

3456 Plymouth Road
Victoria, B.C. V8P 4X4
December 31, 2002

LETTER OF TRANSMITTAL

The Honourable Allan Rock, M.P., P.C.
Minister of Industry
11th Floor, East Tower
C.D. Howe Building
235 Queen Street
Ottawa ON K1A 0H5
Canada

Minister—

I have the honour to attach herewith the Report of the Triangle Mountain Antenna Towers Review that you requested of me, commissioned under Industry Canada contract number 5006595.

Respectfully,

Rod Dobell

A. R. Dobell
Emeritus Professor of Public Policy
University of Victoria

ACKNOWLEDGEMENTS AND DISCLAIMER

In the preparation of this report I have received extensive assistance from many people.

Jan Skora, Mélanie Robert, Rob Cepella, Bruce Drake and Penny Stratas of Industry Canada headquarters and regional staff provided extensive briefing and background information. Gary Paugh and Jim Laursen of the Industry Canada district office in Victoria were unfailingly cooperative and helpful in many requests for assistance with documentation.

Then-Mayor Beth Gibson of Colwood welcomed the review and was generous with her time, despite the claims on it of municipal campaigning. She organized the initial meetings with the City of Colwood Triangle Mountain Transmission Towers Citizens Committee and offered very helpful initial background and interpretation. Joseph Calenda, Bud Harding and Simon Lawrence of the City of Colwood administrative staff also provided important information and materials.

Nigel Giuliany, Ron Crawford and Hugh Bryce of the Citizens Committee offered access to all the results of their work over the previous two years, and maintained a strong interest in the progress of this review. I am particularly grateful to Nigel Giuliany, who made extraordinary efforts to prepare relevant background material in an accessible way, and to ensure that I understood fully the concerns and arguments that the Citizens Committee had been advancing. Though I have not accepted all of those arguments, it will be clear that they have been influential, and there is no question this review would have been much less complete without his help.

A number of residents agreed to interviews, and I am grateful to them for their willingness to take the time, and for the perspectives and background they offered.

Kim Hesketh and Dean Fox of Rogers Broadcasting took time out of busy schedules to meet me with me, as did Mel Cooper, Terry Spence and Bud Goes of Seacoast Communications. Rogers Wireless, through Mr. Jim Piers of Fasken-Martineau, submitted a brief in support of this review.

Finally, I should like to acknowledge the invaluable assistance of the Triangle Mountain Antenna Towers Review Steering Committee. At the invitation of the Honourable Allan Rock, Minister of Industry, three knowledgeable but disinterested Victoria-area people agreed to serve on a steering committee to advise me and, through their arms-length role in the review and drafting process, to ensure visibly the independence of this review. The three members of the Steering Committee are Ms. Colleen Flynn, Manager, Nelson Square Branch, Scotiabank; Mr. Keyvan Shojania, Partner, Windsor Law Group; and Professor Chris Tollefson, Faculty of Law, University of Victoria. They were generous with both their time and their ideas; I am sorry that the tight timetable for this work prevented my taking fuller advantage of their perspectives on the final form of this report.

While acknowledging with gratitude the cooperation, assistance and advice of all these people, I must insist that responsibility for the accuracy of any assertions of fact and any interpretations expressed in this document is mine alone. In particular, it must be emphasized that while the members of the Steering Committee have responded to my descriptions and offered comment on my analysis in rough draft form, neither that analysis nor any conclusions expressed here necessarily represents their views, or the views of their employers, in any way.

It should also be noted here that within the scope of this review and the time available, it has in many cases not been feasible to consult primary sources or original documents. Much of the chronology and narrative on which the analysis here relies was necessarily based on secondary accounts or constructed lists. Confirmation of this material will be essential in any future review.

TRIANGLE MOUNTAIN ANTENNA TOWERS REVIEW

EXECUTIVE SUMMARY

This review is asked to address two questions:

1. to determine whether the authorizations for the towers on Triangle Mountain in Colwood, B.C., were made in accordance with established Industry Canada regulations and procedures; and
2. to suggest recommendations for changes to the established Industry Canada procedures for consideration in the National Antenna Consultation process now announced.

The events leading up to this review are sketched in the first section of this report. Relevant features of Industry Canada legislation, regulation and procedures are reviewed in the second section. The essential point is that they rest on a rather intricate specialization and division of responsibilities, in which all parties involved have to understand and play their part if decisions emerging in a complex interplay of competing considerations are to be balanced and fair, and seen to be fair.

Reflecting the legislation under which it currently operates, the Spectrum Management Group, and Industry Canada in general, focus on the radiocommunications elements of applications for broadcasting certificates. The applications that proponents must submit for approval by Industry Canada are essentially technical briefs that emphasize the radiofrequency field characteristics of the proposed installations, and Industry Canada's own examination also emphasizes these radioengineering considerations, looking principally to three questions: impacts on the existing communications network, potential interference problems for residents, and potential health impacts. The first is a concern for Industry Canada as regulator for the industry, responsible for the allocation and utilization of the scarce resource that is the radio spectrum; the second is addressed (in retrospect) by Industry Canada insisting on the commitment of broadcasters to deal directly with any problems within a high power contour of the radiofrequency field; and the third is handled by insistence on strict compliance with Health Canada's Safety Code 6. Technical acceptance of an application is achieved when all of these considerations are successfully addressed and the applicant also can attest that aeronautical, environmental and land-use considerations have all been resolved through consultation with the relevant authorities in each case. Health and aeronautical standards are non-discretionary; environmental considerations meet the requirements of the Canadian Environmental Assessment Act for review where necessary; impacts on the existing system are concerns to be assessed directly by Industry Canada, while the remaining two dimensions, land-use concerns and residential interference problems, are delegated, in effect, to the broadcasters to handle through consultation with land-use authorities on the first, and a commitment to respond to all valid complaints of individual residents on the second. When Industry Canada finds the application technically acceptable, and the Canada Radio-Television and Telecommunications Commission (CRTC) concludes that the relevant market can support the proposed broadcasting undertaking, a broadcasting

license and broadcasting certificate are issued. Industry Canada is then responsible to ensure that the conditions of license are observed in subsequent operations—that is, that the radio transmissions are maintained within the approved parameters.

This description is perhaps a fair summary of the way the procedures are currently understood and interpreted within Industry Canada. What is important to emphasize, however, is that one significant element seems to have been lost in this interpretation. That is Industry Canada's positive duty to assess in its decision process the potential for interference problems and equipment malfunction difficulties to arise in residences located within the high-strength fields of FM transmissions, and to address that issue through consideration of alternative sites in which the population so affected would be lower. Within the Broadcasting Procedures and Regulations there seems to be an explicit such requirement that has somehow drifted off into an expectation that any concerns about siting will be raised by local authorities and resolved directly with applicants.

It is also worth noting here that the policy as outlined above, in effect, leaves Industry Canada dealing only indirectly with local authorities, and not at all with individual residents or the public, on land-use questions. It is explicitly assumed in Industry Canada policy that the municipal administration or land-use authority will represent the concerns of individual residents. This approach also leaves Industry Canada in the potentially awkward position of appearing indifferent to residents' concerns, having to advise them to deal directly with broadcasters, without assistance from Industry Canada, in resolution of any complaints about the impacts of installations approved by Industry Canada.

Against this backdrop, there is really no simple answer to the question whether Industry Canada failed to follow its own rules in the decision processes leading to approval of one new FM station operating with an existing station on a larger replacement tower, and of a second new FM station operating from a new independent tower, all on Triangle Mountain. I consider several dimensions separately.

Specifically, the City of Colwood Triangle Mountain Transmission Towers Citizens Committee (henceforth, the Citizens Committee) alleges failures in Industry Canada's performance in six respects, which will be addressed here in order of increasing complexity.

1. **Health concerns and Safety Code 6:** I find that Industry Canada rules and procedures were followed fully in respect of expressions of health concerns by residents, and compliance with Safety Code 6 standards was confirmed. The adequacy of those standards themselves is not an issue on which Industry Canada has any authority to rule.
2. **Structural integrity of towers and installed equipment:** Concerns about the absence of post-construction inspection call into question Industry Canada's existing policies, not departures from them. Replacement of the old tower on Triangle Mountain has resulted in an installation that is safer and offers greater structural integrity for residents who were permitted, and chose, to locate at or near the base of the old tower.

3. **Unauthorized installation by Rogers Wireless of cellular telephone antennae in advance of license:** There seems to be uncertainty about how Section 4.1 of the Radiocommunication Act should be read. Consequently it seems unclear whether explicit authority is necessary for mere installation of cellular telephone antennae, and thus whether Industry Canada's approval and enforcement responsibilities are confined to licensing and scrutiny of the operation of such equipment, or extend to a responsibility to approve proposed installations themselves. In the present case, since the company followed customary practice and installed equipment during final construction of a fully authorized structure, with no requirement either for zoning variance or building permits, I see no failure in Industry Canada's processes here. But one can see a need for greater clarity in the regulatory authority in this respect, and perhaps a need for greater notice and scrutiny in advance of any authority being granted for such installations.
4. **Failure of Industry Canada to take formal action to deal with electronic interference in nearby residences:** As noted above, Industry Canada policy rests on the explicit commitment of broadcasters, as a condition of license, to remedy valid complaints of interference from radio transmissions within the high-strength contour of those transmissions. Within the Radiocommunication Act and Radio Regulations there are provisions for the Minister to make a formal determination that Harmful Interference exists, and discretion for the Minister to issue orders to deal with it. But these provisions stem from the original government responsibility to ensure an orderly communications network, and apply principally to radio stations and equipment other than broadcasting undertakings, where, as just noted, the responsibility is deemed to rest directly with the broadcasters. Although regulations and policies have prescribed procedures for measuring interference problems and for making a formal determination of Harmful Interference for most sources of interference, apparently no such regulations have been developed for the case of FM broadcasting. The Citizens Committee seems to misinterpret the extent of the Minister's obligation—as distinct from discretion—to take action in the present case, and Industry Canada seems warranted in its position that any formal determination of Harmful Interference would be premature at this time (even though it is evident that harmful interference, according to the commonsense definition set out in the Radiocommunication Act, surely does result from the transmissions from Triangle Mountain, and constitutes a present nuisance for some residents). The responsibilities of Industry Canada in serving individual citizens in these problems do certainly need clarification in the further review of these issues, however.
5. **Alternatives analysis in the Industry Canada approvals process:** The previous question concerned measures to deal with interference problems resulting from approved broadcasting operations; the present question concerns anticipating the potential for such problems as part of the initial assessment of applications for broadcasting certificates. This is a matter for which Industry Canada is directly responsible, and the Broadcasting Procedures and Rules (BPR) seem to establish in all cases of an application for new or modified facilities for

broadcasting undertakings the requirement for an analysis of alternative sites designed to ensure that the population falling within the high field strength contours of a transmitting station will be minimal. Such an analysis was not carried out, either for the Rogers Broadcasting replacement tower proposal or, more strikingly, for the proposal for an independent Seacoast tower. This failure seems to me to constitute a departure from the procedures formally established for the Department, though it seems that Departmental practice may have drifted into resting all of this responsibility with respect to site selection on the requirement for consultation with local authorities. Such consultation is the final issue to be considered.

6. **Failures in notification and consultation of local authorities:** Arguably the serious failure in the processes of approval for the towers on Triangle Mountain lies in the absence of any public consultation and information exchange. A number of factors probably contributed to the absence of any such consultation. Strong competitive pressures and perhaps a desire to avoid delays associated with public consultation led the broadcasters to follow, without announcements or public notice, a very compressed timetable in the construction process and the final stages of the approvals process leading up to it. Notifications to municipalities were cryptic, and did not contain all the precise wording specified in the BPR, though I conclude that these departures in form were not material and not likely to have had any substantive consequences. In some cases, particularly that of the Municipality of Langford, notice was not given prior to construction, and this might have resulted in reduced public awareness and ultimately reduced public questioning of plans. Most importantly, the land-use authority directly concerned, the City of Colwood, perhaps through inexperience or perhaps through a perception that any objections would be futile and irrelevant to a decision lying solely within federal jurisdiction, did not respond to repeated opportunities for comment or other consultation. In the absence of any such comment, Industry Canada officials did not see any responsibility to go beyond the letter of their existing policy to insist themselves on public consultation, or on an explicit response from the land-use authority rather than a presumption of acquiescence based in non-response. The issue of building permits without any question was taken by the applicants as evidence of concurrence in their consultation processes. Unquestionably the notification and consultation process in this case failed to realize the intent of Industry Canada's policy, which is to ensure (as expressed in the Canada Gazette of June 16, 1990) that *local views on topics such as environmental and land use factors have a good opportunity to be heard and balanced against radiocommunication needs*. Responsibility for that failure must be attributed to several factors, as noted above, and in fact Industry Canada officials did follow their own rules in respect of the consultation process, with perhaps two exceptions. On the first, there was insufficient oversight to ensure that the broadcasters carried through precisely on their obligations to notify and consult; their letters were formally deficient, and their absence in some cases perhaps contributed to lack of adequate public awareness. More crucially, the judgment that the Seacoast application for an independent tower could be treated as a simple revision to a change in facilities, without requirement for public

consultation, seems open to challenge. But here again it must be remembered that the only discussion with residents (two residents) about this prospect had apparently resolved all expressed concerns, and at no stage did the local authorities raise objections in response to the letters of notification received.

Overall, then, from the one perspective, there was a clear failure to satisfy either the regulatory requirement for a full alternatives analysis or the policy intention of public consultation sufficient to ensure a full balancing of local views against claimed radiocommunications needs in the approval process. From the other perspective, a proposal to replace an existing 35 year old self-standing tower with a safer guyed structure carrying an improved antenna system promising reduced interference and the capacity to accommodate multiple stations on the single structure hardly seems, in the absence of any objection from the relevant land-use authority, to demand exhaustive analysis. The sudden and unanticipated shift to a proposal for an independent tower seems to pose significantly greater challenge, but again it must be remembered that from the professional radioengineering point of view that was the original *raison d'être* for the technical acceptance requirement, this revised proposal is essentially indistinguishable from the approved application that preceded it.

On the first question above, therefore, my conclusion is that the actions and decisions taken by Industry Canada officials did not depart in any material way from what appears to be the Department's existing interpretation of current policies and procedures prescribed in applicable legislation and regulations and present Industry Canada procedures and rules. Industry Canada officials did follow their own rules as they seem to be currently interpreted in the Department, and Industry Canada officials exercised their discretion in a manner that arguably is consistent with those interpretations of the rules. The authorizations for the towers on Triangle Mountain thus could be said to be in accord with established Industry Canada procedures at the time.

However, at the same time, it has to be said that the on-the-ground interpretations and discretion could have been exercised in a manner still consistent with Industry Canada's existing policies and rules but that would have led to a different—and perhaps preferable—outcome in respect of the towers. It could be argued that an excessively heavy reliance on a radio engineering perspective at the expense of more general concerns led to an inability by the Industry Canada officials involved in the approvals process to see—or at least give sufficient weight to—significant practical concerns that citizens legitimately might expect to figure more prominently in decisions on applications. One might question whether this conventional interpretation unduly fetters the discretion that Industry Canada officials should exercise in the general public interest in ruling on the technical acceptability of applications for new or modified tower installations.

In summary, therefore, perhaps the best overall conclusion would be that the actions of Industry Canada officials in this case were not inconsistent with an overall policy of delegated or distributed responsibilities, but that the policy itself delegated too much. A more proactive approach to the positive duties assigned to Industry Canada could

reasonably be expected. Some revision and clarification of policies and procedures would surely be warranted to ensure that the considerations entering into approvals processes can be seen to be more balanced than they appear in this present case.

In particular, the residents represented by the Citizens Committee are surely correct in their belief that with changes of the sort involved in the introduction of new broadcasting facilities on new or more massive towers in immediate proximity to residents, there ought to have been direct public consultation of the sort we have come to expect around such developments. They are surely justified in their expectation that the Government of Canada will play a pro-active role directly in assessing not just the technical acceptability but also the socio-economic impacts of applications for proposed installations. Their puzzlement about how the provisions of the relevant legislation apply with respect to harmful radio interference problems in homes or vehicles, or with respect to the authorities needed before installing cellular phone antennae, is surely warranted.

But I have to conclude that what might be seen as failures in the current case are not the result of illegal activities by the broadcasters concerned, nor the result of egregious departures by Industry Canada from its own legislated responsibilities. Rather they stem from a classic case of evolving public expectations and a changing civic environment coming up against a complex mesh of delegated responsibilities in an organizational culture lagging behind the world in which it works. The Citizens Committee has made a strong case for the need to re-examine the legislation and regulations, and their ongoing implementation, in the case of antenna towers in crowded communities.

In evolutionary terms, one might perhaps best understand this story as one in which a simple technical responsibility to ensure that new entrants to the radiocommunication network do not disrupt existing activities has been complicated by addition of a whole range of new concerns involving environmental, health and safety risks, land-use issues, and problems of radio interference with rapidly increasing numbers and varieties of radio-sensitive equipment in residences. Thus straightforward responsibilities for certifying technical acceptability as part of a process of issuing a broadcasting license have grown and diversified by the addition of political and perceptual dimensions.

These additional responsibilities have for the most part been handled by requiring the applicant to attest to having met all the requirements of relevant authorities. Such an approach fits well with the general support for the principle of subsidiarity and results-based regulation in contemporary governance, or outcomes-oriented distributed management, leaving responsibilities and discretion in the hands of those best able to exercise that discretion, at the most local level feasible, with Industry Canada playing, in effect, only an aggregate oversight role to ensure that all elements of the puzzle are properly brought together. The difficulty, as noted above, is that with the present system, it is possible for some crucial elements to slip between the stools. That present system does need revision to ensure a balanced decision process in which all elements of the public interest are given sufficient weight.

TRIANGLE MOUNTAIN ANTENNA TOWERS REVIEW

REPORT

INTRODUCTION

This report outlines the results of a rapid review and analysis of the events leading up to authorizations to Rogers Broadcasting Ltd to construct in the year 2000 a replacement tower on the same site as their antenna structure existing at the time to support their radio station CIOC-FM, and to initiate broadcasting from that site of a new station, CHTT-FM, as well as authorizations to Seacoast Communications Group to construct a new tower on an adjacent property to support antenna systems for their new station, CFEX-FM. Because allegations have been made about Industry Canada's failure to act appropriately to address post-construction concerns about the structural integrity of the tower, interference problems in residences, and unauthorized installation of cellular telephone antennae, the analysis has been carried through to examination of these issues as well.

The events leading up to this review are sketched in the first section, and relevant features of Industry Canada's legislation, regulations and procedures are reviewed very briefly in the second section. An analysis of Industry Canada actions against these established procedures is undertaken in the third section. Lessons learned from the Triangle Mountain experience—or at least questions raised for consideration in a national review of existing legislation, regulation and policies—are set out in summary form in the fourth. A brief final section offers some concluding observations.

I. Towers on Triangle Mountain: Surprise!

What has been known locally as Triangular Hill, but is now better known as Triangle Mountain (and will be referred to as such below) has had a tower or towers on it for close to a century. Its name comes from the use of the summit for triangulation for navigation purposes, and apparently it has been used for that purpose, or for radio communication, since at least the 1920s. In 1941 a Fortress Commander's Post was located there, with radio facilities for wartime communications and navigation purposes.

In 1963 Capital Broadcasting applied for an FM broadcasting license, and in 1964 received approval to erect a 61m stand-alone tower to support antenna structures for radio station CFMS-FM, at an approved frequency of 98.5 MHz. A long-term renewable lease permitted erection of the tower on privately-owned land at 3417 Fulton Road, near the peak of Triangle Mountain, in an area that was substantially rural at the time.

Over the subsequent years, the population of the Western Communities in the Greater Victoria area, including Colwood, began to build up substantially. In 1981, Capital Broadcasting began to explore possibilities for a more advantageous site. A Technical Brief in support of an application for a change in facilities for CFMS-FM on Triangle Mountain notes that on June 3, 1980, the Department of Communications authorized a change to a site on Saturna Island [at the same frequency], but this site proved not satisfactory for service to Victoria, the principal city identified in the CFMS license. So

the proposal was to stay at 98.5MHz on the existing Triangle Mountain site, but with an increase in tower height from approximately 61m (225ft) to 99.1m (325ft). This location was said to be not so good for regional coverage, but much better for coverage to the principal city. This change in facilities was apparently approved as proposed, at the current site for an increase in transmitter power and increased tower height to 99.1 metres. This increase was registered on the Transport Canada database, but the higher tower was never built. Nevertheless, subsequent consultants' technical briefs refer to an 'existing' tower of 99.1m. (A chronology with more detailed references is set out in Appendix 1.)

In 1985, the City of Colwood was incorporated. Many policies, by-laws and administrative practices likely were adopted from other jurisdictions, with intentions to adapt to local circumstances as necessary. The issue of antenna towers was not one that had arisen as controversial in many jurisdictions up to this point, nor had it attracted much public attention. The by-laws and zoning regulations adopted in Colwood at the time, where they mention towers at all, accepted them as a permitted use in all zones. (These by-laws have recently, in 2002, been amended.) Development in the region was rapid around this period, and housing began to build up toward Triangle Mountain.

In 1992, the City of Colwood approved a subdivision at the peak of Triangle Mountain, with some lots on Bexhill Place having rear lot lines abutting the property on which the existing Capital Broadcasting tower and CFMS-FM transmission facilities sat. No setback requirements or other restrictions relating to the proximity of the existing tower were introduced. Over the following years, lots on Bexhill Place and other nearby locations were sold, and substantial residences constructed, taking advantage of the spectacular views offered. It is unclear to what extent purchasers were made aware of, or took into consideration, the possible impacts of the transmission facilities on their own radio-sensitive electronic or other equipment, or were aware of the fifteen-year (renewable) term left to run in the current lease for the existing tower, let alone of the existing approval for an increase in tower height to 99.1m, together with an increase in antenna power. It does seem clear that the striking advantages of the unparalleled views, and possible price reductions reflecting the proximity to the existing tower, must have outweighed any misgivings about the tower itself. Some local residents, aware of the age of the existing tower, may have purchased lots in the expectation that a relocation decision might be imminent. In any case, it appears that very few complaints of radio interference problems were received by Industry Canada or the broadcaster during this period (though some residents in interviews did mention experiencing some problems attributed to the old tower).

By the mid-1990s, the competitive environment in the broadcasting business in the region was also heating up, as population growth continued. Interest in FM broadcasting opportunities was particularly intense, but the number of available frequency allotments in the region, which is subject to particular constraints as a result of restrictions on interference with US stations to the south and east, was severely limited. In 1994 (9/5/94), Seacoast Communications Group Inc, a broadcasting enterprise headed by local business leader Mel Cooper, applied for a new broadcasting undertaking (CFEX-FM, at

107.3MHz) proposed to be co-located with the existing CFMS-FM on Triangle Mountain, sharing the existing tower. (The Technical Brief in support of that application refers to an existing 99.1m tower.)

Before a decision on that application was made, Rogers Broadcasting Ltd, a national company based in Toronto, received approval in 1995 for a transfer of the existing broadcasting license from Capital Broadcasting to Rogers Broadcasting, with the license amended to replace the call letters CFMS-FM to CIOC-FM, but to operate on the same frequency, 98.5MHz, at an approved maximum power of 100,000 watts.

As a result, Seacoast reapplied (22/5/96) for their new station at 107.3MHz as previously requested, with a change to a tower now shared with CIOC-FM. The Technical Brief in support of this re-application says “Existing CFMS supporting structure will be replaced to support both the CFMS existing antenna and the proposed new FM antenna. The radiating centre will remain at its existing level, consequently no change in parameters [from the previous application, presumably] will result. Proposes an 8.2m pole mounted on top of a proposed new guyed tower which will replace the existing 99.1m tower at this site.”

A Seacoast letter of notification to Colwood staff on May 15th, 1996, a week prior to this reapplication, is the first written notification to local authorities so far encountered, though there may well have been conversations with staff prior to that time.

During this period, following production of the brochure, *Let's Talk Towers*, the Victoria office of Industry Canada wrote to local municipalities, drawing attention to the emerging issue of antenna towers and the requirement for consultation by proponents with land use authorities, and more particularly to the opportunity for comment on proposals.

A scan of Industry Canada files shows nothing more for a couple of years, until May 1998, when Rogers Broadcasting applied for FM Channel 297 (107.3MHz)—the frequency previously sought by Seacoast, for which it still had a pending application—on which to locate a proposed new station CJVI-FM that Rogers sought to create by switching its existing AM station CJVI-AM from AM to FM.

As a result, Seacoast again revised its application to reflect a change in the proposed antenna following plans for addition by Rogers of its proposed new FM station. A Seacoast letter to Colwood (14/5/98) provided notice of the revisions and reiterated plans for the proposed replacement tower.

The following month Rogers Broadcasting sent a letter (15/6/98) to Colwood advising of plans for the move of CJVI from AM to FM, with the transmission from a new antenna added to the existing tower, shared with CIOC, and submitted the new application to Industry Canada the following day, attesting that consultation with the land-use authority had taken place 12 June, 1998.

Plans for a new antenna, however, had earlier drawn the attention of Rogers Broadcasting senior engineering staff to the fact that the existing tower, almost 35 years old, did not meet current construction or safety standards; installation of a new antenna would demand replacement of the tower. Five months later (16/11/98), Rogers Broadcasting notified Colwood of a revised application, envisaging replacing the existing tower and existing antenna, maintaining current heights in both cases. A week later the revised application was submitted to Industry Canada for approval of a change of antenna system, with a 61m replacement tower to be constructed to meet current Canadian Standards Association specifications as set out in CSA standard 37 for antenna towers. Industry Canada technical acceptance of the Rogers Broadcasting application of that application was certified on April 22, 1999.

In May, 1999, approval (technical acceptance) of the Seacoast application (11/5/98) was also certified.

The following month (10/6/99) Rogers Broadcasting received from Industry Canada approval to construct its proposed replacement tower and antenna system (designed for use by multiple stations). On October 18, 1999, Rogers Broadcasting sent a letter to Colwood Mayor and Council, advising of approval from Industry Canada and CRTC to proceed with the proposed modifications, namely replacing the existing tower and antenna system, maintaining current heights in both cases (but with the more massive guyed tower required to meet current construction and safety standards). Interestingly, the formal letter of approval seems still to believe that the existing tower is 37.5m taller than in fact it is, so that the approval envisages a reduction in tower height of 37.5m, whereas in fact no significant change in height (within construction tolerances) occurred.

On 28 October, 1999, the CRTC, in Decision 99-480, formally approved the new Seacoast FM broadcasting undertaking on 107.3MHz, at an approved maximum power of 20,000 watts, and at the same time denied the later Rogers Broadcasting request for the same frequency. In the written decision, however, the CRTC noted the merits of the Rogers Broadcasting application in terms of market niche, and encouraged a separate application proposing an alternative frequency.

A few days later (2/11/99), Rogers Broadcasting notified Colwood of their intent to proceed with construction of the replacement tower and applied for building permits for the concrete foundation pads for the tower and for associated buildings for transmission equipment. These building permits were issued, apparently without comment, a week later (9/11/99).

On December 17, 1999 Industry Canada issued to Seacoast a letter of authorization to construct the antenna system for CFEX-FM on the Rogers Broadcasting tower, in accord with its May 1998 application as authorized in CRTC decision 99-480.

With hardly time to open that letter, Seacoast submitted (29/12/99) a technical brief in support of a proposal for a change in facilities to accommodate a switch to a multi-

coupled antenna accommodating what now were planned as three separate stations (CIOC, Seacoast's new CFEX, and Rogers planned CHTT).

On January 5, 2000, Seacoast provided a notification letter to Colwood, and on January 10, 2000 submitted to Industry Canada an application for that change of facilities, with the antenna still to be shared with CIOC on the replacement tower to be built by Rogers Broadcasting. The attestation form states "have consulted, January 5, 2000".

On January 17, 2000, Rogers submitted a reapplication for its new station, having successfully negotiated with Camosun Radio Society a swap of Rogers Broadcasting CJVI-AM frequency at 900kHz for the CKMO-FM frequency at 103.1MHz.

Events and the paperwork take a sudden turn at this point, though it seems decisions may already have been made somewhat earlier. Prompted by the appearance of surveyors on a neighbouring lot at 3415 Fulton Road, a couple of residents contacted the Mayor's office to express concerns about plans apparently in place for construction by Seacoast of a new tower on that property. The Mayor arranged a meeting of Seacoast personnel with the residents, herself and a couple of Colwood staff members. Concerns about health risks arising from radiofrequency fields were raised, and arrangements made for a second meeting where further documentation on these questions could be discussed.

Three days later (21/2/2000), a Seacoast notification letter to Colwood continued the series of such letters, but for the first time noted the intention to apply for approval to construct a separate tower to accommodate an antenna for CFEX-FM.

The second meeting with the two concerned citizens—no others—was held on February 29, 2000. Notes to file suggest that all health concerns were addressed, and no other issues were identified as outstanding.

On March 13, 2000 the revised application proposing the new antenna tower envisaged in the letter to Colwood was submitted to Industry Canada by Seacoast as a revision to their previous application. The Technical Brief ('Revision', 8/3/2000) shows a 48m self-support tower with 10m pole on top. It indicates "The applicant has investigated constructing a new shorter tower on property adjacent to the CIOC-FM property, and **this revision to the parameters** is based on using this new tower. Located approximately 90m from existing CIOC tower, consequently a change in coordinates of one second in both latitude and longitude results." (Emphasis added.)

Building permits for the concrete pads for this new tower were issued some time in March, 2000, and technical acceptance of the proposal was received by Seacoast from Industry Canada on April 14, 2000. The tower was constructed the following month, with authorization to operate contained in a standard letter from Ottawa dated 23/5/2000.

In June of 2000, construction of the Rogers Broadcasting replacement tower was completed and transmission of the existing station CIOC using the new antenna began July 13, 2000. In the meantime, Rogers Broadcasting received Industry Canada approval for construction of the facilities for its new station CHTT on the former CKMO frequency, 103.1, as authorized in CRTC decision 2000-215, and a broadcasting

certificate with authority granted to operate CHTT, with an approved maximum power of 20,000 watts was issued September 1, 2000.

This point offers a good place to pause in the account, essentially carrying the story through the application, approval and construction process. Up to the time of completion of the towers, according to most accounts, little concern or interest was expressed by residents or local authorities; no complaints were received by the broadcasters. Expressions of concern by two local residents arising from the pre-construction activity for the new Seacoast tower seemed to have been fully addressed in the two meetings organized by the Mayor, and subsequent construction provoked only mild curiosity. As engineering staff left for vacation following the intense flurry of activity through the first half of the year, all seemed well. All engineering estimates led to the expectation that with the new directional antenna design installed on the Rogers Broadcasting replacement tower, any potential for interference problems from the high-power CIOC transmission would be dramatically reduced relative to the earlier antenna, and even that had generated little complaint from the nearby residents who had moved into homes at the base of the tower over the previous decade. Addition of the two new lower power stations, one on the same antenna and one on a new antenna system nearby (near enough to be considered a co-location, though not an antenna-sharing situation), was not expected to add to interference potential.

When Rogers Broadcasting went on the air with CIOC-FM from its new antenna, however, nearby residents experienced substantial problems of radio interference and malfunctions in radio-sensitive equipment. Equipment mismatch and malfunction problems at the new transmitter were identified as the likely cause, and corrected.

Residents' sensitivity to the issue did not diminish, however. Heightened awareness of the presence of the larger replacement tower and the new Seacoast tower, and concern over interference problems that seemed to be much more serious than with the previously existing tower and transmissions, persisted.

Into this buzz of activity, Rogers Wireless, a separate sister company to Rogers Broadcasting, entered unwittingly. In March, 2000, Rogers Wireless staff identified the need for a telecommunications site that would enable Rogers Wireless to upgrade its service to compete with Telus Mobility service in the Metchosin area. The Rogers Broadcasting replacement tower was identified as the prime site for this purpose. Staff work by Rogers Wireless continued; Colwood Planning Department staff, contacted early in May, indicated that telecommunication sites were (at that time) a permitted use in every zone and that the municipality preferred communications companies to co-locate on an existing tower. In preparation for an application to Industry Canada for a Cellular Telephone License, Rogers Wireless staff completed the standard Annex, attesting that Rogers Wireless believed their proposed structure to be insignificant, so that formal consultation would be unnecessary. Two grounds for this belief were subsequently advanced: first, the proposed structures (antennae) were a permitted use throughout the City of Colwood, so that no zoning variance need be sought; and, second, the antennae were to be installed on an existing, recently authorized antenna tower, in line with the

policy of encouraging co-location on shared structures emphasized by both Industry Canada and the City of Colwood. The formal application was submitted to Industry Canada with this Annex on May 25, 2000.

On June 12, 2000, Industry Canada sent a letter to Rogers Wireless requesting that formal consultation with the City of Colwood be undertaken. Rogers Wireless requested from the City a formal letter indicating that the proposed site would comply with all the City's bylaws and policies, but were countered with the suggestion that adequate consultation should include a (public) presentation to the Committee of the Whole Council. While exchanges on the necessity for such a presentation continued, Rogers Broadcasting was preparing to go on the air with broadcasting service from its replacement tower. For practical and logistical reasons, in particular in order to avoid having to take the station off the air later, the installation of two Rogers Wireless omni antennae was undertaken at this time, in anticipation of early resolution of the consultation question and early approval by Industry Canada of the application to operate the system from that site.

On July 4, 2000, Rogers Wireless made a short presentation to the Colwood Committee of the Whole. Council subsequently endorsed the recommendation of its Planning Department that the issue be postponed for discussion at a later meeting, that the City indicate formally that it was not in agreement with the Rogers Wireless proposal at that time, and that a Citizens Committee be formed to work with the City to review the issue in the context of concerns about the whole process leading up to construction of the two towers.

On September 12, 2000, a Special Committee of the Whole meeting heard the first report of the Citizens Committee reviewing how the transmission towers and transmitters were installed on Triangle Mountain without public consultation. Both Industry Canada and Rogers Wireless consider some of the analysis to be flawed, but found little opportunity to respond at the time. Nevertheless, on October 20, 2000, Rogers Wireless received from the City of Colwood a letter in which the City indicates that they cannot support the Rogers Wireless application to install wireless cellular antennae and transmitters at 3417 Fulton Road. On November 29, 2000, following further exchanges, Rogers Wireless sent a letter to Industry Canada stating that in its view the consultation process had been undertaken as requested, and asking that Industry Canada now exercise its authority to issue a radio license for this site, as envisaged in Industry Canada's policies and procedures. On December 21, 2000, Industry Canada responded with a request for further information, including consideration of alternative sites.

Since that time, Rogers Wireless has been awaiting resolution of the issues involving the existing towers, with the hope that Industry Canada ultimately will issue a radio license for this site, still considered, from a coverage perspective, the best candidate utilizing an existing tower.

Over that same two-year period since the end of the year 2000, an intensive flurry of activity and exchange of letters regarding the towers themselves has continued. On October 30, 2000, the local office of Industry Canada sent to Colwood a comprehensive

letter responding to the issues raised by the Citizens Committee in its September 12 report. On December 20, 2000 the City of Colwood sent a letter to the Honourable Brian Tobin, then Minister of Industry, requesting that the towers on Triangle Mountain be removed, as having been improperly authorized.

Almost a year further on, in November, 2001, Colwood Mayor Beth Gibson began an exchange of letters with Bruce Drake, Executive Director, Pacific Region, Industry Canada, on the subject of harmful interference experienced by residents, and Industry Canada's responsibility to take corrective action.

Industry Canada district and regional office staff and the Citizens Committee continued extensive discussions to try to resolve differing interpretations. In April, 2002, Industry Canada prepared a summary of the issues and unresolved questions and met with the Citizens Committee to discuss a revised presentation (dated April 16, 2002) of the issues as the Committee saw them.

A number of interpretations remained contested, however. The Citizens Committee and the City took the campaign to a more public level, with a blitz of form letters to the Minister, now Allan Rock, and letters to the Prime Minister, and to the Auditor-General, with also an open letter to the Prime Minister run as an ad in the Ottawa Citizen.

In July, 2002, the City of Colwood created a new consultation policy and amended their existing Land Use Bylaws, prohibiting in all zones antenna structures greater in height than 15m. They also wrote to Industry Canada proposing changes in legislation and regulations, and to the Federation of Canadian Municipalities and the Capital Regional District proposing that these groups work with Industry Canada toward amendment of the existing federal procedures, thought to be seriously flawed in respect of consultation with local communities and responsibilities to local residents.

In August, 2002 the Minister met with the Mayor and representatives of the Citizens Committee to discuss the issues, and the possibility, first raised by the Minister in June, of an appointment of an independent observer to review and report on these questions.

On October 9, 2002, the Minister wrote to Mayor Beth Gibson to advise of my appointment to undertake this work, with the assistance of a local three-person steering committee. It is that review which follows, beginning first with a very brief summary of the legislation, policies and procedures under which Industry Canada is expected to operate, and then undertaking an analysis of the actions outlined above against these expectations.

II. Summary of relevant Industry Canada regulations, rules and procedures

Relevant features of Industry Canada procedures are reviewed in this section. The essential point to note is that they rest on a rather intricate specialization and division of responsibilities, in which all parties involved have to understand and play their part if decisions emerging in a complex interplay of considerations are to be balanced and fair.

In these prescribed procedures, Industry Canada itself assumes responsibility for technical acceptability--for regulating the introduction and character of the nodes in a complex national radio and telecommunications network—that is, for approving and monitoring transmitting and broadcasting facilities, having in mind their patterns of radiated energy and consequent impacts on other elements of the network as well as on the rest of the world. Other responsibilities with respect to other dimensions of the decision essentially are delegated to other players or processes closer to the issues and better able to deal with them in an informed way. Industry Canada responsibilities with respect to local land use issues are expressed through the requirement that the proponent consult with the individual land use authority to the extent required by that land use authority, including public consultation if—but only if—such is required by the land use authority concerned. Responsibilities with respect to structures, as distinct from antennae, are addressed only through a recommendation that proponents ensure that construction meets Canadian Standards Association CSA 37 standards, and that Transport Canada and NavCan requirements are met as well. Responsibilities with respect to environmental impact are met through the requirement of compliance with all provisions of the Canadian Environmental Assessment Act. Responsibilities with respect to health and safety concerns are met by insisting that the standards set out in Health Canada’s Safety Code 6 be strictly observed.

Any proposals for FM broadcasting undertakings, or for construction of any significant antenna structure or changes to a structure, must have Industry Canada approval under the Radiocommunications Act, which states in Section 4 (1) “*No person shall, except under and in accordance with a radio authorization, install, operate or possess radio apparatus...*” and in Section 5 (1) “*the Minister may (a) issue (i) radio licenses and (ii) broadcasting certificates; or in Section 5 (1) (f) “approve each site on which radio apparatus, including antenna systems may be located; and in Section 5 (1) (l) make determinations as to the existence of harmful interference and issue orders...”*”

At the same time, the Broadcasting Act stipulates in Section 22 that

(1) No [broadcasting] license shall be issued ...

(b) unless the Minister of Industry certifies that

(i) the requirements of the Radio Act and Regulations are satisfied, and

(ii) a broadcasting certificate will be issued.

With this legislative background, the Broadcasting Procedures and Rules (BPR) specify in Part I that

(1.3.1) An application to the Department [Industry Canada] for a Broadcasting Certificate shall be accompanied by an application to the CRTC for a Broadcasting License.

(1.5.1) Following approval by the CRTC and authorization by the Department and before the start of construction, any changes to the approved proposal (i.e., (sic) site, parameters, equipment, etc.) shall be submitted to the Department for authorization.

We may thus note that the regulations have now introduced a distinction between the technical acceptance (initial authorization for frequency, antenna, site, etc) which is a precondition for CRTC issue of a license, and an authorization to construct, which may be based on a subsequent proposal for change in facilities for an authorized station. A further authorization to operate follows on-air testing and other measurements to ensure that transmissions fall within authorized parameters.

With respect to transmitting antenna, section 2 of the BPR sets out the requirements and guidelines to be followed in the selection of antenna sites for the purpose of determining if the site and its antenna structure(s) would constitute a hazard to air navigation. It also cross-references other related technical requirements pertaining to the selection of sites.

Its first observation is that “To avoid an excessive number of antenna structures in any given area, the Department expects applicants and antenna structure owners to work cooperatively in reaching agreements which allow for and encourage the sharing of antenna structures.

*2.2 To ensure structural adequacy, the Department **recommends** that all antenna towers and antenna-supporting structures be designed, manufactured and erected in accordance with accepted Canadian standards and that a qualified structural engineer be retained by the applicant.(Emphasis added)*

Among the “Cross-References to other Rules Affecting Site Selection” are Assessment and Control of Maximum Field Strength of FM and TV Broadcasting Undertakings (BPR Part III, Section C-5) and Environmental Assessment and Exposure to Radiofrequency Energy. (both outlined below)

The BPR requires contour maps to be prepared as part of the prescribed engineering brief in support of applications, to be “used by the Department for its technical evaluation of proposals”, including, in case of change in facilities, one additional ‘comparative contours’ map showing the authorized and proposed contours for the FM service.

8.3.1 Applicants shall notify the local municipality(ies) or land use authority(ies) regarding the location of all proposed antenna towers, including the physical characteristics of antenna structures and associated buildings.

8.3.2 The applicant shall also complete Part C of the Preliminary Environmental Information, Municipal/Land-Use Consultation and Aeronautical Site Clearance Attestation. This attestation form may be the first place where the notion of a structure or change ‘believed to be insignificant’ is introduced (though in later forms it is specified that such a declaration is not applicable in the case of FM broadcasting undertakings).

Part III of the BPR governs FM broadcasting undertakings. It specifies the forms required for an application for a broadcasting certificate or for changes to an existing station. A complete technical submission is to include the appropriate such form, an engineering brief, the attestation just referred to, and the contour maps mentioned above.

The emphasis in the engineering brief and the prescribed analysis is on the impact of the introduction of a new transmission location on aeronautical navigation and

communication systems, and on existing radio or TV broadcasting stations. Section C-5, however, addresses other considerations in the assessment and control of high field strength of FM broadcasting stations. It notes that (C.5.1) *Service requirements and constraints related to the siting of FM broadcasting stations may result in high signal strength levels in populated areas. Under these conditions, FM receivers, as well as other radio frequency devices, are susceptible to signal overload and intermodulation (IM) interference. High signal strength levels may also cause equipment malfunctions in non-radio frequency devices. To avoid or minimize such problems, it is necessary to assess the potential for interference.*

Section C-5.2 sets out three items of business in this connection:

- identify the analysis required from applicants in determining interference potential;*
- identify the responsibilities of broadcasters in response to interference complaints;*
- detail the procedures to be followed by applicants in notifying municipal/land-use authorities of the station's proposed location.*

*The requirements of this sub-section apply to **all** applications for the issue or amendment of broadcasting certificates for FM broadcasting stations using primary frequency assignments (emphasis added).*

It is significant here that this text identifies specific responsibilities for Industry Canada in respect of the location or siting decision that are distinct from land use concerns and the requirement for notification of land-use authorities. Section C-5.3.1 sets out related requirements for assessment of high field strength levels and population estimates.

An applicant for a new station or for changes to an existing station shall submit an estimate of the population within the 115 and 100dBUV/m contours.

Every attempt shall be made to keep the population within the 115 and 100 dBUV/m contours to a minimum. The Department reserves the right to request changes to the antenna site, to the antenna height, to the antenna itself, or to the radiated power to reduce the population within these high signal level contours.

This section thus appears to establish, as a high priority, Industry Canada's duty to assess proposed antenna site locations in light of the populations within high signal level contours where a significant potential exists for problems of interference or malfunction of radio-sensitive equipment. This analysis is required of applicants, but its assessment and consideration in the approval decision is a responsibility of Industry Canada. It would seem clear that it cannot be delegated either to applicants or to land-use authorities (or to other agencies). Though it relates to siting decisions, it is a technical assessment as to potential interference problems that is required, not a political judgment by a local government as to the general acceptability of a location for a transmission tower.

Sections C-5.5.1 and C-5.5.2 go on to spell out the broadcaster's responsibilities with respect to the second and third items above, namely the commitment to remedy valid complaints of interference to radiofrequency devices within the 115dBUV/m contour,

and the requirement for municipal/land-use authority notification and consultation. The specific requirement is only that *an applicant for a new station or for changes to an existing station shall communicate its intentions in a notice to local municipal/land-use authorities within an area enclosed but not limited to the 115dBUV/m contour.*

The purpose of the notice is to give the municipal/land-use authorities an opportunity to consider the implication of the proposed antenna structure and site. This notice shall also include a sketch of the building, the proposed tower(s) and antennas, with sufficient detail and dimension to give a pictorial representation of the total structure.

Though this is a notice to local authorities, the specification of a requirement for a pictorial representation of the total structure seems to provide clear recognition of the relevance of aesthetic concerns going beyond the operating parameters of the antenna itself, and this again should presumably be a factor in the Industry Canada decision process. Here, however, it does seem plausible to argue that Industry Canada could expect any concerns of individual citizens to be voiced by the municipal authority.

*The Department expects the applicant and the municipal/land-use authorities to resolve all problems and objections. **Failing this, the Department will consider all factors pertaining to the application**, as well as the municipal authorities comments and render a final decision (emphasis added)..*

These provisions for dealing with the impacts of the high radiofrequency field strengths on the functioning of radio-sensitive equipment are set in a more general context in Departmental circulars and brochures. The principal document describing the Department's policies and rules is the 1995 publication Environmental Process, Radiofrequency Fields and Land-Use Consultation (CPC-2-0-03). This circular sets out procedures for dealing with Type I (site-specific) and Type II (non site-specific) approvals; the former include both FM and conventional cellular antennae (even though cellular antennae are not regulated under the Broadcasting Act or Broadcasting Procedures and Rules). Other PCS forms of cellular telephone communication, and activities such as amateur radio, fall under non-site-specific procedures for Type II installations.

In this more general setting, the underlying principle is that Industry Canada must exercise its spectrum management functions with due regard for impacts on both the human and natural environment. The specific policy is that Industry Canada will consider environmental and health effects (ensuring that the requirements of the CEAA and the standards of Safety Code 6 are satisfied) and will ensure that land-use authority consultation has been taken into consideration before issuing a site-specific radio authorization for significant antenna structures. [CPC 2-0-03, p. 1]

More specifically with respect to land-use issues, Industry Canada published in 1990 the requirement that applicants intending to install significant antenna structures notify and consult with appropriate authorities. The purpose is to ensure that municipal and other land-use authorities are aware of significant antenna structures proposed within their boundaries, so that they have an opportunity to make their views known prior to the building of any such structures. *This consultation is intended to provide an opportunity*

to have land-use concerns addressed while respecting federal jurisdiction for the installation and operation of radiocommunication systems. [CPC 2-0-03, p. 4]

A later (1997) brochure, Let's Talk Towers, is even more expansive on the question of notification and consultation. It notes that *“Industry Canada is responsible, under the Radiocommunications Act, for regulating radiocommunications in Canada and for authorizing the location of radiocommunication facilities. The Department believes that dialogue between all involved parties is essential to the orderly introduction of radiocommunication services into a community.”* The consultation requirement is central to the process: *“Where a significant antenna structure or modification is proposed, the proponent is required to consult with the land-use authority.”* The brochure notes that this requirement for consultation reflects the fact that *“Industry Canada recognizes that the local community should have an opportunity to **influence** the location of a radiocommunication tower.”* (emphasis added)... *“This consultation process is designed to resolve community concerns at the local level.”*

Beyond consultation on land use issues, three further features must be confirmed and checked off: *aviation-related requirements* as dictated by NavCan as well as painting and lighting requirements as set by Transport Canada; determination that *radiofrequency field emissions* are in compliance with Health Canada's Safety Code 6, and that proponents stand ready to address any valid interference or equipment malfunction complaints; and attestation that the *requirements of the CEAA* are met.

It should however also be noted that although interference problems are expected to be dealt with through the commitment of the proponent to resolve all valid complaints, the Radiocommunications Act also provides authority for action by the Minister to respond if necessary to a determination that harmful interference exists as a result of radio transmissions. Moreover, the BPR require Industry Canada to ensure that siting decisions are made in such a way as to keep the population within the contours defining high-intensity radiofrequency fields to a minimum (an issue that will become important below).

Reflecting its origins in the Department of Communications, and the legislation under which Industry Canada currently operates, the Spectrum Management Group, and Industry Canada in general, focus on the radiocommunications elements of applications for broadcasting certificates. The Department of Industry Act itself sets out that focus, saying, in Section 4.1 *The powers, duties and functions of the Minister extend to and include all matters over which Parliament has jurisdiction, not by law assigned to any other department, board or agency of the Government of Canada, relating to ... (k) telecommunications, except in relation to ... (ii) broadcasting, other than in relation to spectrum management and the technical aspects of broadcasting; and (l) the development and utilization generally of communication undertakings, facilities, systems and services for Canada.*

The applications that proponents must submit for approval emphasize the radiofrequency field characteristics of the proposed installations, and Industry Canada's own

examination emphasizes these radioengineering considerations, looking to impacts on the existing communications network, potential interference problems for residents, and potential health impacts. The first is a concern for Industry Canada as regulator of the overall system and manager of spectrum allocations, the second is addressed by insisting on the commitment of broadcasters to deal with any problems within a high power contour of the radiofrequency field, and the third is handled by insistence on strict compliance with Health Canada's Safety Code 6. Technical acceptance of an application is achieved when all of these considerations are successfully addressed and the applicant also can attest that aeronautical, environmental and land-use considerations have all been resolved through consultation with the relevant authorities in each case. Health and aeronautical standards are non-discretionary; environmental considerations meet the requirements of the CEAA for review where necessary; impacts on the existing system are concerns to be assessed directly by Industry Canada, while the remaining two dimensions, land-use concerns and residential interference problems, are delegated, in effect, to the broadcasters to handle through consultation with land-use authorities on the first, and a commitment to respond to all valid complaints of individual residents on the second.

It is worth noting here that this policy, in effect, leaves Industry Canada dealing only indirectly with local authorities as such, not at all with individual residents or the general public, on land-use questions. It is explicitly assumed in Industry Canada policy that the municipal administration or land-use authority represents the concerns of individual residents. It also leaves Industry Canada in the awkward position of appearing indifferent to the concerns of citizens, having to advise residents to deal directly with broadcasters, without assistance from Industry Canada, in resolution of any complaints about the impacts of installations approved by Industry Canada.

It is perhaps worth questioning whether this policy of relying solely on attestations from other people or other processes for all except the radio engineering aspects of applications fully meets Industry Canada's positive responsibilities for full consideration of all aspects of an application in its final approval process. In the absence of evidence of full public consultation by proponents, for example, should Industry Canada not encourage or require the proponent to consult more actively (as in fact Industry Canada has done in the more recent case of the Rogers Wireless application for operation of cellphone transmission facilities from the Rogers Broadcasting replacement tower)? In the absence of any land-use authority requirement, should there not be a residual Industry Canada minimum requirement of public consultation, and perhaps a requirement of positive consent from the land-use authority, rather than simply a presumption of passive acquiescence? These are issues noted below for further examination in a later review.

III. Analysis of Industry Canada actions in the Triangle Mountain Case

Analysis of Industry Canada's actions as outlined in the story above is developed here under the six particular dimensions identified by the Citizens Committee and Industry Canada in their respective summaries of the issues. In order to focus the discussion, the

topics are examined here in an order that reflects the ease with which they can be addressed.

Health Concerns and Safety Code 6

It is fortunate that in the present Triangle Mountain case the most serious of the obligations resting on Industry Canada can be most easily addressed. As noted above, Industry Canada has the responsibility to ensure that all approved radiocommunication activities clearly meet the standards set out in Health Canada's Safety Code 6 with respect to the strength of radiofrequency fields. The way in which these responsibilities are to be met is clearly described in departmental documentation, and there have been no suggestions that the prescribed procedures have not been followed.

In the present case, initial expressions of concern about health issues appear to have been settled in the two meetings with citizens described above and by measurements, on site and (with permission) in residences, verifying that there are no situations where Safety Code 6 prescribed limits are exceeded or come close.

Though some residents still express misgivings about the adequacy of the standards established in Safety Code 6, this concern is clearly one to be addressed in the ongoing debate around Health Canada's precautionary approach to perceived risks, and does not call into question Industry Canada's actions in any way.

Structural Integrity of Towers and Installed Equipment

The concerns expressed about tower standards and the absence of post-construction inspection relate to the content of Industry Canada's prescribed procedures, not to alleged departures from them, and will be addressed in the discussions of lessons learned and questions for future consideration. Whether Industry Canada should content itself, as at present, to recommending that structures be built to current Canadian standards is an important question that should be examined. It is certainly possible that in the present system responsibility for the integrity of structures 'as built' might fall between the stools, with no clear accountability or liability for the consequences of failure able to be established. But again no question has been raised of departure from Industry Canada's current policies in the decisions taken in the current case.

Indeed, though the Rogers Broadcasting replacement tower is more massive, and the system of guy wires appears both more intrusive and much closer to nearby residences than the previously-existing tower, in fact the present tower is not significantly higher, and is slightly more distant from the nearest homes, than the tower it replaced. In terms of structural integrity and safety generally, it seems clear that it is an improvement on the old tower it replaced. The complaints made about Industry Canada's approval process on safety grounds seem to me to be misplaced, though, as noted above, the question of building permits, post-construction inspection and ongoing accountability and liability should be pursued.

Installation of Cellular Telephone Antennae in Advance of License

Allegations have been made that Rogers Wireless (not Rogers Broadcasting) acted without necessary authorization when, for practical logistical reasons, they installed two cellular telephone antennae on the Rogers Broadcasting replacement tower prior to the beginning of on-air operations by Rogers Broadcasting on that tower, and in advance of Rogers Wireless receiving from Industry Canada their license to operate that equipment. A conclusion on this matter seems to rest on subtle legal interpretations—beyond my professional capacity—as to whether any authority is in fact needed to install, as opposed to operate, this equipment. Local Industry Canada officials have indicated that they see their enforcement authority in this area as confined to ensuring that operations are conducted in accord with a valid license; the installation of antennae unconnected to transmitters, and hence incapable of operation, seems to be a ‘grey area’. Rogers Wireless and Rogers Broadcasting are of the opinion that no authorization is needed for such installation, and Rogers Wireless acted in the confident expectation that consultation with Colwood could be positively resolved and an operating license from Industry Canada expeditiously issued. A formal submission by Rogers Wireless for purposes of this review sets out a firm belief that the installation of cellular antennae on an approved tower, in anticipation of approval for their operation, is not in itself illegal or contrary to any regulatory requirement.

As noted in the chronology above, Industry Canada has insisted in this case upon completion of formal consultation with the City of Colwood, and in the face of reservations expressed by Colwood has insisted on exploration by the applicant of alternative sites; as a result, the Rogers Wireless application for a license is still pending.

It does seem clear that in this grey area, Industry Canada officials would not normally have expected to be consulted, or have been expected to act to review the installation of cell phone antennae prior to dealing with the application for an operating license. It does not seem reasonable to argue that Industry Canada officials failed in their duty in the handling of the Rogers Wireless application. They could not have been expected to anticipate the installation of antennae for which it seems no approvals are presently necessary (though a license to operate the associated transmission facilities is essential and such operation would be closely monitored by Industry Canada to ensure that the conditions of the operating license are met).

Since identifying the legislative regime that should apply in determining whether any specific authority is needed prior to installation of cellular telephone equipment is beyond the scope of this review, but the practice seems to be common in the industry and accepted by Industry Canada, I feel compelled to leave this question to further examination in the conduct of the planned national review.

Electronic Interference

Harmful interference is defined in the Radiocommunication Act (in the following paragraphs simply the Act) as *an adverse effect of electromagnetic energy from any emission, radiation or induction that*

- (a) endangers the use or functioning of a safety-related radiocommunication system,*
or
- (b) significantly degrades or obstructs, or repeatedly interrupts, the use or functioning of radio apparatus or radio-sensitive equipment.*

Under this definition, harmful interference seems clearly to exist as a result of the present broadcasting activities on Triangle Mountain; it can be observed directly and easily by residents and others (though not all problems observed can properly be attributed to the broadcast transmissions as opposed to other sources). Under the Act, a formal determination by the Minister can also be made that Harmful Interference (i.e., formally recognized by the Minister) does exist, and at that point discretion to issue Ministerial orders to deal with the problem kicks in. But prior to that point a commitment exists on the part of broadcasters, with the direct oversight of Industry Canada officials as necessary, to attempt to remedy valid complaints of problems in radio-sensitive equipment. Industry Canada policy and the conditions of license are very clear that the responsibility to deal with valid complaints of interference rests with the broadcasters, and they continue to take the position that they stand ready to deal with any problems reported by residents that can reasonably be attributed to broadcast operations.

The Citizens Committee seems to misread the relevant section of the Act as obliging the Minister to act, rather than as offering discretion to exercise authority in situations where it has been determined that other action has failed to resolve problems. More importantly, the Committee seems to overlook the fact that these sections of the Act are generally directed to problems of interference in the radiocommunications system, not in use of consumer electronics in residential settings.

Industry Canada insists that no such determination of Harmful Interference under the Act has been made or would yet be warranted, and hence any exercise of the Minister's powers to order change in transmitting or receiving equipment or activities would be premature. This position does, however, raise questions as to whether and how the Act does or should apply in situations where there appear to be no practical remedies to the interference problems experienced by residents as a result of broadcasting activities.

Attempts to resolve interference problems require further discussion: as noted, the broadcasters insist they stand ready to address and correct any problems brought to their attention, including if necessary through replacement of existing equipment by more fully shielded equipment with greater immunity to strong radiofrequency fields. Some residents, on the other hand, are emphatic in their view that they have run out of patience with fruitless attempts to correct problems that may not have any practical solution in the current levels of radio frequency fields experienced in their homes in close proximity to the transmitters.

Approval process—'alternatives analysis'

It is argued, and Industry Canada acknowledges, that Industry Canada did not require explicit consideration of alternate sites for location of the Rogers replacement tower or the Seacoast new tower, since the present site was an existing broadcasting site and none

of the applications for modifications or new stations proposed to change significantly the technical parameters or service contours from those for the existing station on the existing site. These applications thus were viewed simply as technical amendments to ongoing approved transmission facilities. It could be argued, however, that this approach is not consistent with the evolution of spectrum management responsibilities toward greater awareness of socio-economic and other community impacts going beyond the radioengineering attributes.

The basic logic of Industry Canada's policy is to delegate responsibilities to those most directly concerned and best able to deal with them. But the responsibility for dealing with high intensity radiofrequency fields associated with broadcasting undertakings is a principal responsibility of Industry Canada itself. This responsibility is exercised primarily with respect to problems of interference with the rest of the radiocommunication system, and specifically with respect to spectrum allotments (frequency assignments) and antenna patterns. But impacts on people must also be considered, with respect to both health and safety concerns and interference problems. And the latter must be considered both as potential problems, addressed through siting selections to minimize them, and as actual realized problems, addressed through the commitment of broadcasters to remedy them.

The issue of standards with respect to exposure is referred to Health Canada Safety Code 6, but responsibility for ensuring compliance rests with IC, initially through requiring exposure analysis from the applicant, but in case of any doubt by requiring actual measurements.

The question of interference problems is addressed in the first instance through consideration of siting of antennas. Industry Canada is the lead agency in respect of analysis of interference problems. (It is important to note that this is a siting issue, but not a land-use problem as such. It has to be dealt with by Industry Canada directly, not through consultation of proponents with land use authorities, which will be ill-equipped in any case to deal with that technical (as opposed to political) question.)

Industry Canada apparently failed to ensure explicit consideration in its approval process of the changed environment surrounding the site, especially the unusual proximity of new residences, again on the grounds that no significant changes in the radio characteristics of the site were being introduced, and that no concerns were raised at any time by the local land use authority.

In particular, treating simply as a 'Revision' to a previously approved application the March 13, 2000 Seacoast application for approval of a new tower on a separate property under a separate lease for the site must be questioned. Though the radio parameters might be unchanged, the fact of a separate tower is in itself not inconsequential and certainly might be expected to call for more serious consideration of the social impacts in the new residential context, simply on aesthetics grounds. But here again, the core underlying feature is that Industry Canada policy now seems to call for these issues to be addressed through the expression of concern by municipal or land use authorities and no such objections or expressions of concern were voiced at any point in the process. Industry Canada officials had no reason to believe that there was any community concern

around developments that did not, after all, change the transmission characteristics of the site.

It may be argued that this focus on radio engineering aspects by Industry Canada gives inadequate weight to the physical features and impacts of the structures themselves in the neighbourhood, but in the absence of any expression of objections to them, and given that the radio engineering parameters were unchanged, the failure to require consideration of alternative sites in a review of what were viewed as essentially amendments to an existing operation does not in my judgment constitute a fatal procedural flaw, but rather an exercise of discretion, reflecting a professional culture, falling within a not altogether unreasonable interpretation of existing policies, questionable as these existing policies may also be in current circumstances.

I conclude from this that although the basic regulations seem to dictate a positive duty to carry out what lawyers might call an 'alternatives analysis', even for a replacement structure or a co-location proposal, there are three considerations that might suggest that in the present case this requirement could be passed by or handled in summary fashion.

First, later circulars and brochures drop reference to this requirement and seemingly let it drift into the general requirement for notification and consultation on land use issues.

Second, all engineering analysis indicates that the new antenna complex should pose less potential for interference problems for nearby residents than the old. (Even though the number of residences in close proximity to the old tower was increasing, there were few complaints of problems; as in the case of moving near an airport or interurban rail line, the inconvenience is presumably offset by other advantages of view or price, and rapidly drops below the threshold of awareness.)

Third, in any case, no objections to the proposed siting and construction were registered, either by local authorities or individual citizens.

These justifications suggest that the absence of any explicit alternatives analysis, particularly striking in the case of the new Seacoast tower, might be understandable as part of the conventional practice that has evolved within Industry Canada. Nevertheless it seems regrettable, and the requirement for such an analysis should be clarified in some future amendment of policies and procedures.

Requirement to Notify and Consult

Accepting the justification above essentially places all the weight of the siting decision on the role and participation of local authorities. It therefore attaches critical importance to the notification and consultation obligation placed upon proponents (but also, therefore, to Industry Canada's role in ensuring it is carried out as fully as intended).

That notification requirement is intended to create awareness on the part of all concerned, and to ensure that citizens affected do not awake to the surprise of finding a new tower in the neighbourhood. In the Triangle Mountain case it evidently did not fulfill that function. All municipalities falling partially within the high-strength contour of a broadcasting undertaking for which new or changed facilities are proposed are to be notified, so that they have an opportunity to consider for themselves the implications of

the proposed changes. It is not enough to have that judgment made for them by broadcasters or Industry Canada officials noting that no significant change in operating parameters or other consequences is entailed.

Again, however, the existing formal procedures are not sufficiently explicit or proactive to assure realization of the expressed intention.

The federal government's policy with respect to consultation has developed considerably over the last fifteen years. The Townsend Report in 1987 raised the issue of consultation as a central concern. Following public release of the report as announced in the Canada Gazette, Part I, for January 30, 1988, there was further legislative development, including introduction of the new Radiocommunication Act. Notice No. SMRR-002-90 in the Canada Gazette for June 16, 1990, after noting that *in recent years concern has been expressed by municipal governments on behalf of individual citizens over the siting and appearance of these structures*, drew attention to an important statement of policy on this matter.

Under the new Radiocommunication Act the Minister of Communications [now Minister of Industry] is authorized to take into account not only the spectrum management considerations but also environmental and land use factors in granting radio authorizations. To ensure that local views on these topics have a good opportunity to be heard and balanced against radiocommunications needs, applicants for systems involving significant antenna structures will be required to notify and consult with appropriate municipal authorities.

It is argued by the Citizens Committee and acknowledged by Industry Canada that the wording of letters of notification from proponents to the City of Colwood departs from the precise wording set out in BPR, and that notification to nearby districts or municipalities of Langford, Metchosin and Esquimalt was altogether lacking or late. These concerns seem to me to be not material, but rather technical flaws or oversights without any substantive consequence for approval decisions or subsequent action, except to the extent that they might limit overall public awareness and hence potential mobilization of local views that should be taken into account in the approvals process. To the extent that the intent of the notification requirement is simply to provide notice to local authorities of proposed changes, and to underline the particular responsibilities of the proponent to deal with specific consequences of those changes, the stream of letters sent to Colwood staff and Council surely accomplished that purpose, and the lack of notification to neighbouring communities reflected the anticipated (and apparently realized) absence of impact of the proposed changes (though this does not in any way reduce the responsibility of the proponent, as set out in the written commitment required in the proponent's application for license, if any interference problems are experienced).

If, however, the failure to notify all municipalities involved is thought to have reduced the chances of some local residents noticing the plans in progress and raising questions sufficient to provoke a public consultation, then it also robbed all residents of an opportunity to have their views brought into the decision process.

IV. Lessons—or at least questions—for the future

The above analysis suggests that the key factor in what might be viewed as an inappropriate outcome was the lack of any expression of objection or concern at any time throughout the whole process leading up to approval and construction of the towers. In effect, the land use authority did not play the role expected of it in the subtle specialization and division of responsibilities envisaged in Industry Canada's policies—it did not appreciate that the representation of citizens in negotiations with the proponents, and the voicing of concerns or objections to proposed sites, will influence Industry Canada's assessment of applications even if final authority to approve a site or ultimate power to resolve an impasse in negotiations by the municipal authority with proponents rests with the Minister of Industry.

A second key factor in the failure to find a meeting of minds around the tower decision is the changing view of the role of consultation processes in public decisions. Perhaps nothing has evolved more in the fifteen years or so from the time in which the departmental policies and procedures are rooted to the present day than the notion of 'consultation'. Expectations now for direct public consultation, with voice and influence, are strong; they do not stop simply at notification of a local authority presumed to represent overall citizen views. Again, Colwood, as a new municipal administration with policies perhaps largely still inherited from the early eighties, had no experience with tower issues, and no requirement for public consultation on such questions. The quite sudden appearance of the towers as intrusive physical structures came as a surprise and an unpleasant shock to many of the citizens most directly affected. (Colwood now has explicit policy in place requiring public consultation in the development of its response to any future such application, and indeed, by making towers a prohibited use in zoning regulations, Colwood forces explicit debate on such applications, even though such prohibitions are not in any way binding on the federal authority.)

When controversy over the lack of awareness on the part of individual citizens erupted, they also looked to Industry Canada to be their agent, with expectations that Industry Canada itself—or at least the federal government—would have assured public consultation on such a matter. But Industry Canada interprets its mandate strictly, however, in effect seeing itself not as serving the individual citizen directly across the counter in matters of complaint resolution nor in supporting the local community as a representative in land use decisions, but rather as serving the public interest more generally, through the citizen in the abstract and in the aggregate, as customer and beneficiary of an effective telecommunications network.

At times this approach translates explicitly into language that views the broadcaster or industry proponent as 'the client'. This strict view of departmental mandate, like other subtle jurisdictional distinctions, is not appreciated (in either sense of the word) by individual citizens on the street. (And in this respect, this strict view perhaps lags behind the current rhetoric of the federal government with respect to the need for responsive, citizen-centred, single window, 'no wrong door' concepts of public service.)

It is fair to say that the experience of Triangle Mountain in seeing towers approved and constructed without greater public awareness and public consultation could not happen again in Colwood or in any municipality taking note of its experience. As already noted, the City of Colwood has initiated a number of changes in its by-laws and processes that assure, for the future, public review of any application for approval of new towers or facilities, based on a substantial exchange of information. And Industry Canada's own practice in this respect may also be evolving, as illustrated in its handling of the Rogers Wireless application currently pending.

But in any case the intensive work of the Tower Committee has identified a number of further potential issues that must be addressed in any review designed to bring Industry Canada policies and procedures up to date with the current rapidly changing environment and current expectations as to the role of the federal government. (For example, if the federal government is correct in the priority now given to assuring effective connectedness and access to cyberspace as a fundamental element of effective citizenship, can it at the same time take the position that it will not involve itself proactively in preventing degradation in the functioning of home computers as a result of radio interference?)

Industry Canada's policy statements should be re-examined with an eye to whether there needs to be a re-balancing in the expression of mandate as between the industry proponent as client and the individual taxpayer as citizen. Should Industry Canada not have stronger minimal standards for notification, information and consultation processes for example, that would come into play in situations where local land use authorities may not yet have procedures that meet such minimum standards? If such standards had been in place in the Colwood case, for example, Industry Canada might have required the applicants for approval of replacement or new towers not just to notify municipal staff, but also to undertake some public notice and consultation activities even though Colwood, as a small new municipality, had not yet developed its own formal requirements for such consultation.

Interpretation of Industry Canada's mandate might be re-examined also in respect of a slightly more subtle distinction. Reflecting its origins as the Department of Communications, concerned with the orderly development of an effective national telecommunications network well-placed in the international communications environment, Industry Canada's policies, and particularly the activities of regional offices, are grounded in a radio engineering culture. Technical acceptance of proposals rests on examination of transmission systems, antenna radiation patterns, and interference problems in an increasingly congested frequency spectrum. The concern, it could be said, is with the location of antennas in a mesh of transmissions. It is not with the physical features or appearance of the structures on which the antennae rest, except to the extent of assuring, on behalf of Transport Canada and NavCan, that hazards to aviation are not created, and recommending that CSA structural standards for such towers be met. Thus, from a radio engineering point of view, an application for a shift from an old, rather muted self-supporting tower to a replacement tower three times more massive in cross-section, newly-painted, and supported by guy wires anchored essentially at the

property line of neighbouring residences can be seen as essentially a technical amendment and not a significant change. Similarly, and more dramatically, a change from a proposed structure with three stations operating from a single antenna on a single tower to construction of a second stand-alone tower 81 metres away on a separate property, can be seen as not warranting a new proposal, but again can be viewed as only a simple revision to a previously assessed technical brief, because the antenna is not changing location beyond the limits of the existing site (even though onto a distinct property under a distinct lease), its properties and radiation patterns are not significantly changed, and no new analysis is required. Because the antenna is interpreted as remaining in the same location, from a radio engineering point of view, such a change is not even viewed as a departure from Industry Canada's policy of encouraging co-location. (The preference for co-location apparently refers more to co-location at a single site than co-location on a single structure, because it is the former that dictates the impact of transmissions on the communications network as a whole.)

Lessons learned from the Triangle Mountain experience suggest that all these questions—the positive duty to undertake an alternatives analysis and to assure public consultation, the desirability of other procedural changes to assure a full balancing of local social and economic concerns against radiocommunication needs, the possibility of a shift in Industry Canada's perceived mandate and organizational culture toward one seen as more responsive to individual citizens as well as industry clients—deserve attention in a more comprehensive review. This should be designed to assure a coherent framework running from underlying legislation and regulations through departmental circulars and brochures to an organizational culture embracing social sciences as well as radioengineering in the fulfillment of the Departmental mandate, and responsive in a balanced way to the concerns of the individual citizen.

CONCLUDING COMMENTS

For an accident to happen, a number of things must fail to perform as expected. In the case of the towers on Triangle Mountain, if one thinks of the outcome as an accident, a number of factors had to come together to make it happen. Had Industry Canada policies not relied solely on a response from local authorities on siting issues, but rather had clearly demanded in any case an alternatives analysis in light of a changed environment surrounding the existing tower; had Colwood responded to letters of notification with any reservations about the site, rather than proceeding on the perception that the issue would be dictated solely by federal authorities and could not be influenced by any comments from local authorities; had the broadcasters involved fully informed all municipalities affected, and thereby broadened knowledge of construction plans to the point that public awareness might have led to public concerns being expressed; had competitive pressures not precluded a fully-shared single antenna serving both broadcasters and all three stations; had development pressures and perhaps inexperience not led Colwood to approve a subdivision in such extraordinary proximity to a transmitter location; had those planning purchases of those lots enjoyed full disclosure of the length of the lease for the existing tower and the likelihood of expansion plans even then in the works; had not all of these come together, the outcome of the discussion and the decision process might

well have been different. Had the appearance of the towers not come as such a surprise to many residents directly affected, and had initial start-up problems not created exceptional temporary interference problems for those residents and heightened concerns outlasting those temporary problems, perhaps the appearance of the replacement and even the new tower would have been accepted by the people who earlier had happily moved into close proximity to the existing tower, even though its operating characteristics were no more benign than the present configuration is said by the engineers to possess.

However, all these things did come together, and the objections of the local residents coalesced into a strongly felt perception among some of them, amplified by the Citizens Committee, that Industry Canada, rather than representing the individual citizen, was serving only industry clients—or at best some abstract aggregate public interest in an effective telecommunications and broadcasting system. The balancing sought through the changes in the new Radiocommunication Act was not achieved—or at least not perceived.

Clearly if there had been any unresolved reservations raised or objections expressed by the Land Use Authority, Industry Canada would have had an explicit duty to require applicants to undertake a full alternatives analysis, with emphasis on policies favouring co-location and sharing of structures. Even in the absence of such explicit concerns, I would read the regulations as requiring Industry Canada to undertake such an analysis in order to deal with potential interference problems, quite apart from land use issues. It seems to me that the failure to undertake this analysis, given the change in the surrounding environment, constitutes a significant flaw in the process by which the application for the Rogers Broadcasting replacement tower was assessed.

Even more significant a flaw seems apparent in the haste with which the Seacoast application for a new tower was processed. Seeing this application as a ‘revision’ to a previously approved application for a ‘change in facilities’, with no consequential change in operating parameters, and accepting apparently without question a departure from a policy of emphasis on shared structures while accepting the proposed new Seacoast tower as still a co-location, definitely seems inconsistent with a policy whose intent is to ‘permit communities to influence the selection of sites for antenna towers’.

Having said this, it seems also possible to argue that both flaws are inherent in the current structure of Industry Canada practice, rather than representing a departure in this one case from Industry Canada’s normal rules. It does seem that the policy in practice has drifted toward too great a reliance on the land use authority playing the sole role in siting questions so far as residents are concerned, with Industry Canada confining itself to examination of interference or other problems arising for other broadcasters or users of the radio spectrum.

In this way, a citizen in the street may well feel that the radiocommunication regulatory system is concerned particularly with consideration of market niche and economic factors in the case of CRTC issue of broadcasting licenses authorizing new stations, and with economic return from spectrum use as well as protection of existing assigned frequencies and aeronautical uses, in the case of Industry Canada issue of new broadcasting certificates authorizing new physical structures or frequency allotments. What might be

presumed to be a contemporary Industry Canada role on behalf of the individual citizen adversely affected by siting decisions or interference problems seems still to be overshadowed by the technical responsibilities with respect to the overall system that earlier constituted the whole story in spectrum management.

The rebalancing of these contending obligations within the expressed and implicit policies and procedures of Industry Canada should be the subject of the full national review now announced, beginning with clarification, if possible, of legislative and regulatory authorities, to catch up with evolving public expectations and views of governance as well as emerging technologies. Responding to these developments, Industry Canada officials have been engaged in a variety of revisions to policies over the last decade; a comprehensive review now could aim to restore consistency and balance in a way that encourages more positive public perceptions of the roles and responsibilities involved. Such an outcome would be a welcome constructive return on the investment of time and energy made by so many people in the intensive debate to identify, explore and resolve the issues raised in the Triangle Mountain case.

APPENDIX 1

Statement of Work as Discussed with the City of Colwood Triangle Mountain Transmission Towers Citizens Committee

The tasks for this review are quite specific (though not as simple and straightforward as they might appear at first glance). They are

1. to determine whether the authorizations for the towers on Triangle Mountain were made in accordance with established Industry Canada regulations and procedures (including, as noted in the Minister's letter of October 9, 2002, explicit consideration of the manner in which issues related to site selection and harmful interference were taken into account in decisions on those authorizations); and
2. to prepare recommendations for changes to the established Industry Canada procedures for consideration in the National Antenna Consultation process now announced.

I see this task as asking not whether the right decision was made, but rather whether the decision was made according to the appropriate procedures. Those procedures do, of necessity, leave substantial discretion to regional staff of Industry Canada in making the judgments as to how a suitable balance can be struck among conflicting objectives. I believe that it is not my task to try to establish either personal error or blame: though the question whether the wrong decision might have been made and a balance found in the wrong place is an important question to all concerned, it is not my question here. Likewise, the question of remedy in this case—of what specifically could be done, by whom, to achieve a better outcome in these present circumstances—is not at issue in this review.

(It should be noted, however, that the questions above have two components: first, were the decisions with respect to authorizations for the towers made according to Industry Canada's established procedures as conventionally interpreted, but also, second, are those established procedures and interpretations still appropriate in current circumstances?)

Thus we seem to be addressing here two very concrete questions, and two more general judgments.

1. The chronology—what actually happened, what actions were taken? As a result of much work over the past two years, by the Citizens Committee and Industry Canada in response, we have some extensive chronologies and analyses already prepared, but it seems it will be necessary to reconcile some conflicting understandings of what actually happened, and some apparent discrepancies in interpreting the record.
2. The established procedures applicable in this case—what process should have been followed, and what actions should have been taken, by the applicants, by the City, and by Industry Canada? The relevant procedures and principles here may include not just Industry Canada's procedures, policies and regulations, and the applicable legislation, but perhaps also more general administrative law and principles of good governance.

3. The central question for this review flows from these two foundations of objective information: does examination of the agreed chronology reveal discrepancies between the actions taken and the prescribed procedures—was the decision-making discretion exercised in this case in accord with Industry Canada’s established procedures?
4. Finally, regardless of the answer to the previous question, what does this examination suggest about changes that should be made to the existing procedures so as to improve the quality and acceptability of similar decisions in the future?

Appendix 2

CHRONOLOGY

1920's It is believed that Triangular Hill (now, and in the following, referred to as Triangle Mountain) has had towers for navigation or radio transmission since the early part of the 20th century.

1941 Fortress Commander's Post located on Triangular Hill. Radio facilities used at this site for communications and navigation.

1963 Capital Broadcasting application for an FM Broadcasting License

1964 Capital Broadcasting receives approval for a 61m stand-alone tower, erected to support antenna structures for radio station CFMS-FM, at an approved frequency of 98.5MHz. The lease on the privately-owned property at 3417 Fulton Road, near the peak of Triangle Mountain, that permits erection of this tower still (as of 2002) has seven years to run and offers a right of renewal for another fifteen.

1981 Capital Broadcasting Technical Brief in support of application for change in facilities for CFMS-FM notes that on June 3, 1980, Department of Communications authorized change to a site on Saturna Island [at the same frequency]. This site proved not satisfactory for service to Victoria. So the proposal is to stay at 98.5MHz on the existing site, but with an increase in tower height from 225ft to 325ft. This location will be not so good for regional coverage, but much better for coverage to the principal city. This change in facilities was apparently approved as proposed, at the current site for an increase in transmitter power and increased tower height to 99.1 metres. This increase was registered on the Transport Canada database, but the higher tower was never built. Nevertheless, subsequent consultant's technical briefs refer to an 'existing' 99.1m tower .

1985 City of Colwood incorporated. Many policies, by-laws and administrative practices likely are adopted from other jurisdictions. The issue of transmission towers is not one that has arisen as controversial in many jurisdictions up to this time, and the by-laws adopted, where they mention towers at all, accept them as a permitted use in all zones.

1992 City of Colwood approves a subdivision with some lots on Bexhill Place having rear lot lines at the property line for the property on which the existing tower, with existing transmission facilities for broadcast on 98.5MHz, is located. No setback requirements or other restrictions relating to the proximity of the existing tower are introduced.

1990's Lots on Bexhill Place and nearby are sold, and houses constructed. It is unclear to what extent purchasers took into consideration the possible impact of the transmission facilities, or were aware of the long term left to run on the existing lease for the tower, or of the existing approval for an increase in tower height to 99m. It appears that very few complaints of radio interference problems were received by Industry Canada or the broadcaster during this period.

1994 Seacoast Communications Group Inc. applies for a new station (CFEX-FM) proposed for Triangle Mountain, at 107.3Mhz. To be co-located with CFMS.

9/5/1994 Seacoast Communications Group Inc application (pending CRTC approval) for change to tower shared with CFMS-FM (technical brief refers to existing 99.1m tower)

1995 Existing broadcasting license transferred from Capital Broadcasting to Rogers Broadcasting, amended to replace CFMS-FM by CIOC-FM (on the same frequency)

15/5/96 Seacoast notification letter to Colwood re application for new station co-located with CIOC-FM

22/5/96 Seacoast reapplies for new station using 107.3MHz (pending CRTC approval) with change to tower now shared with CIOC-FM. Technical brief says “Existing CFMS supporting structure will be replaced to support both the CFMS existing antenna and the proposed new FM antenna. The radiating centre will remain at its existing level, consequently no change in parameters will result. Proposes 8.2m pole mounted on top of a proposed new guyed tower which will replace the existing 99.1m tower at this site.”

14/5/98 Seacoast notification letter to Colwood noting revisions to application

20/5/1998 Rogers applies for Channel 297 (107.3MHz) for CJVI-FM. (Application later denied by CRTC; license granted to Seacoast, (CRTC Decision 99-480), but encourages Rogers reapplication. [Rogers seeks 103.1 for CJVI-FM (trade with Camosun). Approved in CRTC 2000-215.]

11/5/98 Seacoast revised application; reflects change in proposed antenna following plans for addition by Rogers of CJVI-FM (call letters later changed to CHTT) on the Rogers existing/replacement tower. Seacoast application still says “Antenna will be top-mounted on the proposed 99.1m tower with radiating centre 104.5m above ground”

15/6/98 Rogers notification to Colwood re CJVI (later CHTT)—will move CJVI from AM to FM (“have consulted, 12 June 1998”) and replace antenna on existing tower.

16/6/1998 Rogers application to Industry Canada for new station CJVI (later CHTT) (pending CRTC approval), on an antenna system shared with CIOC-FM.

16/11/98 Rogers notification to Colwood of revised application, envisaging “replacing the existing tower and the existing FM antenna, maintaining current heights in both cases”. Attaches the Industry pamphlet, Lets Talk Towers, and draws attention to the opportunity for comment, and to the broadcaster’s obligations as set out in the BPR.

23/11/98 Rogers application—change of antenna system. 61m tower. The purpose is to introduce a new antenna system with capacity to accommodate additional stations while reducing the potential for interference problems in nearby residences. At the same

time it was recognized that replacing the antenna would demand also replacing the existing tower with one built to current construction and safety standards.

22/4/99 Industry Canada technical acceptance of Rogers 23/11/98 application

5/99 Approval (technical acceptance) of Seacoast May, 1998 application

10/6/99 IC authorization to construct for Rogers 23/11/98 application--CIOC

18/10/99 Rogers letter to Colwood Mayor and Council, advising of approval from Industry Canada and CRTC to proceed with modifications, namely replacing the existing tower and antenna, maintaining current heights in both cases.

28/10/99 CRTC decision CRTC 99-480 (Oct 28, 1999) approved new Seacoast FM broadcasting undertaking on 107.3MHz.

2/11/99 Rogers notification to Colwood of intent to proceed with construction; requesting building permit for concrete foundation pads for tower and for building for transmission equipment.

9/11/99 Building permits issued

17/12/99 Industry Canada letter of authorization to Seacoast to construct the facilities for their new station, shared with CIOC as per their May 1998 application

5/1/2000 Seacoast notification letter to Colwood advising of proposal for change in parameters for CFEX-FM, to be co-sited with CIOC on the replacement tower. Notes enclosure of a pictorial of the new tower and antenna location. Attestation form for IC states "have consulted (January 5, 2000)"

10/1/2000 Seacoast application for change of facilities and change of antenna system, still shared with CIOC

17/1/00 Rogers reapplication for new station (CHTT), shared antenna with CIOC

18/2/2000 Mtg of Seacoast personnel with Colwood Mayor and staff, and 2 concerned citizens. Decision to have second meeting to address safety concerns.

21/2/00 Seacoast notification letter to Colwood, includes line about application for approval of new tower on property next to the existing CIOC site. Envisages a 48m free standing tower with a 10m pole to support the broadcast antenna. Notes enclosure of survey drawing of the building and tower. Request for building permit for foundation pads for new tower.

21/2/00 Seacoast letter to Mayor Gibson re previous meeting, makes reference to possibility that tower could have been 100m, but, in an attempt to accommodate citizen concerns so far as possible at that site, would instead be constructed as a shorter stand-alone (unguyed) tower.

29/2/2000 Second meeting with concerned citizens. Notes to file by the Mayor and by Industry Canada representative, as well as reports from interviews with broadcaster, suggest all concerns resolved.

13/3/00 Seacoast revised application, now for new antenna site. Technical brief ('Revision', 8/3/2000) shows 48m self-support tower with 10m pole on top. Indicates "The applicant has investigated constructing a new shorter tower on property adjacent to the CIOC-FM property, and **this revision to the parameters** is based on using this new tower. Located approximately 90m from existing CIOC tower, consequently a change in coordinates of one second in both latitude and longitude results." Emphasis added.)

3/00 Building permit for concrete pads for new tower issued to Seacoast

24/3/2000 IC technical acceptance of Rogers 17/1/00 application for CHTT

14/4/2000 Technical acceptance of Seacoast March 13, 2000 application for approval of Revision proposing new antenna site for new station CFEX-FM. Seacoast land use attestation, indicating "have consulted, obtained concurrence", dated 7/4/2000.

5/2000 Seacoast Tower constructed

23/5/2000 Seacoast receives approval to operate new station CFEX-FM on new Seacoast antenna tower. No complaints reported.

6/2000 Rogers replacement tower constructed—CIOC. Initial transmissions from the new antenna on the replacement tower reveal mismatched cabling and equipment, with operational malfunctions and consequent widespread problems of interference with radio-sensitive equipment in nearby homes. Following remedy of these start-up problems, senior engineering staff confirm that operations are now within approved parameters, and speculate that indeed the strength of radio fields likely to cause interference problems is almost certainly significantly reduced from the previous operations using the old antenna.

24/7/2000 CHTT authorized for construction (as approved in CRTC 2000-215)

1/9/2000 Broadcasting certificate for CHTT "authority granted to operate"

18/9/2000 Seacoast (belated) notification of Langford, copying the text of the February 21 letter in describing the proposed new tower. Indicates that that letter was sent also to Esquimalt and Metchosin in February.