

## ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[AD-FRL-5879-1]

RIN 2060-AC19

National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Proposed Rule Clarifications; Correction

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule: Correction.

SUMMARY: On January 17, 1997, the EPA amended certain portions of the "National Emission Standards for Hazardous Air Pollutants for Source Categories: Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks." This rule is commonly known as the Hazardous Organic NESHAP or the HON. Among the changes made to the rule in that action, the EPA added a definition for "enhanced biological treatment systems or enhanced biological treatment processes" to the rule and made clarifying revisions to appendix C of part 63. This action proposes to revise this definition in order to clarify its meaning and proposes revisions to appendix C of part 63 to reflect the clarification of the definition for "enhanced biological treatment systems or enhanced

biological treatment processes." This action also proposes to revise the compliance demonstration procedures for biological treatment units to remove restrictions on the use of the batch test procedure.

These proposed amendments to the rule would not change the basic control requirements of the rule or the level of health protection it provides. The rule requires new and existing major sources to control emissions of hazardous air pollutants to the level reflecting application of the maximum achievable control technology.

DATES: Comments. Comments must be received on or before [INSERT DATE 30 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER], unless a hearing is requested by [INSERT DATE 10 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If a hearing is requested, written comments must be received by [INSERT DATE 45 DAYS FROM DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Public Hearing. Anyone requesting a public hearing must contact the EPA no later than [INSERT DATE 10 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]. If a hearing is held, it will take place on [INSERT DATE 15 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER], beginning at 10:00 a.m.

ADDRESSES: Comments. Comments should be submitted (in duplicate, if possible) to: Air and Radiation Docket and

Information Center (6102), Attention Docket Number A-90-23 (see docket section below), Room M-1500, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

Public Hearing. If a public hearing is held, it will be held at the EPA's Office of Administration Auditorium, Research Triangle Park, North Carolina. Persons interested in attending the hearing or wishing to present oral testimony should notify Kim Teal, U.S. Environmental Protection Agency, Research Triangle Park, NC 27711, telephone (919) 541-5580.

Docket. Docket No. A-90-23, containing the supporting information for the original NESHAP and this action, are available for public inspection and copying between 8:00 a.m. and 5:30 p.m., Monday through Friday, at the EPA's Air and Radiation Docket and Information Center, Waterside Mall, Room M-1500, first floor, 401 M Street SW, Washington, DC 20460, or by calling (202) 260-7548 or 260-7549. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: For general questions, contact Dr. Janet S. Meyer, Coatings and Consumer Products Group, at (919) 541-5254. For technical questions on appendix C and wastewater provisions, contact Elaine Manning, Waste and Chemical Processes Group, telephone number (919) 541-5499. The mailing address for the contacts

is Emission Standards Division (MD-13), U.S. Environmental Protection Agency, Research Triangle Park, NC 27711.

SUPPLEMENTARY INFORMATION: Comments on the proposed changes to the NESHAP may also be submitted electronically by sending electronic mail (e-mail) to: a-and-r-docket@epamail.epa.gov. Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Comments will also be accepted on diskette in WordPerfect 6.1 or ASCII file format. All comments in electronic form must be identified by the docket number A-90-23. No Confidential Business Information (CBI) should be submitted through e-mail. Electronic comments may be filed online at many Federal Depository Libraries.

I. REGULATED ENTITIES AND BACKGROUND INFORMATION

A. Regulated Entities

The regulated category and entities affected by this action include:

<u>Category</u>	<u>Examples of regulated entities</u>
Industry	Synthetic organic chemical manufacturing industry (SOCMI) units, e.g., producers of benzene, toluene, or any other chemical listed in Table 1 of 40 CFR part 63, subpart F.

This table is not intended to be exhaustive but, rather, provides a guide for readers regarding entities

likely to be interested in the revisions to the regulation affected by this action. This action is expected to be of interest to owners and operators subject to this rule who plan to use biological treatment to comply with control requirements for wastewater streams. Entities potentially regulated by the HON are those which produce as primary intended products any of the chemicals listed in table 1 of 40 CFR part 63, subpart F and are located at facilities that are major sources as defined in section 112 of the Clean Air Act. To determine whether your facility is regulated by this action, you should carefully examine all of the applicability criteria in 40 CFR 63.100. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding "FOR FURTHER INFORMATION CONTACT" section.

B. Background on the Rule

On April 22, 1994 (59 FR 19402), and June 6, 1994 (59 FR 29196), the EPA published in the Federal Register the NESHAP for the SOCM, and for several other processes subject to the equipment leaks portion of the rule. These regulations were promulgated as subparts F, G, H, and I in 40 CFR part 63, and are commonly referred to as the hazardous organic NESHAP, or the HON. Since the April 22, 1994 notice, there have been several amendments to clarify various aspects of the rule. Readers should see the

following Federal Register documents for more information:  
September 20, 1994 (59 FR 48175); October 24, 1994  
(59 FR 53359); October 28, 1994 (59 FR 54131); January 27,  
1995 (60 FR 5321); April 10, 1995 (60 FR 18020); April 10,  
1995 (60 FR 18026); December 12, 1995 (60 FR 63624);  
February 29, 1996 (61 FR 7716); June 20, 1996 (61 FR 31435);  
August 26, 1996 (61 FR 43698); December 5, 1996 (61 FR  
64571); and January 17, 1997 (62 FR 2721).

In June 1994, the Chemical Manufacturers Association (CMA) and Dow Chemical Company (Dow) filed petitions for review of the promulgated rule in the U.S. Court of Appeals for the District of Columbia Circuit, Chemical Manufacturers Association v. EPA, 94-1463 and 94-1464 (D.C. Cir.) and Dow Chemical Company v. EPA, 94-1465 (D.C. Cir). The petitioners raised over 75 technical issues on the rule's structure and applicability. Issues were raised regarding details of the technical requirements, drafting clarity, and structural errors in the drafting of certain sections of the rule. On August 26, 1996, the EPA proposed clarifying and correcting amendments to subparts F, G, H, and I of part 63 to address the issues raised by CMA and Dow on the April 1994 rule. On December 5, 1996 and January 17, 1997, EPA took final action on the amendments proposed on August 26, 1996.

## II. PROPOSED CLARIFICATION OF DEFINITION OF ENHANCED

BIOLOGICAL TREATMENT SYSTEM OR ENHANCED BIOLOGICAL TREATMENT  
PROCESS

The August 26, 1996 proposed changes to the wastewater treatment provisions included provisions that provided easier compliance demonstration options for well-mixed activated sludge systems that are used to control readily biodegraded compounds. In that proposed change to the April 1994 final rule, the compounds listed in table 9 of subpart G were divided into three lists; these lists were presented in table 36 of subpart G. In the proposal, a performance evaluation would not be required for an activated sludge system if it met the definition of "enhanced biological treatment system or enhanced biological treatment process" and if the unit was controlling wastewater streams that contained only list 1 compounds. The August 1996 proposed revisions to the rule also required a performance demonstration for activated sludge systems used to treat a combination of list 1 and list 2 and/or list 3 compounds.

The August 1996 proposal defined an enhanced biological treatment system as

an aerated treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation.

This definition of "enhanced biological treatment system or enhanced biological treatment process" was intended to reflect the basis for the simplified compliance approach for some systems. The 3 lists of compounds in table 36 of subpart G were developed by modeling performance of an activated sludge system that was a thoroughly mixed biological treatment unit. (A thoroughly mixed or completely mixed system is a biological treatment unit where biomass and wastewater entering the tank are dispersed quickly throughout the tank such that the system achieves or approaches uniform characteristics throughout the tank (Docket number A-90-23, item VII-B-8).) After the August 1996 proposal, the EPA learned that some people were interpreting the proposed definition of "enhanced biological treatment system or biological treatment process" to apply more broadly than intended. In the January 17, 1997 final rule, the phrase "homogeneously distributed" was added to the second sentence of the definition to clarify the EPA's intent to define a uniformly well-mixed biological treatment unit. The EPA thought that this revision would better reflect the modeling and clarify the EPA's intent to limit the types of biological treatment units that could use the simplified compliance option to systems that were similar to



the modeled case. The EPA also believed that this change did not alter the meaning of the term.

Since January 17, 1997, the EPA has learned that industry representatives were concerned that the revised definition could be read to require absolute uniformity in the biomass concentration. These industry representatives have pointed out that they believe that such a reading of the definition could preclude any system from using the simplified compliance approach and the performance evaluation exemption. It was not the EPA's intent that the phrase "homogeneously distributed" be interpreted in this way. Therefore, the EPA is proposing clarifying changes to the definition of "enhanced biological treatment system or enhanced biological treatment process" and proposing parallel conforming changes to appendix C to part 63.

Today's action would revise the definition of "enhanced biological treatment system or enhanced biological treatment process" to read:

Enhanced biological treatment system or enhanced biological treatment process means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and

operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit.

The proposed definition includes the following changes made to the January 17, 1997 definition. The term "thoroughly mixed" would be added to the first sentence and "homogeneously distributed" would be removed from the second sentence of the definition. A sentence would be added to the end of the definition to clarify the meaning of the phrase "thoroughly mixed treatment unit" in the first sentence.

The description of a "thoroughly mixed treatment unit" in the new sentence is intended to convey the concept of an activated sludge system that is designed and operated to approach or achieve the characteristics of a completely backmixed system. Because the EPA does not intend the definition to only allow systems with perfect uniformity in characteristics, a "thoroughly mixed treatment unit" would be described as a unit that is "designed and operated to approach or achieve uniform biomass distribution and organic compound concentration." This description is intended to recognize that well-designed complete mix systems may still have small insignificant stagnant zones or other minor deviations from complete mixing. This was the intended meaning of the definition promulgated on January 17, 1997 as

well as the intended meaning of the definition proposed on August 26, 1996.

An example of a system that would meet the enhanced biological treatment system definition would be a well-designed, well-operated, and well-maintained activated sludge system that has uniform characteristics in the aeration unit. The biological treatment unit of this enhanced biological treatment system would be thoroughly mixed throughout the unit and biomass and wastewater entering the unit would be quickly dispersed throughout the unit. The design of the unit would be such that uniform mixing and quick dispersion of the biomass and wastewater entering the unit would occur. The design and operation of the biological treatment unit would take into account mixing, quick dispersion of the biomass and wastewater entering the unit, the location of the wastewater inlet with regards to aerators and the wastewater outlet.

In smaller size units, uniform mixing and quick dispersion could be achieved with a round or square tank and only one influent. For larger scale systems, uniform mixing and quick dispersion could be achieved by having multiple influents of biomass and wastewater. In either case, the biological treatment unit would have uniform distribution of organic concentration and mixed liquor volatile suspended solids (MLVSS) throughout the vessel where the biological

reactions occur.

A plug-flow system is an example of a biological treatment system that does not meet the enhanced biological treatment system definition. Plug-flow systems typically occur in long tanks with a high length-to-width ratio in which longitudinal dispersion is minimal or absent (Docket number A-90-23, item VII-B-8). Plug-flow systems are not considered acceptable units for the performance test exemption because they tend to have higher air emissions at the front of the system where the concentration is higher. The modeling used to develop the simplified compliance approach for systems meeting the definition for an "enhanced biological treatment system or enhanced biological treatment process" did not address plug-flow systems. The EPA did not evaluate the performance of plug-flow systems in the development of the 3 lists for the simplified compliance approach due to the complexity of plug-flow systems. The wide range in characteristics of plug-flow systems led EPA to conclude that these systems had to be modeled using site-specific characteristics. Consequently, these systems are required to demonstrate compliance through use of the procedures in Appendix C. The exclusion of plug-flow biological treatment systems from the simplified compliance demonstration should not be interpreted as implying that a well designed and operated plug-flow biological treatment

system would not achieve the required removal of a compound and thus not represent an acceptable means of compliance. If correctly evaluated through the applicable procedures in appendix C to part 63, they can be acceptable.

Examples of additional biological systems that would not meet the enhanced biological treatment system definition would be units that are not thoroughly mixed throughout the aeration unit and that have large concentration gradients between the inlet and the outlet of the aeration unit. Such biological units do not quickly disperse the biomass and wastewater entering the unit throughout the unit and tend to concentrate the volatile organics in a zone with relatively high air stripping rates. Other examples of units that would not meet the definition include a unit where the influent is introduced close to an aerator increasing the opportunity for volatilization prior to biodegradation and a unit where the influent is introduced close to a discharge point such that channeling occurs.

The EPA realizes that many units have varying degrees of uniformity in biomass distribution and organic compound concentration throughout the biological unit. The EPA is developing additional information to assist in the determination of whether a biological treatment unit meets the enhanced biological treatment system definition. The additional information will be available at the time the

final amendment is issued. The EPA plans to make this material available from the Air and Radiation Docket and Information Center and to place it on the EPA's Technology Transfer Network bulletin board as well as on the Internet.

III. REVISIONS TO REQUIREMENTS FOR DETERMINING SITE-SPECIFIC FRACTION BIODEGRADED

The EPA is also proposing to revise the requirements in subpart G for determining site-specific fraction biodegraded ( $F_{bio}$ ). The rule currently only allows biological treatment processes that meet the definition of "enhanced biological treatment process" to use the batch test procedures in appendix C to part 63. In today's action, the EPA is proposing to remove that restriction in § 63.145(h)(2) and to allow use of the batch test procedure in appendix C for any type of biological treatment system. The EPA is also proposing to allow use of the batch test procedure to determine compound specific fraction biodegraded ( $fbio$ ) for compounds designated as list 3 compounds in table 36 of subpart G. Because this second change removes the distinction between list 2 and list 3 compounds, today's action also proposes to revise table 36 by combining the list 2 and list 3 compounds into a new list 2 in table 36. These changes are being proposed to § 63.145(h) to provide

more flexibility and to simplify this section of the rule.

#### IV. REVISIONS TO APPENDIX C TO PART 63

In today's action, the EPA is also proposing to revise appendix C to part 63 to reflect the proposed revision of the definition for "enhanced biological treatment system or enhanced biological treatment process." There are three sets of proposed changes to appendix C associated with the proposed change to the definition. First, the terminology "uniform well-mixed or completely mixed system" would be replaced with "thoroughly mixed treatment unit" throughout appendix C. Second, the description of a uniform well-mixed or completely mixed system would be removed from section I of appendix C and a sentence describing a thoroughly mixed treatment unit would be added to section I of appendix C. Third, based on discussions with industry representatives, the EPA has concluded that the examples in the second sentence of the fourth paragraph in section I were not helpful and should be deleted. Therefore, the second sentence of the fourth paragraph of section I would be removed and the remaining text in the fourth paragraph merged with the preceding paragraph.

The EPA is also proposing to revise the instructions for Procedure 1 and Procedure 4 in appendix C to part 63 to

allow an owner or operator to assume that the first order biodegradation rate constant is zero for any regulated compound(s) present in the wastewater. Appendix C currently allows the use of this assumption only if the compound(s) represent a small proportion of the mass of the regulated compounds in the wastewater. This change would allow an owner or operator to assume that the biological treatment system achieves no control of a particular compound. The EPA is proposing this change to make appendix C consistent with § 63.145(a)(8) of subpart G and to remove a restriction that might under some circumstances impose an unnecessary burden to determine rate constants which will have no effect on the compliance demonstration.

## V. ADMINISTRATIVE REQUIREMENTS

### A. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in the rule under the Provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. and has assigned OMB control number 2060-0282. An Information Collection Request (ICR) document was prepared by the EPA (ICR No. 1414.03) and a copy may be obtained from Sandy Farmer, OPPE Regulatory Information Division; U.S. Environmental Protection Agency (2137); 401 M St., SW; Washington, DC 20460 or by calling (202) 260-2740.



An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for the EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15.

The changes included in these proposed revisions to the rule will have no impact on the information collection burden estimates previously made. The changes consist of revised definitions, alternative test procedures, and clarifications of requirements. The proposed changes are not additional requirements. Consequently, the ICR has not been revised for this rule.

B. Executive Order 12866 Review

Under Executive Order 12866, the EPA must determine whether the proposed regulatory action is "significant" and, therefore, subject to OMB review and the requirements of the Executive Order. The Order defines "significant" regulatory action as one that is likely to lead to a rule that may:

(1) Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety in State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise

interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

The HON rule promulgated on April 22, 1994 was considered "significant" under Executive Order 12866, and a regulatory impact analysis was prepared. The amendments proposed today would clarify the rule and would remove restrictions on use of an alternative test procedure. These amendments would not add any new control requirements. Therefore, this regulatory action is considered "not significant."

### C. Regulatory Flexibility

The Regulatory Flexibility Act (RFA) generally requires an agency to conduct a regulatory flexibility analysis of any rule subject to notice and comment requirements unless the agency certified that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small government jurisdictions. This proposed rule would not have a

significant impact on a substantial number of small entities. See the April 22, 1994 Federal Register (59 FR 19449) for the basis for this determination. The proposed changes to the rule merely clarify existing requirements and therefore, do not create any additional burden for any of the regulated entities. Therefore, I certify that this proposed action will not have a significant economic impact on a substantial number of small entities.

D. Unfunded Mandates Reform Act

Under Section 202 of the Unfunded Mandates Reform Act of 1995 (Unfunded Mandates Act), the EPA must prepare a budgetary impact statement to accompany any proposed or final rule that includes a Federal mandate that may result in estimated costs to State, local, or tribal governments in the aggregate or to the private sector, of \$100 million or more. Under Section 205, the EPA must select the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule and is consistent with statutory requirements. Section 203 requires the EPA to establish a plan for informing and advising any small governments that may be significantly or uniquely impacted by the rule.

The EPA has determined that today's proposed action does not include a Federal mandate that may result in estimated costs of \$100 million or more to either State,

local, or tribal governments in the aggregate or to the private sector. Therefore, the requirements of the Unfunded Mandates Act do not apply to this action.

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: August 15, 1997.

Carol M. Browner,  
Administrator.

For the reasons set out in the preamble, title 40 chapter I, part 63 of the Code of Federal Regulations is proposed to be amended as follows:

1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

2. Section 63.111 is amended by revising the definition of "enhanced biological treatment system or enhanced biological treatment process" to read as follows:  
§63.111 Definitions.

\* \* \* \* \*

Enhanced biological treatment system or enhanced biological treatment process means an aerated, thoroughly mixed treatment unit(s) that contains biomass suspended in water followed by a clarifier that removes biomass from the treated water and recycles recovered biomass to the aeration unit. The mixed liquor volatile suspended solids (biomass) is greater than 1 kilogram per cubic meter throughout each aeration unit. The biomass is suspended and aerated in the water of the aeration unit(s) by either submerged air flow or mechanical agitation. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly

dispersing the recycled biomass and the wastewater entering the unit.

\* \* \* \* \*

3. Section 63.145 is amended by revising paragraph (h) the introductory text and paragraph (h)(2) to read as follows:

§ 63.145 Process wastewater provisions - test methods and procedures to determine compliance.

\* \* \* \* \*

(h) Site-specific fraction biodegraded ( $F_{bio}$ ). The compounds listed in table 9 of this subpart are divided into two sets for the purpose of determining whether  $F_{bio}$  must be determined, and if  $F_{bio}$  must be determined, which procedures may be used to determine compound-specific kinetic parameters. These sets are designated as lists 1 and 2 in table 36 of this subpart.

\* \* \* \* \*

(2)  $F_{bio}$  determination. If a biological treatment process does not meet the requirement specified in paragraph (h)(1)(i) of this section, the owner or operator shall determine  $F_{bio}$  for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(ii) of this section. If a biological treatment

process meets the requirements of paragraph (h)(1)(i) of this section but does not meet the requirement specified in paragraph (h)(1)(ii) of this section, the owner or operator shall determine  $F_{bio}$  for the biological treatment process using the procedures in appendix C to part 63, and paragraph (h)(2)(i) of this section.

(i) Enhanced biological treatment processes. If the biological treatment process meets the definition of "enhanced biological treatment process" in §63.111 of this subpart and the wastewater streams include one or more compounds on list 2 of table 36 of this subpart that do not meet the criteria in paragraph (h)(1)(ii) of this section, the owner or operator shall determine  $f_{bio}$  for the list 2 compounds using any of the procedures specified in appendix C of 40 CFR part 63. (The symbol " $f_{bio}$ " represents the site specific fraction of an individual Table 8 or Table 9 compound that is biodegraded.) The owner or operator shall calculate  $f_{bio}$  for the list 1 compounds using the defaults for first order biodegradation rate constants ( $K_1$ ) in table 37 of subpart G and follow the procedure explained in Form III of appendix C, 40 CFR part 63, or any of the procedures specified in appendix C, 40 CFR part 63.

(ii) Biological treatment processes that are not enhanced biological treatment processes. For biological treatment processes that do not meet the definition for

"enhanced biological treatment process" in §63.111 of this subpart, the owner or operator shall determine the  $f_{bio}$  for the list 1 and 2 compounds using any of the procedures in appendix C to part 63, except procedure 3 (inlet and outlet concentration measurements).

\* \* \* \* \*

4. Table 36 of appendix to subpart G is revised to read as follows:

\* \* \* \* \*



TABLE 36. COMPOUND LISTS USED FOR COMPLIANCE DEMONSTRATIONS FOR ENHANCED BIOLOGICAL TREATMENT PROCESSES (SEE §63.145(h))

List 1	List 2
Acetonitrile	Acetaldehyde
Acetophenone	Acrolein
Acrylonitrile	Allyl Chloride
Biphenyl	Benzene
Chlorobenzene	Benzyl Chloride
Dichloroethyl Ether	Bromoform
Diethyl Sulfate	Bromomethane
Dimethyl Sulfate	Butadiene 1,3
Dimethyl Hydrazine 1,1	Carbon Disulfide
Dinitrophenol 2,4	Carbon Tetrachloride
Dinitrotoluene 2,4	Chloroethane (ethyl chloride)
Dioxane 1,4	Chloroform
Ethylene Glycol Monobutyl Ether Acetate	Chloroprene
Ethylene Glycol Monomethyl Ether Acetate	Cumene (isopropylbenzene)
Ethylene Glycol Dimethyl Ether	Dibromoethane 1,2
Hexachlorobenzene	Dichlorobenzene 1,4
Isophorone	Dichloroethane 1,2
Methanol	Dichloroethane 1,1 (ethyldiene dichloride)
Methyl Methacrylate	Dichloroethene 1,1 (vinylidene chloride)
Nitrobenzene	Dichloropropane 1,2
Toluidine	Dichloropropene 1,3
Trichlorobenzene 1,2,4	Dimethylaniline N,N
Trichlorophenol 2,4,6	Epichlorohydrin

TABLE 36. COMPOUND LISTS USED FOR COMPLIANCE DEMONSTRATIONS  
FOR ENHANCED BIOLOGICAL TREATMENT PROCESSES (SEE §63.145(h))  
(CONCLUDED)

Triethylamine	Ethyl Acrylate
	Ethylbenzene
	Ethylene Oxide
	Ethylene Dibromide
	Hexachlorobutadiene
	Hexachloroethane
	Hexane-n
	Methyl Isobutyl Ketone
	Methyl Tertiary Butyl Ether
	Methyl Ethyl Ketone, (2- butanone)
	Methyl Chloride
	Methylene Chloride (dichloromethane)
	Naphthalene
	Nitropropane 2
	Phosgene
	Propionaldehyde
	Propylene Oxide
	Styrene
	Tetrachloroethane 1,1,2,2
	Toluene
	Trichloroethane 1,1,1 (methyl chloroform)
	Trichloroethane 1,1,2
	Trichloroethylene
	Trimethylpentane 2,2,4

TABLE 36. COMPOUND LISTS USED FOR COMPLIANCE DEMONSTRATIONS  
FOR ENHANCED BIOLOGICAL TREATMENT PROCESSES (SEE §63.145(h))  
(CONTINUED)

	Vinyl Chloride
	Vinyl Acetate
	Xylene-m
	Xylene-o
	Xylene-p

\* \* \* \* \*

5. On page 2801, third column and page 2802, first column, section I of Appendix C to part 63 is corrected to read as follows:

Appendix C to part 63

Determination of the Fraction Biodegraded ( $F_{bio}$ ) in a Biological Treatment Unit

I. Purpose

The purpose of this appendix is to define the procedures for an owner or operator to use to calculate the site specific fraction of organic compounds biodegraded ( $F_{bio}$ ) in a biological treatment unit. If an acceptable level of organic compounds is destroyed rather than emitted to the air or remaining in the effluent, the biological treatment unit may be used to comply with the applicable treatment requirements without the unit being covered and vented through a closed vent system to an air pollution control device.

The determination of  $F_{bio}$  shall be made on a system as it would exist under the rule. The owner or operator should anticipate changes that would occur to the wastewater flow and concentration of organics, to be treated by the biological treatment unit, as a result of enclosing the collection and treatment system as required by the rule.

The forms presented in this appendix are designed to

be applied to thoroughly mixed treatment units. A thoroughly mixed treatment unit is a unit that is designed and operated to approach or achieve uniform biomass distribution and organic compound concentration throughout the aeration unit by quickly dispersing the recycled biomass and the wastewater entering the unit. Systems that are not thoroughly mixed treatment units should be subdivided into a series of zones that have uniform characteristics within each zone. The number of zones required to characterize a biological treatment system will depend on the design and operation of the treatment system. Each zone should then be modeled as a separate unit. The amount of air emissions and biodegradation from the modeling of these separate zones can then be added to reflect the entire system.

\* \* \* \* \*

6. In section III of appendix C of part 63 the second paragraph after (4) is revised to to read as follows:

\* \* \* \* \*

III. \* \* \*

(4) \* \* \*

\* \* \* \* \*

Select one or more appropriate procedures from the four listed above based on the availability of site specific data. If the facility does not have site-specific data on the removal efficiency of its biological treatment unit,

then Procedure 1 or Procedure 4 may be used. Procedure 1 allows the use of a bench top bioreactor to determine the first-order biodegradation rate constant. An owner or operator may elect to assume the first order biodegradation rate constant is zero for any regulated compound(s) present in the wastewater. Procedure 4 explains two types of batch tests which may be used to estimate the first order biodegradation rate constant. An owner or operator may elect to assume the first order biodegradation rate constant is zero for any regulated compound(s) present in the wastewater. Procedure 3 would be used if the facility has, or measures to determine, data on the inlet and outlet individual organic compound concentration for the biological treatment unit. Procedure 3 may only be used on a thoroughly mixed treatment unit. Procedure 2 is used if a facility has or obtains performance data on a biotreatment unit prior to and after addition of the microbial mass. An example where Procedure 2 could be used, is an activated sludge unit where measurements have been taken on inlet and exit concentration of organic compounds in the wastewater prior to seeding with the microbial mass and start-up of the unit. The flow chart in Figure 1 outlines the steps to use for each of the procedures.

\* \* \* \* \*

7. In appendix C of part 63, section III, in the

second sentence of C. phrase "uniform well-mixed or completely mixed system" is revised to read "thoroughly mixed treatment unit."