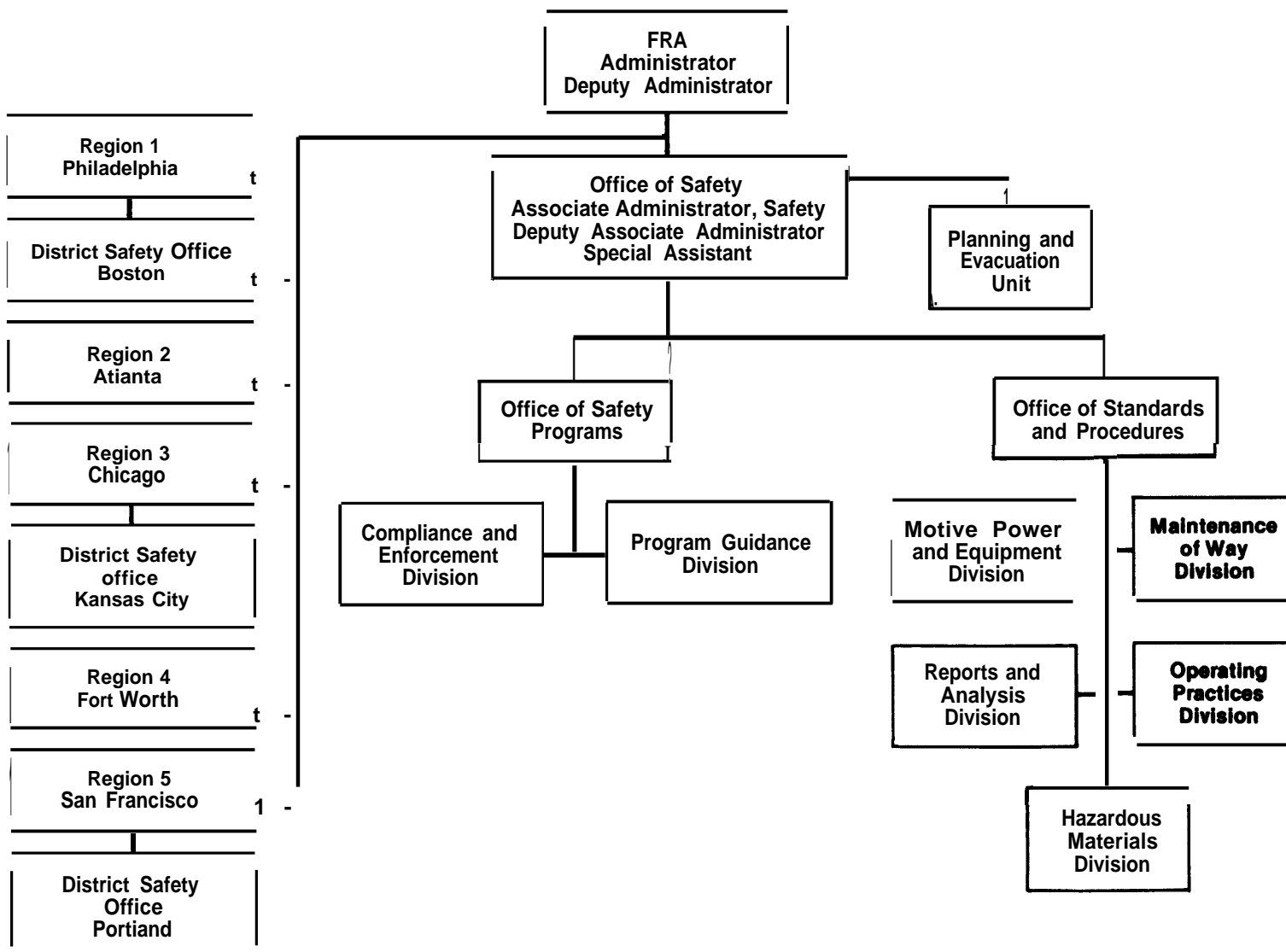
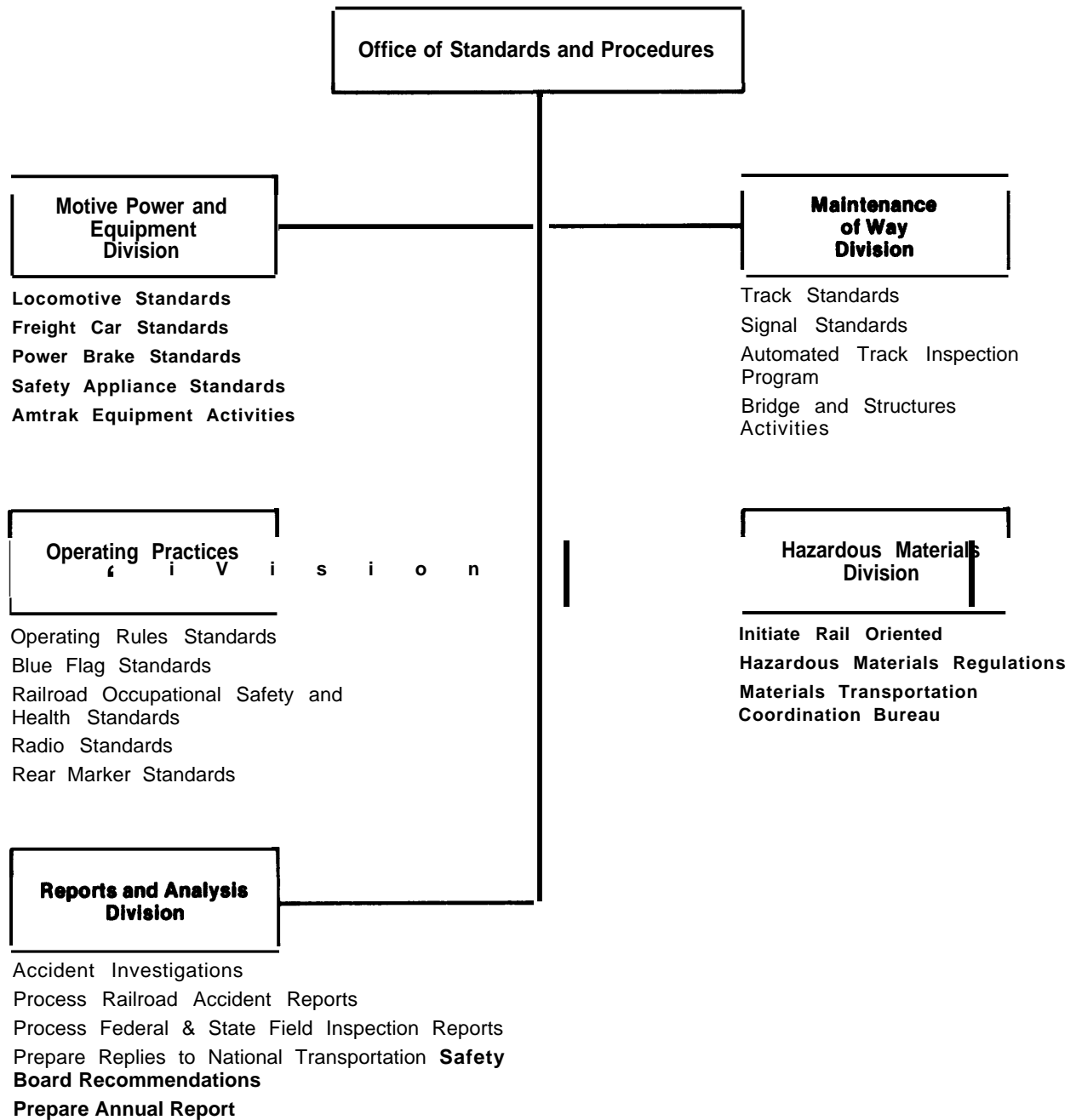


Figure D-1.—Federal Railroad Administration Office of Safety



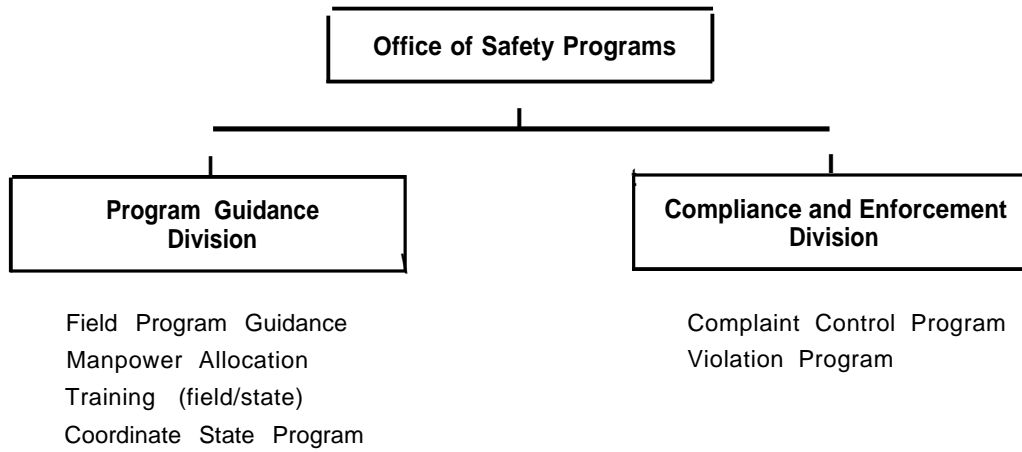
SOURCE: PMM, "Task III" working papers.

Figure D=2.— Federal Railroad Administration Office of Standards and Procedures Under the Office of Safety



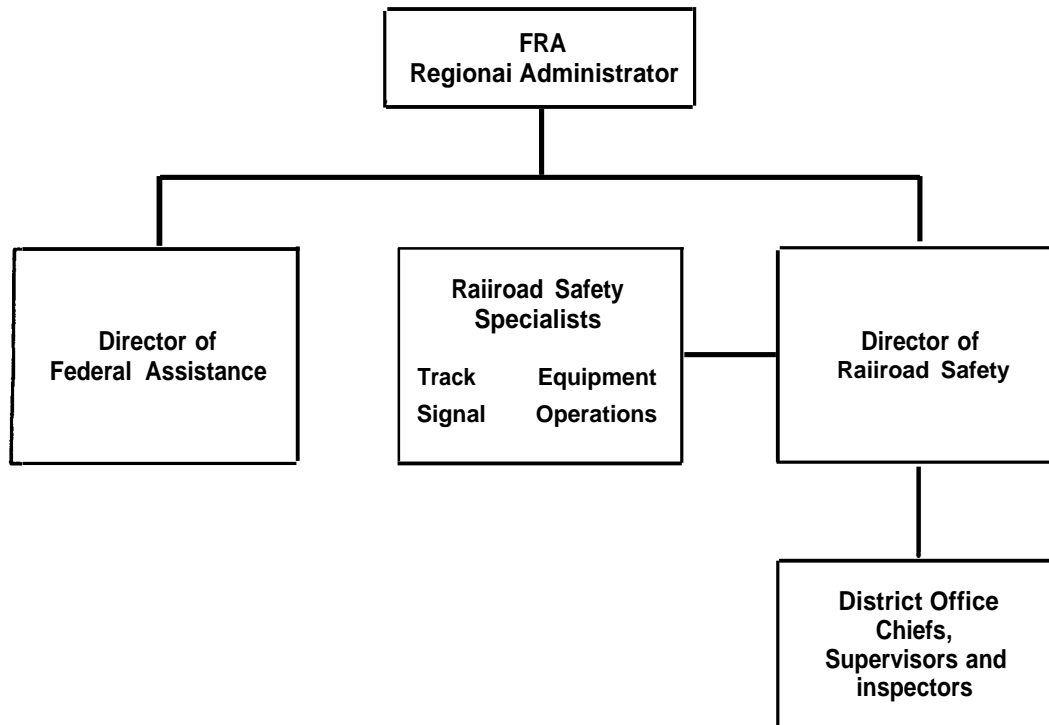
SOURCE: PMM, "Task III" working papers.

Figure D-3.— Federal Railroad Administration Office of Safety Programs Under the office of Safety



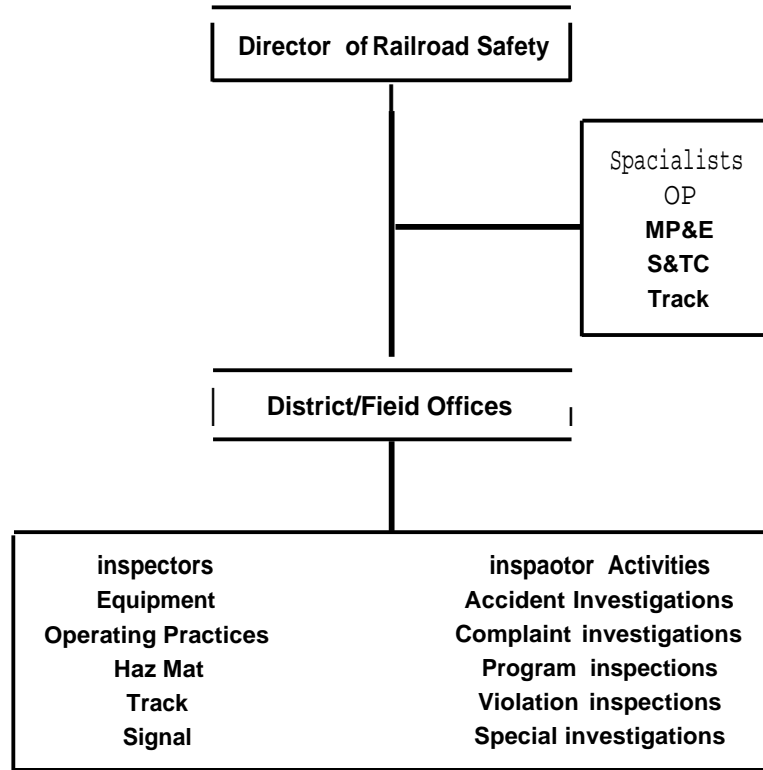
Source: PMM, "Task III" working papers

Figure D-4.— Federal Railroad Administration Regional Administrator



SOURCE: PMM, "Task III" working papers.

**Figure D= S.—Federal Railroad Administration Director of Railroad Safety  
Under the Regional Administrator**



- Supervisory Specialists in:  
San Francisco  
Philadelphia  
Chicago

**SOURCE:** PMM, "Task III" working papers.

Figure D-6.—Federal and State Participation in Railroad Safety Inspection Programs\*

Program	Inspector Qualifications /	Number:	Authorized	On-board	Place of Assignment
<p>1. Track Safety Program</p> <p>Has a state participation component</p>	<ul style="list-style-type: none"> <li>● 6 years railroad experience including 3 recent, progressively responsible experience in track construction/maintenance or equivalent training including working knowledge of track inspection techniques, maintenance methods and equipment</li> <li>● Ability to examine and interpret records, including computer print-outs</li> <li>● Ability to inspect for the prescribed maximum loadings and speed</li> <li>● Ability to prepare comprehensive reports</li> <li>● Skill in conducting investigation of a serious railroad accident</li> </ul>	<p>FEDERAL</p> <p>46, including supervisors and 3 vacancies</p> <p>STATE*</p>	<p>46 (including 4 supervisors)</p> <p>46*</p>	<p>41 and 4 supervisors</p> <p>28* and 8* trainees</p>	<ul style="list-style-type: none"> <li>● Alabama 1*/1</li> <li>● California 2</li> <li>● Colorado 1</li> <li>● Florida 1</li> <li>● Georgia 3</li> <li>● Illinois 4 / 3</li> <li>● Indiana 1*/2</li> <li>● Iowa 3 / 1</li> <li>● Kansas 1T*/1</li> <li>● Kentucky 1</li> <li>● Louisiana 2</li> <li>● Massachusetts 2</li> <li>● Minnesota 2*/2</li> <li>● Missouri 1*/5</li> <li>● Mississippi 1</li> <li>● Montana 1</li> <li>● Nebraska 1*/1</li> <li>● New Jersey 1</li> <li>● New York 2*/1</li> <li>● North Carolina 1</li> <li>● North Dakota 1</li> <li>● Ohio 2 + 2T*2</li> <li>● Oklahoma 1</li> <li>● Oregon 2*/2</li> <li>● Pennsylvania 3*/3</li> <li>● Tennessee 1</li> <li>● Texas 4</li> <li>● Utah 1</li> <li>● Washington 2*/1</li> <li>● West Virginia 2T*1</li> <li>● Wisconsin</li> <li>● does not include vacancies in Maryland, Texas, California, Massachusetts, and Illinois</li> <li>● Arizona 1*</li> <li>● Connecticut 1T*</li> <li>● Maryland 1T*</li> <li>● Michigan 2"</li> <li>● New Hampshire 1T*</li> <li>● Vermont 1*</li> </ul>
<p>2. Signals and Train Control Inspection Program</p> <p>Has no state participation component</p>	<ul style="list-style-type: none"> <li>● 6 years rail industry experience, including at least 3 years in the signal and train control field</li> <li>● Progressively responsible experiences must demonstrate knowledge of the design, installation, inspection, maintenance or repair of railroad signalling or control systems or knowledge of applicable laws or ability to conduct accident investigations and to prepare accurate, comprehensive accident reports</li> </ul>	<p>28, including 8 specialists and 2 district chiefs</p>	<p>26</p>	<p>28</p>	<ul style="list-style-type: none"> <li>● California 2</li> <li>● Colorado 1</li> <li>● Florida 1</li> <li>● Georgia 1</li> <li>● Illinois 2</li> <li>● Indiana 1</li> <li>● Kentucky 1</li> <li>● Louisiana 1</li> <li>● Massachusetts 1</li> <li>● Minnesota 1</li> <li>● Missouri 2</li> <li>● Maryland 1</li> </ul>

Figure D-6.—Federal and State Participation in Railroad Safety Inspection Programs \*— Continued

Program	Inspector Qualifications	Number:	Authorized	On-board	Place of Assignment
2. signals and Train Control Inspection Program (cont'd)					<ul style="list-style-type: none"> <li>● Nebraska 1</li> <li>● New Jersey 1</li> <li>● New York 2</li> <li>● Oregon 1</li> <li>● Pennsylvania 2</li> <li>● Tennessee 1</li> <li>● Texas 2</li> <li>● Utah 1</li> <li>● Virginia 1</li> <li>● Washington 1</li> </ul>
3. Motive Power and Equipment Safety Inspection Program Has state participation component to freight car equipment only	<ul style="list-style-type: none"> <li>● 6 years railroad industry experience, including 3 years motive power and equipment experience 2/</li> <li>● Progressively responsible experience which demonstrates knowledge of construction/design of locomotives or freight and passenger car or knowledge of applicable laws/regulations of either locomotive inspection or safety appliance acts or ability to conduct accident investigations or to prepare accurate, comprehensive accident reports</li> </ul>	<p>FEDERAL</p> <p>91, including 8 specialists and 7 supervisors</p> <p>STATE"</p>	<p>91</p> <p>37</p>	<p>91</p> <p>18*</p>	<ul style="list-style-type: none"> <li>● Alabama 1/2</li> <li>● California 4</li> <li>● Colorado 1</li> <li>● Florida 2</li> <li>● Georgia 3</li> <li>● Indiana 2</li> <li>● Kentucky 1</li> <li>● Louisiana 3</li> <li>● Maryland 1/2</li> <li>● Massachusetts 2</li> <li>● Michigan 2</li> <li>● Minnesota 3</li> <li>● Missouri 6</li> <li>● Montana 1</li> <li>● Nebraska 2</li> <li>● New Jersey 6</li> <li>● New York 416"</li> <li>● North Carolina 3</li> <li>● North Dakota 1</li> <li>● Ohio 7/1"</li> <li>● Oklahoma 1</li> <li>● Oregon 3/1"</li> <li>● Pennsylvania 8/3</li> <li>● Tennessee 2</li> <li>● Texas 7</li> <li>● Utah 1</li> <li>● Virginia 2</li> <li>● Washington 3/2</li> <li>● West Virginia 2/2</li> <li>● Arizona 1</li> </ul>
4. Hazardous Materials Safety Inspection Program No state participation component	<ul style="list-style-type: none"> <li>● 6 years railroad experience, including 3 years progressively responsible experience in the area of hazardous materials 2/</li> <li>● Ability to perform hazardous materials inspections of carrier facilities or ability to inspect shippers' methods of packaging, marking, loading, etc. or the ability to conduct accident investigations and to write accurate, comprehensive accident reports</li> </ul>	<p>14 (FRA)</p> <p>4 (MTB)</p>	<p>14</p> <p>4</p>	<p>14</p> <p>4</p>	<ul style="list-style-type: none"> <li>● Alabama 1</li> <li>● California 2</li> <li>● Georgia 1</li> <li>● Illinois 1</li> <li>● Louisiana 1</li> <li>● Massachusetts 1</li> <li>● Maryland 1</li> <li>● Missouri 1</li> <li>● New Jersey 1</li> <li>● Pennsylvania 2</li> <li>● South Carolina 1</li> <li>● Texas 1</li> </ul>

Figure D-6.—Federal and State Participation in Railroad Safety Inspection Programs \*— Continued

Program	Inspector Qualifications <sup>1</sup>	Number:	Authorized	On-board	Place of Assignment
5. Operating Practices Safety Inspection Program No state participation component	<ul style="list-style-type: none"> <li>● 6 years experience in railroad industry, preferably in operating capacity</li> <li>● 3 years must be progressively responsible experience which demonstrates knowledge of daily yard and road operations, or knowledge of the hours of service act or knowledge of FRA accident reporting requirements or knowledge of railroad safety practices or ability to conduct accident investigations and to prepare accurate, comprehensive reports</li> </ul>	42, including 7 specialists and 5 supervisors	42	42	<ul style="list-style-type: none"> <li>● Alabama 1</li> <li>● California 2 2</li> <li>● Colorado 2</li> <li>● Georgia 2</li> <li>● Illinois 3</li> <li>● Indiana 1</li> <li>● Iowa 1</li> <li>● Maryland 1</li> <li>● Massachusetts 3</li> <li>● Michigan 1</li> <li>● Minnesota 2</li> <li>● Kentucky 1</li> <li>● Missouri 4</li> <li>● Nebraska 1</li> <li>● New York 1</li> <li>● New Jersey 1</li> <li>● Ohio 3</li> <li>● Oklahoma 1</li> <li>● Oregon 3</li> <li>● Pennsylvania 3</li> <li>● Tennessee 1</li> <li>● Texas 2</li> <li>● Virginia 1</li> <li>● Washington 1</li> </ul>
<p><sup>1/</sup> Source: U.S. Civil Service Announcement PH-6-02, 3/76.</p> <p><sup>2/</sup> Two Year <b>specialized</b> experience for GS-9 level; three <b>years</b> for GS-11-12.</p> <p>● Figuraa taken from PMM, "Task III."</p>					

Figure D-7. — Direct Inspections

FRA WORKLOAD TITLE	Units	FY 1974 Costs	Cost/Unit	Units	FY 1975 Costs	Cost/Unit	Units	FY 1976 Cost	Cost/Unit
Motive Power and Equipment	111,546	\$ 48,554	\$ .44	149,475	\$ 139,854	\$ .29	194,428	\$ 183,411	\$ .94
Railroad Freight Equipment	832	730	.88	1,091	2,837	2.42	438	817	1.87
Railroad Passenger Equipment	2,824	28,409	9.49	4,632	37,617	8.12	3,281	39,559	12.06
Trans Air-Brake Test Observation	1,613	8,356	5.18	1,540	9,063	5.90	1,071	7,991	7.46
Single Car & Devices Test Observation	73,472	340,730	4.64	43,983	236,898	5.50	30,678	186,469	6.08
Motive Power	529,814	56,072	.11	226,369	46,321	.20	188,211	36,901	.21
Motive Power & Equipment Repairs	404,752	167,974	.39	479,340	233,024	.49	428,289	206,930	.40
Safety Appliances & Power Brake	1,124,965	640,825	—	904,660	705,234	—	846,394	666,106	—
Total (Current Year Dollars)		762,886			769,316			666,106	
FY 1976 Constant Dollars									
Signal and Train Control	1,133	32,040	28.28	1,591	34,680	21.77	829	33,778	40.75
Automatic Block Signal	2,297	51,134	22.26	1,799	53,189	29.57	1,602	63,635	39.72
Interlocking Control	1,904	53,311	28.00	1,715	56,209	32.77	1,182	58,045	49.02
Traffic Control	211	7,064	33.57	632	4,257	6.74	140	5,168	36.91
Automatic Train Control	259	3,206	12.38	130	1,627	12.52	110	3,042	27.65
Automatic Train Stop	154	6,869	44.54	692	10,593	15.52	397	10,446	26.36
Automatic Cab Signal	73,417	16,486	.22	75,973	19,907	.26	64,966	18,654	.29
Signal Records	79,376	170,120	—	82,522	180,410	—	66,266	193,366	—
Total (Current Year Dollars)		202,523			193,969			193,366	
1976 Constant Dollars									
Track & Structures	69,463	72,132	1.04	110,344	211,298	1.91	96,915	202,768	2.05
Track — Mainline	1,223	7,636	6.24	4,867	19,106	3.93	7,066	28,105	3.98
Track — Yard	918	736	.80	4,666	2,542	.52	2,015	2,668	1.32
Track — RR/HW Grade Crossing	11,810	9,466	.80	29,017	24,603	.85	37,966	36,960	1.03
Track — RR Crossing & Turnouts	74,496	19,221	.26	115,571	33,371	.29	139,202	46,007	.32
Track Records	157,909	109,211	—	264,655	290,680	—	266,164	317,518	—
Total (Current Year Dollars)		130,013			312,774			317,518	
1976 Constant Dollars									
Hazardous Materials	23,132	32,608	1.41	18,049	47,234	2.62	21,122	44,023	2.08
Hazardous Materials Equip./Oper.	29	1,504	51.86	113	2,846	25.18	6	830	136.33
Hazardous Material Mfg. Prod.	1,365	14,368	10.53	527	19,495	36.99	842	18,725	22.24
Hazardous Materials Shipper Prod.	75,094	25,681	.34	17,769	43,648	2.46	4,963	44,243	8.91
Hazardous Materials Records	99,620	74,161	—	36,468	113,222	—	26,933	107,821	—
Total (Current Year Dollars)		86,286			121,744			107,821	
1976 Constant Dollars									
Operating Practices	426	2,140	5.02	681	3,661	5.52	2,806	11,314	4.03
Railroad Operating Practices	208,535	17,514	.08	296,694	32,469	.11	342,692	40,415	.12
Hours of Services	616	980	1.59	1,799	2,154	1.20	4,705	5,400	1.15
Railroad Operating Records	207,477	20,614	—	299,154	38,284	—	360,203	57,129	—
Total (Current Year Dollars)		24,540			41,144			57,129	
1976 Constant Dollars									
Total Costs (Current Year Dollars)	1,669,334	1,014,931		1,567,349	1,328,010		1,577,980	1,341,964	
1976 Constant Dollars		\$1,208,251			\$1,427,967			\$1,341,964	

SOURCE: ERA Work Measurement System, Printout W24207, FY 1974 - FY 1976. Taken from PMM, "Task III."



Figure D-8.—Status Summary at Fiscal Year End for Track Safety Inspection<sup>1</sup>

State	Full Cert. - cert. - Agree	No. of Inspectors			No. of Trainees			Federal Funding 1975	Federal Funding 1976	Federal Funding 1977
		75	76	77	75	76	77			
AL	C		1	1				\$26,652	\$33,393	
AZ	FC		1	1				N/A	NIA	
CN	A			1		1			• 3,062	
IL	A	1	1	3		1	\$24,040	51,650	30,325	
IN	TA		1	1				24,915	20,641	
IO	FC	1	2	3			29,916	54,453	51,766	
MO	tA					1			• 7,712	
MI	C			2					26,970	
MN	A		1	2		1		52,500	42,221	
NC	C	1	1	1		1	26,496	45,931	36,291	
ND	C	1	1	1			32,413	26,125	17,709	
NH	A					1			9,064	
NY**	A			2					* 73,659	
OH	A	1	1	2		2	1,466	29,712	15,314	
OR		1	2	2			29,069	45,916	60,651	
PA		4	4	3			22,645	63,539	75,656	
VT	A	1	2	1			9,956	14,450	14,150	
WA	FC	1	2	2			59,405	72,065	60,026	
Total		12	20	27	2	6	\$235,608	\$526,126	\$561,032	

• Funding Agreements are still pending finalization.

• \* The present maximum of inspector level of effort unauthorized by FRA's State Participation Regulations without a higher level being authorized by the Administrator New York State is in the process of requesting additional authorization.

Under Certification for FY 1976,

Under Full Certification until FY 1977.

<sup>1</sup> These figures represent FRA "commitment" based on individual state estimates so, in some cases, they may not coincide with actual expenditures. Taken from PMM, "Task (11," pp. III. 14-15.

Figure D-9.—Status Summary at Fiscal Year End for Freight Car Safety Inspection

State	Full cert.= agree.	No. of inspector		Federal funding 1976	Federal funding 1977
		76	77		
AL	C		1		\$16,063
AZ	FC	1	1	N/A	N/A
MO	FC		1		* 6,550
OH	A	1	1		18,568
OR	FC	1	1	\$37,321	51,738
PA	C	3	3	\$15,450	70,134
WA	t FC	1	2	53,546	59,327
WY	FC		2		28,461
<b>Total</b>		<b>7</b>	<b>12</b>	<b>\$106,317</b>	<b>\$250,831</b>

● Funding Agreements are still pending finalization.

t Under Certification for FY 1977.