DOE/CH/10324--T21

THE RAIL ABANDONMENT PROCESS:

A SOUTHERN PERSPECTIVE

December 1988

Prepared for U.S. Department of Energy
under Cooperative Agreement
DE-FC02-87CH10324

by the

Southern States Energy Board
3091 Governors Lakes Drive, Suite 400
Norcross, Georgia 30071

Table of Contents

1.0 INTRODUCTION: THE RAIL ABANDONMENT ISSUE

The Nuclear Waste Policy Act (NWPA) of 1982[1] and its 1987 amendments[2] call for, among other things, deep geologic disposal of high-level radioactive waste beginning early in the twenty-first century.[3] As the Department of Energy and other government organizations and private industries plan for transporting waste to a repository proposed in Yucca Mountain, Nevada,[4] decisions must be made on the mode of transport to be used. Alternatives include truck, rail or barge transport, with the first two modes the two most often chosen due to insurmountable problems associated with barge access to reactor sites.[5]

While truck transport is, and will continue to be, a valuable shipping mode owing to explicit regulations, shipping procedures, convenience and a number of other factors, much of the NWPA transportation activity can be accomplished through the use of the nation's rail system. Railroads can transport heavier loads, which means fewer total shipments are needed and arguably this results in reduced cost and risk in many cases.[6] It makes sense, then, to examine the rail option when contemplating shipments of high-level radioactive waste.

One factor in evaluating the desirability of rail transport is the frequency, or lack thereof, with which railroads and railroad lines have been, and are, abandoned. If DOE makes a decision to use the rail option and a line is subsequently abandoned, the choice results in increased cost, time delays and possibly safety problems. Information is therefore needed prior to the decision-making process to evaluate the desirability of the rail shipping option.

One result of the abandonments mentioned herein, as well as other later abandonments, is the creation of a U.S. rail system undergoing an evolutionary process in the 1980s as far-reaching as the changes that occurred when the industry was in its infancy a century and-a-half ago. The purpose of this paper is to examine the factors leading to some of these changes by tracing the historical development of the rail abandonment process, with particular emphasis on the rise of regional railroads, their problems in the modern era and current trends in rail abandonments as well as their effects on the southeastern United States.

1.1 Scope of the Rail Abandonment Problem

Historically, railroads were abandoned almost as soon as they were completed, although most abandonments in the nineteenth century occurred owing to realignments and grade improvements.[7] Railroad abandonments began occurring in large numbers at the turn of the century as narrow gauge railroads were not converted to standard gauged or double gauged railroads. Mining railroads, logging railroads and railroads in oil fields in and near New York and Pennsylvania were most frequently abandoned or removed and re-used as needs changed.[8]

Large scale rail abandonments began in the 1960s with the advent of mergers and takeovers in the business world.[9] Well-known mergers during this period included the Erie and Delaware, Lackawanna and Western, and the New York Central and Pennsylvania. Parallel and non-profitable routes were quickly abandoned, leaving businesses and individuals serviced by these routes with little or no alternatives in the event access was limited at the new railroad.[10] This limited access to railroad lines in the wake of an

abandonment, particularly when shipments of high-level radioactive waste are involved, indicates that the rail abandonment issue can raise some problems when the rail option is chosen.

1.2 Methodology Used in Examining the Rail Abandonment Problem

Because a finite number of railroads and rail lines exist, rail model(s) can be developed to handle information with relative ease. One such model, INTERLINE, was developed by Oak Ridge National Laboratory in Oak Ridge, Tennessee. INTERLINE is an interactive computer program that finds likely routes for shipments over the U.S. rail system based on the shortest path algorithm modified to reflect the operations of the railroad company and to accommodate computer resource limitations in handling a large transportation network.[11] This report will refer to INTERLINE data collected through the Oak Ridge database to gain an historical perspective on some of the issues presented herein, specifically in the state section on pages 9-10. The report will also refer to various articles, publications and legal materials on the rail abandonment issue in an effort to adequately address the rail abandonment problem.

2.0 THE FORMATION OF REGIONAL RAILROADS: AN HISTORICAL PERSPECTIVE

While there is no formal definition of a "regional" railroad, the term is generally associated with Class II railroads. Railroads are classified in three categories: Class I railroads earn $50 million or more annually; Class II railroads earn between $10 and $50 million; and Class III railroads earn less than $10 million.[12] Regional, or class II, railroads have been, and are, perhaps the most notable feature in the history of railroads in the United States since they have been the largest class of railroads in existence.[13]

2.1 The Development of Regional Railroads in the Nineteenth Century

The rise of regional railroads in the nineteenth century and early into the twentieth century corresponds with the exploration and development of the western states in American history. This is no mere coincidence. From the 1830s until the 1920s, the railroad industry flourished as the most effective mode of transportation owing to the lack of competition among other transportation sectors and the cost effectiveness of building railroads to serve the increasing number of people heading west. The railroads were able to develop large geographical areas and serve an evolving agricultural and industrial base west of the Mississippi River and this development, in turn, sparked continued growth. By the 1920s, there were approximately 380,000 miles of track and the railroad industry employed close to two million people.[14]

The railroads continued to dominate the American landscape throughout much of the nineteenth century: during America's manifest destiny period, up to and after the Civil War, through the Granger period of the 1870s and 1880s and up to and including World War I. The industry as a whole began to experience a decline in influence beginning in the 1920s and thereafter owing to overbuilding, oppressive and wasteful regulations and increasingly effective competition from motor and barge modes, which received fairly substantial federal subsidies.[15] Downsized manufactured products, greater competition from abroad and the more recent shift of the American economy from a manufacturing to a service-oriented system have contributed to the downfall of railroads as well.[16]

2.2 The Pre-Staggers Act Modern Era

As one result of the above-mentioned causes, the modern era of the railroad has been characterized by a series of sales and abandonment of various lines. These sales and abandonments differ from earlier abandonments in that earlier railroad lines were built for specific purposes, e.g., transporting logging equipment and supplies or men to a work site. The railroads understood the temporary nature of these lines and did not come to depend on their existence as a means of continued expansion.[17] In later years, as "permanent" lines developed, i.e., lines meant to be used indefinitely, the industry contributed significant capital and efforts to ensure the continuation of such lines; thus, when these lines were abandoned during the modern pre-Staggers Act era, the effect on the entire rail infrastructure was much greater than any abandonments had been prior to that time.[18]

While the railroads are still regarded as a vital component of the United States' transportation network and despite productivity increases in the last three decades, the rail industry has nonetheless suffered a decline in the market share of freight traffic.[19] In 1947, for example, railroads moved approximately 56 percent of all intercity tonnage in the United States. From 1947 to 1979, the year before passage of the Staggers Act, total intercity freight doubled while rail tonnage declined by 1 percent. As a result, rail market share fell to 27 percent by 1979.[20]

This decline in market share, which gradually occurred between the mid- 1920s through 1979, translated into substandard returns on net investment, declining "real" revenue per ton-mile, significant loss of the manufactured traffic base and, in some severe cases, bankruptcy by some large carriers.[21] The industry recognized that something had to be done to ensure survival in the pre-Staggers changing marketplace.

Beginning in the 1960s, railroads became extremely adept at effectuating productivity increases. Using enhanced capital expenditures as well as a number of cost-cutting measures through technical and operational and other means, the industry made progress towards increasing the viability of the American rail system. One major element in the industry's efforts was the disposal of portions of the rail system generating insufficient revenues to cover associated operational and maintenance costs. Lines or portions of lines contributing low corporate profits or which could be more cost-effective when operated by another party in interline service were abandoned or sold.[22]

Since 1970, the number of miles abandoned by railroads has gradually increased, with a significant portion of that abandonment occurring even after passage of the Staggers Act.[23] The table on the next page illustrates the number of railroad abandonments granted nationwide from 1970 through 1987.[24]

By the mid-1970s, nearly a quarter of the nation's rail system neared bankruptcy or reorganization.[25] Railroads were forced to delay maintenance and capital improvements, resulting in unreliable and reduced service as well as safety problems.[26] Problems in the northeast, for example, forced the federal government to pay some $7 billion to purchase and establish Conrail. This action set the stage for possible nationalization of the entire rail system.[27]

Instead of nationalizing the country's railroads at an estimated cost of at least $100 million, Congress chose to reduce some of the shifting regulatory restraints through corrective legislation. The Railroad Revitalization and Regulatory Reform Act of 1976(4-R Act)[28] provided some regulatory relief, but was not very effective due to interpretations

of the act by the Interstate Commerce Commission (ICC), the federal agency responsible for, among other things, ruling on rail abandonment applications and establishing standards for and evaluating the financial conditions of railroads.[29]

TABLE

RAILROAD ABANDONMENTS GRANTED

YEAR	NUMBER OF APPLICATIONS	MILES	AVERAGE MILES PER APPLICATION
1970	82	1,782	22
1971	129	1,287	10
1972	268	3,458	13
1973	198	2,428	12
1974	24	529	22
1975	42	708	17
1976	99	1,789	18
1977	147	2,500	17
1978	113	2,417	21
1979	123	2,873	23
1980	105	2,321	22
1981	81	1,342	17
1982	381	5,151	14
1983	123	2,454	20
1984	419	3,083	7
1985	148	2,343	16
1986	117	1,417	12
1987	60	818	14

2.3 The Staggers Act

The major breakthrough for rail deregulation to relieve some of the financial problems of the railroad industry came with the passage of the Staggers Rail Act of 1980.[30] The act partially deregulated rail rates and allowed market forces to help determine reasonable rates.[31] The ICC was given a large amount of discretionary authority for developing many of the act's provisions. Important provisions in the act included the exemption of certain rail traffic from ICC regulation; individually negotiated contracts between railroads and shippers; guidelines for developing adequate revenue levels; and procedures for rail line abandonment.[32]

The legislative history behind the Staggers Act indicates that Congress, in passing the measure, intended to assist the railroad industry in: rehabilitating the rail system as a private sector entity; reforming federal regulations to preserve a safe, adequate, efficient and financially stable rail system; and providing a regulatory process balancing the needs of carriers, shippers and the public.[33]

In the wake of the Staggers Act passage, the financial condition of the railroad industry generally improved. Increased rate and service flexibility granted by the act, allowing railroads to better endure a recessionary period, were regarded as the major

short-term positive effects in the first year after the act took effect.[34] In 1982, however, the country suffered a fairly severe recession and this may have contributed to a decline in the industry's financial condition that year.[35]

2.4 Industry Development After the Staggers Act

The passage of the Staggers act alleviated some of the railroads' financial problems in that it gave the industry increased flexibility in setting rates and in competing in a changing marketplace; however, it was not a panacea. Despite the relative success of the act and significantly increased railroad efficiency in recent years, the total operating revenue of Class I railroads dropped from $30.9 billion in 1981 to $26.2 billion in 1986, while Net Railway Operating Income (NROI) declined from $1.4 billion to $.5 billion during the same time frame.[36]

Because Class I railroads suffered from decreases in operating revenue in the mid-1980s, many regional railroads were formed as the larger Class I lines were sold or divided. Thus, regional railroads began to increase in number after the Staggers Act for the first time since 1929. Six of the twenty-seven regional railroads operating today were organized between 1973 and 1984 largely from the bankruptcies of the eastern and midwestern railroads.[37]

2.5 Post-Staggers Regional Lines v. Pre-Staggers Regional Lines

As a result of dividing Class I railroads, a new breed of regional railroad has surfaced in the years since the Staggers Act was passed. The nine most recent railroads, formed from the line sales of the Illinois Central Gulf, the Chicago & North Western, the Burlington Northern and the Soo Line, have a traffic base similar to Class I railroads and are typically larger than the old regional railroads in terms of trackage, with the new rails operating between 600-2,000 miles of road. The new regionals are, by and large, privately owned. Owing to better management techniques, shipper support, a better quality of track and increased traffic, many of the new railroads have met with success.[38]

Some lines have failed, however, due to a variety of causes. Physical problems such as poor quality track as well as management problems, a lack of investor capital, a lack of rate division with a connecting railroad and inadequate traffic have forced some regionals out of business. Those lines that have stayed in business have generally been more financially secure than earlier, smaller regionals were, but even the relaxed regulatory climate in the wake of the Staggers Act could not save some regionals.[39]

3.0 THE RAIL ABANDONMENT PROCESS: AN OVERVIEW

So far, this report has discussed the historical causes leading up to the rail abandonment problem as it exists today. Railroad lines have been abandoned for a number of reasons, including the size and financial stability of the railroad, the economic and regulatory environment and the costs associated with operating and maintaining the lines in an acceptable condition. Once the decision has been reached to abandon a line owing to the existence of these and other conditions mentioned above, the railroad must follow an established procedure by filing an application with the ICC.[40]

3.1 The Role of the Interstate Commerce Commission (ICC)

The abandonment process is set forth in 49 C.F.R. §1151 et. seq. The railroad is required to file a system diagram map with the ICC and the state authorities identifying the line slated for abandonment.[41] The formal application for abandonment follows the notice.[42] Procedures then exist for public participation with respect to the application. The ICC will then investigate, if deemed necessary, and gather written and/or oral testimony.[43] The ICC will then issue its decision concerning the abandonment.[44] An appeals process is available, however, and may be exercised in accordance with criteria set forth in §115.25 (e) (2) (ii) of C.F.R. In addition, a railroad may choose to pursue an "exemption" whereby the ICC may find the line to be traveled so infrequently that it would be unnecessary to engage in the formal abandonment process.[45]

3.2 The Role of the Department of Transportation (DOT)

While the ICC specifically regulates the rail abandonment process pursuant to the C.F.R. regulations as outlined above, the Department of Transportation (DOT) also exercises some regulatory authority over rail shipments of hazardous materials, including radioactive waste.[46] DOT regulates the transportation of hazardous materials in interstate commerce by land, air and on navigable waters. The department's Office of Hazardous Materials Transportation exercises control over the specifics of hazardous materials and exercises compliance and enforcement authority over intermodal shippers of hazardous materials. Other DOT departments, "operating administrations," retain jurisdiction for enforcement and compliance actions involved in the general operation of one particular mode of transportation. While the Federal Highway Administration (FHA) handles the highway movement of cargo, the Federal Railroad Administration (FRA) is responsible for ensuring compliance and regulatory enforcement for rail shipments of cargo.[47]

DOT and FRA regulations affecting railroads are found in 49 C.F.R. §174 et. seq., specifically 49 C.F.R. §174, Subparts A, B, C, D and K and 49 C.F.R. §§200-268. The sections applicable to the rail abandonment issue are located at 49 C.F.R. §235 et. seq. concerning the instructions governing applications for approval of a discontinuance or material modification of a signal system.[48]

According to 49 C.F.R. §235, when a railroad block signal system, interlocking, traffic control system, automatic train stop, train control or cab signal system is to be modified or discontinued, application must be made in accordance with the rules and procedures set forth in the sections following §235.[49] The regulations dictate the changes necessitating the filing of an application; the changes not requiring the filing of an application; the contents of the application; the procedure for filing an application; the notice provisions; the process for filing a protest; and the institution of civil penalties for noncompliance.[50]

3.3 Balancing the Needs of the Railroad and the Needs of the Protestants

A quick study of several ICC rail abandonment decisions indicates that the effect of an abandoned rail line on a community in general and on shippers in specific, not to mention the provisions for alternate transportation, or the lack thereof, are carefully considered by the Commission or the administrative law judge in ruling on the abandonment.[51] Once these factors have been considered, the case becomes a balancing act. The Commission or the judge, as the case may be, balances the needs of the community

and the shippers for transportation against several factors facing the railroad proposing the abandonment, including the amount of traffic on the line; the condition of the track in question; the costs associated with continued operation and maintenance of the track; and the financial condition of the railroad.[52]

Typically, if shippers have already switched to truck transportation for part of their traffic, then the truck transport alternative is an obvious possibility for all of their traffic. Truck rates may be higher, however, calling into question whether the business can survive faced with higher transportation costs.[53] Additionally, sufficient trucks may not be available to handle the increased traffic, or the local highway infrastructure may not be capable of withstanding the increased wear and tear associated with truck transportation of, for example, overweight shipments. The issue of available alternate transportation must therefore be fully explored and developed by protestants, especially local shippers, in testifying against the abandonment application.[54]

Local shippers may also be able to present testimony concerning past and future use of the rail line. If there are reasonable explanations why past rail shipments have been low, e.g., owing to sporadic business fluctuations or other causes, then this should be brought out. If shippers are expecting, based on sound and defensible business forecasts, that rail shipments will increase in the future, this fact should be presented and documented.[55]

The balancing test the Commission uses in ruling on an abandonment cuts both ways. To succeed, protestants must not only show the harm they will suffer due to an abandonment, but they must also present testimony, if available, to disprove or question the railroad's evidence of losses or burdens it incurs from operating a line. In other words, the abandonment "will have a serious, adverse impact on rural and community development."[56]

The railroad itself bears the burden of demonstrating that is indeed suffering a financial burden by continued operation of the line.[57] Under 49 U.S.C. §10903(a) (2), the railroad must prove to the ICC's satisfaction that "the present or future public convenience and necessity require or permit the abandonment."[58]

4.0 COPING WITH RAIL ABANDONMENT

If the case weighs in favor of the railroad, the line is abandoned and the affected community as well as the shippers must cope with the loss of a transportation mode. The fact that the ICC ruled against the community/shipper interest in the first place indicates that alternative modes of transportation, usually truck transport, probably exist to handle shipping needs. While this deduction holds some merit, it fails to consider factors such as inconvenience and increased transportation costs and their potentially deleterious effects on the shipper.

4.1 A Case Study: Yakima County, Washington

The Burlington Northern Railroad Company made an application to the ICC to abandon a railroad line extension 11.70 miles in Yakima County, Washington in 1984. Public notice of the application was served and, on April 12, 1984, the Commission instituted an investigation pursuant to the requirements set forth in 49 C.F.R. 1152, et. seq.[59]

As mentioned above, one factor seriously considered by the Commission in its investigation in any rail abandonment case is the available alternate transportation. In the Burlington Northern case, the ICC considered that rail service would be still available, albeit somewhat limited, even after the line was abandoned. The railroad also presented data indicating that rail service in the area had previously been reduced from six days a week to three days a week owing to the fact that some of the shippers in the area had begun to rely on truck transport to carry goods. Citing the unprofitability of the rail line and the decrease in railroad use in that area, Burlington Northern contended that continued use was financially detrimental to the company and the needs of the local shippers did not outweigh the needs of the railroad.

In addition, the area was served by six motor carriers of general commodities, four fruit and grain carriers and one motor carrier of farm machinery and other specialized commodities. The area was also served by several major highways, including U.S. Highway 12 which, in turn, connected to Interstate 82. There was little question, then, that other means of transportation were available.[60]

The protestants, which included the Washington Utilities and Transportation Commission (WUTC), argued that the recent declines in rail traffic resulted from a relatively short crop year for farmers who customarily used the line, an alleged downgrading of service on the line by Burlington Northern, and the construction of an irrigation project that allegedly interfered with delivery of cars on the line because of an easement over Burlington Northern's right-of-way.[61]

The ICC, when viewing all of the factors and weighing the competing interests, found that the abandonment of the rail line would not result in a serious adverse impact on the community and the shippers. Accordingly, in a decision issued July 23, 1984, the line was abandoned. As expected, the affected shippers, including WUTC, turned to truck transportation companies to handle their shipping needs, although information on the difference, or lack thereof, in transportation costs is currently unavailable.[62]

5.0 RAIL ABANDONMENTS IN THE 1980s: TRENDS

In the 1980s, as more companies and utilities have been forced to cope with abandoned lines, a major development in the nation's transportation picture has been the formation of more than a hundred new railroad companies, formed to take over lines abandoned, about to be abandoned or spun off by major systems. The trend has resulted from several factors: the formation of Conrail; the liquidation of the Rock Island and the Milwaukee railroads; the Staggers Act itself; companies' concerns about eliminating unprofitable mileage; the availability of federal funds, at least for a time, for assistance to new lines; state rail planning and the availability of subsidized funding in some states; and legislation ensuring first right of acquisition to a concern that continues to operate a line.[63]

5.1 Companies Formed to Take Over Abandoned Lines

From 1971 to 1984, 122 new, generally smaller, railroad companies began operation to take over lines that had been abandoned or were to be abandoned in the near future. In 9 of the 122 cases, the new company simply ceased to operate and another company took over.[64] Of the 7,479 miles of rail line involved (4.5 percent of the total rail mileage in the United States), 1,038 were abandoned by April 1984.[65]

Transfer of unprofitable lines from major railroads to local ventures that can operate them more cheaply owing to lower overhead rates and thereby bring the service more into line with shipper preferences has provided a net gain both to major systems and to the shippers and communities served. The general experience in many cases has been that these small railroads provide more satisfactory service to their shippers than major railroad companies on branch lines, and thus shippers have benefited by the transfer of lines to the new companies.[66]

5.2 Rail Abandonments in the South

According to the ICC database, which provides information through 1987, over 1,000 cases have been filed with the ICC in the South alone. As of November 2, 1987, 899 southern cases were granted abandonment. This figure represents approximately 85 percent of the total cases applied for in the southern region.[67] Of the cases heard before the Commission, 91 percent were granted abandonment and, as of November 1987, 87 southern cases were pending.[68]

Only a small number of rail abandonment cases in the South have been withdrawn, dismissed or denied. Over the available 27-year recording period, 51 abandonment applications were withdrawn by railroads. Nineteen cases were dismissed due to an incorrect application and a mere 16 cases were denied.[70]

The matrix on the next page provides a brief description of each southern state's rail abandonments, including general locations and distance of rail abandonments since 1960 through November 1987.[71]

RAIL ABANDONMENTS CASES IN THE SOUTH: 1960 - 1987

State	Cases Heard	Range of Miles in Applications	Cases Pending Nov. 1987	General Time Frame of Abandonments	Reactors potentially affected
AL	54	0.1-66.6	7	late 1970s/1980s	None
AR	37	1.63-104.5	0	1960s-1980s	None
FL	98	.05-188.0	10	1970s/1980s	None
GA	42	.19-152.24	7	1980s	Hatch 1,2
KY	57	.05-102.65	8	early-mid 1980s	None
LA	48	.80-81.93	1	1960s-1980s	River Bend 1
MD	42	.03-21.0	4	1970s-1980s	Calvert Cliffs 1,2
MS	38	1.13-87.34	3	1973-1980s	Grand Gulf 1
MO	76	.01-222.30	1	1960s-1980s	Callaway 1
NC	55	.03-154.72	4	late 1970s-1980s	Harris 1 Brunswick 1,2
OK	42	.80-225.34	6	late 1960s-1980s	None
SC	50	.33-59.24	5	1960s-1980s	Robinson, Catawba, Summer, Savannah River Plant
TN	54	.15-287.0	3	1960s-1980s	Sequoyah 1,2
TX	95	.56-220.28	14	1960s-1980s	Commanche Peak 1,2 South Texas 1,2
VA	48	.35-79.8	6	1960s-1980s	North Anna 1,2
WV	97	.17-92.04	8	1970s-1980s	Beaver Valley (PA)

6.0 CONCLUSIONS

The U.S. rail system can be a valuable transportation mode, although care must be taken to examine possible rail line abandonments prior to deciding on the preferred mode of shipment. Rail abandonments have occurred historically for a number of reasons, with financial concerns cited by the railroads as the number one reason for abandonments in the modern era. Regional railroads, larger and more financially secure than previous regionals, are arising in record numbers to fill the void created by the dissolution of some Class I railroads. As a consequence, the new regionals are operating lines that might otherwise have been abandoned.

While the financial stability of railroads in the United States has improved somewhat since the passage of the Staggers Act of 1980, rail abandonments still occur with relative frequency owing to the unprofitability of some lines, the lack of adequate traffic, managerial problems and the like. Communities and shippers protesting an abandonment decision by the ICC must show that the line is needed and that alternate modes of transportation will not adequately satisfy their transportation needs. In the event a line

is abandoned, which is generally the case once a railroad files an abandonment application, the affected shippers must cope with the ICC decision by securing other modes of transportation, most often through a local motor carrier.

In the South, as the matrix above suggests, a large number of abandonments occurred between 1960 and November 1987. This activity is attributable to the region's changing nature: the South is made up of many rural farming communities that traditionally depended on the railroads to meeting most or all of their shipping needs. As farms are sold and the economy of the South and the nation evolves from a manufacture-based to a service-based system, as competition increases from the motor carriers and as the region comes more into line with the rest of the country, the railroads find it necessary to abandon some lines. The southern experience is not that much different from the general experience of the United States as described in this report. In some cases, however, it has taken longer for the South to reach the same crossroads as other sections of the nation. In any event, one thing is clear: in the South, as elsewhere, the trend towards abandoning unprofitable lines will continue and this trend will affect transportation decisions any time a shipper has the rail option available.

Notes

[1]Nuclear Waste Policy Act (NWPA) of 1982, Pub. L. No. 97-425, 96 Stat. 2201 (1983).

[2]Nuclear Waste Policy Amendments Act of 1987, Pub. L. No. 100-203, 101 Stat. 1330-227 (Title 5, Subtitle A, §5001 et. seq.) (1987).

[3]See generally: Spent Nuclear Fuel and High-Level Radioactive Waste Transportation Primer, Western Interstate Energy Board, June 1985.

[4]Nuclear Waste Policy Amendments Act of 1987, §402.

[5]Ibid.

[6]This assertion is debatable. Transportation risk analyses indicate that risk factors do not always correlate directly to the distance traveled. Other factors, such as safety and handling procedures and the condition of the transportation mode or system used, weigh heavily in determining degrees of risk. See: Spent Fuel and High-Level Radioactive Waste Transportation Primer, pp.7-1.1 - 7-6.1.

[7]Waldo Nielsen, Right-of-Way: A Guide to Abandoned Railroads in the United States, Old Battle Magazine (1972), p.11.

[8]Ibid.

[9]Ibid.

[10]Ibid.

[11]B.E. Peterson, INTERLINE, a Railroad Routing Model: Program Description and User's Manual, Oak Ridge National Laboratory [ORNL-TM-8944], p.xi.

[12]Craig F. Rocky, "The Formation of Regional Railroads in the United States," Transportation Journal Winter 1987, p.8.

[13]Nielsen, p.11.

[14]Rockey, p.5.

[15]Ibid.

[16]Ibid., p.6.

[17]Ibid., p.7.

[18]Ibid.

[19]Ibid.

[20]Ibid.

[21]Ibid.

[22]Ibid., pp.6-7.

[23]Ibid., p.7.

[24]Ibid.

[25]The 1980 Staggers Rail Act in Review, National Governor's Association, Committee on Transportation, Commerce and Communications, August 1985, p.3.

[26]Ibid.

[27]Ibid.

[28]P.L. 94-210 (1976).

[29]The 1980 Staggers Rail Act in Review, pp.3-4.

[30]P.L. 96-448 (1980).

[31]The 1980 Staggers Rail Act in Review, p.4.

[32]Ibid. See also: Staggers Rail Act Briefing Papers, Edison Electric Institute, July 1983.

[33]The 1980 Staggers Rail Act in Review, pp.3-5. See also: Legislative History of P.L. 96-448, pp.4152-4158.

[34]The 1980 Staggers Rail Act in Review, p.5.

[35]Ibid.

[36]Harvey A. Levine and Craig F. Rockey, "Face Lift of U.S. Rail System is Far More Than Merely Cosmetic," Traffic World, February 15, 1988, p.15.

[37]Ibid., pp.16-17.

[38]Ibid., p.18.

[39]John F. Due, "New Railroad Companies formed to Take Over Abandoned or Spun-Off Lines," Transportation Journal Winter 1984, pp.38-39.

[40]49 C.F.R. §1152.10, et. seq.

[41]49 C.F.R. §1152.10.

[42]49 C.F.R. §1152.22.

[43]Ibid.

[44]49 C.F.R. §1152.26

[45]49 C.F.R. §1152.10 et. seq.

[46]49 C.F.R. §174 et. seq.

[47]49 C.F.R. §200 et. seq.

[48]49 C.F.R. §174 et. seq.; 49 CFR §200 et. seq. For a good general discussion concerning DOT and FRA regulations, See: Spent Nuclear Fuel and High-Level Radioactive Waste Transportation Primer, Western Interstate Energy Board, June 1985, pp. 3-2.5-3.29.

[49]49 C.F.R. §235 et. seq.

[50]Ibid.

[51]A Guide For Public Participation in Rail Abandonment Cases under the Interstate Commerce Act, Office of Public Assistance, Interstate Commerce Commission, December 1986, p.13.

[52]Ibid.

[53]Ibid., p.13-15.

[54]Ibid., p.15.

[55]Ibid., p.16.

[56]Ibid., p.14.

[57]Ibid.

[58]Ibid., p.13.

[59]Interstate Commerce Commission, Docket No. AB-6 (Sub.-No. 197), Burlington Northern Railroad Company - Abandonment - in Yakima County, Washington, July 23, 1984, p.1.

[60]Ibid., p.1.

[61]Ibid., p.4.

[62]Ibid., pp.4-5.

[63]Due, p.33.

[64]Ibid.

[65]Ibid., p.30.

[66]Ibid., p.42.

[67]The information mentioned on the number of rail abandonment cases and the number of miles involved was derived from a database provided to the Southern States Energy Board by the ICC on November 2, 1987. The information is entitled Profile of Selected Abandonment Cases by Primary State Impacted.

[68]Ibid.

[69]Ibid.

[70]Ibid.

[71]Ibid.

BIBLIOGRAPHY

Allen, G.C., Jr. Effect of Truck and Rail Economic Deregulation on Radioactive Material Transportation. SAND 82 - 2958, Sandia National Laboratories, January 1984.

Atlas of Routes for NWPA Commercial Spent Fuel Shipments in the South. Southern States Energy Board. July 1987.

49 C.F.R. § 174 et. seq. (1984).

49 C.F.R. § 200 et. seq. (1984).

49 C.F.R. § 1151 et. seq. (1984).

Due, John F. "New Railroad Companies Formed to Take Over Abandoned or Spun-off Lines." Transportation Journal. Winter 1984. pp.30-43.

Environmental Assessment: Deaf Smith County, Texas. DOE/RW-0069, U.S. Department of Energy, 1986

Fitzwater, Alan M. Testimony before the U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Transportation, Tourism and Hazardous Materials, October 1, 1987.

Goodman, Leonard S. "Recent Trends in Transport Rate Regulation." Michigan Law Review. June 1972. pp.1223-73.

Gradison, Heather J. testimony before the U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Transportation, Tourism and Hazardous Materials, October 1, 1987.

Grittings, Gary and Evelyn Thomchick. "Some Logistic Implications of Rail Line Abandonment." Transportation Journal. Summer 1987. pp.16-25.

A Guide for Public Participation in Rail Abandonment Cases Under the Interstate Commerce Act. Office of Public Assistance, U.S. Interstate Commerce Commission, December 1986.

High-level Waste Committee Meeting November 9-11, 1988. Western Interstate Energy Board. November 1988.

Interline, a Railroad Routing Model: Programs Description and Users Manual (ORNL/TM-8944), November 1985.

Lamboley, Paul H. testimony before the U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Transportation, Tourism and Hazardous Materials, October 1, 1987.

Levive, H. A. and C. F. Rocky. "Face of the U.S. Rail System is Far More Than Merely Cosmetic," Traffic World. February 15, 1988, p.15-17.

Nielsen, Waldo. Right-of Way: A Guide to a Abandoned Railroads in the United States. Old Battle Magazine, 1972.

Questions and Answers about the Staggers Rail Act of 1980. Association of American Railroads, April 1985.

Railroad Facts 1986. Association of American Railroads. September 1986

Riley, John H. testimony before the U.S. House of Representatives, Committee on Energy and Commerce, Subcommittee on Transportation, Tourism and Hazardous Materials, October 1, 1987.

Rockey, Craig F. "The Formation of Regional Railroads in the United States." Transportation Journal. Winter 1987. pp.5-13.

So You Want to Start a Small Railroad. U.S. Interstate Commerce Commission, August 1987.

Southern Pacific Transportation Company Abandonment in Gila, Graham and Cochise Counties, AZ, Docket No. AB-12 (Sub. No. 104) (Not Printed) Served June 13, 1986.

Spent Nuclear Fuel and High-Level Radioactive Waste Transportation Primer. Western Interstate Energy Board, July 1985. Updated January 1988.

Staggers Rail Act of 1980, Public Law 96-448, 94 Stat. 1885 (1980).

The 1980 Staggers Rail Act in Review: White Paper. National Governors Association, August 1985.

The Staggers Rail Act: Why it was Passed - What it has Accomplished. AARB-073187, Associaiton of American Railroads.

Wooden, Donald G. Railroad Transportation of Spent Fuel. SAND 86 - 7083, Sandia National Laboratories, March 1986.

END

DATE
FILMED
7/20/93