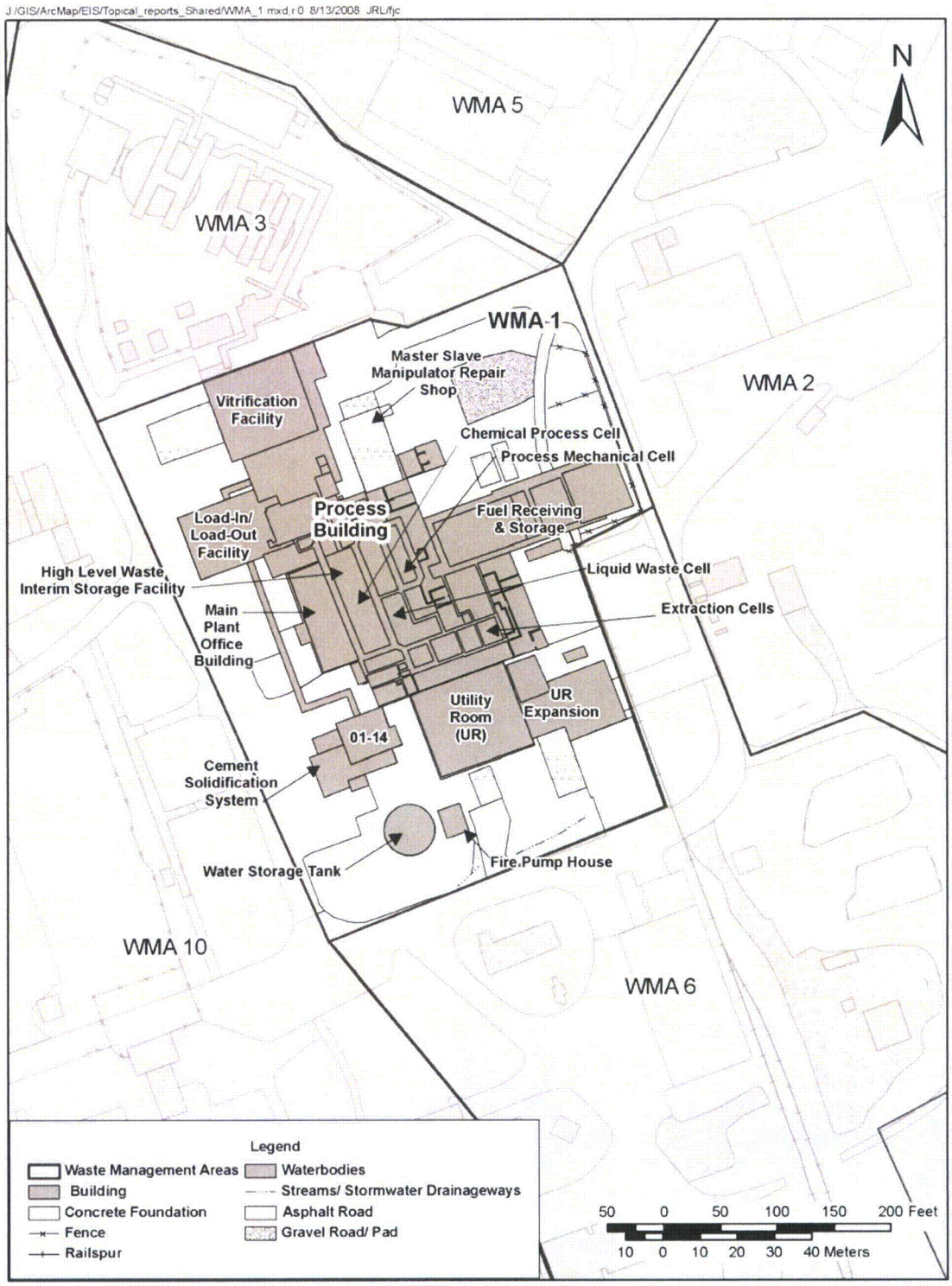


Figure 3-10. WMA 1. (The Phase 1 decommissioning activities will include removal of the facilities and the underlying north plateau groundwater plume source area.)

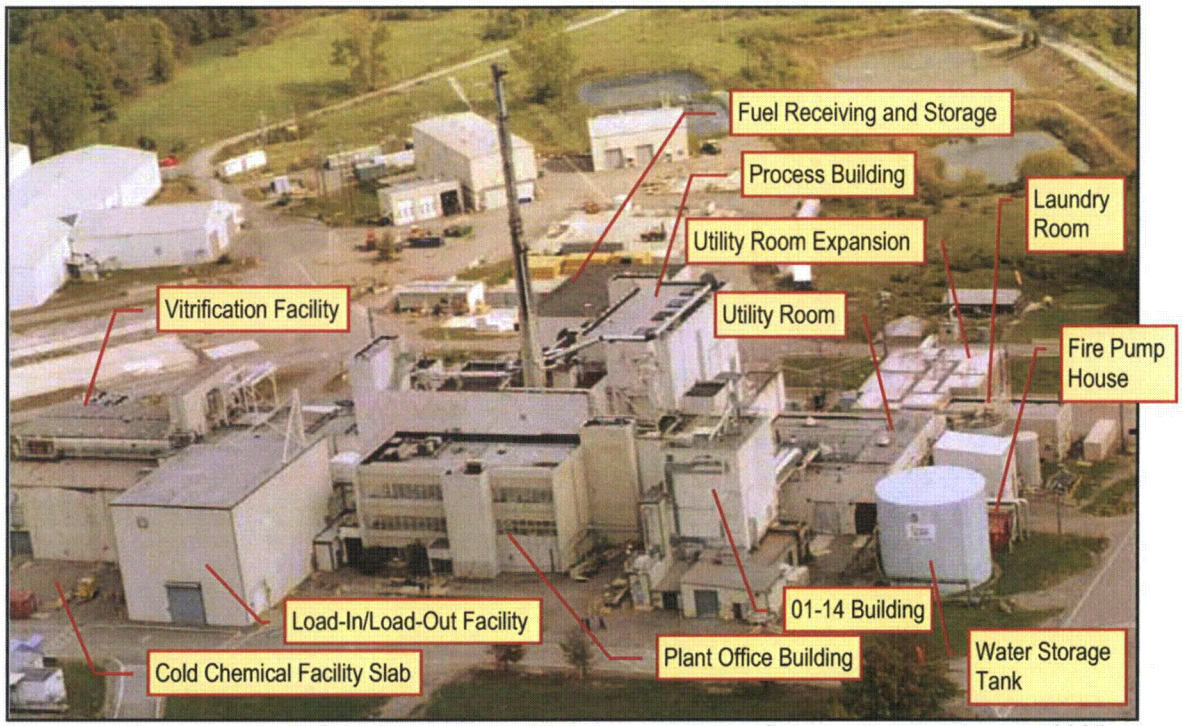


Figure 3-11. Aerial View of the Process Building Area and Vitrification Facility Area in 2007. (The Laundry Room will be removed before the Phase 1 of the decommissioning begins.)

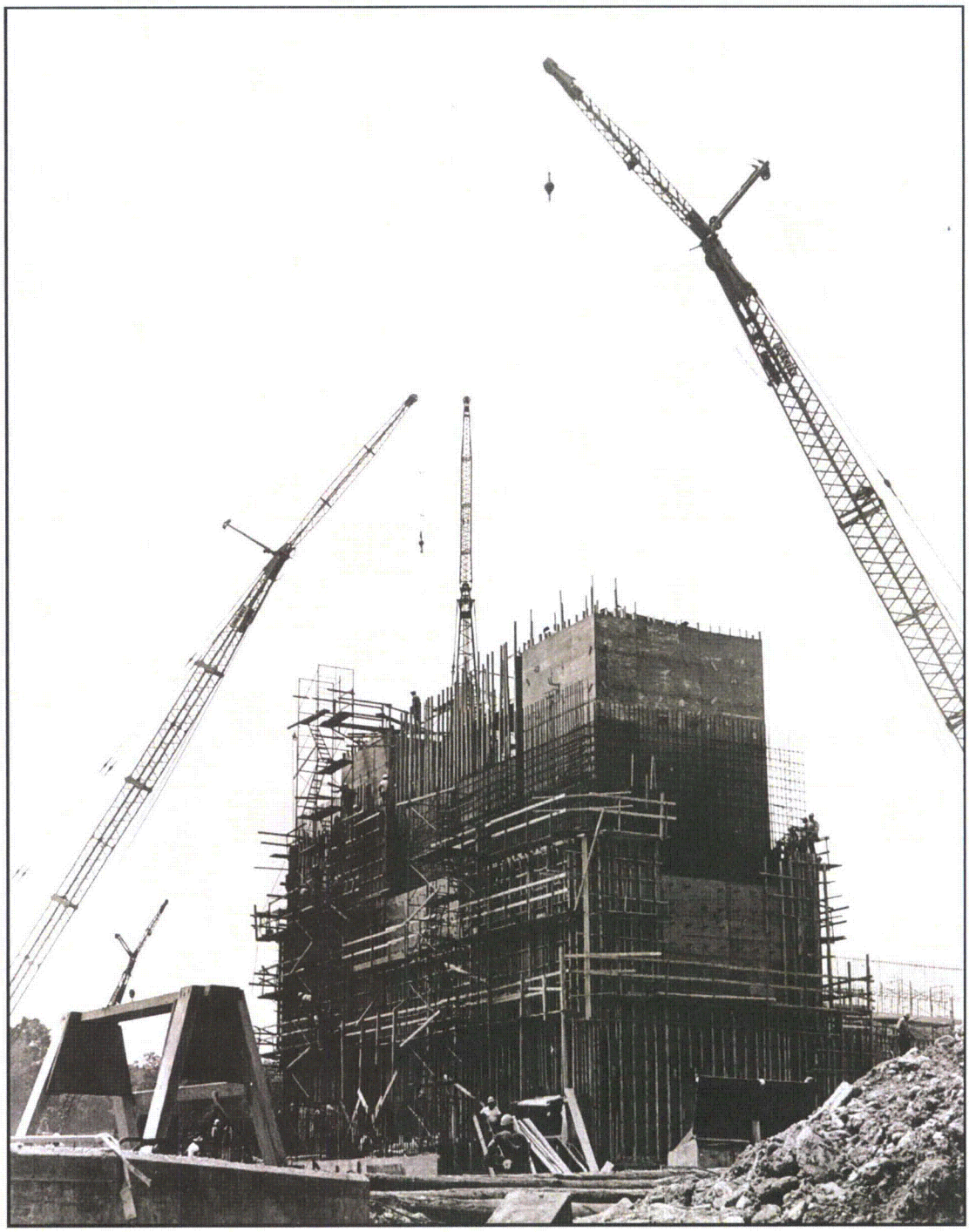
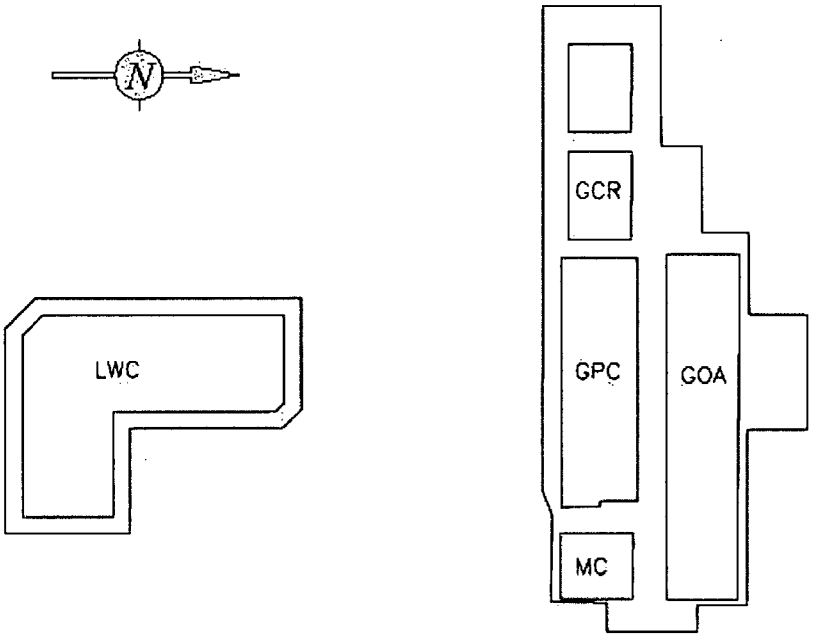


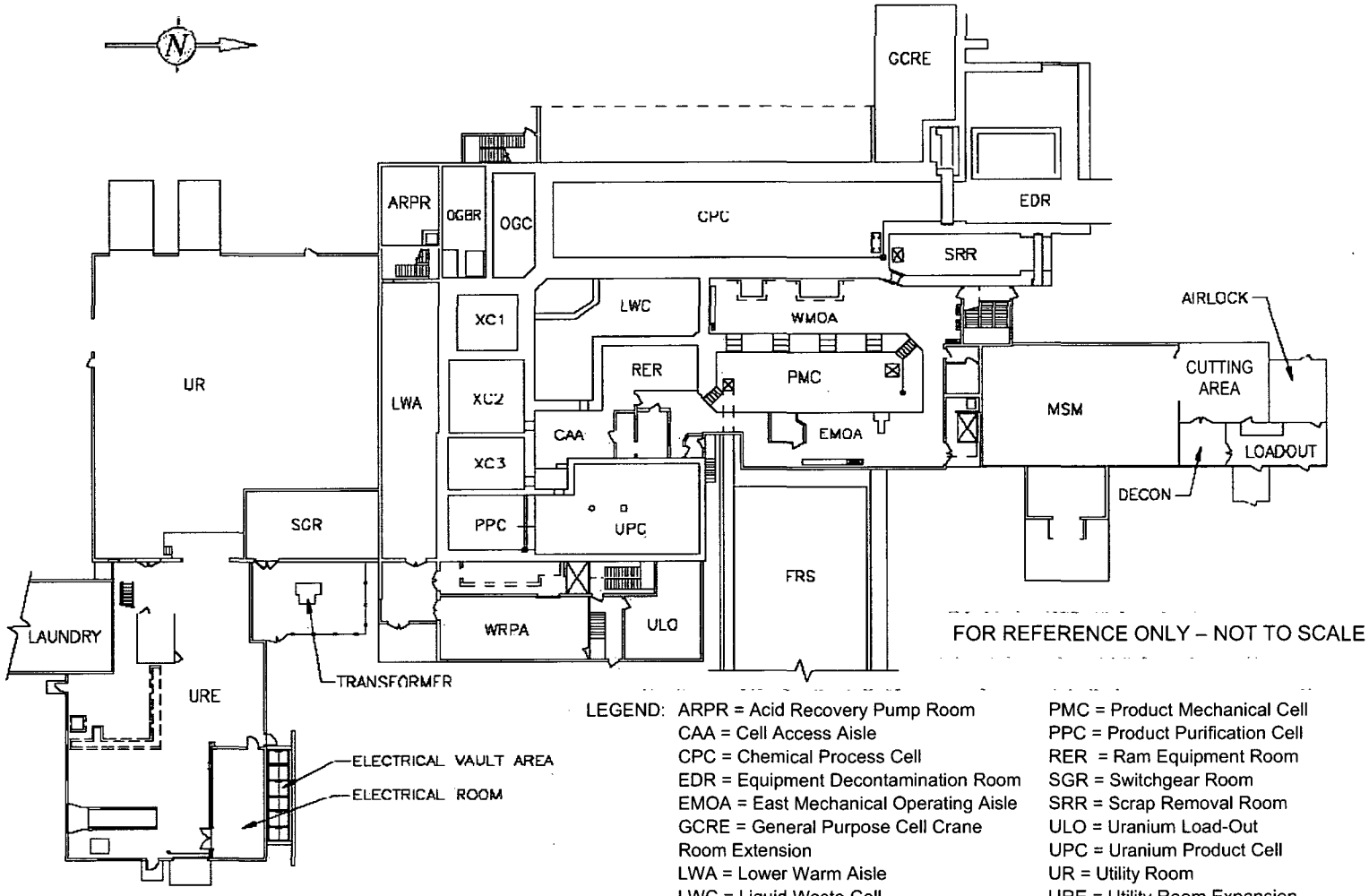
Figure 3-12. Construction of the Process Building.



FOR REFERENCE ONLY – NOT TO SCALE

LEGEND: GCR = General Purpose Cell Crane Room
GOA = General Purpose Cell Operating Aisle
GPC = General Purpose Cell
LWC = Liquid Waste Cell
MC = Miniature Cell

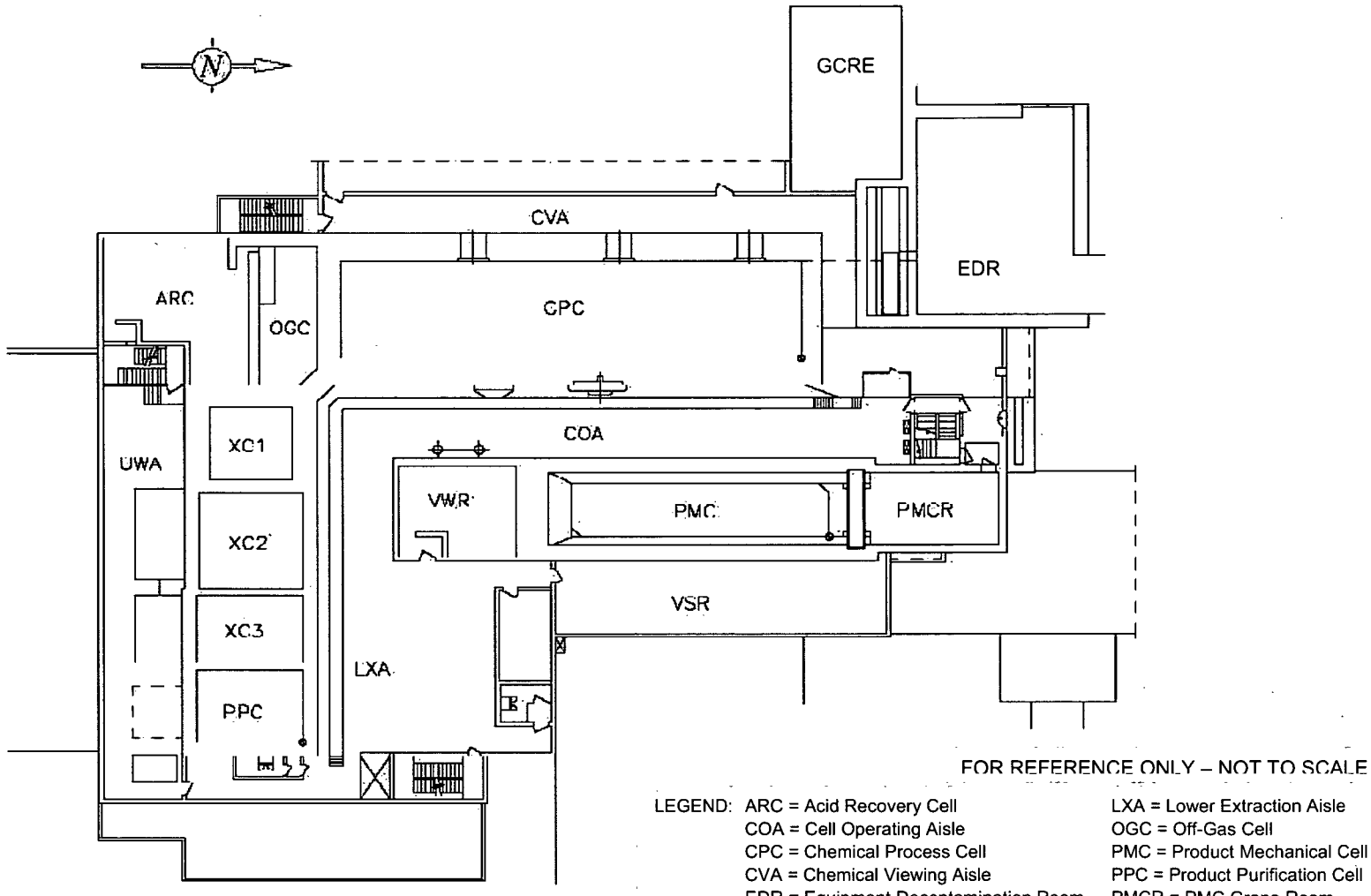
Figure 3-13A. Process Building Layout – Below Grade



FOR REFERENCE ONLY – NOT TO SCALE

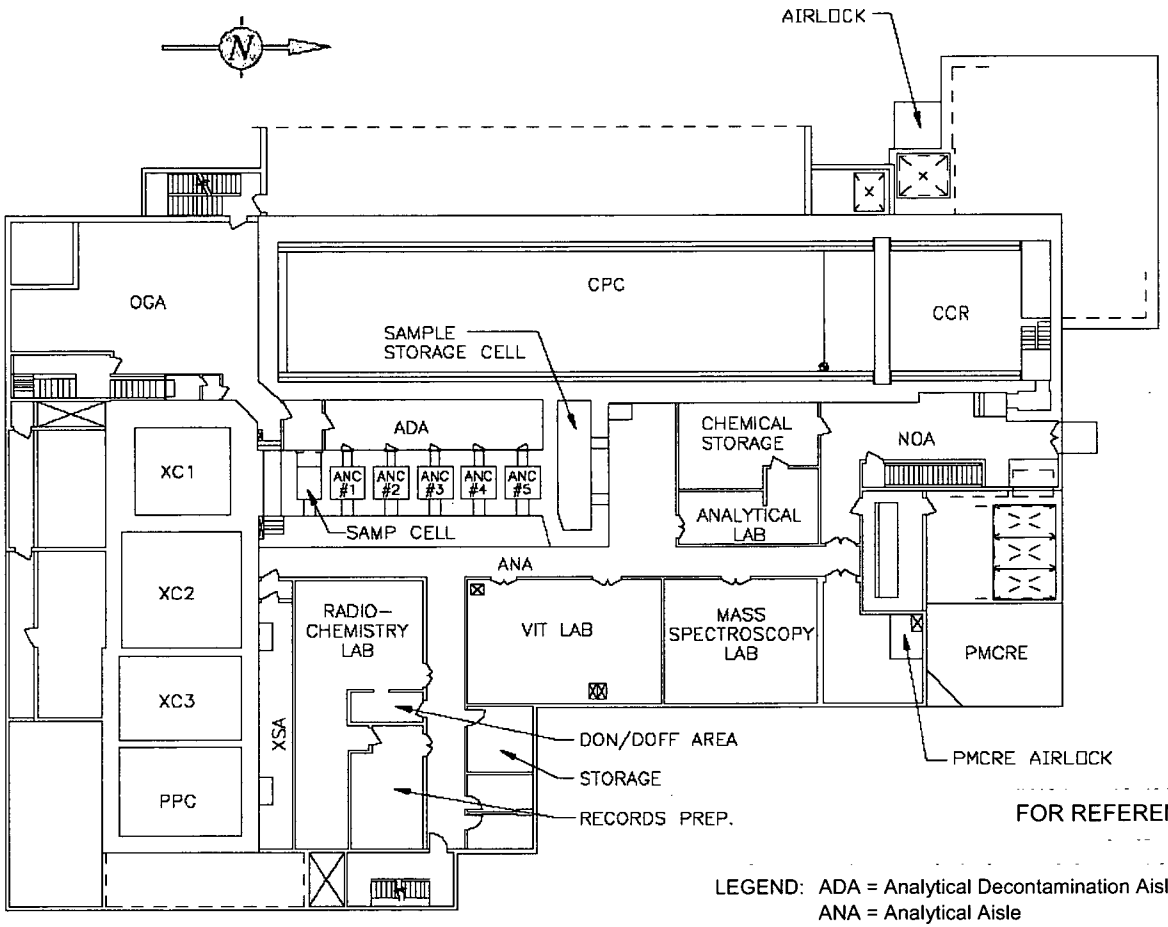
LEGEND:
ARPR = Acid Recovery Pump Room
CAA = Cell Access Aisle
CPC = Chemical Process Cell
EDR = Equipment Decontamination Room
EMOA = East Mechanical Operating Aisle
GCRE = General Purpose Cell Crane Room Extension
LWA = Lower Warm Aisle
LWC = Liquid Waste Cell
MSM = Manipulator Repair Shop
OGBR = Off-Gas Blower Room
OGC = Off-Gas Cell
PMC = Product Mechanical Cell
PPC = Product Purification Cell
RER = Ram Equipment Room
SGR = Switchgear Room
SRR = Scrap Removal Room
ULO = Uranium Load-Out
UPC = Uranium Product Cell
UR = Utility Room
URE = Utility Room Expansion
WMOA = West Mechanical Operating Aisle
WRPA = Waste Reduction & Packaging Area
XC = Extraction Cell

Figure 3-13B. Process Building Layout at 100-Foot Elevation



LEGEND:
ARC = Acid Recovery Cell
COA = Cell Operating Aisle
CPC = Chemical Process Cell
CVA = Chemical Viewing Aisle
EDR = Equipment Decontamination Room
GCRE = General Purpose Cell Crane Room Extension
LXA = Lower Extraction Aisle
OGC = Off-Gas Cell
PMC = Product Mechanical Cell
PPC = Product Purification Cell
PMCR = PMC Crane Room
VWR = Ventilation Wash Room
XC = Extraction Cell

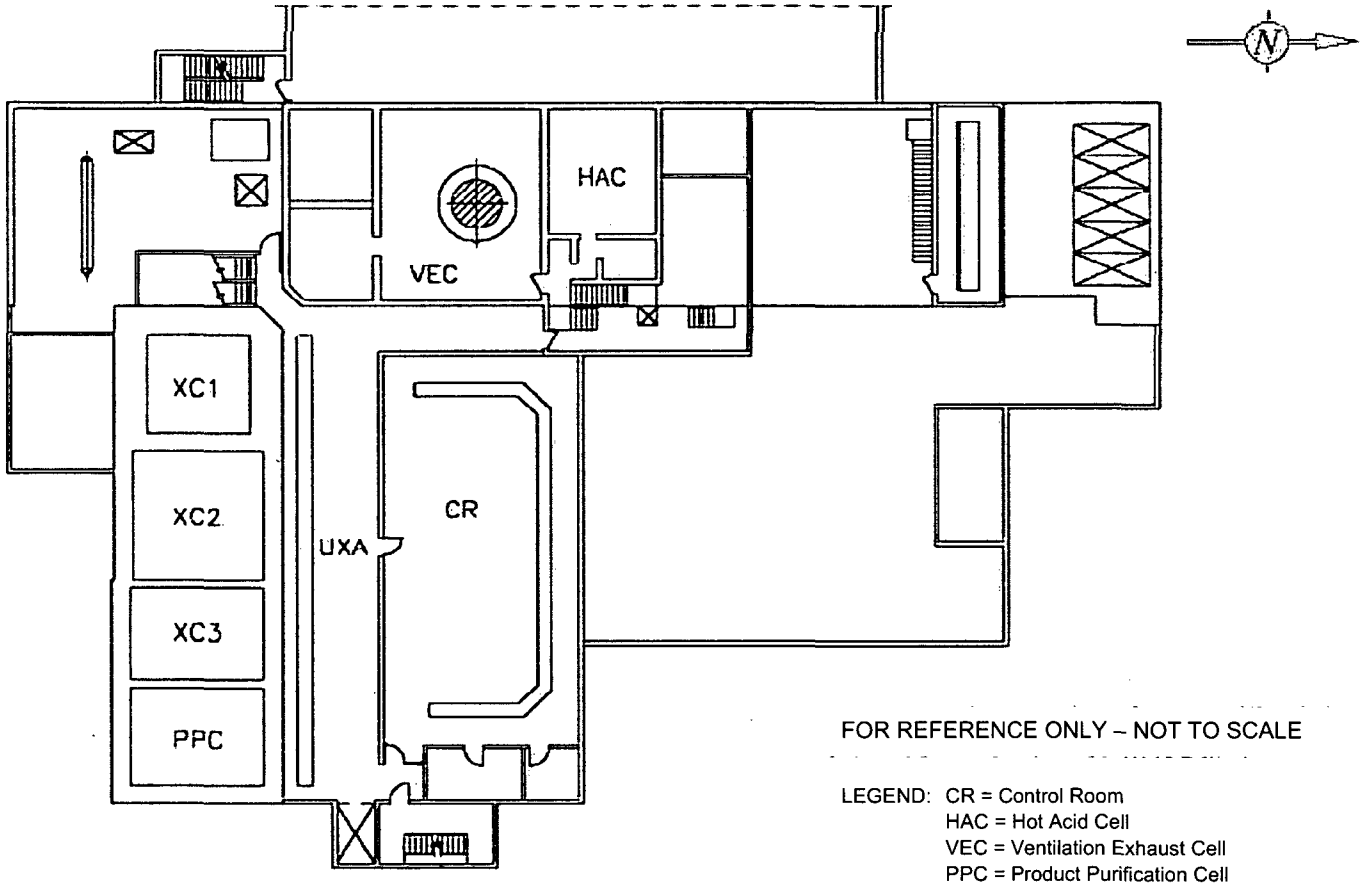
Figure 3-13C. Process Building Layout at 114.5-Foot Elevation



FOR REFERENCE ONLY – NOT TO SCALE

LEGEND:
ADA = Analytical Decontamination Aisle
ANA = Analytical Aisle
ANC = Analytical Sample Cell
CCR = CPC Crane Room
CPC = Chemical Process Cell
NOA = North Operating Aisle
OGA = Off-Gas-Acid Recovery Aisle
PMCRE = Process Mechanical Cell Crane Room Enclosure
PPC = Product Purification Cell
XC = Extraction Cell

Figure 3-13D. Process Building Layout at 131-Foot Elevation



FOR REFERENCE ONLY – NOT TO SCALE

LEGEND: CR = Control Room
HAC = Hot Acid Cell
VEC = Ventilation Exhaust Cell
PPC = Product Purification Cell
UXA = Upper Extraction Aisle
VEC = Ventilation Exhaust Cell
XC = Extraction Cell

Figure 3-13E. Process Building Layout at 144-Foot Elevation

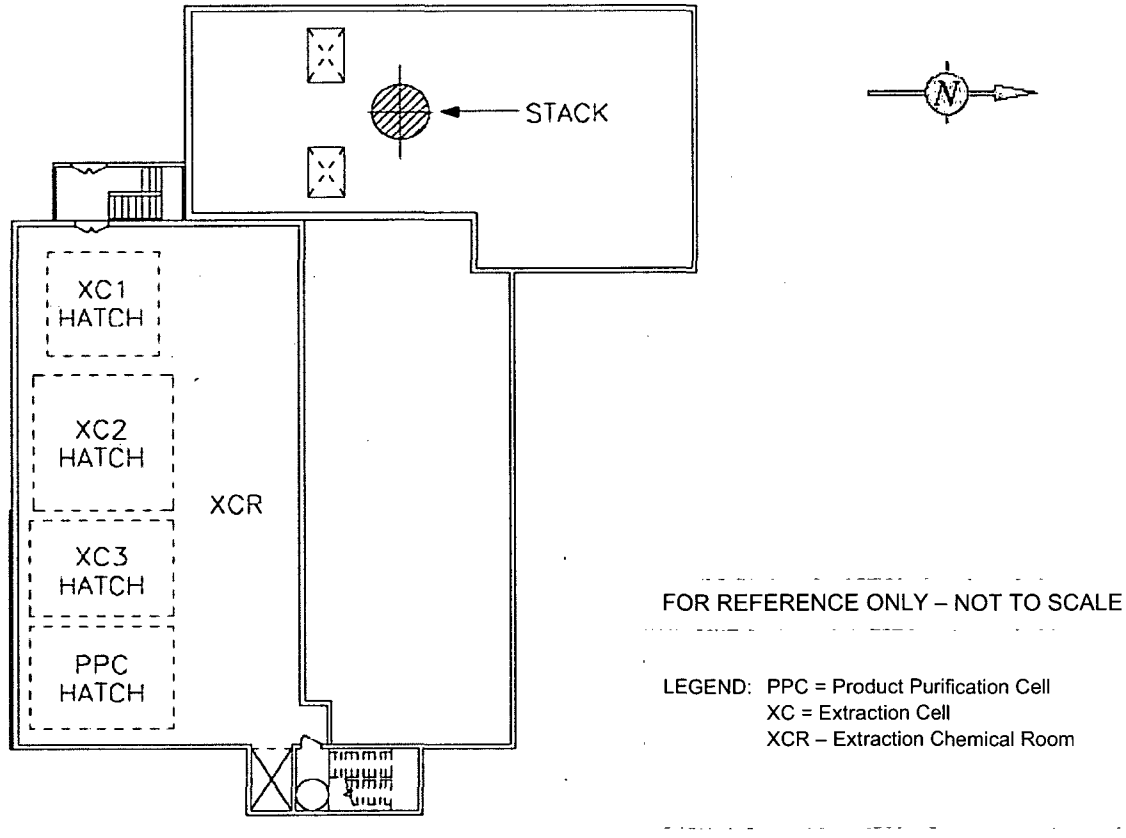


Figure 3-13F. Process Building Layout at 160-Foot Elevation

Figure 3-14. West Side of the Process Building. (The building with windows is actually the Plant Office Building. The plant part of the Process Building is behind the Office Building

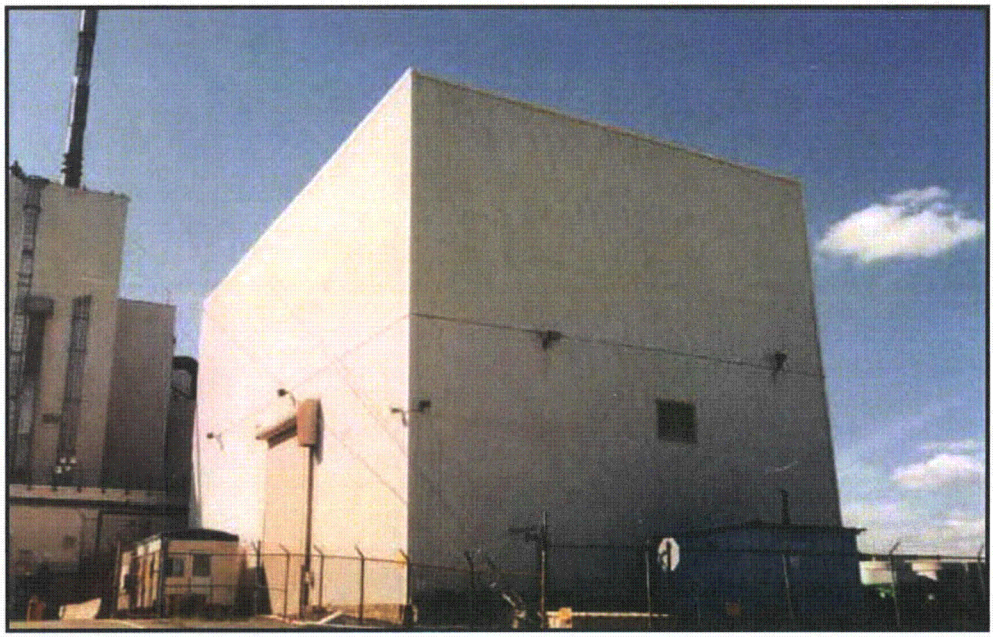


Figure 3-15. Fuel Receiving and Storage Area. (This facility is located on the east side of the Process Building.)

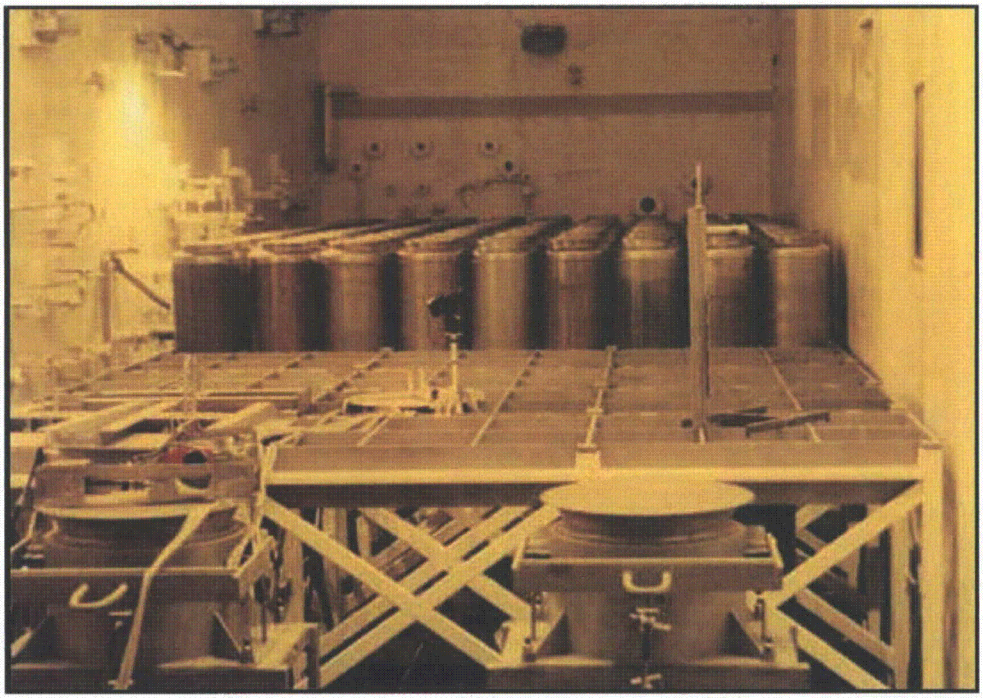


Figure 3-16. HLW Canisters Stored in the HLW Interim Storage Area

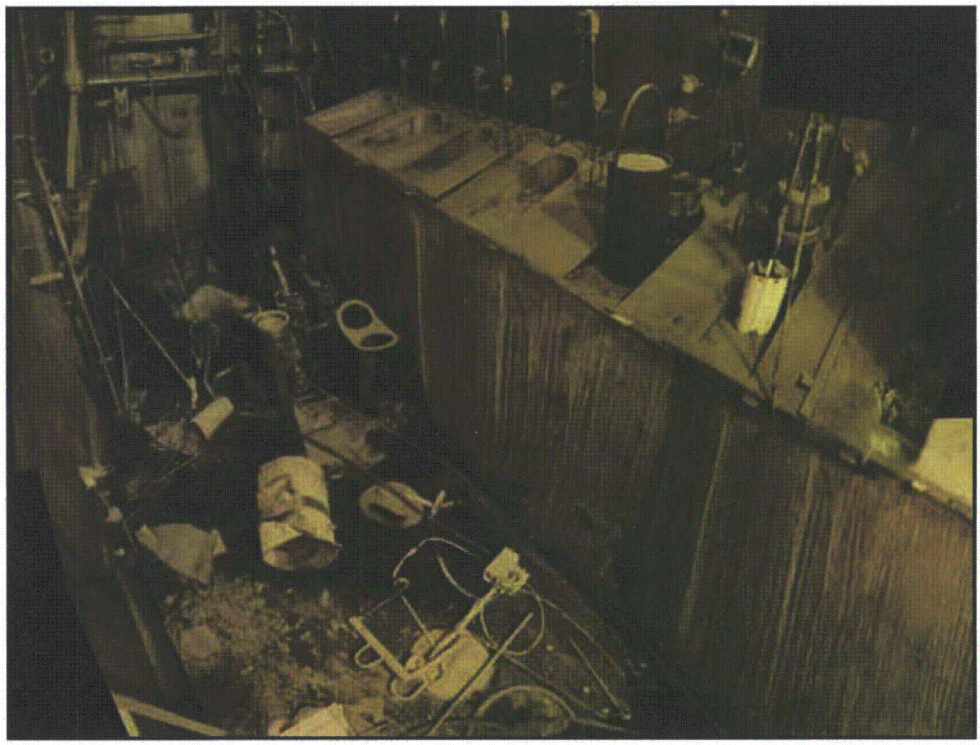


Figure 3-17. Conditions in the General Purpose Cell in 1999. (These were the conditions before the beginning of cleanup in connection with deactivation.)

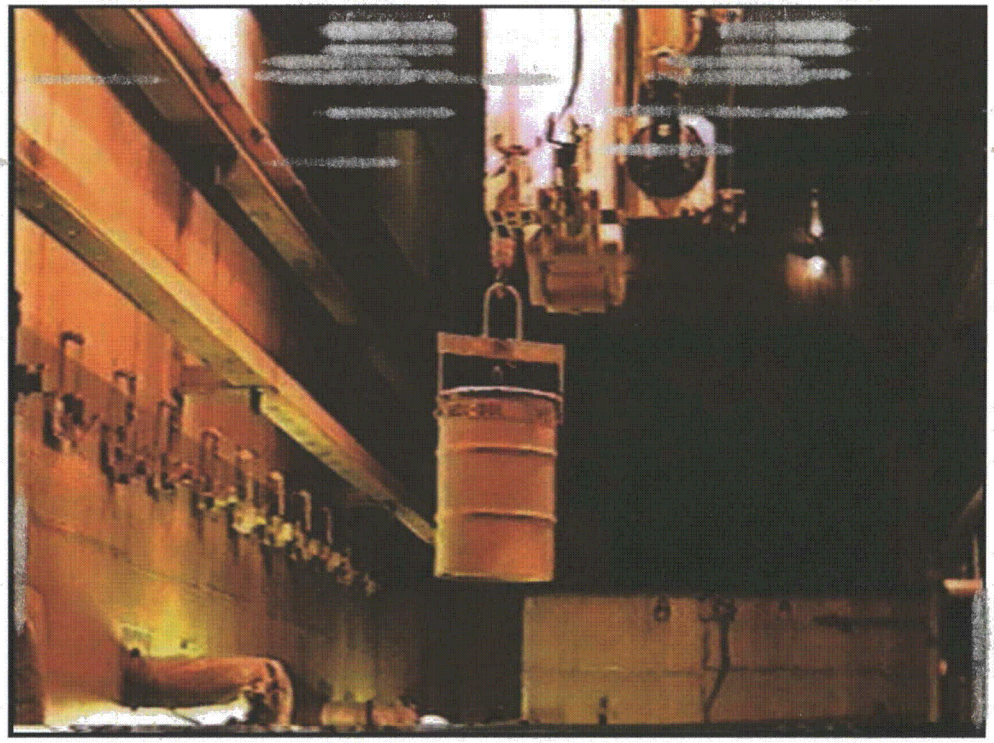


Figure 3-18. Process Mechanical Cell During Deactivation

Figure 3-19. Extraction Cell 3 (After removal of processing equipment and before installation of the WVDP Liquid Waste Treatment System Equipment)

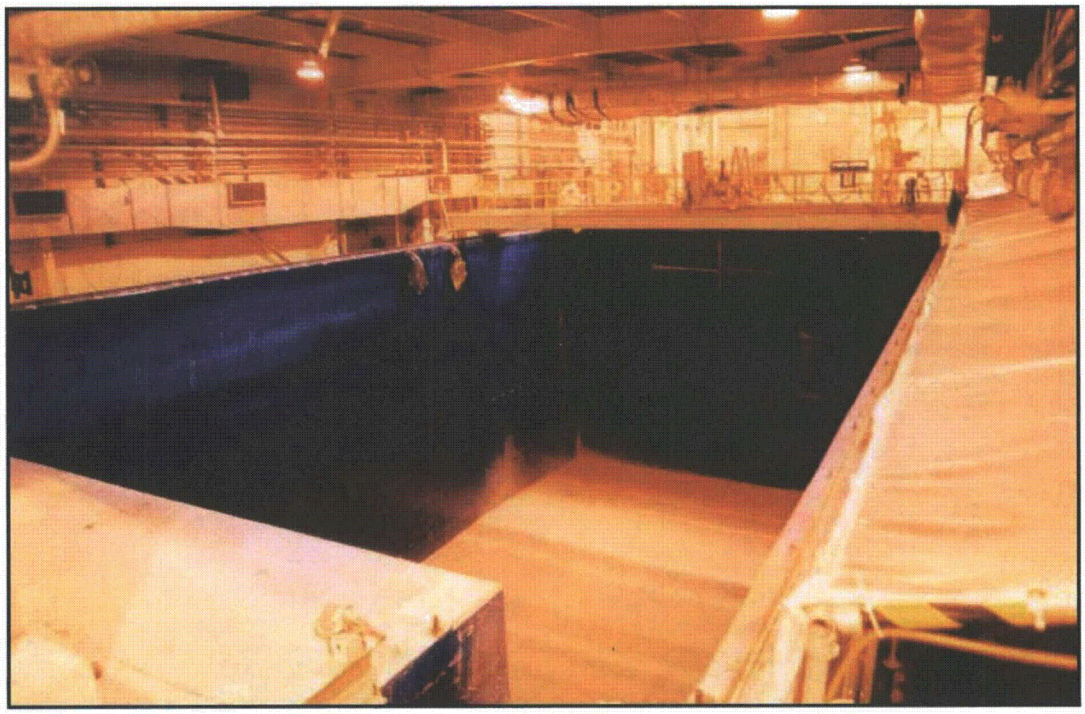


Figure 3-20. The Spent Fuel Pool After Deactivation

Figure 3-21. Equipment Decontamination Room Before Cleanup

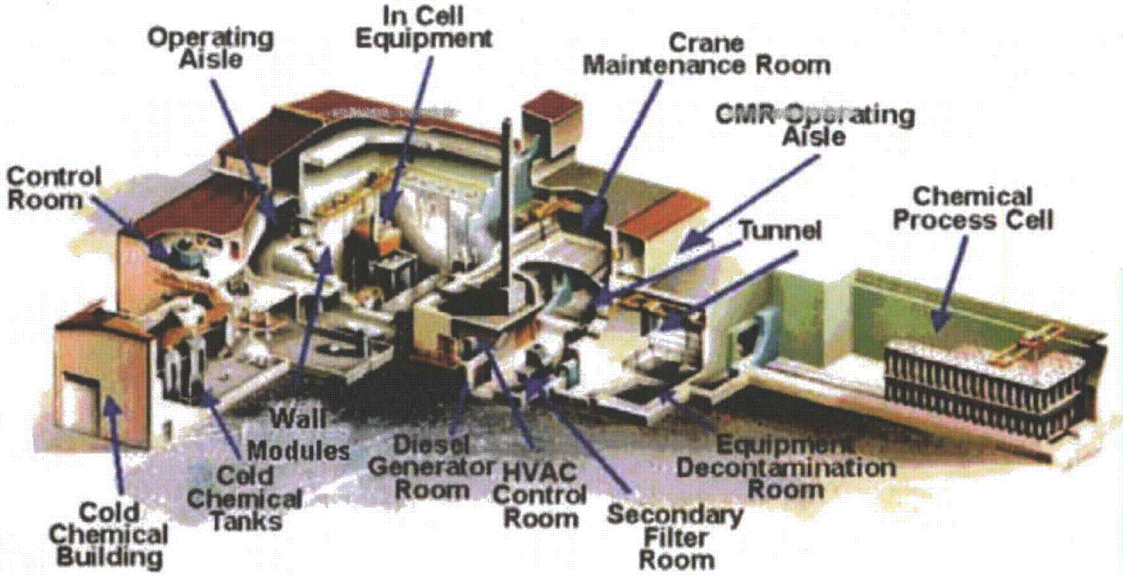


Figure 3-22. Vitrification Facility General Arrangement

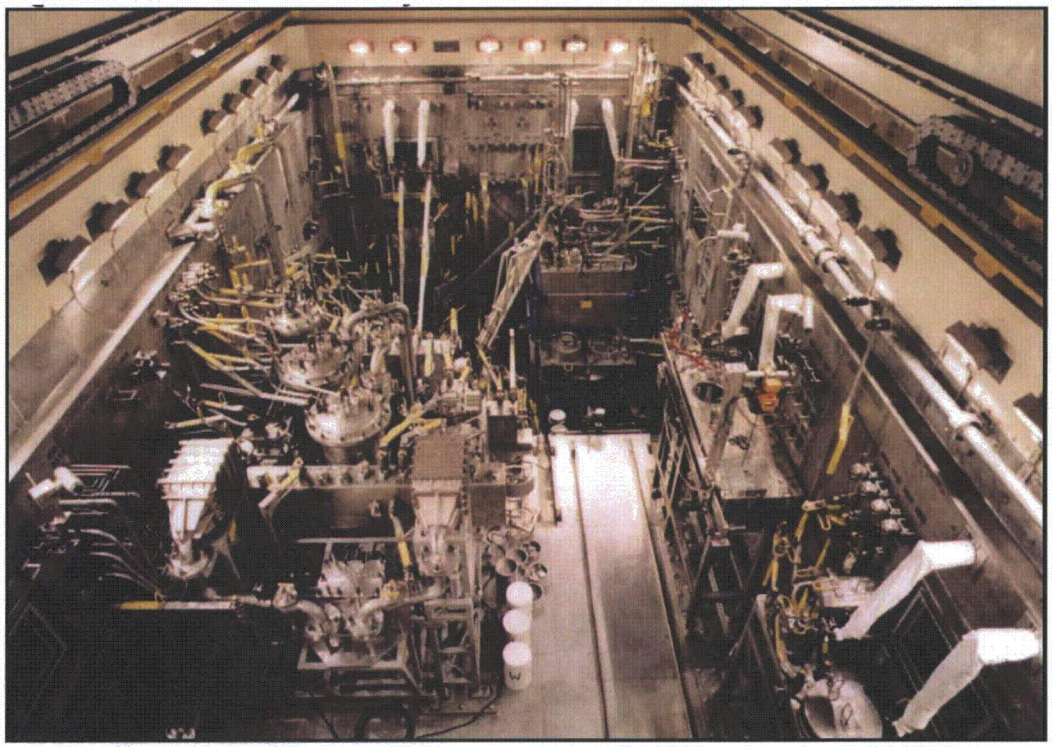


Figure 3-23. Vitrification Cell at Time of Startup

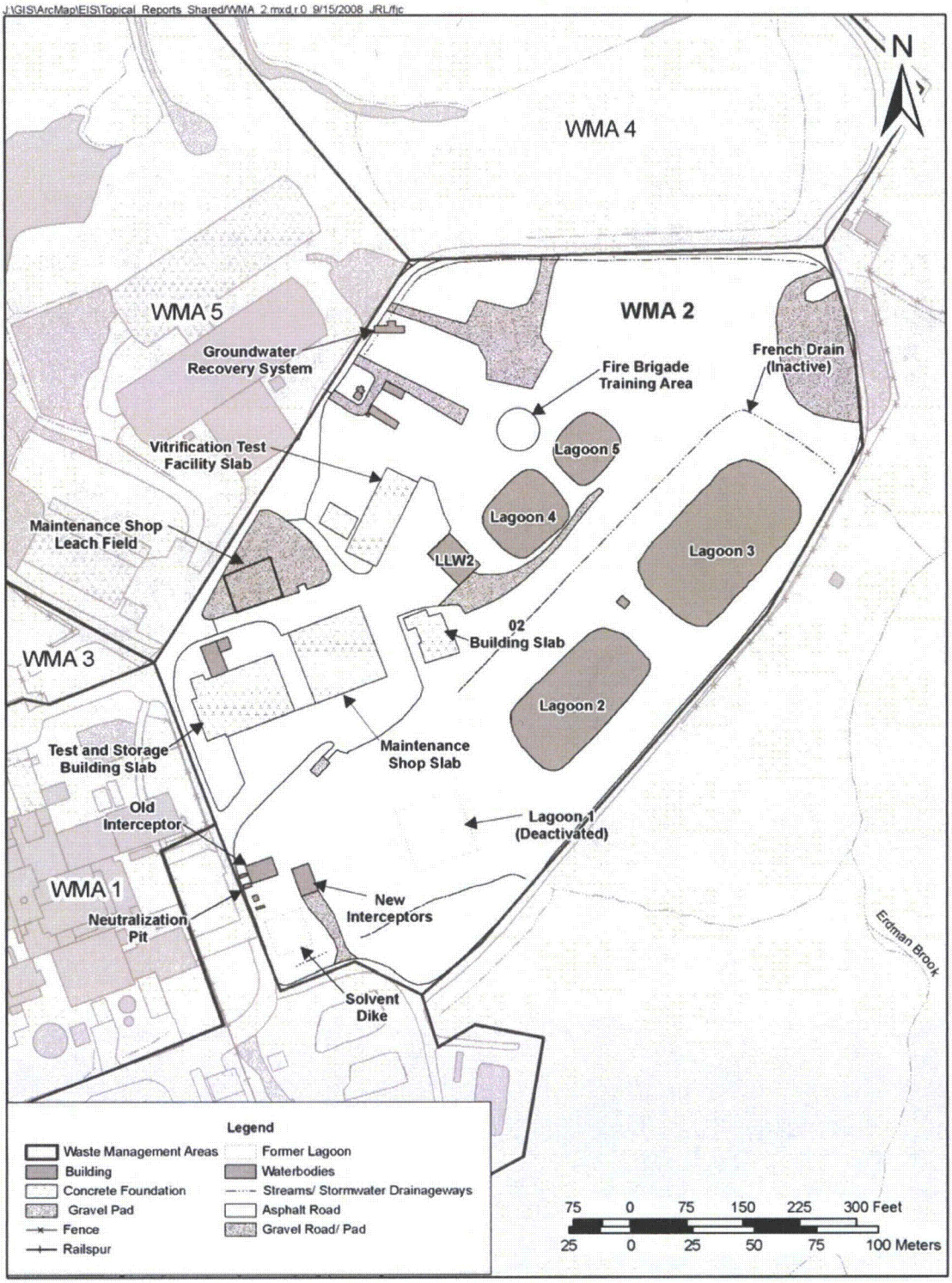


Figure 3-24. WMA 2. (The facilities to be removed during Phase 1 decommissioning activities include the Neutralization Pit, Interceptors, Lagoons, and remaining slabs.)

Figure 3-25. The Low-Level Waste Treatment Facility. (This photo shows the site in 1982, looking toward the southwest.)

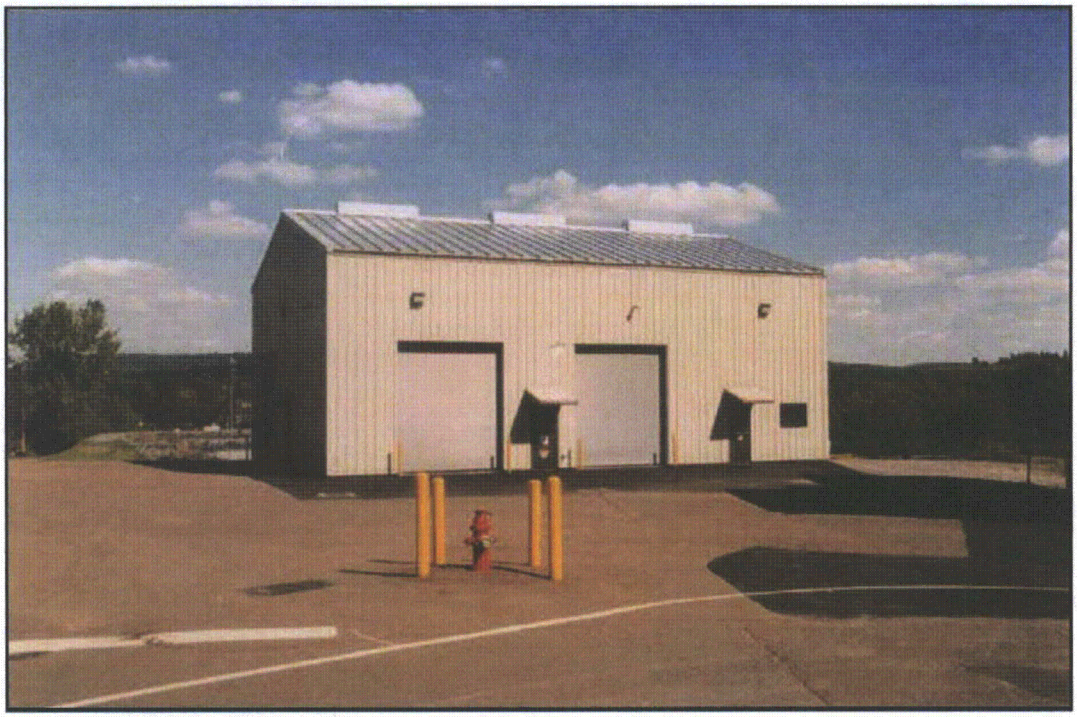


Figure 3-26. The LLW2 Building that Replaced the O2 Building

Figure 3-27. The Lagoon 1 Area. (Radioactive debris was placed in Lagoon 1 when it was closed in 1985.)

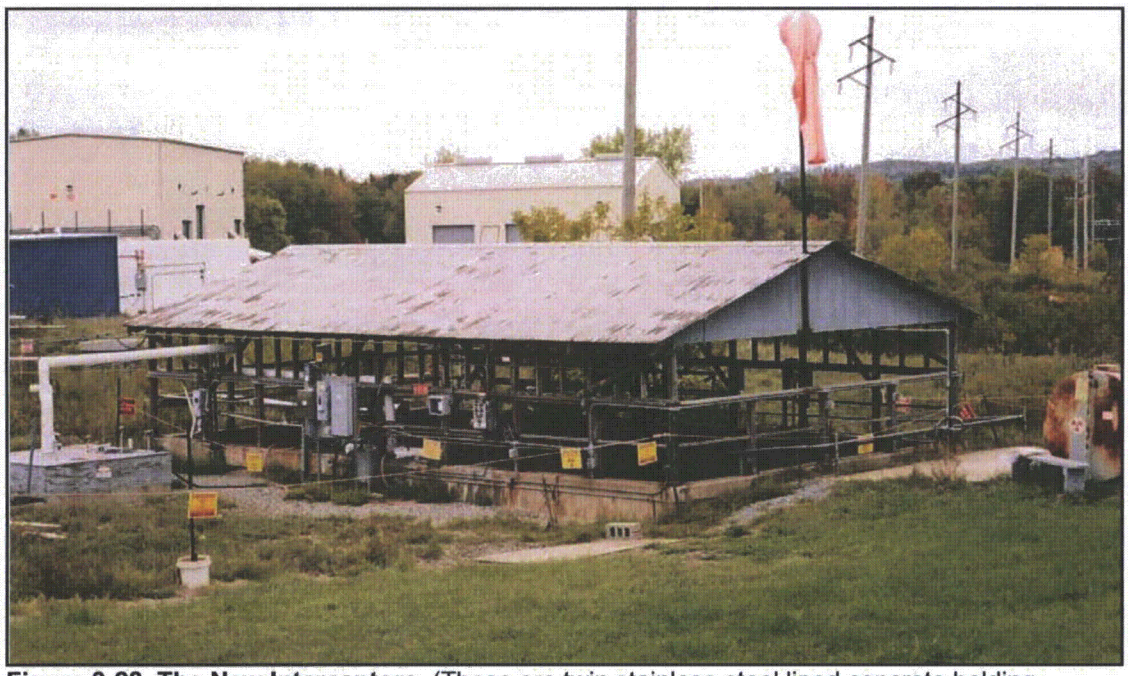


Figure 3-28. The New Interceptors. (These are twin stainless-steel lined concrete holding tanks.)

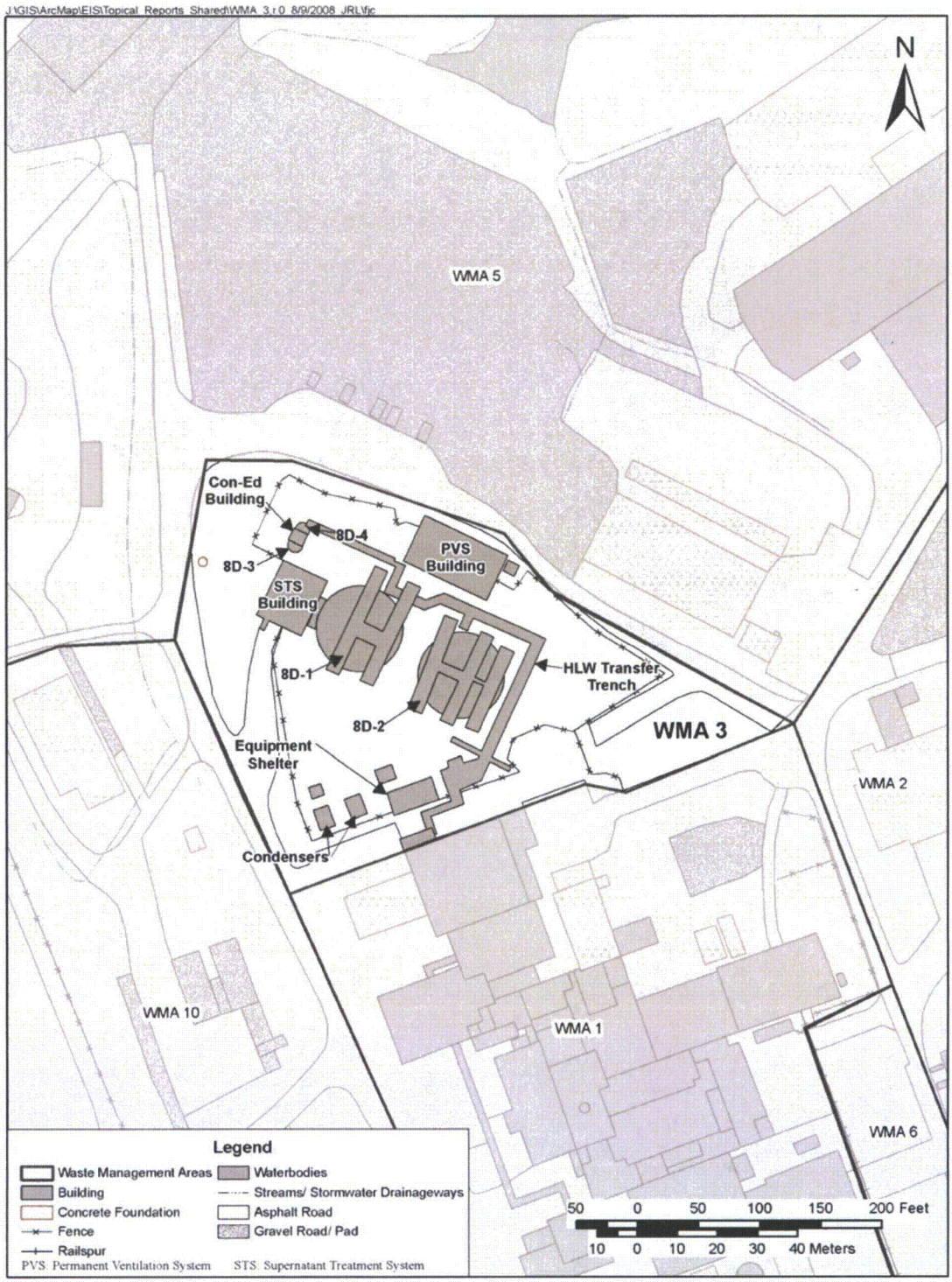


Figure 3-29. WMA 3. (Facilities to be removed during Phase 1 decommissioning activities include the Equipment Shelter, the condensers, the piping in the HLW transfer trench, and the Con-Ed Building.)

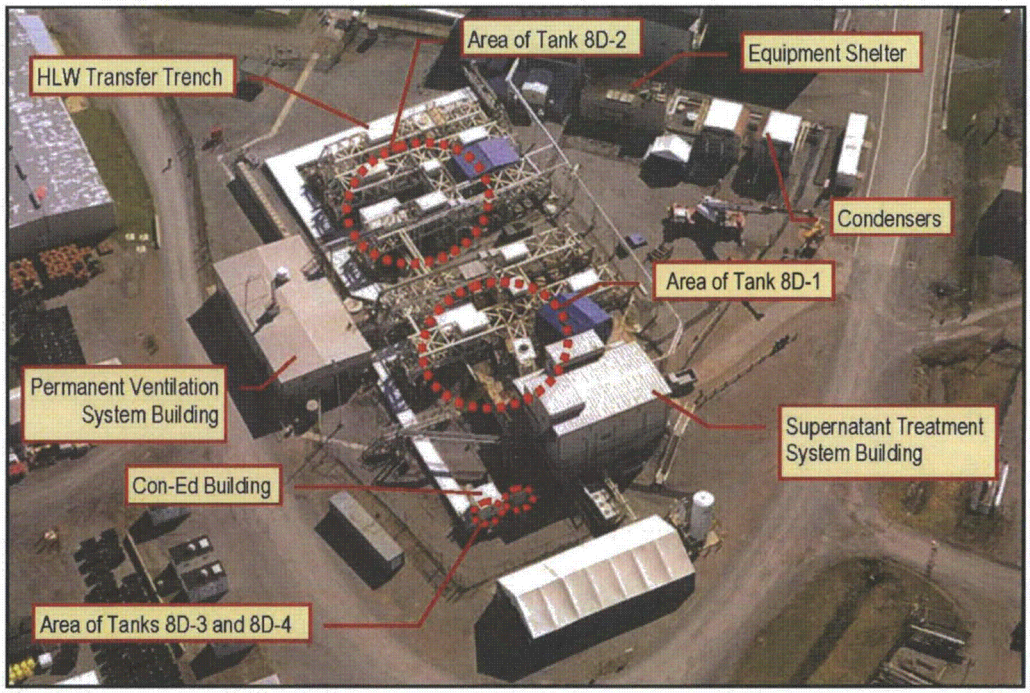


Figure 3-30. Aerial View of WMA 3 Area

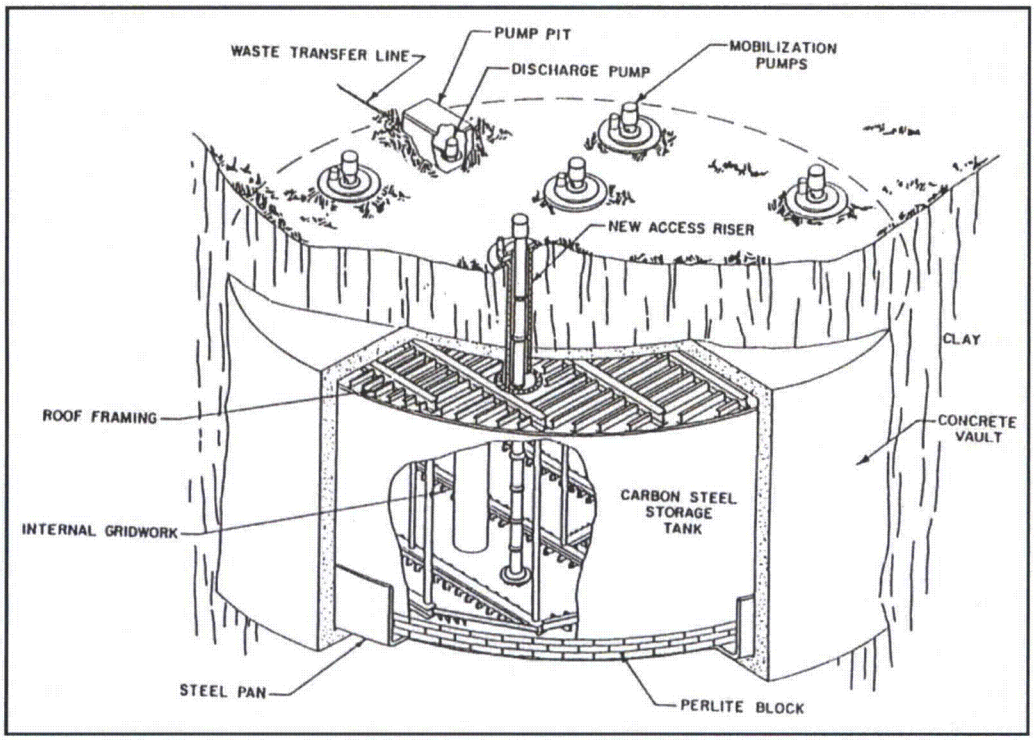


Figure 3-31. Cutaway View of 750-Gallon Underground Waste Tank

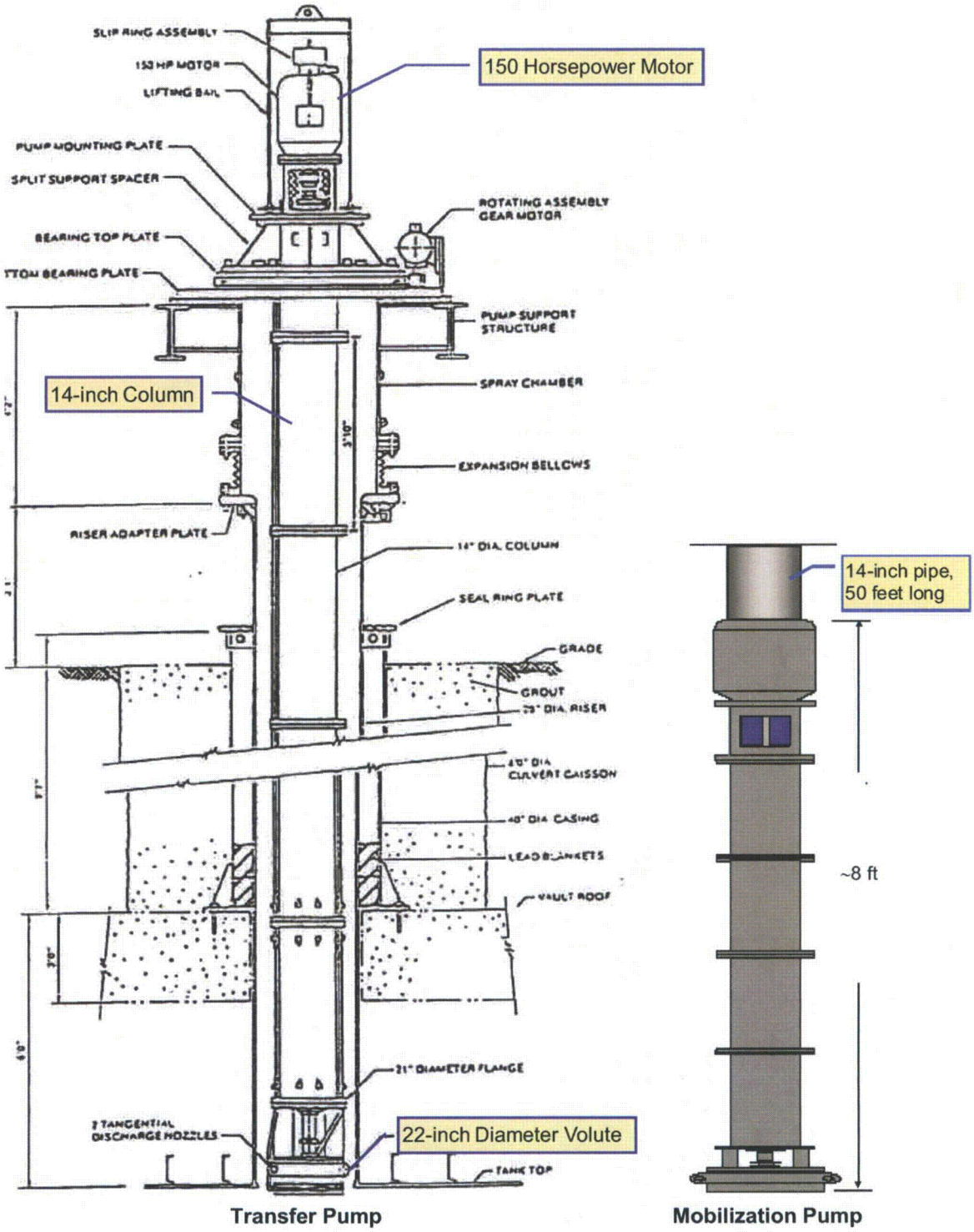


Figure 3-32. HLW Transfer and Mobilization Pumps

Figure 3-33. HLW Transfer Trench Under Construction

Figure 3-34. Typical HLW Pump Pit

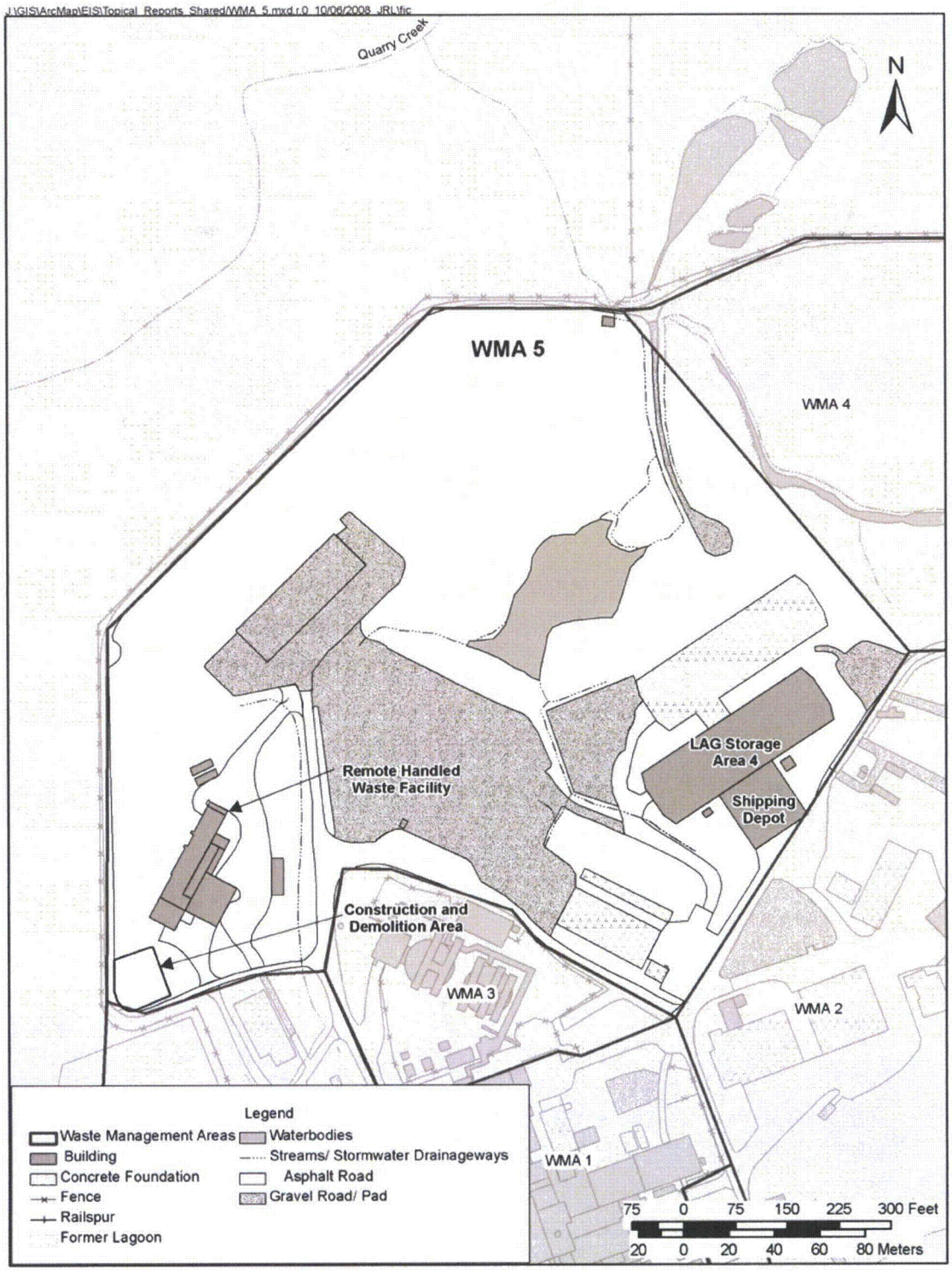


Figure 3-35. WMA 5. (Facilities to be removed during Phase 1 decommissioning include the Remote-Handled Waste Facility, Lag Storage Addition 4 and its Shipping Depot.)

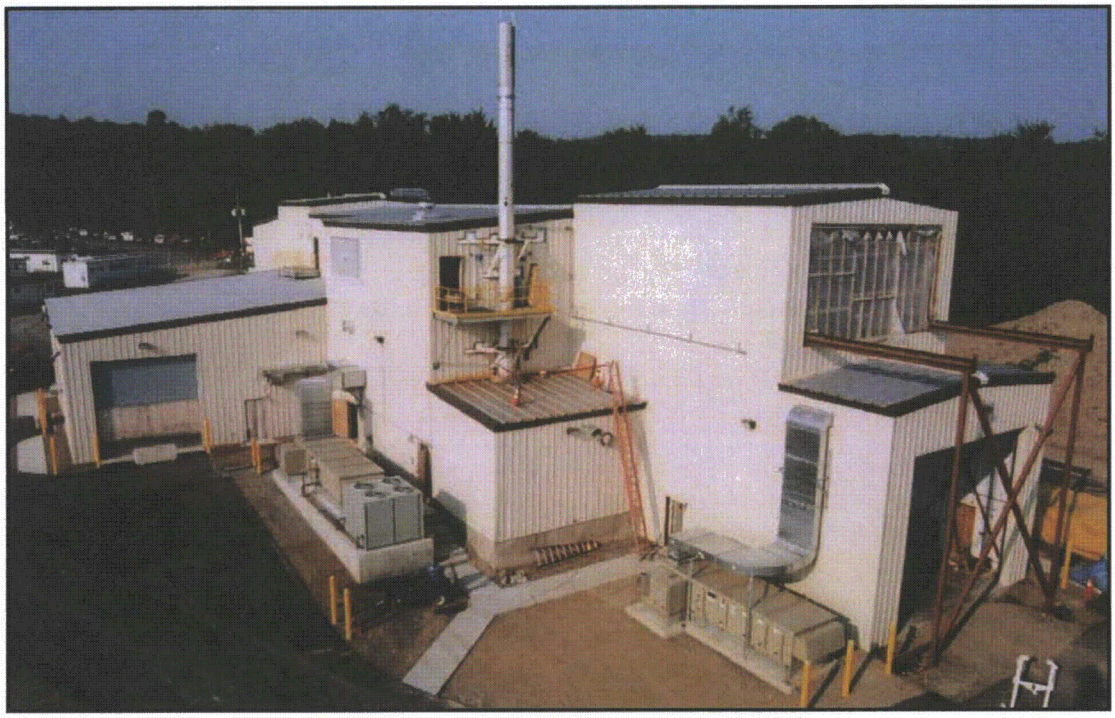


Figure 3-36. The Remote-Handled Waste Facility. (Placed into service in 2004, this new building may contain significant contamination at the time it is removed.)

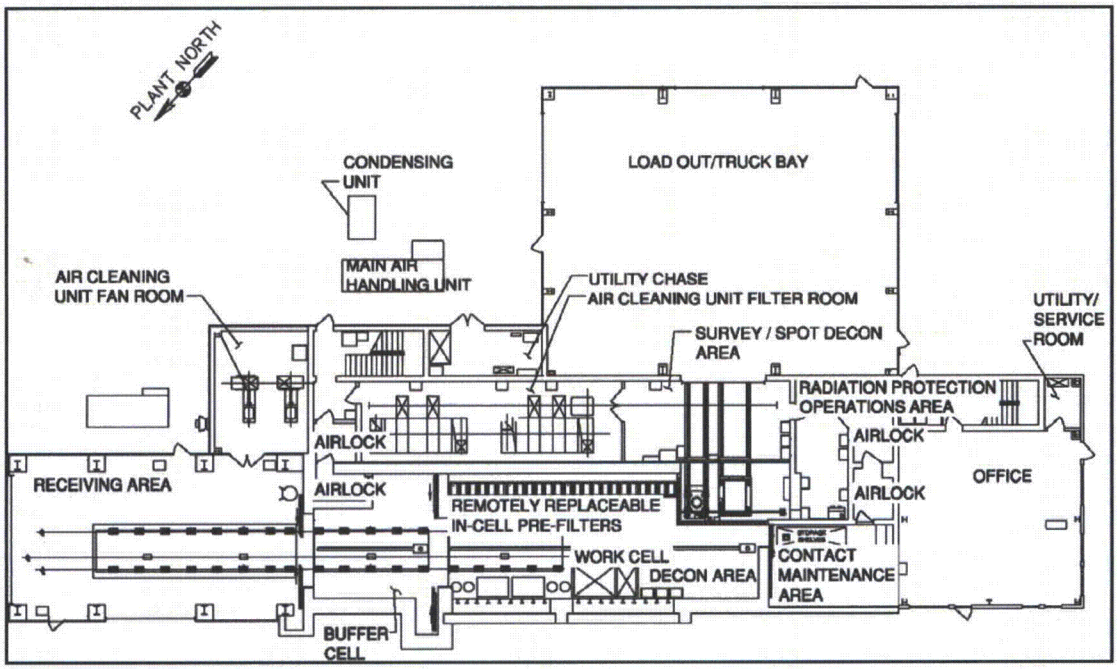


Figure 3-37. The Remote-Handled Waste Facility First Floor Layout.

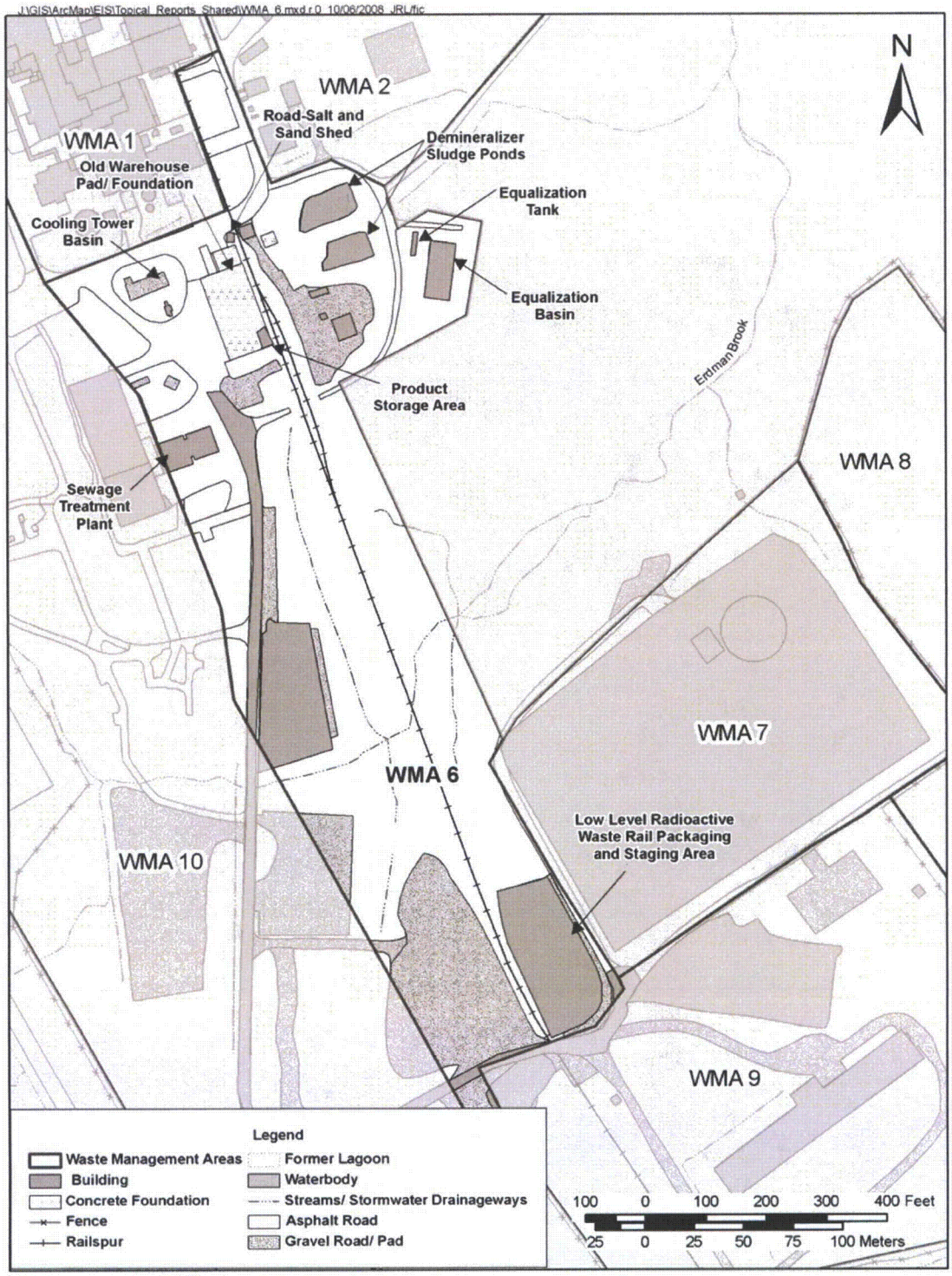


Figure 3-38. WMA 6. (Facilities to be removed during Phase 1 Decommissioning include the Demineralizer Sludge Ponds, the Sewage Treatment Plant, the Equalization Tank and Basin, the south Waste Tank Farm Training Platform, and the remaining slabs.)

Figure 3-39. The Rail Spur. (The rail spur leads to the Fuel Receiving and Storage Facility.)

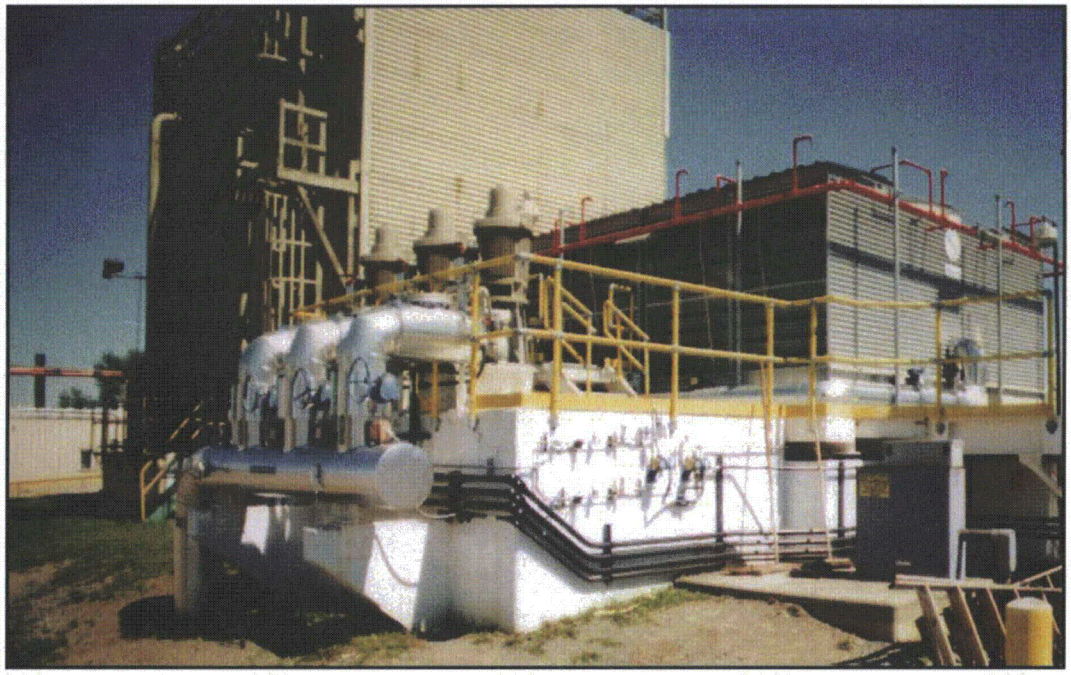


Figure 3-40. The New Cooling Tower. (The cooling tower will be removed, except for its concrete basin, before Phase 1 decommissioning activities begin.)

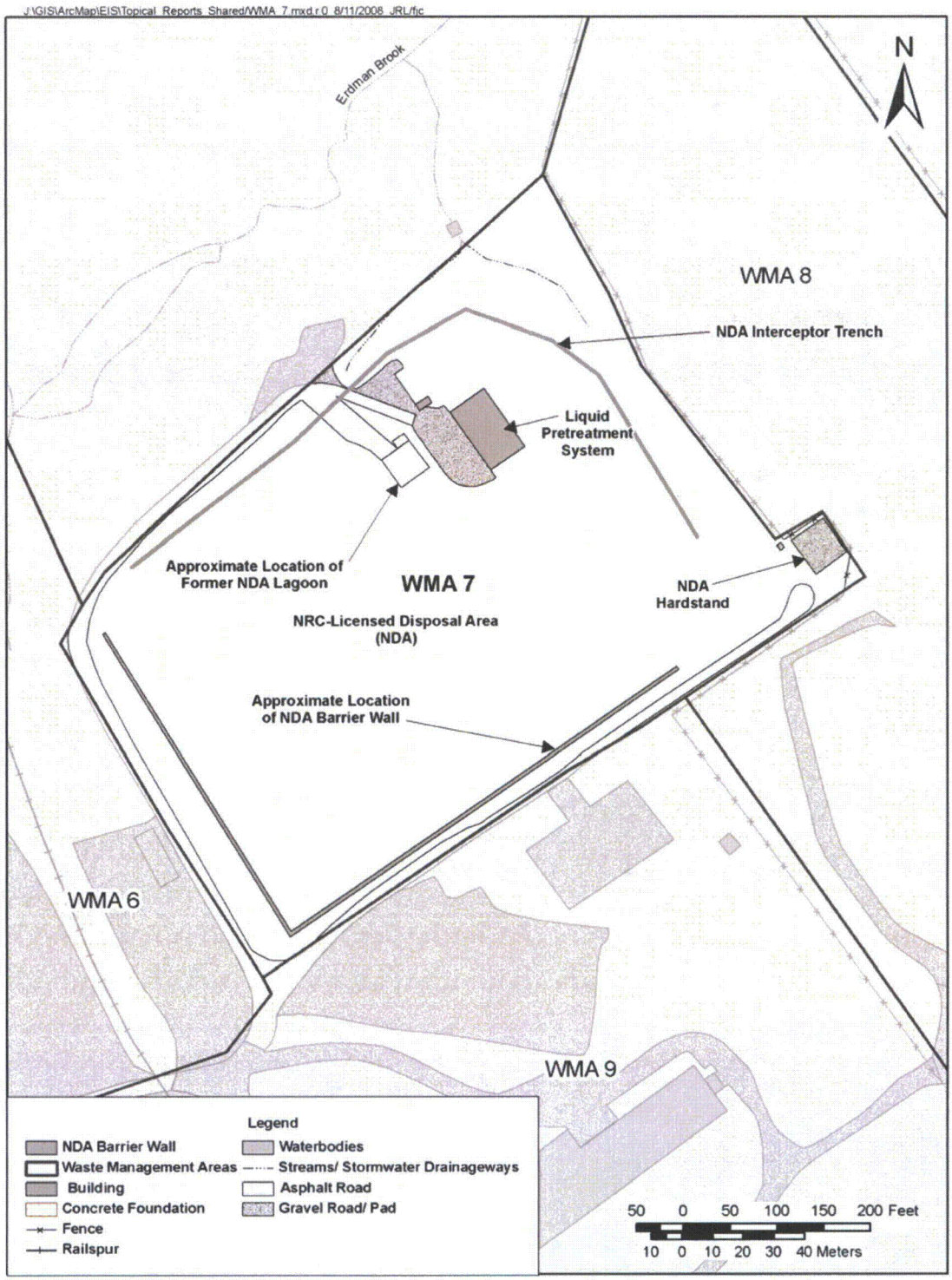


Figure 3-41. WMA 7. (The only facility to be removed during Phase 1 decommissioning is the NDA hardstand pad.)

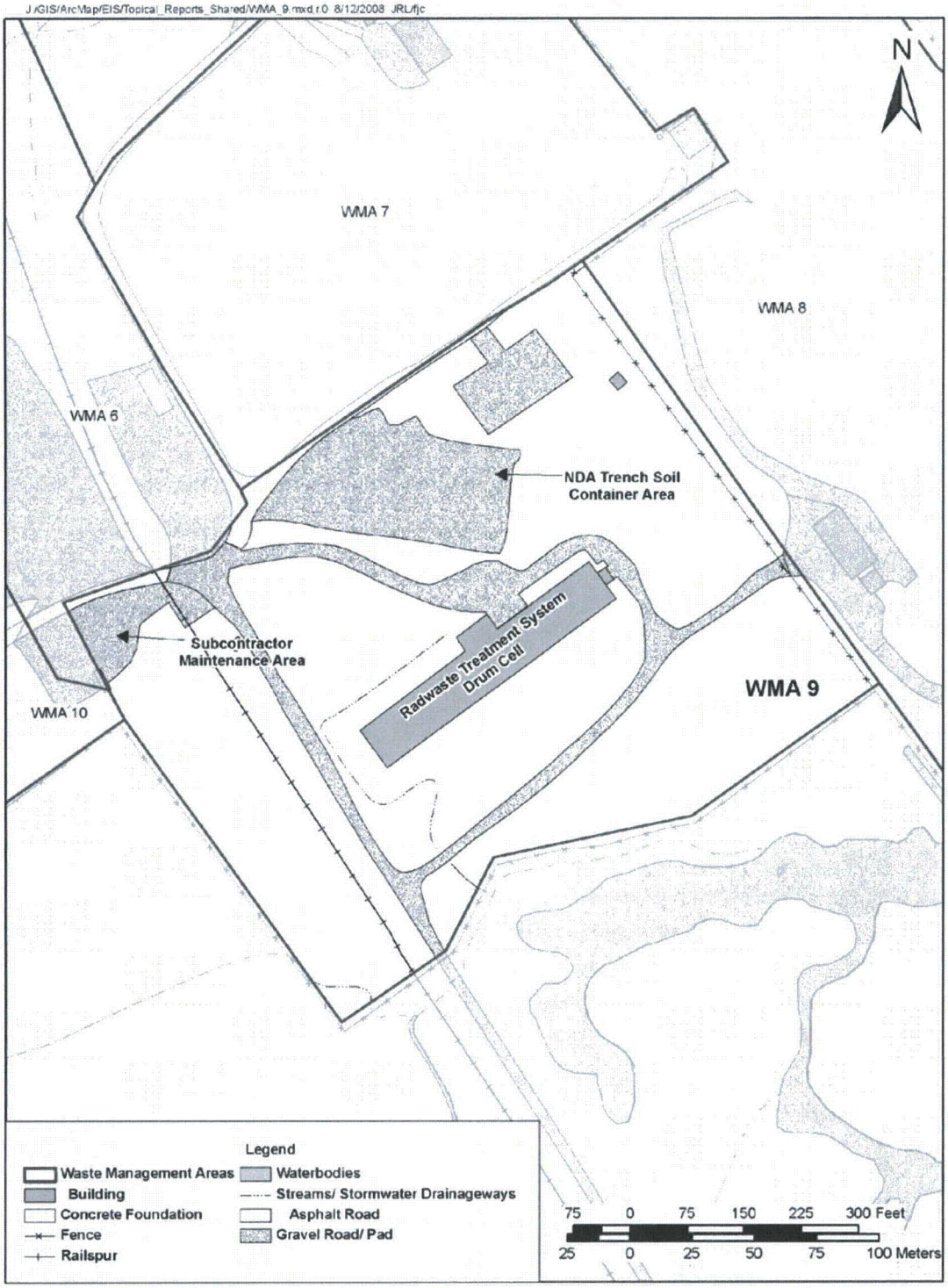


Figure 3-42. WMA 9. (The Drum Cell will be removed during Phase 1 decommissioning, along with NDA Trench Soil Container Area and the Subcontractor Maintenance Area.)

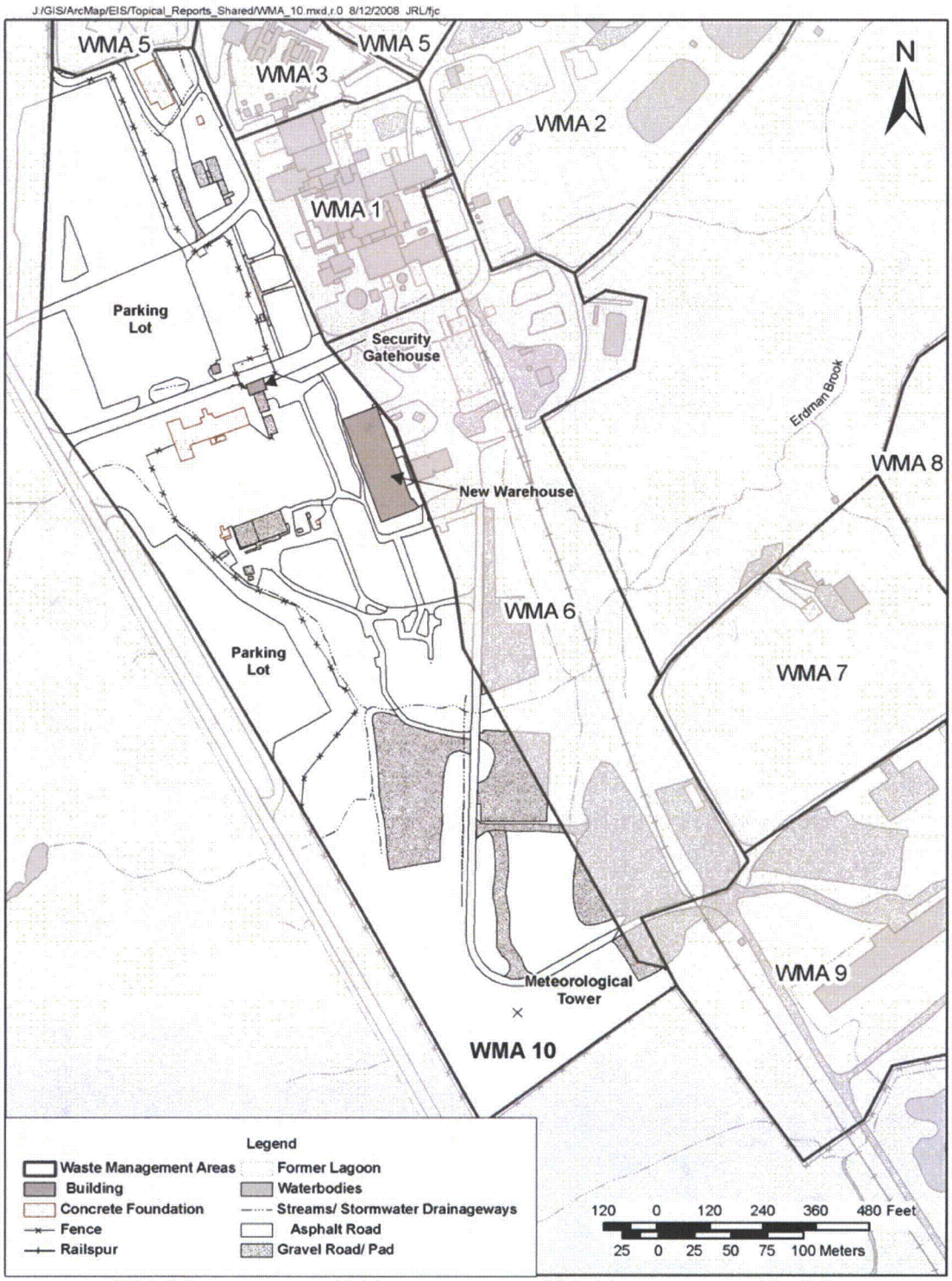


Figure 3-43. WMA 10. (Facilities to be removed during Phase 1 decommissioning include the New Warehouse and the remaining slabs and pads.)

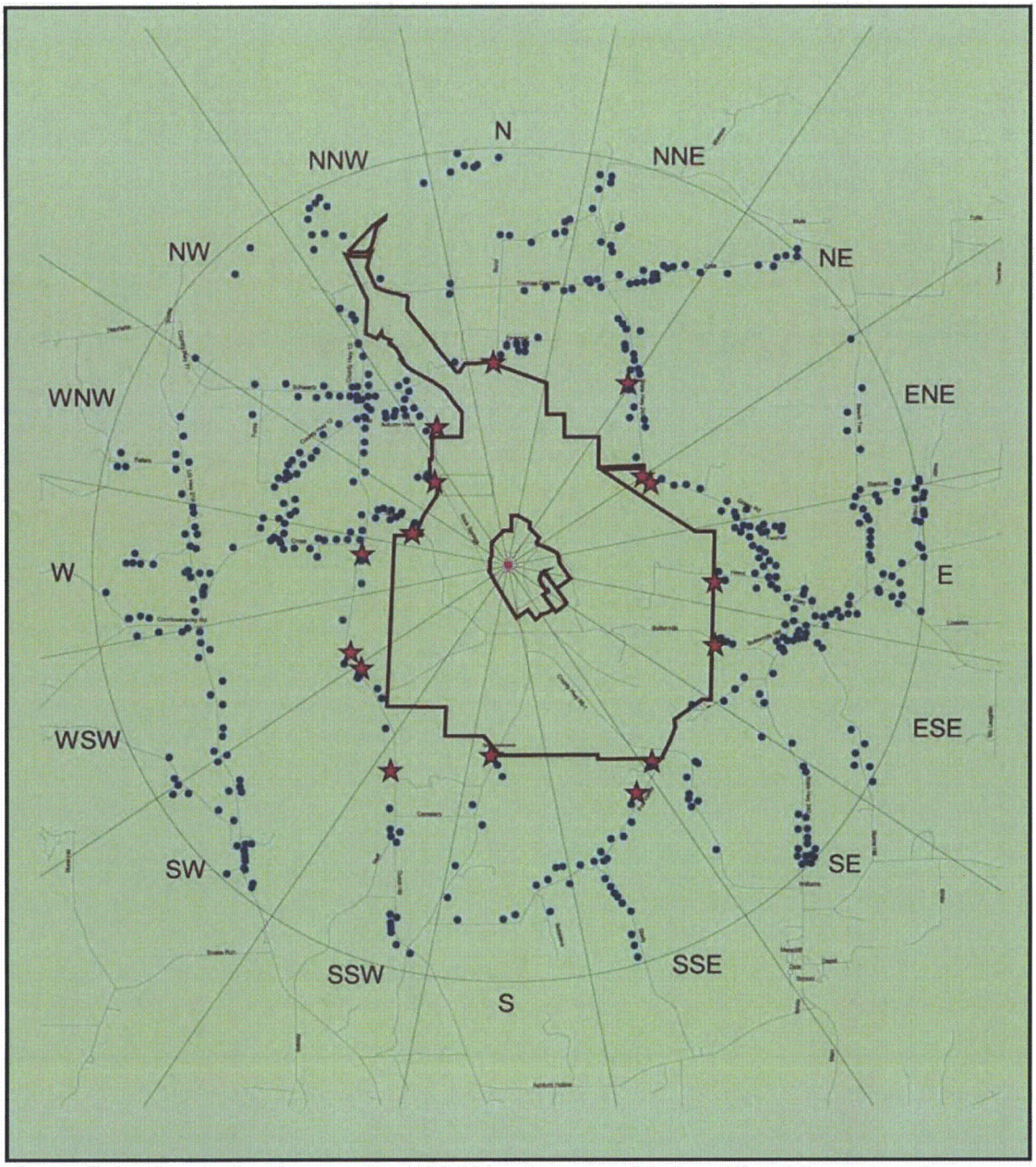


Figure 3-44. Population Around the WVDP by Compass Vector. (The dots represent residences. The stars show the nearest residences by compass vector.)

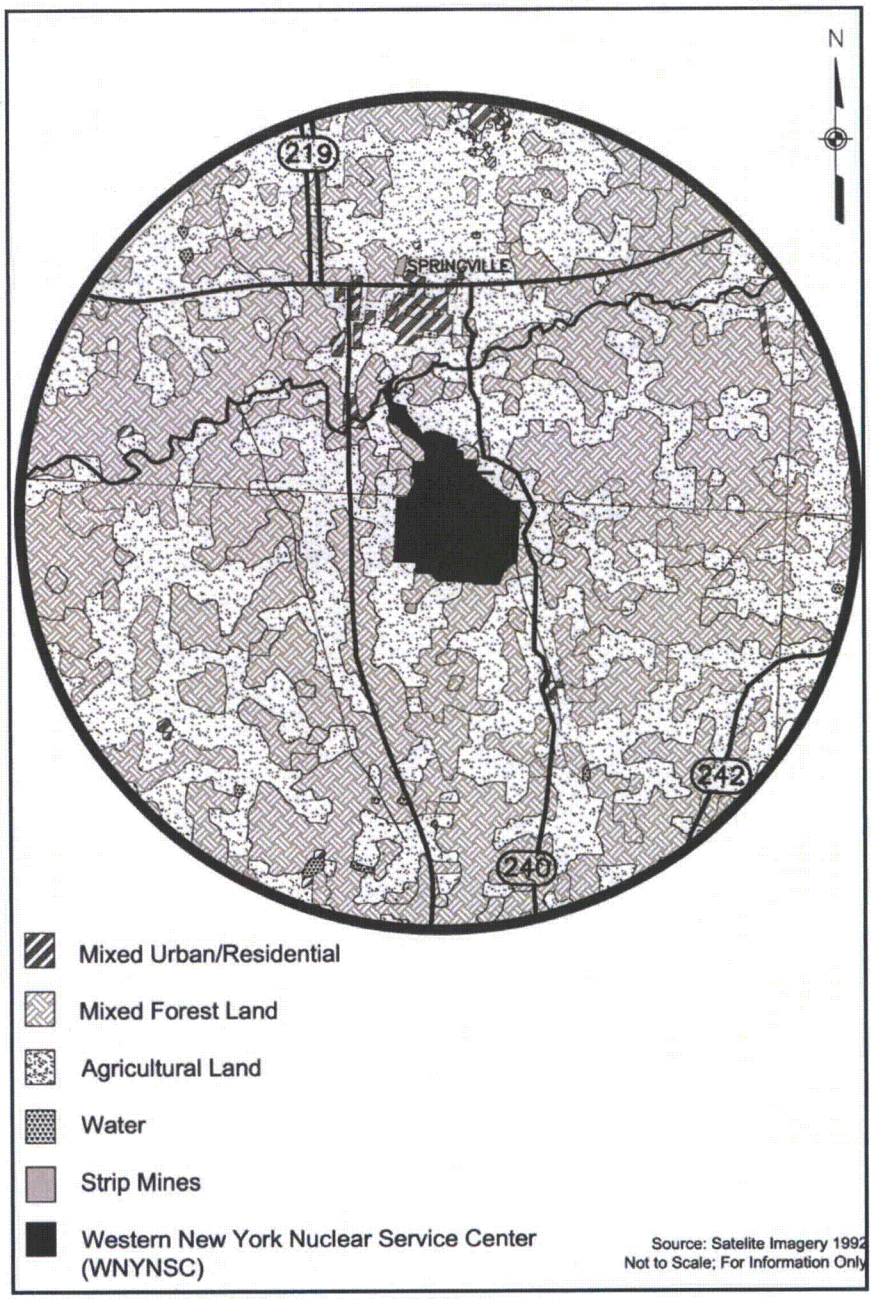


Figure 3-45. Land Use in the Vicinity of the Center

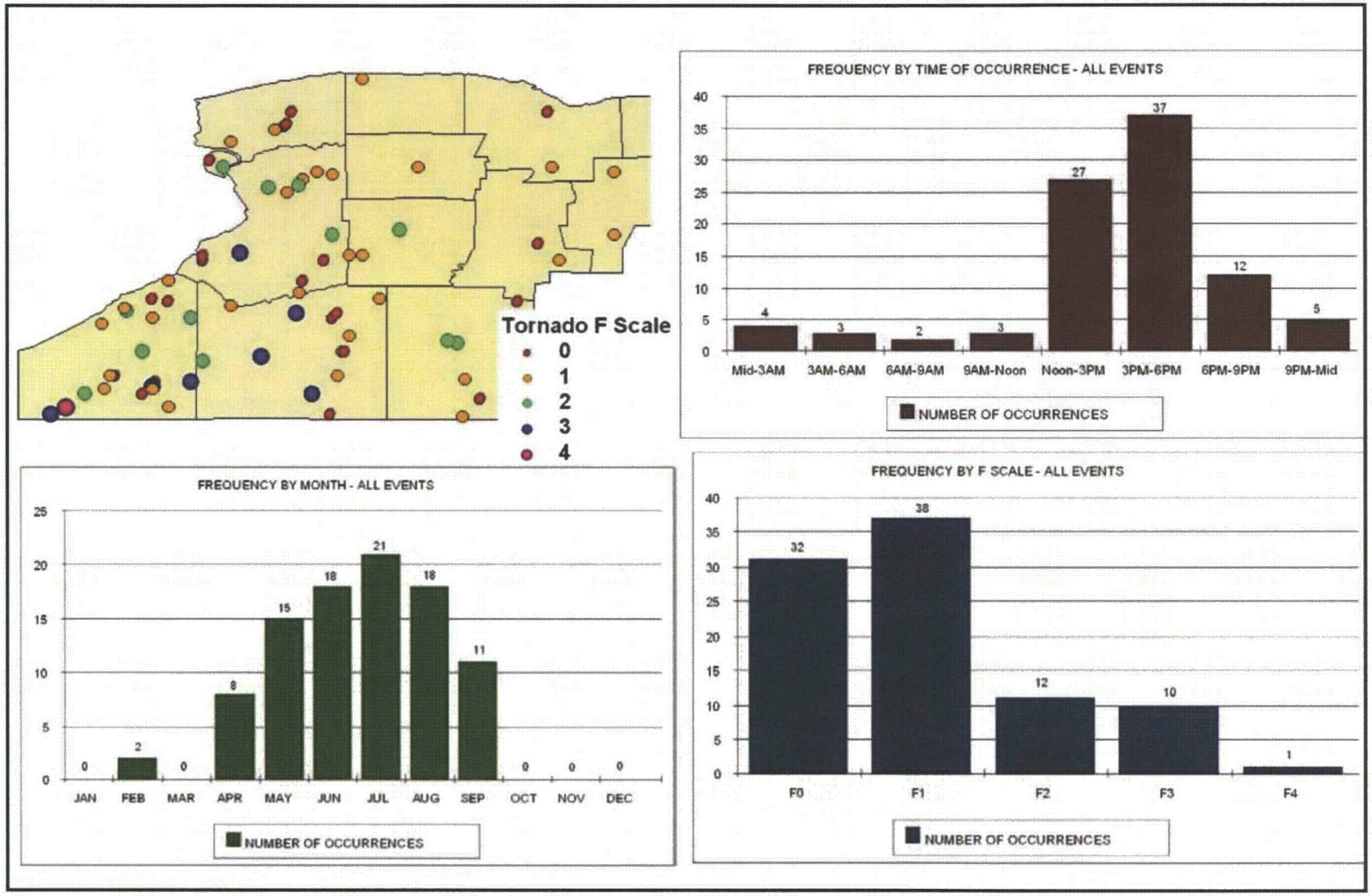


Figure 3-46. Tornado Events in Western New York (1950 – 2002) (From National Weather Service, Buffalo)

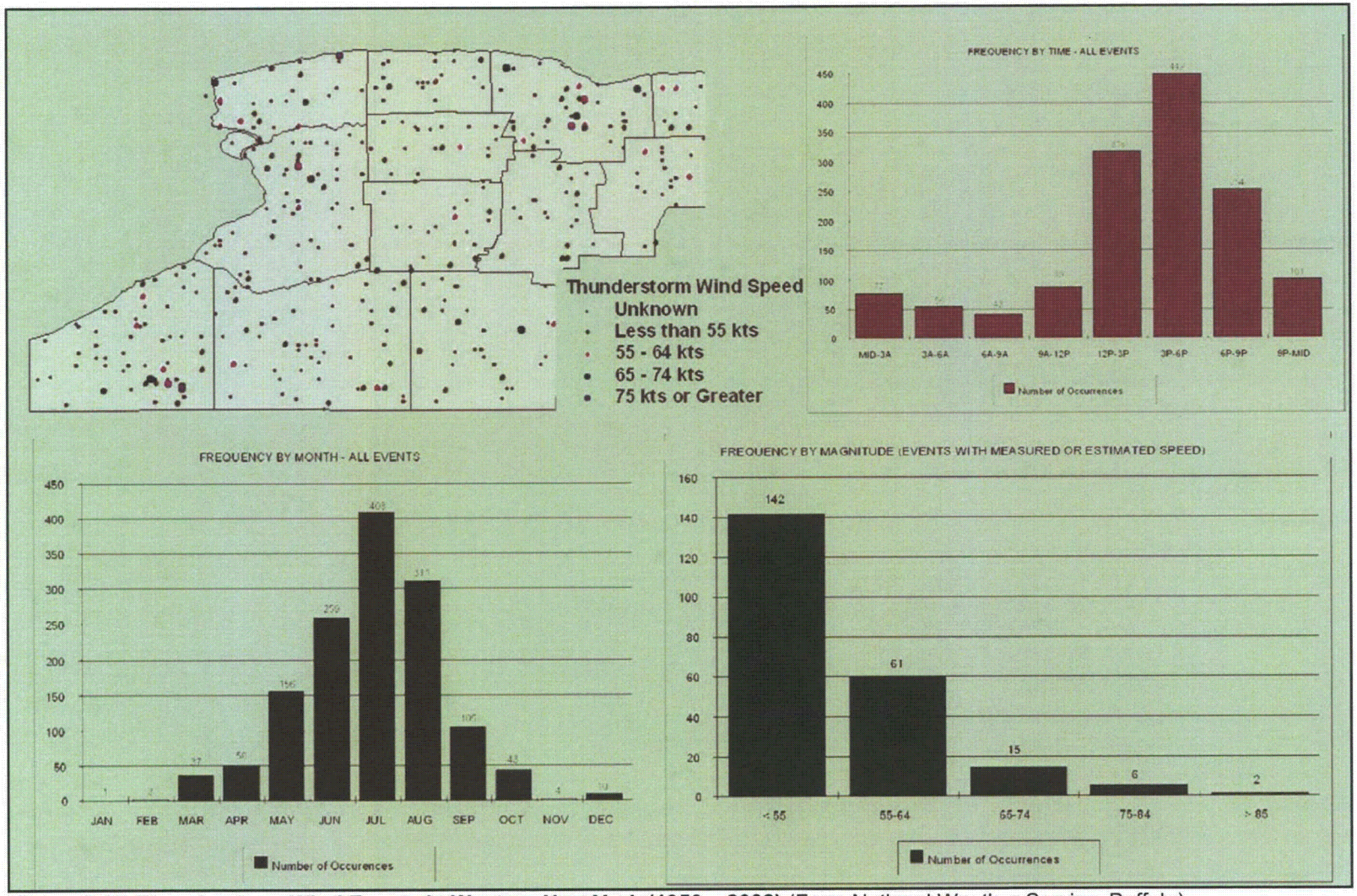


Figure 3-47. Thunderstorm Wind Events in Western New York (1950 – 2002) (From National Weather Service, Buffalo)

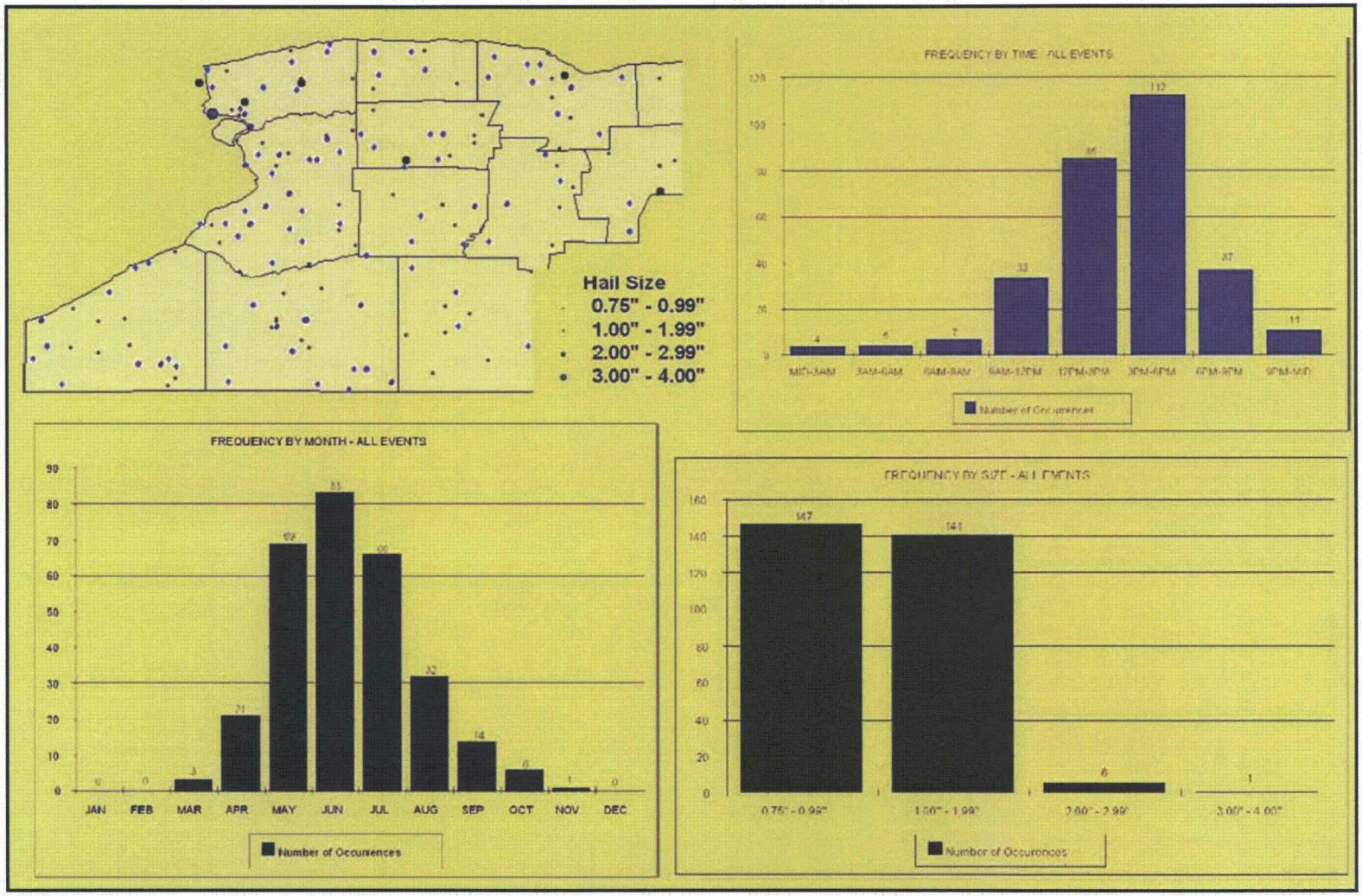


Figure 3-48. Hail Events in Western New York (1950 – 2002) (From National Weather Service, Buffalo)

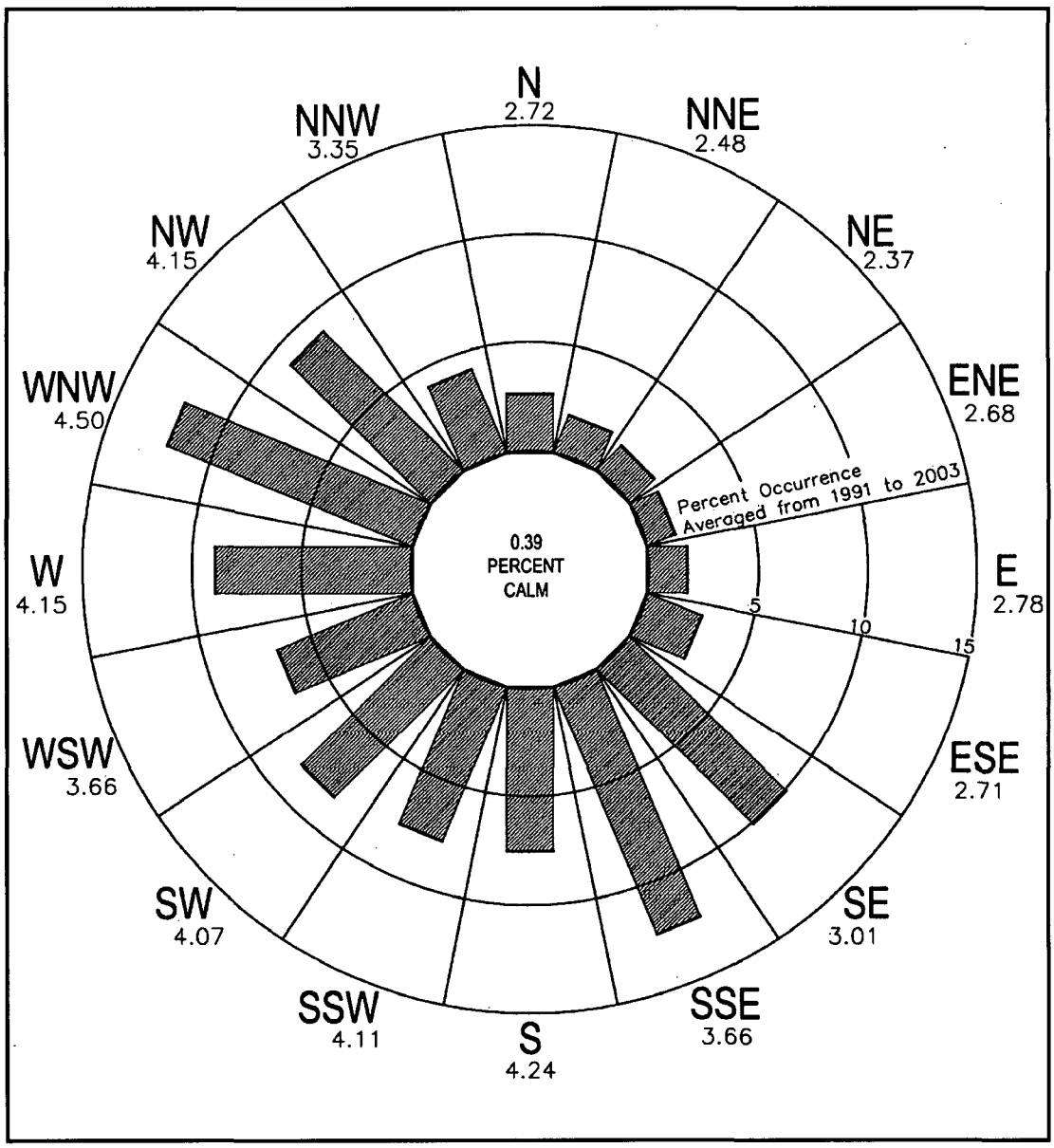


Figure 3-49. Wind Rose Diagram. (1991 – 2003 average head-wind direction and average wind speed in m/s)

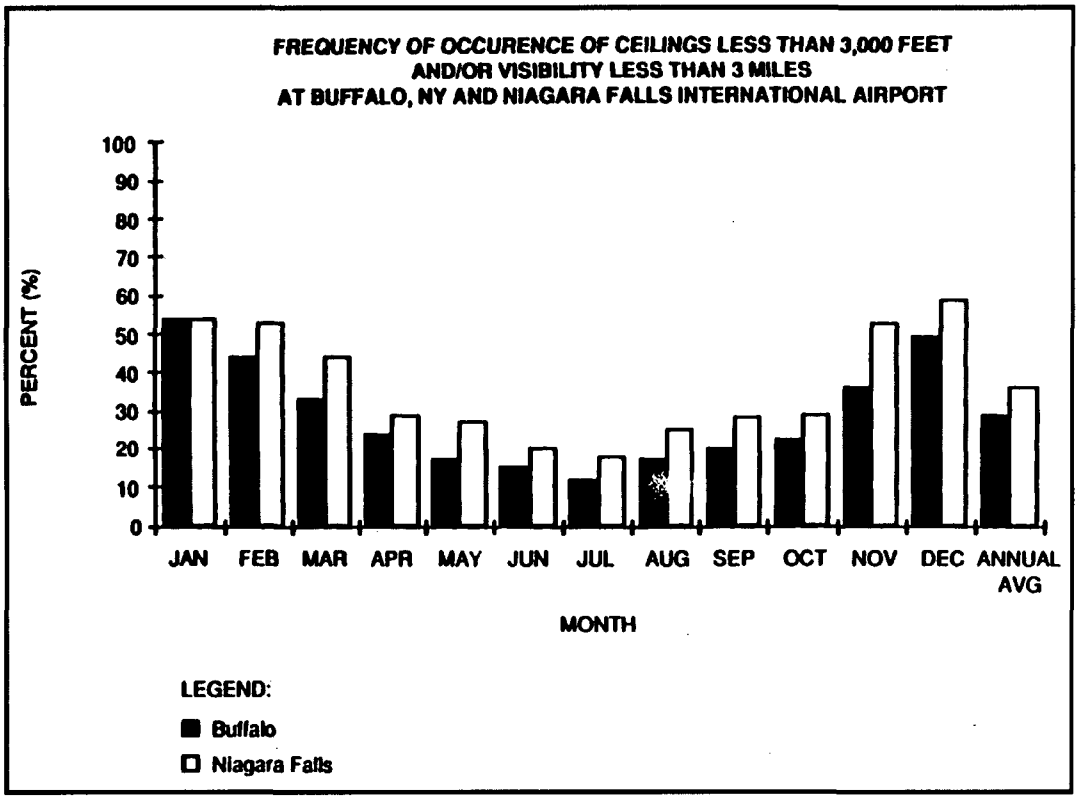


Figure 3-50. Cloud Ceiling Information (From reference 3-11)

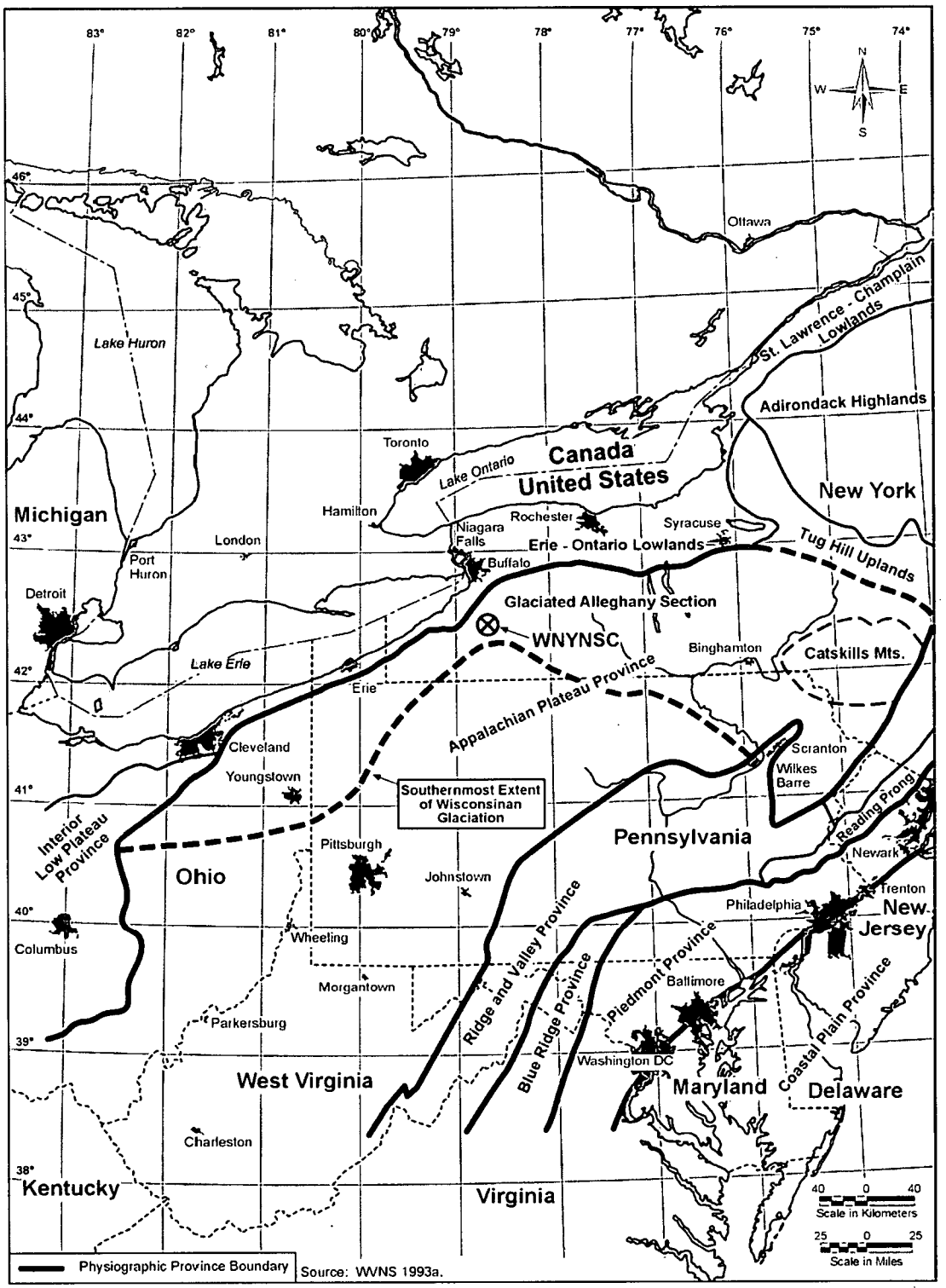


Figure 3-51. Regional Physiographic Map

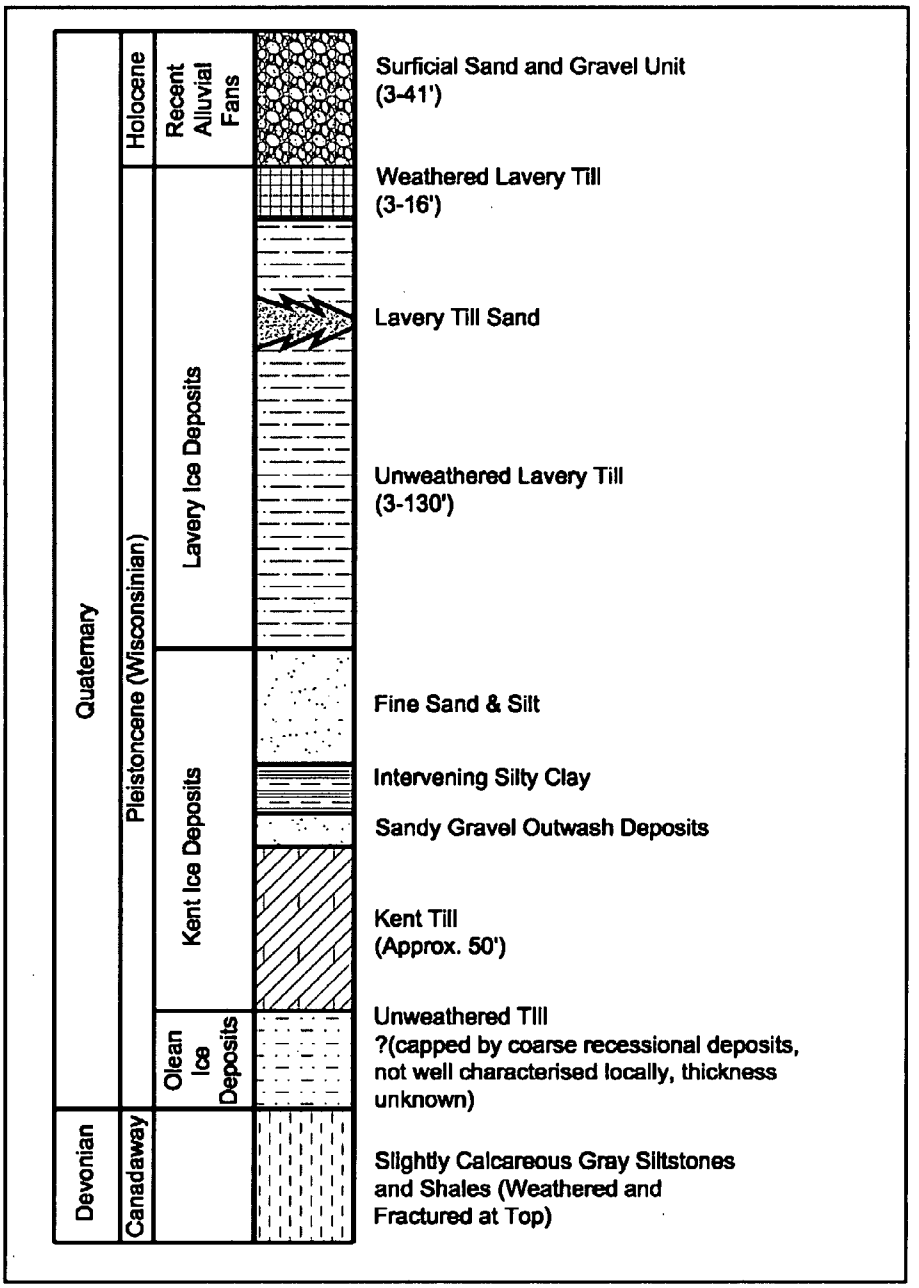


Figure 3-52. Bedrock and Glacial Stratigraphy of the WVDP

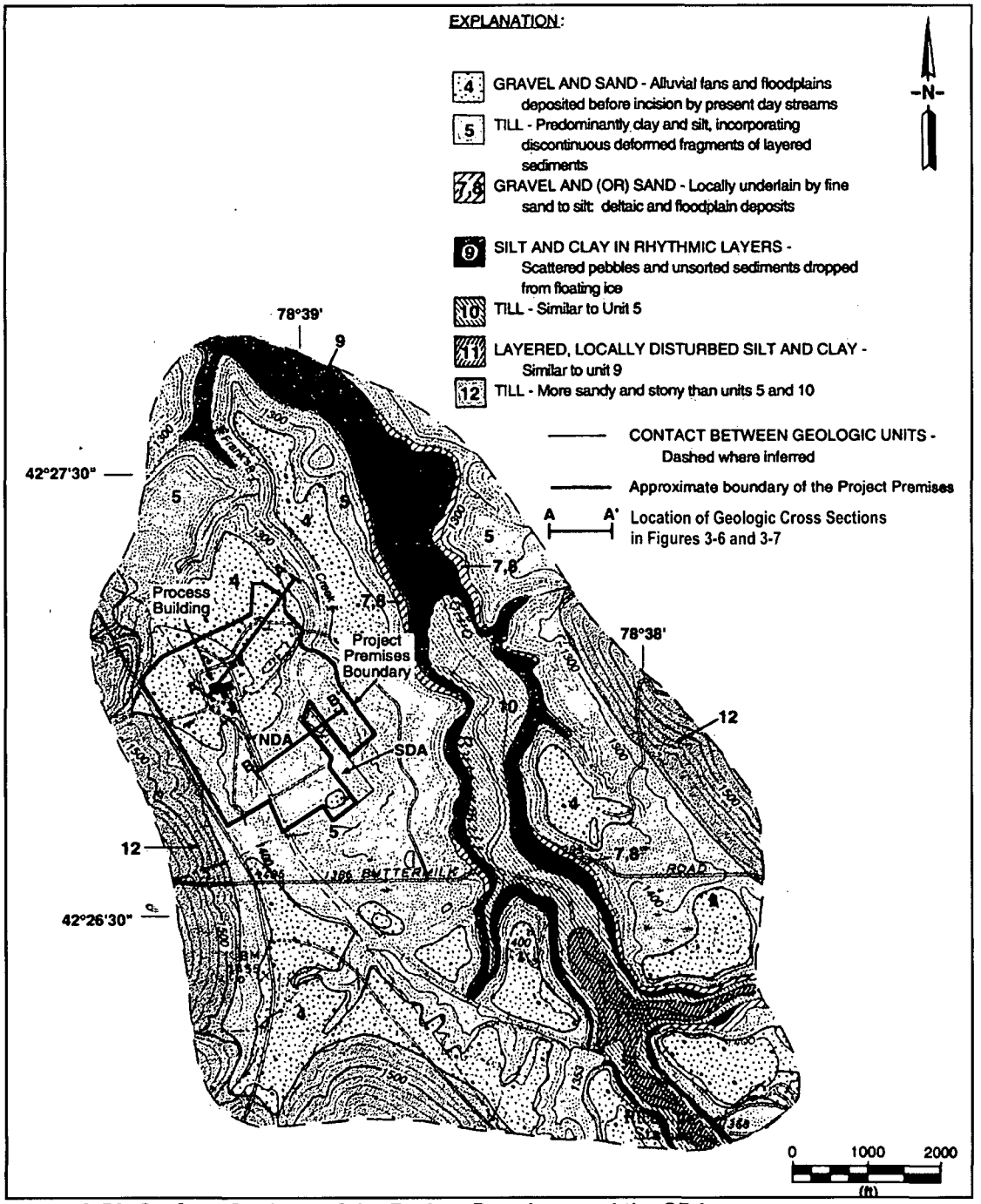


Figure 3-53. Surface Geology of the Project Premises and the SDA

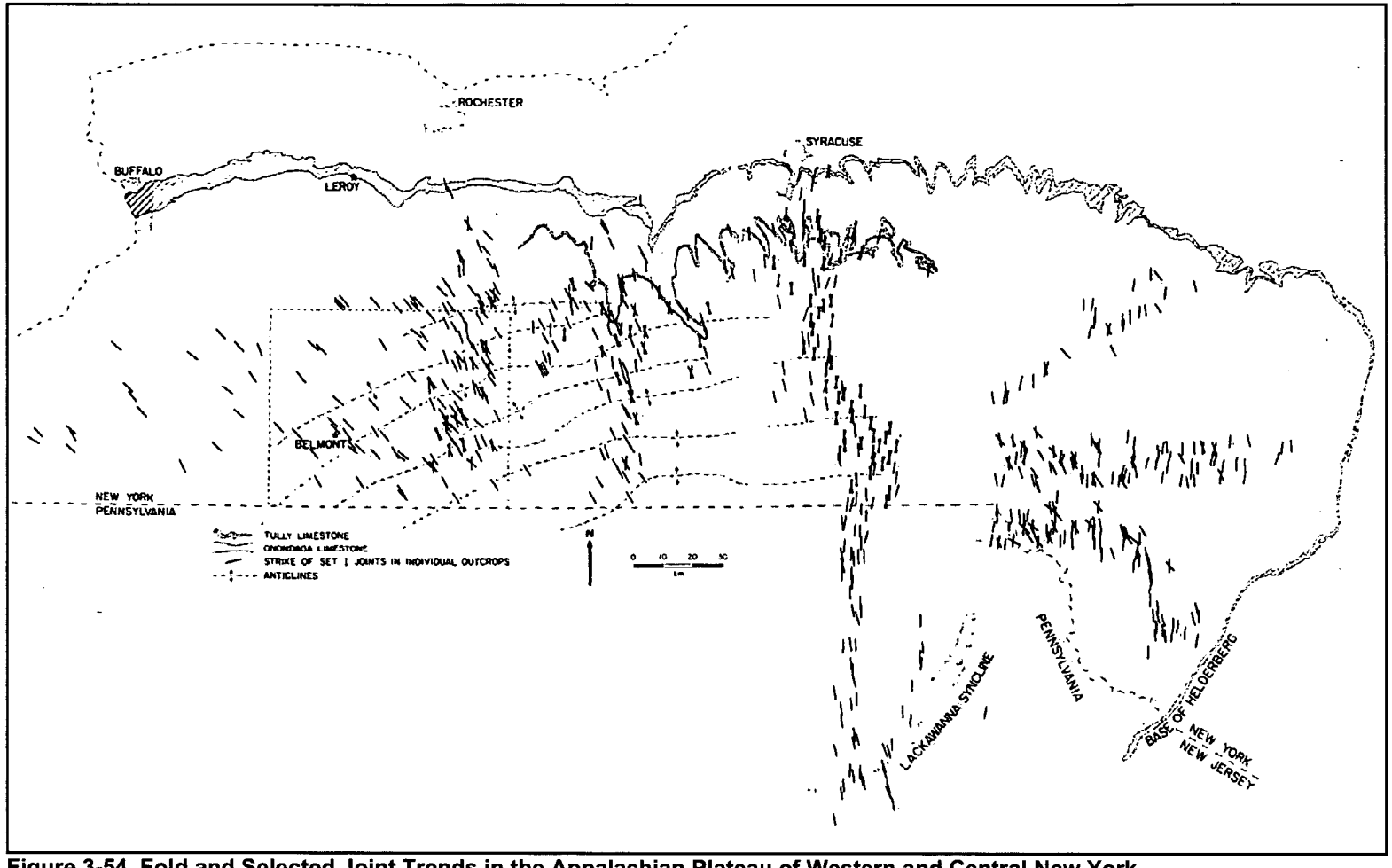


Figure 3-54. Fold and Selected Joint Trends in the Appalachian Plateau of Western and Central New York

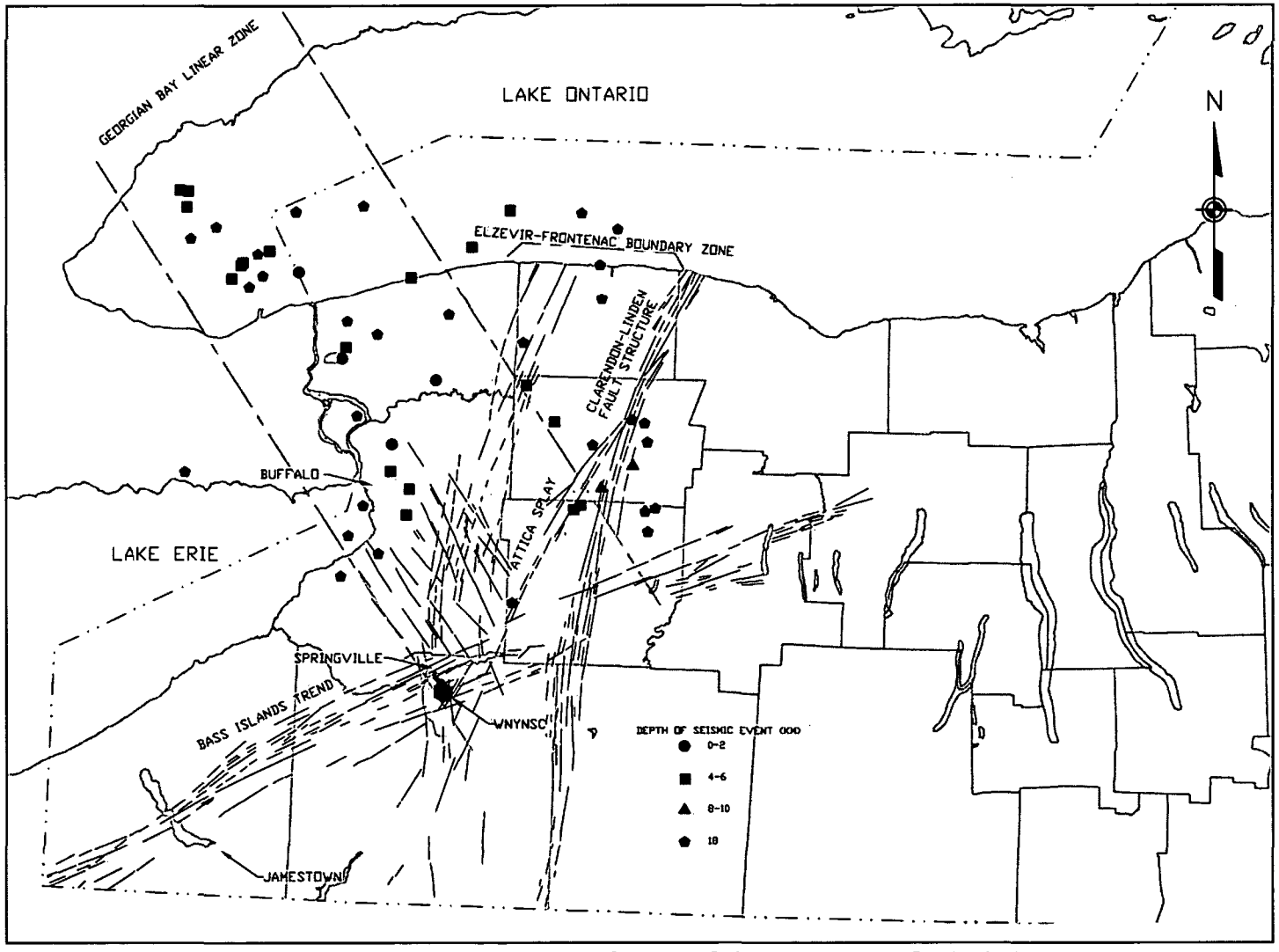


Figure 3-55. Seismo-Tectonic Map of Western New York Showing Selected Regional Geologic Structures

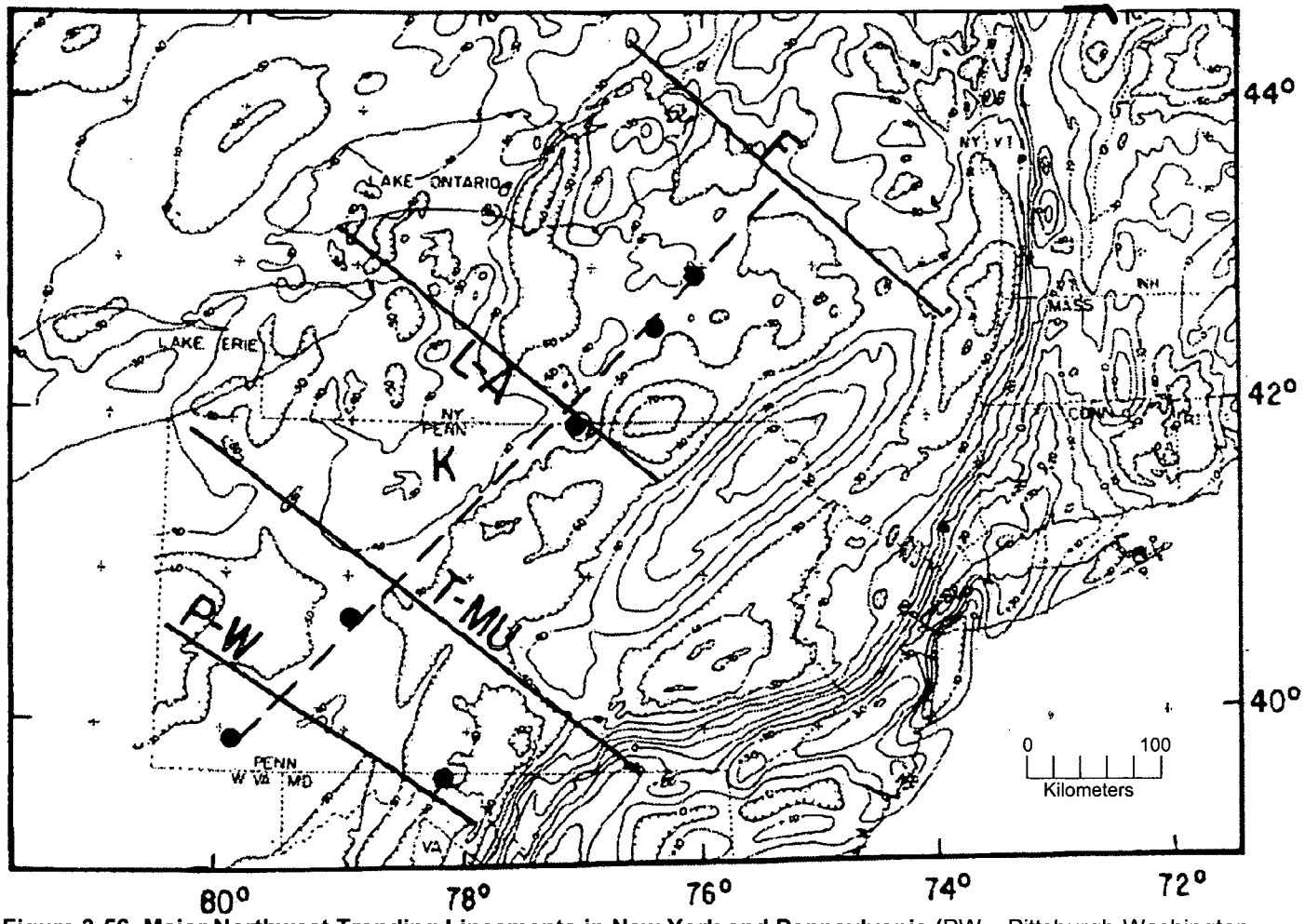


Figure 3-56. Major Northwest Trending Lineaments in New York and Pennsylvania (PW – Pittsburgh-Washington Lineament, T-MU – Tyrone-Mt. Union Lineament, L-A – Lawrenceville-Attica Lineament, F – F Lineament)

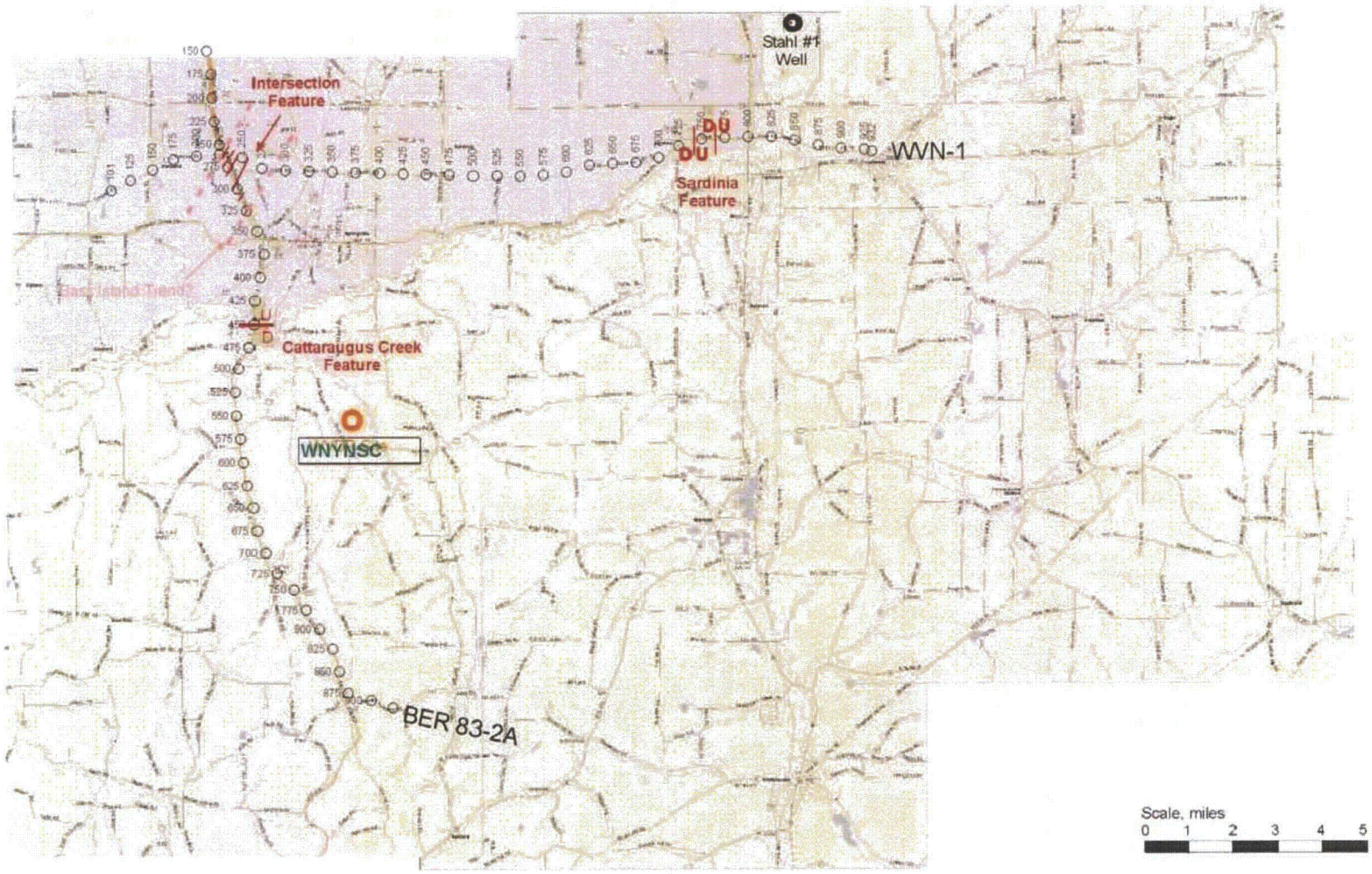


Figure 3-57. Location of Seismic Lines WVN1 and BER 83-2A

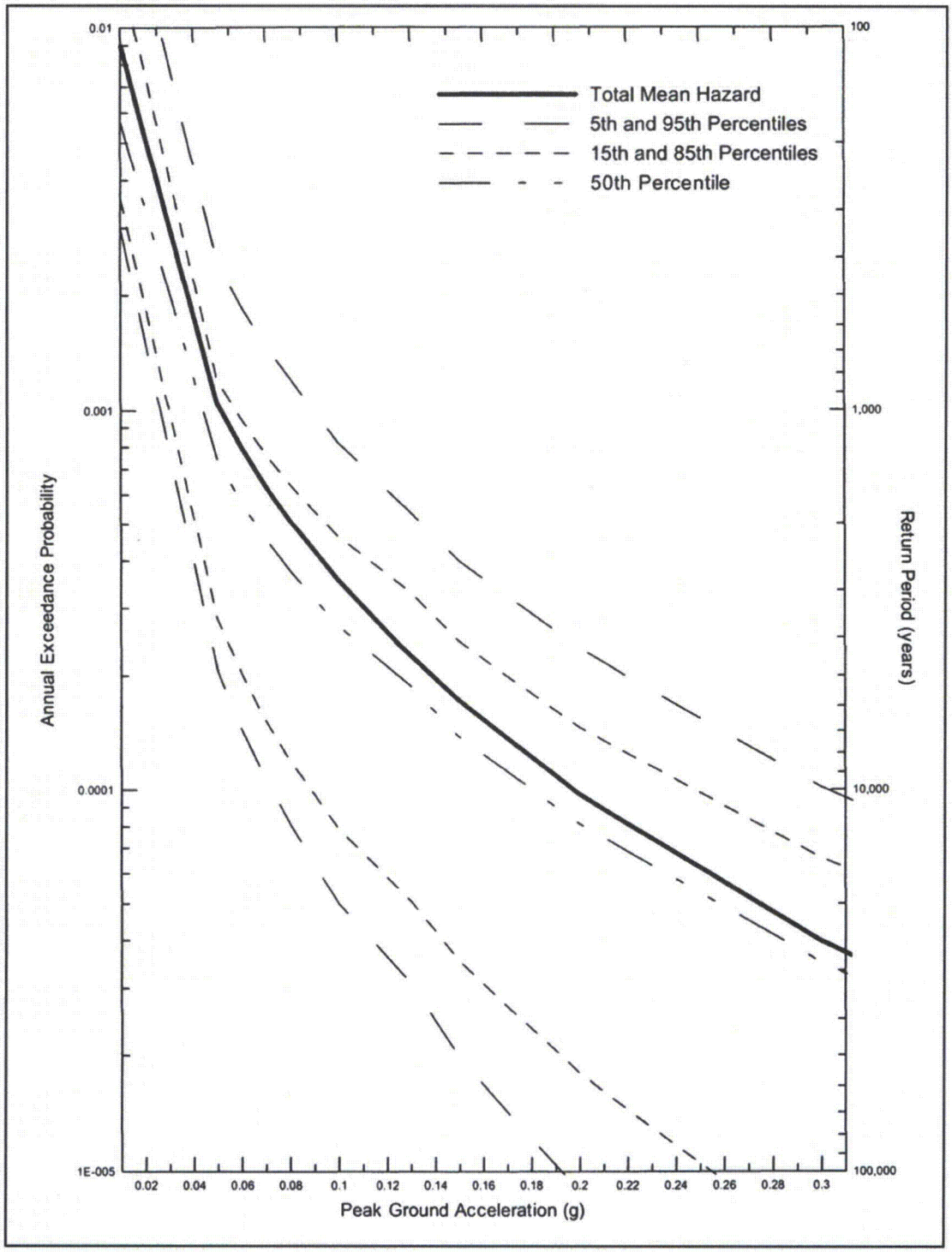


Figure 3-58. Seismic Hazard Curves for Peak Horizontal Acceleration

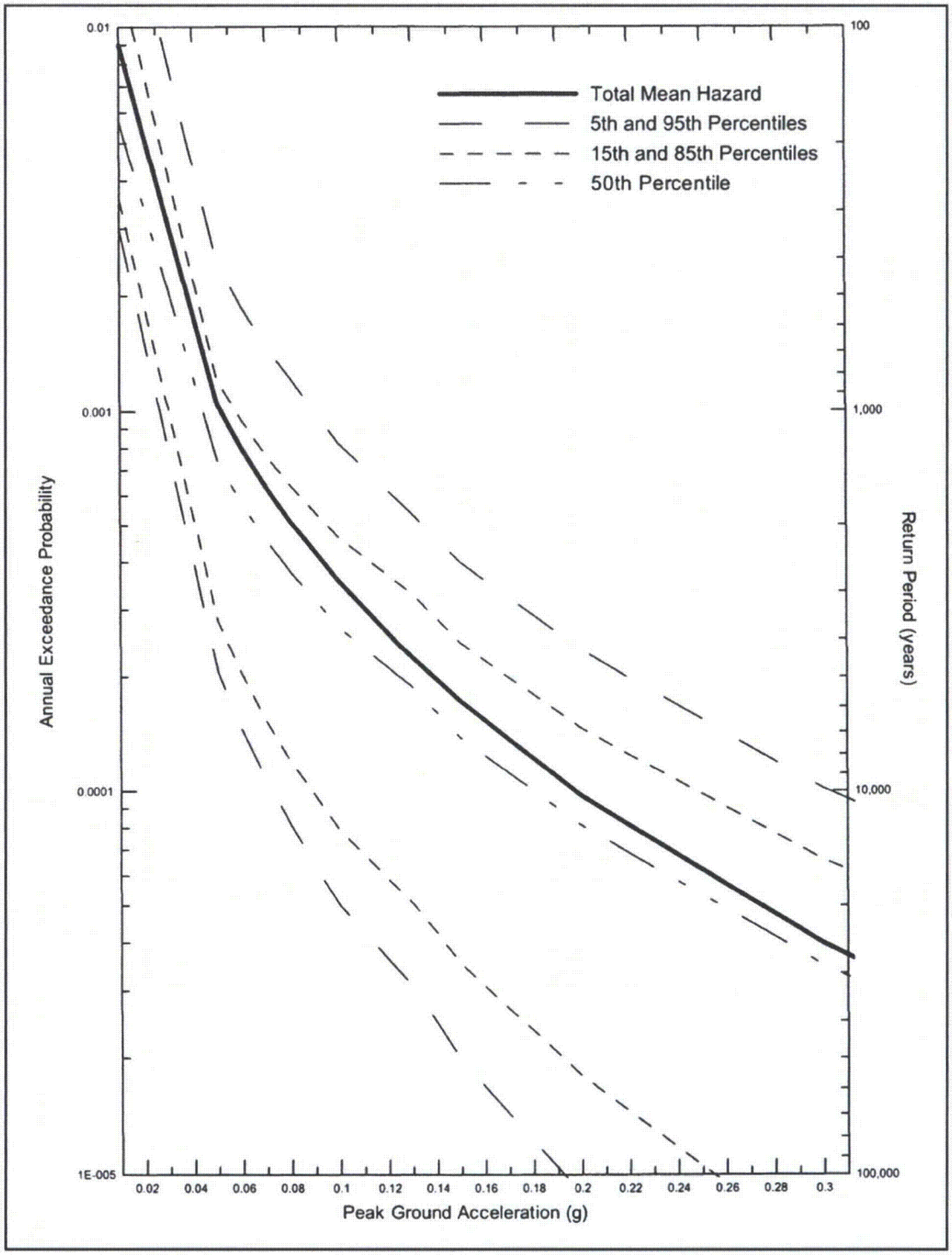


Figure 3-59. Seismic Hazard Curves for 1.0 Second Horizontal Spectral Acceleration

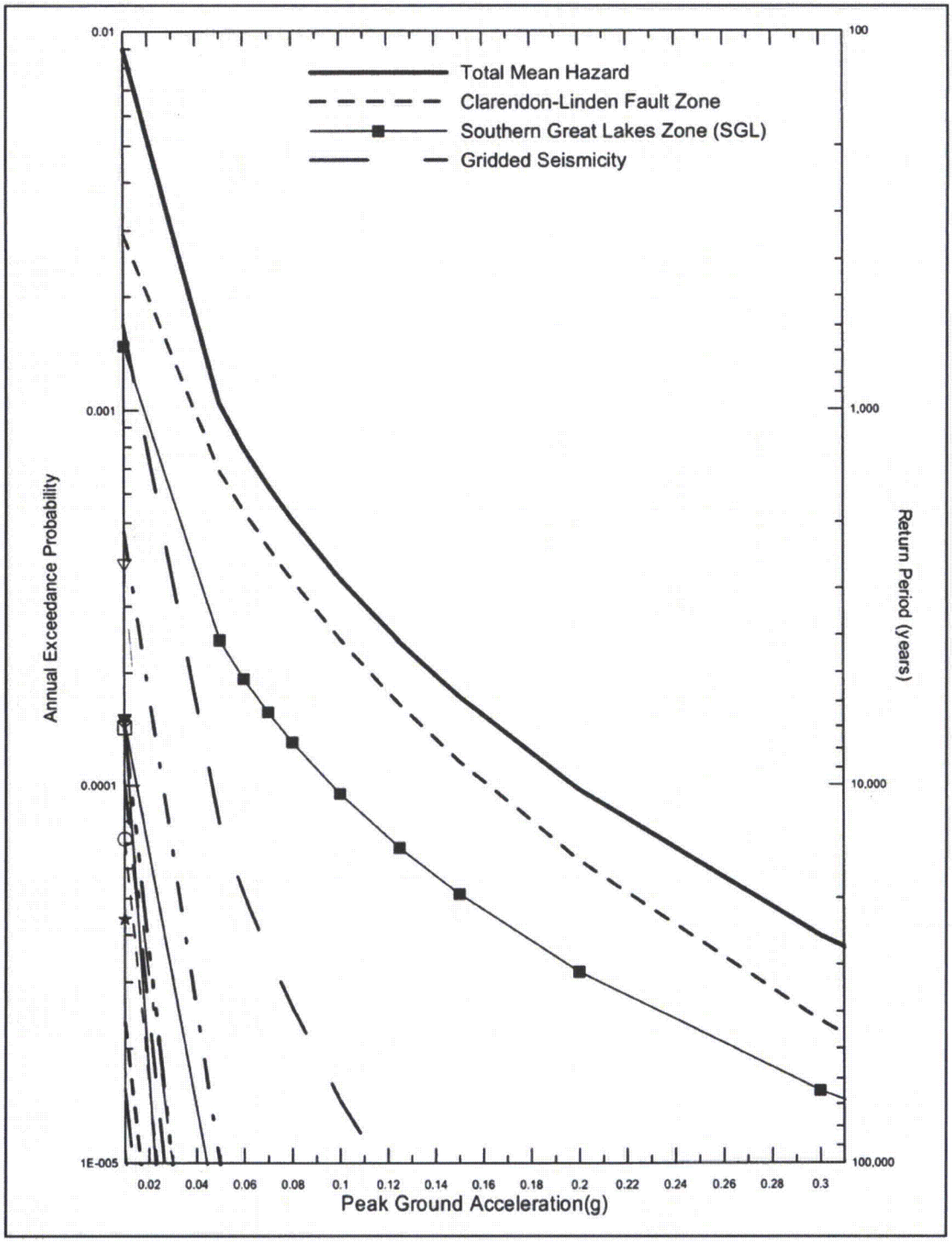


Figure 3-60. Seismic Source Contributions to Mean Peak Horizontal Acceleration Hazard

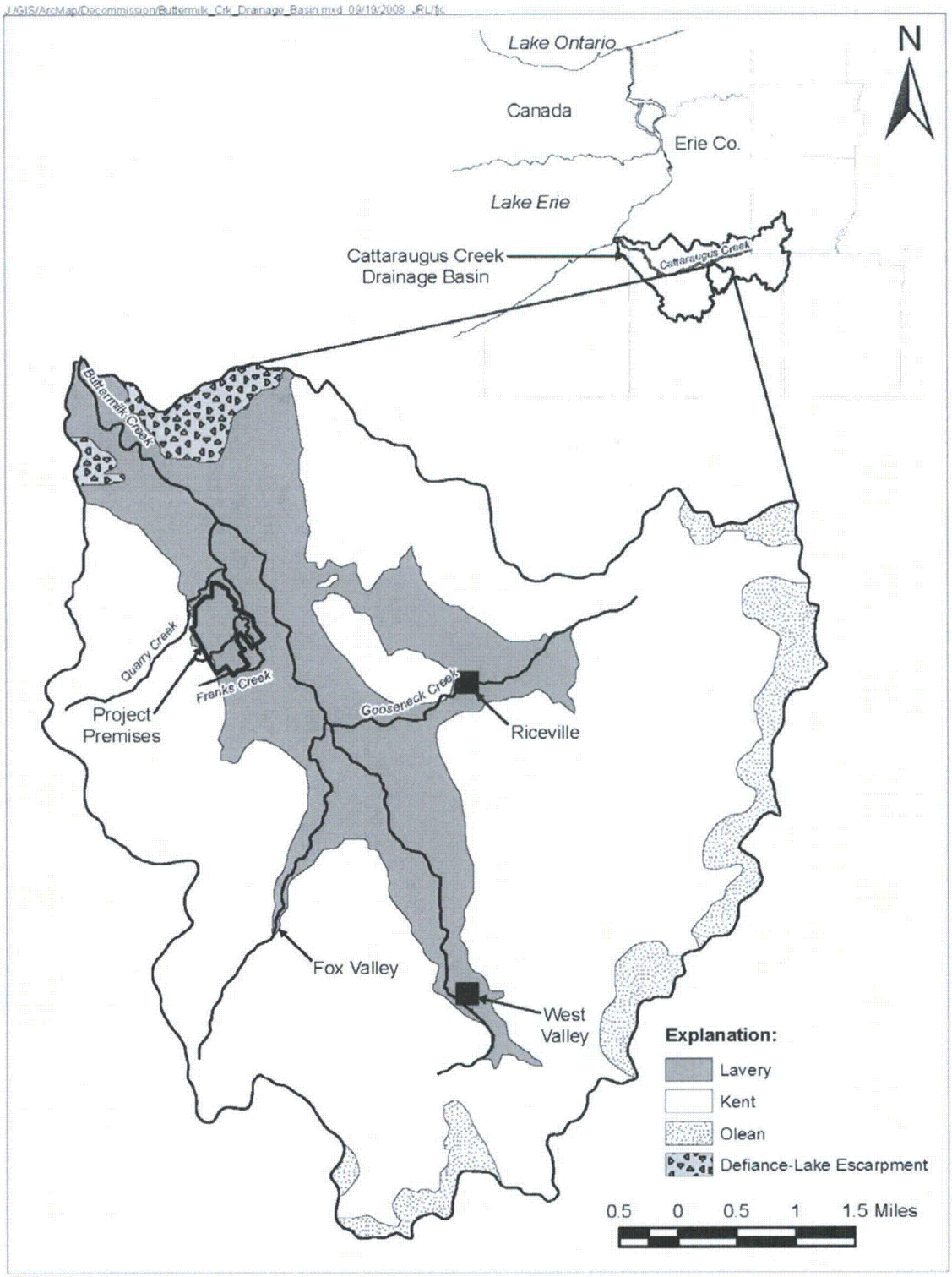


Figure 3-61. Buttermilk Creek Drainage Basin

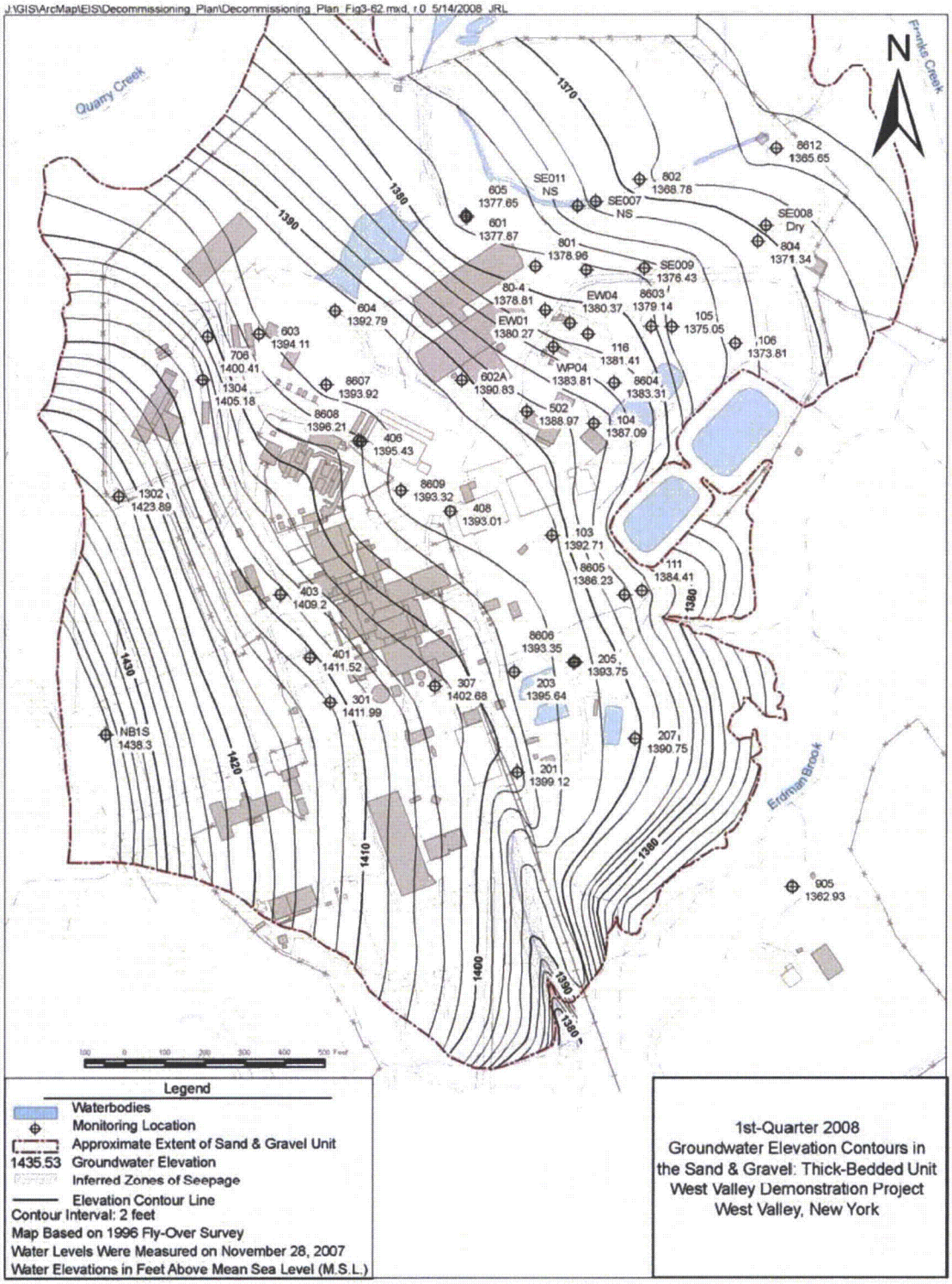


Figure 3-62. Groundwater Elevation Contours of the Sand and Gravel Unit, First Quarter 2008

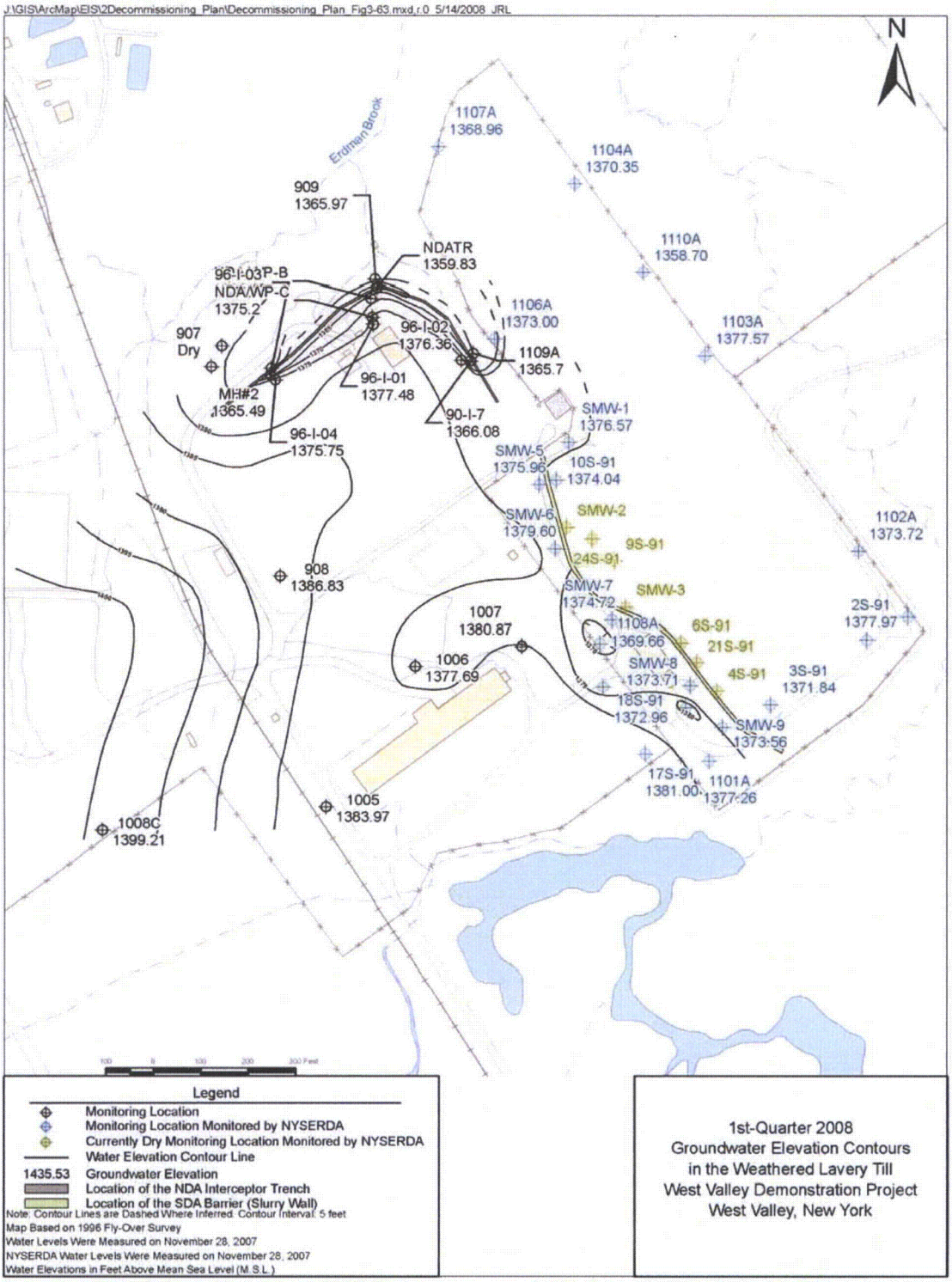


Figure 3-63. Groundwater Elevation Contours of the Weathered Lavery Till, First Quarter 2008

Figure 3-64. Groundwater Elevation Contours of the Lavery Till Sand, First Quarter 2008

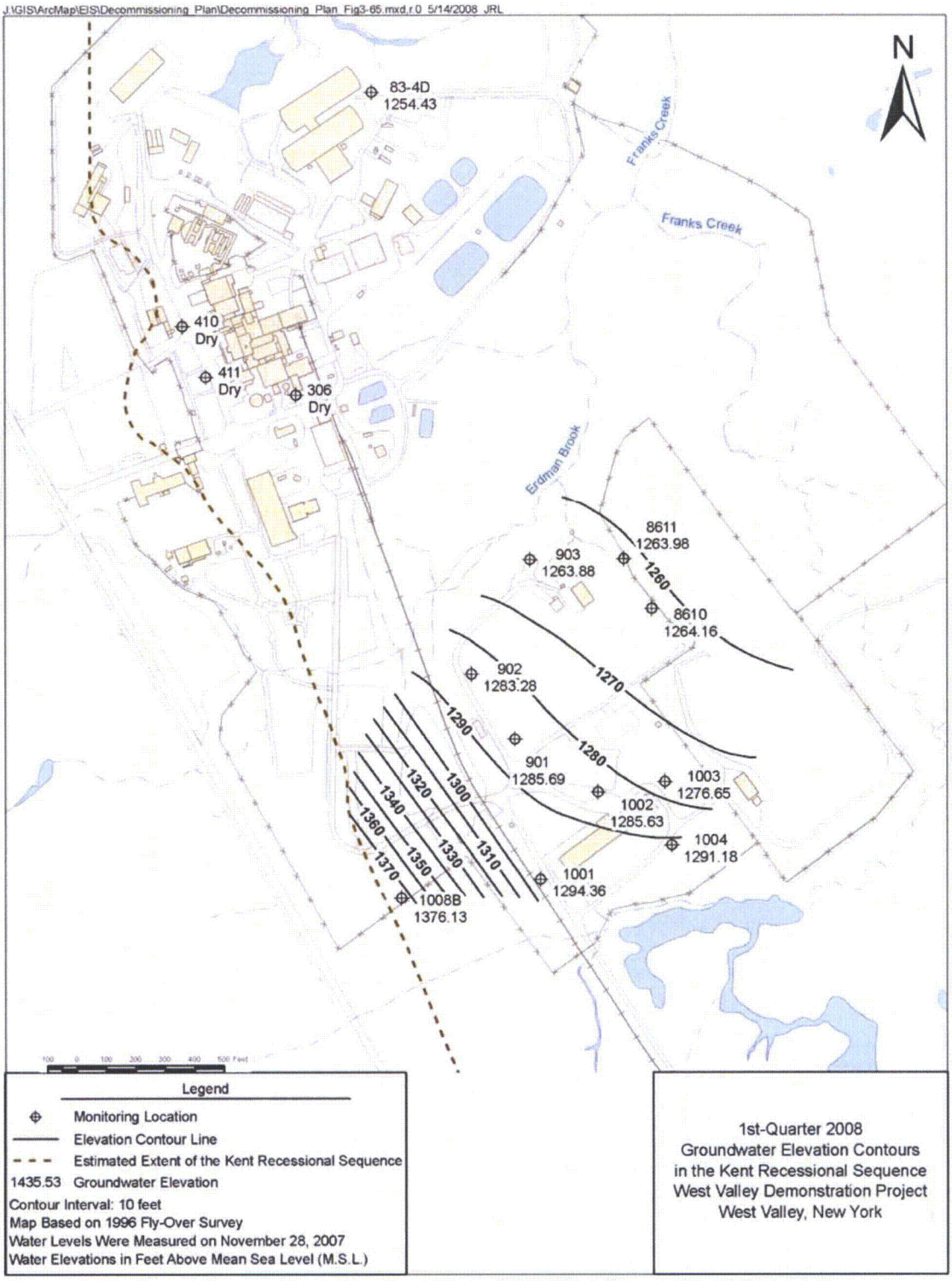


Figure 3-65. Groundwater Elevation Contours of the Kent Recessional Sequence, First Quarter 2008

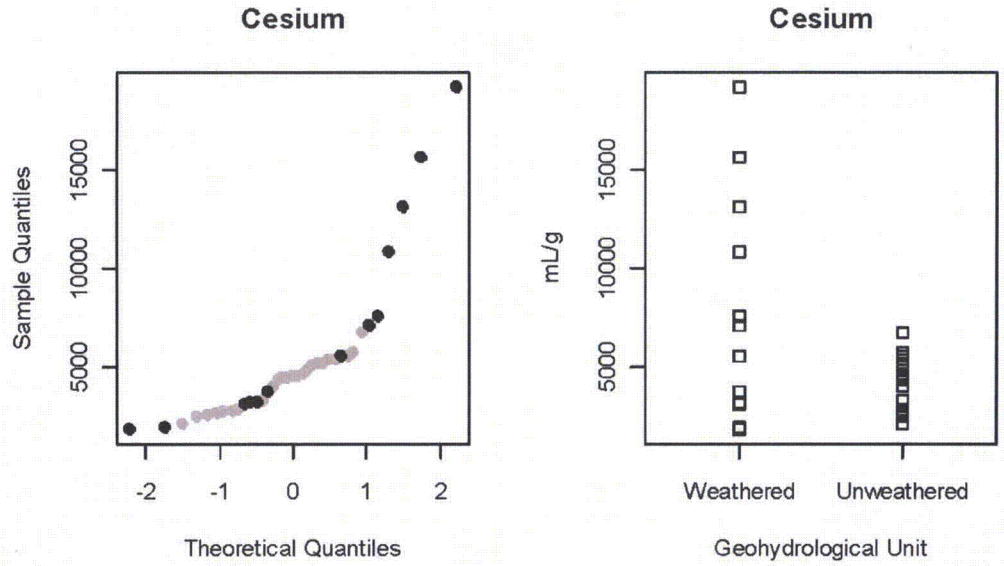


Figure 3-66. Vertical Distribution of Cesium K_d in the Weathered and Unweathered Tills (WVNSCO 1993a)

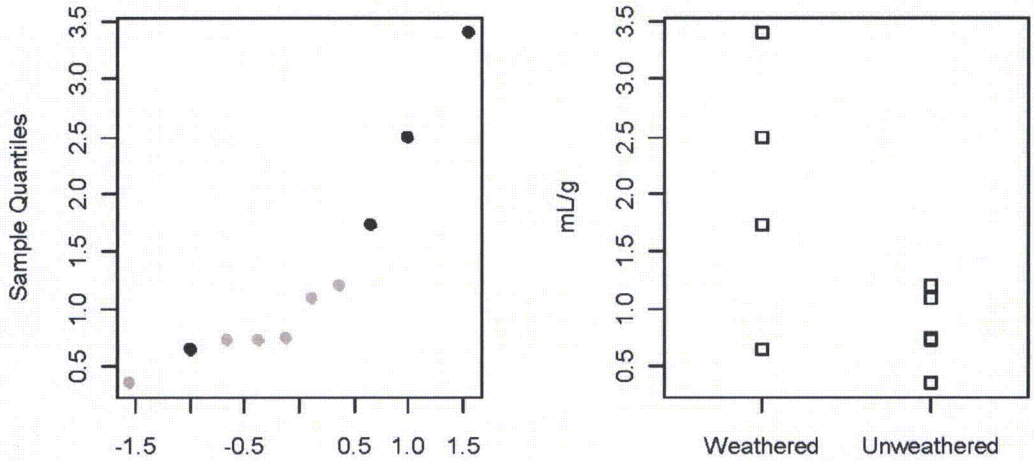


Figure 3-67. Vertical Distribution of Iodine K_d in the Weathered and Unweathered Tills (WVNSCO 1993a)

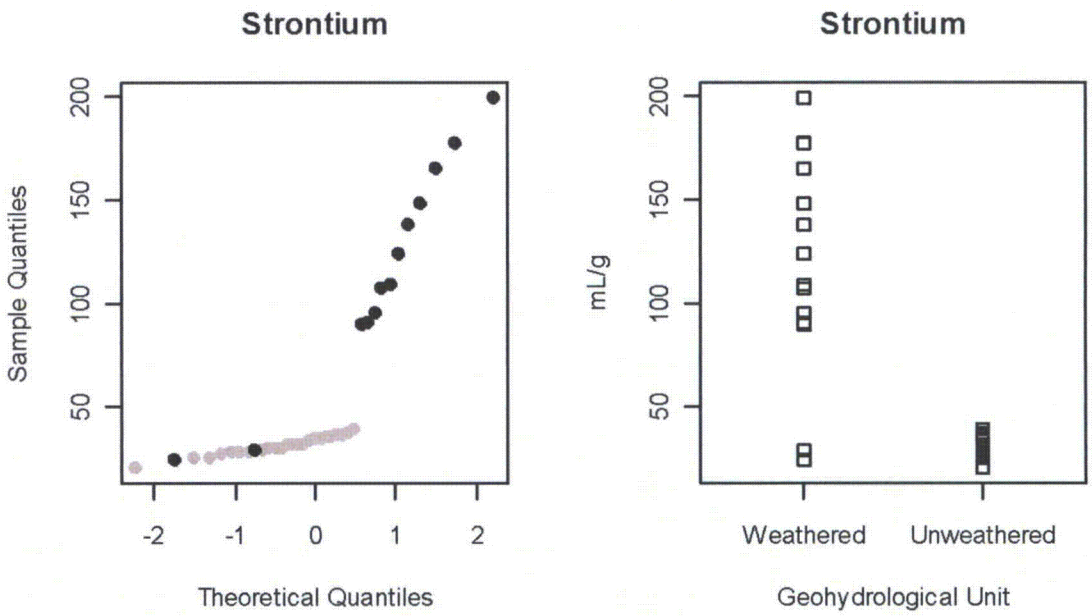


Figure 3-68. Vertical Distribution of Strontium K_d in the Weathered and Unweathered Tills (WVNSCO 1993a)

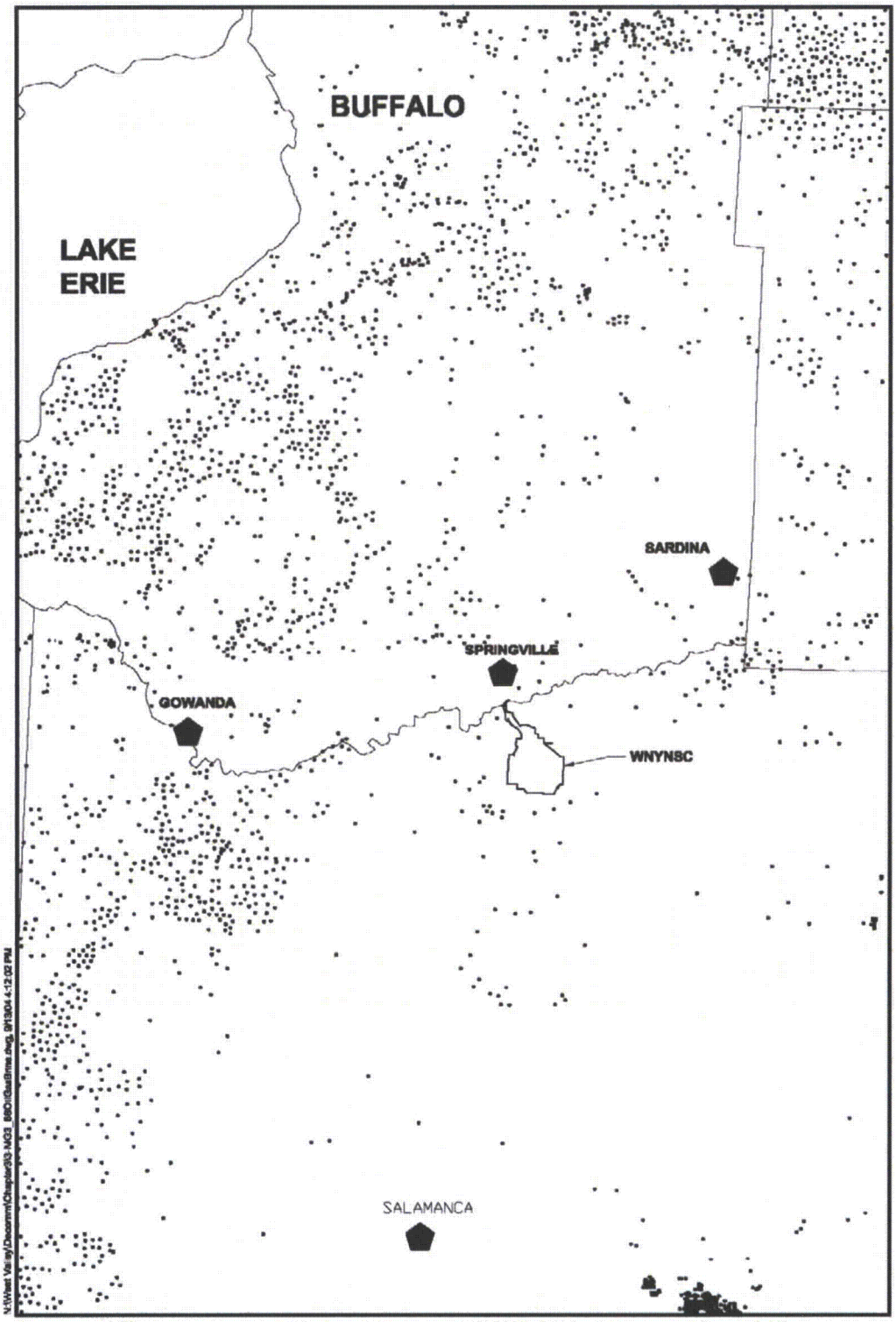


Figure 3-69. Locations of Natural Gas and Oil Wells in Western New York

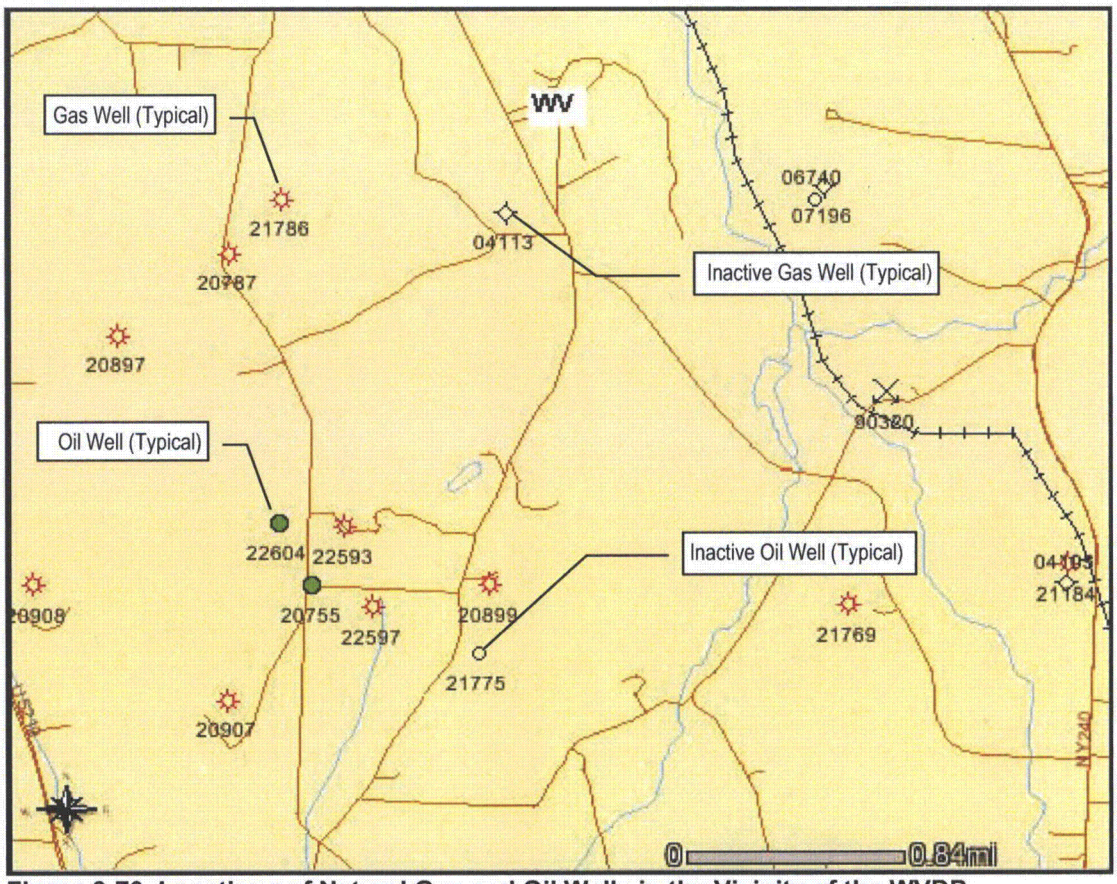


Figure 3-70. Locations of Natural Gas and Oil Wells in the Vicinity of the WVDP

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