Part 03



Exelon Generation Victoria County Station ESP Application

ESP Table of Contents

Part 01 — Administrative Information

Part 02 — Site Safety Analysis Report (SSAR)

Part 03 — Environmental Report (ER)

Part 04 — Emergency Plan (E-Plan)

Part 05 — Enclosures

Victoria County Station

ESP Application

Part 3

Environmental Report (ER)

Revision 1

ESP ER Overall Table of Contents

Section	<u>litle</u>	Page
Chapter 1	Introduction	1.1-1
1.0 Inti	roduction	1.1-1
1.1 Th	e Proposed Project	1.1-1
1.1.1	The Applicant and Owner	1.1-1
1.1.2	Site Location	1.1-1
1.1.3	Reactor Information	1.1-2
1.1.4	Cooling System Information	1.1-2
1.1.5	Transmission System Information	1.1-3
1.1.6	Pre-application Public Involvement	1.1-3
1.1.7	Proposed Dates for Major Activities	1.1-4
1.1.8	References	1.1-4
1.2 Sta	atus of Reviews, Approvals, and Consultations	1.2-1
Chapter 2	Environmental Description	2.1-1
-	e Location	
2.1.1	References	2.1-3
2.2 Lai	nd Use and Transmission	
2.2.1	The Site and Vicinity	2.2-1
2	.2.1.1 The Site	
	.2.1.2 The Vicinity	
2.2.2	Transmission Corridors and Offsite Areas	2.2-3
	.2.2.1 Proposed Transmission Corridors	
	.2.2.2 Cooling Basin Blowdown Line and VCND Transportation Corridor	
	.2.2.3 Rail Spur Connection	
2	.2.2.4 Raw Water Makeup System and Intake Structure	
2	.2.2.5 Emergency Operation's Facility	
2.2.3	The Region	
	.2.3.1 Victoria County	
	.2.3.2 Calhoun County	
2	.2.3.3 DeWitt County	2.2-9
2	.2.3.4 Goliad County	2.2-10
2	.2.3.5 Jackson County	2.2-11
2	.2.3.6 Refugio County	2.2-12
2.2.4	References	2.2-13
	ater	
2.3.1	Hydrology	2.3-1
	.3.1.1 Surface Water	
2	.3.1.2 Groundwater	2.3-40
2.3.2	Water Use	2.3-139
2	.3.2.1 Water Resources Planning and Appropriation	2.3-139
	.3.2.2 Groundwater Use	
	.3.2.3 Surface Water Use	
	.3.2.4 References	
2.3.3	Water Quality	2.3-178

i

<u>Section</u>	<u>Title</u>	<u>Page</u>
2.3.3.1	Groundwater	2.3-178
2.3.3.2	Surface Water	2.3-180
2.3.3.3	References	2.3-185
2.4 Ecology		2.4-1
2.4.1 Terr	estrial Ecology	2.4-1
	Regional Landscape	
	General Site Description	
2.4.1.3	Offsite Areas	2.4-4
	Terrestrial Wildlife	
	Threatened and Endangered Species	
	Other Important Species and Habitats	
	Transmission Line Corridor Habitats and Communities	
	atic Ecology	
	Aquatic Communities	
	Important Aquatic Resources	
	Nuisance Species	
	Preexisting Environmental Stresses	
	References	
	nomics	
	nography	
	Population Data by Sector	
	Population Data by Political Jurisdiction	
	Transient Populations	
	References	
	nmunity Characteristics	
	Economy	
	Transportation	
	Taxes	
2.5.2.4	Land Use	
	Aesthetics and Recreation	
	Housing	
	Public Services and Community Infrastructure	
	Schools	
	References	
	oric Properties	
2.5.3.1	Applicable Federal and State Historic Preservation Regulations	
	Consultation with the Texas Historical Commission	
	Cultural Resource Investigations Cultural Resources in the Two VCS Site APEs	
2.5.3.4		
2.5.3.5		
	Native American Consultation	
2.5.3.7		
	Significant Cultural Resources within 1.2 Miles of the Offsite Areas	
	Cultural Resources in the Transmission Line Study Area	
2.5.3.10	References	∠.၁-155

<u>Section</u>	<u>Title</u>	<u>Page</u>
2.5.4 Env	ironmental Justice	2.5-162
2.5.4.1	Methodology	2.5-162
2.5.4.2	Minority Populations	
2.5.4.3	•	
2.5.4.4	•	
2.5.4.5		
2.6 Geology		
	logical Conditions	
	Physiography	
	Stratigraphy	
	logical Impacts	
	erences	
	ogy, Air Quality, and Noise	
	ional Climatology	
	Data Sources	
	General Climate	
2.7.1.3		
2.7.2 Air (Quality	
2.7.2.1	Regional Air Quality Conditions	
2.7.2.2	Projected Air Quality Conditions	
	Restrictive Dispersion Conditions	
	ere Weather	
2.7.3.1		
2.7.3.2	Extreme Winds	
2.7.3.3		
2.7.3.4		
2.7.3.5	Tropical Cyclones	
2.7.3.6	Droughts and Dust (Sand) Storms	
2.7.4 Loca	al Meteorology	
2.7.4.1	Normal, Mean, and Extreme Values	
2.7.4.2		
2.7.4.3		
2.7.4.4	Atmospheric Stability	2.7-26
	Topographic Description and Potential Modifications to	
	Meteorological Conditions	2.7-27
2.7.5 Sho	rt-Term Diffusion Estimates	2.7-28
2.7.5.1	Regulatory Basis and Technical Approach	2.7-28
2.7.5.2	PAVAN Modeling Results	
2.7.6 Long	g-Term (Routine) Diffusion Estimates	2.7-31
2.7.6.1	Regulatory Basis and Technical Approach	2.7-31
	XOQDOQ Modeling Results	
	se	
	erences	
2.8 Related F	Federal Project Activities	2.8-1
2.8.1 Ove	rview	2.8-1

<u>Section</u>	<u>Title</u>	<u>Page</u>
2.8.2	Acquisition of Land and Use of Transmission Corridors	2.8-2
	.2.1 Federal Actions Associated With Land Acquisition and/or Use	
2.8	.2.2 Federal Actions Associated With Land Acquisition for Transmission	
	Corridors	2.8-2
2.8.3	Cooling Water Source and Supply	2.8-3
2.8.4	Other Federal Actions Affecting Construction or Operation	2.8-3
2.8.5	Planned Federal Projects Contingent on Plant Construction or Operation .	2.8-4
2.8.6	Cooperating Agencies	2.8-4
2.8.7	References	2.8-4
	lant Description	
	rnal Appearance and Plant Layout	
3.1.1	Site Description	
3.1.2	Power Plant Design	
3.1.3	ER Design Parameters	
3.1.4	Plant Appearance	
3.1.5	Site Development and Improvements	
	ctor Power Conversion System	
3.2.1	Reactor Description	
3.2.2	Engineered Safety Features	
3.2.3	Power Conversion Systems	
	t Water Use	
	Water Consumption	
	.1.1 Plant Water Use	
	.1.2 Plant Water Releases	
	Water Treatment	
	.2.1 Surface Water	
	.2.2 Groundwater	
	ing System	
3.4.1	Description and Operational Modes	
_	.1.1 Normal Plant Condenser Cooling	
	.1.2 Safety-Related and NonSafety-Related Service Water Systems	
	.1.3 Other Operational Modes	
	Component Descriptions	
	.2.1 RWMU System Intake Structure	
	.2.2 Plant Discharge	
	.2.3 Cooling Basin CWS Intake Structure and Discharge Outfall	
	.2.4 Heat Dissipation System	
3.4.3	References	
	oactive Waste Management System	
3.5.1	Source Terms	
3.5.2	Liquid Radioactive Waste Management System	
3.5.3	Gaseous Radioactive Waste Management System	
3.5.4	Solid Radioactive Waste Management System	
3.6 Nonr	adioactive Waste Systems	3.6-1

iv Revision 1

<u>Section</u>	<u>Title</u>	<u>Page</u>
3.6.1 Effluents Containing Chemica	als or Biocides	3.6-1
3.6.2 Sanitary System Effluents		3.6-2
3.6.3 Other Effluents		3.6-2
3.6.3.1 Gaseous Effluents		3.6-3
3.6.3.2 Liquid Effluents		3.6-3
3.6.3.3 Solid Effluents		3.6-3
3.6.3.4 Hazardous Wastes		3.6-4
3.7 Power Transmission System		3.7-1
3.7.1 Switchyard and Substation Ir	terfaces	3.7-1
	Way (Corridors)	
	ts-of-Way Ecological and Cultural Surveys	
	Maintenance	
	peration	
	gn and Methods of Construction	
•	erials	
	d Fuel	
•	uel	
	e Waste	
	paration Activities	
	hment of Environmental Controls	
	d Grading	
	acility Construction	
3.9.1.4 Construction Security P	rogram Implementation	3.9-4
• •	struction	
	Facilities Construction	
3.9.1.7 Laydown, Fabrication, a	and Shop Area Preparation	3.9-5
	tion	
	d Discharge Structure Installation	
3.9.1.10 Blowdown Discharge Li	ne Installation	3.9-6
	stem Pump Station and Pipeline Installation .	
	vation	
	£:II	
	fill	
	nat Foundation	
	struction	
	acilities	
	vith Construction	
	l Processes	
3.9.5 Environmental Procedures		3.9-12

v Revision 1

<u>Section</u>		<u>Title</u>	<u>Page</u>
	3.9.5.1	Noise and Vibration	3.9-12
	3.9.5.2	Air Quality (Fugitive and Vehicular Emissions)	
	3.9.5.3		
	3.9.5.4	Construction Water Management	3.9-13
	3.9.5.5	Protection of Sensitive Resources	3.9-14
	3.9.5.6	Unanticipated Discoveries	3.9-16
	3.9.5.7	Hazardous Materials and Petroleum Management	3.9-16
	3.9.5.8		
	3.9.5.9	Asbestos and Lead-Based Paint	3.9-17
	3.9.5.10	Spill Prevention and Response	3.9-17
	3.9.5.11	Cleanup and Restoration	3.9-17
3.9	9.6 Refe	erences	3.9-18
3.10	Workforc	e Characterization	3.10-1
		struction Workforce	
3.1	10.2 Wor	kers Relocation and Commuting	3.10-2
		rations Workforce	
		al Construction and Operations Workforce	
3.1	10.5 Outa	age Workforce	3.10-2
-	-	ts of Construction	
		e Impacts	
4.		Site and Vicinity	
	4.1.1.1		
		The Vicinity	
4.		nsmission Corridors and Offsite Areas	
		Proposed Transmission Corridors	
		Blowdown Piping	
	4.1.2.3		
	4.1.2.4		
	4.1.2.5		
		oric Properties	
		erences	
		elated Impacts	
4.2	•	rologic Alterations	
	4.2.1.1		
		Groundwater	
4.2		er Use Impacts	
		Surface Water	
		Groundwater	
4.2		er Quality Impacts	
	4.2.3.1		
		Groundwater	
		erences	
		al Impacts	
4.3	3.1 Terr	estrial Ecosystems	4.3-1

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.3.1.1	The Site and Vicinity	4.3-1
	RWMU System Pipeline	
4.3.1.3	Transmission Corridors	4.3-7
4.3.2 Aqua	atic Ecosystems	4.3-9
4.3.2.1	Construction of Cooling Basin	4.3-11
4.3.2.2	Construction of Heavy Haul Road and Blowdown Line	4.3-12
4.3.2.3	Construction of RWMU Pump Station, Intake Canal, and RWMU	
	Pipeline	4.3-13
4.3.2.4	Transmission Corridors	
4.3.3 Refe	erences	4.3-18
4.4 Socioecor	nomic Impacts	4.4-1
4.4.1 Phys	sical Impacts of Station Construction	4.4-1
4.4.1.1	Groups or Physical Features Vulnerable to Physical Impacts	4.4-1
	Predicted Noise Levels	
4.4.1.3	Air Quality	4.4-5
4.4.1.4	Aesthetics	4.4-7
4.4.1.5	Occupational Health	4.4-8
4.4.1.6	Conclusion	4.4-9
4.4.2 Soci	al and Economic Impacts	4.4-9
4.4.2.1	Demography	4.4-10
4.4.2.2	Impacts to the Community	4.4-14
4.4.3 Envi	ronmental Justice	4.4-63
4.4.3.1	Health and Environmental Impacts	4.4-64
4.4.3.2	Socioeconomic Impacts	4.4-65
4.4.4 Refe	erences	4.4-68
4.5 Radiation	Exposure to Construction Workers	4.5-1
4.5.1 Site	Layout	4.5-1
4.5.2 Radi	iation Sources	4.5-1
4.5.3 Cons	struction Worker Doses	4.5-2
4.5.3.1	Gaseous Effluent Doses	4.5-2
4.5.3.2	Direct Radiation Doses	4.5-2
4.5.3.3	Total Doses	4.5-3
4.5.4 Refe	erences	4.5-3
4.6 Measures	and Controls to Limit Adverse Impacts during Construction	4.6-1
	ve Impacts	
4.7.1 Land	d Use	4.7-5
4.7.2 Hydr	rology and Water Use	4.7-7
4.7.2.1	Surface Water	4.7-7
4.7.2.2	Groundwater	4.7-9
4.7.2.3	Water Quality	4.7-9
	ogy (Terrestrial and Aquatic)	
	Terrestrial	
	Aquatic	
	oeconomic Resources	
4.7.5 Sum	ımary	4.7-14

<u>Section</u>	<u>Title</u>	<u>Page</u>
4.7.6 Re	eferences	4.7-14
Chanter F. Francis	inamental Impacts of Station Operation	E 0.4
	ronmental Impacts of Station Operation	
	se Impactse Site and Vicinity	
5.1.1	•	
_	2 The Vicinity	
	ansmission Corridors and Offsite Areas	
	1 Transmission Corridors	
	2 Cooling Basin Blowdown Line and Transportation Corridor	
5.1.2.3	·	
5.1.2.4	·	
5.1.2.	·	
	6 Waste Disposal	
	storic Properties and Cultural Resources	
	Related Impacts	
	drologic Alterations and Plant Water Supply	
5.2.1.		
5.2.1.2	2 Groundwater	
	3 Summary of Hydrologic Alterations	
	ater-Use Impacts	
	1 Surface Water	
5.2.2.2	2 Groundwater	5.2-25
5.2.3 W	ater Quality Impacts	5.2-27
5.2.3.	1 Surface Water	5.2-27
5.2.3.2	2 Groundwater	5.2-29
5.2.4 Re	eferences	5.2-30
5.3 Cooling	System Impacts	5.3-1
	ake System	
	1 Hydrological Descriptions and Physical Impacts	
	2 Aquatic Ecosystems	
	References	
	scharge Systems	
	1 Thermal Discharges and Other Physical Impacts	
5.3.2.2	· · · · · · · · · · · · · · · · · · ·	
5.3.2.3		
	eat Dissipation Systems	
	1 Heat Dissipation to the Atmosphere	
	2 Terrestrial Ecosystems	
	References	
	pacts to Members of the Public	
5.3.4.	3 3 1	
	Noise Impacts	
	References	
5.4 Radiolo	gical Impacts of Normal Operation	5.4-1

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.4.1 Ex	xposure Pathways	5.4-1
	1 Liquid Pathways	
5.4.1.	2 Gaseous Pathways	5.4-2
	3 Direct Radiation	
5.4.2 Ra	adiation Doses to Members of the Public	5.4-3
5.4.2.	1 Liquid Pathway Doses	5.4-3
5.4.2.	2 Gaseous Pathway Doses	5.4-3
5.4.3 lm	npacts to Members of the Public	5.4-4
5.4.4 lm	npacts to Biota Other than Members of the Public	5.4-4
5.4.4.	1 Liquid Pathway	5.4-4
5.4.4.	2 Gaseous Pathway	5.4-5
5.4.4.	3 Biota Doses	5.4-5
5.4.5 O	ccupational Doses	5.4-6
5.4.6 R	eferences	5.4-6
5.5 Enviror	nmental Impacts of Waste	5.5-1
	onradioactive Waste System Impacts	
5.5.1.	· · · · · · · · · · · · · · · · · · ·	
5.5.1.	2 Impacts of Discharges to Land	5.5-2
5.5.1.	3 Impacts of Discharges to Air	5.5-4
	4 Sanitary Waste Impacts	
5.5.1.	5 Impacts of Dredging and Disposal	5.5-4
	ixed Waste Impacts	
5.5.2.	·	
5.5.2.	2 Mixed Waste Storage and Disposal Plans	5.5-6
	3 Waste Minimization Plan	
5.5.2.	4 Environmental Impacts of Mixed Waste	5.5-7
	onclusions	
5.5.4 R	eferences	5.5-8
	nmental Impacts of Transmission Systems	
	errestrial Ecosystems	
	quatic Ecosystems	
	1 Important Habitats	
5.6.2.	2 Important Species	5.6-4
	npacts to Members of the Public	
	1 Visual Impacts	
5.6.3.	2 Electric Shock	5.6-6
5.6.3.	3 Electromagnetic Field Exposure	5.6-7
	4 Noise	
	5 Radio and Television Interference	
5.6.4 R	eferences	5.6-9
	m Fuel Cycle and Transportation Impacts	
	ranium Fuel Cycle Impacts	
	1 Land Use	
	2 Water Use	
	3 Fossil Fuel Impacts	
	•	

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.7.1.4	Chemical Effluents	5.7-4
5.7.1.5	Radioactive Effluents	
5.7.1.6	Radioactive Waste	5.7-7
5.7.1.7	Occupational Dose	5.7-7
5.7.1.8	Transportation	5.7-7
5.7.1.9	Summary	5.7-8
5.7.2 Tran	sportation of Radioactive Materials	5.7-8
5.7.2.1	Transportation Assessment	5.7-8
5.7.2.2	Incident-Free Transportation Impacts Analysis	5.7-14
5.7.2.3	Conclusion	
5.7.2.4	References	5.7-20
	nomic Impacts	
5.8.1 Phys	sical Impacts of Station Operation	5.8-1
5.8.1.1	Noise	
5.8.1.2	Air Quality	5.8-2
5.8.1.3	Aesthetics	
	Traffic	
5.8.1.5	Occupational Health	
5.8.1.6	Other Impacts	
5.8.1.7		
	al and Economic Impacts	
5.8.2.1	Demography	
	Impacts to the Community	
	ronmental Justice	
	Health and Environmental Impacts	
5.8.3.2	Socioeconomic Impacts	
5.8.3.3	References	
	ssioning	
	GEIS Regarding Decommissioning	
	E-Funded Study on Decommissioning Costs	
	t Design Features for Decommissioning	
	clusions	
	erences	
	s and Controls to Limit Adverse Impacts During Operations	
	ve Impacts	
	d Use	
	rology and Water Use	
	Groundwater	
	ogy (Terrestrial and Aquatic)	
	Ecological Impacts of Land Use (Terrestrial and Aquatic)	
	Ecological Impacts of Water Use (Terrestrial and Aquatic)	
	Impingement and Entrainment	
	oeconomic Resources	
	ospheric and Meteorological	
5.11.0 Rad	iological	5. 1 1-19

<u>Section</u>	<u>Title</u>	<u>Page</u>
5.11.7 Sumr	mary	5.11-20
5.11.8 Refer	rences	5.11-20
Chantar 6 Enviro	nmental Magazzamenta and Manitaring Drograms	604
	nmental Measurements and Monitoring Programs Monitoring	
	Application Monitoring	
	struction Monitoring	
	perational and Operational Monitoring	
	cal Monitoring	
	ological Environmental Monitoring Program Basis	
	ological Environmental Monitoring Program Contents	
	Pathways Monitored	
	Land Use Census	
6.2.2.3	Quality Assurance Program	6.2-4
	rences	
6.3 Hydrologic	cal Monitoring	6.3-1
6.3.1 Pre-A	Application Monitoring	6.3-1
6.3.1.1	Surface Water	6.3-2
6.3.1.2	Groundwater	6.3-2
	truction and Preoperational Monitoring	
6.3.2.1	Surface Water	6.3-3
	Groundwater	
	ational Monitoring	
	Surface Water Hydrologic Monitoring	
	Groundwater Hydrologic Monitoring	
	rences	
	gical Monitoring	
	eral Monitoring Program Description	
	orological Tower and Instrument Siting	
	Site Description and Topographic Features of the Site Area	
	Meteorological Tower Exposure	
	Potential Airflow Alteration	
	Heat and Moisture Sources Influence	
	Potential Changes on Site Diffusion Climate	
	Instrument Siting	
	Application Monitoring Phase	
	Meteorological Parameters Measured	
	Meteorological Sensors Used	
	Data Recording and Storage	
	Data Reduction and Reporting	
	Instrumentation Surveillance	
	System Accuracy	
	perational Monitoring Phase	
	Meteorological Parameters Measured	
6.4.4.2	Data Collection System	6.4-15

<u>Section</u>	<u>Title</u>	<u>Page</u>
6.4.5 Ope	erational Monitoring Phase	6.4-15
	Description of Monitoring Program	
6.4.5.2	Emergency Preparedness Support	6.4-17
6.4.6 Met	eorological Data	6.4-17
6.4.6.1	Representativeness and Adequacy of Meteorological Data	6.4-17
6.4.6.2	Long-Term and Climatological Conditions	6.4-18
6.4.6.3	Need for Additional Data Sources for Airflow Trajectories	6.4-22
	Supplemental Data for Environmental Impact Evaluation	
6.4.6.5	Period of Data and Data Used to Support the Application	6.4-23
	erences	
	al Monitoring	
	restrial Ecology and Land Use	
	Pre-Application Terrestrial Ecological Monitoring	
	Construction, Preoperational, and Operational Monitoring	
	ıatic Ecology	
	Pre-Application Monitoring	
	Construction Monitoring	
	Preoperational and Operational Monitoring	
	erences	
	Il Monitoring	
	-Application Monitoring	
	Surface Water Monitoring	
	Groundwater Monitoring	
	nstruction and Preoperational Monitoring	
	Surface Water Monitoring	
	Groundwater Monitoring	
-	erational Monitoring	
	Surface Water Monitoring	
	Groundwater Monitoring	
	erences	
	y of Monitoring Programs -Application Monitoring	
	construction/Construction Monitoring	
	operational Monitoring	
	erational Monitoring	
0.7.4 Ope	Erational Monitoring	
Chapter 7 Envir	onmental Impacts of Postulated Accidents Involving	
	pactive Materials	7.1-1
	Basis Accidents	
	ection of Accidents	
	luation Methodology	
	rce Terms	
	diological Consequences	
	erences	
	Accidents	

<u>Section</u>	<u>Title</u>	<u>Page</u>
7.2.1	ESBWR and ABWR Reactor Vendor Methodology	7.2-2
7.2.2	Exelon Methodology	7.2-5
7.2.3	Consequences to Population Groups	7.2-7
	2.3.1 Air Pathways	
	2.3.2 Surface Water Pathways	
	2.3.3 Groundwater Pathways	
	Comparison to NRC Safety Goals	
7.	2.4.1 Individual Risk Goal	7.2-9
7.	2.4.2 Societal Risk Goal	
7.2.5	Conclusions	
7.2.6	References	
	vere Accident Mitigation Alternatives	
	nsportation Accidents	
	Radiological Impacts of Transportation Accidents	
	4.1.1 Transportation of Unirradiated Fuel	
	4.1.2 Transportation of Spent Fuel	
	Nonradiological Impacts of Transportation Accidents	
	4.2.1 Transportation of Unirradiated Fuel	
	4.2.2 Transportation of Spent Fuel	
	4.2.3 Transportation of Radioactive Waste	
	Conclusion	
7.4.4	References	7.4-5
01 (0		
Chapter 8	Need for Power	8.0-1
Chapter 8	Need for Power	8.0-1
•	Need for Power Alternatives to the Proposed Action	
•	Alternatives to the Proposed Action	9.0-1
• Chapter 9 9.0.1	Alternatives to the Proposed Action	9.0-1 9.0-1
• Chapter 9 9.0.1 9.1 No	Alternatives to the Proposed Action	9.0-1 9.0-1 9.1-1
9.0.1 9.1 No- 9.2 End	Alternatives to the Proposed Action	9.0-1 9.0-1 9.1-1 9.2-1
9.0.1 9.1 No- 9.2 End	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process	9.0-1 9.0-1 9.1-1 9.2-1
9.0.1 9.0.1 9.1 No- 9.2 Ene 9.3 Site 9.3.1	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2	Alternatives to the Proposed Action References Action Alternative ergy Alternatives e Selection Process Introduction	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-1
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites	9.0-1 9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2 9.3-3 9.3-5
9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2 9.3-3 9.3-5 9.3-10
9.0.1 9.1 No- 9.2 Ene 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion Alternative Site Review	9.0-1 9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-2 9.3-2 9.3-3 9.3-5 9.3-10 9.3-12
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion Alternative Site Review 3.3.1 Evaluation of the Matagorda County Site	9.0-1 9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2 9.3-5 9.3-10 9.3-13
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion Alternative Site Review 3.3.1 Evaluation of the Matagorda County Site 3.3.2 Evaluation of the Buckeye Site	9.0-1 9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2 9.3-5 9.3-10 9.3-12 9.3-13
9.0.1 9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion Alternative Site Review 3.3.1 Evaluation of the Matagorda County Site 3.3.2 Evaluation of the Buckeye Site 3.3.3 Evaluation of the Alpha Site 3.3.4 Evaluation of the Bravo Site	9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-2 9.3-2 9.3-2 9.3-5 9.3-10 9.3-12 9.3-13
9.0.1 9.1 No- 9.2 End 9.3 Site 9.3.1 9.3.2 9. 9. 9. 9. 9. 9. 9. 9. 9. 9.	Alternatives to the Proposed Action References Action Alternative ergy Alternatives Selection Process Introduction Overview of Site Selection Process 3.2.1 Region of Interest 3.2.2 Process for Identifying Candidate Areas 3.2.3 Identification and Screening of Potential Sites 3.2.4 Screening Process to Identify Candidate Sites 3.2.5 Candidate Site Evaluation and Conclusion Alternative Site Review 3.3.1 Evaluation of the Matagorda County Site 3.3.2 Evaluation of the Buckeye Site 3.3.3 Evaluation of the Alpha Site	9.0-1 9.0-1 9.0-1 9.1-1 9.2-1 9.3-1 9.3-1 9.3-2 9.3-2 9.3-5 9.3-10 9.3-12 9.3-13 9.3-13 9.3-34 9.3-53

Section	<u>Title</u>	<u>Page</u>
9.4.1 Hea	t Dissipation Systems	9.4-1
	Screening of Alternative Heat Dissipation Systems	
	Analysis of Recommended Cooling Tower Alternative	
9.4.1.3	Summary	9.4-7
9.4.2 Circ	ulating Water Systems	9.4-7
9.4.2.1	Intake Systems	9.4-8
9.4.2.2	Discharge Systems	9.4-12
9.4.2.3	Water Supply	9.4-14
9.4.2.4	Water Treatment	9.4-21
	smission Systems	
	Alternative Corridor Routes	
	Alternatives to the Proposed Transmission System Design	
9.4.4 Refe	erences	9.4-24
Chapter 10 Propo	sed Action Consequences	10.0-1
	ental Consequences of the Proposed Action	
10.1 Unavoida	ble Adverse Environmental Impacts	10.1-1
10.1.1 Una	voidable Adverse Environmental Impacts of VCS Construction	10.1-1
10.1.2 Una	voidable Adverse Environmental Impacts of VCS Operation	10.1-3
	le and Irretrievable Commitments of Resources	
10.2.1 Irrev	versible Commitments of Environmental Resources	10.2-1
	Land Use Commitments	
	Hydrology and Water Use Commitments	
	Ecological Commitments (Terrestrial and Aquatic)	
	Socioeconomics	
	Radiological Releases	
	Air Emissions and Meteorological Changes	
	rievable Commitments of Material Resources	
	erences	10.2-5
	hip Between Short-Term Uses and Long-Term Productivity of the	
	nvironment	
	struction of VCS and Short-Term Uses	
	ration of VCS and Long-Term Productivity	10.3-2
	mary of Relationship Between Short-Term Uses and Long-Term	
	ductivity	
10.4 Benefit-C	ost Balance	10.4-1
Annondiy A Cons	cultation Latters	4