

TABLE OF CONTENTS

YUCCA MOUNTAIN RAIL CORRIDOR IMPACT STUDY

| | |
|--|-----------|
| Executive Summary | 1 |
| 1. Introduction | 2 |
| 2. Study Area | 5 |
| Location & Limits of Study Area | |
| History | |
| 3. Land Use | 13 |
| General Description Of Uses | |
| Current Land Uses | |
| Future Land Uses | |
| Summary | |
| 4. Socio-Economic | 19 |
| Introduction | |
| Property Value Diminution | |
| 5. Floodplain | 24 |
| Drainage | |
| Soils | |
| Summary | |
| 6. Groundwater Hydrology & Well Inventory | 26 |
| Introduction | |
| Field Work | |
| Summary | |
| 7. Wind/Air Quality | 29 |
| Climate | |
| Air Quality | |
| Wind Data | |
| 8. Analysis of Rail Corridor Engineering & Construction | 31 |
| Introduction | |
| Review Department of Energy Documents | |
| Department of Energy Description of Carlin Rail Corridor | |
| Physical Constraints | |
| Existing Infrastructure | |
| Summary | |
| 9. Summary of Impacts | 47 |

TABLE OF CONTENTS

YUCCA MOUNTAIN RAIL CORRIDOR IMPACT STUDY

FIGURES

| | | |
|------------------|---|------------|
| Figure 1 | Mining Districts of Nevada | Appendix A |
| Figure 2 | Mining Districts of Nevada: Crescent Valley and Surrounding Areas | Appendix A |
| Figure 3 | Land Use: Proposed Yucca Mountain Rail Corridor Through Northwestern Eureka County, Nevada | Appendix B |
| Figure 4 | Property Owners: Proposed Yucca Mountain Rail Corridor Through Northwestern Eureka County, Nevada | Appendix B |
| Figure 5 | Privately Owned Parcels: Potentially to be acquired for Right-of-Way Based on Minimum 100' ROW on Either Side of the Track | Appendix B |
| Figure 6 | Floodplain Location Overview: Carlin Alignment | Appendix D |
| Figure 7 | Floodplain Crossing: Carlin Alignment | Appendix D |
| Figure 8 | Floodplain Crossing: Carlin Alignment | Appendix D |
| Figure 9 | Floodplain Crossing: Carlin Alignment | Appendix D |
| Figure 10 | Representative Rail Routes From Commercial & DOE Sites to Yucca Mountain | Appendix F |
| Figure 11 | Potential Nevada Rail Routes to Yucca Mountain | Appendix F |
| Figure 12 | Carlin Alignment: Carlin Rail Alignment | Appendix G |
| Figure 13 | Water Resources: Carlin Rail Alignment | Appendix G |
| Figure 14 | Soils: Carlin Rail Alignment | Appendix G |
| Figure 15 | Area of Potential Ground Subsidence: Carlin Rail Alignment | Appendix G |
| Figure 16 | Existing Infrastructure: Carlin Rail Alignment | Appendix H |
| Figure 17 | Existing Infrastructure: Carlin Rail Alignment | Appendix H |
| Figure 18 | Existing Infrastructure: Carlin Rail Alignment | Appendix H |
| Figure 19 | Existing Infrastructure: Carlin Rail Alignment | Appendix H |
| Figure 20 | Possible Configuration for Rail Yard Layout | 44 |
| Figure 21 | Typical Railroad Cross-Section | 46 |

TABLE OF CONTENTS

YUCCA MOUNTAIN RAIL CORRIDOR IMPACT STUDY

TABLES

| | | |
|-----------------|---|-----------------|
| Table 1 | Assessed Value of Private Parcels Within 100' on Either Side of the Track |Appendix C |
| Table 2 | Potential Loss of Private Property Value and Property Tax Revenue |Page 23 |
| Table 3a | Wells Located Within or Near the Proposed Yucca Mountain Rail Corridor in Northwestern Eureka County, Nevada |Appendix D |
| Table 3b | Wells Located Within or Near the Proposed Yucca Mountain Rail Corridor in Northwestern Eureka County, Nevada |Appendix D |
| Table 4 | Floodplain Impacts |Page 40 |
| Table 5 | Wind Direction Versus Wind Speed |Appendix E |
| Table 6 | Wind Direction Versus Wind Speed |Appendix E |
| Table 7 | Wind Direction Versus Wind Speed |Appendix E |
| Table 8 | Wind Direction Versus Wind Speed |Appendix E |
| Table 9 | Proposed Horizontal Alignment Parameters |Appendix I |
| Table 10 | Proposed Horizontal Alignment Parameters Continued |Appendix I |
| Table 11 | Longitude Profile Criteria |Appendix I |
| Table 12 | Longitude Profile Criteria Continued |Appendix I |

APPENDICES

| | |
|-------------------|--|
| Appendix A | Mining Districts |
| Appendix B | Corridor Maps |
| Appendix C | Property Value Diminution |
| Appendix D | Floodplain Location Maps & Well Tables |
| Appendix E | Wind Data Tables |
| Appendix F | Rail Route Maps |
| Appendix G | Corridor Maps for Analysis |
| Appendix H | Existing Infrastructure |
| Appendix I | Railroad Standards |