

Compliance with Pollution Control Permits in the Lower Fraser Valley, 1967-1981

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To an engineer, pollution control is an engineering process, one of applying appropriate treatment and recycling technologies to wasteloads of particular quality and quantity. To an ecologist, it is an ecological process — maintaining or improving water quality and protecting or rehabilitating aquatic life. It is thus in character that political scientist Mathew Holden has described pollution control as a political process, or one of “conflict leading to the distribution of advantages and disadvantages.”¹

In this context, the advantage enjoyed by polluters prior to government-mandated pollution control is that of imposing all of the costs of their waste disposal, in the form of contaminated water, onto other segments of the public which value cleaner water, like recreationists and commercial fishermen. The significance of pollution control legislation, in the interpretation of analysts like Holden, is that it strips polluters of this advantage, i.e., it forces them to dispose of wastes in a manner that reduces or prevents pollution. (Occasionally, pollution control does yield useful, marketable by-products that can offset or recover the cost of the installation, as with sulfur dioxide scrubbers producing sulfur, and sewage treatment by plants yielding a sludge that is dried and sold as fertilizer.) However, pollution control normally requires an investment that yields little monetary return to the waste discharger, which is precisely why it is not undertaken voluntarily. Most of the benefits, except perhaps improved public relations, accrue to other water users in the form of reduced pollution, so that profit-minded firms and budget-conscious municipalities often have every incentive to defer or avoid expenditures on pollution control.

Holden argues that because of the political and economic influence of many waste dischargers, pollution control agencies for the most part do not enforce “the letter of the law” over the opposition of unwilling dis-

¹ Mathew Holden Jr., “Pollution Control as a Bargaining Process: An Essay in Regulatory Decision-Making,” Cornell University Water Resources Center, Pub. No. 9, 1966, 53 pp.

chargers. Instead, these regulatory bodies engage in a process of bargaining or negotiation with regulated parties that usually results in a weaker level of pollution control than called for by official public policy. Then, in Holden's words, "there is a tendency to attribute this to the ethical deficiencies of the regulators, sometimes to their intellectual deficiencies, and often to what the critic believes an inappropriate organizational format."²

This typification bears striking resemblance to charges made in recent years by critics of government pollution control efforts in B.C.'s lower Fraser River:

... inaction by civil servants, the present inter-governmental referral system, the present Pollution Control Branch permit system, and inept enforcement on most violations are resulting in the failure to protect habitat and water quality along the Fraser ...³

There appears to be one unspoken reason why governments are not following through on their pledges to protect the estuary ... The will to enforce has apparently been sapped ...⁴

These were not isolated opinions. This author's impression, after a year and a half of closely following the issue, was that "informed citizens" generally believed the lower Fraser to be quite polluted as a result of undue lenience on the part of government towards polluters.⁵

The Fraser scarcely needs an introduction to British Columbians. Among other distinctions, it is an internationally significant salmon river, and valued highly by the public as such.⁶ The still free-flowing Fraser,

² Ibid., 10.

³ Written statement of the Fraser River Coalition accompanying their slide show "The Fraser Delta: An Estuary In Crisis," first exhibited publicly in November 1979. This production was shown widely over the lower mainland during the next couple of years, and generated a good deal of public and media support for the Coalition's position. The slide show was effective probably because it did not stop at general charges, but proceeded to graphically expose specific examples of alleged failures of government and industry to prevent pollution. The Fraser River Coalition consisted of a number of lower mainland civic and environmental groups and the United Fishermen and Allied Workers Union, all committed to preserving habitat and water quality along the lower Fraser.

⁴ *Vancouver Province*, 3 December 1979, editorial.

⁵ See also Mark Sproule-Jones, *The Real World of Pollution Control* (Vancouver: Westwater Research Centre, 1981).

⁶ See M. W. Meyer, *Recreational and Preservation Values Associated with the Salmon of the Fraser River*, Environment Canada Information Report Series No. PAC 74-1, 1974, 49 pp., and *Updated Estimates for Recreation and Preservation Values Associated with the Salmon and Steelhead of the Fraser River*, Fisheries and Environment Canada, 1978, 35 pp. These preliminary studies attempted to quantify values associated with the Fraser salmonid stocks to the public. They

with its large runs of Pacific salmonids, is perhaps symbolic of the natural wealth and enduring wildness of western Canada cherished by many.

It is not surprising, then, that many are concerned about the threat to the Fraser's water quality posed by the lower mainland's rapid growth in recent decades. In simple terms, more people and greater industrial activity generate more raw waste that requires disposal in some fashion. Responding to this concern, in 1967 the B.C. legislature passed the *Pollution Control Act*,⁷ which greatly expanded the provincial government's role in regulating point sources of water pollution over that provided by the earlier *Pollution-control Act* of 1956.⁸

The 1967 act was the foundation of government's pollution control program in the lower Fraser during the period of my investigation. Although most of the actual prosecution of alleged polluters along the river occurred under the federal *Fisheries Act*,⁹ federal officials largely played only an advisory role in determining the levels of waste treatment to be required of dischargers. These levels were specified in permits issued by the provincial Waste Management Branch (WMB).¹⁰ The *Pollution Control Act* prohibited any "discharge of effluent or other waste material

showed mean annual "preservation values" ("value over and above that associated with recreational or aesthetic use of a resource") of \$526 and \$225 per Prince George and Vancouver household, and median household values of \$100 and \$50, respectively. Meyer concluded: "... it is clear that the residents of the Fraser River do not wish to lose any further salmon and steelhead from their river. Rather, they have a strong desire to see stocks built up to greater levels of abundance. When considering the interests of their children, this sentiment intensifies." (*Updated Estimates*, 19)

⁷ RSBC 1979, c. 332.

⁸ "Point sources" vent pollutants to the aquatic environment via discrete outlets, e.g., a sewage plant with an underwater pipe discharging treated effluent into the Fraser. "Non-point" pollution, in contrast, is not funnelled into water bodies at a limited number of specific points; it originates from numerous dispersed sources and is largely a function of land use patterns in a watershed. Urban runoff, agricultural drainage, and man-made erosion are all non-point sources. In general, non-point pollution is considered less amenable to control not only because of the costly, extensive measures that would be necessary, but also the co-operation required between pollution control agencies, numerous property owners, and land use authorities. Thus, B.C.'s regulators, like those elsewhere, have almost exclusively targetted point sources in their water pollution control efforts.

⁹ RSC 1970, c. 14. This act can and has been used in court by provincial authorities as well.

¹⁰ The present WMB is a successor to the Pollution Control Branch (PCB). This agency was formally established by the 1967 act, and was originally situated in the now-defunct B.C. Water Resources Services. Reorganization placed it in the Ministry of Environment. In 1979 the PCB was divided into the Air Management Branch and the Waste Management Branch, the latter having jurisdiction over solid waste disposal and the related problem of water pollution control.

on, or in or under land or into water without a permit" (s. 4). In 1982 the *Pollution Control Act* was repealed and superseded by the *Waste Management Act*,¹¹ which substantially, but not fundamentally, modified the province's pollution control apparatus.¹²

The remainder of this paper will examine the contentious subject of compliance with pollution control permits from 1967 to 1981, the first fifteen years under B.C.'s regulatory regime. The record will be set forth as objectively as possible and an attempt made to describe and interpret (some would say apologize for) the behaviour observed. In 1980, in response to growing criticism of provincial pollution control efforts, the Social Credit government initiated a well-publicized crackdown on suspected polluters of the lower Fraser. This move will be placed in context. The primary source data for the study were WMB files for thirteen point source discharges which the author received special permission to examine. The files were located at the WMB central office in Victoria and the Lower Mainland Regional Office in Surrey. Each contained: the permit itself and an accompanying "Letter of Transmittal," which prescribed conditions to be met by the permit-holder; correspondence between agencies, between the permittee and the WMB, and from the public; WMB memos to file and technical evaluations of the discharge and options for its control; notes of meetings, phone calls and site inspections; and monitoring data. The thirteen files were not randomly selected, but were chosen to represent a cross-section of discharges found in the Fraser. Ten were effluent permits; three were refuse permits (for landfills). Ten were private facilities; three were public. Municipal sewage, wood processing, food processing and metal processing effluents were all represented, as were small, medium and large volume dischargers. The files provided an indispensable insight into the "real world" of pollution control.

A. Setting Permit Conditions

Each permittee was legally bound by certain terms and conditions. Some took the form of limits, such as to the volume of a discharge or concentrations of various pollutants in it. Others took the form of instructions: to utilize certain pollution control devices or treatments, to monitor effluent at designated time intervals and report the results to the WMB, possibly to make improvements according to a specified timetable, and so

¹¹ SBC 1982, c. 41.

¹² B. J. Barton, R. T. Franson and A. R. Thompson, *A Contract Model for Pollution Control* (Vancouver: Westwater Research Centre, 1984), 100 pp.

on. Because hundreds of unregulated discharges existed prior to the 1967 act, the WMB spent some years simply bringing them under permit. Anyone initiating waste disposal after 1970 was expected to apply for a permit from the WMB and be issued one before any discharge into water or disposal onto land actually commenced. Copies of the permit application were circulated to other government agencies, posted on site, and printed in the *B.C. Gazette* and two local newspapers. If another agency or member of the public opposed the application in whole or part, the WMB was required to consider the objection in deciding which conditions to impose or whether to issue the permit at all.

The administrative procedures developed under the 1967 act did not dictate identical waste treatment standards for each and every permittee regardless of circumstances. There was, for example, no uniform requirement that all municipal sewage discharge permits not exceed 45 mg/l BOD and 60 mg/l SS,¹³ the equivalent of secondary treatment. Instead, the WMB evaluated each permit application individually.¹⁴ If the water body into which a wasteload would be discharged was judged large enough to assimilate it without significant degradation, or if a discharger could convincingly plead inability to finance waste treatment facilities, allowances could be made. Although empowered by statute to do so, the WMB rarely if ever shut down an operation anywhere in the province that was unable or unwilling to meet its pollution abatement obligations.¹⁵ Some means of reaching an accommodation was always found.

¹³ Mg/l stands for milligrams per litre, a widely used measure of concentration. BOD (Biochemical Oxygen Demand) and SS (Suspended Solids) are two measures or parameters of effluent and water quality. The former indicates how much dissolved oxygen will be consumed in breaking down an organic wasteload; the latter is a measure of the concentration of fine matter in suspension.

¹⁴ Lending a certain uniformity to the evaluation process were the so-called "pollution control objectives," five sets of which were promulgated in the 1970s for different categories of waste dischargers in the province. Objectives were established by industry for each major effluent quality parameter, such as BOD, SS, oil and grease, temperature, dissolved organic compounds, heavy metals and others. As the name implies, objectives served as effluent quality targets which guided the WMB in reviewing permit applications. They were not legally binding standards as the limits on permits are, but a permit applicant had to argue persuasively when requesting permit conditions that fell short of the relevant objectives.

The pollution control objectives emerged from public inquiries at which both public interest groups and affected dischargers could participate (although the technical nature and lengthiness of the hearings tended to discourage all but specialists). These inquiries were also the scene of discussions between dischargers and regulators over appropriate control measures. See L. Kolankiewicz, "Implementation of British Columbia's Pollution Control Act, 1967, in the Lower Fraser River" (M.Sc. thesis, UBC, 1981) for a discussion of how objectives were set.

¹⁵ The author never discovered any prominent instance of such in the course of this investigation.

This flexibility often led to negotiation, as permit applicants sought the best deals they could wrest from the WMB. It seems plausible that the bargaining strength or pertinacity of a waste discharger could influence the permit conditions eventually granted.¹⁶ A specific example offers material for speculation. In 1971 the Pollution Control Board¹⁷ issued a new policy calling for secondary treatment of municipal sewage along the lower Fraser. (This produces a cleaner effluent than primary treatment, but at a stiffer price.) A 1977 internal WMB memo disclosed that all municipal sewage permits granted after 1971 did indeed require secondary treatment, but for one major exception — the Annacis Island plant of the Greater Vancouver Sewerage and Drainage District (GVSD). The GVSD happened to be by far the largest and most powerful of these municipal agencies requesting a permit.

Another example, also drawn from WMB files,¹⁸ confirms the considerable influence waste dischargers in B.C. have wielded at times in negotiating the terms of their permits. On 16 February 1977, VenDev Enterprises Ltd. applied for a permit to place fill and refuse on a site beside a small salmon-bearing stream in Coquitlam. Included in the fill was hogfuel (wood waste), which generates a leachate highly toxic to aquatic life under moist conditions. The application stated in part: "No fill will be placed within 50 ft. of any existing watercourse. . . ." It was circulated according to standard procedure. Noting the fifty-foot clause, the planning director of Coquitlam stated in his written reply: ". . . we would expect the 50 foot leave strip to be protected." The B.C. Fish and Wildlife Branch displayed concern that the operation would "adversely affect the quality of fisheries habitat present in Schoolhouse Creek through direct encroachment of the dump and the introduction of hog fuel leach-

¹⁶ See A. R. Thompson, *Environmental Regulation in Canada: An Assessment of the Regulatory Process* (Vancouver: Westwater Research Centre, 1980). Thompson notes: "In the bargaining situation, the group having the greatest power will be likely to dominate the proceedings and control the decision-making," p. 50.

¹⁷ The Board, an entity distinct from the Pollution Control Branch, was originally set up by the *Pollution-control Act* of 1956, and renewed by the 1967 act. It was a policy-setting and appeal body composed of civil servants and members of the public appointed by cabinet. In 1982 the Pollution Control Board became the Environmental Appeal Board.

¹⁸ In 1980, while preparing a master's thesis at UBC, the author received permission from the provincial government to examine WMB files on thirteen pollution control permit-holders. Files were chosen to represent a variety of waste dischargers: large and small, industrial and municipal, effluent and refuse. The forest products, food and metals processing industries were all represented, as were sewage treatment plants. The quotations cited were all obtained from notes, memos and letters observed in these files, which were located in the WMB's central office in Victoria and lower mainland regional office in Surrey.

ate into the water.” They also requested that the applicant clean up material that they claimed had *already* been deposited within the fifty-foot leavestrip without a permit. The federal Environmental Protection Service (EPS), representing several federal agencies, recommended that a permit not be issued at all and that VenDev should be made to clean up any existing fill.

These objections led to a meeting between all parties in July 1977, the outcome of which was that the federal agencies would study the situation in more detail and submit their findings and recommendations “as soon as possible.” These came forth in early September; concerning leavestrips, they stated: “The physical integrity of Laurentian and Schoolhouse Creeks . . . must be maintained. To maintain these streams, no fill should be placed within 50 feet of each stream channel.”

In late September, WMB staff met alone with VenDev to discuss these recommendations. In attendance was the Vice-President and General Manager of VenDev, a forceful personality judging from WMB’s notes of the meeting. The company wished to revise its application: “VanDev would like to be permitted to fill . . . to within 5 feet of the waterways but could live with a wider leavestrip, if such is required.” The WMB notes concluded: “We assured [the two VenDev representatives] that we would expedite the processing of the company’s application as much as possible.” One week later, WMB informed EPS: “We feel . . . that the second guideline, wherein you indicated that no fill (inert or otherwise) should be placed within 50 ft. of each stream channel, is too restrictive. It is our opinion that inert fill, properly diked, can be used to within five feet. . . .”

On 13 October 1977, two and a half weeks after this memo, WMB granted VenDev a permit with the five-foot leavestrip. Ultimately, after continued protests by the B.C. Fish and Wildlife Branch and EPS, WMB amended the permit to establish a thirty-foot leavestrip. Thus, the final width could be construed as a compromise — midway between what the environmental protection agencies and the applicant each preferred — except that this compromise was reached only by additional effort on the part of these agencies. The original five-foot leavestrip granted by the WMB favoured the applicant against the clear recommendations of at least four government agencies.

It should not be inferred that this case necessarily typified a “pro-industry” posture on the part of the WMB. It is recounted here rather to show that all waste dischargers did not just passively accept terms imposed by omnipotent regulatory authorities. Instead, in keeping with

Holden's ideas and more recent Canadian studies,¹⁹ many actively (and successfully) pressed their cases, exploiting various tactics²⁰ to achieve "better" permits, which from their perspective, of course, were those least costly or burdensome to comply with. Unfortunately, a permit allowing less costly waste treatment or fewer environmental safeguards usually entailed more pollution as well.

B. Compliance with Permits

An issued permit enabled its holder to legally discard wastes of specified quantity and composition into the environment. In exchange for official sanction to dispose of substances that might damage provincial waters, the permittee agreed to meet a number of terms which had the force of law. This section summarizes compliance with these permit requirements.

Two types of requirements—procedural and substantive—can be differentiated. The procedural requirement examined here is effluent monitoring. Permittees were required to sample their discharges at specified intervals, have the samples analyzed for designated pollutants by a certified laboratory, and submit the results to the WMB. This enabled the WMB to determine compliance with the substantive requirements—the actual limits on pollutants. Unless the permittee complied with the effluent monitoring requirement, the WMB could not, in short, ascer-

¹⁹ A. H. J. Dorsey, M. W. McPhee and S. Sydneysmith, *Salmon Protection in the B.C. Coastal Forest Industry: Environmental Regulation as a Bargaining Process* (Vancouver: Westwater Research Centre, 1980), 373 pp.; A. R. Thompson, *Environmental Regulation in Canada*. These reports were prepared by the UBC Westwater Research Centre for the Economic Council of Canada as part of a larger study of the impact of environmental regulation on the Canadian economy. They reveal the significant extent to which environmental regulation in Canada is characterized by bargaining between regulator and regulatee. The Thompson paper also points out the deficiency of a "command/penalty" model of law in understanding and assessing environmental regulation. In his view this model is more applicable to cases of criminal wrongdoing than to regulation of pollution, surrounded as it is by unresolved, complex economic, political and scientific issues.

²⁰ The tactics revealed in file correspondence included pleading ignorance of the need for a permit, claiming financial hardship, threatening to close down a plant or lay off workers, denying that the waste discharge caused significant pollution, or simply ignoring the WMB until the threat of legal action was invoked. Another tactic was to advance a project to a state that effectively foreclosed certain pollution control options, and then claim that it would be unfair or prohibitively expensive to backtrack. Still another was to sidestep the WMB and seek political support from office-holders or the community at large by emphasizing the importance of the operation to the local economy. The WMB, despite its assertions that it based decisions strictly on "technical" criteria—i.e., engineering and ecological considerations—was not immune to political pressures (nor would we expect it to be).

tain whether the permittee was illegally polluting the Fraser or a tributary, without conducting its own spot checks.²¹

1. Monitoring

Compliance with monitoring requirements was inconsistent. Of seven files examined in depth for monitoring performance, compliance was good in two, where the permittees sampled their effluent according to outlined procedures and submitted results punctually. In two others it was poor, where the permittees submitted incomplete data and then only when demanded repeatedly by the WMB. In the remaining three it was mixed or unclear. There was some evidence that performance overall was improving with time.

Extensive monitoring data were also presented in two reports of the comprehensive Fraser River Estuary Study (FRES).²² Judging from these, monitoring at the three largest GVSDD municipal sewage treatment plants (Iona, Annacis, Lulu) complied well with requirements. Data on the proper parameters were supplied to the WMB on schedule. Monitoring of industrial effluents appeared to vary by industry, with forest, metal and cement industries generally showing good compliance. It may be that what qualified as good compliance in the FRES *Industrial Effluents Report* does not pass for such in this author's estimation. In the case of at least one permittee whose file I studied in detail and whose compliance I labelled "poor" (because of persistent negligence in supplying required data), there was no indication at all of unsatisfactory performance.

2. Effluent limits

Compliance with effluent limits (the substantive requirements) was also mixed. In my detailed case studies, of the six effluent discharges that can be evaluated, one was in perfect compliance; on every sample taken, each parameter was always within the limits specified by the permit.

²¹ WMB technicians occasionally took "grab samples" during plant inspections to obtain the WMB's own analysis of effluent quality. This provided some check against the possibility of intentional or unintentional flaws in the permittee's sampling technique leading to biased samples. But when effluent quality is variable, a grab sample, which consists of but a single scoop, will probably be unrepresentative as well.

²² R. T. Cain and L. G. Swain, *Fraser River Estuary Study Water Quality Background Report — Municipal Effluents* (Victoria, 1980), 101 pp.; L. G. Swain, *Fraser River Estuary Study Water Quality Background Report — Industrial Effluents* (Victoria, 1981), 195 pp.

Another was generally in compliance — one parameter did not always conform to its permit limit, but the others did. Two other discharges were consistently well out of compliance on more than one parameter. For the remaining two it was impossible to evaluate compliance because of insufficient monitoring data submitted by the permittees.

In my own analysis of monitoring data tabulated industry by industry in the FRES *Industrial Effluents Report*, about 60 percent of all parameters in the aggregate were generally in compliance. However, this figure depends on a liberal definition of the term. If a tighter one is used — that is, if compliance for a parameter is considered to be achieved only when the permit limit was not exceeded in a single sample — then less than 10 percent of all parameters complied. The various industries along the Fraser — forest, metals, cement, food and other miscellaneous — were roughly similar in their levels of compliance with permit conditions. The GVSDD's sewage treatment plants complied well with their permit limits for suspended solids, but exceeded the limits for BOD about 50 percent of the time.²³

In a few cases, non-compliance stemmed from permittees simply not installing the necessary pollution control works. Permit effluent limits were often set precisely at levels a given familiar technology was known to be capable of delivering. In one file reviewed by this author, the manager of a fish packing plant disconnected a pollution control device that was necessary to meet his permit effluent limits. He claimed it was too costly, generated a sludge that he was unable to dispose of, and did not significantly improve water quality. He requested and eventually received a revised permit with relaxed limits corresponding to effluent levels attainable without the device. In most cases of non-compliance, however, control works had been installed but performed below rating. The usual causes of this were operator inexperience, inadequate maintenance, inherently delicate machinery and processes, and overloading. The last cause was known to be responsible for some of the trouble GVSDD sewage treatment plants had in meeting their limits.²⁴

C. Perception of Compliance

Two types of compliance are discernible. The first, discussed above, is conformity with literal permit specifications, or "the letter of the law." The second is what passes for tolerable performance, or "reasonable com-

²³ FRES Water Quality Work Group, *Summary Report* (Victoria, 1979), 176 pp.

²⁴ *Ibid.*

pliance," to the regulatory agency. It is this second type that an uncooperative discharger would hypothetically be interested in (what he can "get away with"). Rankin and Finkle²⁵ have called it the "real rule." The public, in general, is most concerned with minimizing any discrepancy between the two types of compliance.

An example of how compliance can be interpreted differently is furnished by VenDev Enterprises Ltd., the Coquitlam landfilling operation discussed earlier. What follows is a chronology of WMB and EPS comments selected from site inspection reports, memos, and correspondence on file with the WMB. It will be recalled that VenDev was eventually issued a permit late in 1977 and that EPS was a federal environmental protection agency originally opposed to the application.

- WMB site inspection, 23 February 1978: "The leachate from VenDev is getting worse, possibly due to a high groundwater level at the present."
- EPS site inspections, February, March, April: "... permit conditions were being violated and ... leachate generation was getting worse."
- WMB letter of May 25 to VanDev advising them of "... severe deficiencies in operation and variations from the intent of the Permit." Six corrective steps requiring "immediate action" are listed.
- EPS memo of June 8 to WMB: "... we do not consider the above site to be managed in accordance with the WMB permit. Furthermore, leachate from this site ... has killed fish under laboratory conditions in fifteen minutes demonstrating a clear violation ... of the Fisheries Act."
- WMB site inspection of June 8, "... showed it to be essentially a well operated demolition disposal facility. Work had been done along the Schoolhouse Creek which showed very little evidence of leachate ..."
- WMB memo to file of June 20: "The Permittee has at all times been most co-operative in implementing directives from this office."
- EPS site inspection of October 11: "VenDev ... still violating permit conditions and ... not building the required dykes."
- EPS site inspection of 9 April 1979: "Leachate from dump is entering stream ... toxic to fish in 57 minutes."

²⁵ M. Rankin and P. Finkle, "The Enforcement of Environmental Law: Taking the Environment Seriously," *U.B.C. Law Review* 17(1)(1983): 35-57.

— WMB memo to file of June 21: "The conditions of the Permit . . . have not been met at all times, however for practical purposes the intent of the permit has essentially been satisfied. This has taken constant surveillance and, as is documented, directives from this office to attain.

"We do not deny that the waters in Schoolhouse Creek and Laurentian Creek have suffered periodically from leachate and reports by our biologist in this regard are on file. We have taken steps to correct problems as they appeared.

"At the present time, the fill is being conducted in an acceptable manner and the requirements of the . . . Permit are being satisfied. Some leachate is necessarily entering the drainage works however the effect on the waters would not seem to be serious."

This example illustrates that the permittee's ostensible co-operativeness was a major criterion of "reasonable compliance." It also shows how differently EPS and WMB tended to view events. The WMB, though admitting that it took constant exertion on their part, professed satisfaction with both the effort by the permittee and the result (minimal pollution), at least to the extent of never threatening prosecution. EPS was dissatisfied with both effort and result. This outcome is not altogether surprising. The WMB, responsible for approving the terms of the permit and enforcing them, and thus answerable for any resulting pollution, could be expected to defend "its" permit as a reasonable compromise between environmental protection and its costs. To quote Rankin and Finkle: ". . . it is standard fare in practically all modern texts on public administration that regulators can and often do assume the same perspective as those whom they would regulate."²⁶ EPS, on the other hand, not having to bear final responsibility for any administrative action that would burden an enterprise contributing to the local economy, could afford to spotlight and agitate for the correction of any emerging environmental problems.²⁷

For the WMB in general, deciding what constituted reasonable compliance was in good part a subjective matter, influenced by non-technical considerations such as whether the permittee appeared to be acting in

²⁶ Ibid., p. 44.

²⁷ It is worth mentioning that a disgruntled member of the Fraser River Coalition brought charges himself against VenDev under section 33(2) of the federal *Fisheries Act* because he felt neither federal nor provincial governments would act (*R. v. Crown Zellerbach Properties Ltd.*, Prov. Ct. of B.C., Burnaby, Groberman, P.C.J.). On 20 February 1981 the defendant was found guilty and fined \$21,500. An appeal was later dismissed by the County Court of New Westminster.

good faith. One probable reason for this is the difficulty of establishing clear-cut damage to the aquatic environment from any one discharge; dramatic evidence such as a fish kill occurs only in extreme cases. Lacking unequivocal proof, WMB officials were perhaps guided more by surrogate factors such as permittee co-operativeness. The author's own experience in fisheries regulation attests to the strong psychological tendency to give the benefit of the doubt to regulatees who seem sincere in their efforts to comply.

Even when a discharge is clearly toxic, however — as the leachate in the case above proved to be in laboratory tests — the significance of the damage caused is a question regulators must still reckon with. Complying with the conditions imposed to preserve Schoolhouse Creek for salmon would presumably have cost the landfill operator both space and convenience. How important is one small salmon stream in an urbanizing region with a limited land base? This is the real issue, raised each time the developing lower mainland impinges on a new stream, but since it is a larger political question, the bureaucrats did not debate it. Instead, when justifying its decision not to demand greater measures of the operator, the WMB did so on the grounds that pollution from the landfill simply was not severe enough to warrant it, in effect repudiating ESP's formidable evidence to the contrary.

When dealing with a permittee seemingly acting in good faith and faced with concrete problems of his own, the pressure on the WMB to be "flexible" would indeed be strong.

D. Response to Non-Compliance

The WMB's response to cases of neglected monitoring was to contact permittees in writing anytime from several months to a year after a missed deadline and advise them that they were in violation of the law. If this failed, it appears that personnel from the WMB's lower mainland office would visit the operation and speak to the permittee in person. On several occasions in two of the files I reviewed, the permittee's response was that the effluent samples were at the lab or in the mail at that very moment, leading one to suspect that only the WMB's direct pressure led to any monitoring at all in these cases. Evidence from the files also suggests that smaller operations seemed to regard monitoring as a greater nuisance.²⁸ Though legal action was sometimes threatened by the WMB

²⁸ Proportionately, the expense and inconvenience would have been greater. Discussing salmon protection in the B.C. forest industry, a study noted likewise: "For the many small companies ... additional costs of protection will be a greater

in the worst cases, no permittee was ever prosecuted for violating monitoring requirements alone.²⁹

The WMB's approach to violations of substantive permit conditions was similar. According to one official, the procedure was to advise the permittee of the violation, demand to know what corrective action would be taken, possibly initiate court action if no co-operation was forthcoming and, in the most drastic cases, shut down an operation.³⁰ It has already been pointed out that the last step was rarely if ever invoked from 1967 to 1981. This official account also omits the numerous instances of long-standing violations with little or no corresponding initiative by either the WMB or permittee to correct them.³¹ Presumably this was because the violations were not considered significant or the prospect of persuading or coercing the permittee to comply was considered remote. Of course, it could also be due at least in part to the WMB's manpower being spread too thinly.

Whatever the reason, the WMB did tend to play down non-compliance, apparently sometimes even to the point of not recording violations in their own files. According to members of the seven-man Fraser River Task Force, who at the behest of B.C. Environment minister Stephen Rogers investigated pollution independently of the WMB for six months in 1980: "The teams would encounter major violations which were easily identifiable yet would observe no record of the non-compliances. . . . Three days after the team visited one site, two Waste Management Branch staff members visited the same site and reported no violations."³²

Although the *Pollution Control Act* provided penalties for convicted offenders (maximum fine of \$10,000 and one year imprisonment), until 1980 it was the unwritten policy of the provincial government to nego-

burden than for the larger integrated companies" (Dorcey *et al.*, *Salmon Protection and the B.C. Coastal Forest Industry*, xix).

²⁹ Hon. C. S. Rogers, B.C. Minister of Environment, in response to a question posed by Environment critic R. Skelly, listed all of the charges brought under the Pollution Control Act throughout the province between 1976 and 1980; none concerned monitoring. *Hansard*, 29 April 1980, 4-8.

³⁰ Written summary of WMB Assistant Director H. P. Klassen's oral reply to a query from a waste discharger in a 1974 meeting (recorded in a WMB memo).

³¹ A. Ackerman and B. Clapp, *Fraser River Task Force — Final Report*, 1980. Originally stamped "Confidential," this mimeographed report was leaked to the public in 1981 and later submitted to the Pearse Commission on Pacific Fisheries Policy.

³² *Ibid.*, p. 14.

tiate rather than litigate compliance.³³ Waste dischargers had long enjoyed almost unlimited use of the lower Fraser as a convenient receptacle for their unwanted by-products. Thus, it could be that WMB officials deemed a co-operative approach superior to a confrontational one in weaning them away from this privilege without provoking a backlash (although the foregoing evidence suggests permissiveness more than co-operativeness). It seems just as plausible, however, that this policy emanated directly from the minister's or premier's office, as did the 1980 decision to crack down on violators.

In those relatively few instances around the province when an alleged violator was actually charged and brought to trial, the results were generally disappointing. Convictions were obtained for less than half of the charges laid, and fines on those convictions ranged from a paltry \$10 to \$2,500.³⁴ In the 1980 case of *R. v. Vancouver Wharves Ltd.*, five separate charges dating as far back as 1975 were laid against the defendant. In her decision dismissing all five, Judge N. Morrison cited "legislation and procedures that leaves [*sic*] some gaping holes."³⁵

In a similar vein, Fraser River Task Force leaders, who utilized the *Pollution Control Act* in 1980, commented that "many of the Pollution Control Permits were written in ambiguous or vague terms. . . . This often made enforcement of these documents difficult."³⁶ Indeed, although the task force members and Crown prosecutors had learned from the Crown's prior experience with the act in court and felt they had very strong cases, their record seems rather unimpressive. Forty suspected violators were investigated in 1980, and seventeen of them were charged on fifty-two counts. By March 1982, more than two years after investigations began, the courts had reached decisions in twelve cases; convictions were obtained in just six. Penalties ranged from fourteen days' probation to a fine of \$7,500.³⁷ Given the considerable time and expense of legal proceedings, these modest results certainly call into question the value of prosecution as an enforcement tool.

³³ M. H. Sproule-Jones and K. G. Peterson, "Pollution Control in the Lower Fraser: Who's in Charge?" in A. H. J. Dorsey (ed.), *The Uncertain Future of the Lower Fraser* (Vancouver: UBC Press, 1976), 151-74.

³⁴ Hon. C. S. Rogers, *Hansard*, 29 April 1980. The mean fine was \$492, median \$250.

³⁵ Prov. Ct. of B.C., North Vancouver, no. 4023, 27 May 1980.

³⁶ Ackerman and Clapp, *Final Report*, 13.

³⁷ Letters of 16 October and 24 March 1981 from Fraser River Task Force leader Andy Ackerman to the author.

But we should not infer prematurely that B.C. experiences unusual difficulty in prosecuting polluters. Commenting on the situation in Canada as a whole, two scholars note: "Legal proceedings, of course, are not the chief goal of a compliance programme. The results in court are too costly, time consuming and unpredictable to produce effective, cohesive environmental regulation."³⁸ In the United States the situation is similar, judging from the remarks of a former high official in the Environmental Protection Agency:

Regulatory law enforcement, from the time that a violation is detected onward, is a mess. If an agency is lucky enough to detect a violation, it is often able to do little more. If jawboning fails to induce compliance, regulators must either give up or litigate, and litigation is uncertain, slow, and costly. . . . Especially in criminal penalties, it is often hard for the agency to present an adequately rigorous case.³⁹

It would be a mistake, though, to wholly dismiss prosecution on the basis of its limited success in achieving convictions. Most waste dischargers are already preoccupied with their own business; the cost, aggravation and social stigma of being dragged to court probably make them as eager to avoid it as the regulators are. "We have turned off a lot of taps," claimed the Fraser River Task Force's leader,⁴⁰ and one WMB inspector at least conceded privately to the author that during the task force's investigations permittees seemed more anxious to comply, now that the threat of prosecution was to be taken seriously.

The need for stronger measures to make polluters more amenable is not confined to British Columbia. Dewees notes that securing compliance is frequently cited as the most serious problem facing environmental authorities in Canada.⁴¹ Reviewing studies of the Canadian pulp and paper and non-ferrous industries, Thompson observes that "the present system does not bring sufficient weight to bear on industry to make the necessary investment in pollution control. . . ." ⁴² A credible "stick," as Rankin and Finkle call it,⁴³ would seem indispensable to establishing and maintaining authority over polluters. Only then would minimal use of

³⁸ Rankin and Finkle, "Enforcement of Environmental Law," 50.

³⁹ William Drayton, "Economic Law Enforcement," *The Harvard Environmental Law Review* 4(1) (1980): 1.

⁴⁰ *Burnaby Today*, 8 July 1980, 1.

⁴¹ D. N. Dewees, *Evaluation of Policies for Regulating Environmental Pollution* (Vancouver: Westwater Research Centre, 1980).

⁴² Thompson, *Environmental Regulation in Canada*, 46.

⁴³ Rankin and Finkle, "Enforcement of Environmental Law," 48.

prosecution indicate an effective regulatory system rather than an impotent one.

E. Interpretation and Discussion

This paper has aimed to demonstrate that in the lower Fraser, as elsewhere, pollution control is by no means a routine, apolitical exercise, where a regulatory agency "objectively" determines what technical controls will "properly" protect aquatic resources and then polices the river to ensure compliance. This notion presumes an omniscience and an omnipotence well beyond the abilities of government authorities.

What we observe instead generally corresponds to the ideas of Holden presented initially: the ostensible failure of a regulatory agency to fully execute its mandate to restrain polluters. From 1967 to 1981 there is abundant evidence of waste dischargers along the lower Fraser exerting considerable and perhaps excessive sway in shaping their pollution control permits, of not complying with the terms of those permits, of degrading water quality and of successfully fending off government challenges in law courts. What factors account for these phenomena?

First, it must be recognized that a distinction exists between pollution control permit violations and crimes of a purely malicious nature, such as burglary. The former occur in the pursuit of what are widely considered legitimate (if not essential) economic aims — refining petroleum, processing seafood, preparing sites for development, and so forth — while the latter aim, self-enrichment by robbing others, has no such compensating virtues. Pollution, in the economist's parlance, is a negative externality: a socially undesirable side-effect of an economic activity. The economic activities that pollute are often those that provide employment, income and tax revenues to communities. The pulp mills, canneries and smelters of British Columbia are prime examples.

Attempts by government to compel industries like these to incur the cost of abating pollution must contend with two fundamental realities. The first is that an enterprise must stay profitable to remain in operation. Theoretically, the more stringent pollution control requirements are, the higher the cost of meeting them (generally), and the greater the risk to an enterprise's survival. Older plants, already hard pressed to compete with newer, more efficient facilities, are particularly at risk. Even if the owners of an operation that discharges waste personally value the public goal of clean water, it is still to their advantage to escape paying the bill themselves (the so-called "free-rider" effect); from an individual per-

spective, it is not "rational" to make unrecoverable expenditures on pollution control. Especially in competitive or marginal industries, it is unlikely that a sense of civic duty inspires more than a very few to instigate clean-up voluntarily.

The second reality is that their roles as economic providers give industries political leverage. When regulators insist that a plant clean up its discharge, a widely used tactic of industry is to assert that the expense of doing so will drive it out of business, costing the community jobs and income. If the industry plans to pass the cost of clean-up onto consumers, they too can sometimes be enlisted to protest the new measures.

The challenge facing a fledgling pollution control agency begins to assume more formidable proportions: it confronts powerful interests with long-entrenched privileges and potent financial incentives not to comply with the agency's goals.⁴⁴ Without a strong, sustained display of broad public commitment to vigorous anti-pollution measures, a law alone is not necessarily enough to give the agency the support it needs to rein in polluters. Dewees has pointed out that environmental legislation may include "symbolic measures intended to generate enthusiasm and approval from environmental advocates."⁴⁵ Thus, as others note, "politicians can curry favour at elections by pointing to ostensibly tough environmental legislation which has been passed."⁴⁶ Drafting and adopting the 1967 Pollution Control Act did not necessarily convey anything more than superficial support for certain vague ideals. It is easy to wax enthusiastic about clean water until the costs of cleansing it become tangible. A show of support for all to see in the legislative assembly does not automatically translate to vigorous anti-pollution efforts on the river itself, in a less visible setting.

By the late 1970s, however, there seemed to be a growing public consensus that degradation of the lower Fraser from pollution and habitat destruction was an urgent problem that demanded a serious government response. The joint federal-provincial Fraser River Estuary Study was set up to address these concerns. In November 1979 the Fraser River Coalition (an alliance of environmental groups) released its documentary audio-visual "The Fraser Delta: An Estuary in Crisis" to a receptive

⁴⁴ Public sector waste dischargers like the GVSDD may not have profit-related disincentives to curb pollution, but they do have budget constraints and they certainly possess political strength, as well as a basic motivation to minimize sewage treatment costs for their constituents. The GVSDD has actually proved one of the least tractable permittees with which the WMB must contend.

⁴⁵ Dewees, *Evaluation of Policies*, 18.

⁴⁶ Rankin and Finkle, "Enforcement of Environmental Law," 40.

news media and public. This dramatic exposé purported to document the failure of government bureaucracies to enforce existing laws that would stem abuse of the river by private industry and local municipalities. The documentary's numerous showings throughout the lower mainland and favourable reactions to its message attested to the general public's concern for the Fraser.

It is certainly no coincidence, then, that the following month Environment minister Stephen Rogers announced the creation of a Fraser River Task Force and directed it to investigate allegations that pollution violations were rampant along the lower Fraser. The seven members of this team belonged to the province's Conservation Officer Service, a department independent of the Waste Management Branch and previously best known for enforcing B.C.'s fish and game regulations. The task force's well-publicized six-month investigation confirmed accusations of widespread non-compliance and culminated in numerous charges brought against suspected polluters in court (described earlier in this paper). Mr. Rogers eventually appointed a more permanent team to continue stepped-up enforcement.

It is probably a good idea for the enforcement function to be carried out by a separate, specialized police force like the Conservation Officer Service, rather than by the administrators and engineers of the WMB, as formerly. WMB staff inevitably had personal contact with most waste dischargers or their consulting engineers. Together they inspected facilities, explored technical options for reducing discharges and negotiated mutually acceptable solutions. Business was conducted for the most part in private, with little or no outside scrutiny to assure accountability to the public interest. In situations like these, it may be all too easy for the agency to become "captured" by the party it regulates.⁴⁷ Dewees too speaks of the strong incentive regulators face to make the working relationship a "comfortable" one.⁴⁸ WMB engineers themselves may well frequently have lost sight of the subtle distinction between justifiably flexible and unduly lenient postures. WMB files contain many examples of a concession made to a permittee and then defended to EPS or other agencies as the only feasible alternative.

However, even when a discharger was clearly intransigent, and relations with the WMB were more antagonistic than co-operative, it is probable that at least two weak points still undermined any inclination to bring more force to bear on the errant discharger. The first was the

⁴⁷ Thompson, *Environmental Regulation in Canada*, 43.

⁴⁸ Dewees, *Evaluation of Policies*.

virtual impossibility of demonstrating unequivocable, significant damage to aquatic resources from any one discharge. Dorcey *et al.* observe:

... it is common to find in environmental regulation that it is more difficult and costly to develop information on the ecological impacts and benefits of environmental protection, relative to the difficulty and costs of developing estimates of the costs of protection measures.⁴⁹

Thus, the WMB lacked a solid case to counter the forceful claims of the discharger. Referring to situations characterized by this kind of uncertainty, Holden described the "difficulty the regulator has in laying down rules which he feels confident in enforcing or which are actually enforceable no matter how confident he feels."⁵⁰

The second source of impotence was the lack of a convincing weapon to coerce submission when gentler means of persuasion failed. Prosecution, with all its drawbacks, was probably as disagreeable a course of action for the WMB as for any polluter, and was rarely invoked, so threats of its use were largely empty bluffs. There was little hard incentive to comply.

As of 1980, however, prosecution is apparently no longer just an empty bluff. The Fraser River Task Force, the 1981 *Environmental Management Act*⁵¹ and the 1982 *Waste Management Act* suggest on the surface at least that British Columbia has entered a new era of intensified pollution control. Conservation officers, to whom primary responsibility for enforcement has been delegated, should not fall prey to those psychological forces promoting laxness because they will presumably have no need to develop a comfortable working relationship with permittees.

But it would be rash to hope that pollution will soon be a thing of the past. The New Democratic Party also initiated a vigorous enforcement program in 1972⁵² that did not survive. Budget austerity has curbed the WMB's resources, and in the political climate accompanying this time of acute economic hardship, it is safe to predict that B.C. officials will be cautious about even appearing to threaten already stressed industries. When the economy improves, so will the climate for strict enforcement, but at the same time discharges will increase as factories re-open or expand.

⁴⁹ Dorcey *et al.*, *Salmon Protection and the B.C. Forest Industry*, 144.

⁵⁰ Holden, "Pollution Control as a Bargaining Process," 31.

⁵¹ SBC, 1981, c. 14.

⁵² R. T. Franson and A. R. Lucas, "Environmental Decision-making in British Columbia," in P. S. Elder (ed.), *Environmental Management and Public Participation* (Toronto: Canadian Environmental Law Research Foundation, 1975), 84-99.

There are other trends that do not bode well. The growing problem of non-point sources of water pollution is not addressed at all by the permit system evaluated in this paper. And basic long-term ecological research on the Fraser Estuary, critical to providing the information regulators need to make intelligent decisions, was on the decline even before the recession.⁵³

There have been proposals in recent years⁵⁴ to strengthen pollution control regulation by replacing permits with contracts and criminal sanctions with civil remedies more appropriate to the circumstances (and thus more easily and effectively applied), and these merit careful consideration. But under any regime, clean water has its price. As the lower mainland grows, and the upper portion of the Fraser watershed develops apace, it is inevitable that more stringent and costly measures will be necessary to protect the Fraser as a great salmon river.

⁵³ Westwater Research Centre, "The Status of Fraser Estuary Research," unpub. manuscript, 14 pp.

⁵⁴ Barton *et al.*, *A Contract Model for Pollution Control*; Drayton, "Economic Law Enforcement."