

By Mr. Herren of Fall River, petition of Albert Herren relative to the establishment of a division of nuclear facility safety within the Department of Public Safety. Energy.

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**The Commonwealth of Massachusetts**

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In the Year One Thousand Nine Hundred and Ninety-Three.

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AN ACT RELATIVE TO THE ESTABLISHMENT OF A DIVISION OF NUCLEAR FACILITY SAFETY WITHIN THE DEPARTMENT OF PUBLIC SAFETY.

*Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same, as follows:*

1 Chapter 22 of the General Laws is hereby amended by inserting  
2 after section 15 the following new section: —

3 Section 16. The department shall hereby establish and operate  
4 a Division of Nuclear Safety which shall be responsible for moni-  
5 toring the operation and modification of the two nuclear power  
6 plants within the Commonwealth. The Division shall be  
7 responsible for developing emergency response plans in  
8 conjunction with Massachusetts Civil Defense for responding to  
9 accidents involving nuclear plant facilities. Major activities shall  
10 include: installation, operation and maintenance of a system for  
11 remote monitoring of radioactive discharges from the nuclear  
12 power plants; development and review of the Massachusetts  
13 Radiological Accident Emergency Preparedness Plan; and  
14 oversight of training of state and local civil defense personnel  
15 responsible for implementation of the emergency plan; and  
16 enforcement of rules and regulations prescribing standards for in  
17 service testing of pressurized systems at nuclear power plants  
18 which the Department of Public Safety oversees.

19 (1) The Division of Nuclear Facility Safety shall establish the  
20 Massachusetts Radiological Accident Emergency Preparedness  
21 Plan which shall establish a program for statewide, integral  
22 management procedures in the event of an accident which may  
23 occur at a nuclear power reactor site. The primary purpose of the

24 plan shall be to provide a coordinated response by state and local  
25 governmental officials for the protection of the citizens living near  
26 nuclear plants; a concept of operations so that the plan can be  
27 effectively carried out; and an effective allocation of resources and  
28 personnel. The plan shall preassign the duties and responsibilities  
29 that would be taken by all the respondents to a nuclear accident  
30 thus enabling actions to be made quickly and efficiently.

31 The Massachusetts Division of Nuclear Facility Safety and the  
32 Massachusetts Civil Defense Agency shall share the primary  
33 responsibility for developing the plan with integral agencies such  
34 as the State Police, the Emergency Planning Zone (EPZ) local  
35 officials, and the utility's security and safety personnel, all playing  
36 a major role in planning. The Division of Nuclear Facility Safety  
37 shall be responsible for the technical functions of this effort, and  
38 the Civil Defense Agency shall be responsible for the operational  
39 aspects. The plan shall be updated every three years for accuracy  
40 and proper appropriation to assure a fully functional quality plan.  
41 The appropriate components shall be distributed to the proper  
42 county and municipal agencies and organizations in the Common-  
43 wealth for implementation.

44 (2) The Division of Nuclear Facility Safety, in cooperation with  
45 the Department of Public Health shall adopt and develop a remote  
46 monitoring system (RMS) which shall incorporate three major  
47 components: gross gamma detectors radially positioned around  
48 each nuclear power station; an automated, isotopic gaseous  
49 effluent monitor system which samples from major engineering  
50 release points; and a reactor parameter data communication link  
51 to each facility's on-site computer. In addition there shall be  
52 provided liquid discharge points. All of these RMS components  
53 shall be connected through a dedicated data communications link  
54 to the Division of Nuclear Facility Safety Headquarters.  
55 Technical staff shall review the data and perform analysis of plant  
56 conditions.

57 (a) The Division of Nuclear Facility Safety shall develop a dual  
58 ring system of environmental radiation monitors utilizing gross  
59 gamma detectors and automated isotopic detectors which shall  
60 be installed and maintained around each reactor site that would

61 measure a change in radiation levels resulting from a radioactive  
62 release at the reactor site. This system shall serve a multitude of  
63 purposes. It shall define the existence of a radioactive release  
64 sufficiently large enough to impact upon the environment, as well  
65 as detect a release through an unmonitored release path. In  
66 addition, the system shall provide a backup capability should the  
67 effluent monitoring system be inoperable, and shall also reveal  
68 the presence of atmospheric conditions (windshear) which could  
69 result in plume dispersal not following anticipated direction of  
70 travel.

71 (b) The Massachusetts Division of Nuclear Facility Safety shall  
72 install a direct data communication link between the Division  
73 headquarters computer and each nuclear reactor's control room  
74 computer for the monitoring of the Commonwealth's two nuclear  
75 power reactors and their safety systems. The data link shall be  
76 developed for early notification of events that could lead to  
77 nuclear accidents. This system is an essential element in providing  
78 continuous plant safety assessment, early detection of abnormal  
79 conditions, and evaluation on nuclear plant transients.

80 The system signals to be received at the Division's headquarters  
81 shall be the same signals available to the nuclear plant personnel  
82 on-site. The Division shall select particular parameters to be  
83 transmitted to them from an index containing all available plant  
84 system information. Parameters selected by the Department  
85 provide detailed information on the operation characteristics of  
86 all essential plant safety systems.

87 (c) The Division of Nuclear Facility Safety shall be directed to  
88 utilize and implement a custom designed automated system to  
89 monitor gases routinely released by nuclear power plants. The  
90 Radioactive Gaseous Monitoring System is designed to identify  
91 and quantify the radioactive components of the gaseous  
92 discharges from stacks and other gaseous release points to the  
93 environment so that appropriate emergency action can begin in  
94 the event of a nuclear accident.

95 The Radioactive Gaseous Effluent Monitoring System is a  
96 state-of-the-art, computerized system which shall continuously  
97 transmit data from the nuclear power plant to the Division's  
98 headquarters computer.

99 (3) The Secretary of Public Safety shall appoint a Director of  
100 the Division of Nuclear Facility Safety. Said Director may enter  
101 into agreements with other state agencies for the purpose of  
102 carrying out the provisions of this act. The Director shall file an  
103 annual report with the Joint Committee on Government  
104 Regulations on or before December first of each year, detailing  
105 the activities undertaken with regard to this act. Said Director  
106 shall make no expenditures without the prior approval of the  
107 Secretary of Public Safety. The Division of Nuclear Facility  
108 Safety shall include not more than eleven positions. Said positions  
109 shall not be subject to the provisions of Chapter 31 of the General  
110 Laws.