

Britain's environment—nanny knows best

Pollution control in Britain: the best in the world or a carve-up between industry and government? The public cannot judge, for emission limits are secret, levels of discharge are secret, and even environmental monitoring is sometimes secret. As the Royal Commission on Pollution demands a more open policy, Jon Tinker describes just how the facts are being concealed

Jon Tinker

Some of Britain's pollution rules are better suited to an Edwardian girls' school than to an advanced industrial society. Offenders are taken quietly on one side by the prefects and ticked off for letting the side down. There is no need for prosecutions: the shame of being found out is reckoned to be punishment enough. Carefully shielded from vulgar eyes, pollution control operates behind a deliberate smokescreen of evasion and reticence.

Airborne or liquid emissions from each individual factory have to be authorised by a national or local regulating agency—but the permitted limits are kept secret. Pollution officers have the power to take samples of industrial discharges to make sure that they are complying with these secret limits—but any analysis of the samples remains strictly confidential. The regulating agency may require the factory to monitor air or water quality downwind or downstream of the discharge—but the measurements which result are quickly hidden away in government files.

The whole system operates on two principles. First, there is close cooperation between regulating authority and industry. Second, each case is considered on its merits: emission limits are fixed on the basis of local conditions, rather than forced to conform to some nationwide norm. Cooperation and flexibility are the twin watchwords of the Alkali Inspectorate, the river authorities and the Factory Inspectorate.

Is flexible, cooperative British pollution control the best in the world, as many of its practitioners claim? Or do flexible officials sometimes place public health and safety at risk rather than jeopardise their cooperative relationship with the polluters? The public is unable to judge, because the facts which they need to form an opinion are hidden away in secret cabinets, guarded by the cooperating ranks of industry and the pollution officers, protected by the majesty of a dozen acts of parliament. If a factory owner should choose to pour thousands of gallons of cyanide into a river, the maximum fine the courts can impose is £100. But if a river inspector analyses a sample of this effluent, and mentions the result to a member of the public, he can be sent to prison for three months. Far too often the Prevention of Pollution Acts function as Acts for the Protection of Polluters.

I do not mean to suggest that our pollution control agencies are incompetent, inefficient or corrupt: I believe the opposite to be true. But when faced with the delicate task of balancing environmental hazards against costly new equipment, even the best administrators sometimes make errors of judgement. In an open society, the comment and criticism of the scientific community, conservation

groups, the press and the public would be available to spotlight such mistakes before serious harm had been done. In Britain today, data on individual emissions are guarded more closely than military blueprints.

Like an elderly nursemaid, the Alkali Inspectorate suggests that publication of emission figures could only serve to alarm the public, in spite of the fact that official reports on environmental levels (mercury in shellfish and DDT in river water, for example) have been released without noticeable mass hysteria. "A nasty taste in your jam, dear? Nonsense. Nanny's looked at it very carefully and there's nothing at all wrong. Eat it up like a good boy. Nanny knows best."

The defenders of the status quo claim that pollution judgements are best made in a spirit of cool, scientific detachment, in the absence of emotional public clamour. Yet these decisions are essentially political, a balance between what is technically feasible and what is economically possible, with public safety and amenity depending on the answer. The notion that government alone is clever enough to evaluate pollution problems, and that the general public is too ignorant and too stupid to understand them, I find paternalistic and offensive. Moreover, in the long term such a view is potentially totalitarian and dangerous.

The regulating authorities and industry sometimes start a discussion on pollution secrecy by denying that it exists at all. To show that it does, the law and its implementation must be examined in some detail. Consider first the water situation. England and Wales is covered by 29 river authorities, which must give permission for each discharge into a river. In granting consent, they may impose conditions; some common conditions are maxima of 30°C, 1 ppm of heavy metals, 20 mg/l of BOD and 30 mg/l of suspended solids. Under section 7 of the Rivers (Prevention of Pollution) Act 1951, river authorities must maintain a register of consents, together with the conditions imposed, and keep it "open to inspection at all reasonable hours by any person appearing to the river board to be interested in the outlet". What, one might think, could be more open than that?

Alas, the legal mind defines "interest" somewhat narrowly: the Trent River Authority recently issued a special memorandum to its staff reminding them that the only people entitled to see the register were those with a property interest at the point of discharge. In other words, the polluter or his landlord is entitled to know what is the level of discharge a river authority considers satisfactory, but not the farmer whose cows drink out of the river, nor the man who owns the

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fishing rights downstream. And certainly not the general public. Most river authorities appear to take a similar view to the Trent: the Thames and the Yorkshire Ouse do, for example. Not even a group of scientists from a local university can look at the register of consents: they are not what lawyers would call "interested".

Not all river authorities have this maidenly reticence. The Northumbrian RA neatly gets round section 7 by recording full details of every consent in its minutes. These (under paragraph 18 of the fourth schedule to the Water Resources Act 1963) must be made available to local electors, and are in fact distributed to the press. Ralph Dyson, Northumbria's chief pollution officer, is shocked at the idea of secrecy. "We're a public body. Details of consents are public property. We can't hush them up—it would be most unwise to try to do so."

Consent conditions, though, are only part of the story. According to the Jeger report, three-quarters of all our sewage works outfalls fail to conform with their consent conditions, and industrial discharges to rivers may well be nearly as bad. River authorities can take samples of effluent—they even have statutory powers of entry into factories to do so—but they are expressly forbidden by section 12 of the Rivers (Prevention of Pollution) Act 1961 from disclosing any information derived from such samples. Moreover, river authorities can require dischargers to install monitoring equipment in the river some yards below the point of discharge; this is often done with hot water effluent from a power station. Since the monitor is the property of the polluter, so are any figures it collects, and it is an offence for the river authority to disclose them. Of course, the authority could install its own recording equipment, but it would then have to pay for it, and there is no way the cost could be recovered from the polluter. Since river authorities are, in general, scandalously short of scientific equipment, they are unlikely to pass up the opportunity of getting industry to pay for it instead.

Discharge levels secret

So there we have it. The polluter is a factory or a sewage works. His discharge is controlled by a river authority, two-thirds of whose members are nominated by local councils. Councils are rarely unmindful of the difficulties besetting local factories or local sewage works: sometimes factory owners and sewage authority chairmen actually sit on the river authority's pollution committee, the body which takes the decision whether or not to prosecute. The river authority sets an upper limit to the discharge, but this limit is kept secret. The river authority measures the discharge, but those figures are kept secret. I do not suggest that the majority of river authorities are anything but zealous and impartial, but I feel river quality could only benefit if they were required to operate less furtively.

Indeed, many pollution officers strongly resent being forced to work in this hole-and-corner way, and privately press their authorities to find ways of evading the stranglehold

of section 12. One possibility being discussed would follow Northumbria's lead, and publish a list of the worst polluters, and details of their effluents, in the authority's minutes or annual report. Nowadays, less and less industrial pollution is released direct into rivers, for it is general policy to divert it into local authority sewers. Under the Public Health Acts of 1936 and 1937, the local authority is obliged to accept trade effluents, but it may impose conditions as to chemical and physical quality. Local authority regulation of trade effluent to sewers receives little publicity, but it forms the greatest part of water pollution control in Britain. Since some pollutants—some heavy metals, for example—can poison the microflora which degrade sewage in treatment plants, unexpected contamination can cause the sewage works to discharge virtually raw sewage through its outfall into the river.

The publication of consent conditions, or of the results of samples of trade effluent, does not appear to be specifically forbidden by the Public Health Acts. However, such details are normally kept secret, and section 287 of the 1936 Act is usually held to justify this; it threatens three months' imprisonment if a local official "discloses to any person any information obtained by him in the factory, workshop or workplace with regard to any manufacturing process or trade secret . . .". As Kenneth Tyler of the Association of Public Health Inspectors put it to me: "an inspector would be a very unwise man if he started releasing details of individual discharges to sewers."

What justification is advanced for keeping secret all details of discharges into public rivers and public sewers? A CBI spokesman told me that "it would be possible for a competitor to gain useful information from an effluent", and the Chemical Industries Association, somewhat more pompously, claimed that since Britain made her way in the world by technological innovation, secrecy was essential. It is indeed conceivable that an analysis of a works effluent could give a competitor a clue to the vital catalyst in a new process, and it is also true that not all processes are protected by patents. There are still a few trades—dyestuffs and textiles, for example—where idiosyncratic recipes still play an important if declining part.

In practice, though, the notion of industrial secrets leaking away down the plughole is regarded as ludicrous by most chemists. Plants usually have only one outfall, which drains dozens of separate processes, and a firm anxious to protect itself could so treat or mix its effluent that it became unrecognisable. In any case, a competitor wanting details of a rival's waste is more likely to row stealthily upriver on a dark night, and take a sample for himself, than to rely on the meagre information recorded in a local authority's books. Privately, even the CBI will admit that secrecy cannot be justified on these grounds. The bigger chemical companies also recognise this, and currently favour a policy of relative frankness. Shell, for example, "do not believe that disclosure of the nature of our effluents



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would give any useful information to our competitors". Clandestine pollution control benefits nobody but the polluters.

Fortunately, there will be an opportunity to alter the present hush-hush situation in the very near future. The government is committed to replacing river authorities with 10 different regional water authorities (RWAs), which will control all aspects of pollution and water supply within their areas, including sewage treatment. This means that the RWAs will both operate sewage works and regulate river pollution; under present legislation this would mean that they were policing themselves in total secret. Industry would be unlikely to tolerate this: it is already resentful at being painted as a major polluter, when in fact the worst culprits on most rivers are the sewage works. A bill to set up the RWAs, now being drafted at the Department of the Environment, will probably contain provisions requiring all consents registers to be open to the public, and insisting that all effluents are regularly sampled at the point of discharge and the results made publicly available. Since the RWAs will also control the release of trade effluents to sewers, the same procedure could easily be followed there.

The atmosphere

So much for water. What is the situation in the atmosphere? Somewhat paradoxically, while the river authorities tend to resent being legally gagged, the Alkali Inspectorate, which suffers from no such statutory constraints, voluntarily chooses to remain mute. The inspectorate deals with a long list of "scheduled" industries: those which are considered to emit especially dangerous forms of air pollution. In contrast to all the other acts dealing with pollution, the Alkali etc Works Regulation Act 1906 threatens the inspectors with no dire penalties if they disclose any trade secrets they pick up in the course of their work. The sole legal justification for the almost legendary tight lips of the Alkali Inspectorate is section 12 of the 1906 Act, which requires that "the owner of any (scheduled) work shall, on the demand of the chief inspector, furnish him within a reasonable time with a sketch plan, to be kept secret, of those parts of such work in which any process causing the evolution of any noxious or offensive gas . . . is carried on." The Act does not specify that disclosing such a secret sketch is an offence, nor does it mention secrecy with regard to any information the inspector may pick up for himself, nor does it require him to keep quiet about any samples he may analyse.

The liberal nature of the 1906 Act, under which the Alkali Inspectorate still operates, is hard to square with its obsessive refusal to explain to the public what it is doing. Scheduled industries are required to use the "best practicable means" to prevent or minimise the escape of harmful air pollutants. Sometimes the inspectorate makes known, in its annual report, the emission levels or the precise process which it considers constitutes the best practicable means. More often,

these facts are not released to the public.

After consulting privily with an individual polluter, and often with an industrial research association as well, the Alkali Inspectorate indicates to a company what it is prepared to accept as the best practicable means. Frequently, where a small or only marginally profitable firm is concerned, the inspectorate lays down a time limit within which a required standard must be reached. Again, these are rarely allowed to become public knowledge.

The most absurd situation regards monitoring. The inspectorate itself does not have the funds to undertake this work very often, nor does it have the power to impose charges on industry to pay for it. So the inspectors often require a polluter to install monitoring equipment, either on the chimney itself, or at ground level some distance away. As is the case in rivers, this equipment is the private property of the polluter—and so are the figures it produces. The polluter is on his honour not to cause pollution, and he supplies the information on which the inspectorate judges his performance. It is hardly surprising that recorded infractions of the Alkali Acts are rare (25 in 1970), and prosecutions are even rarer (2). The public has no means whatever of judging how accurately these figures represent the true situation.

Consider the London Brick Company, whose forest of chimneys between Bedford and the M1 emits sulphur dioxide, fluorine and a singularly nasty smell. The fluorine is locally believed to be responsible for dead and dying trees and corroded metal window frames; some years ago the company bought up a number of local farms because the cattle were suffering from the bone-disease fluorosis. The inspectorate requires London Brick to carry out a monitoring programme, and the 1970 Alkali Report commented that "ground level concentrations of sulphur and fluorine compounds continue to be satisfactorily low". But how low does the Alkali Inspectorate consider satisfactory? The Bedfordshire County Council is denied access to the figures, and as county planning officer Geoffrey Cowley put it to me recently: "Glorious ignorance isn't much good to us".

Essentially the same situation applies around the now notorious Rio Tinto-Zinc smelter at Avonmouth. Lead levels inside the plant are the concern of the Factory Inspectorate, about whose performance on this site it would be uncharitable to comment, but external emissions are the province of the Alkali Inspectorate. On 3 February, 1972, Peter Walker assured the Commons that there was no evidence health was being affected by base metal pollution of the atmosphere from RTZ. This reassuring conclusion was based on a monitoring programme carried out by RTZ itself, and reported to a joint committee of the Alkali Inspectorate and . . . RTZ.

Unlike London Brick, though, RTZ was willing to let the local authorities in on the secret, so the City of Bristol also sits on the committee. Originally invited—provided, of course, they promised not to publicise the facts—was the University of Bristol's Sabrina



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project, which is studying the overall pollution patterns of the Severn estuary. When Sabrina started to publish results indicating that Bristol industry was somewhat dirtier than it need be, the City Fathers and RTZ became highly indignant and forced Sabrina off the committee. This turned out to be a mistake: six days after Peter Walker's statement, two Sabrina scientists decided to report their own studies of environmental lead, which were in marked contrast to the official line of the Alkali Inspectorate and RTZ. Elm leaves near the plant contained the startling level 4 500 ppm of lead, compared with only 90 ppm six miles away. Sabrina was hurriedly invited back on to the RTZ committee, but it will still not be free to publicise any figures it may learn.

Lead smelting inquiry

As a result of the Avonmouth fiasco, an urgent Department of the Environment probe is taking place around every lead smelter in Britain. Nobody pretends that the results are reassuring, and there is a growing feeling in Whitehall that the Alkali Inspectorate must be strengthened—and made to publish more of its figures. The difficulty is that the inspectorate is an independent statutory body, making its own annual report to parliament, and not subject to any direct departmental control. So far, it has shown itself in public stubbornly insensitive to all criticism, and as a result, has suffered a growing and regrettable loss of public confidence.

Too often the inspectorate manoeuvres itself into the position of defending the big polluters, behaving more like a firm of hired consulting engineers than a government regulating agency. The unfortunate results of this approach are apparent in Anglesey, where a vast new aluminium smelter was opened last year. (Oddly enough, the Anglesey Aluminium Co is owned by RTZ: perhaps they are trying to corner the market in pollution as well as in national parks?) Aluminium smelting emits fluorine, and at the Alkali Inspectorate's request RTZ has been regularly sampling the local vegetation for fluorides. Unusually, the inspectorate has initiated its own monitoring programme as well. The results of both schemes, needless to say, are secret.

The Chief Alkali Inspector, F. E. Ireland, confirmed to me last week that this was indeed the case. "I am a great believer in informing the public", he added, "but not in giving them figures they can't interpret. You would get amateur environment experts and university scientists playing around with them. People can become scared of figures, they can get the wind up." In order to rule out such a possibility the latest (1970) Alkali Report carefully avoids numbers: "the average basic level of fluoride is low, but some high levels were obtained, especially in winter and spring." Could it be that the inspectorate is getting its halogens muddled up, and replacing fluorides with bromides?

The main risk from airborne fluoride is to livestock feeding on polluted grass, so not surprisingly Anglesey farmers are worried.

Mr R. J. Williams, county secretary of the Farmers' Union of Wales, has been trying for months to get at the fallout figures. "I'm not suggesting the results are phoney", he told me, "but why are they afraid of disclosing them?" Williams angrily contrasts the aluminium situation with pollution control at the nearby Wyddfa nuclear power station. There he sits on a local liaison committee, which is supplied with the results of two independent monitoring programmes, carried out by the CEBG and the Ministry of Agriculture; members of the committee are free to make public use of the figures. "I can't understand all these curies and tritium—but we've got experts who can. I'm quite happy on the Wyddfa: now I want the same attitude as regards fluoride. Aluminium production is only 30 per cent at present. What happens when they reach full capacity?"

Williams is not the only man who is worried. In recent weeks Anglesey County Council committees have twice turned down, by the chairman's casting vote alone, a proposal to set up an independent monitoring scheme. Chief Inspector Ireland is not convinced. "What evidence have you got for public concern?" he asked me. "A lot of this trouble is caused by one or two militants and agitators. The general public doesn't give a damn about figures."

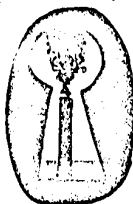
Unlike external emissions, pollution inside a plant is controlled by the Factory Inspectorate. As with the river authorities, factory inspectors are severely hampered by legal prohibitions. Under section 78 of the Factories Act 1961, an inspector is empowered to take samples of dust or air, but he is forbidden to disclose the result to anyone unless he is bringing a prosecution. While an employer who deliberately bolts his doors and refuses to allow a factory inspector inside his plant can only be fined £20 (section 147), an inspector can be gaoled for three months (section 154) if he discloses any information about a manufacturing process or trade secret. In other words, if an inspector tips off a trades union official about a dangerous situation he can be prosecuted for it.

In practice, this is not a serious loophole, if only because factory inspectors do not see liaison with shop stewards as part of their functions. Like their alkaline cousins, they sometimes appear to act more as management consultants than as public servants. At least, though, they have in the last few years introduced the dastardly and un-English practice of arriving unexpectedly and looking round the plant unannounced. They used to come by appointment only, which is still the normal procedure for Alkali Inspectors. Housewives around the infamous Carbon Black factory in Swansea, until a blockade forced the company to install something markedly better than the best practicable means (see New Scientist, vol 51, p 151), used to claim that the only time their washing wasn't filthy with smoke was when the Alkali Inspectorate was due for a visit.

A factory inspector's report goes to management alone: the idea that it should be shown to the workers who are at risk is



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regarded by the Department of Employment as somewhat preposterous. "It would be like going to the police, and asking what they had found out about Joe Bloggs when they interviewed him," a spokesman told me sternly. "Reports and samples are a matter between the inspector and management." Albert Blyton, legal secretary of the T & G, doesn't see it quite like that. "We want full consultation, and we've never had it. Shop stewards and convenors know the inspector has been in the plant, but they never see him."

Public servants gagged

This mania for preserving industrial secrecy, at the expense of public participation and at the risk of public safety, runs right through British pollution law and procedure. Section 26 of the Clean Air Act 1956 and section 59 of the Offices, Shops and Railway Premises Act 1963, for instance, both threaten local authority inspectors with three months' imprisonment for unauthorised disclosure of information. Of course, some such safeguard is clearly necessary, but it is intolerable that it should be so phrased as to gag a public servant from reporting to the public about genuine hazards of indoor and outdoor pollution. Last week I described a related situation in British procedures for approving pesticides ("The Vapona dossier", *New Scientist*, vol 53, page 489), and the same problem exists to some extent with drugs and food additives. A product can be passed for general sale on the basis of secret submissions by manufacturers. These facts are not published, and are therefore immune from the judgement and criticism of the scientific community.

River pollution, air pollution, factories, pesticides: what all these various procedures have in common is a contempt for the good sense of ordinary people, and the rooted dislike of administrators for submitting their decisions to the scrutiny of informed public opinion. If we were talking of something so relatively unimportant as the design of postage stamps or the route of a footpath, this paternalistic arrogance would perhaps not matter. But mistakes and errors of judgement in pollution control threaten the health and well-being of us all. The Avonmouth disaster, where over 100 workers were found with dangerously high blood lead levels, might never have happened if Alkali and Factory Inspectorate data had been made available to the Sabrina project. The Skeffington report urged that our planning laws and procedures should be overhauled to encourage public participation: some drastic changes in pollution control are equally urgent.

Without such reforms, there is a serious danger of a withdrawal of public confidence from the statutory authorities, the Alkali Inspectorate in particular. Indeed, there are disturbing signs that this has already begun to take place. Older amenity organisations such as the National Society for Clean Air remain strong supporters of the inspectorate, but they tend to reflect the attitudes and enthusiasms of a decade ago. The new eco-groups which are springing up all over the country, especially in the universities, are no

longer convinced by the bland reassurances of the alkali, river and factory inspectors. As Friends of the Earth director Graham Searle puts it: "Everyone says they're very good, but how can we tell if they don't publish any figures?"

The Conservation Society, the Friends of the Earth and other young eco-action clubs tend to start from the assumption that, as has proved to be the case in the USA, government pollution agencies are normally incompetent and hand-in-glove with industry. Personally, I believe this is far from the truth in the UK, but the behaviour of the Alkali Inspectorate in particular could not be better calculated to lend conviction to this transatlantic stereotype.

Pressure for change is also coming increasingly from the scientific community, especially from those whose research into pollution problems has been handicapped by official secrecy. Dr Norman Leigh of Manchester University, who has been leading a multi-disciplinary probe into pollution in the north-west, told a recent ASLIB conference that he doubted if confidentiality was necessary to its present extent, and Dr Kenneth Mellanby of Monks Wood told me: "all of these things would be better if everyone came clean."

Professor David Dineley, head of Bristol's Sabrina project, put it more strongly. "A few of us have had experience in the US, where all data gathered by public servants is publicly available. The need for secrecy is grossly overplayed here, and I can't see that any great harm would be done by disclosure. Some people's faces might be red, though."

As one pollution crisis has succeeded another, Whitehall sympathy for red faces has been evaporating rather fast. An intriguing solution now being considered at the highest level is the technical audit, a scheme suggested by Sir Frederick Warner, chairman of a committee of the Council of Scientific and Technical Institutes. All plants would have to issue an annual pollution report, detailing the precise levels of emissions to both air and water, as well as describing what happened to all the firm's waste. The attraction of Warner's scheme is that it would need only one parliamentary bill, while tightening the whole gamut of pollution law would involve amending dozens of existing acts. The technical audit would be signed by a firm of consulting engineers, who would have to certify that the best practicable means were being used to reduce pollution.

The Prime Minister has made many speeches about open government. The Secretary of State for the Environment has pledged himself to clean up our air, rivers, land and seas. If Heath and Walker mean what they say, let them freely invite the support and criticism of the scientific community, the voluntary amenity societies and the general public. Let them sweep away the system of schoolgirl honour which forces our pollution officials to behave like hired PR men of the polluters. The quality of the environment is not the private concern of government and industry, to be bargained away behind closed doors. Nanny does not always know best.

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