ozone nonattainment areas in Ohio: Canton, Cincinnati-Hamilton, Cleveland-Akron-Lorain, Columbus, Dayton-Springfield, Toledo and Youngstown-Warren-Sharon. The USEPA has completed its review of the emissions inventories submitted for the Canton (which includes Stark County), Cincinnati-Hamilton (which includes Butler, Clermont, Hamilton and Warren Counties), Cleveland-Akron-Lorain (Ashtabula, Cuyahoga, Geauga, Lake, Lorain, Medina, Portage and Summit Counties) and Youngstown-Warren-Sharon (which includes Mahoning and Trumbull Counties) ozone nonattainment areas. Revisions to the March 1994 submittal were submitted on June 8 and August 18, 1995 for these areas. These revisions addressed deficiencies highlighted in USEPA's proposed rulemaking. The 1990 base-year emissions inventories submitted for the Toledo and Dayton-Springfield were approved in a rulemaking published in the Federal Register on March 22, 1995 (60 FR 15053). The emissions inventory submitted for the Columbus area will be addressed in a separate rulemaking.

Inventory Preparation Plan/Quality Assurance Plan

All States were required to submit an Inventory Preparation Plan (IPP) to USEPA for review and approval by October 1, 1991. The IPP documents the procedures utilized in the development of an emissions inventory and contains the quality assurance and quality control plan (QA/QC). On March 19, 1992, the State of Ohio submitted a final ozone emissions IPP. On April 15, 1992, USEPA informed the State that the IPP was not approvable at the time. Subsequently, USEPA has worked with the State to correct deficiencies in the IPP. With the March 1994 SIP revision request, the State submitted documentation of how the emissions inventory was prepared, as well as a quality assurance report for the point, area, and mobile source portions of the emissions inventory. The USEPA finds that this documentation and quality assurance report are acceptable to meet the requirements of an IPP.

Point Source Emissions Inventory

For each nonattainment area, the State submitted a point source emissions inventory of all facilities that emit at least 10 tons per year (tpy) of VOC, or 100 tpy NO_X or CO. The State also included sources that emit 100 tpy of VOC, CO, or NO_X located in a 25-mile boundary surrounding each nonattainment area. The point source emissions inventory contains general facility information, number of sources, production schedules and related emissions for each source, emissions limitation, control efficiency and rule effectiveness (RE), as applicable, and total emissions on an annual and daily ozone season basis.

The following methods were employed by the State to identify sources to be included in the 1990 base-year emissions inventory: The 1989 records for plants in the Emissions Inventory System (EIS) were checked and plants meeting the VOC, CO or NO_X criteria were revised with 1990 emissions data; the air permit records were reviewed for plants that are candidates for inclusion in the point source inventory; and current industrial directories and the Toxic Release Information System (TRIS) database were checked for additional point source emissions. For facilities in the point source inventory, the State acquired the emissions data by means of the following: Mail surveys; plant inspections; telephone calls; and air permit files.

The USEPA reviewed the point source emissions data by cross referencing the point source inventory to the following sources: (1) USEPA's guidance document entitled ''Major CO, NO_2, and VOC Sources in the 25–Mile Boundary Around Ozone Nonattainment Areas, Volume I: Classified Ozone Nonattainment Areas,'' (EPA–450/4–92–005a) February 1992; a 1990 TRIS Retrieval; and a 1990 Aerometric Information Retrieval Systems (AIRS) Facility Subsystem—Emission to Compliance Comparison Report.

Where a source was governed by a regulation or a control device, the emissions limit was stated. A RE factor was then applied in the determination of emissions. In accordance with USEPA guidance, a standard RE factor of 80 percent was utilized, unless otherwise justified.

Area Source Emissions Inventory

Area source emissions were calculated using State-specific data as well as USEPA guidance documents and technical memoranda developed for various categories. The State utilized emission factors from Procedures; Volumes I and IV, and AP–42 and provided necessary documentation. The following area source categories were included in the emissions inventory: Gasoline loading and distribution, dry cleaning, degreasing, architectural surface coatings, traffic markings, automobile refinishing, graphic arts, cutback asphalt, pesticide application, commercial/consumer solvents, bakeries, waste management practices (landfills), leaking underground storage tanks, incineration of solid waste, stationary fossil fuel combustion, and fires (structural, open burn, etc.). Vehicle refueling emissions were included as part of the mobile source emissions inventory.

The area source inventory was reviewed utilizing USEPA's guidance documents, and the Level I and II checklists, to ensure that all source categories and their related emissions (and emission factors) were included in the area source emissions inventory. Seasonal adjustments, rule effectiveness, and rule penetration factors were applied as indicated in the State submittal.

On-Road Mobile Source Emissions Inventory

Development of Emission Factors

In the development of the mobile source emissions inventory, the State utilized USEPA's mobile source emissions model, Mobile 5a, for the determination of emissions factors for eight vehicle types and twelve roadway types. Hard-copy documentation of the input and output files are provided in the State's submittal. Where available, the State-specific inputs were utilized in the development of the input files for Mobile 5a.

Development of Vehicle Miles Travelled (VMT)

Canton, Cleveland-Akron-Lorain and Youngstown-Warren-Sharon Areas: The 1990 VMT for each roadway type was developed by the Ohio Department of Transportation (ODOT). ODOT maintains data on each section of highway in the State of Ohio. VMT were developed by the State Road Inventory System and reported through the Highway Performance Monitoring System (HPMS) to the Federal Highway Administration (FHWA).

Each roadway section daily VMT (dVMT) is computed as the annual average daily traffic (AADT) for that section times the length of the section. The county DVMT is the sum of the DVMT for each highway functional classifications in the county. The total dVMTs are then summed as a statewide total. The statewide totals are then compared by functional class to the 1990 HPMS submittal. For those classifications were traffic counts are available for all or nearly all their sections, the totals were essentially the same. For those with more off-systems roads, the resulting totals were larger than the HPMS's submittal value (as expected). Correction factors were computed from the two sets of totals and applied to the individual cells.