

shall be used to determine the cost ratios between cost-effective project components and those of the actual project. These cost ratios shall be multiplied by the step 2 cost and step 3 contract costs of actual components to determine the eligible step 2 and step 3 costs.

c. The actual treatment works to be built shall be assessed. It must be determined that the actual treatment works meets the requirements of the National Environmental Policy Act and all applicable laws, regulations, and guidance, as required of all treatment works by §§ 35.925-8 and 35.925-14. Particular attention should be given to assessing the project's potential secondary environmental effects and to ensuring that air quality standards will not be violated. The actual treatment works' discharge must not cause violations of water quality standards.

d. The Regional Administrator shall approve the plans, specifications, and estimates for the actual treatment works under section 203(a) of the Act, even though EPA will be funding only a portion of its designed capacity.

e. The grantee shall satisfactorily assure the Agency that the funds for the construction costs due to the additional capacity beyond the cost-effective treatment works' capacity as determined by EPA (i.e., the ineligible portion of the treatment works), as well as the local share of the grant eligible portion of the construction costs will be available.

f. The grantee shall execute appropriate grant conditions or releases providing that the Federal Government is protected from any further claim by the grantee, the State, or any other party for any of the costs of construction due to the additional capacity.

g. Industrial cost recovery shall be based upon the portion of the Federal grant allocable to the treatment of industrial wastes.

h. The grantee must implement a user charge system which applies to the entire service area of the grantee, including any area served by the additional capacity.

APPENDIX B TO SUBPART E OF PART 35—
FEDERAL GUIDELINES—USER
CHARGES FOR OPERATION AND MAIN-
TENANCE OF PUBLICLY OWNED
TREATMENT WORKS

(a) *Purpose.* To set forth advisory information concerning user charges based on actual use pursuant to section 204 of the Clean Water Act, hereinafter referred to as the Act. Applicable requirements are set forth in subpart E (40 CFR part 35).

(b) *Authority.* The authority for establishment of the user charge guidelines is contained in section 204(b)(2) of the Act.

(c) *Background.* Section 204(b)(1) of the Act provides that after March 1, 1973, Federal grant applicants shall be awarded grants only after the Regional Administrator has

determined that the applicant has adopted or will adopt a system of charges to assure that each recipient of waste treatment services will pay its proportionate share of the costs of operation and maintenance, including replacement. The intent of the Act with respect to user charges is to distribute the cost of operation and maintenance of publicly owned treatment works to the pollutant source and to promote self-sufficiency of treatment works with respect to operation and maintenance costs. The 1977 Amendments amended section 204(b) to allow grantees to establish user charge systems based on ad valorem taxes. This appendix does not apply to ad valorem user charge systems.

(d) *Definitions—(1) Replacement.* Expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary to maintain the capacity and performance during the service life of the treatment works for which such works were designed and constructed. The term "operation and maintenance" includes replacement.

(2) *User charge.* A charge levied on users of treatment works for the cost of operation and maintenance of such works.

(e) *Classes of users.* At least two basic types of user charge systems are common. The first is to charge each user a share of the treatment works operation and maintenance costs based on his estimate of measured proportional contribution to the total treatment works loading. The second system establishes classes for users having similar flows and waste water characteristics; i.e., levels of biochemical oxygen demand, suspended solids, etc. Each class is then assigned its share of the waste treatment works operation and maintenance costs based on the proportional contribution of the class to the total treatment works loading. Either system is in compliance with these guidelines.

(f) *Criteria against which to determine the adequacy of user charges.* The user charge system shall be approved by the Regional Administrator and shall be maintained by the grantee in accordance with the following requirements:

(1) The user charge system must result in the distribution of the cost of operation and maintenance of treatment works within the grantee's jurisdiction to each user (or user class) in proportion to such user's contribution to the total wastewater loading of the treatment works. Factors such as strength, volume, and delivery flow rate characteristics shall be considered and included as the basis for the user's contribution to ensure a proportional distribution of operation and maintenance costs to each user (or user class).

(2) For the first year of operation, operation and maintenance costs shall be based upon past experience for existing treatment

Environmental Protection Agency

Pt. 35, Subpt. E, App. C-1

works or some other rational method that can be demonstrated to be applicable.

(3) The grantee shall review user charges annually and revise them periodically to reflect actual treatment works operation and maintenance costs.

(4) The user charge system must generate sufficient revenue to offset the cost of all treatment works operation and maintenance provided by the grantee.

(5) The user charge system must be incorporated in one or more municipal legislative enactments or other appropriate authority. If the project is a regional treatment works accepting wastewaters from treatment works owned by others, then the subscribers receiving waste treatment services from the grantee shall have adopted user charge systems in accordance with these guidelines. Such user charge systems shall also be incorporated in the appropriate municipal legislative enactments or other appropriate authority.

(g) *Model user charge systems.* The user charge system adopted by the applicant must result in the distribution of treatment works operation and maintenance costs to each user (or user class) in approximate proportion to his contribution to the total wastewater loading of the treatment works. The following user charge models can be used for this purpose; however, the applicant is not limited to their use. The symbols used in the models are as defined below:

C_T = Total operation and maintenance (O. & M.) costs per unit of time.

C_u = A user's charge for O. & M. per unit of time.

C_s = A surcharge for wastewaters of excessive strength.

V_c = O&M cost for transportation and treatment of a unit of wastewater volume.

V_u = Volume contribution from a user per unit of time.

V_T = Total volume contribution from all users per unit of time.

B_c = O&M cost for treatment of a unit of biochemical oxygen demand (BOD).

B_u = Total BOD contribution from a user per unit of time.

B_T = Total BOD contribution from all users per unit of time.

B = Concentration of BOD from a user above a base level.

S_c = O&M cost for treatment of a unit of suspended solids.

S_u = Total suspended solids contribution from a user per unit of time.

S = Concentration of SS from a user above a base level.

P_c = O&M cost for treatment of a unit of any pollutant.

P_u = Total contribution of any pollutant from a user per unit of time.

P_T = Total contribution of any pollutant from all users per unit of time.

P = Concentration of any pollutant from a user above a base level.

(1) *Model No. 1.* If the treatment works is primarily flow dependent or if the BOD, suspended solids, and other pollutant concentrations discharged by all users are approximately equal, then user charges can be developed on a volume basis in accordance with the model below:

$$C_u = C_T/V_T(V_u)$$

(2) *Model No. 2.* When BOD, suspended solids, or other pollutant concentrations from a user exceed the range of concentration of these pollutants in normal domestic sewage, a surcharge added to a base charge, calculated by means of Model No. 1, can be levied. The surcharge can be computed by the model below:

$$C_s = [B_c(B) = S_c(S) = P_c(P)]V_u$$

(3) *Model No. 3.* This model is commonly called the "quantity/quality formula":

$$C_u = V_c V_u = B_c B_u = S_c S_u = P_c P_u$$

(h) *Other considerations.* (1) Quantity discounts to large volume users will not be acceptable. Savings resulting from economies of scale should be apportioned to all users or user classes.

(2) User charges may be established based on a percentage of the charge for water usage only in cases where the water charge is based on a constant cost per unit of consumption.

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APPENDIX C-1 TO SUBPART E OF PART 35—REQUIRED PROVISIONS—CONSULTING ENGINEERING AGREEMENTS

1. General
2. Responsibility of the Engineer
3. Scope of Work
4. Changes
5. Termination
6. Remedies
7. Payment
8. Project Design
9. Audit; Access to Records
10. Price Reduction for Defective Cost or Pricing Data
11. Subcontracts
12. Labor Standards
13. Equal Employment Opportunity
14. Utilization of Small or Minority Business
15. Covenant Against Contingent Fees
16. Gratuities
17. Patents
18. Copyrights and Rights in Data

1. GENERAL

(a) The owner and the engineer agree that the following provisions apply to the EPA grant-eligible work to be performed under