Contents

1	Ma	naging	the Nuclear Legacies	1
	1.1		uction	1
		1.1.1	Science and Technology	2
		1.1.2	Nuclear Weapons Proliferation	3
		1.1.3	Economic Costs and Benefits	3
		1.1.4	Multilayered Policy Puzzles	5
		1.1.5	Public Participation in Areas with Nuclear Facilities	6
	1.2	Showe	ered with Mixed Messages	7
	1.3	Organi	ization of the Book	12
	Refe	erences		13
2	The	United	States Nuclear Factories	15
	2.1	Introdu	uction	15
	2.2	Nuclea	ar Weapons Factories	17
	2.3	Federa	I Government Management of Defense Nuclear Materials	24
		2.3.1	Office of Environmental Management	24
		2.3.2	Legal Framework for Defense Wastes	26
	2.4	Geogra	aphy of Nuclear Defense Sites	28
		2.4.1	Hanford	30
		2.4.2	Idaho National Laboratory	31
		2.4.3	Savannah River	31
		2.4.4	Oak Ridge	32
		2.4.5	Los Alamos	33
		2.4.6	Waste Isolation Pilot Plant	33
		2.4.7	Closed Sites: Fernald, Mound, and Rocky Flats	34
		2.4.8	Economic Dependence and Public Preferences	34
	2.5	Nuclea	ar Power	35
		2.5.1	Nuclear Power Life Cycle	36
		2.5.2	Nuclear Power Debates	37

		2.5.3	Uncertain Status and Future of Nuclear Power	38
		2.5.4	Geography of Nuclear Power, Other Electrical Energy	20
	Dafe		Sources, and DOE Nuclear Facilities in the United States	39 41
	Refe	erences.		41
3	Pub	lic Stak	ceholders: What We Know and Expect	45
	3.1	Introdu	uction	45
	3.2	Survey	/s, 2005–May 2011	46
	3.3	Theory	4	47
		3.3.1	Affect and Worry	47
		3.3.2	Trust	50
		3.3.3	Demographic Attributes	50
		3.3.4	Cultural Worldviews	51
		3.3.5	Personal History	51
	3.4	More I	Detailed Presentations	52
		3.4.1	European Studies	52
		3.4.2	United States Surveys	54
	3.5	Post-T	MI and Chernobyl Surveys	58
	Refe		· · · · · · · · · · · · · · · · · · ·	61
	CDI			
4			rveys of Major US Department of Energy	
			ntal Management Site Regions and of	15
			al Population, 2005–2010	65
	4.1		uction	65
	4.2		ons	66
	4.3	-	/ Design	67
	4.4	•	ons	72
		4.4.1	Future Nuclear Use	72
		4.4.2	Legacy Waste Management	72
		4.4.3	Correlates	73
	4.5		s	75
		4.5.1	Question 1. Future Nuclear Use	75
		4.5.2	Question 2. Legacy Waste Management	77
		4.5.3	Question 3. Correlates	79
	4.6		ary and Lessons Learned	88
		4.6.1	Limitations	88
		4.6.2	Results: New Activities at Legacy Sites	89
		4.6.3	Results: Legacy Waste Management	89
		4.6.4	Results: Correlates	89
		4.6.5	Policy-Related Results	90
	Refe	erences		90
5	Imp	act of t	he Fukushima Events on Public Preferences	
-	-		tions in the United States, 2011	93
	5.1	-	uction	94
	5.2		n of the Survey and Questions	94
	5.4	Design		74

		5.2.1	Questions
		5.2.2	Sampling Locations
		5.2.3	Survey Implementation
	5.3	Result	s
		5.3.1	Question 1. Preference Responses
		5.3.2	Question 2. Correlates of Six Factors
	5.4	Summ	ary and Lessons Learned
		5.4.1	Design Changes and Limitations
		5.4.2	Results: New Activities at Legacy Sites
		5.4.3	Results: Impact of Fukushima Events on Preferences
			for Nuclear Power
		5.4.4	Results: Legacy Waste Management
		5.4.5	Results: Correlates
		5.4.6	Policy-Related Results
	Refe	erences	
6	Nuc		aste Management: Building a Foundation
6		lear W	
6		lear Wa	aste Management: Building a Foundation
6	to E	clear Wa Cnhance Introdu	aste Management: Building a Foundation Trust
6	to E 6.1	clear Wa Enhance Introdu Public	aste Management: Building a Foundation P Trust
6	to E 6.1 6.2	clear Wa Enhance Introdu Public	aste Management: Building a Foundation Trust
6	to E 6.1 6.2	clear Wa Enhance Introdu Public Decisi	aste Management: Building a Foundationaste Management: Building a FoundationactionuctionPresentations: An Opportunityon-Makers and the Public: Building a Foundation
6	to E 6.1 6.2	elear Wa Enhance Introdu Public Decisi 6.3.1	aste Management: Building a Foundationaste Management: Building a Foundationaste Trustuction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management Issues126
6	to E 6.1 6.2	clear Wa Introdu Public Decisi 6.3.1 6.3.2	aste Management: Building a Foundationaste Management: Building a Foundationactionuction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management IssuesNuclear Power in the Energy Mix,
6	to E 6.1 6.2 6.3	clear Wa Introdu Public Decisi 6.3.1 6.3.2	aste Management: Building a Foundationaste Management: Building a Foundationaction123uction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management Issues126Nuclear Power in the Energy Mix,Deliberation, and Trust128
6	to E 6.1 6.2 6.3	clear Wa Introdu Public Decisi 6.3.1 6.3.2 The Pu 6.4.1	aste Management: Building a Foundationaste Management: Building a Foundationauction123uction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management Issues126Nuclear Power in the Energy Mix,Deliberation, and Trust128Jblic Participation Challenge and Public Trust129
6	to E 6.1 6.2 6.3	clear Wa Introdu Public Decisi 6.3.1 6.3.2 The Pu 6.4.1 6.4.2	aste Management: Building a Foundationaste Management: Building a Foundationauction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management Issues126Nuclear Power in the Energy Mix,Deliberation, and Trust128ublic Participation Challenge and Public Trust129Five Publics130
6	to E 6.1 6.2 6.3	clear Wa Introdu Public Decisi 6.3.1 6.3.2 The Pu 6.4.1 6.4.2	aste Management: Building a Foundationaste Management: Building a Foundationaste Management: Successionuction124Presentations: An Opportunity124on-Makers and the Public: Building a Foundation125Nuclear Waste Management Issues126Nuclear Power in the Energy Mix,Deliberation, and Trust128Jblic Participation Challenge and Public Trust129Five Publics130Trust and the Five Publics131