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Director J. Sullivan

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CT-91/2

THE COMPETITION TRIBUNAL

IN THE MATTER OF an Application by the Director of Investigation and Research under s. 79 of the Competition Act, R.S.C., 1985, c. C-34, as amended;

AND IN THE MATTER OF certain practices by Laidlaw Waste Systems Ltd., in the communities of Cowichan Valley Regional District, Nanaimo Regional District and the District of Campbell River, British Columbia.

BETWEEN:

THE DIRECTOR OF INVESTIGATION
AND RESEARCH

Applicant

COMPETITION TRIBUNAL TRIBUNAL DE LA CONCURRENCE		P R O D U I T
SEP 30 1991 <i>se</i>		
REGISTRAR - REGISTRAIRE		
OTTAWA, ONT.	#49	

- and -

LIDLAW WASTE SYSTEMS LTD.

Respondent

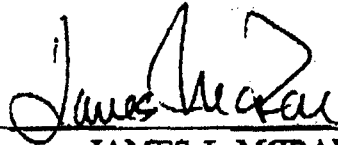
REBUTTAL AFFIDAVIT

I, JAMES J. MCRAE, of the District of North Saanich and the Province of British Columbia, make an oath and say as follows:

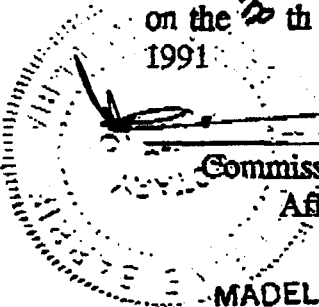
1. I swore an Affidavit, attaching my original report in this proceeding, on September 12, 1991.
2. Attached hereto as Exhibit "A" is a true copy of my report which provides a rebuttal to the report prepared by Mr. Michael Ross et. al of Peat Marwick Stevenson Kellogg.

3. I make this Affidavit pursuant to Rule 42 (1) of the Competition Tribunal Rules.

SWORN before me at the)
City of Victoria, in the)
Province of British Columbia,)
on the 20th day of September,)
1991.)



JAMES J. MCRAE



Commissioner for Taking
Affidavits

MADELEINE BARRIE
NOTARY PUBLIC
817A FORT STREET
VICTORIA, B.C. V8W 1H6
382-5331

This is Exhibit "A" referred to in the affidavit of JAMES J. MCRAE sworn before me at Victoria in the Province of British Columbia, this 25 day of September 1991.
Notary Public and for the Province of British Columbia

EXHIBIT "A"

THE COMPETITION TRIBUNAL

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AND IN THE MATTER OF certain practices by Laidlaw Waste Systems Ltd., in the communities of Cowichan Valley Regional District, Nanaimo Regional District and the District of Campbell River, British Columbia.

MADELERNE BARRIE
NOTARY PUBLIC
817A FORT STREET
VICTORIA, B.C. V8W 1H
382-5331

B E T W E E N:

**THE DIRECTOR OF INVESTIGATION
AND RESEARCH**

Applicant

- and -

LIDLAW WASTE SYSTEMS LTD.

Respondent

AFFIDAVIT EVIDENCE OF JAMES J. MCRAE

1. This rebuttal to the Affidavit and report prepared by Mr. Ross and his associates at Peat Marwick Stevenson Kellogg is organized into six sections. Section I compares the relevant product market as defined by Mr. Ross and myself, and concludes that the two are nearly identical. Section II compares our respective definitions of the relevant geographic market and reconciles the differences. The next Section re-visits the issue of Laidlaw's market share in the relevant market areas. Section IV notes that both Mr. Ross and I conclude that barriers to entry exist in the markets under examination. Section V looks at the empirical relevance of economies of density in light of Mr. Ross' suggestion that exclusivity may be an efficient response to prevailing market forces. The final Section discusses the issue of economies of scale, again in light of the efficiency question.

I THE RELEVANT PRODUCT MARKET

2. The report of Mr. Michael Ross, dated September 13, 1991, defines the relevant product market (p. 47) as, "lift-on-board (LOB) services, i.e., the provision to customers of the service of solid waste pickup, haulage, and disposal, using bins of a size between 2 and 8 cubic yards, lifted and dumped into front, side or rear-load compactor trucks".
3. My report, dated September 12, 1991, defines the product market as solid waste collection and disposal service to medium volume (one to ten cubic yards per week) customers who desire the containerized storage of their refuse, and who are most efficiently served by means of front-load vehicles, or less frequently by automated rear or side-loaders which have container lifting capacity.
4. I believe that the two definitions of the product market are almost identical. Accordingly, I conclude that the market for commercial containerized solid waste collection and disposal service (my terminology) is the relevant one for the purpose of this proceeding.

II THE RELEVANT GEOGRAPHIC MARKET

5. In the report of Mr. Ross, there is a detailed analysis of the "cost impact of remote service" which is based on cost information made available by Laidlaw operating staff on servicing the Cowichan Valley directly from Nanaimo. Mr. Ross concludes (p. 44) that, "any pick-up route that has at least part of its length within 30 miles (50 kilometres) of the base of operations of another provider of the same service is potentially open for competition".
6. I arrive at a similar conclusion, i.e. a solid waste collection and disposal firm operating from a hub outside of the local area (an "outside" firm) can remain competitive with locally domiciled ("inside") competitors so long as the outside firm's operational hub is 50 km or less from the operational hub of the inside firm.

7. Primarily from this observation on the reach of the firm's competitive "envelope", i.e. 50 km from an operation hub, Mr. Ross concludes that the Nanaimo Regional District and the Cowichan Valley Regional District - with the exception of the City of Duncan and the Village of Lake Cowichan which provide commercial containerized service as a local government activity - should be considered as a single market. This is incorrect.
8. The 50 km competitive envelope would allow a firm with an operational hub in Nanaimo to competitively serve customers in the southern portion of the Nanaimo Regional District, plus customers in the northern portion of the Cowichan Valley Regional District, i.e. the Town of Ladysmith and surrounding Electoral Areas G and H, and population centres in the northern half of the District of North Cowichan. These areas comprise 35% of the total population of the Cowichan Valley Regional District.
9. Thus, the relevant market in this area is the Nanaimo Regional District plus the northern portion of the Cowichan Valley Regional District comprising about one-third of the Regional District's total population. This is the area which I reference as the "Nanaimo" market in paragraph 32 of my report. The southern portion of the Cowichan Valley Regional District is a separate geographic market which I reference as the "Cowichan Valley".
10. In combining all of the Nanaimo Regional District and the Cowichan Valley Regional District into a single market, Mr. Ross also appeals to the observation that Laidlaw considers both regions as a single entity in terms of the regional office functions of operations, equipment maintenance, marketing and administration. This observation is not relevant to the issue of defining the geographic boundaries of the market.
11. The placement of geographic boundary lines is accomplished by determining the likely substitution to producers whose production facilities, i.e. operational hubs in the present context, are located in other regions. The observation that Laidlaw finds it efficient to supply regional office services to two (or three) hubs from a single location

has no bearing on the issue of determining whether or not a significant number of commercial containerized customers can obtain service from firms domiciled in other regions if they so desired.

12. Finally, the practical significance (in terms of market shares) of where the geographic market boundary line should be placed for the Nanaimo Regional District and the Cowichan Valley Regional District areas is minimal given that Laidlaw has a very high market share in both jurisdictions.
13. In his report, Mr. Ross defines the Campbell River market broadly. The stated reasons (p. 52) for this particular grouping of communities into a market area for the purpose of this proceeding range from "convenience" to the observation that existing firms dump waste in the "same Campbell River landfill as Laidlaw currently uses".
14. As already discussed, the placement of geographic market boundary lines should be done on the basis of the likely substitution of firms whose operating hubs are located in other regions.
15. Mr. Ross and I have independently estimated that in the Nanaimo area, the competitive envelope of a solid waste collection and disposal firm extends 50 km or less from its operational hub. Given the distribution of population between the District of Campbell River on the one hand, and the City of Courtenay, the Town of Comox and Village of Cumberland on the other, I conclude that the estimated size of the competitive envelope is also valid between these population centres.
16. The District of Campbell River is at the outer limit (or beyond) the competitive envelope in terms of the distance from the Courtenay/Comox/Cumberland area. Evidence of this fact is provided by the observation that Laidlaw in Campbell River, and the firms providing commercial containerized service in the Courtenay/Comox/Cumberland area, do not enter each other's market areas, and end their service at a point approximately one-half way between the two population centres.

17. Quadra Island is unique because part of the journey to the Campbell River dumpsite must be made by ferry. Because of the higher cost of travelling by this mode, the competitive envelope will be considerably smaller than the estimated 50 km which is based on road transportation only.
18. The Village of Sayward is also unique due to the fact that it lies 81 km north of the District of Campbell River, but Laidlaw simultaneously provides residential hand bag/trash can service and commercial containerized service from its base in Campbell River. However, as discussed in paragraph 28 of my report, the size of the competitive envelope depends partially on the size of the market area to be served by the outside firm. Small market areas such as Sayward (population 411) can be served from Campbell River because the truck must make the "empty" segment of the trip relatively infrequently. Larger market areas such as the Courtenay/Comox/Cumberland area must be served by establishing an operational hub.
19. The practical significance of including or excluding both Quadra Island and the Village of Sayward is minimal due to the low number of customers desiring commercial containerized service in these areas.
20. Thus, the relevant geographic market for the purpose of this proceeding is considerably smaller than the one identified by Mr. Ross. As discussed in paragraph 32 of my report, the relevant area is referenced as "Campbell River" and includes the District of Campbell River and surrounding Electoral Areas D, E and F.

III MARKET SHARE

21. Mr. Ross uses three methods to measure Laidlaw's market share in the commercial containerized (or lift-on-board) solid waste market. His three methods are described on pages 54 to 58 of his report. He chooses Method 3 as his "best" estimate in the Nanaimo Regional District (as defined by him); Method 1 (the only one available)

in the Campbell River market; and an average of all three methods for the Cowichan Valley Regional District.

22. In my view, his Method 2, which is based on actual weighed volumes of waste, is the most reliable and is also used in my calculations. Method 1 is based on a numerical count of bins rather than recorded weight of refuse. Method 3 is based on a combination of arbitrary underlying measures.
23. Mr. Ross' estimates using method 2 are very similar to mine. My estimate of Laidlaw's (average) market share for 1991 in the Cowichan Valley Regional District is 89% as compared to his 86-87%. In the Nanaimo Regional District, my (average) 1991 estimate is 86% while his is 87%. Because no weight records are kept at the Campbell River dumpsite, neither Mr. Ross nor I is able to use this method to produce market share estimates.
24. Mr. Ross' estimate of Laidlaw's market share for Campbell River (46%) is significantly biased downward by his definition of the relevant geographical market (see para. 20 above). Once the Campbell River market is correctly defined, Laidlaw's market share is estimated to be 83% using Mr. Ross' Method 1 (see col. 2, line 9, p.30).

IV EASE OF ENTRY

25. Mr. Ross acknowledges the existence of entry barriers due to economies of scale, and the existence of a contracted customer base which is difficult for new entrants to penetrate (see p. 61 of the Ross report).
26. I make precisely the same points in my report.

V ECONOMIES OF DENSITY

27. Mr. Ross points out that in various sectors of the transportation industry, operating costs per pick-up are thought to fall as the distance between pick-up points

decreases, i.e. the density of pick-up points increases. Mr. Ross calls this concept the "economies of contiguity" and produces an empirical estimate of the importance of the concept, but not in the conventional economic format of a per unit cost elasticity.

28. Data provided on p. 37 of Mr. Ross' report may be organized into a cost elasticity format to show that a 1% increase in density (measured in terms of pick-ups per 100 miles) reduces the labour and landfill costs per pick-up by only 0.25%.

29. Even this relatively small degree of cost responsiveness to increases in density is an overestimate. Mr. Ross does not include the costs of fuel and oil, tire wear and tear, or maintenance and depreciation, all of which increase with the higher levels of stop-and-go driving associated with increased customer density. Inclusion of these costs will reduce the cost responsiveness estimate of 0.25% toward zero.

30. Based on my analysis of the empirical results produced by Mr. Ross on economies of contiguity (or density), I conclude that "exclusivity", i.e. Laidlaw's near monopoly position in the relevant geographic markets, is not an efficient response to the market. The potential cost efficiencies which may accrue to an exclusive commercial containerized firm due to economies of density are insufficient in magnitude for exclusivity to be an efficient market outcome.

VI ECONOMIES OF SCALE

31. Mr. Ross suggests that economies of scale, attributable to better labour and equipment utilization, specialization of personnel functions within the firm, volume purchasing and the pooling of overhead costs are present in the solid waste collection and disposal industry.

32. The source of this observation is a 1977 academic analysis of the costs of residential solid waste collection and disposal in a sample of 315 US cities. For residential solid waste service provided under a "market" organizational structure, the

author estimates (pp. 132 - 134) that economies of scale are exhausted in cities served by more than two residential collection vehicles.

33. These findings are of limited relevance to this proceeding for several reasons. First, the author analyzes the costs of residential solid waste collection and disposal only. Second, the data are quite stale, and hence cannot incorporate the many changes in transportation technology and management practices which have taken place since 1977. Finally, the functional form of the estimated cost function is a rigid specification which has been replaced in leading econometric studies of the transportation industry.
34. The matter of economies of scale is also examined in detail in my report (see paragraph 60). For reasons discussed therein, I conclude that there are economies of scale applicable to single truck firms in the commercial containerized solid waste business, but they are almost completely exhausted at the point when a front-load vehicle produces approximately 240 lifts per week.
35. Another important consideration is that the achievement of economies of scale in the solid waste collection industry does not necessarily require a firm to hold a specific share of the market in the individual relevant markets under examination in this case. Some multi-vehicle economies of scale, arising due to the reasons identified by Mr. Ross, are potentially available to firms who are able to operate in two or more adjoining market areas, and/or other solid waste transportation and disposal product markets. This observation is supported by Laidlaw's organization of its operations into Divisions which, in some cases, serve adjoining regional markets. For example, both the Cowichan Valley Regional District and the Nanaimo Regional District are subsumed within the respondent's Nanaimo Division.
36. I therefore conclude that the asserted economies of scale are not sufficiently strong, relative to the size of each of the three geographic markets, to imply that Laidlaw's overwhelming market shares or its restrictive contractual practices are an efficient response to market forces.