

Figure 6-22. Scenario *recirc\_uaz\_centerA* TCE Concentrations at Simulation Time of 15 Years

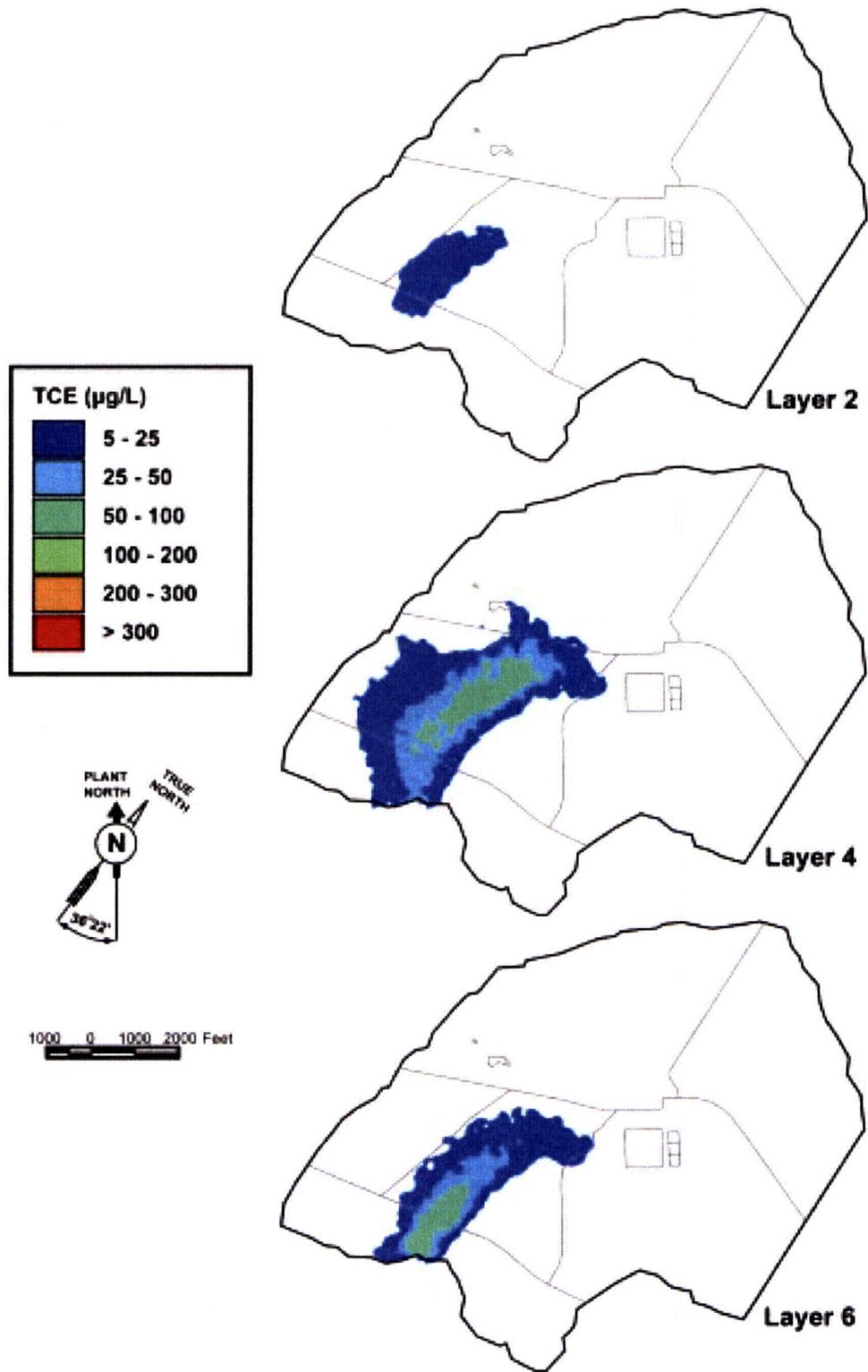


Figure 6-23. Scenario *recirc\_uaz\_fence2A* TCE Concentrations at Simulation Time of 15 Years

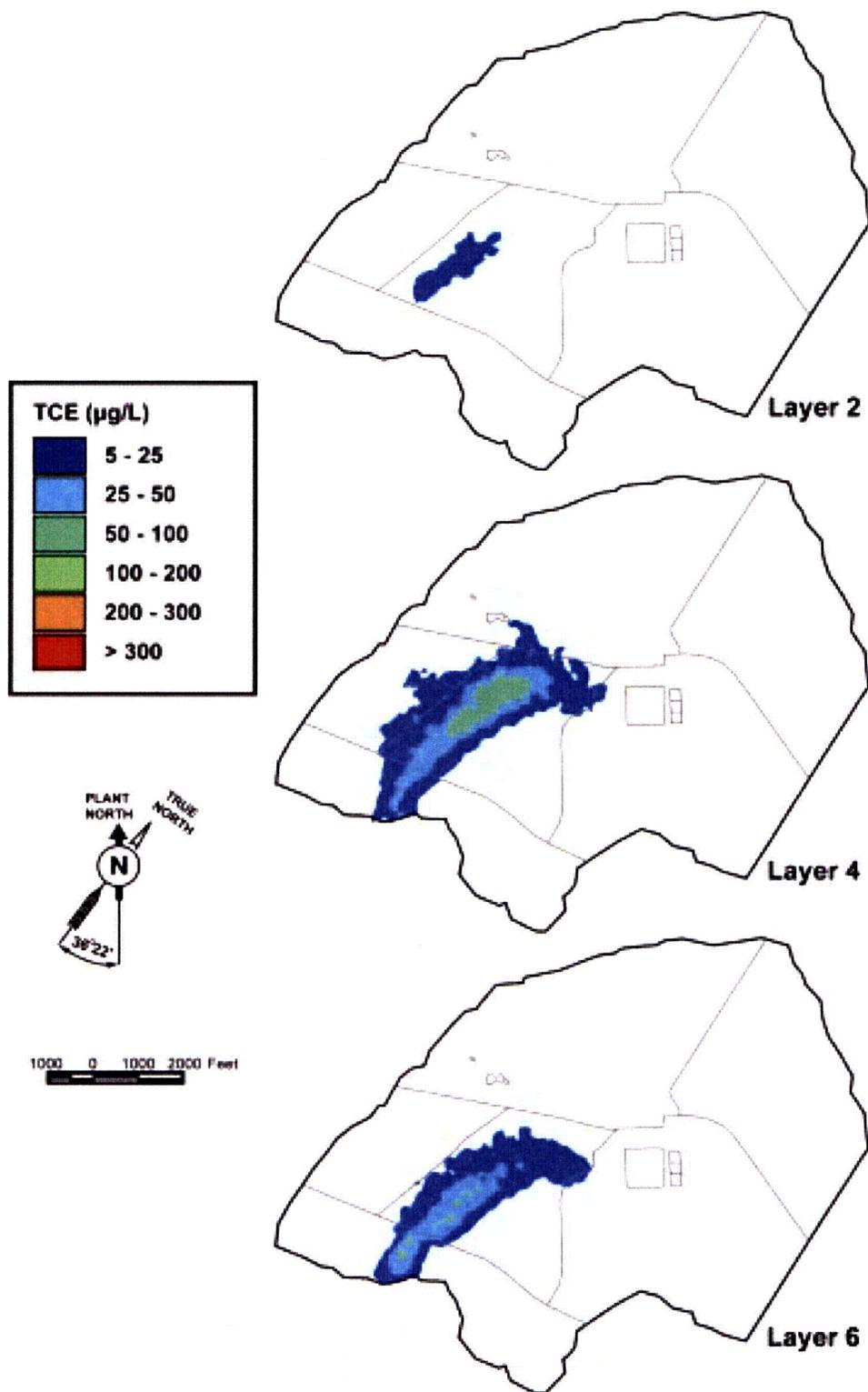


Figure 6-24. Scenario *phyto\_recirc1A* TCE Concentrations at Simulation Time of 15 Years

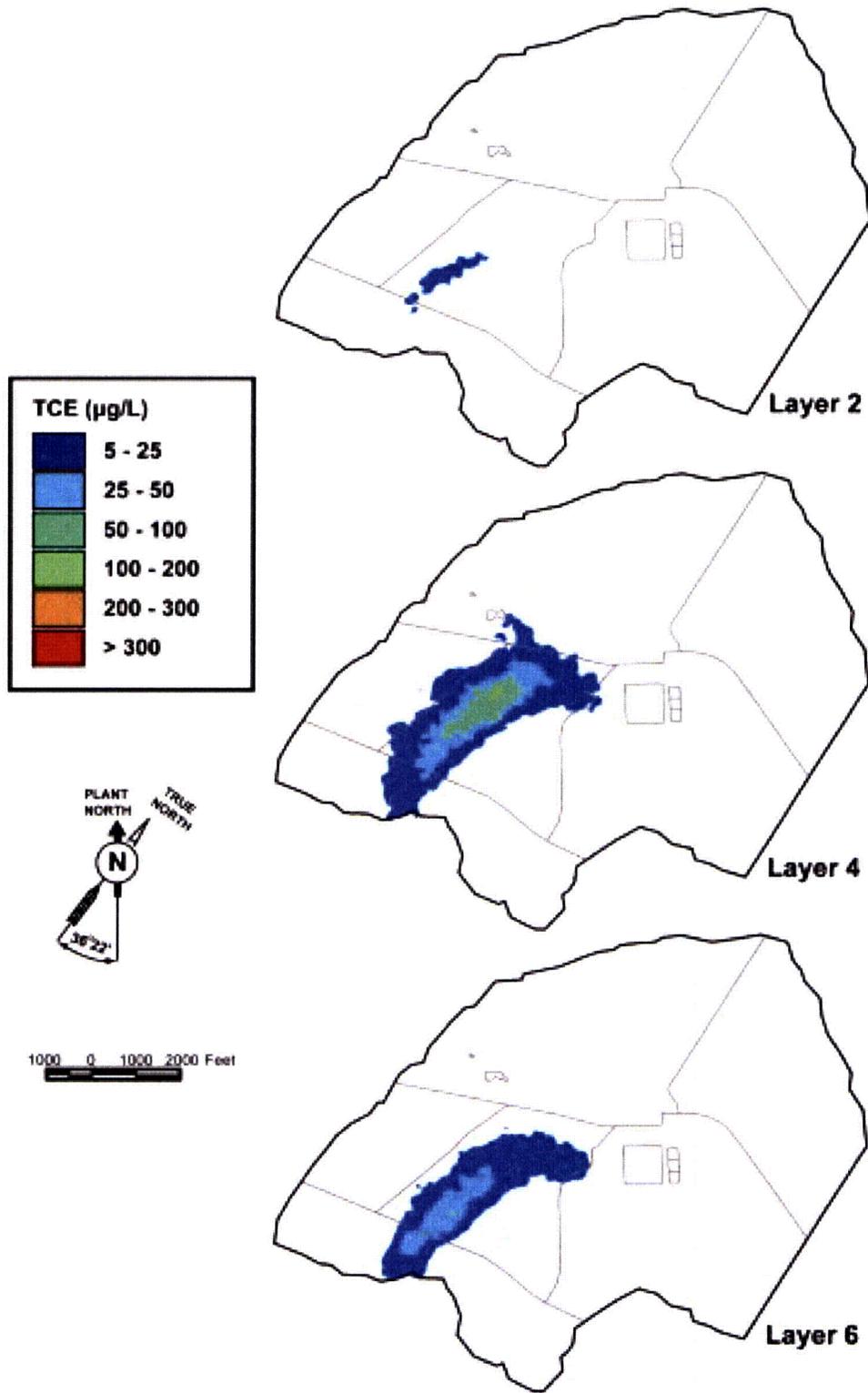


Figure 6-25. Scenario *phyto\_recirc2A* TCE Concentrations at Simulation Time of 15 Years

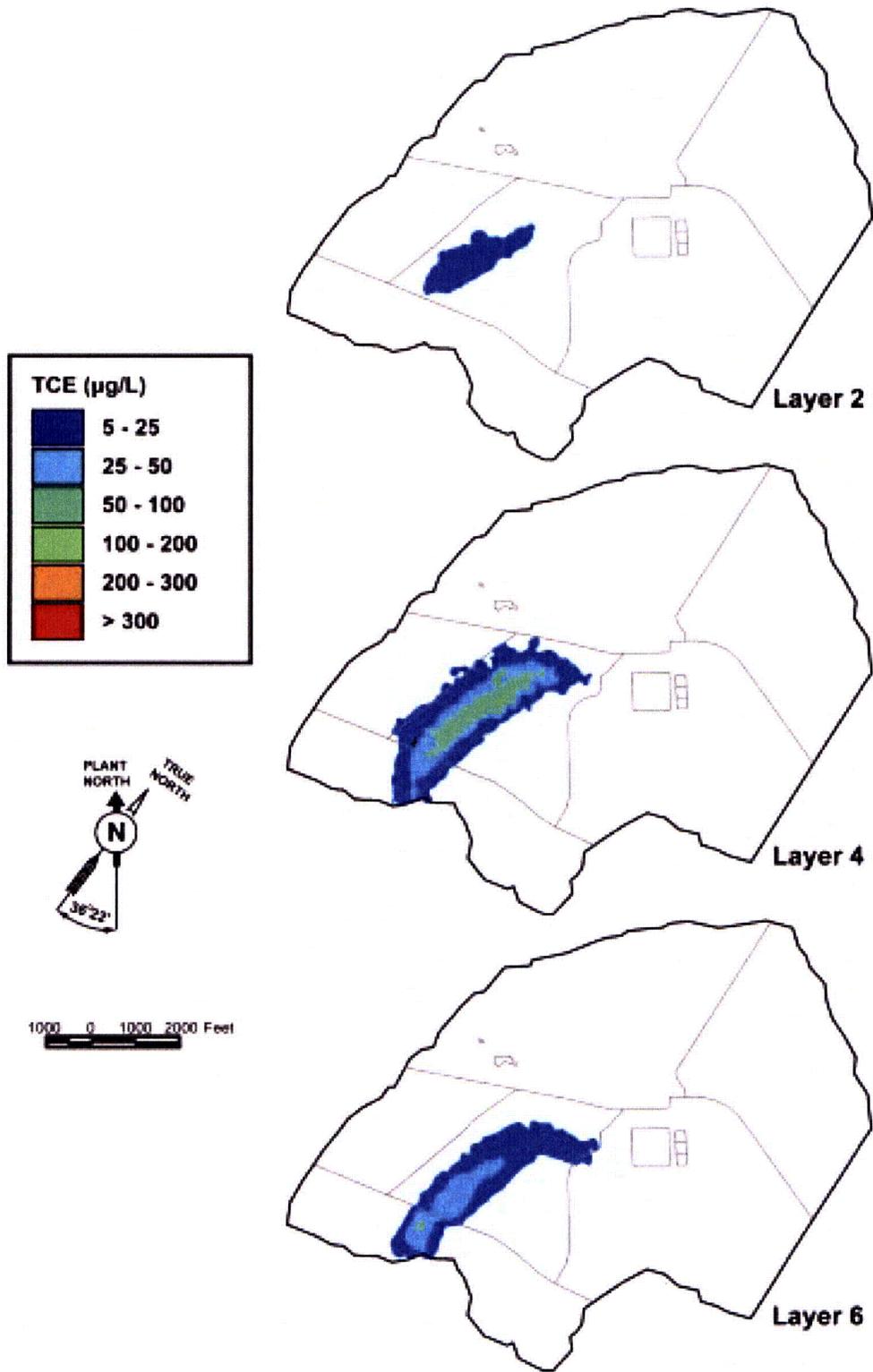


Figure 6-26. Scenario *phyto\_comboA* TCE Concentrations at Simulation Time of 15 Years

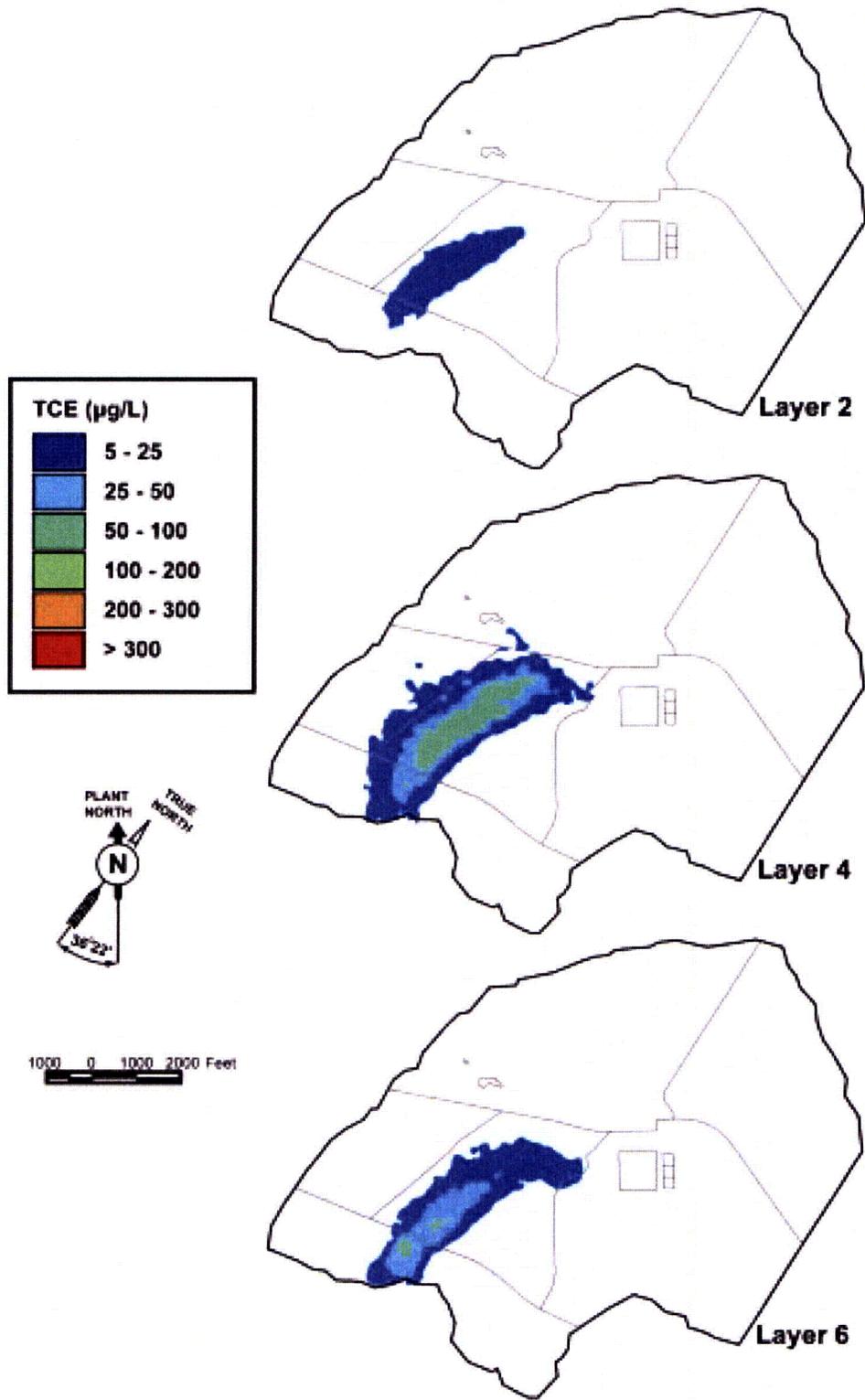


Figure 6-27. Scenario *phyto\_combo2A* TCE Concentrations at Simulation Time of 15 Years

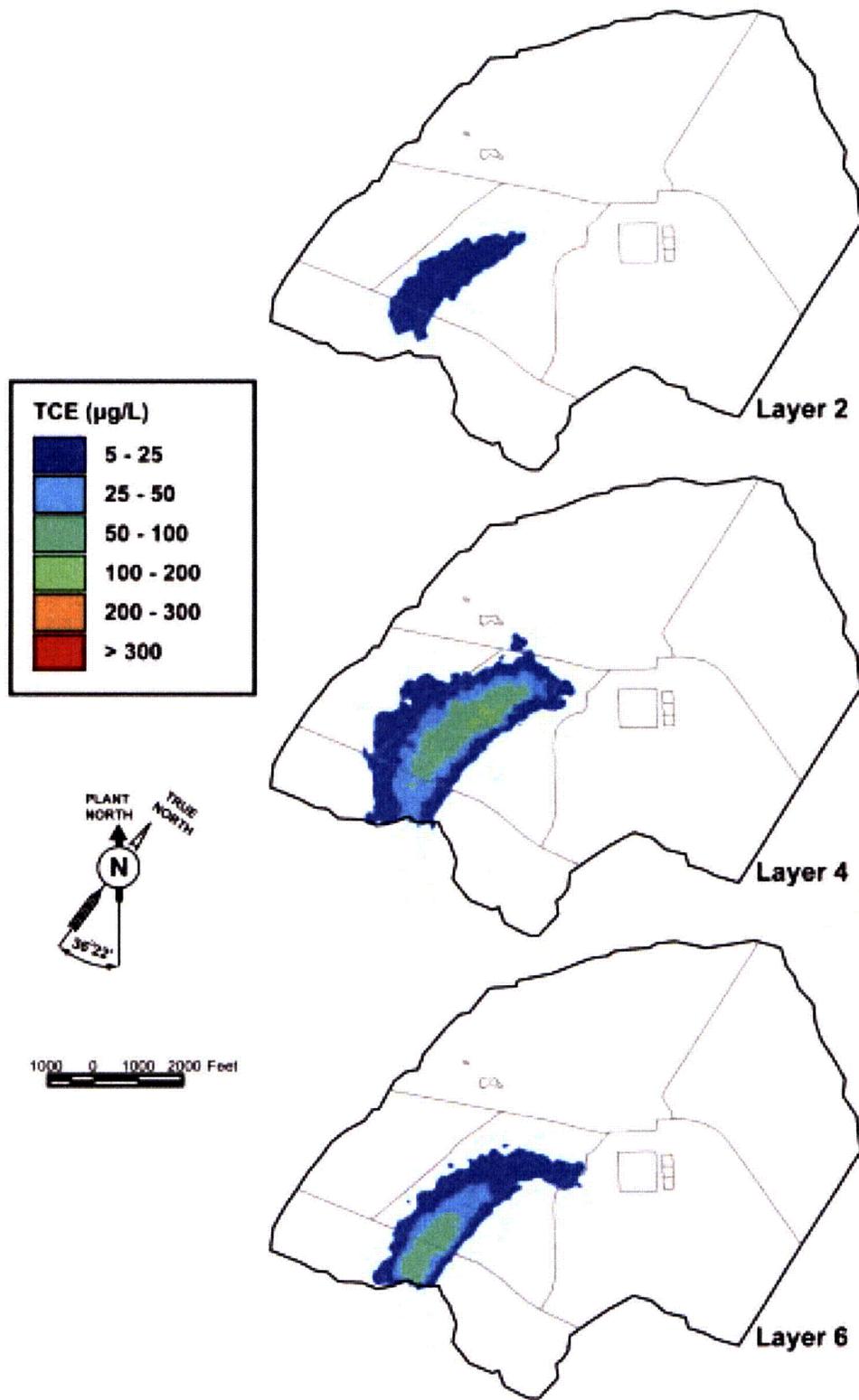


Figure 6-28. Scenario *phyto\_L1L2\_fenceA* TCE Concentrations at Simulation Time of 15 Years

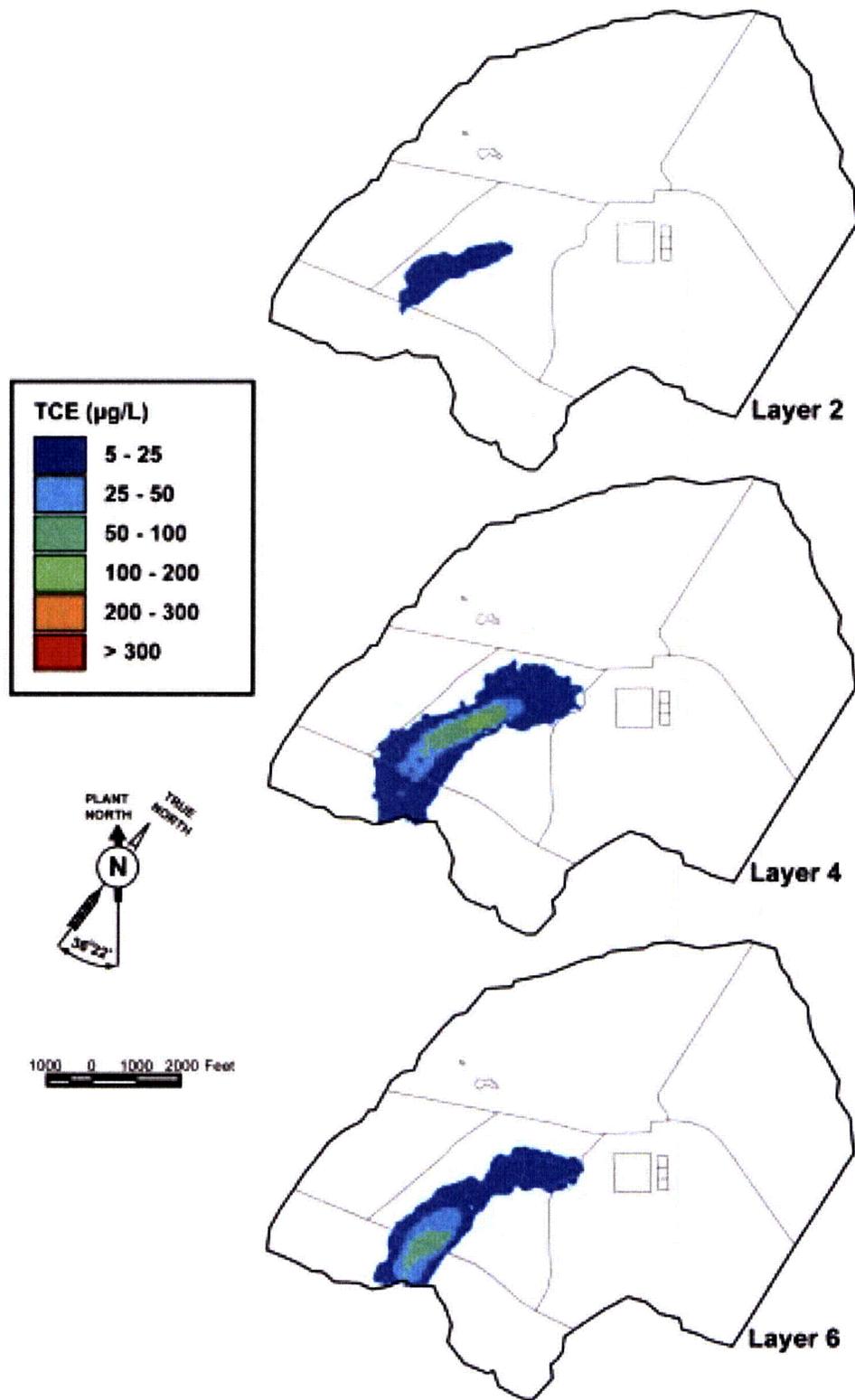


Figure 6-29. Scenario *phyto\_L2L4\_centerA* TCE Concentrations at Simulation Time of 15 Years

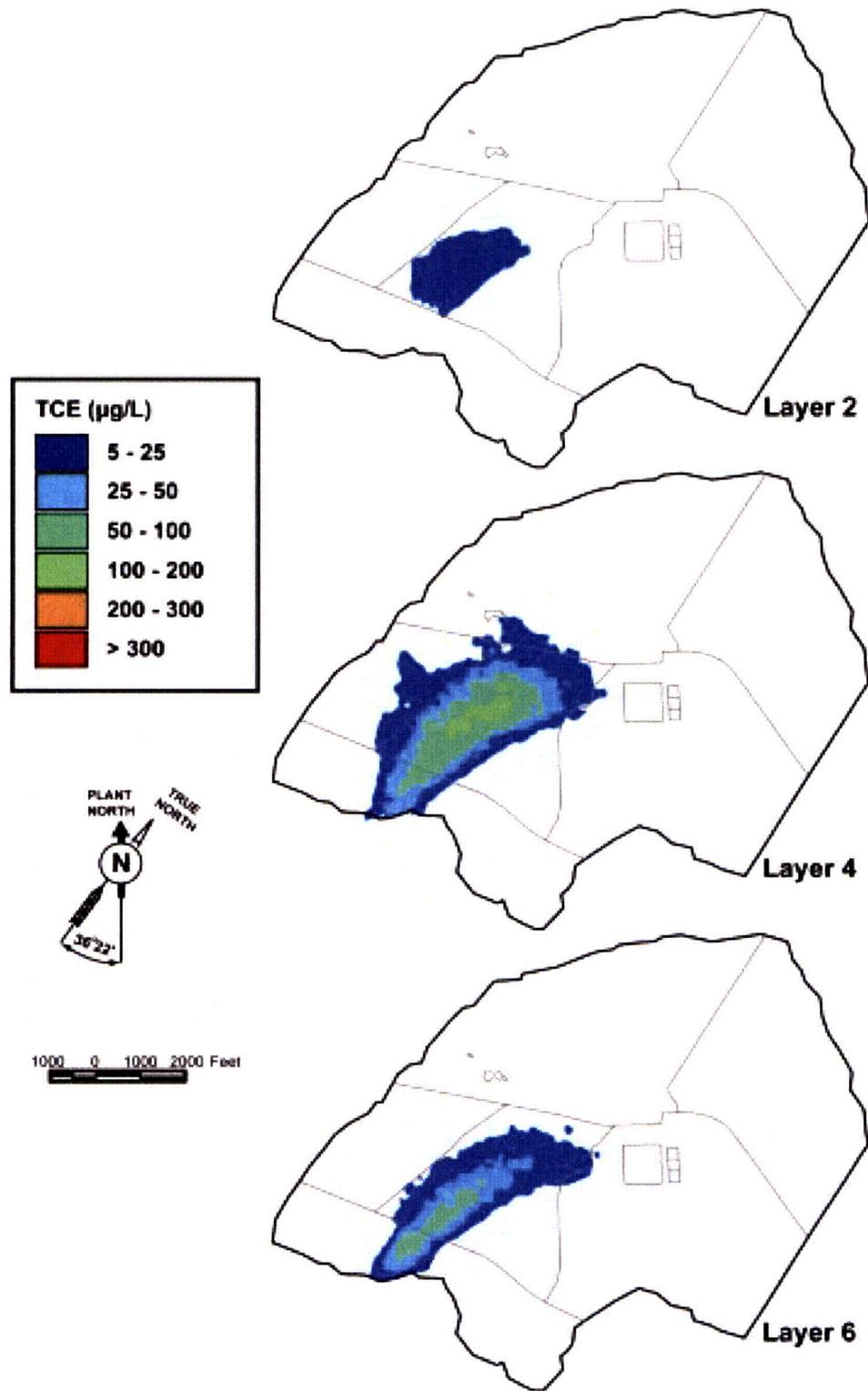


Figure 6-30. Scenario *phyto\_L4L6\_edgeA* TCE Concentrations at Simulation Time of 15 Years

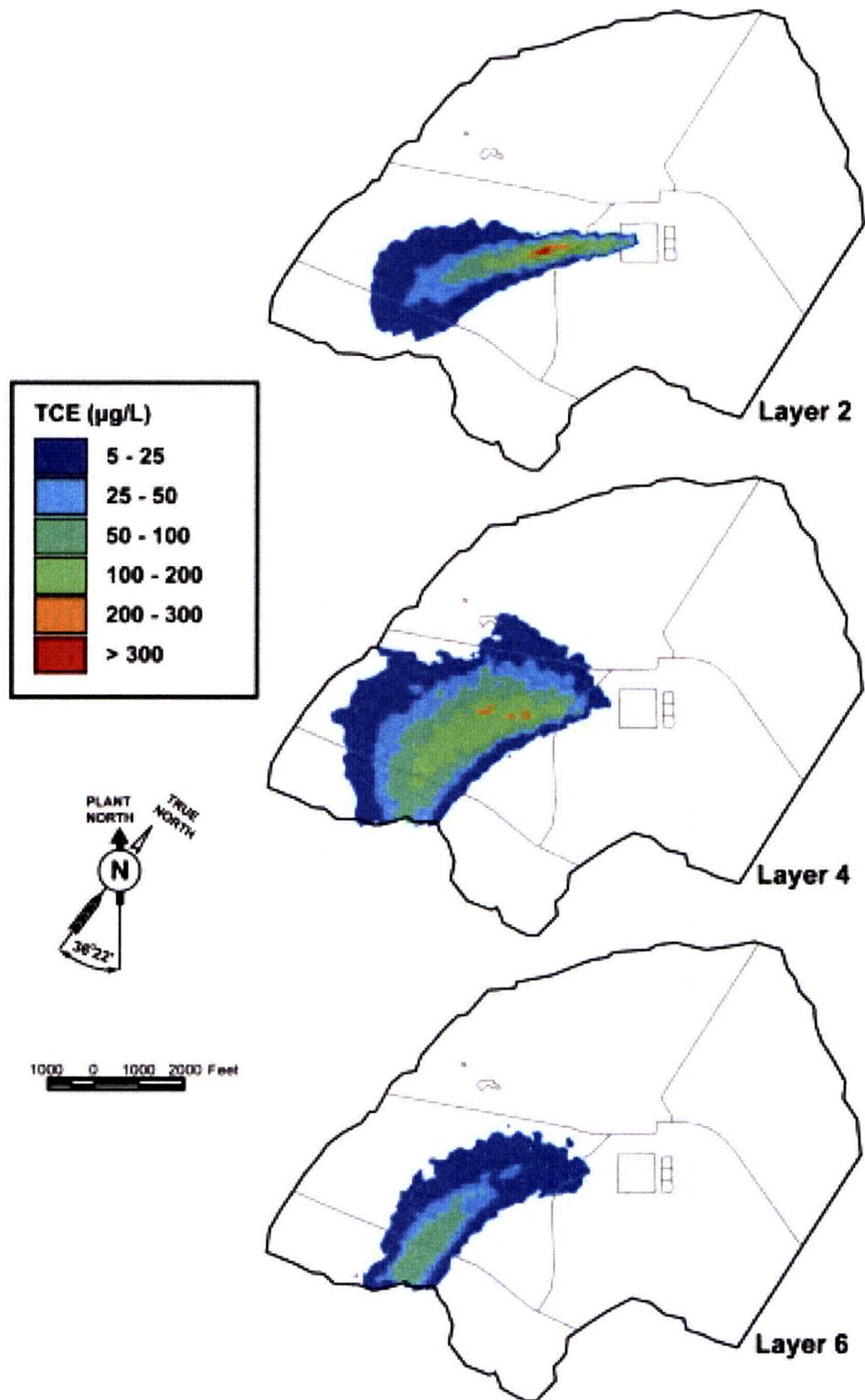


Figure 6-31. Scenario *BaserunB* TCE Concentrations at Simulation Time of 15 Years

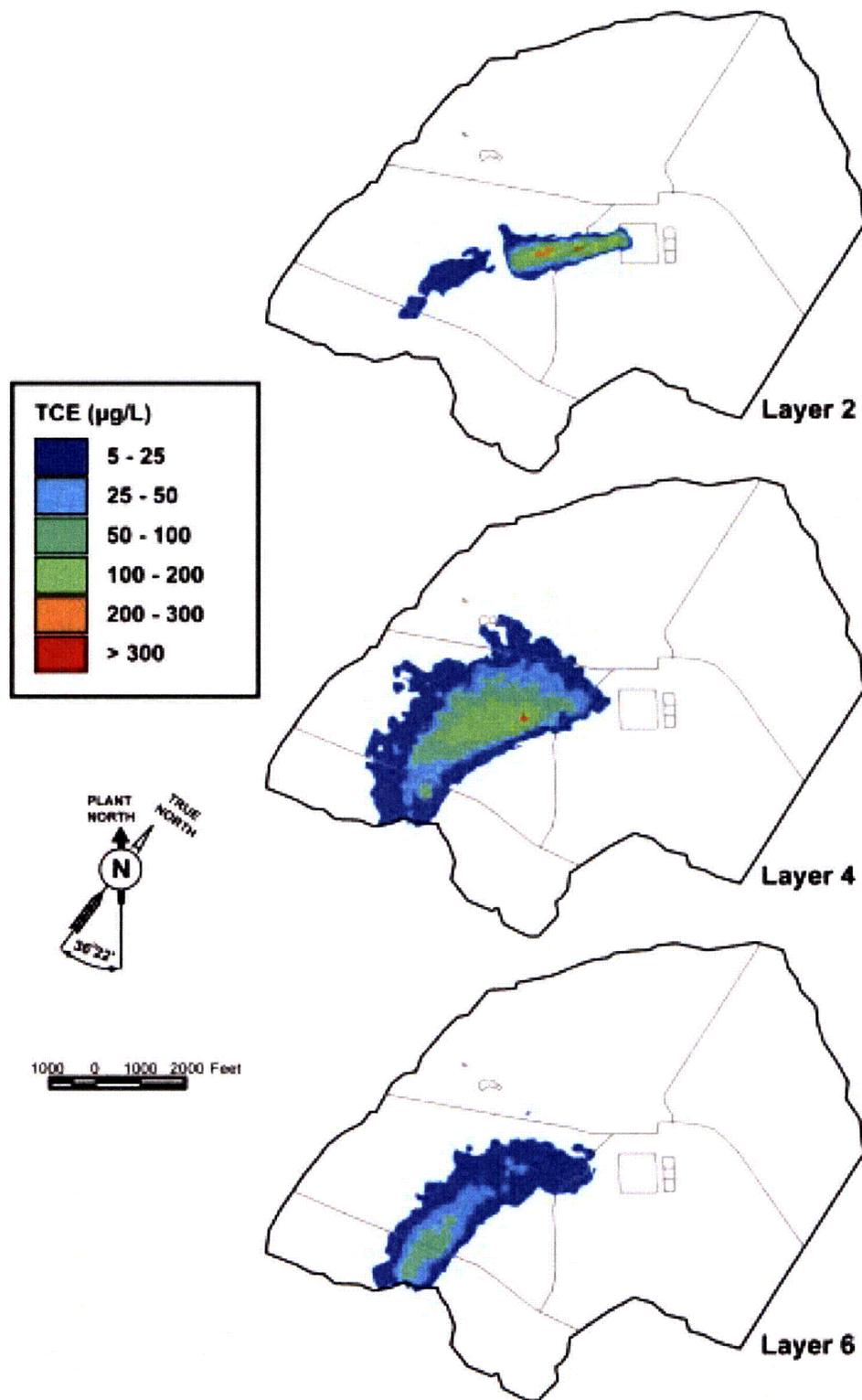


Figure 6-32. Scenario *recirc\_uaz\_centerB* TCE Concentrations at Simulation Time of 15 Years

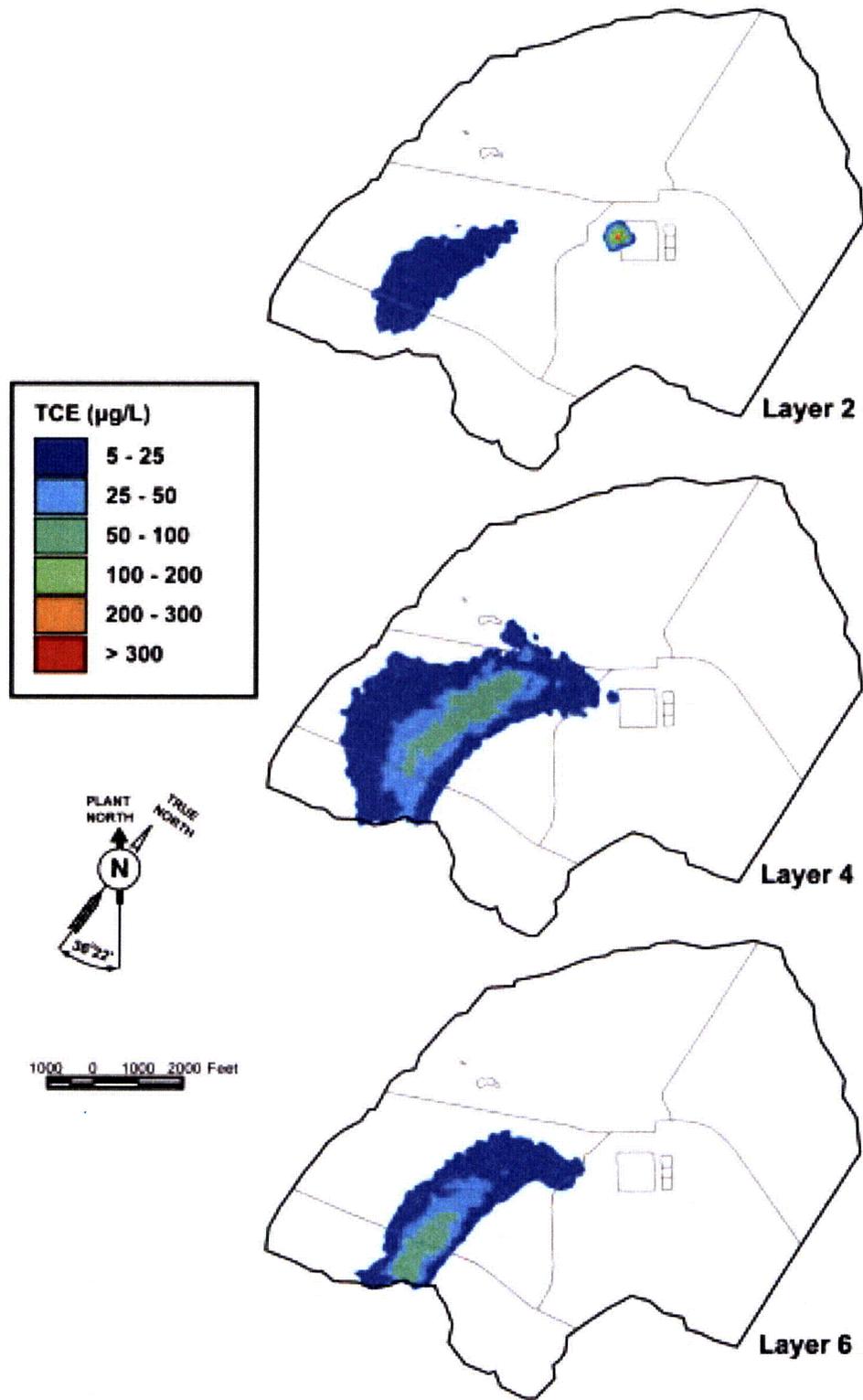


Figure 6-33. Scenario *recirc\_uaz\_fence2B* TCE Concentrations at Simulation Time of 15 Years

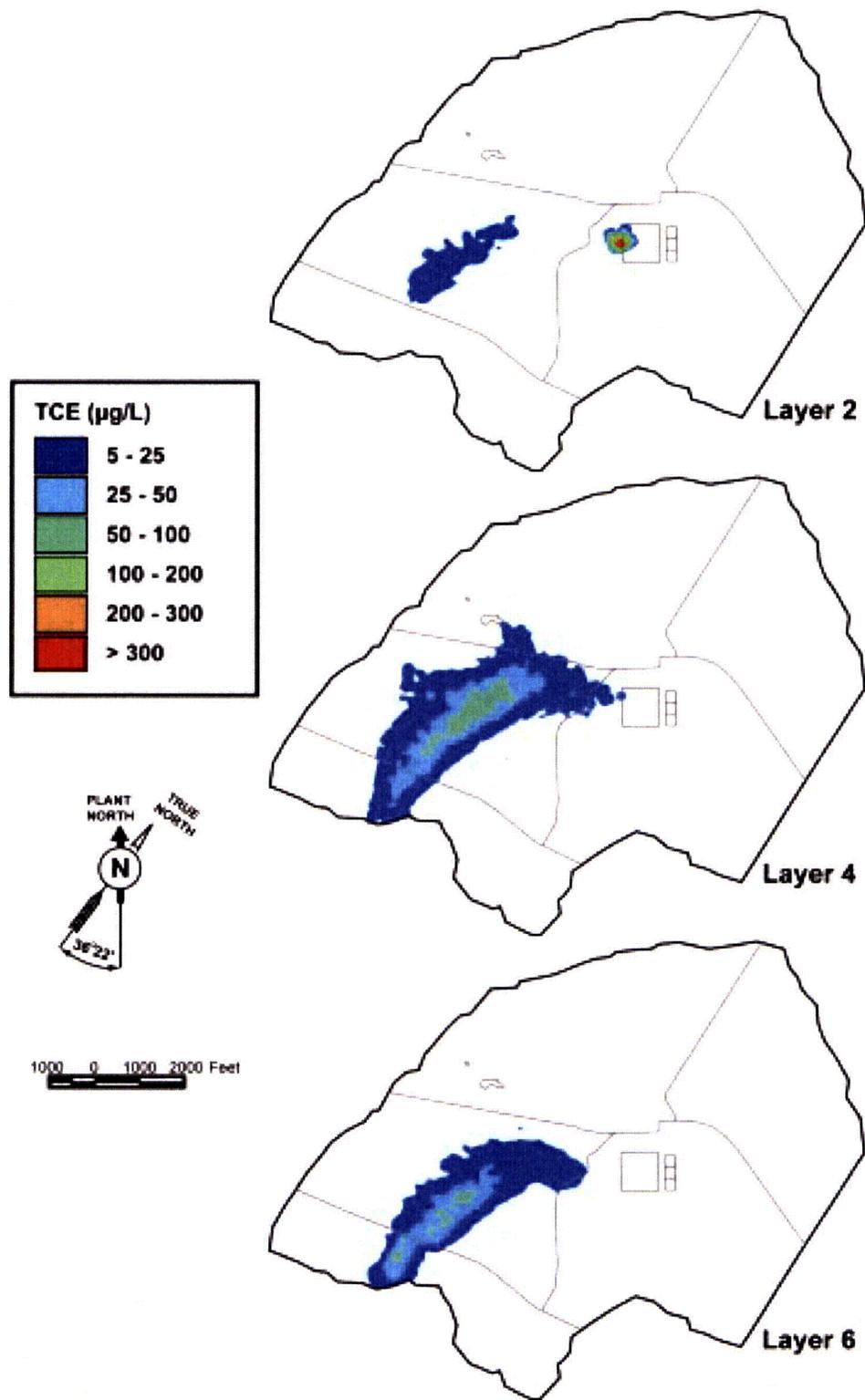


Figure 6-34. Scenario *phyto\_recirc1B* TCE Concentrations at Simulation Time of 15 Years

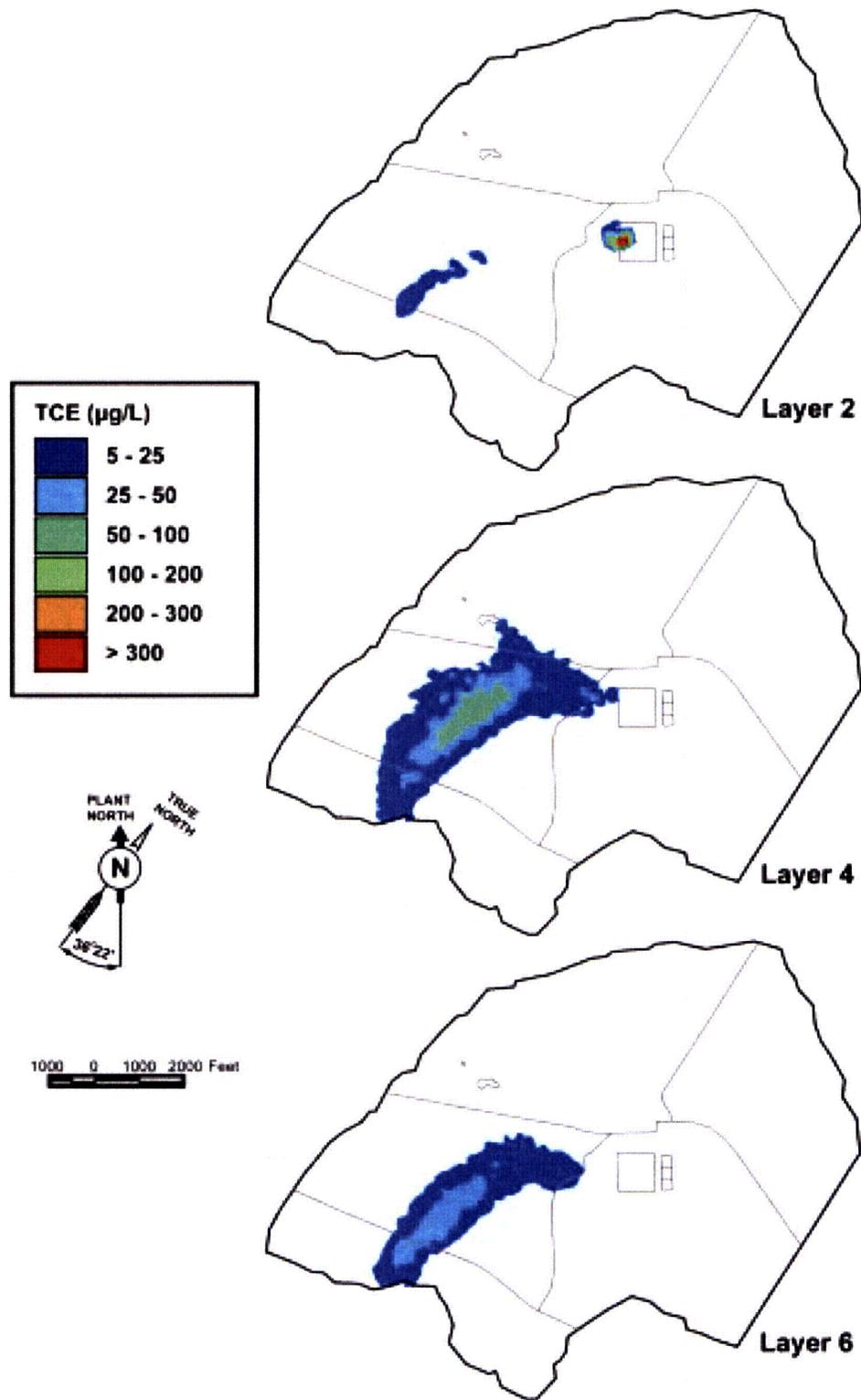


Figure 6-35. Scenario *phyto\_recirc2B* TCE Concentrations at Simulation Time of 15 Years

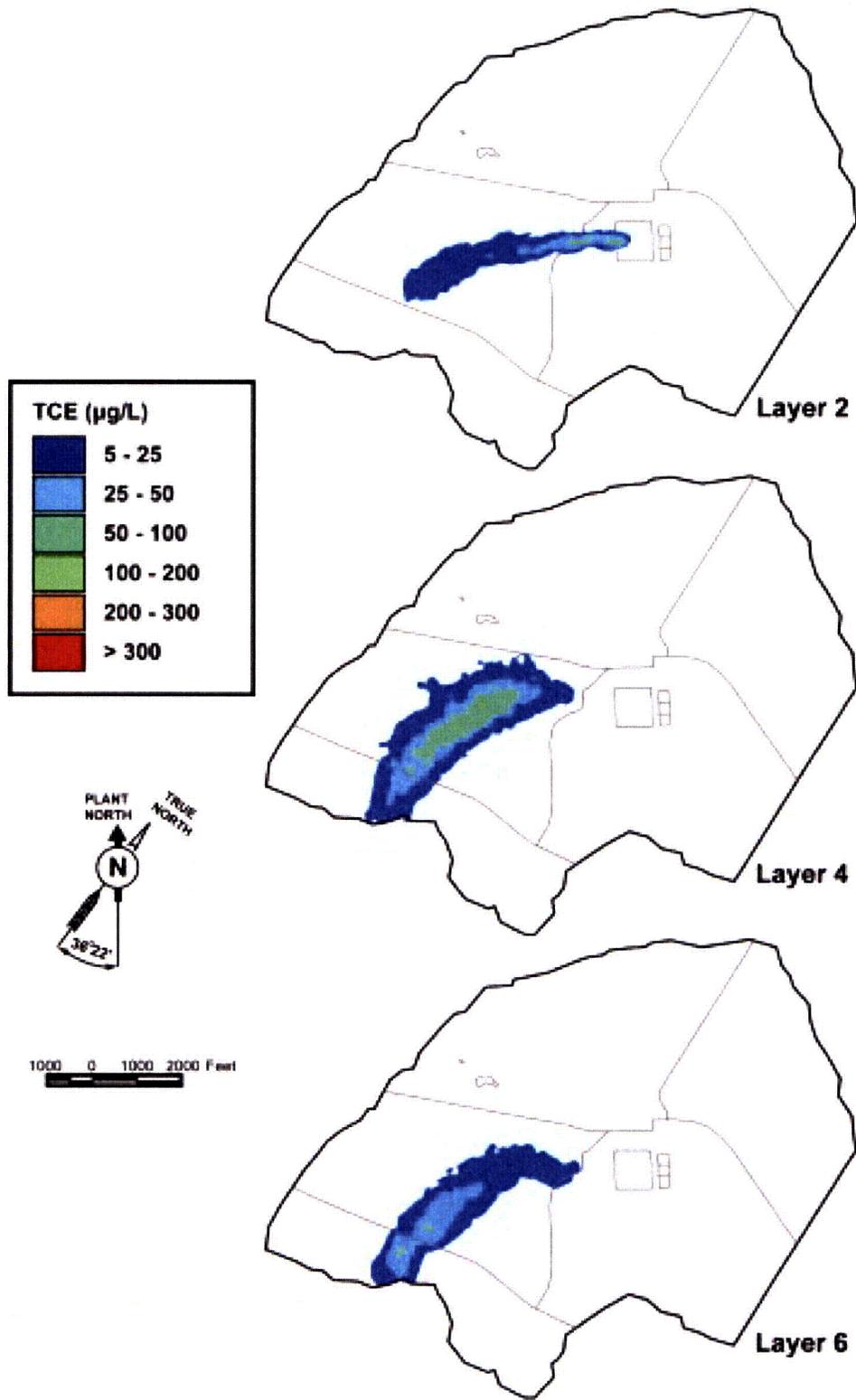


Figure 6-36. Scenario *phyto\_comboB* TCE Concentrations at Simulation Time of 15 Years

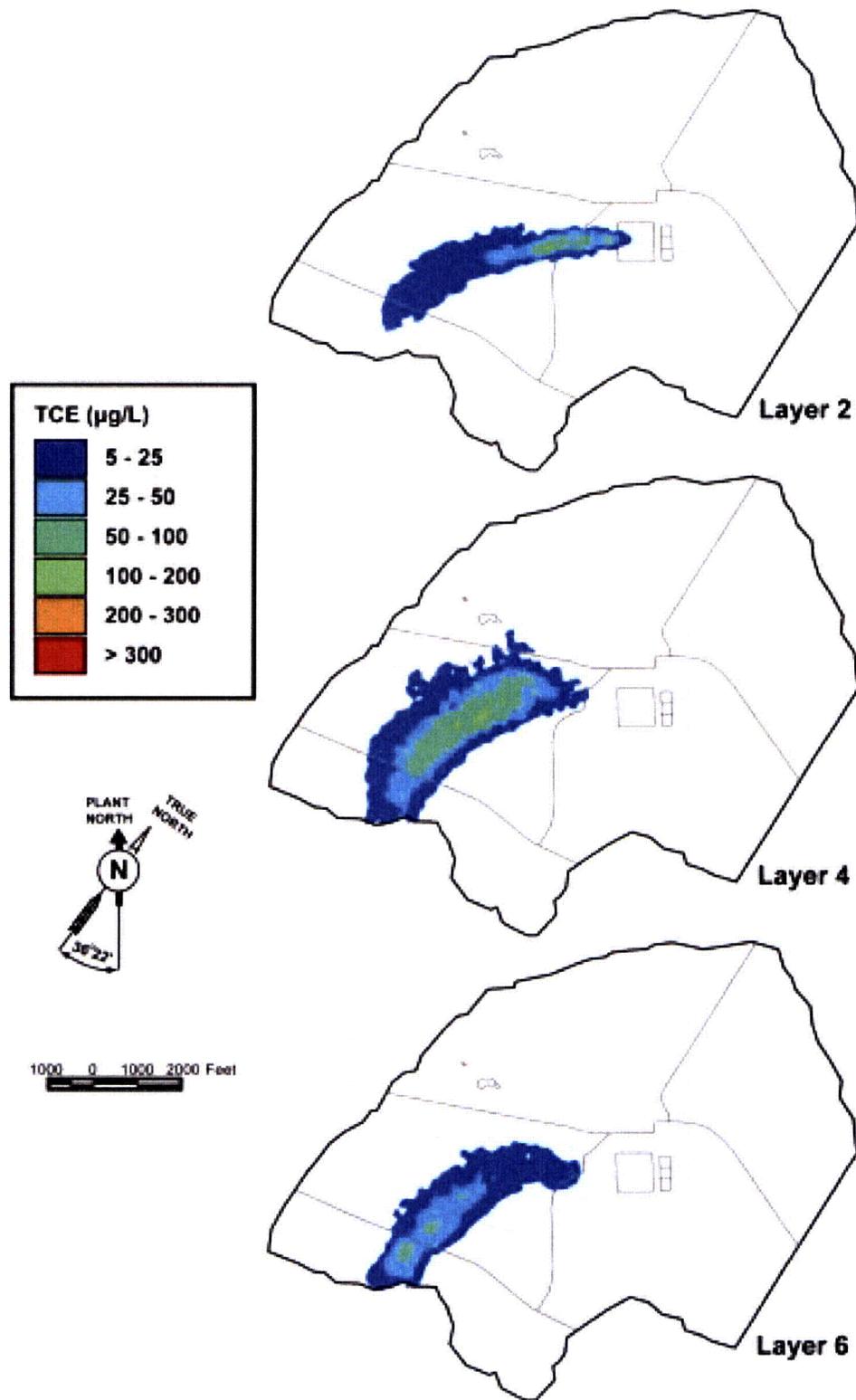


Figure 6-37. Scenario *phyto\_combo2B* TCE Concentrations at Simulation Time of 15 Years

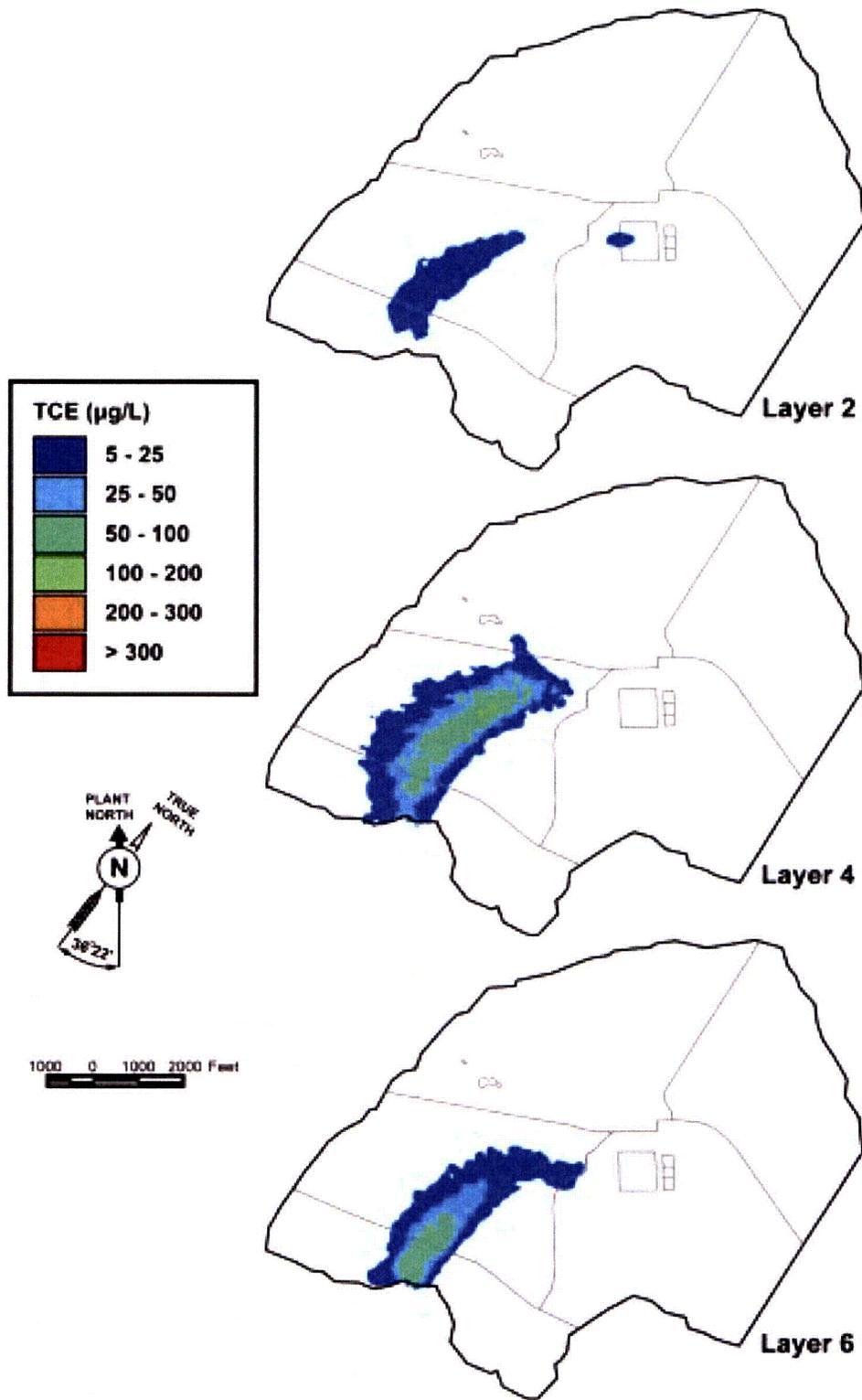


Figure 6-38. Scenario *phyto\_L1L2\_fenceB* TCE Concentrations at Simulation Time of 15 Years

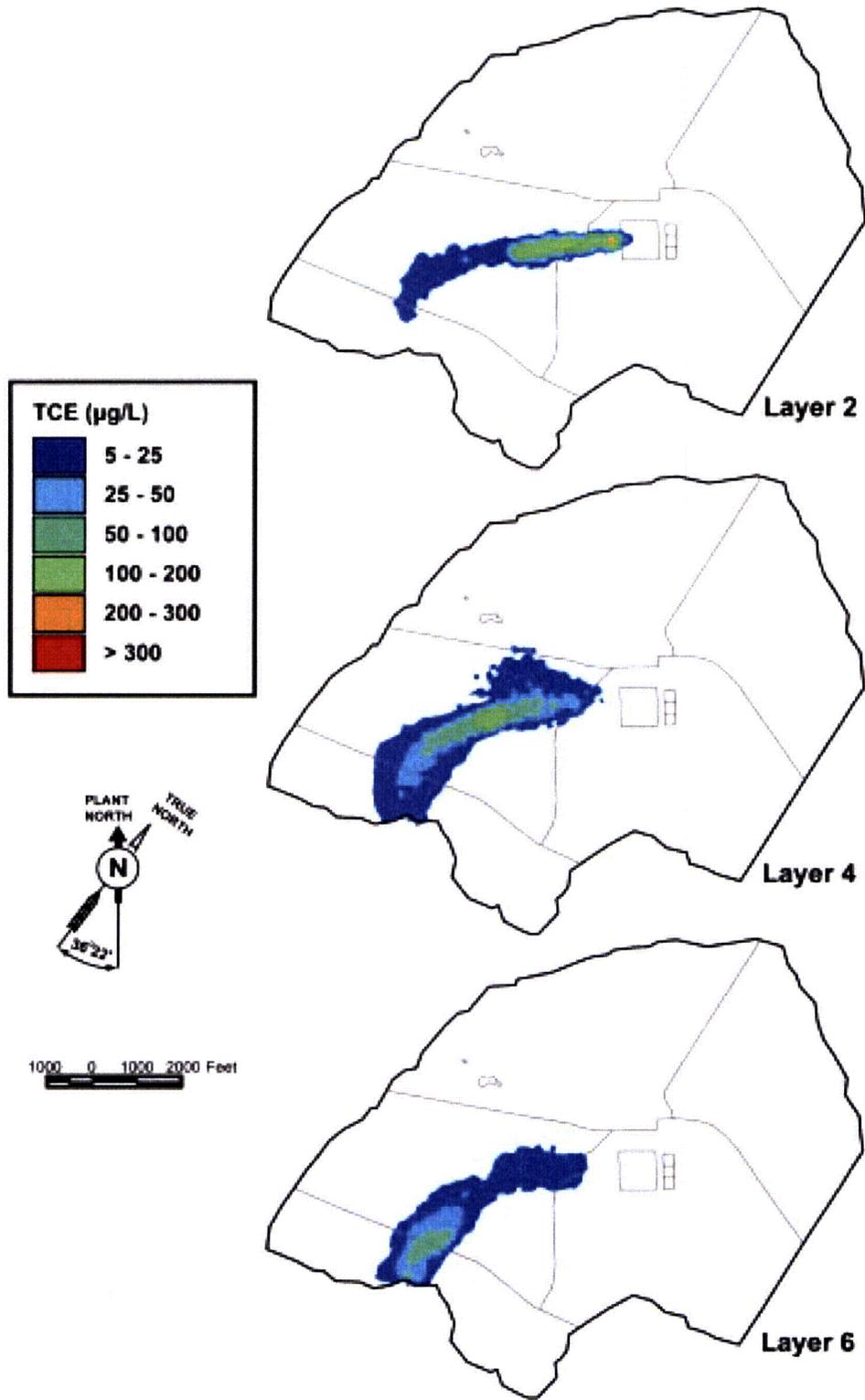


Figure 6-39. Scenario *phyto\_L2L4\_centerB* TCE Concentrations at Simulation Time of 15 Years

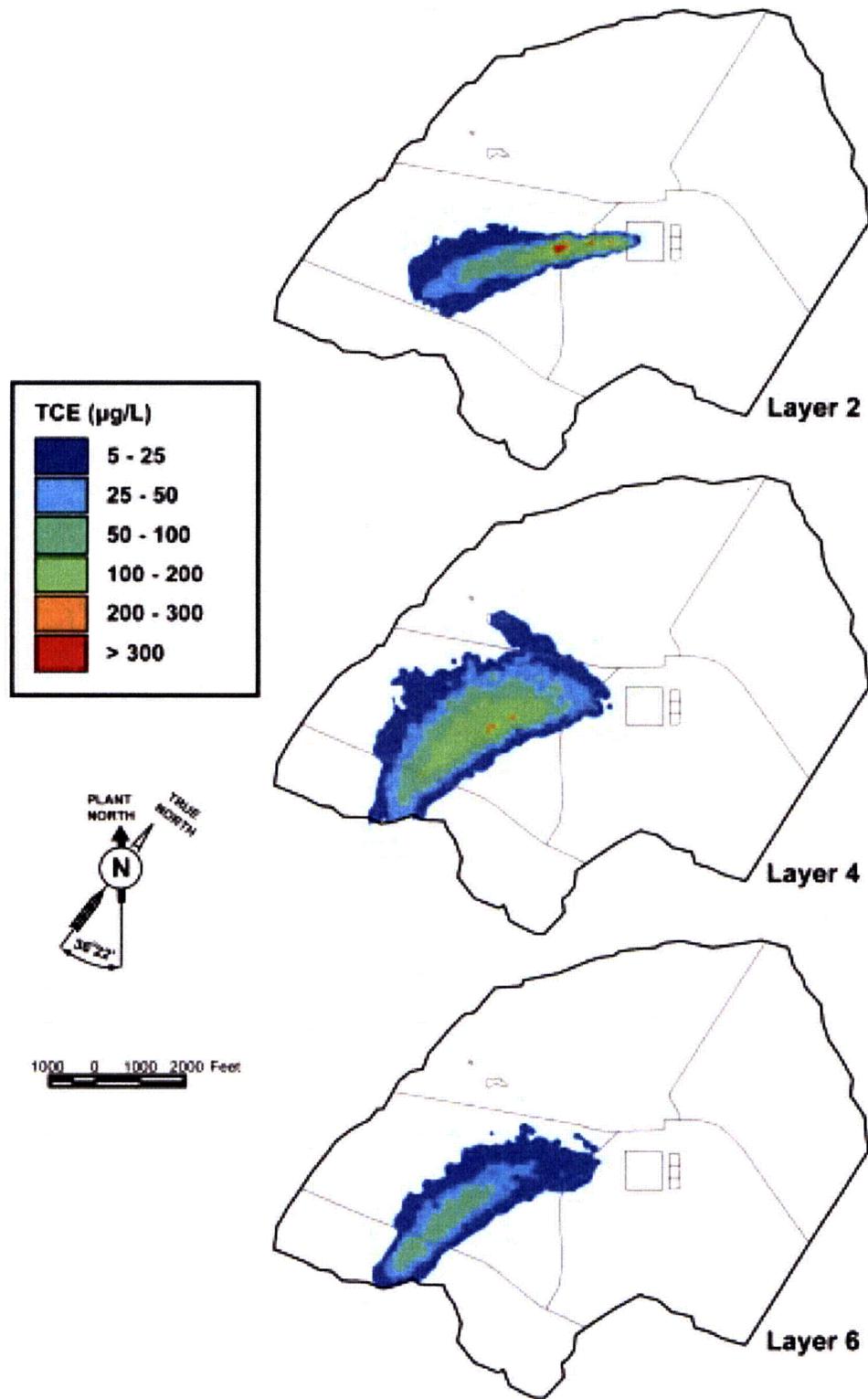


Figure 6-40. Scenario *phyto\_L4L6\_edgeB* TCE Concentrations at Simulation Time of 15 Years

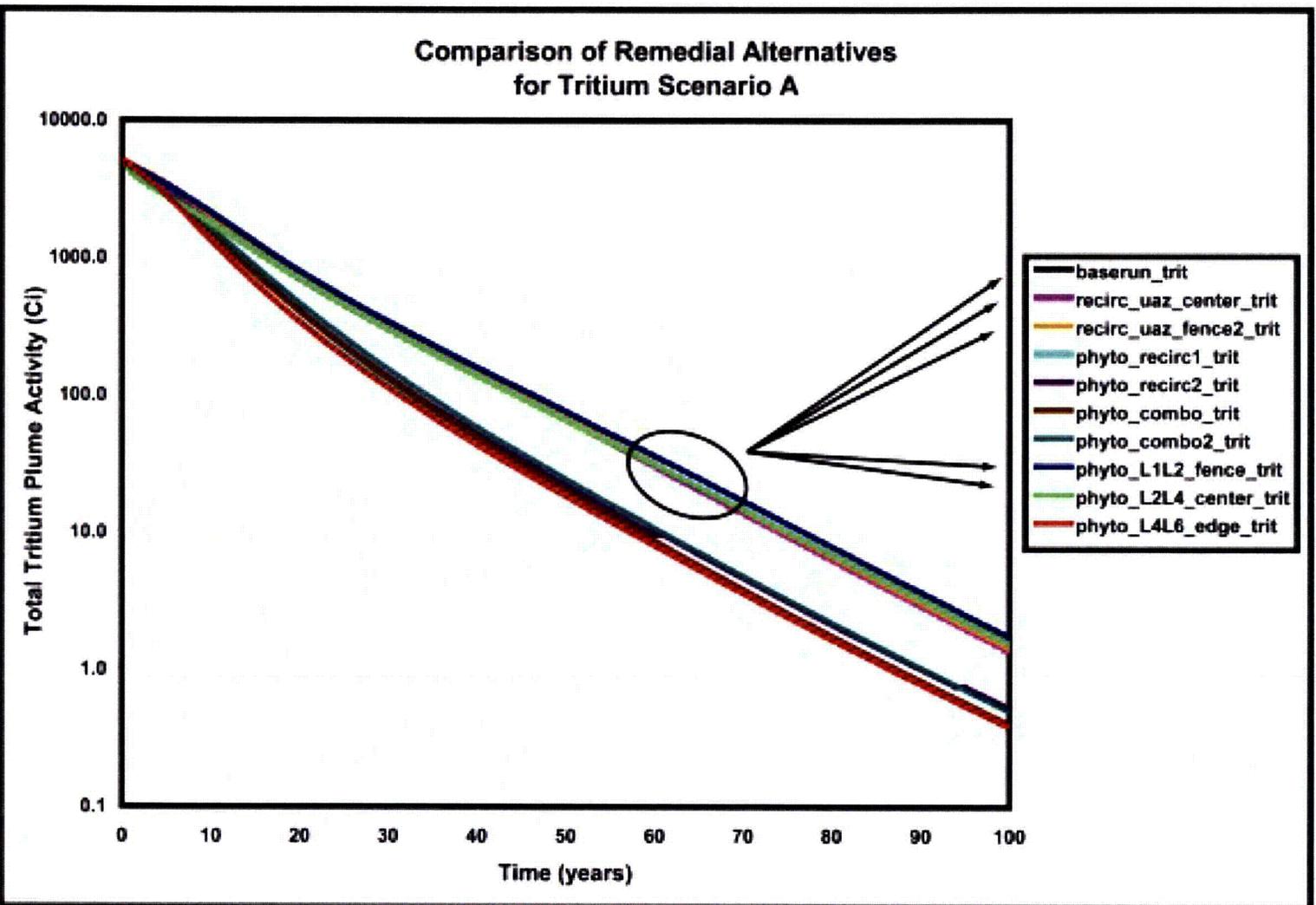


Figure 6-41. Scenario A Remedial Alternatives Total Tritium Plume Activity Through Time

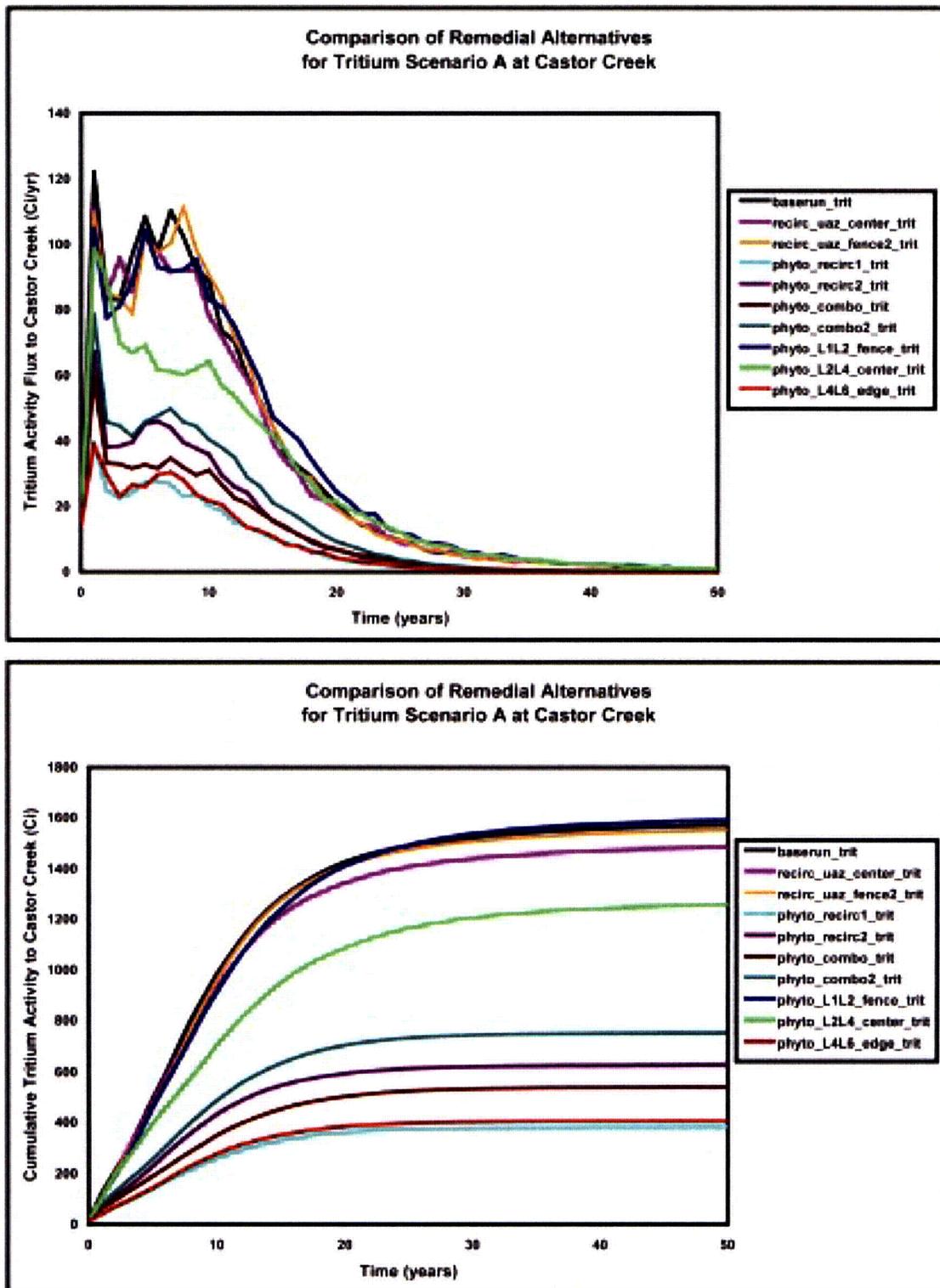


Figure 6-42. Scenario A Remedial Alternatives Tritium Activity Flux and Cumulative Activity to Castor Creek Comparisons

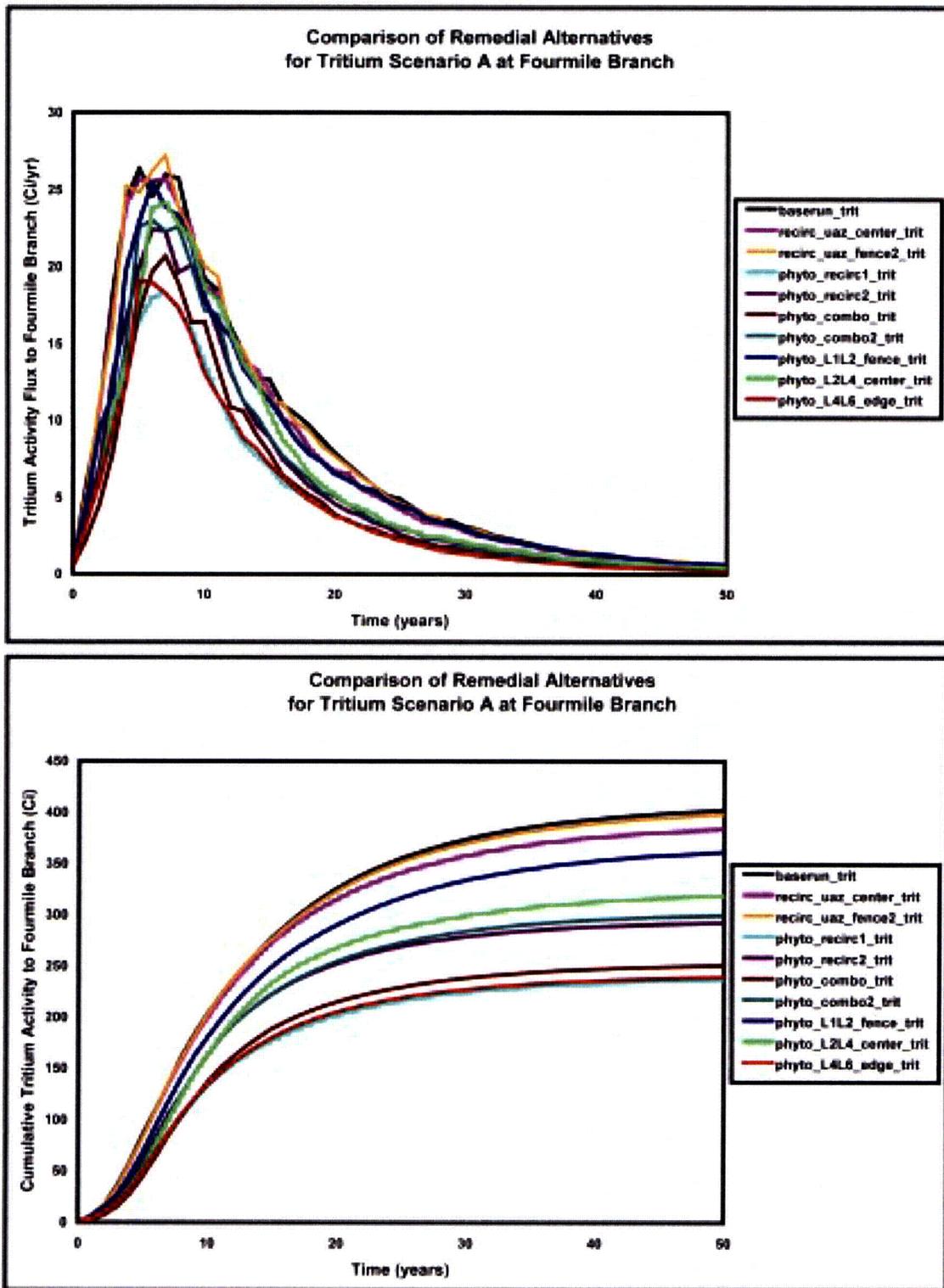


Figure 6-43. Scenario A Remedial Alternatives Tritium Activity Flux and Cumulative Activity to Fourmile Branch Comparisons

Sec 2.3 Ref 12

V2.3.2-5

UNITED STATES OF AMERICA  
FEDERAL POWER COMMISSION



004-PH

ENVIRONMENT; FISH, WILDLIFE AND RECREATION; HISTORIC  
LANDMARKS; LICENSE TERM; MINIMUM FLOW RELEASES; NEW  
LICENSE (MAJOR); PUBLIC INTEREST; TAKEOVER; WATER QUALITY.

Before Commissioners: John N. Nassikas, Chairman;  
Albert B. Brooke, Jr., Rush Moody, Jr.,  
William L. Springer, and Don S. Smith.

South Carolina Electric &  
Gas Company

*Fairfield + Parr*

Project No. 1894

FOR YOUR INFORMATION  
P. G. BOWMAN, III  
REID & PRIEST

ORDER ISSUING NEW LICENSE (MAJOR), AUTHORIZING  
PROJECT REDEVELOPMENT, PERMITTING USE OF PROJECT  
WATERS FOR CONDENSER COOLING PURPOSES,  
VACATING HEARING ORDER, AND PERMITTING  
WITHDRAWAL OF INTERVENTION

(Issued August 28, 1974)

On July 26, 1972, South Carolina Electric & Gas  
Company (Applicant) of Columbia, South Carolina, filed an  
amended application for new license requesting: (1) a new  
license under Section 15 of the Federal Power Act (Act) for  
the existing 14.9 megawatt (mW) Parr Hydroelectric Project  
No. 1894, (2) authorization to construct a 518.4 mW pumped  
storage development (Fairfield Pumped Storage Facility)  
which would utilize the enlarged Parr Reservoir as the lower  
pool, and (3) authorization to use the upper pool (Monticello  
Reservoir) of the Fairfield facility as a cooling impound-  
ment for a proposed 900 mW nuclear steam-electric generating  
facility, known as Unit 1 of the V. C. Summer Nuclear Complex,  
for which a construction permit was issued by the Atomic  
Energy Commission in A.E.C. Docket No. 50-395 on March 21,  
1973.

This amended application supersedes parts of the original  
new license application for the existing hydroelectric project  
filed June 19, 1969, and amended February 27 and November 16,  
1970, as well as parts of a subsequent application filed  
September 30, 1971, and revised March 1, 1972, which embraces  
the concept of project redevelopment to include the Fairfield  
Facility and the use of water from the Monticello Reservoir

projec

Applicant indicates that it plans at some future date to construct a second, and perhaps a third, 900 MW nuclear steam-electric generating unit. We note that the application for this project only includes a request for the use of the Monticello Reservoir "as a cooling impoundment for the proposed V. C. Summer Nuclear Complex (A.E.C. Docket No. 50-395)," and the only unit which was the subject of licensing before the Atomic Energy Commission was the 900 MW Unit 1 of the V. C. Summer Nuclear Complex. Although the Staff's Draft and Final Environmental Impact Statement considered the impacts of future nuclear units, we are approving in this license order only the use of Monticello Reservoir waters to cool the 900-MW Unit 1 of the V. C. Summer Nuclear Complex. If, in the future, Applicant desires to construct any steam electric generating plants on project lands or wishes to construct any plants which would utilize project waters for cooling purposes, then prior to construction it must file an appropriate application for Commission approval.

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We believe that the subject matter of the instant application has been fully developed and considered by this Commission. These facts have been fully developed in the Draft Environmental Impact Statement and comments thereon, as set out in the Final Environmental Impact Statement, and other data on file with the Commission. Therefore, we do not believe that a public hearing will contribute any new and relevant information and conclude that it is not in the public interest to hold a hearing in this proceeding.

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Turning to the transmission facilities connected with this project, we conclude that the generator leads and 2.3-kV lines for six units, the three 2.3/13-kV transformers at the hydro station, the 13-kV tie from the hydro station to the 72.5 MW Parr Steam Plant, the 2.3-kV tie from the hydro station to the nearby 2.3/23-kV Parr distribution substation, the 2.3/23-kV, 5,000 kVA transformer bank at the Parr distribution substation, and appurtenant facilities at the existing Parr Hydroelectric Project are primary lines within the meaning of Section 3(11) of the Act. At the Fairfield Pumped-Storage Facility, the generator leads, the step-up facilities, the two 230-kV lines from Fairfield Powerhouse to the V. C. Summer Nuclear Station switchyard, and appurtenant facilities are "primary lines". All other lines connected to the V. C. Summer Nuclear Station switchyard are part of Applicant's interconnected system.

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We have previously noted that no recommendation for Federal takeover of the existing Parr Hydroelectric Project has been received. We believe, also, that a recommendation

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Recreational features of the project comprise a boat-launching area adjacent to the crossing of Heller's Creek by County Road 28 in Parr Reservoir; a 300-acre subimpoundment to be created in the northern end of Monticello Reservoir having a public boat-launching area with parking and sanitary facilities on land acquired for recreational purposes; a scenic overlook on the eastern shore of Monticello Reservoir with parking, picnic, and sanitary facilities; and appurtenant facilities.

The South Carolina Pollution Control Authority issued a Water Quality Certificate, pursuant to Section 401 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. §§1251-1376, 1341, by letter dated January 11, 1973, which stated that, assuming the operation of the 900 MW Unit 1 of the V. C. Summer Nuclear Complex, there is reasonable assurance that the construction and operation of the Monticello impoundment and the Fairfield Pumped Storage Facility will not violate applicable water quality standards. By letter dated February 13, 1973, the South Carolina Pollution Control Authority issued a permit for the dredging of a tailrace canal for the Fairfield Pumped Storage Facility along Frees Creek. By letter dated June 26, 1974, the South Carolina Department of Health and Environmental Control stated that there is reasonable assurance that the redeveloped Parr Hydroelectric Development will not violate applicable water quality standards and stated its intent to certify this development.

Study of the existing and proposed structures indicates that the project, its structures and appurtenant facilities will be safe and adequate provided proper materials and accepted construction practice and procedure are used.

With respect to economic feasibility, even before the recent escalation of fuel costs <sup>1/</sup> and lack of supplies, studies show that estimated annual project costs of the redeveloped project to include authorization to use Monticello Reservoir for cooling the proposed 900 MW Unit 1 of the V. C. Summer Nuclear Complex compare favorably to costs for a gas turbine alternative and are more feasible than either nuclear or other fossil fuel alternatives. Estimated annual project costs of

<sup>1/</sup> FPC Form 423 reports pursuant to 18 C.F.R. §141.61 (1974) show that fuel costs for the gas turbine alternative are more than twice as high as those costs used in the economic feasibility studies referred to in the Staff Final Environmental Impact Statement.

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such volume in acre-feet per specified period of time as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned. Pending further order by the Commission on its own motion or at the request of others, including the State of South Carolina Wildlife and Marine Resources Department and the Fish and Wildlife Service of the U. S. Department of the Interior, after notice and opportunity for hearing, the Licensee shall:

- (a) ~~discharge from the Parr powerhouse during initial filling of the project reservoirs and during all months of the year, except March, April, and May, a minimum flow of 150 cfs and a minimum daily average flow of 800 cfs for the daily natural inflow to the Parr Reservoir (less evaporative losses from the Parr and Monticello Reservoirs), whichever is the lesser amount; and~~
- (b) ~~discharge from the Parr powerhouse during the striped bass spawning season in the months of March, April, and May a minimum flow of 1,000 cfs or the average daily natural inflow into the Parr Reservoir (less evaporative losses from the Parr and Monticello Reservoirs), whichever is the lesser amount.~~

Provided, That Licensee shall take reasonable measures to determine the daily natural inflow to the Parr Reservoir: Provided further, That, whenever it is foreseeable that the daily natural inflow into the Parr Reservoir (less evaporative losses from Parr and Monticello Reservoirs) will be released, the Licensee shall promptly notify the State of South Carolina Wildlife and Marine Resources Department: And provided further That such flows may be modified temporarily if required by operating emergencies beyond the control of the Licensee and for short periods for fishery management purposes upon mutual agreement between the Licensee and the State of South Carolina Wildlife and Marine Resources Department.

Article 15. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall, after notice and opportunity for hearing, permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission in the interest of comprehensive development of the waterway or waterways

involved sources of steam- lar uses. at least the joint or other poses, an either by the party for heari ficient d use, incl possesses law, or a rently so the prope which may waters.

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TetraTech NUS

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DATE: 01/22/2007

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Attachment G - Field and Laboratory Testing Data (Groundwater)					
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SC