

5.0 DESIGN FEATURES

5.1 SITE

EXCLUSION AREA

5.1.1 The exclusion area shall be as shown in Figure 5.1.1-1.

LOW POPULATION ZONE

5.1.2 The low population zone shall be as shown in Figure 5.1.2-1.

Unrestricted Area

~~SITE~~ BOUNDARY FOR GASEOUS EFFLUENTS

unrestricted area

5.1.3 The ~~site~~ boundary for gaseous effluents shall be as shown in Figure ~~5.1.3-1~~. The gaseous effluent release points are shown in Figure 5.1.1-1. ^{5.1.4-1}

Unrestricted Area

~~SITE~~ BOUNDARY FOR LIQUID EFFLUENTS

unrestricted area

5.1.4 The ~~site~~ boundary for liquid effluents shall be as shown in Figure 5.1.4-1.

5.2 CONTAINMENT

CONFIGURATION

composed of a vertical right cylinder and a hemispherical dome. Inside the containment is a reinforced concrete drywell composed of a vertical right cylinder and a steel drywell liner. At the bottom of the drywell and containment is the suppression pool. The drywell portion of the suppression pool is connected to the containment portion by a series of horizontal vents. Reinforced

5.2.1 The primary containment is a steel lined ~~prestressed~~ concrete structure consisting of a drywell and suppression chamber. The drywell is in the form of a truncated cone on top of a cylindrical suppression chamber attached to the suppression chamber through a series of downcomer vents. The primary containment has a minimum free air volume of ~~(273,000)~~ cubic feet. ^{net} 1,400,000

DESIGN TEMPERATURE AND PRESSURE

5.2.2 The primary containment is designed and shall be maintained for:

- a. Maximum internal pressure: ~~(45 psig)~~ drywell 30 psig, containment 15 psig
- b. Maximum ^{design} internal temperature: drywell ³³⁰ (340) °F, suppression chamber (275) °F, pool 185
- c. Maximum ^{design} external pressure ~~(2) psig~~ differential: drywell 21 psid, containment 3 psid
- e. Maximum floor differential pressure: (25) psid, downward; (9) psid, upward.

The drywell has a minimum net free air volume of 270,000 cubic feet.

GGNS
~~BWR STS I~~



STATIONS EFFLUENT RELEASE POINTS
 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

| STATION | ELEVATION | COORDINATES |
|---------|-----------|-------------|
| 1 | 1000.00 | 1000000.00 |
| 2 | 1000.00 | 1000000.00 |
| 3 | 1000.00 | 1000000.00 |
| 4 | 1000.00 | 1000000.00 |
| 5 | 1000.00 | 1000000.00 |
| 6 | 1000.00 | 1000000.00 |
| 7 | 1000.00 | 1000000.00 |
| 8 | 1000.00 | 1000000.00 |
| 9 | 1000.00 | 1000000.00 |
| 10 | 1000.00 | 1000000.00 |
| 11 | 1000.00 | 1000000.00 |
| 12 | 1000.00 | 1000000.00 |
| 13 | 1000.00 | 1000000.00 |
| 14 | 1000.00 | 1000000.00 |
| 15 | 1000.00 | 1000000.00 |
| 16 | 1000.00 | 1000000.00 |
| 17 | 1000.00 | 1000000.00 |
| 18 | 1000.00 | 1000000.00 |
| 19 | 1000.00 | 1000000.00 |
| 20 | 1000.00 | 1000000.00 |
| 21 | 1000.00 | 1000000.00 |
| 22 | 1000.00 | 1000000.00 |
| 23 | 1000.00 | 1000000.00 |
| 24 | 1000.00 | 1000000.00 |
| 25 | 1000.00 | 1000000.00 |
| 26 | 1000.00 | 1000000.00 |
| 27 | 1000.00 | 1000000.00 |
| 28 | 1000.00 | 1000000.00 |
| 29 | 1000.00 | 1000000.00 |
| 30 | 1000.00 | 1000000.00 |
| 31 | 1000.00 | 1000000.00 |
| 32 | 1000.00 | 1000000.00 |
| 33 | 1000.00 | 1000000.00 |
| 34 | 1000.00 | 1000000.00 |
| 35 | 1000.00 | 1000000.00 |
| 36 | 1000.00 | 1000000.00 |
| 37 | 1000.00 | 1000000.00 |
| 38 | 1000.00 | 1000000.00 |
| 39 | 1000.00 | 1000000.00 |
| 40 | 1000.00 | 1000000.00 |
| 41 | 1000.00 | 1000000.00 |
| 42 | 1000.00 | 1000000.00 |
| 43 | 1000.00 | 1000000.00 |
| 44 | 1000.00 | 1000000.00 |
| 45 | 1000.00 | 1000000.00 |
| 46 | 1000.00 | 1000000.00 |
| 47 | 1000.00 | 1000000.00 |
| 48 | 1000.00 | 1000000.00 |
| 49 | 1000.00 | 1000000.00 |
| 50 | 1000.00 | 1000000.00 |
| 51 | 1000.00 | 1000000.00 |
| 52 | 1000.00 | 1000000.00 |
| 53 | 1000.00 | 1000000.00 |
| 54 | 1000.00 | 1000000.00 |
| 55 | 1000.00 | 1000000.00 |
| 56 | 1000.00 | 1000000.00 |
| 57 | 1000.00 | 1000000.00 |
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| 59 | 1000.00 | 1000000.00 |
| 60 | 1000.00 | 1000000.00 |
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| 62 | 1000.00 | 1000000.00 |
| 63 | 1000.00 | 1000000.00 |
| 64 | 1000.00 | 1000000.00 |
| 65 | 1000.00 | 1000000.00 |
| 66 | 1000.00 | 1000000.00 |
| 67 | 1000.00 | 1000000.00 |
| 68 | 1000.00 | 1000000.00 |
| 69 | 1000.00 | 1000000.00 |
| 70 | 1000.00 | 1000000.00 |
| 71 | 1000.00 | 1000000.00 |
| 72 | 1000.00 | 1000000.00 |
| 73 | 1000.00 | 1000000.00 |
| 74 | 1000.00 | 1000000.00 |
| 75 | 1000.00 | 1000000.00 |
| 76 | 1000.00 | 1000000.00 |
| 77 | 1000.00 | 1000000.00 |
| 78 | 1000.00 | 1000000.00 |
| 79 | 1000.00 | 1000000.00 |
| 80 | 1000.00 | 1000000.00 |
| 81 | 1000.00 | 1000000.00 |
| 82 | 1000.00 | 1000000.00 |
| 83 | 1000.00 | 1000000.00 |
| 84 | 1000.00 | 1000000.00 |
| 85 | 1000.00 | 1000000.00 |
| 86 | 1000.00 | 1000000.00 |
| 87 | 1000.00 | 1000000.00 |
| 88 | 1000.00 | 1000000.00 |
| 89 | 1000.00 | 1000000.00 |
| 90 | 1000.00 | 1000000.00 |
| 91 | 1000.00 | 1000000.00 |
| 92 | 1000.00 | 1000000.00 |
| 93 | 1000.00 | 1000000.00 |
| 94 | 1000.00 | 1000000.00 |
| 95 | 1000.00 | 1000000.00 |
| 96 | 1000.00 | 1000000.00 |
| 97 | 1000.00 | 1000000.00 |
| 98 | 1000.00 | 1000000.00 |
| 99 | 1000.00 | 1000000.00 |
| 100 | 1000.00 | 1000000.00 |

CATEGORY 1 STRUCTURES

- 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

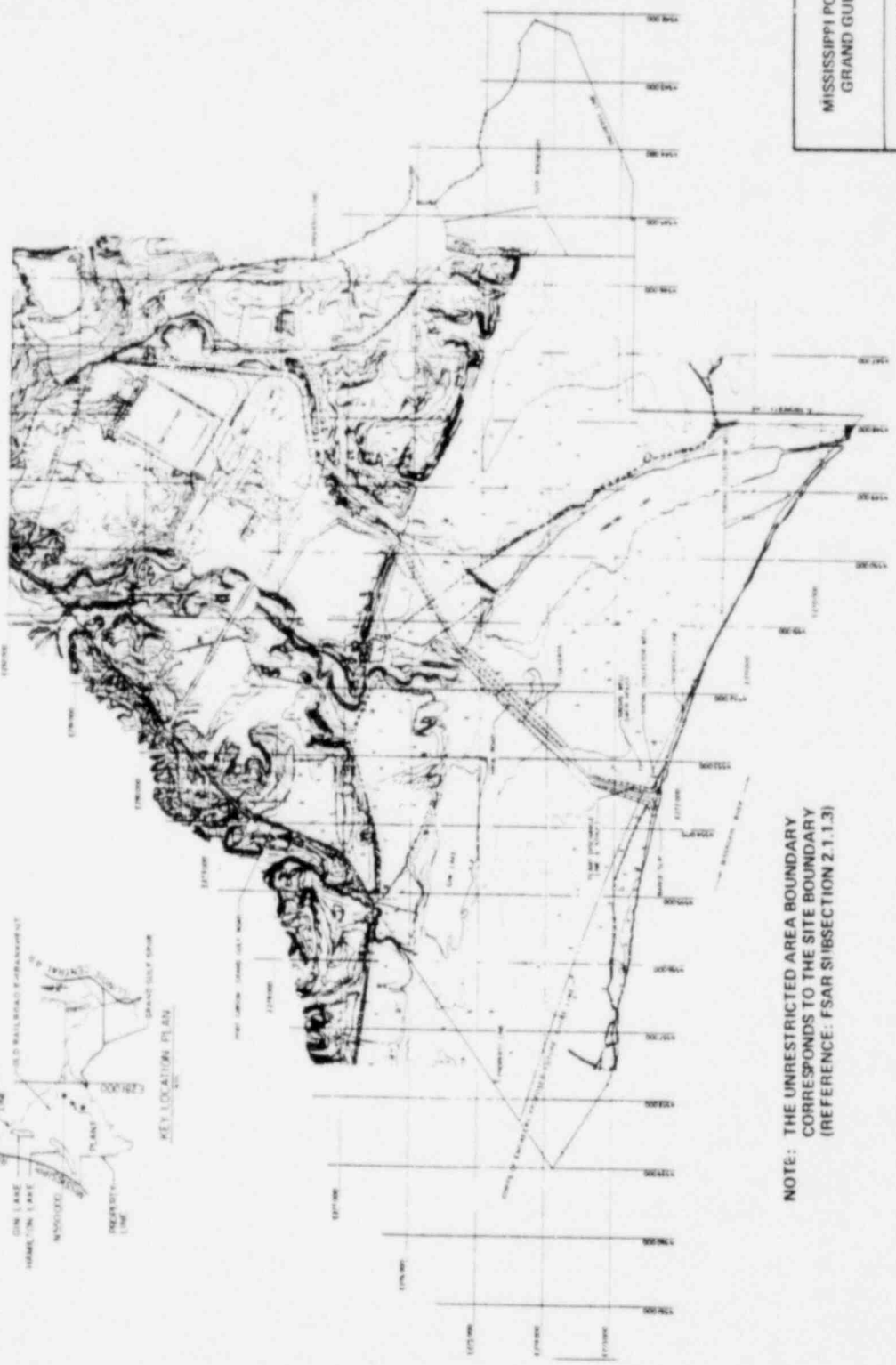
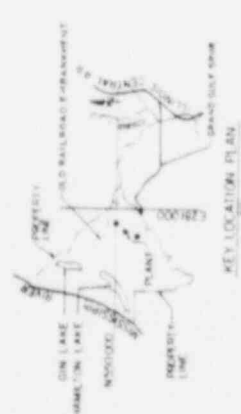
NOTES

1. GRID COORDINATES SHOWN ARE BASED ON MISSISSIPPI COORDINATE SYSTEM WEST ZONE
2. DATUM FOR ELEVATIONS SHOWN IS MEAN SEA LEVEL EL. 00'
3. SEE FIGURE 5.1.4.1 FOR UNRESTRICTED AREA BOUNDARY
4. SEE FIGURE 5.1.2.1 FOR METEOROLOGICAL TOWER LOCATION



MISSISSIPPI POWER & LIGHT COMPANY
 GRAND GULF NUCLEAR STATION
 EXCLUSION AREA AND GASEOUS
 EFFLUENT RELEASE POINTS
 FIGURE 5.1.1-1

5 1100 3



NOTE: THE UNRESTRICTED AREA BOUNDARY
CORRESPONDS TO THE SITE BOUNDARY
(REFERENCE: FSAR SUBSECTION 2.1.1.3)

MISSISSIPPI POWER & LIGHT COMPANY
GRAND GULF NUCLEAR STATION

UNRESTRICTED AREA BOUNDARY
FOR LIQUID AND GASEOUS
EFFLUENTS

FIGURE 5.1.4.1