Note: After completing Part D, refer to the Application Overview section to determine which other sections of Form 2A you must complete. If you have completed all other required sections of Form 2A, you may proceed to the Certification Statement in question 19 of the Basic Application Information packet.

Appendix A—Guidance for Completing the Effluent Testing Information

All Treatment Works

All applicants must provide data for each of the pollutants in question 18 of the Basic Application Information packet. Some applicants must also provide data for the pollutants in Part A of the Supplemental Application Information packet. All applicants submitting effluent testing data must base this data on a minimum of three pollutant scans. All samples analyzed must be representative of the discharge from the sampled outfall.

If you have existing data that fulfills the requirements described below, you may use that data in lieu of conducting additional sampling. If you measure more than the required number of daily values for a pollutant and those values are representative of your wastestream, you must include them in the data you report. In addition, use the blank rows provided on the form to provide any existing sampling data that your facility

may have for pollutants not listed in the appropriate sections. All data provided in the application must be based on samples taken within three years prior to the time of this permit application.

Sampling data must be representative of the treatment works' discharge and take into consideration seasonal variations. At least two of the samples used to complete the effluent testing information questions must have been taken no fewer than 4 months and no more than 8 months apart. For example, one sample may be taken in April and another in October to meet this requirement. Applicants unable to meet this time requirement due to periodic, discontinuous, or seasonal discharges can obtain alternative guidance on this requirement from their permitting authority

The collection of samples for the reported analyses should be supervised by a person experienced in performing wastewater sampling. Specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, and collection of duplicate samples. Samples should be taken at a time representative of normal operation. To the extent feasible, all processes that contribute to wastewater should be in

operation and the treatment system should be operating properly with no system upsets. Samples should be collected from the center of the flow channel (where turbulence is at a maximum), at a location specified in the current NPDES permit, or at any location adequate for the collection of a representative sample.

A minimum of four grab samples must be collected for pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, fecal coliform, E. coli, and enterococci (applicants need only provide data on either fecal coliform or E. coli and enterococci). For all other pollutants, 24-hour composite samples must be collected. However, a minimum of one grab sample, instead of a 24-hour composite, may be taken for effluent from holding ponds or other impoundments that have a retention period greater than 24 hours.

Grab and composite samples are defined as follows:

- Grab sample: an individual sample of at least 100 milliliters collected randomly for a period not exceeding 15 minutes.
- Composite sample: a sample derived from two or more discrete samples collected at equal time intervals or collected proportional to the flow rate over the compositing period. The composite collection method may vary depending on pollutant characteristics or discharge flow characteristics.

The permitting authority may allow or establish appropriate site-specific sampling procedures or requirements, including sampling locations, the season in which sampling takes place, the duration between sampling events, and protocols for collecting samples under 40 CFR Part 136. Contact EPA or the State permitting authority for detailed guidance on sampling techniques and for answers to specific questions. The following instructions explain how to complete each of the columns in the pollutant tables in the effluent testing information sections of Form 2A.

Maximum Daily Discharge. For composite samples, the daily discharge is the average pollutant concentration and total mass found in a composite sample taken over a 24-hour period. For grab samples, the daily discharge is the arithmetic or flow-weighted total mass or average pollutant concentration found in a series of at least four grab samples taken during the operating hours of the treatment works during a 24-hour period.

To determine the maximum daily discharge values, compare the daily discharge values from each of the sample events. Report the highest total mass and highest concentration level from these samples.

- "Concentration" is the amount of pollutant that is present in a sample with respect to the size of the sample. The daily discharge concentration is the average concentration of the pollutant throughout the 24-hour period.
- "Mass" is calculated as the total mass of the pollutant discharged over the 24-hour period.
- All data must be reported as both concentration and mass (where appropriate). Use the following abbreviations in the columns headed "Units."

ppm Parts per million. gpd Gallons per day. Million gallons per day. mgd su Standard units. Milligrams per liter. mg/l ppb Parts per billion. Micrograms per liter. ug/l lbs Pounds. Tons (English tons). ton Milligrams. mg Grams. Kilograms. kg Tonnes (metric tons).

Average Daily Discharge. The average daily discharge is determined by calculating the arithmetic mean daily pollutant concentration and the arithmetic mean daily total mass of the pollutant from each of the sample events within the three years prior to this permit application. Report the concentration, mass, and units used under the Average Daily Discharge column, along with the number of samples on which the average is based. Use the unit abbreviations shown above in "Maximum Daily Discharge."

If data requested in Form 2A have been reported on the treatment works' Discharge Monitoring Reports (DMRs), you may compile such data and report it under the maximum daily discharge and the average daily discharge columns of the form.

Analytical Method. All information reported must be based on data collected through analyses conducted using 40 CFR Part 136 methods. Applicants should use methods that enable pollutants to be detected at levels adequate to meet water quality-based standards. Where no approved method can detect a pollutant at the water quality-based standards level, the most sensitive approved method should be used. If the applicant believes that an alternative method should be used (e.g., due to matrix interference), the applicant should obtain prior approval from the permitting authority. If an alternative method is specified in the existing permit, the applicant should