

The Trail Smelter Case: International Air Pollution in the Columbia Valley

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The Trail Smelter Case of 1926 to 1934 is important in the study of United States-Canadian relations for two reasons. It was the first case of air pollution to come before an international tribunal, and it was the first time that the Canadian government had complete control of the settlement of a problem by international arbitration, from original complaint to final settlement, without clearing its actions through London. Since the issue had no precedent in international law, and very few precedents in national law, the tribunal that examined the facts and rendered a judgment had little to go on; indeed it established a precedent subsequently used in other cases.

In 1889 silver ore was discovered in the Lily May mine at Rossland, British Columbia.¹ The nearest smelter to which the ore could be sent was five hundred miles away in Montana. There was almost no transportation in or out of Rossland in 1890, and the boats of the Kootenay Steamship Company that travelled on the Columbia between the Little Dalles, north of the present Kettle Falls in Washington, and Revelstoke, B.C., were much too small to handle the bulky shipments of unsmelted ore from Rossland. Besides, costs were too high to make such shipments profitable even if they could have been made.

Accordingly, D. C. Corbin, a Spokane promoter, organized the Spokane Falls and Northern Railway Company which built a road to the Little Dalles from Spokane in the summer of 1890.² That same year, five additional mines began production in Rossland.³ As a result, Frank George, A. V. Downs, and Fred Farquhar, all associates of Corbin, pre-empted a site on the banks of the Columbia river a few miles north of the Little Dalles and south of the Canadian border, ostensibly for agricultural purposes. Two years later D. J. Roberts, chief engineer for the Spokane

¹ Trail (British Columbia), *Daily Times*, Oct. 21, 1953.

² *The Trail Smelter Question: Statement of Facts Submitted by the Agent for the Government of Canada, May 3, 1936* (4 Vols. Ottawa: Kings Printer, 1936). Appendix A 1. "The Dean's Report," p. 10 (hereafter referred to as "Dean's Report").

³ Trail, *Daily Times*, Oct. 21, 1953.

Falls and Northern, organized the Northport Townsite Company at this location. Roberts made no attempt to hide his plans to build a smelter on a small bench a few hundred yards from the river.⁴ A few families moved to Northport immediately. The men were employed in railroad construction by the S.F. & N. from the Little Dalles to Nelson, B.C., which was reached in 1893.⁵

Three years later the S.F. & N. built a branch line, the Red Mountain Railroad, through winding Sheep Creek Canyon between Rossland and Northport, and in the process built a bridge across the Columbia.⁶ The profits which resulted brought the Spokane Falls road and its branch line to the attention of the great empire builder, James J. Hill, whose Great Northern system had been built from the purchase of just such local rail lines. By the end of 1896 the Great Northern owned the S.F. & N. line north of Little Dalles.⁷

In 1896 a small ore reduction plant at Northport, called the Breen Copper Smelter, began treating Rossland ores for the LeRoi Mining and Smelting Company.⁸ By 1900 Northport had almost 800 inhabitants, nearly all connected in some way with the smelter or the railroad.⁹ In 1901 the LeRoi and Red Mountain operations reorganized their smelter as the Northport Smelting and Refining Company. Except for a brief strike in 1901,¹⁰ the population and industrial level of Northport remained constant until 1908. In 1909, however, the smelter closed, and the population declined to about half of what it had been a year before.

The reason the smelter closed was competition from the Consolidated Mining and Smelting operations at Trail. This company developed from a scheme of E. S. Topping, a Nelson mining engineer, who came into possession of one of the Rossland mines in 1896. Topping was a natural promoter, and after he sold his claim for a handsome profit, he joined with Augustus Heinze of Butte, Montana, and built a smelter where Trail Creek joined the Columbia. Heinze also financed a short rail link with

⁴ "Dean's Report," p. 10; Richard F. Steele, *An Illustrated History of Stevens, Ferry, Okanogan, and Chelan Counties, State of Washington*, (Spokane: Western Historical Publishing Company, Publishers), 1904, p. 137.

⁵ Steele, *Stevens County*, pp. 137-8.

⁶ Elsie G. Turnbull, *Trail, 1901-1961: Sixty Years of Progress*, (privately printed), no date, p. 38.

⁷ "Dean's Report," p. 10.

⁸ "Dean's Report," p. 8.

⁹ "Dean's Report," p. 7.

¹⁰ Steele, *Stevens County*, pp. 146-7.

Rosslund to bring ore to the new smelter.¹¹ Its capacity was small, but it did encourage Le Roi's Rosslund competitors, including the Rosslund Power Company, to help Topping expand his smelter and form the Consolidated. The newly reorganized corporation sold stock, half of which was purchased by the Canadian Pacific Railway.¹² Immediately the C.P.R. built a spur from its main line to Trail, while urging that "Canadian ores should be treated in Canadian smelters."¹³

Before 1909 farming in the Northport district was a minor source of income for farmers believed that the "heap roasting" process used at Northport, which produced a horrible odour, was poisoning the soil. (Local citizens referred to the heaps of burning coals at "stink piles".)¹⁴

Even before the Northport smelter closed, part of the Colville Indian Reservation was opened for settlement by the United States government. The land rush to the west bank of the Columbia was brief, but spirited. Homesteaders filed on timber claims, and soon sawmills began to cut the pine forests into lumber, which added a new source of income to upper Stevens County.

At the same time, a speculative land company, called the Upper Columbia Land Company bought about ten thousand acres of land near the Little Dalles, advertised the fertility of the soil, and planted about 900 acres of the land in apple trees to demonstrate that farming was possible. The promoters did not know horticulture, for they planted twice as many trees as could possibly flourish on the land, their irrigation was inadequate, and they neither pruned nor sprayed.¹⁵ By 1917 the trees should have been bearing fruit, but instead most were dead or dying. Many purchasers of the land quit in disgust. Others found that they could grow alfalfa hay, potatoes, or some wheat in the small ravines and canyons that drained into the Columbia; a few more put sheep to graze on the sparse grass.¹⁶

The failure of the fruit growers was partially compensated for by United States involvement in war preparations. The government found itself woefully short of certain strategic metals including lead. In anticipation of war demand, the government encouraged the Northport Mining

¹¹ Victoria, *Daily Colonist*, July 28, 1951; Vancouver (B.C.) *Province*, June 30, 1951; ———, "Cominco, A Canadian Enterprise," *Canadian Mining Journal*, 75:5, May 1954.

¹² Trail, *Daily Times*, June 5, 1954.

¹³ Turnbull, *Trail*, p. 38.

¹⁴ "Dean's Report," p. 8.

¹⁵ "Dean's Report," p. 18.

¹⁶ "Dean's Report," p. 9.

and Smelting Company to reopen and to process the lead ores that had been discovered at Lead Point, a few miles north of Northport and in the Deep Creek valley, east of the town. The smelter remained open throughout the war, and once again employed nearly five hundred men.¹⁷ The process used was much more sophisticated than that used in the copper process of the previous decade, and although about thirty tons of sulphur a day was discharged from the smelter stack, this was not considered intolerable.¹⁸

By 1920, the population of Northport was almost 1000 people, and the farming and logging population nearby added another 400.¹⁹ The community seemed to its "boosters" to have a solid future when the limestone hills behind the town began to produce materials for cement manufacturing as well as for ornamental stone. The Idaho Lime Company opened a quarry at a spot called Evans, a few miles south of town, and a Portland cement operation also sent limestone from the nearby hills to plants out of town.²⁰

On March 5, 1921, the prosperity ended abruptly. The government drastically curtailed its lead purchases, and the severe business depression of that year reduced mining activity still further. With the end of the war most of the Rossland mines decreased or stopped operations. The Red Mountain railway to Northport was abandoned and its tracks were removed. The smelter at Northport again closed. The workers found employment elsewhere, and the population decrease reduced local demand for agricultural products and lumber. High freight rates made shipping of farm products to distant markets uneconomical. As a result many farms and land claims were again abandoned, and there was a general decrease in rural population. Before 1929 the population of upper Stevens county had been cut in half. Business prosperity, naturally, collapsed with the prosperity of its customers. The so-called Coolidge prosperity did the town no good at all. By the time the depression began in 1929, almost a quarter of the 33,000 acres under cultivation a decade before had gone back to wasteland.²¹

By way of contrast, only twenty miles north of Northport, Trail was flourishing. Although the Rossland mine closures severely hurt the Consolidated in 1921, ore from this source was shortly replaced by the zinc

¹⁷ "Dean's Report," p. 10.

¹⁸ "Dean's Report," p. 8.

¹⁹ "Dean's Report," p. 7.

²⁰ "Dean's Report," p. 11.

²¹ "Dean's Report," p. 12.

ores of the great Sullivan mine at Kimberly, British Columbia — which remains the most important known zinc ore body in the world.

The Sullivan mine was first opened in 1892, but the high iron sulphide content of the ore at first made it impossible to refine it profitably. This impurity caused the molten zinc to crust over, and occasionally it would solidify in the furnace. In the event of such an accident, it might take months before the furnace involved could go back into production.²² In 1899 Heinze brought Selwyn G. Blaylock, a young mining engineer trained at McGill University, to British Columbia to try to handle the smelting problems. After almost a quarter of a century of effort, he was successful. In 1925 Kimberly Mining and Smelting was added to the Consolidated holdings.²³

The Sullivan ores came to Trail, and employment at the Trail smelter increased significantly. Naturally the population of the town increased as well. The disgruntled, embittered citizens of Northport watched their rival prosper with a jealousy that eventually became hatred.²⁴ The Trail smelter became both efficient and profitable, and no financier could possibly consider reopening the much smaller and less efficient Northport smelter. The Northport buildings decayed, one was flooded for use as a skating rink in winter, and others were demolished for useable bricks.²⁵

The Blaylock process recovered the arsenic and lead by-products which were known to be dangerous to the environment. The sulphides, however, were not recovered, but were discharged into the air after the ore was subjected to intense heat, through a huge brick stack 409 feet high, which was the wonder of the whole Columbia valley. Between 1924, before the Sullivan ores were involved, and 1926, when the iron sulphide began polluting the atmosphere, Trail increased its sulphur discharge from 4700 tons a month to over 10,000 tons a month — eleven times that of the old Northport smelter, mainly in the form of sulphur dioxide.²⁶ Since the stack was designed specifically to carry the fumes away from Trail, and the high mountains kept the sulphur dioxide from drifting either to the east or west, the only place for the fumes to go was south into the United

²² ———, "Cominco, A Canadian Enterprise," *Canadian Mining Journal*, 75:5, May 1954, Rossland, *Miner*, May 19, 1966; Benn Keer, "Reflections of a Pioneer," *Cominco Magazine*, 19:6, June 1958.

²³ Trail Golden Jubilee Society, *Trail, B.C., A Half Century: 1901-1951*, (privately printed), 1951, pp. 34-6.

²⁴ Vancouver, *Province*, June 16, 1951.

²⁵ "Dean's Report," p. 13.

²⁶ "Dean's Report," p. 10.

States, over the orchards, forests, fields, homes and businesses of the inhabitants of northern Stevens county.

Of course there was fume damage at Trail as well, but per capita income was so high, and so many people depended on the smelter for their living, that they tended to agree with the newspaper editor who dismissed the odour and pollutant by saying, "The descending smelter smoke will come to them as balm to the nostrils."²⁷

To complicate the problems of Northport, a drought struck the upper Columbia valley in the late 1920's. Normal average annual rainfall of 17 inches at the border declined to only 9.6 inches in 1929.²⁸ Dehydration of the forests and poor fire control measures contributed to a devastating forest fire which virtually wiped out all commercial timber between Trail and Marcus, south of Northport. By the end of 1929 all lumber mills were closed.²⁹ To compound the devastation, acid from the sulphur fumes soured the soil so much that no natural reforestation took place.³⁰

The citizens of Northport, already frustrated by natural disasters, population and business decline, and depression, turned upon their hated rival to the north with a fury that bordered on paranoia. They reasoned that they had been prosperous when their smelter operated, and the Trail smelter was small. Now, as Trail grew larger, their smelter crumbled to ruins as did their hopes and livelihood. They accused the Trail smelter officials of starting the forest fire to ruin them. They could smell the sulphur fumes from the north. Their crops withered and their cattle sickened and died. Their barbed wire fences and galvanized roofs corroded far sooner than would normally be expected. The paint on their buildings peeled and disappeared with the combination of drought and sulphur dioxide fumes. They formed a "Citizens Protective Association" of farmers and property owners whose shrieks of rage, letters of protest, and speeches of denunciation reached the ears of politicians in both Ottawa and Washington.³¹

In the autumn of 1926, one of the members of the Citizens Protective Association, J. H. Stroh, a Northport farmer, wrote to Consolidated to complain about the fumes, and the company took immediate action. In

²⁷ Trail, *Daily Times*, Dec. 23, 1950, quoting an editorial from the *Trail Creek News*, Oct. 19, 1895.

²⁸ "Dean's Report," p. 6.

²⁹ A. E. Richards, (U.S. Department of Agriculture), "Survey of Business Conditions in the Northport Area," *Economic Survey of Northeastern Washington*, 1937.

³⁰ Victoria, *Daily Colonist*, April 8, 1951.

³¹ *Trail Smelter Question*, "Statement of S. G. Blaylock," Appendix B 3; *Trail Smelter Question*, "Statement of Facts," p. 3.

due time company agents appeared, and offered to buy the farm of anyone who had suffered smoke damage. Since property was low in value around Northport, their costs would have been minimal. Washington state alien land laws, however, prohibited any foreign corporation from owning American real estate, and Stroh was informed by local officials that he could not sell.³²

The matter then moved to the level of international diplomacy. The United States State Department opened negotiations to collect damages from the Canadian government for the citizens of Northport. State Department employees took affidavits from the local residents which detailed the problem as the Northport citizens saw it. For some reason, however, Washington did not keep the senators or citizens informed of progress. Senator Clarence C. Dill of Washington state complained publicly that he had held a meeting in Spokane on the fumes question, and had so informed Secretary Kellogg, referring other letters from Northport residents to Kellogg, but that the Secretary's response was cold and indifferent.³³ The State Department actually did press the case of the Americans, and the Canadian Consul-General wrote his prime minister that their nation was facing what amounted to an international lawsuit. The official response was quite in order. The Canadian government suggested that the fumes problem should be placed on the agenda of the International Joint Commission³⁴ which was empowered to examine and report on "any other question or matters of differences arising between [the United States and Canada] involving the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other, along the common frontier between the United States and the Dominion of Canada."³⁵

The International Joint Commission did not consider the case until August 1928. Meanwhile, the air pollution continued. Local politicians became increasingly agitated, and opportunists became involved when they thought there was political capital to be gained from notoriety in an international matter.

For example, the Spokane *Spokesman-Review* carried a story on Feb-

³² "Statement of Facts," p. 3; Lawrence J. Burpee, "The International Joint Commission," in F. A. Soward and others, *Canada in World Affairs: The Pre-War Years*, (London: The Oxford University Press), 1941, pp. 227-35.

³³ U.S. Public Documents, *The Congressional Record*, 72 Cong., 2 session, Dec. 21, 1932, p. 833.

³⁴ Letter, W. R. Castle, Jr., to William Phillips, Aug. 20, 1927. U.S. Department of State, *Papers Relating to the Foreign Relations of the United States*, 1928, (3 vols.), 1943, v. 1, p. 78 (hereafter referred to as *Foreign Relations*).

³⁵ "Statement of Facts," p. 5.

ruary 28, 1928 with the headline, "Hartley to view smelter's havoc." Roland H. Hartley was governor of Washington. The very nature of the headline suggested that the smelter had injured Stevens county settlers, though the Consolidated insisted that there was no "havoc." In any event, the Governor chartered a private aircraft, in itself a good publicity stunt in those days; he flew over the valley, but did not land, talked to no citizens involved, and having attracted attention to himself, he issued neither statements of findings nor support or rejection of the claims.³⁶

At a more responsible level, W. L. Mackenzie King wrote a letter to the American minister to Canada informing the United States that Canada had appointed an expert to investigate the allegations. A. G. Langley, the provincial minister of mines, began his investigation with the assistance of Professor Thatcher of Cornell University, and R. C. Crowe, an attorney for Consolidated Mining and Smelting. The Company again offered to pay for any damage done if the amount could be determined, and employed Dr. Ray E. Neidig of the University of Idaho Department of Agriculture to determine amounts due and to pay for damage. The farmers spurned the amounts decided upon by Neidig and the Company.³⁷ Secretary of State Kellogg then notified Canadian authorities that the issue could be settled quickly only if an American team checked the conclusions of the Canadian investigating team.³⁸

Unfortunately, neither the farmers nor Washington's powerful senators were content to wait for the results of diplomatic negotiations. Senator Wesley L. Jones, a republican with long seniority and much prestige joined Washington's junior senator, Democrat Clarence Dill, to needle the Coolidge administration with bi-partisan fervor.³⁹ In spite of their oratory, the governments of both the United States and Canada agreed to submit the problem to the International Joint Commission.

In his charge to the Commission, Secretary Kellogg asked five questions of the body. These became the guide for the investigations of the next decade. They were:

1. What was the extent to which property in the State of Washington has been damaged by fumes from the smelter at Trail, British Columbia?

³⁶ Spokane, *Spokesman-Review*, Feb. 28, 1928.

³⁷ Letter, Mackenzie King to Phillips, Feb. 24, 1928, *Foreign Relations*, 1928, v. 2, pp. 81-2.

³⁸ Letter, Castle to Phillips, March 12, 1928, *Ibid.*, p. 82.

³⁹ Telegram, Kellogg to Phillips, May 4, 1928, *Ibid.*, p. 85.

2. What was the amount of indemnity which would compensate United States interests in the State of Washington for past damages?
3. What were the probable effects in Washington of future operations of the smelter?
4. What was the method by which adequate indemnity for damages caused by future operations could be paid?
5. What might be other problems not covered in the first four, but concerned mainly with ways in which future fume damage might be prevented?⁴⁰

The actual, scientific investigations were not intended to be sensational, and in fact they received minimum publicity. Deans Howes of the University of Alberta, and Miller of the University of Idaho made preliminary field studies, but their very thoroughness took time. The impatient farmers chafed under the delay. At last the Commission met at Northport for hearings on October 9 and 10, 1928, then moved to Washington, D.C. for additional meetings in February and April of 1929. In November 1929 they returned to the Columbia valley and met in Nelson, British Columbia. They met once more in Washington, D.C. from January 22 to February 12, 1930 to hear the summaries of investigation and arguments for and against damages.⁴¹ They considered the facts available for a full, additional year. On February 28, 1931 the International Joint Commission recommended that the Canadian government should pay \$350,000 in damages and require the smelter company to stop polluting the atmosphere. Vice President S. G. Blaylock promised that the company would spend ten million dollars on by-products plants to end pollution. The Commission then extended the period of abatement until the end of 1931.⁴²

It is clear that the company planned to end the air pollution, but it is equally clear that it was reluctant to make large expenditures until it could know for certain that its first, small pilot plant would work effectively.⁴³ Blaylock claimed that the cost of treatment would run as high as

⁴⁰ Kellogg to Newson (U.S. Chargé d'Affaires in Canada) Aug. 7, 1928, *Foreign Relations*, 1928, v. 2; "Statement of Facts," p. 5.

⁴¹ "Statement of Facts," p. 6; *Victoria Daily Colonist*, Oct. 9, 1928.

⁴² "Statement of Facts," p. 6.

⁴³ John T. Raftis, *International Joint Commission, Trail Smelter Reference*, Colville: The Statesman Index Co., 1931, p. 36.

\$4,000 a day or ten per cent of the gross income of the plant.⁴⁴ What he did not know, of course, was that the company would eventually receive more profits from the fertilizer and acid recovered from the wastes than it did from its depression-reduced smelting of zinc ores.

The Northport claimants were disappointed by the Commission's recommendations. They had asked for almost three times the damages allowed. They had asked for payment to businesses damaged, as well as to farmers. The state of Washington had claimed payment for damage done to timber on state lands. Stevens county had asked compensation for losses on tax revenues not paid by citizens who had moved away and abandoned their property. The commission rejected these kinds of damage claims on the grounds that there was no proof that any connection existed between damage to business, timber, or tax revenues directly with the fumes. They accepted the obvious contrast between Northport depression and prosperity in Trail, but said it was merely a matter of competitive industry, and had nothing to do with fumes.⁴⁵ The United States government, speaking for all of the claimants, refused to accept the \$350,000 award, and asked that the case be reexamined by an arbitration tribunal rather than the I.J.C.

This action by the United States government stopped the attempt to compensate the Stevens county farmers dead in its tracks. President Hoover and Secretary of State Stimson had worse problems to face than the plight of a few hundred farmers in the northern third of a remote western county and apparently forgot the matter. Without pressure from the top of the government, nothing was going to happen, and nothing did.

A few days before Christmas, 1932, Senator Dill reopened the matter with a flourish. In a long senatorial speech he denounced the Republican administration as "do-nothing" because they ignored the plight of the "poor farmers" who had been wronged by "a great foreign corporation." He noted that the most optimistic estimates of fumes abatement predicted that sulphur output would be reduced only 35 per cent a year, which would still leave 84,000 tons of untreated sulphur dioxide pouring across the border annually.

With heavy sarcasm he documented Stimson's utter lack of concern. In April 1931, Stimson wrote that the matter was receiving his "earnest attention." Eleven months later the Secretary wrote that he "would take action in the near future." Now, after another nine months Dill noted,

⁴⁴ S. W. O'Brien, Reply Brief, *Trail Smelter Reference, International Joint Commission*, (privately printed), 1931, p. 21.

⁴⁵ "Statement of Facts," p. 7.

the Secretary wrote, "early action has not been considered advisable pending developments, but the case is receiving constant attention." According to Dill this constant attention had resulted in steadily decreased annual appropriations for pollution study until in 1932 only ten thousand dollars was recommended by the administration. The Federal Land Bank refused to grant credit to Stevens county farmers because the fumes had ruined their lands, but the administration was still wondering whether any damage had been done at all.⁴⁶

Apparently stung by Dill's attack, the State Department reopened the case officially in February 1933, though this was only a few days before Stimson was to be replaced by Secretary Hull.⁴⁷ Prime Minister R. B. Bennett wired James J. Warren, president of Consolidated, to tell him of renewed American activity, and suggested an immediate strategy conference.⁴⁸ Warren and Bennett jointly informed the American government shortly afterward, that no damage had occurred after January 1932.⁴⁹ The Acting Secretary's letter of reply to this assertion was so sharp that the chargé d'affaires softened the words to prevent the Canadian Prime Minister from taking offense.⁵⁰ Six pollution recorders showed that destructive fumes had crossed the border on at least three separate occasions in 1932 and 1933.⁵¹

For the next few months much was spoken and written, but very little happened. The Company ignored all pleas for voluntary cooperation and for a time even refused to send representatives to Ottawa.⁵² Not until the last week of 1933 was the Prime Minister able to make any proposals for a final settlement to the new administration in Washington.

Bennett suggested that the two governments reopen negotiations for a new study, since he felt it was possible that the sharp decline in Northport business was the result of the world-wide Depression rather than the fumes.⁵³ His letter made no concrete suggestions for a meeting of the two governments, and Undersecretary Phillips rather tartly warned Bennett

⁴⁶ *Congressional Record*, 72 Cong., 2 Sess., Dec. 21, 1932, pp. 831-40.

⁴⁷ Letter, Stimson to Pierre de L. Boal (U.S. Chargé in Canada), Feb. 10, 1933, *Foreign Relations*, 1933, v. 2, pp. 52-4.

⁴⁸ Telegram, Boal to Stimson, Feb. 25, 1933, *Ibid.*, p. 55.

⁴⁹ Telegram, Boal to Stimson, March 1, 1933, *Ibid.*, pp. 55-6; "Statement of Facts," p. 33.

⁵⁰ Letter, Boal to Phillips, June 7, 1933, *Foreign Relations*, 1933, p. 59.

⁵¹ Letter, Phillips to Boal, June 5, 1933, *Ibid.*, p. 58.

⁵² Letter, Phillips to Robbins, (U.S. Minister to Canada), Aug. 3, 1933, *Ibid.*, pp. 59-61.

⁵³ Letter, R. B. Bennett to Robbins, Dec. 26, 1933, *Ibid.*, p. 58.

that not only were Washington state congressmen upset because of delay in fumes abatement or damage payments, but that Senator William E. Borah of Idaho was beginning to support them. If the Canadians waited much longer, he further noted, they could soon expect a blast from the long-time foreign relations committee member, and when he was in full cry, Senator Borah could be very noisy indeed.⁵⁴

Even when threatened with the majesty of Idaho's senior senator, Bennett waited almost another month before he replied. In his formal response, he admitted that the fumes from the Trail smelter were impossible to control with devices currently used, but he insisted that the data were wrong, and no damage had taken place after January 1932. He then urged the American government to drop the matter.⁵⁵

It was clear that Bennett was stalling for time because the Consolidated management objected to paying even the \$350,000 that had been assessed against the corporation. They became indignant at the thought of paying any more.⁵⁶

From May 29 to June 3, 1934 and again on September 18, 1934 officials of the Consolidated met with the Canadian government representatives in Ottawa. President Warren, Vice President Blaylock, the Vice President of the Kootenay Power and Light (subsidiary of Consolidated), and others represented the smelter interests.⁵⁷ Their position was as clear as it was simple. They would still pay the damages assessed if they could be assured that they would no longer be bothered about where their fumes drifted.⁵⁸ Congressman Sam B. Hill of Washington's Fifth district was so incensed that he demanded the United States should compel the smelter to close until the case was settled.⁵⁹ How anyone, short of war, could have forced the Canadian government to close the Trail smelter, he did not say.

A month later nothing had happened yet. Then President Roosevelt entered the controversy. On October 25 he wrote to the Canadian Prime Minister:

⁵⁴ Letter, Phillips to Robbins, Jan. 29, 1934, *Foreign Relations*, 1934, v. 1, p. 897.

⁵⁵ Letter, Bennett to Robbins, Feb. 17, 1934, *Ibid.*, pp. 898-910.

⁵⁶ Boal to Cordell Hull, April 19, 1934, *Ibid.*, pp. 934-5.

⁵⁷ Memorandum Jacob A. Metzger to State Department, July 26, 1934; *Ibid.*, pp. 938-46; John E. Read, "The Trail Smelter Dispute," *The Canadian Yearbook of International Law*, v. 1, 1963, (Vancouver: University of British Columbia Press), 1963, p. 228.

⁵⁸ Memo, Metzger to State, Sept. 25, 1935, *Foreign Relations*, 1934, v. 1, pp. 938-46.

⁵⁹ Memo, Metzger to State, Sept. 25, 1935, *Ibid.*, pp. 938-46.

... The most pressing of these questions is that of the Trail Smelter case, which, as you know, has been pending between our countries for a number of years and remains unsettled. I am receiving in increasing numbers protests from residents and officials in the State of Washington. These communications disturb me greatly and cause me to fear that, unless a way is found as soon as possible to reach a settlement of this case, real harm may be done to the relations of Canada and the United States in the Far West. The continuing drifting of sulphur dioxide into the State of Washington, with its consequent injury to the interests of a large number of American citizens, is a matter to which I cannot remain indifferent. . . .⁶⁰

The uneasy Bennett knew that he could not ignore the American president.⁶¹ His problem was that in 1934, private corporations thought they could continue to defy governments as they had been doing for a century before. The president of Consolidated told Bennett that since the United States had refused the \$350,000 the case was closed.⁶² Roosevelt heard of this reply, and was incensed. He wrote a memorandum to his legation in Ottawa instructing the American minister to threaten the Canadians with proceedings in the World Court if something did not happen soon to redress the injuries of the Northport farmers. This was a curious threat, since the United States had refused to participate in World Court affairs, but it is possible that Roosevelt thought an appeal to a world body might make American public opinion more favourable to future cooperation with international organizations.⁶³

By the beginning of the summer of 1934, the year of experimentation ended successfully for Consolidated when its "Elephant Brand" fertilizers began to show a profit. In its reports, the Company complained that it had lost money on its by-products, but this was a "book loss" of seven millions of dollars caused by writing off the entire cost of development in one year. In 1935, the company admitted to a modest profit, and expanded its pollution control activities. In the expansion, they included a synthetic ammonia and phosphoric acid plant to be built at a cost of \$15,000,000. Fertilizer and by-products output increased steadily with corresponding increases in Company profits.⁶⁴

As a result of this success, Consolidated began to soften its position and

⁶⁰ Letter, Franklin D. Roosevelt to Prime Minister Bennett, Oct. 25, 1934, *Ibid.*, p. 954.

⁶¹ Bennett to Roosevelt, Oct. 31, 1934, *Ibid.*

⁶² Letter, Robbins to Phillips, Dec. 4, 1934, *Ibid.*, pp. 963-4.

⁶³ Note, Roosevelt to Phillips, Dec. 6, 1934, *Ibid.*, p. 965.

⁶⁴ Spokane, *Spokesman-Review*, April 18, May 8, 1934; S. D. Kirkpatrick, "Trail Solves Its Sulphur Problem," *Chemical and Metallurgical Engineering*, 45:9, Sept. 1938, pp. 483-5.

became more co-operative. By March 1935, the representatives of the State Department were able to meet in Colville with the Citizens Protective Association to discuss an actual arbitration convention proposal. The officers of the Association were content to see that progress was at last being made. Senators Homer T. Bone and Clarence Dill of Washington state, also agreed to support the arbitration, and the Senate Foreign Relations Committee recommended ratification of the convention.⁶⁵

On April 15, 1935 Pierre de L. Boal, American chargé d'affaires, and Prime Minister Bennett signed the convention in Ottawa. It provided that the \$350,000 damages assessed in 1931 should be deposited in the United States treasury to be paid out as decided later, and that any claims of citizens not approved by the International Joint Commission would not be considered. One Canadian and one American, plus a chairman who was to be "a jurist of repute who is neither a British subject nor a citizen of the United States" was to be chosen by the two governments, and these three men should together form the arbitration tribunal.

The third article of the convention was the crucial one. It provided that four questions should be answered during the arbitration proceedings:

1. Whether damage caused by the Trail Smelter in the State of Washington has occurred since the first day of January 1932, and if so, what indemnity should be paid therefor?
2. In the event of the answer to the first part of the preceding question being in the affirmative, whether the Trail Smelter should be required to refrain from causing damage in the State of Washington in the future and, if so, to what extent?
3. In the light of the answer to the preceding question, what measures or regime, if any, should be adopted or maintained by the Trail Smelter?
4. What indemnity or compensation, if any, should be paid on account of any decision or decisions rendered by the tribunal pursuant to the next two preceding questions?

The balance of the Convention, totalling fourteen articles in all, were primarily procedural, dealing with hiring experts, stating who should be liable for expenses of the investigation, and providing for payment of damages if additional payments were authorized.⁶⁶

⁶⁵ Letter, Phillips to Roosevelt, March 15, 1935, *Foreign Relations, 1935*, v. 2, p. 32.

⁶⁶ U.S. Public Documents, Department of State Publication No. 1649, Arbitration

The Senate ratified the convention June 5, 1935, and Roosevelt announced the action on June 12. The Canadian government exchanged ratifications in Ottawa on August 3. Finally, on August 7, almost seven years after the first study began, President Roosevelt formally announced that the Treaty of Arbitration was in effect.⁶⁷

The appointed members of the new tribunal were Jans F. Hostie of Belgium, chairman; Charles E. Warren of Massachusetts, and Robert E. Greenshields of Quebec. Dozens of scientists, research assistants, and other experts descended on the Columbia valley. They took almost two additional years to make a thorough study of what had been happening for the previous ten, and to solve the question of how the fumes dispersed, why damage was so severe on certain days and not on others, and what atmospheric conditions contributed to the damage. The work was exhaustive and their reports were definitive. Facts came to light giving information on air pollution which had never been known before. For example, when the sun rose in the morning, it warmed the atmosphere close to the ground, and as the air rose, the cooler, upper, fume-filled air descended rapidly in almost a vertical wind. In colder months the vertical movement was not as rapid, nor as simultaneous, yet if the wind was blowing heavily, which would normally disperse the poison gas, sometimes pollution occurred anyway. Colder, quieter air at the mountaintop level might form a "cap" over the pollution, producing a high level of acid concentration on the valley floor. During rain or snow storms, danger of acid formation was acute, even though the weather might be both windy or cold.⁶⁸

Finally, on June 21, 1937 enough data had accumulated that the tribunal felt it could reach a conclusion. On June 22 it sat and heard preliminary statements by the officials of both nations. On July 1 tribunal members went west for on the spot investigations in Northport and Trail, ending their work on July 6. From July 7 to 29 they met in Spokane, and returned to Washington, D.C. where they met from August 16 to 19 to read field reports. They next spent from August 23 to September 18 in Ottawa. The tribunal then recessed, but met once more in mid-October

Series 8, *Trail Smelter Arbitration between the United States and Canada Under Convention of April 15, 1935: Decision of the Tribunal Reported March 11, 1941*, (Washington: Government Printing Office), 1941.

⁶⁷ *Congressional Record*, 74 Cong., 1 Sess., May 10, 1935, p. 7602; June 4, 1935, p. 8941; June 5, 1935, pp. 9000-1; *Trail Smelter Arbitration*, Department of State Arbitration Series 8, New York, *Times*, June 6, 1935, p. 15.

⁶⁸ *Trail Smelter Case*, "Decision," 1938, pp. 39-51 and *passim*.

and listened to seven days of debate over points of international law by consuls of both nations. Once again they recessed, and from October 19 to January 2, 1938 they weighed the evidence. On January 2 they announced that they would require three more months to reach agreement.⁶⁹

April arrived, and still the members could not agree. They requested further studies and further data. They did announce a preliminary "final decision" on question one and answered it saying, "Yes, there was damage." They assessed an additional \$78,000 damages for injuries sustained from 1932 to 1937. They also announced temporary control measures for the smelter. They received further funds from the two governments for additional study.⁷⁰

To implement the control measures, the smelter hired an adviser, Dr. John Patterson, the national controller of the meteorological division of the Air Services for the Canadian government, to make recommendations for controlling the fumes. His advice seemed effective, for the amount of air pollution dropped steadily for the following several months. The smelter was fortunate with the weather as well, and the summer of 1938 passed with neither serious incident nor complaint.⁷¹

The tribunal held another progress meeting in April 1939 to read reports of the new research, and to check on the smelter's control measures. It was evident from the monitoring devices that the company was actually making good on its promises to reduce pollution. For the reason that fumes emission had dropped by almost half from its peak in 1931,⁷² the tribunal did not close the smelter as some of the more militant Americans insisted it should, but it granted additional time to complete the two sulphuric acid plants which were under construction.

The summer of 1939 was one of international crises. That fall the by-products plants at Trail became worth almost their weight in gold to hardpressed Britain and her Canadian ally. When war came, the ammonia and phosphate plants converted quickly to munitions manufacture. In addition, strategic metals, such as zinc, lead, and copper were needed desperately by the Allies. For the first, frantic months of the war, sulphur contamination increased, but in early 1940 it quickly diminished when the two new plants began production. Even in Northport, a

⁶⁹ *Trail Smelter Arbitration*, Department of State Arbitration Series 8.

⁷⁰ U.S. Public Documents, 76 Cong., 1 Sess., House Document No. 127, "Supplemental Appropriation."

⁷¹ *Trail Smelter Case*, "Decision," 1938.

⁷² *Ibid.*, part 4, p. 4; p. 12.

German-inspired attempt to sabotage the smelter in Trail on Christmas day 1939, was denounced with consternation and horror.⁷³

Because of the war, the tribunal suspended meetings until after the disastrous 1940 campaigns of the European continent were over. They consulted one another by mail, however, and in late September they met briefly in Boston. From December 5 to 13, 1940 they assembled in Montreal to examine scientific reports.⁷⁴

At last the final brief was presented. The final arguments were made. The tribunal renamed their 1937 findings the "Previous Decision" and issued a new "Final Decision," which was published on March 11, 1941.⁷⁵

This decision denied payments for maintaining experts and laboratories to study the fumes question. They decided that no damage had taken place after 1938 in Stevens County. They also issued a policy statement that itself became a precedent in future cases of this kind: "No State has the right to use or permit the use of its territory in such a manner as to cause injury by fumes or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by the clear and convincing evidence . . . The Dominion of Canada is responsible in international law for the conduct of the Trail Smelter. . . ."⁷⁶

Before World War II ended, the Consolidated Mining and Smelting Company, now known as Cominco, spent almost \$20,000,000 on facilities to recover the wasted air pollutants, turning them into saleable by-products. At war's end, the *Canadian Yearbook* noted that more sulphur dioxide was removed from Cominco stacks than from the stacks of all other smelters of the North American continent combined.⁷⁷ In 1955 the net profit to the company from sale of the by-products was just under \$33 million, which returned the entire cost of construction and a fifty per cent gain in a single year. Since then, with inflation and demand, the value of by-products has increased further.⁷⁸ Protest and groan as they might during the depression years, the present Cominco officials must almost bless the rasping oratory of the Stevens county farmers that compelled them to build the plants.

⁷³ New York, *Times*, Jan. 3, 1940.

⁷⁴ "Decision," pp. 5-6.

⁷⁵ Read, *Canadian Yearbook*, 1963, v. 1, pp. 25-6.

⁷⁶ *Ibid.*, "Trail Smelter Dispute," p. 220.

⁷⁷ *Ibid.*, p. 221.

⁷⁸ Trail, *Times*, April 7, 1956.

From the scientific standpoint, the concluding words of the tribunal as it wound up the case are worth quoting:

This is probably the most thorough study ever made of any area subject to atmospheric pollution by industrial smoke. Some factors such as atmospheric turbulence and the movements of the upper air currents have been applied for the first time to the question of smoke control. . . . A regime has been formulated which should throttle at the source the expected diurnal fumigations to a point where they will not yield concentrations below the international boundary sufficient to cause injury to plant life. This is the goal which this Tribunal has set out to accomplish.⁷⁹

⁷⁹ Read, *Canadian Yearbook*, 1963, "Tribunal Statement," April 16, 1938.