively debarred the Department's Environmental Officers from being able to give directions.

Even with the advent of the *Mineral Resources Act 1989*, Leggate's situation as an authorised officer did not change.

Bywater stated he had not heard of this arrangement and did not think that such would be proper.

CONFORMITY WITH POLICY

Bywater conceded to Counsel Assisting the Inquiry that the Department could not contend that the mining scene had become perfect. There had been significant

improvements in some areas and, conversely, in other areas there had been no improvement or no significant improvement at all.

Bywater believed the reason lay mainly in the need to turn around a mining environment which operated for years under a regime of low commitment to environmental management. The Department has been trying to turn the industry around by a participative process involving the mining groups in the collaborative development of and commitment to new environmental policies, planning frameworks and the like, all of which will take time to get the runs on the board.

He said that the commitments now being made were reflected in operational practices; that it would still take a little time before the fundamental change of attitude and commitment to improving environmental performance occurred.

He said the tensions which were evident to him upon arrival in Brisbane in 1991, namely the conflict between the facilitation of mining industry requirements at the expense of the regulation or policing of the industry, still existed in the Minerals Division of the Department. There was still a difference in the philosophy at the core of each of the two points of view which generated the tension.

Bywater stated that 100% of coal mining operations and 60% of metalliferous mining operations were now in conformity with the new Environmental Management Policy:

- Simply stated all coal mining operations have an approved EMOS and Plan of Operations in place; and
- 60% of metalliferous operations have achieved that goal.

The next stage, according to him, is to assess objectively the extent to which the commitments made in those Plans of Operations are being adopted operationally. To that end, the Department plans to carry out spot checks and detailed environmental audits to ascertain whether the industry self audit system is working.

Bywater was confident that, even though only two large metalliferous mines (of approximately 1200 mining projects in Queensland) had been audited in the north of the State since the policy was introduced three years ago, the vast majority of the 1198 remaining mining operations will be demonstrating operational practices which are in conformity with their approved planning documents within two to three years.

Having read the extract taken from the Viciulis & Associates Risk Management Report, I have my reservations that Bywater's stated belief will be met. As Viciulis

noted (p. 24 of Exhibit 336), after debriefings and discussions with senior personnel, among other things:

Divisional established objectives cannot be achieved eg 300 audits 1993/94.
[Emphasis added].

OFFICIAL MISCONDUCT

The witnesses Leggate, Bywater and Curley were asked for their knowledge of any matters of official misconduct within the Department.

Leggate stated that until early 1991 he simply thought that the Department was just badly run and that legal requirements were being poorly administered, everything being dependent on the provisions of adequate resources. He said that he believed the Department was just not delivering on a very important phase of the Queensland mining program. Leggate said that even though the Director-General acted promptly and efficiently on each of his two grievance statements, each investigation:

concentrated solely on the procedures for the appointment of new staff and avoided the core issue of maladministration and non-compliance. [Emphasis added]

Leggate said that he believed it was much easier for the Department to deal with straightforward issues such as the appointment of staff than deal with a dramatic allegation of widespread non-compliance.

Curley and Bywater had no knowledge of official misconduct by officers. The examination by Commission officers of the DME files produced to this hearing did not disclose evidence which could reasonably suggest official misconduct by any person.

SUBMISSIONS RECEIVED

The DME's written Submission was received by me and tendered into evidence on 14 April 1994 (Exhibit No 3593/366); an addition to the submission was received soon after. The Submission sets out the Department's views in relation to the matters brought before me. Briefly stated, the Department maintains that the issues raised concern disagreement over policy and administration.

The Submission maintained that it was clear from the evidence of the Departmental officers that the problems caused by the old system of regulation would not be repeated in the future and that existing problems were being dealt with in an appropriate manner.

The Department maintained that this view is also held by DEH. DEH has an overview responsibility for implementing environmental protection measures. As part of its development of comprehensive new environmental legislation (the proposed Environment Protection Act and also proposed strategies), DEH has looked at the procedures adopted by DME and, according to the Submission, is happy to delegate the stewardship of the mining industry to DME in respect of this key piece of environmental legislation.

The Submission also maintained that the increase in mining industry expenditure on environmental protection (from \$46.2 million in 1990/91 to \$61.4 million in 1991/92) was further evidence of the success of the Department's policy.

The Department maintained quite simply that its present policy is the best in Australia, with some of the other States actively examining the Queensland-based initiatives with a view to introducing them in their own jurisdiction.

The Department also contended that the problems identified by this investigation are all problems arising from the previous system of regulating mining. Some of the problems apparently have arisen from decisions taken years before.

The Department's submission continued with an acknowledgment that two problem areas were identified generally in the evidence presented to the Inquiry:

- Inadequate security deposits; and
- Poor operating procedures (possibly amounting to breaches of operating conditions or statute).

The Department maintained that limited auditing does not mean a lack of will by the organisation in enforcing environmental obligations, simply the ordinary limitations upon the Department's resources as it seeks an orderly progressive implementation of a strategy spanning the Queensland mining industry.

In concluding, the Department contends that the present mining policy developed by the department in conjunction with the industry is ensuring that past problems are not repeated and that existing problems are addressed. The Submission asserts that there is clear evidence that the policy is effective and is turning around the industry's environmental performance.

Hutton also made submission on the mining industry as part of his overall submission. The Submission dated 12 April 1994 tendered by Hutton (Exhibit No 3593/367) deals predominantly with the main part of the investigation into the Improper Disposal of Liquid Waste in South-East Queensland. Hutton acknowledges that, in his view, the separate examination of mining wastes has been dealt with very thoroughly by Mr Leggate and others.

CONCLUSION

It is clear that in the absence of corruption of officers of the Queensland Public Service and Local Authorities to facilitate the unauthorised disposal of liquid waste or official misconduct (as that term is defined in the *Criminal Justice Act 1989*) by holders of offices in units of public administration in connection with the unauthorised disposal of liquid waste, then the Commission is without power to take this matter further.

I accept that each of the witnesses who gave evidence on this matter were truthful but obviously there are matters where their interpretation of facts and the opinions which they expressed varied.

Particularly by the evidence of Bywater and by its written submission to the investigation, it has been maintained by DME.

that the problems caused by the old system of regulation would not be repeated in future and that existing problems were being dealt with in an appropriate manner;

indeed DME maintains that its present policy of self-regulation is the best in Australia and that other states are examining the means being adopted here to implement that policy with a view to introduction of them in their own jurisdiction.

However, since inception of the policy, and the provision by mining companies of environmental management overview strategies (EMOS) there have been only two final audits against the performance of the proposals and what appeared in the respective EMOS of the mining companies. From these audits nothing untoward emerged, but it is a pity that lack of resources prevented more work being done in this particular field.

In the course of this investigation, as I have said, evidence was given of matters outside my jurisdiction considered either topically or geographically and consequently I will not make findings in respect of many subjects discussed. It is to be hoped that the now adopted policy is successful because the mining industry is of such importance to the economy of the state. The policy has been gradually

produced since 1991 and according to DME will relevantly meet two problem areas identified in the evidence given to this investigation – evidence of inadequate security deposits and poor operating procedures.

The focal points of the policy, apart from the additional facts of self-regulation are the EMOS documents (coupled with the plan of operations) and the requirement that each miner lodge a security equal to the real third-party costs of rehabilitating sites, although there may be discounting of security in appropriate cases.

The EMOS will, as a matter of course, provide for installation of an appropriate waste water management system which will prevent liquid waste from being discharged to the environment. Although the Department will make spot or random checks of EMOS proposals and the relevant performance, there is the important aspect that it will be left to the miner to monitor the performance of the proposal.

It is not my function to criticise any departmental policy and I have no wish to dampen enthusiasm for the existing policies, but, because of the evidence of Leggate and Curley, to which I have referred, and even confining my attention to the problems of the Agricola mine and others in South-East Queensland, I can see how liquid waste disposal, in particular, and rehabilitation of disused mine sites in general, become expensive headaches for those seeking to protect the environment.

This being so, I will but point to a number of aspects of policy which it seems to me call for further study and perhaps some action. First, although the DME argues that the statutory right to require special conditions for mining leases is sufficient justification for requiring an EMOS of the miner, there is no legislative foundation for this and I think this should be remedied as soon as possible. Because no matter how constructive are departmental ideas, they have not acquired during the lapse of some three years any standing before the law. This is noteworthy also from the point of view that, in very important respects, the Minister's view is made the criterion for satisfaction.

As Professor Pearce observed in his recent report:

[T]he issues in this matter seem to me to be very much affected by the want of compatibility that can exist between the legal and administrative cultures. Some departmental officers do not seem to appreciate that actions that they must take must adhere to relevant legal requirements. It is the law that determines the way things have to be performed, not governmental policy or departmental practice.

He went on to say:

The ... more significant problems stems from what ... I call the administrative culture. Some officers in the Australian Public Service hold the view that if there is a contradiction between the policy and the law, then the former is to prevail. Further, administrative practice is regarded as being more important than legal niceties.²

I find it strange that the regulation of a multi-million dollar industry can be reworked over a number of years without a clear legislative basis for the initiatives underway and this suggests the reliance on policy by officers of DME rather than legal developments.

Secondly, Bywater accepted, as correct, a concession made by him in earlier proceedings that, as at January 1991, there had been massive non-compliance by mine owners with legislative provisions. This was in the context of complaints made by Leggate as an environmental officer and, if legal constraints failed in respect of this massive non-compliance, one cannot help but wonder whether self-imposed restraints will succeed.

Then there is what I would describe as the departmental dilemma. DEH has by its draft waste management strategy recently published, apparently constituted DME its agent for the overseeing of environmental control of mining. But DME naturally devotes the bulk of its energy and resources to the facilitation of mining on the basis of the importance of the industry to the well-being of the State. This, when environmental concerns come into the picture, creates a dichotomy of view which has, obviously, in the past, resulted in low morale within the DME and Bywater concedes that this low morale or tension still continues amongst staff under his control in the Minerals Division.

I assume that establishment of an independent statutory Environmental Authority, such as exists in the majority of States (I think only Queensland and, perhaps, Tasmania are without such a body), has been, and, if not, should be considered as a means of lessening of the effects of this dilemma.

Another danger may be that miners of lesser substance will find that compliance with the present strategy is beyond their means. Having looked at examples of EMOS documents, I would think that even production of them involves a deal of expense; to fulfil the burden of the proposals; including rehabilitation contained in them, might become too much for the promisors, if, as I say, they are persons of lesser substance.

² *Inquiry into Certain Aspects of the MDS Tendering Process 1992-93 - Vol. 1,* pp. 4 and 9 - Report by Professor Dennis Pearce.

This part of the investigation was conducted to ascertain if further investigations should be carried out. The evidence I have heard to date, in my opinion, does not warrant any further investigation of this particular issue by the Commission.

This is not to say that the evidence did not raise many matters of importance and concern, but rather that those issues were not so clearly within the jurisdiction of the Commission or the terms of the Direction to this investigation, that I considered fruitful inquiries could occur within the area of my responsibility or that of the Commission.

I am of the view that the evidence did raise matters of great importance and there are issues which should be examined by a person or body possessing appropriate powers and expertise.

Therefore, I report in respect of the mining industry and on the limited evidence in respect of it which I heard:

1. No evidence of official misconduct or breaches of other legislation by holders of offices in Units of Public Administration as outlined within the terms of the direction to this investigation was disclosed by the mining related evidence.
2. Matters which were put forward as evidence of mismanagement amounting to official misconduct were not such as to cause me to think that the Commission should conduct further investigation.
3. It is appropriate for this Commission to draw to the attention of the Government, my concerns of issues revealed in the evidence and to press strongly for a further investigation. This investigation should not be limited by the jurisdiction of this Commission but rather examine a range of matters concerning the impact of mining in Queensland, the rehabilitation of mines, the adequacy of securities held by DME and the departmental policies and oversight exercised by DME, DEH, Water Resources Commission and other bodies which may have authority in mining related issues; and finally, to establish appropriate legislation to produce a clear basis for the policies now applied to the mining industry.