supervisory decisions and actions cannot be resolved informally and a national bank chooses not to file an appeal with its immediate supervisory office, a national bank may file an appeal directly with the Ombudsman. In cases where the Ombudsman should be recused from reviewing the decision under appeal, the Ombudsman shall transfer the appeal to the Senior Deputy Comptroller for Bank Supervision Policy in the OCC's Washington DC office. In such cases, the procedures outlined below will apply.

National banks filing appeals with the Ombudsman must submit information in writing fully describing the matter in dispute. After receipt of an appeal, the Ombudsman shall contact the OCC management official involved in the dispute. That management official shall submit written materials and relevant OCC documents pertaining to the bases of the appeal within 10 calendar days of the notice from the Ombudsman. The Ombudsman shall contact the national bank to ensure that the OCC is in possession of all relevant materials. If requested by either OCC management involved in the dispute or a senior official of the national bank filing the appeal, the Ombudsman shall arrange a meeting or a telephone call to more fully discuss the appeal and related issues. In the absence of any extenuating circumstances, the Ombudsman shall issue a written response to the appeal within 45 calendar days of the filing of the appeal by a national bank.

B. Follow-up by Ombudsman

After the Ombudsman receives a decision on an appeal, the Ombudsman shall contact every appellant bank to inquire whether the bank believes OCC examiners have taken actions against the bank in retaliation for its appeal. The Ombudsman shall make these contacts (1) six months after the date the Ombudsman, Deputy Administrator or Deputy Comptroller issues a final written response to an appeal, and (2) six months after the date of completion of the first examination of the appellant bank following its appeal. A national bank may, of course, contact the Ombudsman at any time during or after the appeal if the bank reasonably believes that an OCC examiner is taking action against it in retaliation for its appeal. Upon identifying or learning of any possible retaliatory actions, the Ombudsman shall investigate the complaint; such investigations must be completed within 30 days. If the Ombudsman determines that retaliation has occurred, the Ombudsman shall forward the complaint to the District Administrator, Deputy Comptroller, or Inspector General for appropriate action.

C. Appealable Matters

Except as otherwise provided, a national bank may seek a review of any agency decision or action, including a material supervisory determination. A material supervisory determination includes a determination relating to:

- Examination ratings;
- The adequacy of loan loss reserve provisions; and
- Loan classifications on loans that are significant to an institution.

A national bank may not appeal:

- Appointments of receivers and conservators;
- Preliminary examination conclusions communicated to the national bank prior to the issuance of either a final Report of Examination or other written communication from the OCC; and
- Enforcement-related actions or decisions, including decisions to take prompt corrective action pursuant to section 38 of the Federal Deposit Insurance Act (12 U.S.C. § 1831o).

An enforcement-related action or decision commences, and therefore becomes unappealable, when the national bank receives notice from the OCC indicating its intention to pursue available remedies under applicable statutes or published enforcement-related policies of the OCC. Such policies include OCC's Policy for Corrective Action (PPM 5310–3)(REV), Civil Money Penalty Policy (PPM 5000–7)(REV), and Securities Enforcement Policy (PPM 5310–5). These policies are available on request from the OCC's Communications Division, 250 E. Street, SW., Washington DC 20219–0001, 202–874–4700. For purposes of these guidelines only, remarks in a Report of Examination do not constitute notice of intent to pursue enforcement remedies.

The appeals process established by these guidelines does not supersede any existing appeals procedures available under current law. Matters which are subject to an existing appeals process designed specifically for the issue in dispute, such as re-review of Shared National Credit findings (Banking Circular 189), and reconsideration of decisions on corporate applications (12 CFR 5.13(d)), are appealable to the Ombudsman when the agency decision is final under the specifically designed procedures.

III. Effect of Filing An Appeal

As a general rule, the filing of an appeal with either the national bank's immediate supervisory office or with the Ombudsman serves to stay all agency decisions and actions until the appeal is resolved. In the appropriate circumstances, however, the Ombudsman may put the disputed agency decision or action into effect while the appeal is still pending.

Dated: December 19, 1994.

Eugene A. Ludwig

Comptroller of the Currency

[FR Doc. 94–31545 Filed 12–21–94; 8:45 am]

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federal register

Thursday
December 22, 1994

Part II

Environmental Protection Agency

40 CFR Part 261 et al.

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Dye and Pigment Industries; Hazardous Waste Listing Determination Policy; and CERCLA Hazardous Substance Designation and Reportable Quantities; Proposed Rules

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 261, 271, and 302

[SWH–FRL–5122–5]

RIN 2050–AD80

Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Dye and Pigment Industries; Hazardous Waste Listing Determination Policy; and CERCLA Hazardous Substance Designation and Reportable Quantities

AGENCY: Environmental Protection Agency.

ACTION: Notice of proposed rulemaking.

SUMMARY: The U.S. Environmental Protection Agency (EPA) is proposing to amend the regulations for hazardous waste management under the Resource Conservation and Recovery Act (RCRA). EPA is listing, as hazardous, five wastes generated during the production of dyes and pigments because certain ways of disposing of these wastes may present a risk to human health and the environment. EPA also is proposing not to list as hazardous six other wastes from this industry, and to defer action on three wastes due to insufficient information. The proposal would add the toxic constituents found in the wastes to the list of constituents that serve as a basis for classifying wastes as hazardous. This action also describes EPA's policy on making listing determinations, and the risk-based criteria used by the Agency.

This action is proposed under the authority of Sections 3001(e)(2) and 3001(b)(1) of the Hazardous and Solid Waste Amendments of 1984 (HSWA), which direct EPA to make a hazardous waste listing determination for dye and pigment wastes. If finalized, this regulation would regulate these wastes as hazardous wastes under Subtitle C of RCRA. Additionally, this action proposes to designate the wastes proposed for listing as hazardous substances subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). EPA is not taking action at this time to adjust the one-pound statutory reportable quantities (RQs) for these substances.

DATES: EPA will accept public comments on this proposed rule and on EPA's hazardous waste listing determination policy until March 22, 1995. Comments postmarked after this date will be marked "late" and may not be considered. Any person may request a public hearing on this proposal by filing a request with Mr. David Bussard, whose address appears below, by January 5, 1995.

ADDRESSES: The official record of this proposed rulemaking is identified by Docket Number F–94–DPLP–FFFFF and is located at the following address. The public must send an original and two copies of their comments to: EPA RCRA Docket Clerk, Room 2616 (5305), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

The Docket Number for comments on EPA's discussion of its listing determination policy (see Section I.B) is F–94–LCN–FFFFF. The public must send an original and two copies of their comments on EPA's policy discussion to the above address. Such comments must be submitted separately from comments on the dye and pigment listing determinations, and must reference Docket Number F–94–LLCN–FFFFF. Copies of materials relevant to this proposed rulemaking are located in the docket at the address listed above. The docket is open from 9 am to 4 pm, Monday through Friday, excluding Federal holidays. The public must make an appointment to review docket materials by calling (202) 260–9327. The public may copy 100 pages from the docket at no charge; additional copies are $0.15 per page.

Requests for a hearing should be addressed to Mr. David Bussard at: Characterization and Assessment Division, Office of Solid Waste (5304), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

FOR FURTHER INFORMATION CONTACT: The RCRA/Superfund Hotline, toll-free, at (800) 424–9346 or at (703) 920–9810. The TDD Hotline number is (800) 553–7672 (toll-free) or (703) 486–3323 in the Washington, DC metropolitan area. For technical information on the RCRA hazardous waste listings, contact: Wanda Levine, Office of Solid Waste (5304), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, (202) 260–7458.

For technical information on the CERCLA aspects of this rule, contact: Ms. Gerain H. Perry, Response Standards and Criteria Branch, Emergency Response Division (5202G), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460, (703) 603–8760.

SUPPLEMENTARY INFORMATION: The contents of the preamble to this proposed rule are listed in the following outline:

I. Background

A. Statutory and Regulatory Authorities

These regulations are proposed under the authority of Sections 2002(a) and 3001(b) and 3001(e)(2) of the Solid Waste Disposal Act, 42 U.S.C. 6912(a), and 6921(b) and (e)(2), as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA). These statutes commonly are referred to as the Resource Conservation and Recovery Act (RCRA) and are codified at Volume 42 of the United States Code (U.S.C.), sections 6901 to 6992(k) (42 U.S.C. 6901–6992(k)).

Section 102(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. 9602(a) is the authority for the CERCLA aspects of this rule.

Section 3001(a) of RCRA, 42 U.S.C. 6921(a), requires EPA to promulgate criteria for identifying characteristics of hazardous wastes and for listing hazardous wastes. Section 3001(b) of RCRA requires EPA to promulgate regulations, based on these criteria, identifying and listing hazardous wastes which shall be subject to the requirements of the Act.

Hazardous waste is defined at Section 1004(5) of RCRA, 42 U.S.C. 6903(5). There are two types of hazardous waste. First, hazardous wastes are those solid wastes which may cause or significantly contribute to an increase in mortality, serious irreversible illness, or incapacitating reversible illness. In addition, hazardous wastes are those solid wastes which may pose a substantial present or potential hazard to human health or the environment when improperly managed.

EPA's regulations establishing criteria for listing hazardous wastes are codified at Title 40 of the Code of Federal Regulations (CFR) § 261.11 (40 CFR 261.11). Section 261.11 states three criteria for identifying characteristics and for listing wastes as hazardous.

First, wastes may be classified as "characteristic" wastes if they have the properties described at 40 CFR 261.21–24 which would cause them to be classified as having the characteristics of ignitability, corrosivity, reactivity or toxicity.

Second, wastes may be classified as acutely hazardous if they are fatal to humans at low doses, lethal in animal studies at particular doses designated in the regulation, or otherwise capable of causing or significantly contributing to an increase in serious illness.

Third, wastes may be listed as hazardous if they contain hazardous constituents identified in Appendix VIII of 40 CFR part 261 and the Agency concludes, after considering eleven factors enumerated in 40 CFR 261.11(a)(3), that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly managed. Such wastes are designated as toxic wastes. A substance is listed in Appendix VIII if it has been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms.

Wastes listed as hazardous are subject to federal requirements under RCRA for persons who generate, transport, treat, store or dispose of such waste. Facilities that must meet the hazardous waste management requirements, including the need to obtain permits to operate, commonly are referred to as Subtitle C facilities. Subtitle C is Congress' original statutory designation for that part of RCRA that directs EPA to issue those regulations for hazardous wastes as may be necessary to protect human health or the environment. Thus, facilities like incinerators or landfills that are required to comply with RCRA requirements for hazardous waste are referred to as Subtitle C incinerators or landfills.

Subtitle C is codified as Subchapter III of Chapter 82 (Solid Waste Disposal) of Volume 42 of the United States Code (42 U.S.C. 6921 through 6939(e)). EPA standards and procedural regulations implementing Subtitle C are found generally at 40 CFR parts 260 through 272.

Solid wastes that are not hazardous wastes may be disposed of at facilities that are overseen by state and local governments. These are the so-called Subtitle D facilities. Subtitle D is Congress' original statutory designation for that part of RCRA that deals with federal assistance to state and regional planning efforts for disposal of solid waste.

Subtitle D is codified as Subchapter IV of Chapter 82 (Solid Waste Disposal) of Volume 42 of the United States Code (42 U.S.C. 6941 through 6949(a)). EPA regulations affecting Subtitle D facilities are found generally at 40 CFR parts 240 thru 247, and 255 thru 258.

Section 3001(e)(2) of RCRA (42 U.S.C. 6921(e)(2)) requires EPA to determine whether to list as hazardous wastes generated by various chemical production processes, including the production of dyes and pigments.

In June of 1991, EPA entered into a proposed consent decree in a lawsuit filed by the Environmental Defense Fund, *et al.* (*EDF* v. *Reilly*, Civ. No. 89–0598 (D.D.C.), hereinafter referred to as the settlement agreement), in which the Agency agreed to publish a proposed determination as to whether or not to list as hazardous certain wastes from the production of dyes and pigments by November 30, 1994 and to promulgate a final decision by November 30, 1995.

There are three major classes of dyes and pigments: Azo/benzidine, anthraquinone, and triarylmethane. The settlement agreement specifies that the listing is to address the azo, monoazo, diazo, triazo, polyazo, azoic, and benzidine categories of the azo/benzidine dye and pigment class; the anthraquinone and perylene categories of the anthraquinone dye and pigment class; and the triarylmethane, triphenylmethane, and pyrazolone categories of the triarylmethane dye and pigment class. The settlement agreement also specifies that the listing is to address the following types of wastes where they are found: spent catalysts, reactor still overheads, vacuum system condensate, process waters, spent adsorbent, equipment cleaning sludge, product mother liquor, product standardization filter cake, dust collector filter fines, recovery still bottoms, treated wastewater effluent, and wastewater treatment sludge.

As part of its regulations implementing Section 3001(e) of RCRA, EPA published a list of hazardous wastes that includes hazardous wastes generated from non-specific sources and a list of hazardous wastes from specific sources. These lists have been amended several times, and are published in 40 CFR 261.31 and 40 CFR 261.32, respectively. In this action, EPA is proposing to amend 40 CFR 261.32 to add five wastes from specific sources generated during the production of dyes and pigments.

Those hazardous constituents that are proposed to be included in Appendix VII to part 261, Basis for Listing Hazardous Waste, also are proposed to be added to Appendix VIII of Part 261, the list of Hazardous Constituents, if not already included in this list.

All hazardous wastes listed under RCRA and codified in 40 CFR 261.31 through 261.33, as well as any solid waste that exhibits one or more of the characteristics of a RCRA hazardous waste (as defined in 40 CFR 261.21 through 261.24), are also hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended. See CERCLA Section 101(14)(C). CERCLA hazardous substances are listed in Table 302.4 at 40 CFR 302.4 along with their reportable quantities (RQs). Accordingly, the Agency is proposing to list the proposed wastes in this action as CERCLA hazardous substances in Table 302.4 of 40 CFR 302.4. EPA is not taking action at this time to adjust the one-pound statutory RQs for these substances.

B. EPA's Hazardous Waste Listing Determination Policy

EPA believes that it should provide the public with a better understanding of the basis for EPA's listing decisions. Accordingly, EPA presents here the general approach the Agency uses for determining whether to list a waste as hazardous pursuant to 40 CFR 261.11(a)(3). This presentation focuses on selection of waste management scenarios used in assessing risk and the use of information on risk levels in making listing determinations. These elements are an important part of EPA's general listing policy and critical aspects to the dyes and pigments listing determination. It is important to note that this discussion presents EPA's general listing policy and is not a rulemaking. The Agency may take action at variance with this general policy. The Agency is seeking comment on its policy in order to get input from the public, not in order to promulgate binding rules for listing determinations.

The Agency will review any comments received and may revise its policy based on such comments. However, the Agency does not intend to respond to comments submitted.

The listing criteria described here focus on several aspects of the Agency's listing determination process. The discussion is not intended to cover all potential aspects of these determinations. For example, analyzing population risk is not included in this presentation. The Agency solicits comment on how population risks could be included as a factor in listing determinations. The Agency's approach to calculating distributions of individual risk values when determining "high end" risk and the Agency's position on how far into the future it will consider risk are not covered in today's notice. The Agency solicits comment on these factors and their use in listing determinations.

Currently, risk levels (including carcinogen risk, non-carcinogen risk as determined by hazard quotient (HQ), and ecological risk) provide one of the principal bases for a listing determination. However, risk levels themselves do not represent the sole basis for a listing. Other factors generally are weighed in making a listing decision. The Agency's listing decision policy uses a "weight-of-evidence" approach in which calculated risk information is a key factor. Available risk values are assessed with all other data available to determine whether a waste is or is not a hazardous waste.

The criteria for listing wastes as hazardous are described in 40 CFR 261.11. They are presented in two basic parts: Numeric criteria for acutely hazardous wastes (defined by 40 CFR 261.11(a)(2)); and criteria for toxic wastes (defined by 40 CFR 261.11(a)(3)) containing toxic constituents listed in Appendix VIII to Part 261 (where 11 factors are considered in determining "substantial present or potential hazard to human health and the environment").

Of these 11 factors, seven deal with risk (constituent toxicity, concentration, waste quantity, migration potential, persistence, degradation product potential, and bioaccumulation potential) and are integrated into the risk values generated. The other four factors (plausible management, damage cases, coverage of other regulatory programs, and other factors as may be appropriate) are individual factors that also are considered in a listing determination. Waste quantity (specifically, "de minimis" amounts of waste) also can be a special consideration in making a listing determination for a lower volume wastestream.

1. Selection of Waste Management Scenarios (261.11(a)(3)(vii))

As noted above, one of the many factors that the Agency takes into account is the "plausible types of improper management to which the waste could be subjected." 40 CFR 261.11(a)(3)(vii). Exposures to wastes (and therefore the risks involved) will vary by waste management practice.

It is important to note that a management scenario need not be in use currently to be considered plausible by EPA since disposal practices can and do change over time. Potential future waste management practices are projected and considered in the risk analysis, if appropriate. The Agency often projects risks from management that reasonably *could* be employed.

a. Factors for Projecting a Plausible Waste Management Scenario. There are a number of disposal scenarios for wastes not hazardous under RCRA that are common across industries. These include municipal and industrial unlined landfills for solid materials, tanks and unlined surface impoundments for liquids, and boilers for organic solids and liquids. The Agency will presume that these scenarios are plausible unless circumstances unique to a particular industry show that one or more is not plausible for that industry.

The Agency notes that there may exist certain disposal scenarios not common across industries that could present a greater risk than the risk from the common plausible management scenarios mentioned above. An example might be land-spreading sludge from wastewater treatment facilities. These less common scenarios generally will be considered plausible only when information on an industry indicates that these disposal methods currently are being practiced, or there is good reason to believe they might be practiced in the future.

In determining whether one of the common disposal scenarios is not plausible, the Agency will consider factors such as the following:

- Availability of waste management practices.

There may be practical constraints to the type of waste management practices available to a category of waste generators. For example, if facilities in an industry have only a limited amount of land available to them, then building large surface impoundments to handle wastewaters may be highly unlikely and would not be considered plausible.

- Coverage of the Characterization Program.

Where all, or at least a large percentage, of facilities in an industrial category can be characterized with respect to waste management practices, the Agency may be able to do a more refined analysis of the plausibility of facilities switching from their current waste management practice to a higher risk waste management practice. The Agency may determine it more appropriate to estimate risk based on current management practices where our analysis shows that it is unlikely that facilities would switch to another management practice.

- Effect of Other Regulatory Programs.

Other regulatory programs, for example, the water pollution control program or air pollution regulatory requirements, can impose legal, technical, or practical restraints on waste management practices. If these requirements restrict certain practices (*e.g.*, water treatment requirements technically and practically might preclude treatment in surface impoundments) the Agency can use this information to consider eliminating that disposal practice from consideration.

- Management Costs.

Often, the cost of different management scenarios can be a determinative factor in dictating the plausibility of waste management scenarios. In the absence of other potential cost factors, such as liability, the plausibility that a facility would choose a waste management scenario increases as the expense of that management practice decreases. Conversely, it is more implausible to assume that a firm would chose management activities that impose a higher cost (where cost includes the likelihood of future potential liabilities.) Cost can be a consideration the Agency uses in choosing which management scenario to project as a scenario to analyze for determining potential risk of waste management.

These factors are presented as examples; there may be others appropriate to specific industries. In characterizing the risks for a wastestream where more than one disposal scenario is plausible, the Agency will use the results of the risk assessment for the plausible scenario that presents the highest risks.

Note that EPA considers the extent to which the plausible management scenario calculated to cause the highest risk is practiced, or could be practiced. Management practices the Agency believes probably would occur infrequently may be less determinative

in the final listing determination process. As the probability that generators would use a management practice increases, the greater the weight that set of risk values has in the final listing determination.

2. Risk Levels in Making Listing Decisions

As noted earlier, the Agency's listing determination policy utilizes a "weight-of-evidence" approach in which risk is a key factor. Risk measurements used include carcinogen risk, non-carcinogen risk as determined by hazard quotient (HQ), and ecological risk. However, risk levels themselves do not necessarily represent the sole basis for a listing. There can be uncertainty in calculated risk values and so other factors are considered in conjuction with risk in making a listing decision.

a. Use of Risk Levels in a Listing Decision. EPA's current listing determination procedure (illustrated in Figure 1) uses as an initial cancer-risk "level of concern" a calculated risk level of 1×10^{-5} (one in one hundred thousand) and/or HQs (and/or environmental risk quotients [EQs]) of 1 at any one point in time. Note that individual risks can occur at different points in time. For example, a category of wastestream that is both burned in a boiler by one facility but placed in a landfill by another would be projected to cause exposure through both the air and the drinking water pathways. It is likely that risks from each source will occur at different times, since air exposures would probably occur sooner than groundwater exposures. The Agency will take the timing factor into account when analyzing risk. In accordance with EPA policy, risks from individual carcinogens generally are added together. Listing decisions from this risk level of concern generally will be as follows.

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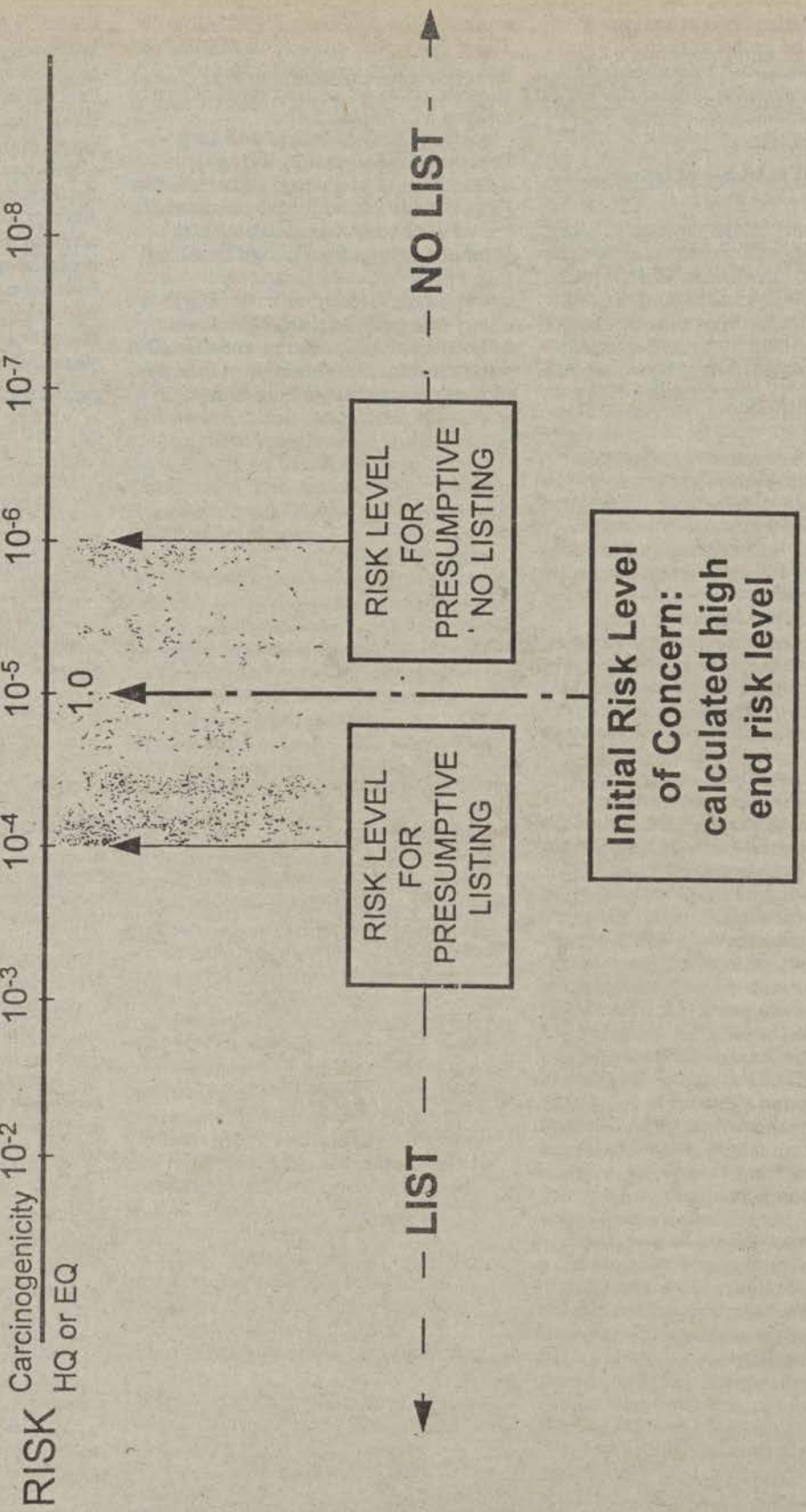
Figure 1



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(1) Wastestreams for which the calculated high-end individual cancer-risk level is 1×10^{-5} or higher generally are considered initial candidates for a list decision.

(2) Wastestreams for which these risks are calculated to be 1×10^{-4} or higher, or 1 or higher HQs or EQs for any individual non-carcinogen, or non-carcinogens that elicit adverse effects on the same target organ, generally will be considered to pose a substantial present or potential hazard to human health and the environment and generally will be listed as hazardous waste. Such wastestreams fall into a category presumptively assumed to pose sufficient risk to require their listing as hazardous waste. However, even for these wastestreams there can in some cases be factors which could mitigate the high hazard presumption. These additional factors, explained below, also will be considered by the Agency in making a final determination.

(3) Wastestreams for which the calculated high-end individual cancer-risk level is lower than 1×10^{-5} generally are considered initial candidates for a no-list decision.

(4) Wastestreams for which these risks are calculated to be 1×10^{-6} or lower, and lower than 1.0 HQs or EQs for any non-carcinogens, generally will be considered not to pose a substantial present or potential hazard to human health and the environment and generally will not be listed as hazardous waste. Such wastestreams fall into a category presumptively assumed not to pose sufficient risk as to require their listing as hazardous waste. However, even for these wastestreams, in some cases, there can be factors that could mitigate the low hazard presumption. These also will be considered by the Agency in making a final determination.

(5) Wastestreams where the calculated high-end individual cancer-risk level is between 1×10^{-4} and 1×10^{-6} fall in the category for which there is a presumption of candidacy for either listing (risk $>10^{-5}$) or no listing (risk $<10^{-5}$). However, this presumption is not as strong as when risks are outside this range. Therefore, listing determinations for wastestreams falling into this range would always involve assessment of the additional factors discussed below.

b. Additional Factors.

The following factors will be considered in making listing determinations, particularly for wastes falling into the risk range between 1×10^{-4} and 1×10^{-6}:

(1) Certainty of waste characterization;

(2) Certainty in risk assessment methodology;

(3) Coverage by other regulatory programs;

(4) Waste volume;

(5) Evidence of co-occurrence;

(6) Damage cases showing actual impact to human health or the environment; and

(7) Presence of toxicant(s) of unknown or unquantifiable risk.

(1) Certainty of Waste Characterization

EPA compiles data on the amounts and composition of each wastestream. Different sources of variability in these data, variability between facilities, between production processes, between samples, and in analytical methodologies, exist. All such variability sources may influence the Agency's decision on how much weight to place on data collected as a basis for a listing decision.

Budget constraints or sample availability constraints may limit the size of the database for any one wastestream. In such cases, the Agency generally assumes that the sample(s) taken are representative of each like wastestream from that category of generator and that the data, generated following a QA/QC plan, are "good" data. However, EPA will take uncertainty of the data into account in the listing process.

The Agency sometimes relies on analytical measurements that fall below the level of an analyst's ability to quantify with certainty the concentration of the constituent involved (these measurements are referred to as "estimated" or "J-values" in listing determinations). Analytical methods used by the Agency have been developed with a goal of obtaining quantitative measurements (*i.e.*, ±25% uncertainty or less) at levels of regulatory concern. Frequently, analytical measurements may detect the presence of constituents of concern at levels at or below the analytical method's limit of quantitation. However, for some highly toxic substances measurements of constituents below the limit of quantitation may be of toxicological significance and, therefore, potential regulatory significance.

The *limit of quantitation* is defined as the level above which results may be obtained with a specified degree of confidence. In the case of methods which use mass spectrometric measurements, quantitative uncertainty is assigned to measurements below the limit of quantitation (although a positive determination of presence is certain) as follows:

- The uncertainty of measurements at the limit of detection (3 times the standard deviation estimation [σ]) approaches ±100% ($3\sigma \pm 3\sigma$).
- At the point of reliable detection ($6\sigma \pm 3\sigma$), the uncertainty of measurement approaches ±50%.
- In the area of accurate quantitation (10σ to 12σ), uncertainty approaches ±30% to ±25%, based on the 99% confidence level of the measurement uncertainty.

In other words, when the analyte signal is 10 or more times larger than the standard deviation of the measurements, there is a 99% probability that the true concentration of the analyte is ±30% of the calculated concentration.[1]

Although the uncertainty of analytical measurements increases as the limit of detection is approached, the calculated concentrations obtained may represent the best available measurement of the analyte present.

It is the Agency's policy on listing determinations that measurements in the range below the level of quantification but above the level of detection will be used at the reported quantitation level for risk analysis purposes. However, the Agency generally will consider the uncertainty associated with measurements below the quantitation level and assess the impact of that level of uncertainty on a listing decision. Increasing uncertainty of a measurement may increase the importance of other factors in making a listing determination.

(2) Certainty in Risk Assessment Methodology

Uncertainty can exist in the methodologies and data used to conduct both the toxicity assessments and the fate and transport exposure models employed in risk assessments. Toxicity assessment methods sometimes rely on animal or cellular models to predict a chemical's effect on humans or animals. Direct toxicity testing of a chemical is not always available. For some of these chemicals, structure/activity relationships can be used to predict the toxicity of the substance involved. In these cases, the Agency considers what degree of uncertainty can exist in that analysis when making listing determinations. Similarly, some fate/transport models make use of an increased amount of input data or can involve actual verification. For those models, uncertainty in exposure

[1] Keith, L.H., Environmental Sampling and Analysis: A Practical Guide (Chelsea, MI: Lewis Publishers, 1992). See Figure 12, page 110, for the relationship of limit of detection, reliable detection limit, and limit of quantitation.

analysis is decreased. The Agency weighs the relative uncertainty of the predictive models when generating risk assessments and making listing determinations.

(3) Coverage by Other Regulatory Programs

Listing decisions can be strongly influenced by the effect of other regulatory requirements on the wastestreams involved. Where another Federal or State program or other RCRA requirements clearly will provide the type of control needed to eliminate the risk associated with a certain type of waste management, a RCRA listing may be considered unnecessary or redundant.

• Other Federal or State programs. If other Federal or State programs clearly regulate risk associated with the wastestream, listing may not be necessary to eliminate risk. For example, if the Office of Air and Radiation within EPA has issued an NESHAP to control emissions of a constituent, it may be unnecessary to consider risk from inhalation of that constituent in making listing determinations. In some cases, another regulatory program may be in the process of developing such regulatory requirements. If this program is under statutory requirements or Court Order, EPA may consider these regulatory requirements to be forthcoming and, in some cases, may defer to them in listing determinations, even where such regulatory coverage is several years away. If this program is under no statutory or legal deadline, no deference typically will be given to projected future regulatory coverage from other programs.

(4) Waste Volume

Waste volume is, in fact, part of a risk-level calculation. Risk is projected based on the volume of waste involved. However, volume of waste is also a factor EPA may consider when the projected risk falls in a marginal risk range.

(5) Evidence of Co-occurrence

Virtually all wastestreams EPA assesses are complex mixtures of constituents. Where possible, the Agency calculates potential risk for all measured pollutants. Where more than one risk value for carcinogenicity is calculated, concern about overall wastestream effects increases and the Agency will consider that risk additive. However, where sampling and analysis data show compelling evidence that the constituents cannot or do not occur together in the wastestream or at the receptor, the Agency generally will only consider the risk associated with individual constituents.

(6) Damage Cases

For each listing determination, EPA seeks data on damage cases. These are cases in which some prior waste management practice has resulted in environmental harm. Where there has been a clear case of harm, the data suggest the management of that waste has already damaged human health or the environment in some way, and that such damage could occur again. Depending on the number and severity of the damage cases and the potential for these damages to happen again, adverse damage cases may provide a "stand alone" reason for listing the waste.

Where damage cases appear to contradict the risk analysis, EPA will try to determine the reason and use that assessment in the overall listing decision.

(7) Unknown or Unquantified Risk

Not all constituents in a complex wastestream can be analyzed for risk. Hazard data may not be available either directly or through mechanisms such as structure/activity relationships, or they may be in a form which is not considered usable by EPA. In the cases where some constituents are present but no risk levels can be assigned to them, the Agency considers the potential for these constituents to be hazardous.

As stated above, use of these additional factors is not limited to cases in which the risk levels fall between 10^{-4} and 10^{-6}. Pursuant to EPA's listing determination policy "weight-of-evidence" approach, the Agency will consider these factors, as appropriate, even where risk levels fall in the presumptive list or presumptive no-list levels.

II. Today's Action

A. Summary of Today's Action

1. Confidentiality Claims

The hazardous waste listings proposed here are based in part upon data claimed as confidential by certain dye and pigment manufacturers. Although EPA intends to publish information derived from these data claimed as confidential (to the extent relevant to the proposed listing), the Agency is unable to do so at the present time. Therefore, this proposed rule is being published without some of the information that supports the Agency's proposal. Where that information is missing from text, it is noted in the text. Whenever EPA is unable to include pertinent data in a table, the following statement appears in a footnote: "Relevant data are not included at the present time due to business confidentiality concerns." EPA is pursuing avenues to allow publication of the information, and intends to supplement the public record prior to issuing a final listing.

2. Summary of Proposed Listing Determinations and Deferrals

In today's notice, EPA is proposing to add five wastes generated during the production of dyes and pigments to the lists of hazardous wastes in 40 CFR 261.32. A summary of the waste groupings proposed for listing are provided below with their proposed corresponding EPA Hazardous Waste Numbers.

K162 Wastewater treatment sludge from the production of azo pigments.
K163 Wastewaters from the production of azo pigments.
K164 Wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants.
K165 Wastewaters from the production of azo dyes, excluding FD&C colorants.
K166 Still bottoms or heavy ends from the production of triarylmethane dyes or pigments.

The Agency has determined that these wastes meet the criteria for listing set out in 40 CFR 261.11. Section II.E. of this preamble presents waste characterization, waste management, and risk assessment data, which are the bases for the Agency's proposal to list or not to list the wastes studied in this rulemaking.

Upon promulgation of these proposed listings, all wastes meeting the listing descriptions would become hazardous wastes and would require treatment, storage, or disposal at permitted facilities. Residuals from the treatment, storage, or disposal of the wastes included in this proposed listing also would be classified as hazardous wastes pursuant to the "derived-from" rule (40 CFR 261.3(c)(2)(i)). For example, ash or other residuals from treatment of the listed wastes would be subject to the hazardous waste regulations. Also, 40 CFR 261.3(a)(2)(iv) (the "mixture" rule) provides that, with certain limited exceptions, any mixture of a listed waste and a solid waste is itself a RCRA hazardous waste.

However, when these wastes are recycled as described in 40 CFR 261.2(e)(1)(iii) or 261.4(a)(8), they are not solid wastes and are not subject to hazardous waste regulations. For example, if a waste is collected and returned in a closed-loop fashion to the

same process, the waste is not regulated. To meet the exemption, the manner in which a material is recycled must meet the three key requirements outlined in the rules and in 50 FR 639 (January 4, 1985): (1) The material must be returned to the original process from which it was generated without first being reclaimed; (2) the production process to which the materials are returned must use raw materials as principal feedstocks; and (3) the material must be returned as a substitute for raw material feedstock in the original production process. (The regulations contain other recycling exclusions as well, but the provisions referenced above are the principal ones most likely to be applicable to the wastes at issue in this proposal.) EPA is proposing to amend Appendix VII and Appendix VIII to 40 CFR part 261 to add constituents contained in the above wastestreams which were found to pose risk.

The Agency requests comments on the proposed listing of the above wastes, and on the option of not listing these wastes.

This action also proposes not to list as hazardous six wastestreams generated during the production of dyes and pigments:

- Wastewaters from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock).
- Wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock.
- Wastewaters from the production of triarylmethane pigments using aniline as a feedstock.
- Wastewaters from the production of anthraquinone dyes and pigments.
- Wastewaters from the production of FD&C colorants.
- Dusts and dust collector fines from the manufacture of dyes and pigments.

The Agency requests comments on the proposal not to list the above wastes and on the option of listing these wastes.

Because the Agency does not have sufficient sampling information on which to base a proposed listing determination, the Agency proposes to defer a determination of whether to list wastewater treatment sludge from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock), as well as spent filter aids, diatomaceous earth, or adsorbents from azo, anthraquinone, or triarylmethane dyes, pigments, or FD&C colorants. The Agency intends to obtain such sampling information and issue a supplemental notice making a proposed determination on whether to list the wastes as hazardous. The Agency also is deferring a proposed listing determination for wastewater treatment sludge from the production of anthraquinone dyes and pigments due to lack of health effects information on two constituents, leucoquinizarine and 1-aminoanthraquinone, that were found in the wastestream. The Agency requests any information that commenters may have on the toxicology of these constituents, including the existence of any toxic analogs for leucoquinizarine and 1-aminoanthraquinone. EPA will evaluate carefully all public comments and information received in response to this notice. Particular notice will be paid to any data which tend to support or refute a finding of risk to human health and the environment. Based on comments received, EPA may choose, rather than deferring, to promulgate a final determination to either list or not list wastewater treatment sludge from the production of anthraquinone dyes and pigments as hazardous under RCRA.

The Agency also requests comments on the data used in this proposal, the methodology and assumptions used in the risk assessment, the waste groupings chosen by the Agency and other analyses supporting the proposed listings.

3. Request for Comment on the Effect of Enforceable EPA/Industry Agreements on Plausible Mismanagement Analysis and Subsequent Listing Determinations

The Agency is interested in innovative ways of conducting listing determinations that could assure environmental protection with less cost than full regulation as a hazardous waste. One approach on which the Agency seeks comment involves enforceable agreements between EPA and the regulated community.

The Agency is seeking comment on whether enforceable agreements between EPA and industry that restrict the use of certain waste management practices could affect the Agency's plausible mismanagement analysis and, in turn, affect the Agency's listing determination. Specifically, the Agency seeks comment on whether EPA should pursue such agreements with respect to either the dye and pigment wastes that the Agency is proposing to list in this notice (or, additionally those it proposes not to list). The Agency seeks comment on whether the Agency should decide not to list such wastes (or retain a no-list decision) if the agreements ensure that the wastes will not be managed in a manner that poses unacceptable risk.

A decision not to list based on such enforceable agreements could be based on the view that management practices that are prohibited in an enforceable agreement are not "plausible" because facilities within an industry covered by an enforceable agreement are unlikely to violate that agreement; *i.e.*, use a risky management practice, especially if the agreement were to contain monetary or other sanctions for a breach or violation. Waste management practices that are not plausible because they are prohibited by such an agreement arguably need not be considered by the Agency in determining whether the waste poses "a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed." (*See* discussion of selection of waste management scenarios at I.B.1.) Thus, if a waste does not pose an unacceptable risk if managed in accordance with an enforceable agreement, the Agency could determine that the waste should not be listed as hazardous. The Agency requests comment on the use of such an approach as part of the listing determination for wastes generated during the production of dyes and pigments, including those proposed to be listed and/or proposed not to be listed in today's notice.

For such an approach to be workable, the EPA believes that the following basic principles must apply:

(1) All of the companies that generate the wastestream at issue must be party to the agreement;

(2) To ensure that the agreement will adequately deter prohibited waste management practices, the agreement should be enforceable in court and should contain provisions requiring payment of sufficient penalties or damages if the agreement is violated;

(3) The agreement should eliminate management practices that pose an unacceptable risk;

(4) The agreement should contain provisions that would account for new entrants; and

(5) The agreement should promote waste minimization.

Section 7003 of RCRA may provide EPA with authority under appropriate circumstances to enter into such agreements on consent. Section 7003(a) of RCRA authorizes EPA to issue orders requiring such action as may be necessary upon receipt of evidence that the past or present handling, storage, treatment, transportation, or disposal of any solid waste or hazardous waste may present an imminent and substantial endangerment to human health or the environment. EPA also has the authority to settle claims under RCRA section 7003 by entering into a consent decree

or agreement. In addition, the Agency has inherent authority to enter into contracts that are not prohibited by law. See generally, *Kern-Limerick, Inc.* v. *Scurlock*, 347 U.S. 110 (1954). Such inherent authority also may be available to enter into such agreements.

EPA believes that such an approach may be feasible for the wastes generated during the production of dyes and pigments because such wastes are generated by a relatively small number of facilities, and the likelihood of expansion in this industry does not appear to be great. Such an approach may not be feasible in an industry with a greater number of facilities or in an industry that is expanding. Additionally, it may not be a valid approach for an industrial sector in which the wastes generated are so hazardous, move off-site in such a fashion, or require such detailed controls that EPA wants the full regulatory controls and civil and criminal authorities that follow from full Subtitle C regulation.

The Agency requests comments on the feasibility of entering into and enforcing such agreements with industry. The Agency also requests comment on how such agreements would account for entrance into the market of new facilities that generate the waste at issue (*e.g.*, add new elements to the agreement, issue unilateral order under RCRA Section 7003). The Agency also requests comment on alternative innovative approaches to listing determinations.

B. Dye and Pigment Industries Overview

The dye and pigment industries are comprised of three separate industries, represented by three different trade associations. The Color Pigment Manufacturers Association (CPMA) represents pigment manufacturers, the Ecological and Toxicological Association of the Dyestuffs Manufacturing Industry (ETAD) represents dye manufacturers, and the International Association of Color Manufacturers (IACM) represents food, drug, and cosmetic (FD&C) colorants manufacturers.

Dyes are intensely colored or fluorescent organic substances that impart color to a substrate by selective absorption of light.[2] When a dye is applied, it penetrates the substrate in a soluble form, after which it may or may not become insoluble. Dyes are retained in the substrate by physical absorption, salt or metal-complex formation, solution, mechanical retention, or by the formation of ionic or covalent chemical bonds.[3]

Dyes are used to color fabrics, leather, paper, ink, lacquers, varnishes, plastics, cosmetics, and some food items. Dye manufacture in the U.S. includes more than 2,000 individual dyes, the majority of which are produced in quantities of less than 50,000 pounds. In 1990, total U.S. dye production was 258 million pounds. In 1991, there were approximately 33 manufacturing plants operated by 20 companies that produce either azo, anthraquinone, or triarylmethane dyes.[4]

Pigments possess unique characteristics that distinguish them from dyes and other colorants. Pigments are colored, black, white, or fluorescent particulate organic or inorganic solids, usually insoluble in, and essentially physically and chemically unaffected by, the vehicle or substrate in which they are incorporated. The primary difference between pigments and dyes is that during the application process, pigments are insoluble in the substrate. Pigments also retain a crystalline or particulate structure and impart color by selective absorption or by scattering of light. With dyes, the structure is temporarily altered during the application process, and imparts color only by selective absorption.[5]

Pigments are used in a variety of applications; the primary use is in printing inks. There are fewer pigments produced than dyes, though pigment batches are generally larger in size. The U.S. total 1990 pigment production volume of approximately 415 million pounds is composed of 300 million pounds of inorganic pigments and 115 million pounds of organic pigments.[6] In 1991, there were approximately 27 domestic manufacturing plants operated by 20 companies[7] producing organic pigments subject to the settlement agreement.

FD&C colorants are dyes and pigments that have been approved by the Food and Drug Administration (FDA) for use in food items, drugs, and/or cosmetics. Typically, FD&C colorants are azo or triarylmethane dyes and are similar or identical to larger-volume dye products not used in food, drugs, and cosmetics. Manufacture of FD&C colorants is identical to that for the corresponding dye or pigment, except that the colorant undergoes additional purification. Each FD&C colorant batch is tested and certified by the FDA. In 1991, there were approximately 7 domestic manufacturing plants operated by 5 companies[8] producing FD&C colorants subject to the EDF settlement agreement.

This proposal addresses the three chemical classes of organic dyes and pigments specified in the settlement agreement: azos, anthraquinones, and triarylmethanes.

Azos are the largest and most versatile chemical class. The various azo chemical structures are readily synthesized, typical product application methods are not complex, and a broad range of colors can be produced with excellent fastness properties. Azo colorants are used in essentially all organic dye applications, including textiles, paper, inks, coatings, plastics, and leather.

Pyrazolones are a subset of azo dyes and pigments, named for the substituted pyrazolones that are used as coupling agents. The pyrazolone subclass is comprised mainly of yellow, orange, and red azo dyes and pigments.

Pyrazolone dyes and pigments are used primarily in textiles and plastics, respectively.

Despite high costs, anthraquinones are an important group of dyes due to superior fastness. They have applications on cotton, cellulose, and synthetic fibers. They have good affinity for the substrate, level dyeing power, and excellent fastness. Anthraquinone pigments are chemically identical to the corresponding dyestuffs and also exhibit high fastness properties. They are used primarily in automotive paints. There are many more anthraquinone dyes than pigments. Most anthraquinone dyes have not been developed into pigments due to technical constraints, as well as competition from less expensive substitutes.

Perylene pigments, a subset of the anthraquinone chemical class, provide an economical alternative to heavy metal-containing red pigments. Their excellent thermal stability and fastness properties meet the standards for automotive finishes and other high-quality coatings.

Triarylmethanes are characterized by their brilliancy of hue, intensity of color, and low fastness properties. Triarylmethane dyes typically are used in the textile industry and in the production of pigments. Pigments typically are used in the production of printing and duplicating inks.

[2] "Pigments—A Primer," reprinted from American Ink Maker, June 1989, Color Pigment Manufacturers Association.

[3] Kirk-Othmer Encyclopedia of Chemical Technology—Volume 8, "Dyes and Dye Intermediates."

[4] 1992 RCRA Section 3007 Questionnaire Data.

[5] "Pigments—A Primer," reprinted from American Ink Maker, June 1989, Color Pigment Manufacturers Association.

[6] CPMA meeting presentation, August, 1991.

[7] 1992 RCRA Section 3007 Questionnaire Data.

[8] 1992 RCRA Section 3007 Questionnaire Data.

C. Description of the Process Wastes Identified in Comparison to Those Specified in the Settlement Agreement

Based on the Agency's study of the dye and pigment industries, EPA has concluded that many of the dye and pigment processes within each of the three chemical classes generate very similar wastestreams. Because of the similarity of wastestreams associated with the manufacture of each class of dye or pigment (*i.e.*, azo, anthraquinone, and triarylmethane), EPA combined closely related wastestreams into "waste groupings," and proposed one hazardous waste listing description and waste code for each of these groupings. Although, given time and resource constraints, EPA was not able to sample wastestreams generated from the production of each distinct product within a particular waste grouping, the sampling data and raw material and process chemistry information that EPA collected support the waste groupings EPA has established.

The constituents and their concentrations in a waste will determine, in turn, the nature of the toxicity of the waste. EPA is required to consider the nature and toxicity of a waste in making listing determinations pursuant to 40 CFR 261.11. Given that similarities between wastes will result in a similar listing determination pursuant to the factors in EPA's regulations, it is reasonable to group wastes for the purpose of making listing determinations. Further, grouping similar waste matrices (*i.e.*, wastewaters or sludges) will facilitate the development of land disposal treatment standards (see 40 CFR part 268).

Listing determinations were made on each waste grouping. For example, all wastewaters resulting from the production of azo pigments are proposed to be listed as K163 hazardous wastes. Other wastewater groupings for which listing determinations were made include wastewaters resulting from the production of azo dyes, excluding FD&C colorants (proposed as K165), wastewaters resulting from the production of anthraquinone dyes and pigments, and wastewaters resulting from the production of FD&C colorants.

In addition, wastewaters generated from the production of triarylmethane dyes and pigments are grouped together under one waste grouping due to the similarity of these wastes, with the exception of wastewaters from the production of triarylmethane pigments using aniline as a feedstock. Wastewaters from the production of triarylmethane pigments using aniline as a feedstock were found to be significantly different in chemical composition from other triarylmethane dye and pigment processes and, therefore, were placed in a separate waste grouping.

Triarylmethane pigments using aniline as a feedstock are manufactured at two facilities in the country. Only two triarylmethane products are made at each of these facilities and one is used as an intermediate for the second. The process used in manufacturing these pigments is a batch process but is operated throughout the year. Only two primary reactants are used at these facilities, unlike other dye and pigment operations where hundreds of raw materials often are used at one site. As a result, these reactants are present in the wastewater at high concentrations.

Thus, wastewaters from the production of triarylmethane dyes and pigments were divided into two categories for purposes of making a listing determination: (1) Wastewaters from the production of triarylmethane dyes and pigments, excluding triarylmethane pigments using aniline as a feedstock, and (2) wastewaters from the production of triarylmethane pigments using aniline as a feedstock.

The wastewater categories include mother liquors generated from product filtration, filter washwaters, equipment and floor cleaning washwaters, break waters, spent scrubber waters, and other process waters. Treated wastewater effluent also is captured by these wastewater groupings. Although EPA did not sample wastewater following treatment, treated wastewater would be expected to contain the same or fewer hazardous constituents and the same or lower concentrations of such constituents than untreated wastewater. Thus, if not listed before treatment, such wastewater is presumed not to meet the Agency's criteria for listing after treatment. Furthermore, any wastewater listed as hazardous before treatment would continue to be regulated as hazardous waste after treatment.

Wastewater treatment sludges were grouped in a similar manner to wastewaters. Wastewater treatment sludges generated from the dye and pigment industries include any sludges generated during the pretreatment or treatment of dye and pigment wastewaters. This includes pretreatment sludge generated from filtration and precipitation in equalization and neutralization basins, sludges from powdered activated carbon or other adsorbent treatments, and primary and secondary biological treatment sludges. Sludge groupings defined for purposes of listing determinations include wastewater treatment sludge from the production of azo pigments (proposed as K162), wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants (proposed as K164), wastewater treatment sludge from the production of anthraquinone dyes and pigments, wastewater treatment sludge from the production of triarylmethane dyes and pigments, excluding triarylmethane pigments using aniline as a feedstock, and wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock. These groupings are justified because, as was true within the wastewater grouping, the sludges covered by each sludge waste group exhibit similarities in constituent concentrations.

Distillation bottoms from dye and pigment manufacturing are generated during raw material and solvent recovery operations. The Agency determined that still bottoms from dye and pigment manufacturing are generated only during recovery operations associated with the manufacture of triarylmethane dyes and pigments. Therefore, the following waste grouping was developed to address distillation bottoms from the dye and pigment industries: Still bottoms or heavy ends from the production of triarylmethane dyes or pigments (proposed as K166).

The Agency grouped spent filter aids, diatomaceous earth, or adsorbents used in the production of azo, anthraquinone, or triarylmethane dyes, pigments, or FD&C colorants into one waste grouping because these wastes all adsorb unreacted raw materials, by-products, and impurities and are generated in physically similar forms. Because the constituent composition of these filter aids varies depending on raw materials used, the Agency does not, at this time, have sufficient data to fully characterize this waste grouping. To further support a listing determination on these wastestreams, the Agency intends to collect additional information which will allow assessment of these wastes either as a single waste grouping or, alternatively, as several separate groupings.

Dusts and dust collector fines are generated primarily during drying, grinding, and blending operations used in manufacturing both dyes and pigments. These wastestreams were grouped because they all are comprised primarily of product dust.

Product standardization filter cake probably is generated during a final purification step following product standardization. Information obtained during the industry study does not confirm the existence or description of

this wastestream. However, filter cakes generated during product purification are comprised of spent filter aids, diatomaceous earth, or other adsorbent, along with product impurities and, therefore, will be characterized with the spent filter aids wastestream described above.

Information relevant to this discussion is not included at the present time due to business confidentiality concerns.

Therefore, the Agency is including the spent catalyst wastestreams with the spent filter aids, diatomaceous earth, or adsorbents used in the manufacture of azo, anthraquinone, or triarylmethane dyes, pigments, or FD&C colorants waste group. The Agency did not encounter any traditional catalysts (*i.e.*, chemicals used to enhance a reaction without being consumed) used in dye and pigment manufacturing.

Vacuum system condensate, reactor still overhead, and equipment cleaning sludge, are not generated in dye and pigment manufacturing.

The following table summarizes each of the wastestreams identified in the settlement agreement, and describes their coverage in the listing determinations proposed in today's rulemaking:

TABLE II–1.—SETTLEMENT AGREEMENT WASTESTREAMS

Wastestreams identified in the settlement agreement	Coverage in today's proposed rulemaking
Product mother liquor Process waters Treated wastewater effluent	Addressed as a wastewater for each industry segment, including azo, anthraquinone, and triarylmethane dyes and pigments (K163, K165).
Wastewater treatment sludge	Addressed as wastewater treatment sludge for each industry segment, including azo, anthraquinone, and triarylmethane dyes and pigments (K162, K164).
Recovery still bottoms	Still bottoms from triarylmethane dyes and pigments (K166).
Spent filter aids	Addressed for the industries as a whole.
Dust collector fines	Addressed for the industries as a whole.
Product standardization filter cake	Not explicitly generated.
Spent catalysts	Not explicitly generated but included with spent filter aids.
Vacuum system condensate Reactor Still Overhead Equipment Cleaning Sludge	Not generated by these industries.

D. Description of Health and Risk Assessments

In determining whether waste generated from the production of dyes and pigments meets the criteria for listing a waste as hazardous as set out at 40 CFR 261.11, the Agency evaluated the potential toxicity and intrinsic hazard of constituents present in the wastestreams, the fate and mobility of these chemicals, the likely exposure routes, the current waste management practices, and plausible management practices. A quantitative risk assessment was conducted for those constituents and wastestreams where the available information made such an assessment possible.

1. Human Health Criteria and Effects

The Agency uses health-based levels, or HBLs, as a means for evaluating the level of concern of toxic constituents in various media. In the development of HBLs, EPA first must determine exposure levels that are protective of human health and then apply standard exposure assumptions to develop media-specific levels. EPA uses the following hierarchy for evaluating health effects data and health-based standards in establishing chemical-specific HBLS:

a. Use the Maximum Contaminant Level (MCL) or proposed MCL (PMCL) as the HBL for the ingestion of the constituent in water, when it exists. MCLs are promulgated under the Safe Drinking Water Act (SWDA) of 1974, as amended in 1986, and consider technology and economic feasibility as well as health effects.

b. Use Agency-verified Reference Doses (RfDs) or Reference Concentrations (RfCs) in calculating HBLs for noncarcinogens and verified carcinogenic slope factors (CSFs) in calculating HBLs for carcinogens. Agency-verified RfDs, RfCs, and CSFs and the bases for these values are presented in the EPA's Integrated Risk Information System (IRIS).

c. Use RfDs, RfCs, or CSFs that are calculated by standard methods but not verified by the Agency. These values can be found in a number of different types of Agency documents and EPA uses the following hierarchy when reviewing these documents: Health Effects Assessment Summary Tables (HEAST); Human Health Assessment Group for Carcinogens; Health Assessment Summaries (HEAs) and Health and Environmental Effects Profiles (HEEPs); and Health and Environmental Effects Documents (HEEDs).

d. Use RfDs or CSFs that are calculated by alternative methods, such as surrogate analysis, including structure activity analysis, and toxicity equivalency.

All HBLs and their bases for this listing determination are provided in a document entitled "Dye and Pigment Waste Listing Support Health Effects Background Document" (RTI,1994), which can be found in the RCRA docket for this rule at EPA Headquarters (see **ADDRESSES** section).

Acute toxicity data such as lethal doses for the oral and dermal routes and lethal concentrations for the inhalation route also were evaluated for all analytes in the record samples. These data also are presented in the Health Effects Background Document prepared for this rule.

Use of Metabolic Products

There are three compounds commonly identified in the record samples for which EPA has found no reliable health effects data. These compounds are: Acetoacet-*o*-anisidide (AAOA), acetoacet-*o*-toluidide (AAOT), and acetoacetanilide (AAA). Because of the lack of health effects data on these compounds, the Agency explored the use of metabolic pathway information to develop toxicologic values. This approach involves the use of health effects information for compounds expected to follow a similar metabolic pathway to those of the three chemicals of concern to estimate toxicity.

The metabolic pathways for the class of compounds identified as aromatic amines have been extensively studied, and acetylation and N-hydroxylation have been identified as initial metabolic

reactions of this class of compounds. Using this information, the Agency proposes to use the toxicity of aniline to represent the toxicity of AAA and the toxicity of 2-aminotoluene to represent the toxicity of AAOA and AAOT. The Agency has assumed a direct quantitative relationship between the constituents of concern (*i.e.*, AAOA, AAOT, AAA) and these compounds (*i.e.*, aniline, 2-aminotoluene) that follow a similar metabolic route.

In humans as much as 60 percent of aniline that is absorbed is oxidized in a dose-dependent manner to give *o*- and *p*-aminophenol, the first step in amide formation for this pathway. The metabolites of these products include acetylated arylamines, and are responsible for the toxicity of aniline.

Acetoacetanilide (AAA) is a structural analog of aniline and the metabolic pathways are expected to be similar. Since the acetyl group is already part of AAA, initial acetylation may be considered complete.

Because the metabolic conversions occur on a molar basis and the doses in laboratory studies are reported as parts per million, the difference in molecular weight must be considered. Also, since only 60 percent of the aniline is expected to be metabolized by the acetylation pathway and AAA is acetylated in its original form, the toxicity of AAA is expected to be proportionally greater than the toxicity of aniline. Therefore, the HBL for AAA is estimated to be 0.003 mg/L as compared to 0.006 mg/L for aniline.

Acetoacet-*o*-toluidide (AAOT), and acetoacet-*o*-anisidide (AAOA) are structural analogues of 2-aminotoluene, and the metabolic pathways are expected to be similar to those previously described for aniline. Since the acetyl group is already part of AAOT and AAOA, initial acetylation may be considered complete.

Because the metabolic conversions occur on a molar basis and the doses in laboratory studies are reported as parts per million, the difference in molecular weight must be considered. Also, since only 25 percent of the aminotoluene is expected to be metabolized by the acetylation pathway, and AAOT and AAOA are acetylated in their original forms, their toxicities are expected to be proportionally greater than the toxicity of 2-aminotoluene. Therefore, the HBLs for AAOT and AAOA are estimated to be 0.00004 mg/L and 0.00005 mg/L, respectively, as compared to 0.0001 mg/L for 2-aminotoluene.

2-Methoxyaniline also has been identified in the azo pigment wastestream. 2-Aminotoluene has been selected as the surrogate for the toxicity of 2-methoxyaniline, because of the structural similarity of the compounds and the similarity of metabolic mechanisms described above. The Agency requests comment on the use of metabolic pathway information to determine health effects, and on alternate approaches.

2. Coeluting Compounds

A number of compounds detected in the wastes generated from dye and pigment manufacture coelute (*i.e.*, overlap) on the Gas Chromatography/Mass Spectrometry (GC/MS) curve, making it impossible to confirm the concentration and, in some cases, the presence of the individual coeluting compounds. For example, the three constituents, 2- and 4-aminoaniline, and 2-methoxyaniline, coelute on the GC/MS curve. The coelution is such that the presence of 2- and 4-aminoaniline is indistinguishable, yet the presence of 2-methoxyaniline can be verified. This occurs because the curve for 2-methoxyaniline contains an extra peak in addition to the peaks that overlap with 2- and 4-aminoaniline. However, the individual contributions to the total concentration found in the waste can not be established.

Because the contributions from the individual contaminants can not be established, the Agency assumed that any of the three contaminants could be present at 100 percent of the concentration detected. The Agency evaluated all coeluting compounds independently in the risk assessment and used the highest risk calculated for the compounds to ensure the risk was not underestimated.

However, 2-methoxyaniline is the expected contaminant in wastes generated from facilities that manufacture azo pigments using acetoacet-*o*-anisidide (AAOA) as a raw material because 2-methoxyaniline is an expected hydrolysis product of AAOA (refer to Section II.E, Wastewater Treatment Sludge from the Production of Azo Pigments, K162, for a discussion on the hydrolysis of AAOA). Therefore, for wastes generated from the manufacture of azo pigments using AAOA as a raw material, the Agency conducted the risk assessment for these coeluting compounds based on toxicity information for 2-methoxyaniline (see discussion of metabolic products, above, and the Dye and Pigment Waste Listing Support Health Effects Background Document for discussions on the toxicity surrogate used for 2-methoxyaniline).

A second set of coeluting compounds consists of the three isomers 2-, 3-, and 4-aminotoluene. The presence of the three isomers was confirmed when detected, and the combined concentration of the three compounds was quantified. Because the contributions from the individual contaminants can not be established, any one of the coeluting contaminants could be present at 100 percent of the concentration detected. Therefore, the Agency evaluated coeluting compounds with health-based levels independently in the risk assessment and used the highest risk calculated by the constituents, in this case 2-aminotoluene, to ensure that risk was not underestimated. The volume of 2-aminotoluene consumed as a raw material, based on 1991 RCRA Section 3007 Questionnaire data, is approximately 9 times that of the other isomers. In addition, aromatic amines with substitutions in the 2- and 4-positions of the aromatic ring are used in the manufacture of azo dyes much more frequently than those substituted in the 3- position. Therefore, any impurities or breakdown products from aromatic amines are likely to be substituted in the 2- and 4- positions.

1,2-diphenylhydrazine and azobenzene also coelute on the GC/MS curve. Both compounds are likely oxidation products of aniline, and may be present in the waste as reaction by-products. In addition to the uncertainty in establishing concentrations for each of the two compounds, the chemical pathway from aniline to these oxidation products suggests that either contaminant may be present at all or part of the concentration detected. The Agency evaluated these coeluting compounds independently and used the highest risk calculated by the compounds to ensure the risk was not underestimated.

As with azobenzene and 1,2-diphenylhydrazine, diphenylamine and N-nitrosodiphenylamine coelute on the GC/MS curve and are likely by-products resulting from the oxidation of aniline. As stated above, the Agency evaluated these coeluting compounds independently and used the highest risk calculated by the compounds to ensure the risk was not underestimated.

The Agency requests comments on the approach used to assess risk when compounds that coelute were detected in the wastestream, and on alternative approaches that commenters may develop.

3. Risk Analysis

Risk Characterization Approach

The risk characterization approach follows the recent EPA Guidance on Risk Characterization (Habicht, 1992)

and Guidance for Risk Assessment (EPA Risk Assessment Council, 1991). The guidance specifies that EPA risk assessments will be expected to include (1) the central tendency and high-end portions of the risk distribution, and (2) important subgroups of the populations such as highly susceptible groups or individuals, if known. In addition to the presentation of results, the guidance also specifies that the results portray a reasonable picture of the actual or projected exposures with a discussion of uncertainties. These documents are available in the public docket for this action (see **ADDRESSES** section).

Individual Risk

Individual risk descriptors are intended to convey information about the risk borne by individuals within a specified population and subpopulations. These risk descriptors are used to answer questions concerning the affected population, and the risk for individuals within a population of interest. The approach used in this analysis for characterizing baseline individual risk included: (1) Identifying and describing the population of concern for an exposure route; (2) determining the sensitivity of the model parameters used in the risk estimation; (3) estimating central tendency and high-end values for the most sensitive parameters in the risk estimation procedures; and (4) calculating individual risk for likely exposure pathways that provides a characterization of the central tendency and high-end risk descriptor.

Risk Assessment

The results of the risk assessment are presented in waste-specific risk tables in each of the basis for listing sections (Section II.E.). The risk tables include the following information: Constituents of concern; estimated human health risk associated with the current and plausible management scenarios; high, low, and average concentrations of constituents found in this wastestream; the number of samples in which the constituent was detected; notes regarding "J-values" (see Section II.B on Data Uncertainties); and industry-submitted data.

In addition to those compounds presented in the waste-specific risk tables, the Agency's characterization data include a number of compounds identified as present in the waste but for which no health benchmarks exist. In addition, other compounds which do have health benchmarks have been identified in these wastes but were dropped from further consideration following the risk screening because the risks were projected to be below levels of concern. The risk tables presented in this preamble do not contain these additional constituents. The complete list of constituents found in each of the wastes generated from the manufacture of dyes and pigments, an explanation of the risk screening process, and an explanation of EPA's development of the target analyte list are presented in the Listing and Health Effects Background Documents for this proposed rule, which are located in the RCRA Docket for this rulemaking (See **ADDRESSES** section).

The analysis of risk was developed using both the input of derived or measured toxicological information and the modeling of exposure from baseline (or current) waste management practices and other plausible management scenarios. Pursuant to the Agency's regulations on listing hazardous wastes, EPA considers the "plausible types of improper management to which the waste could be subjected", 40 CFR 261.11(a)(3)(vii). Thus, plausible management is one of the waste management scenarios used by EPA to assess the risks to human health and the environment from the disposal of the wastes under consideration.

The choice of "plausible management" depends on a combination of factors which are discussed in Section II.A, "EPA's Listing Determination Process." The following discussion explains the plausible management scenarios used to assess risk for each of the waste groups addressed in this proposal. The Agency requests comment on its choice of plausible management scenarios and on the possibility of using alternative plausible management scenarios.

Sludges and Other Solid Materials

The plausible management scenario used to assess risks for the wastewater treatment sludges from the production of azo dyes and pigments (K162 and K164), and still bottoms or heavy ends from the production of triarylmethane dyes and pigments (K166) was disposal in an on-site monofill. Disposal in an on-site monofill for these waste categories results in the highest adverse exposure of sensitive individuals or populations. For wastewater treatment sludges from azo dye production (K164), this plausible management scenario (*i.e.*, on-site monofill) currently is practiced.

The Agency determined that disposal in an on-site monofill is a plausible management scenario for wastewater treatment sludges from azo pigment production (K162) and still bottoms or heavy ends from the production of triarylmethane dyes and pigments (K166), for the following reasons:

- On-site monofills have been used by industry to dispose of wastewater treatment sludge from the manufacture of dyes and pigments;
- Most of the still bottoms generated from the production of triarylmethane dyes and pigments are high-volume wastestreams for which on-site monofills are a plausible management option; and
- On-site monofills can be a lower-cost disposal option.

Therefore, there is a potential for monofills to be constructed and used in the future, by either dye or pigment manufacturers to dispose of wastewater treatment sludges or other high-volume solid wastes.

For wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock, the plausible management was determined to be the current management, blending with non-hazardous fuel. Currently, 100% of this waste is sent off-site for non-hazardous fuel blending. The Agency believes that this waste will continue to be managed in this manner because the relatively high organic content of the waste gives the material value as a fuel ingredient. Therefore, generators of the waste have an economic incentive to continue fuel blending. For comparison purposes, the Agency also projected the risks from managing this wastestream in a municipal landfill (from release of contaminants into ground water) and in an on-site boiler (from release of contaminants into the air).

The primary exposure pathway considered from disposal of solid materials in both unlined municipal landfills (evaluated as the baseline management practice for K162, K164, and K166) and monofills (evaluated as plausible management practices for K162, K164, and K166) is direct ingestion of drinking water from residential wells near the disposal site. Because of the widespread practice of daily cover, indirect air pathways and surface erosion and runoff were not evaluated for municipal landfills. For on-site monofills, however, the presumption of no daily cover was used, and risks associated with indirect pathways were evaluated.

In addition to estimating potential risks from waste disposed in an unlined municipal landfill, the Agency evaluated risks from municipal landfills meeting the minimum requirements for a Subtitle D landfill (56 FR 50978, 1991). These requirements include daily cover, flexible membrane liner, leachate collection system, clay liner, and final

cap and cover. The results of these analyses can be found in the Risk Assessment for Dye and Pigment Waste Listing Determination. This document is available in the RCRA public docket (see **ADDRESSES** section).

A dilution factor based on the ratio of the volume of the waste to the volume of co-disposed municipal waste and daily cover was used to estimate the concentrations of the constituents of concern in the landfill. The concentrations of the constituents measured in the waste were multiplied by this dilution factor to determine the concentration of the constituents in the landfill. The concentrations of the constituents in the landfill leachate were estimated using Toxicity Characteristics Leaching Procedure (TCLP) data submitted by industry for selected constituents (3,3'-dichlorobenzidine, aniline, 4-chloroaniline, and 2- and 4-aminotoluene), or when TCLP data were not available, by using a soil-water partitioning equation.

EPA used the following linear partition equation (Dragan, 1988) with an adjustment to relate sorbed concentration to total waste concentration.

$C_L = C_W/[Foc * Koc + O * S/Bd]$

where C_L=leachate concentration
C_W=waste concentration
Foc=fraction organic carbon
Koc=organic carbon partitioning coefficient
O=porosity
S=fraction water content
Bd=bulk density

The physical properties of the waste used in this equation (*i.e.*, bulk density, fraction organic carbon) were obtained either from the Agency's record samples when available, or from the 1991 RCRA Section 3007 Questionnaire responses.

The volume of leachate and rate of ground-water recharge were estimated using the HELP model. The HELP model uses site-specific precipitation values and standard assumptions for the characteristics of municipal waste to estimate infiltration and recharge rates. For the evaluation of dye and pigment wastes in municipal landfills, annual precipitation rates for sites near all dye and pigment facilities were ranked. Charlotte, North Carolina was selected as representative of the median precipitation value for the areas near dye and pigment facilities, and Charleston, South Carolina, was selected as representative of sites with high annual rainfall potential. The default meteorologic conditions for these locations in the HELP model were used to determine the infiltration and recharge rates used in the ground-water modeling.

The distance to the receptor wells near the municipal landfill used in the ground-water modeling were obtained from the survey of well distances conducted for the Background Document for EPACML: Finite Source Methodology (EPA, 1992). The value selected as representative of the average condition is the 50th-percentile value for well distance (438 m), and the value for the high-end (close) condition (48 m) is the 95th-percentile value.

The Agency used the MULTIMED groundwater model to simulate the subsurface dilution and attenuation of the leachate constituents in order to estimate the concentration of constituents at the hypothetical residential wells. The Agency then calculated risks to an individual, assuming the residents using this well on average consume 1.4 L/day of contaminated water, or 2 L/day for higher consumptions. Values of 9 or 30 years were used for the average and high-exposure duration estimates. The formulae used and a more detailed discussion of the application of these models to the waste samples can be found in the Risk Assessment for Dye and Pigment Waste Listing Determination, available in the RCRA public docket (see **ADDRESSES** section).

For on-site monofills, the leaching analysis was the same as for municipal landfills except that the waste concentrations are not diluted in the monofill.

The distance to the nearest receptor wells near the on-site landfill used in the ground-water modeling were obtained from a telephone survey of 9 city planning offices and a review of site visit reports and site maps. The value selected as representative of the average condition is the 50th-percentile value for well distance (163 m) and the value for the high-end (close) condition (16 m) is the closest value. The Risk Assessment for Dye and Pigment Waste Listing Determination for this rulemaking contains a more detailed discussion of these values. This document is available in the RCRA public docket (see **ADDRESSES** section).

In addition to direct ingestion of contaminated drinking water, additional pathways were evaluated depending on the characteristics of the waste and management practices evaluated. These pathways included inhalation pathways from airborne particulates and volatiles released from the monofills, and indirect exposure pathways such as the ingestion of vegetables grown in soil contaminated by runoff from the on-site landfill and/or dermal exposure due to direct contact with contaminated soil. The algorithms used for the estimation of risks due to indirect exposures were taken from the Methodology for Assessing Health Risks Associated with Indirect Exposure to Combustion Emissions (U.S. EPA, 1990) as modified by the September 24 draft of Addendum: Methodology for Assessing Health Risks Associated with Indirect Exposure to Combustion Emissions. Working Group Recommendations (U.S. EPA, 1993) and the Risk Assessment Guidance for Superfund (RAGS): Volume I—Human Health Evaluation Manual (Part B, Development of Risk-base Preliminary Remediation Goals) (U.S. EPA, 1991), and Dermal Exposure Assessment: Principles and Applications. Interim Report (U.S. EPA 1992) for dermal exposures to water. These documents are available in the public docket for this rule (see **ADDRESSES** section).

The air pathways were evaluated using the CHEMDAT 7 air emission model to determine the emission rates for volatile constituents from the landfill, tanks, and storage bins. The Fugitive Dust Model (FDM) was used to determine the emission rates for particulates. These emissions were coupled with dispersion coefficients to determine the ambient air concentrations and the rate of deposition of the waste constituents onto the nearby soil, vegetable gardens, watersheds, and water bodies. The distances to air receptors are assumed to be similar to those used for the ground-water wells. The meteorologic locations used for the air modeling were selected by a procedure similar to that used to select the ground-water locations. The annual average wind speed, temperature, and precipitation values for 34 sites near dye and pigment facilities were evaluated to determine three sites believed to represent a range of conditions to be examined in greater detail. Hourly meteorological data for five years were ranked for these three sites to select the location and year of the data to be used in the air modeling. For the average case, Huntington, West Virginia was selected. For the high-end case, Charlotte, North Carolina was selected.

An on-site boiler (as the plausible management scenario) also was evaluated for exposure through the air pathway for still bottoms generated from the production of triarylmethane dyes and pigments (K166), and for wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock. The boiler was characterized as a small non-hazardous boiler based upon Agency

information and industry-supplied data in the RCRA Section 3007 Questionnaire data. The meteorologic data used to characterize the dispersion were determined based upon a distribution of meteorologic data collected for sites near existing dye facilities. These data are ranked by year and location, and the 50th- and 90th-percentile year and location were selected for the central and high-end dispersion modeling. The air dispersion was estimated using the COMPDEP model to estimate air concentrations and wet and dry deposition of the constituents on nearby soil, vegetables and water bodies. The air concentrations and deposition data also were used to evaluate indirect exposures.

Wastewaters

For wastewater streams (K163, K165, and wastewaters from the production of triarylmethane dyes and pigments) the Agency determined that treatment in surface impoundments represents the plausible management scenario because, since surface impoundments currently are in use or planned at several dye facilities, and waste management practices in the dye and pigment industries are generally similar, the Agency believes that pigment manufacturers may employ surface impoundments in the future. In addition, facilities currently manufacturing dyes also could manufacture pigments in the future and manage wastewaters from pigment production in surface impoundments.

The baseline management practice evaluated for these wastewater streams (*i.e.*, K163, K165, and wastewaters from the production of triarylmethane dyes and pigments) was treatment in tanks. Thus, for wastewaters, the modeling included direct and indirect exposures to volatile emissions from surface impoundments and tanks and direct and indirect exposures to contaminants that may leach into ground water from unlined surface impoundments. The air emissions from tanks were estimated using the CHEMDAT 7 air emission model and the dispersion of these emissions was estimated using the Industrial Source Complex Model-Long Term, Version 2 (ISCLT2) air dispersion model. The meteorologic locations used for estimating the emissions and dispersions were the same locations selected for use with air models for volatile emissions from landfills. Very few inhalation health-based levels are available for constituents found in dye and pigment wastewaters. Risk from direct inhalation exposure to wastes disposed in surface impoundments was estimated to be less than one-in-a-million for all constituents. Results from air emission modeling for tanks are presented in the Risk Assessment Background Document for the Proposed Rule in the RCRA Docket at EPA Headquarters (see **ADDRESSES** section).

Since the constituents in these wastes are highly soluble, leaching from unlined impoundments was evaluated. The concentration of the constituents in the leachate was assumed to be equal to the concentration in the wastewater.

To estimate the concentration of constituents at the hypothetical residential well, the Agency attempted to use the MULTIMED model to simulate the subsurface attenuation and dilution of the surface impoundment leachate. However, there are limitations of the MULTIMED model that preclude its use in this analysis. These include the large volume of leachate estimated to be released from the surface impoundment and a conservative approach to predict the horizontal transport of the leachate within the aquifer. This resulted in an infiltration rate that is so high that it overwhelms the aquifer and dilution was not expected. Therefore, to evaluate risk for those wastewaters that the Agency is proposing to list, the Agency assumed for this proposal that a dilution and attenuation factor (DAF) of 100 is achievable during migration to the nearest drinking water well. The Agency's toxicity characteristic (TC) rule (55 FR 11798, 1990) adopts a DAF of 100 to estimate the subsurface fate and transport between an unlined landfill and a receptor drinking water well. For purposes of the risk analyses, the concentrations in the residential wells near the on-site disposal facility were estimated to be equal to 0.01 times the concentrations measured in the wastewater. The residents using this well are assumed on average to consume 1.4 L/day or 2L/day of contaminated water for an exposure duration of 9 years or 30 years.

The Agency believes that it is more reasonable to use the TC rule approach to support a proposed determination to list, rather than developing a model more sophisticated than the MULTIMED model because the Agency believes a more sophisticated analysis would suggest greater estimated risks than the analysis using a DAF of 100 for the following reasons. First, the DAF of 100 was derived for the TC rule for a range of municipal landfill leachate volumes that are generally lower than leachate volumes from surface impoundments. Surface impoundment DAFs are expected to be lower (and risks subsequently higher) compared to landfill DAFs as a result of both the liquid in the impoundment and subsequent increase in hydraulic head. Second, in the TC analysis, the location of the receptor well was varied anywhere within the extent of the contaminant plume. For listing determinations, the Agency generally assumes that the well is located on the centerline of the plume. This assumption would lead to a lower DAF and higher risks. Thus, because the use of the TC DAF of 100 underestimates risk, use of the TC to estimate risk can support a proposal to list. A more sophisticated model would show only higher risk numbers. The wastewaters that the Agency proposes not to list were evaluated using MULTIMED and creating a bounding estimate. The Agency believes that it is reasonable to use the MULTIMED model to support this proposed determination not to list certain wastewaters because it overestimates risks.

Ecological Risks

In addition to evaluating the risk to human health, the analysis also estimates risks to fish and wildlife from exposure to dye and pigment wastes. The concentrations of contaminants of concern in water bodies near dye and pigment waste facilities were estimated using the indirect exposure methodology and a few high-end input parameters. As a screening analysis, the estimated surface-water concentrations were compared with the National Ambient Water Quality Criteria (NAWQC), or LC_{50} values for bluegill and/or rainbow trout if NAWQC were not available. The risks to terrestrial and avian species were evaluated by comparing the waste concentration with the oral rat LD_{50}, dermal rabbit LD_{50}, any available avian LD_{50} values, and if available, a Lowest Observed Adverse Effects Level (LOAEL). Aniline from the manufacture of triarylmethane pigment using aniline as a reactant was the only compound identified as a potential risk to the aquatic or terrestrial environment by this method. Details of these analyses are presented in the Risk Assessment for Dye and Pigment Waste Listing Determination available in the public docket (see **ADDRESSES** section).

The Agency requests comments on methodology used by the Agency in selecting plausible mismanagement scenarios and assessing risks and on the plausible management scenarios selected for the wastestreams generated from the manufacture of dyes and pigments.

E. Waste-Specific Listing Determination Rationales

1. Wastes From the Production of Azo Pigments

a. Wastewater treatment sludge from the production of azo pigments (K162).

Summary

EPA is proposing to list as hazardous wastewater treatment sludges from the production of azo pigments. This wastestream meets the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and is capable of posing a substantial present or potential hazard to human health or the environment. Based on ingestion of contaminated ground water, EPA calculated high-end individual cancer-risk levels for six hazardous constituents that are equal to or exceed 1E–4 for carcinogens or have HQs equal to or greater than 1 for non-carcinogens for the plausible management practice, an on-site monofill. The combined carcinogenic risk for multiple co-existing constituents in this wastestream is projected to be 6E–3 for the on-site monofill. In addition, a combined risk of 1E–4 for multiple co-existing contaminants were identified for the baseline management practice, a municipal landfill. Calculated risks exceeding 1E–4 also were identified from exposure to four contaminants through ingestion of contaminated vegetables or through dermal contact with contaminated soil. Three additional contaminants pose calculated individual risks between 1E–4 and 1E–6 for the on-site monofill, and 4 contaminants pose calculated risks between these levels for the municipal landfill. Six contaminants pose calculated individual risks between 1E–4 and 1E–6 from exposures through indirect pathways.

TABLE II–2.—WASTE CHARACTERIZATION AND RISK ESTIMATES—K162—WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF AZO PIGMENTS

Constituents of concern	Baseline management		Plausible management		Waste characterization				
	Municipal landfill***		On-site monofill***		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tendency	High end	Central tendency	High end					
Aniline	Risk<1E–6	Risk=1E–6	Risk=1E–5	Risk=6E–5	f.n.	f.n.	f.n.	f.n.	
2- & 4-Aminoaniline/ 2-Methoxyaniline*.	Risk=6E–6	Risk=3E–5	Risk=3E–6	Risk=3E–4	7.17			1 of 5	J, S
2- & 4-Aminotoluene**	Risk<1E–6	Risk<1E–6	Risk=1E–5	Risk=3E–5	1.3	1.5	1.2	3 of 8	J(3), I(3)
Acetoacet-*o*-anisidide (AAOA)	Risk=2E–6	Risk=8E–6	Risk=3E–4	Risk=1E–3	0.67			1 of 5	S
Acetoacet-*o*-toluidide (AAOT)	Risk=1E–5	Risk=6E–5	Risk=6E–4	Risk=4E–3	f.n.	f.n.	0.31	4 of 5	J(1), S
Acetoacetanilide (AAA)	Risk=7E–6	Risk=3E–5	Risk=1E–4	Risk=6E–4	f.n.	f.n.	0.14	5 of 5	(J)(1), S
1,3-Dinitrobenzene	HQ <1	HQ <1	HQ=5	HQ=7	1.05	1.6	0.72	3 of 16	J(3), I(3)
3,3'-Dimethyl-benzidine.	Risk<1E–6	Risk<1E–6	Risk=3E–6	Risk=1E–5	1.9	2.4	1.3	2 of 16	J(2), I(2)
Nitrobenzene	HQ <1	HQ <1	HQ=10	HQ=14	f.n.	f.n.	f.n.	f.n.	J
2,4-Dinitrophenol	HQ <1	HQ <1	HQ=1	HQ=1	0.74			1 of 16	J
Combined Carcinogen Risk	Risk=3E–5	Risk=1E–4	Risk=8E–3	Risk=6E–3					

* Risk estimates based on surrogate for 2-methoxyaniline.
** Risk estimates based on 2-aminotoluene.
*** Exposure through ingestion of contaminated water.
f.n. Relevant data are not included at the present time due to business confidentialty concerns.
Notes:
All concentrations are in mg/kg.
J(#)—samples where estimated concentrations are below quantitation limits, "(#)" indicates number of samples that are "J" values.
I(#)—includes data supplied by industry, "(#)" indicates number of samples that are industry-supplied.
S—Toxicity estimated based on metabolic similarity to chemical analog.

TABLE II–3.—K162—RISK VALUES FOR DISPOSAL IN A MONOFILL (OTHER THAN DRINKING CONTAMINATED GROUND WATER)

Constituent	Vegetable ingestion		Soil dermal contact		Soil ingestion	
	Central	High end	Central	High end	Central	High end
1,3-Dinitrobenzene.						
2-Aminoaniline	R=4E–5	R=4E–5				
2-Aminotoluene	R=3E–6	R=2E–5				
4-Aminotoluene	R=1E–6	R=1E–6				
2,4,6-Trichlorophenol	R=1E–6	R=2E–6				
3,3'-Dichlorobenzidine	R=2E–3	R=7E–3	R=7E–5	R=2E–4	R=9E–6	R=3E–5
3,3'-Dimethylbenzidine	R=4E–3	R=5E–3	R=3E–5	R=3E–5	R=5E–6	R=6E–6
Acetoacet-*o*-anisidine	R=3E–5	R=3E–5				
Acetoacet-*o*-toluidine	R=3E–4	R=5E–4				
Acetoacetanilide	R=ER–5	R=2E–4				
Aniline	R=1E–5	R=1E–5				
Total Carcinogen Risk	R=6E–3	R>9E–3	R=1E–4	R=2E–4	R=1E–5	R=4E–5

Discussion

The volume reported by the industry in the 1991 RCRA Section 3007 Questionnaire data for wastewater treatment sludge from the manufacture of azo pigments (K162) is not included at the present time due to business confidentiality concerns. Over 99% of this wastestream currently is disposed in Subtitle D municipal landfills. Therefore, the Agency used disposal in a municipal landfill as the baseline management practice. In addition, as explained under Section II.D, Description of Health and Risk Assessments, the Agency evaluated on-site monofilling as a plausible management scenario.

The projected risks of increased cancer or hazard quotient above one for exposure to this waste are presented in Table II–2. The data presented in this table represent 16 samples collected from 4 azo pigment-manufacturing facilities. Eleven of the 16 samples were collected and analyzed by industry, and were submitted to EPA for evaluation. The 11 industry samples were analyzed using Gas Chromatography/Mass Spectrometry (GC/MS), Method 8270B in EPA's "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW–846, Third Edition) but were not analyzed using High Pressure Liquid Chromatography/Thermospray/Mass Spectrometry (HPLC/TS/MS), Method 8321 in SW–846. EPA has reviewed the quality of these industry submitted data and has found that these data meet the Agency's data quality objectives and, therefore, qualify for inclusion in the waste assessment. Inclusion of these industry data, however, does bias the industry's characterization toward one facility (*i.e.*, of 16 data points, 11 were submitted by one facility, and 2 were collected by the Agency at that same facility). The five EPA-collected samples, representing four facilities, were analyzed using both methods, a process which encompasses more analytes. Therefore, several analytes, specifically acetoacetanilide (AAA), acetoacet-*o*-toluidide (AAOT), and acetoacet-*o*-anisidide (AAOA), were detected in some or all of the EPA samples, but were not analyzed in the industry samples.

The calculated risks from ingesting contaminated ground water associated with disposing these sludges in on-site monofills are very high. Three of the compounds that exceed risk levels of 1E–4 are common raw materials used as coupling agents in the manufacture of azo pigments: acetoacetanilide (AAA), acetoacet-*o*-anisidide (AAOA), and acetoacet-*o*-toluidide (AAOT). These three compounds were expected to be present in the waste, and consistently were found in the samples collected by the Agency.

The three coupling compounds present in this waste, AAA, AAOA, and AAOT, are predicted to pose very high risks via ground-water ingestion when managed in an on-site monofill. As shown in Table II–2, the calculated risks posed by these compounds range from 1E–3 to 6E–4. These risks were calculated using metabolic product structural-activity relationships (SAR) for these compounds. A detailed discussion of the SAR for these compounds, and the estimation of toxicities for AAA, AAOA, and AAOT is presented earlier in this preamble, under Section II.C, Description of Health and Risk Assessments, and in the Health Assessment Background Document for this proposed rule, which is located in the RCRA Docket for this rulemaking (See **ADDRESSES** section).

These three compounds are high-volume couplers used in the manufacture of azo pigments. Based on RCRA Section 3007 Questionnaire data, AAA is the third highest-volume reactant in the pigment industry, with over 8200 metric tons used in 1991. AAOT and AAOA also are used in high volumes; their 1991 use volumes were 2600 and 850 Mtons, respectively.

AAA, AAOT, and AAOA were found in 85% of the wastewater systems where they are used. When detected in the wastewater system, the compound was found either in the wastewater or in the sludge. Table II–4 presents the number of wastewater systems where each of the three coupling compounds were detected. Table II–4 also shows the number of samples in which the three coupling compounds were detected relative to the number in which the compounds were expected.

TABLE II–4

	WWT System	Wastewater	Sludge
AAA	5 of 5 systems	4 of 4 samples	5 of 5 samples.
AAOA	2 of 4 systems	3 of 3 samples	1 of 2 samples.
AAOT	4 of 4 systems	1 of 4 samples	4 of 4 samples.

Amides (*e.g.*, AAA, AAOT, and AAOA) hydrolyze to form free acids and amine salts under acidic conditions. Measurements of pH values of process wastewaters at several pigment production facilities revealed that these acidic conditions are encountered frequently. The hydrolysis products for AAA, AAOT, and AAOA are aniline, 2-aminotoluene, and 2-methoxyaniline, respectively. The unreacted amide raw materials and the amines expected from hydrolysis of these amides both have been identified in untreated wastewaters and wastewater biological treatment sludges.

Two sets of coeluting compounds were observed from the analysis of wastewater treatment sludge from the production of azo pigments. The first set of coeluting compounds produced one data point, shown in Table E1, for which the mass spectrum indicates the presence of 2-methoxyaniline, along with the potential presence of 2- and 4-aminoaniline (for a discussion of coeluting compounds and risk assessments conducted on these compounds, please refer to the section entitled "Coeluting Compounds" in Section II.D). 2-Methoxyaniline is expected as a contaminant in the wastewater treatment sludge from the facility that generated the sample because that facility manufactures azo pigments using acetoacet-*o*-anisidide (AAOA) as a raw material, and, as stated above, 2-methoxyaniline is an expected hydrolysis product of AAOA. In addition, the facility from which this sample was collected uses 2-aminoaniline as a reactant in the manufacture of azo dyes.

For this wastestream, the Agency conducted the risk assessment for these coeluting compounds based on toxicity information for 2-methoxyaniline because this contaminant is expected to be present from azo pigment production. Since there currently is no HBL for 2-methoxyaniline, the Agency based the risk assessment on the toxicity of a surrogate compound. 2-Aminotoluene is a structural analog of 2-methoxyaniline and is being used as a toxicity surrogate. The resulting high-end individual cancer-risk level for 2-methoxyaniline was calculated to be 2E–3 for the on-site monofill management scenario.

The second set of coeluting compounds consists of the two isomers 2- and 4-aminotoluene. The two isomers were detected in 3 out of 8 sludge samples from azo pigment manufacturing operations, and the combined concentration of the two compounds was quantified. The calculated high-end individual cancer-risk level, based on the toxicity of 2-aminotoluene, is 3E–5 for the on-site monofill management scenario.

In addition to the substantial calculated risks (*i.e.*, exceeding 1E–4 for carcinogens) posed by raw materials used in azo pigment manufacturing and their break-down products, four additional contaminants were found in the wastestream at concentrations that are projected to pose very high risks (HQs of 1 or greater for non-carcinogens) through ingestion of contaminated ground water under plausible management in an on-site monofill. 1,3-Dinitrobenzene, nitrobenzene, and 2,4-dinitrophenol were found at concentrations that resulted in calculated high-end HQs of 7, 9, and 1 . respectively.

In addition to assessing the risks associated with the individual constituents found in the waste, the Agency considers the combined risk of constituents that co-exist in the wastestream. In the case of wastewater treatment sludges generated from the manufacture of azo pigments, all of the diazotization and coupling reactants and breakdown products previously discussed in this section (*i.e.*, AAA, AAOT, AAOA, aniline, 2-aminotoluene, and 2-methoxyaniline) are assumed to co-exist in the wastestream. The reactants are used in numerous large-volume pigments which are manufactured on a frequent basis. Since this sludge is a commingled wastestream representing production from the entire plant, the constituents are likely to be present simultaneously in the waste. Therefore, the combined risk of these individual constituents, which is projected to be very high (*i.e.*, 8E–3 at the high end), also was considered in making this listing determination.

In addition to the very high risks posed by the plausible management practice (a monofill), the calculated risks posed by the current management practice (a municipal landfill) are also high. The combined additive high-end risk for the reactants and breakdown products previously discussed in this section (*i.e.*, AAA, AAOT, AAOA, aniline, 2-aminotoluene, and 2-methoxyaniline) is projected to be 1E–4 for the municipal landfill management practice. Therefore, EPA concludes that even if the Agency considered current management and did not consider plausible management, this wastestream would present a substantial risk to human health and the environment, and should be listed as hazardous.

Three additional constituents (*i.e.*, aniline, 3,3′-dimethylbenzidine, and 2-aminotoluene) were found in the wastewater treatment sludge from azo pigment operations at concentrations that are projected to pose risks within the Agency's risk range of concern (*i.e.*, 1E–4 to 1E–6 for carcinogens) using the on-site monofill management scenario. Four constituents (*i.e.*, AAOA, AAOT, AAA, and the coeluting compounds 2-aminoaniline and 2-methoxyaniline) were found in this waste at concentrations that pose risks between 1E–4 and 1E–6 for carcinogens for the municipal landfill scenario. In addition, six constituents pose risks within this range of potential concern through indirect pathways.

Based on an analysis of the risks associated with both current and plausible management practices, EPA is proposing to list wastewater treatment sludge from the production of azo pigments as a hazardous waste, designated as EPA Hazardous Waste Number K162.

For the reasons stated above, the Agency is proposing to add the following constituents to Appendix VII to Part 261—Basis for Listing: Aniline, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 4-aminotoluene, acetoacet-*o*-anisidide, acetoacet-*o*-toluidide, acetoacetanilide, 1,3-dinitrobenzene, 3,3′-dimethylbenzidine, nitrobenzene, and 2,4-dinitrophenol.

In addition, acetoacet-*o*-anisidide, acetoacet-*o*-toluidide, acetoacetanilide, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, and 1,3-dinitrobenzene are proposed to be added to Appendix VIII to Part 261—Hazardous Constituents.

b. Wastewaters from the production of azo pigments (K163).

Summary

The Agency is proposing to list wastewaters from the production of azo pigments as hazardous wastes. This waste meets the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and is capable of posing a significant present or potential hazard to human health or the environment. Based on ingestion of contaminated ground water, EPA calculated high-end individual risk levels for three carcinogens that exceed 1E–4 for disposal in an unlined on-site surface impoundment, the plausible management scenario. The calculated combined carcinogenic risk for these constituents is 3E–4 from exposure to contaminated ground water for the surface impoundment management scenario. To further support this listing, four additional contaminants pose individual risks between 1E–4 and 1E–6 for the surface impoundment scenario.

Discussion

Data from the RCRA Section 3007 Questionnaire show that the 1991 volume reported by the industry for the wastewater stream from azo pigment production is 9,914,662 metric tons, or approximately 7.2 million gallons per day. Over 75% of wastewaters from azo pigment manufacturing currently are pretreated and discharged to a publicly owned treatment works (POTW). Most of these wastewaters are treated in equalization and neutralization tanks prior to discharge to a POTW. A smaller percentage of these wastewaters is subjected to aerobic biological treatment in tanks, with subsequent NPDES discharge to a surface water.

As explained under Section II.D, Description of Health and Risk Assessments, the risk assessment for these wastewaters was performed using treatment in tanks as the current, or baseline, management practice, and treatment in surface impoundments as a plausible management scenario. The risks of increased cancer for exposure to this waste are presented in Table II–5. The data presented in this table represent six samples collected from four azo pigment manufacturing facilities.

TABLE II–5.—WASTE CHARACTERIZATION AND RISK ESTIMATES K163—WASTEWATERS FROM THE PRODUCTION OF AZO PIGMENTS

Constituents of concern	Baseline management		Plausible management scenario		Waste characterization				
	Treat in tanks***		Treat in SI***		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tendency	High end	Central tendency	High end					
2- & 4-Aminoaniline/2-Methoxyaniline*.	All		Risk=5E–5	Risk=1E–4	f.n.	4.75	f.n. (J)	2 of 6	J(1)
2-, 3-, & 4-Aminotoluene**.	Constituents		Risk=1E–5	Risk=2E–5	0.54	2.1	f.n. (J)	4 of 6	J(3)
Aniline	Dropped		Risk=2E–6	Risk=4E–6	f.n.	f.n.	f.n.	4 of 5	
Acetoacet-*o*-anisidide (AAOA).	After		Risk=5E–6	Risk=1E–5	f.n.	0.18	0.021(J)	3 of 6	J(1), S
Acetoacet-*o*-toluidide (AAOT).	Bounding		Risk=5E–5	Risk=1E–4	2.06			1 of 6	S
Acetoacetanilide (AAA).	Risk		Risk=4E–6	Risk=7E–6	f.n.	f.n.	f.n.	4 of 6	S
2,4- & 2,6-Dimethylaniline.	Assessment		Risk=5E–5	Risk=1E–4	f.n.			f,n,	
Combined Carcinogen Risk.			Risk=2E–4	Risk=3E–4					

* Risk estimates based on surrogate for 2-methoxyaniline.
** Risk estimates based on 2-aminotoluene.
*** Exposure through ingestion of contaminated groundwater.
f.n. Relevant data are not included at the present time due to business confidentiality concerns.
Notes:
All concentrations are in mg/l.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.
S—Toxicity estimated based on metabolic similarity to chemical analog.

The calculated risks associated with managing these wastewaters in surface impoundments are very high. Three constituents are considered to pose a substantial potential hazard to human health and the environment (*i.e.*, risks exceed 1E–4). Calculated risks for each of these three compounds are 1E–4.

Three of the constituents that have been projected to pose a risk greater than 1E–6, namely, acetoacetanilide (AAA), acetoacet-*o*-toluidide (AAOT), and acetoacet-*o*-anisidide (AAOA), are high-volume coupling reactants used in the manufacture of azo pigments. As explained above for K162, these constituents are dominant raw materials in the azo pigment manufacturing industry and generally are present in the wastewater treatment systems at these sites. As shown in Table II–5, the risks calculated by these compounds range from 1E–4 to 1E–6. As stated for K162, these risks were calculated using metabolic product structural-activity relationships (SAR) for these compounds, an approach which is discussed in detail in Section II.D of this preamble, and in the Listing Background Document for this proposed rule, which is located in the RCRA Docket for this rulemaking (See **ADDRESSES** section).

Table II–4, presented earlier, shows that AAA and AAOA were detected in all of the wastewater samples collected from facilities that use these reactants. AAOT was found only in one of four wastewater samples, but it was found in all four of the sludge samples collected from facilities using the compound. The Agency believes that the latter compound generally is present in the wastewater treatment system at facilities that use AAOT as a raw material but that it may be preferentially partitioning to the sludge.

In addition to the high risks calculated by the three reactants, AAA, AAOA, and AAOT, the hydrolysis products of these compounds, aniline, 2-aminotoluene, and 2-methoxyaniline, also were detected in the waste at concentrations that pose significant risk (*i.e.*, risks ranging from 1E–4 to 4E–6). Discussions addressing hydrolysis pathways and conditions for these compounds, and the issue of coeluting compounds associated with the hydrolysis products, were presented earlier in this preamble (see discussion of K162, and Section II.D).

In addition to the primary raw materials and breakdown products presented above, the combined 2,4- and 2,6-isomers of dimethylaniline, which also are suspected raw material breakdown products, were detected in this waste at concentrations that pose a very high risk (*i.e.*, a risk of 1E–4).

Along with risks associated with the individual constituents found in the waste, the Agency considers the combined risks of constituents that co-exist in the wastestream. In the case of wastewaters generated from the manufacture of azo pigments, all of the reactants and breakdown products previously discussed in this section (*i.e.*, AAA, AAOT, AAOA, aniline, 2-aminotoluene, and 2-methoxyaniline) are assumed to co-exist in the wastestream. The reactants are used in producing numerous large-volume pigments that are manufactured on a frequent basis. Since this wastewater stream represents several commingled wastestreams from throughout the plant, the constituents are likely to be present simultaneously in the waste. Therefore, the combined risks of these individual constituents, which are projected to be very high under the surface impoundment mismanagment scenario

(i.e., 3E–4 at the high end), also were considered in making this listing determination.

Based on the calculated risks associated with the plausible management practice for this waste (treatment in surface impoundments), EPA is proposing to list wastewaters from the production of azo pigments as a hazardous waste, designated EPA Hazardous Waste Number K163. However, the Agency recognizes that if wastewater treatment sludges from the production of azo pigments (K162) are listed as proposed, the available options for wastewater management may change and the surface impoundment scenario may not be plausible for the following reason: wastewaters that are managed in an impoundment will generate sludges through precipitation. In the event that K162 sludges were listed and the wastewaters were not, the sludges generated in a Subtitle D wastewater impoundment would be hazardous wastes and the surface impoundment would become subject to RCRA Subtitle C regulation. The Agency is requesting comment on whether the use of Subtitle D surface impoundments to manage wastewaters would be a plausible management scenario if the wastewaters were not listed but the wastewater treatment sludges were listed as hazardous wastes. The Agency also is requesting comment on the need to list K163 wastewaters, given that the plausibility of the management scenario on which the risk assessment was based may be affected by the final outcome of the K162 sludge listing.

For the reasons stated above, EPA proposes to add the following constituents to Appendix VII to Part 261—Basis for Listing: Aniline, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 3-aminotoluene, 4-aminotoluene, acetoacet-*o*-anisidide, acetoacet-*o*-toluidide, acetoacetanilide, 2,4-dimethylaniline, and 2,6-dimethylaniline.

In addition, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 3-aminotoluene, acetoacet-*o*-anisidide, acetoacet-*o*-toluidide, acetoacetanilide, 2,4-dimethylaniline, and 2,6-dimethylaniline are proposed to be added to Appendix VIII to Part 261—Hazardous Constituents.

2. Wastes from the production of azo dyes.

a. Wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants (K164).

Summary

EPA is proposing to list wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants, as a hazardous waste. This wastestream meets the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and is capable of posing a substantial present or potential risk to human health or the environment. Based on ingestion of contaminated ground water, EPA calculated high-end individual cancer risk levels for five constituents which exceed 1E–4 for carcinogens and have HQs of 1 or greater for non-carcinogens for the plausible management practice, an on-site monofill. Four additional contaminants further support the listing by posing individual risks between 1E–4 and 1E–6. Risks between 1E–4 and 1E–6 also were identified for six contaminants from exposure to these constituents through other exposure pathways.

Discussion

The majority of wastewater treatment sludge from the production of azo dyes is biological treatment sludge. The information on volume and the percentage of this waste volume disposed of at Subtitle D municipal landfills, as reported in the 1992 RCRA Section 3007 Questionnaire, is not included at the present time due to business confidentiality concerns.

TABLE II–6.—WASTE CHARACTERIZATION AND RISK ESTIMATES, K154—WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF AZO DYES

Constituents of concern	Baseline management #		Plausible management scenario				Waste characterization				
	Municipal landfill ****		On-site monofill ****		Vegetable ingestion		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tend.	High end	Central tend.	High end	Central tend.	High end					
2-&4 Aminoaniline/ 2-Methoxyaniline*.	R=4E–6	R=2E–5	R=2E–4	R=5E–4	R=4E–5	R=4E–5	7.17	.....	.....	1 of 7	J
Aniline	R<1E–6	R<1E–6	R=2E–6	R=1E–5	R=2E–6	R=2E–6	f.n.	f.n.	14	f.n.	
Diphenylamine/ N-Nitrosodiphenylamine**.	R<1E–6	R<1E–6	R<1E–6	R=2E–6			f.n.	f.n.	f.n.	f.n.	I
3,3'-Dimethoxybenzidine.	R<1E–6	R<1E–6	R=4E–6	R=2E–5	R=3E–6	R=3E–6	f.n.	f.n.	f.n.	f.n.	
4–Methylphenol	R<1E–6	R<1E–6	HQ = 2	HQ = 3			9.5	.....	.....	1 of 7	
1,3–Dinitrobenzene.	HQ < 1	HQ < 1	HQ = 34	HQ = 45			1.05	1.6	0.72	3 of 8	J
2–Methoxy-5-nitroaniline.	R<1E–6	R<1E–6	R<1E–6	R=2E–6	R=5E–6	R=5E–6	0.92	.....	.....	1 of 10	J(3),I(3)
2,4–Dinitrophenol.	HQ < 1	HQ < 1	HQ = 1	HQ = 2			0.74	.....	.....	1 of 18	J,I
2- & 4-Aminotoluene***.	R<1E–6	R=1E–6	R=3E–5	R=1E–4	R=1E–5	R=2E–5	1.3	1.5	1.2	3 of 11	J(5),I(9)

TABLE II–6.—WASTE CHARACTERIZATION AND RISK ESTIMATES, K154—WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF AZO DYES—Continued

Constituents of concern	Baseline management #		Plausible management scenario				Waste characterization				
	Municipal landfill ****		On-site monofill ****		Vegetable ingestion		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tend.	High end	Central tend.	High end	Central tend.	High end					
Combined Carcinogenic Risk.	R=4E–6	R=2E–5	R=2E–4	R=7E–4							

Underestimates risks due to disposal in on-site monofill, not included in estimate.
* Risk numbers based on 2-aminoaniline.
** Risk numbers based on N-nitrosodiphenylamine.
*** Risk numbers based on 2-aminotoluene.
**** Exposure through ingestion of ground water.
f.n. Relevant data are not included at the present time due to business confidentiality concerns.
Notes:
All concentrations are in mg/kg.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.
I(#)—Includes data supplied by industry, '(#)' indicates number of samples that are industry-supplied.
S—Toxicity estimated based on metabolic similarity to chemical analog.

As discussed earlier under Section II.D, Description of Health and Risk Assessments, the Agency conducted the risk assessment on these wastestreams using both a current, or baseline management scenario, and a plausible management scenario. Information relating to this discussion is not included at the present time due to business confidentiality concerns.

Therefore, the Agency conducted the risk assessment on two current management scenarios, a municipal landfill, and a monofill, with the monofill representing the plausible management practice.

The risk projections associated with this wastestream are presented in Table II–6. The data presented in this table represent 18 samples collected from four azo dye manufacturing facilities. Eleven of the 18 samples were collected and analyzed by industry, and were submitted to EPA for evaluation.

The risks associated with disposing these sludges in monofills are projected to be very high. Five constituents found in the waste are predicted to pose individual high-end cancer-risk levels equal to or exceeding 1E–4 or HQs equal to or exceeding 1 for non-carcinogens, through ingestion of contaminated ground water or vegetables. The five constituents pose carcinogenic risks ranging from 1E–4 to 5E–4 and non-carcinogenic hazards from 2 to 45 times above the RfDs for the monofill management scenario.

There are two cases of coeluting constituents for this wastestream. As shown in Table II–6, there is one data point for which the mass spectrum indicates the presence of 2-methoxyaniline along with the potential presence of 2- and 4-aminoaniline. As discussed in Section II.D, EPA based the risk assessment for this set of coeluting compounds on 2-aminoaniline. The calculated high-end individual cancer-risk level for 2-aminoaniline is 5E–4 for the monofill management scenario.

The second set of coeluting compounds consists of the three isomers 2-, 3-, and 4-aminotoluene. The presence of the three isomers was confirmed in four out of six wastewater samples collected from azo dye manufacturing operations, and the combined concentration of the three compounds was quantified. The calculated high-end individual cancer-risk level, based on the toxicity of 2-aminotoluene, is 1E–4 for the monofill management scenario (See Section II.D of this preamble, Coeluting Compounds, for more details on the Agency's approach to risk assessment for coeluting compounds).

In addition to the two sets of coeluting compounds used as raw materials in azo dye manufacturing, three compounds, 1,3- dinitrobenzene, 4-methylphenol, and 2,4-dinitrophenol were found at concentrations that are projected to pose a substantial risk to human health and the environment. The risks presented by these compounds are calculated to have high-end HQs of 45, 3, and 2, respectively.

Aniline is a high-volume dye reactant present in the wastewater treatment sludge at multiple facilities, according to RCRA Section 3007 questionnaire data. Aniline is the fourth highest-volume reactant used in the dye industry, according to data provided in the 1991 RCRA Section 3007 Questionnaires, with a 1991 use volume of 4860 metric tons. Based on the aniline concentrations found in the waste, the Agency has calculated a high-end individual cancer-risk level for this constituent at 1E–5.

Aniline was found in over 70% of the samples of wastewater treatment sludge from azo dye production. However, 11 of the 13 aniline data points, which were all from one facility, were dropped prior to the risk assessment because the facility reported that aniline found in the wastewater treatment sludges is associated with non-dye operations. This facility consumes larger volumes of aniline in their non-dye operations than in the manufacture of azo dyes. It is likely that aniline from dye operations contributed to the presence of the constituent in the waste; however, the Agency could not determine the extent of this contribution.

In studying the wastewater treatment systems from azo dye manufacturing operations as a whole, the Agency found aniline to be present in all systems from which samples were collected. In addition, aniline was consistently present in the wastewaters for all samples collected. Furthermore, even though aniline would be expected to biodegrade in the wastewater treatment system, aniline was present in 2 out of 5 samples from the wastewater treatment sludge. Because the wastewater treatment sludge presents a complex matrix for chemical analysis, the detection limits obtained for the wastewater treatment sludges were high Therefore, the Agency believes that, given the consistent presence of aniline in the wastewater, and the detection of aniline in 2 out of 5 sludge samples

(with 11 data points dropped for the reasons stated earlier), aniline typically is present in wastewater treatment sludges from azo dye manufacturing operations. Based on the aniline concentrations found in the two data points that remain after 11 data points were dropped, the Agency has determined that the risk posed by aniline in this wastestream is significant.

An additional high-volume raw material used in the manufacture of azo dyes, 3,3'-dimethoxybenzidine, was found to be present in the wastewater treatment sludge from azo dye operations at concentrations that result in calculated high-end individual cancer-risk level of 2E–5. Based on data from the 1991 RCRA Section 3007 Questionnaire, 1719 metric tons of 3,3'-dimethyoxybenzidine were used in the manufacture of azo dyes in 1991.

In addition to the risks posed by the individual hazardous constituents found in the waste, some of the contaminants are co-occurring in this wastestream. The Agency found that sludge samples collected from each of the four azo dye manufacturing facilities generally contain one or more toxic raw materials simultaneously. Therefore, some individual carcinogens are co-occurring in the waste and the calculated risks are assumed to be additive. Given the waste characterization and risk assessment results, along with toxicity information on other raw materials used in the production of azo dyes (*i.e.*, aromatic amines), the Agency believes that wastewater treatment sludges from azo dye manufacturing typically contain one or more toxic raw materials at concentrations that pose a significant risk.

In addition to the azo dye raw materials that were found in the wastestream at concentrations that pose a high risk, two additional constituents, 2-methoxy-5-nitroaniline, and the two coeluting compounds diphenylamine and N-nitrosodiphenylamine, were found in the wastewater treatment sludge from azo dye operations at concentrations that pose carcinogenic risks above 1E–6 (See Section II.D for treatment of coeluting compounds).

The results from the assessment of exposure pathways other than drinking contaminated ground water resulting from management in an on-site monofill also are presented in Table II–6. Calculated high-end individual cancer-risk levels between 1E–4 and 1E–6 were identified for six contaminants through indirect exposure pathways (contaminated vegetable ingestion) if airborne dusts are not controlled.

In addition to the risks posed by the monofill management practice, the calculated risk posed by municipal landfill disposal also is within EPA's range of potential concern, 1E–6 to 1E–4, for two sets of coeluting compounds, 2- and 4-aminoaniline/2-methoxyaniline, and 2- and 4-aminotoluene. The Agency also considered the risks posed by these contaminants for a municipal landfill when making the listing decision.

Based on an analysis of the risks associated with the current management practices, a monofill and municipal landfill, EPA is proposing to list as hazardous wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants, designated EPA Hazardous Waste Number K164.

For the reasons stated above, the Agency is proposing to add the following constituents to Appendix VII to Part 261—Basis for Listing: 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, aniline, diphenylamine, N-nitrosodiphenylamine, 3,3'-dimethoxybenzidine, 4-methylphenol, 1,3-dinitrobenzene, 2-methoxy-5-nitroaniline, 2,4-dinitrophenol, 2-aminotoluene, and 4-aminotoluene.

In addition, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, N-nitrosodiphenylamine, 4-methylphenol, 1,3-dinitrobenzene, and 2-methoxy-5-nitroaniline are proposed to be added to Appendix VIII to Part 261—Hazardous Constituents.

b. Wastewaters from the production of azo dyes, excluding FD&C colorants (K165).

Summary

The Agency is proposing to list wastewaters from the production of azo dyes, excluding FD&C colorants, as hazardous. This wastestream meets the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and is capable of posing a substantial present or potential hazard to human health or the environment. Based on ingestion of contaminated ground water, EPA calculated a high-end individual risk level of 1E–4 for one hazardous constituent for the plausible management scenario, treatment in an unlined surface impoundment. Two additional constituents are estimated to pose risks between 1E–4 and 1E–6 for the surface impoundment scenario.

Discussion

Based on response data from the 1991 RCRA Section 3007 Questionnaire, the volume reported by the industry for wastewaters from azo dye production, excluding FD&C colorants, was 6,295,779 metric tons per year, or 4.6 million gallons per day. Approximately 58% of wastewaters from azo dye production, excluding FD&C colorants currently are pretreated and discharged to a POTW. Over 40% of these wastewaters are treated in aerobic biological tank systems, with subsequent NPDES discharge to a surface water. Approximately 5% of the wastewaters from azo dye operations excluding FD&C colorants are treated in biological treatment systems that use surface impoundments.

As discussed earlier under Section II.D, Description of Health and Risk Assessments, the risk assessment for these wastewaters was performed using treatment in tanks as the current, or baseline, management practice, and treatment in surface impoundments as a plausible management scenario. For this waste, however, the worst-case management scenario, treatment in a surface impoundment, is also one of the current management practices. The calculated risks of increased cancer or hazard quotient above one for exposure to this waste are presented in Table II–7. The data presented in this table represent seven samples collected from five azo dye-manufacturing facilities.

TABLE II–7—WASTE CHARACTERIZATION AND RISK ESTIMATES K165—WASTEWATERS FROM THE PRODUCTION OF AZO DYES, EXCLUDING FD&C COLORANTS

Constituents of concern	Baseline management		Plausible Management		Waste Characterization				
	Treat in tanks***		Treat in SI***						
	Central tendency	High end	Central tendency	High end	Avg. conc.	High conc.	Low conc.	# of pts	Notes
2- & 4-Aminoaniline/2-Methoxyaniline*.	Insignificant risk for any constituent.	.....	Risk=6E–6	Risk=1E–5	f.n.	4.75	f.n.	3 of 8	
2-, 3-, & 4-Aminotoluene**.	.....	.....	Risk=6E–5	Risk=1E–4	f.n.	f.n.	0.048 (J)	6 of 8	J(2)
Aniline	.....	.....	Risk=<1E–6	Risk=2E–6	f.n.	f.n.	0.063	5 of 5	
Combined Carcinogenic Risk.	.....	.....	Risk=6E–5	Risk=1E–4					

* Risk estimates based on 2-aminoaniline.
** Risk estimates based on 2-aminotoluene.
*** Exposure through ingestion of contaminated ground water.
f.n. Relevant data are not included at the present time due to business confidentiality concerns.
Notes:
All concentrations are in mg/l.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.
S—Toxicity estimated based on metabolic similarity to chemical analog.

The risk associated with the wastewaters in tanks is estimated to be below levels of concern. However, the risks associated with managing these wastewaters in surface impoundments are calculated to be high. One constituent found in the waste is considered capable of posing a substantial present or potential risk to human health or the environment (*i.e.*, risks are 1E–4 or higher for carcinogens, or 1 or higher HQs for non-carcinogens). The constituent poses a risk 1E–4.

As was the case with wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants, the wastewaters were found to contain high concentrations of aniline, a high-volume dye reactant that poses an unacceptable risk at such levels. In fact, aniline was present in each of the seven wastewater samples from azo dye production. However, two of the seven aniline data points, which were both from one facility, were dropped prior to the risk assessment because the facility reported that aniline found in the wastewater is associated with non-dye operations. This facility consumes larger volumes of aniline in their non-dye operations than in the manufacture of azo dyes. It is likely that aniline from dye operations contributed to the presence of the constituent in the waste; however, the Agency could not determine the extent of this contribution.

Based on the aniline concentrations represented by the five remaining data points, the Agency has determined that the risks posed by aniline in this wastestream are 2E–6).

The presence of three coeluting isomers, 2-, 3-, and 4-aminotoluene, was confirmed in four out of six wastewater samples collected from azo dye manufacturing operations, and the combined concentration of the three compounds was quantified (refer to earlier discussion under Section II.D.2, Coeluting Compounds, for a discussion on the coelution of 2-, 3-, and 4-aminotoluene). The calculated high-end individual cancer-risk level, based on the toxicity of 2-aminotoluene, is 1E–4 for the surface impoundment management scenario.

The second set of coeluting compounds consists of 2- and 4-aminoaniline, and 2-methoxyaniline. EPA based the risk assessment for this set of coeluting compounds on 2-aminoaniline, as discussed in Section II.D.2. The resulting calculated high-end individual cancer-risk level is 1E–5 for the surface impoundment management scenario.

Based on the risks associated with the plausible management practice for this waste, EPA is proposing to list wastewaters from the production of azo dyes, excluding FD&C colorants, as a hazardous waste, designated EPA Hazardous Waste Number K165. However, the Agency recognizes that if wastewater treatment sludges from the production of azo dyes (K164) are listed as proposed, the available options for wastewater management may change and surface impoundments may not be used. Wastewaters that are managed in an impoundment will generate sludges through precipitation. In the event that K164 sludges were listed and the wastewaters were not, the sludges generated in a Subtitle D wastewater impoundment would be hazardous wastes and the surface impoundment would become subject to RCRA Subtitle C regulation. The Agency is requesting comment on whether it would be plausible to use a Subtitle D surface impoundment to manage wastewaters if the wastewaters were not listed and the wastewater treatment sludges were listed as hazardous wastes. The Agency also is requesting comment on the need to list K165 wastewaters, given that the plausibility of the worst-case management scenario on which the risk assessment was based may be affected by the K164 sludge listing.

For the reasons stated above, EPA proposes to add the following constituents to Appendix VII to Part 261—Basis for Listing: 2-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 3-aminotoluene, 4-aminotoluene, and aniline.

In addition, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline and 3-aminotoluene are proposed to be added to Appendix VIII to Part 261—Hazardous Constituents.

3. Wastes from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock).

a. Wastewater treatment sludge from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock).

Summary

EPA is proposing to defer the decision on whether to list wastewater treatment sludges from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock) due to insufficient waste characterization data. The Agency is planning to collect additional information on this wastestream. EPA then will publish a supplemental notice with a proposed determination on whether to list this waste.

Discussion

This waste is generated from the treatment of wastewaters from triarylmethane dye and pigment manufacturing. These wastewaters often are commingled with wastewaters from the manufacture of other dyes and pigments. As a result, the wastewater treatment sludges typically are managed also as a commingled wastestream from the production of triarylmethane and any other dyes or pigments manufactured at the site. Based on the RCRA Section 3007 Questionnaire data, the 1991 volume reported by the industry for this wastestream is 1,404 metric tons.

Wastewater treatment sludge from the production of triarylmethane dyes and pigments is generated at only five facilities. The Agency's sampling program, which was conducted in support of this listing determination, included wastewater treatment sludge from one of the five facilities generating this waste. However, the facility was not manufacturing triarylmethane dyes or pigments during the time of the sampling activities. Therefore, the resulting absence of constituents attributable to the triarylmethane operations was not unexpected.

In conclusion, based on insufficient characterization data, the Agency proposes to defer a listing decision on wastewater treatment sludges from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock). The Agency is proposing to conduct additional sampling on this wastestream and will publish a supplemental notice with a proposed listing determination.

b. Wastewaters from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock).

Summary

EPA is proposing not to list wastewaters from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock) because the constituents in this waste were observed at concentrations that present low risk levels (*i.e.*, calculated at less than 1E–6 for carcinogens and lower than 1 HQ for non-carcinogens) through ingestion of contaminated ground water, and no other hazardous constituents attributed to triarylmethane dye or pigment production were detected.*

Discussion

Volume information reported by the industry in the 1992 RCRA Section 3007 Questionnaire for the wastewater stream from triarylmethane dye and pigment production is not included at the present time due to business confidentiality concerns. Wastewaters from the production of triarylmethane dyes and pigments (excluding triarylmethane pigments using aniline as a feedstock) often are commingled with wastewaters from the manufacture of azos and other dyes and pigments.

TABLE II–8.—WASTE CHARACTERIZATION AND RISK ESTIMATES WASTEWATERS FROM THE PRODUCTION OF TRIARYLMETHANE DYES AND PIGMENTS (EXCLUDING TRIARYLMETHANE PIGMENTS USING ANILINE AS A FEEDSTOCK)

Constituents of concern	Baseline management		Plausible management		Waste characterization				
	Treat in Tanks*		Treat in SI*		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tendency	High end	Central tendency	High end					
f.n.	No HBL		No HBL		f.n.			1 of 3	
4–Nitroaniline	No HBL		No HBL		0.016			1 of 3	J
f.n.	All remaining constituents were dropped following bounding on baseline management								
4–Methylphenol									
f.n.									
f.n.									
N,N'-Dimethylaniline									
f.n.									

* Exposure through ingestion of contaminated ground water.

f.n. Relevant data are not included at the present time due to business confidentiality concerns.

Notes:

All concentrations are in mg/l.

J(#)—samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.

Information on the percentage of these wastewaters currently pretreated and discharged to a POTW, and on the percentage treated in a biological treatment system and discharged to a surface water under the NPDES system is not included at the present time due to business confidentiality concerns. As discussed earlier under Section II.D, Description of Health and Risk Assessments, the risk assessment for these wastewaters was performed using treatment in tanks and surface impoundments as the baseline and plausible management practices, respectively.

The Agency believes that the three wastewater samples collected from the manufacture of triarylmethane dyes and pigments are representative of the industry, in part, because wastewater samples were collected from the two largest triarylmethane dye producers in the country. Furthermore, the chemical analyses conducted on this waste encompassed the most important raw materials used in the manufacture of triarylmethane dyes and pigments, and these compounds were not detected at concentrations that pose a significant risk. For example, N,N-dimethylaniline is a large volume raw material used in the manufacture of triarylmethane dyes and pigment, and was analyzed using the Gas Chromatography/Mass Spectrophotometry analytical method.

In addition to the GC/MS analysis, specific analyses were conducted in order to look for two additional toxic raw materials for triarylmethane dyes and pigments; chloranil and another raw material that cannot be identified due to business confidentiality concerns. As shown in Table II–8, N,N-dimethylaniline and the other raw material that cannot be identified were not found in these wastewaters at concentrations that pose a significant risk, and chloranil was not detected at all in the wastewaters.

Table II–8 presents eight constituents, obtained from three wastewater samples which were collected at three out of 14 facilities that manufacture triarylmethane dyes or pigments. These eight compounds are the constituents that were found to be attributable to the triarylmethane processes, and six of the eight compounds were dropped following the risk assessment screening (see the Listing and Risk Assessment for Dye and Pigment Waste Listing Determination Background Documents for this proposed rule, located in the RCRA Docket for this rulemaking (see **ADDRESSES** section) for the process used in identifying attributable constituents and for the process used for dropping compounds after risk screening, respectively). Because these compounds are not expected to bioaccumulate, the maximum measured concentrations of those constituents with HBLs in this wastestream were compared to their HBLs, and the ratio of concentrations to HBL values was less than 1, indicating that the concentrations of these compounds in the waste are not expected to pose a risk to human health or the environment. The two remaining constituents, 4-nitroaniline and a constituent that cannot be identified at the present time due to confidentiality concerns, were detected at low concentrations and do not have HBLs needed to conduct a risk assessment. The risks posed by these two constituents, however, were assessed using surrogate compounds. Neither of the compounds are expected to be potential carcinogens. Furthermore, the Agency selected surrogate compounds that are structurally similar to the compounds detected in the waste, and are estimated, by means of structural activity relationships (SARs), to be more toxic than the subject compounds. Nitrobenzene was selected as a surrogate for 4-nitroaniline. Surrogate information on the second constituent cannot be included at the present time due to business confidentiality concerns. The ratios of concentration to HBL (HQ) determined by this analysis were also less than 1, indicating that, if the contaminant concentrations found in the waste were actually present in drinking water, the risks posed by ingesting the drinking water would be insignificant. More detailed discussions on the risk assessment screening and surrogate compounds are presented in the Dye and Pigment Listing Support Health Effects Background Document, which is located in the RCRA Docket for this rulemaking (see **ADDRESSES** section).

In conclusion, because the constituents in this waste were observed at concentrations that present low risk levels, and no other hazardous constituents attributed to triarylmethane dye or pigment production were detected, the Agency is proposing not to list wastewaters from the manufacture of triarylmethane dyes and pigments as hazardous.

4.Wastes from the production of triarylmethane pigments using aniline as a feedstock.

Triarylmethane pigments using aniline as a feedstock currently are produced at two domestic facilities. These facilities each produce a single product which is manufactured throughout the year using aniline as the major feedstock. The two processes are markedly different from other dye and pigment processes in the industry. Most dye and pigment processes manufacture numerous products on a batch basis, using different raw materials for each product. The wastes generated from typical dye manufacturing plants vary in composition over time due to the constant changes in raw materials. In contrast, triarylmethane pigments using aniline as a feedstock are generated at facilities that are dedicated to the manufacture of one product continuously throughout the year, and use only two raw materials, aniline and formaldehyde, at the site. In addition, aniline is used in excess in the process. These differences have a significant impact on the compositions of the waste. Such wastes were expected, and found, to contain high concentrations of aniline. The listing Background Document, found in the RCRA docket (see **ADDRESSES** section) for this proposed rulemaking, contains details on the process for manufacturing triarylmethane (TAM) pigments using aniline as a feedstock.

a. Wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock.

Summary

The Agency is proposing not to list as hazardous wastewater treatment sludges from the production of triarylmethane pigments using aniline as a feedstock. If this wastestream were managed by disposal in a municipal landfill (the plausible management scenario used for other wastewater treatment sludges), it would meet the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and would be capable of posing a substantial present or potential hazard to human health or the environment. However, as discussed in Section II.D, Description of Health and Risk Assessments, the Agency has determined that management in a municipal landfill is not plausible for this wastestream. Despite this determination, for comparison purposes the Agency calculated the risks associated with disposal in a municipal landfill and with diposal in an on-site boiler. If, based on comments, the Agency determines that it is not reasonable to use fuel blending as the plausible management scenario, the Agency probably would determine that plausible management is disposal in a municipal landfill for the ground-water pathway, and is disposal in an on-site boiler for the air pathway. Disposal in an on-site monofill, which was established as the plausible management scenario for other wastewater treatment sludges (*i.e.*, K162 and K164), is not a practical option for this wastestream due to its low volume relative to the capacity of a monofill, and so is not feasible economically.

Based on ingestion of contaminated ground water due to releases from a municipal landfill, EPA calculated high-end individual cancer-risk levels of 1E–4 and 8E–5 for the constituents benzidine and aniline, respectively The coeluting compounds 1,2-diphenylhydrazine and azobenzene are calculated to pose risks between 1E–6 and 1E–5. Therefore, the combined carcinogenic risk for multiple co-existing constituents in this wastestream would be 2E–4, assuming disposal in a landfill. However, the risks associated with the current and plausible management practice, blending with non-hazardous fuel, are insignificant for any constituent. Thus, the Agency is proposing not to list it as hazardous.

Discussion

Wastewater treatment sludge from the production of triarylmethane pigments using aniline as a feedstock currently is generated at only one facility. This waste is generated from a filter press that is used as part of the wastewater pretreatment system. The waste is generated at a rate of approximately 18 metric tons per year.

EPA has summarized the risk projections associated with this sludge

in Table II–9. The data presented in this table represent one sample from one facility. Unlike earlier wastestreams, health benchmarks exist for all the contaminants detected in this wastestream (with the exception of one coeluting compound, which is discussed later in this section). Additional compounds which do have health benchmarks, however, have been identified in these wastes, but were dropped from further consideration following the risk screening. The complete list of compounds found in this and other wastestreams is presented in the Listing Background Document for this proposed rule, which is located in the RCRA Docket for this rulemaking (see **ADDRESSES** section).

Details on the risk assessment are provided in Section II.D of this preamble, Description of Health and Risk Assessments, and in the Listing Background Document for this proposed rule, located in the RCRA Docket for this rulemaking (see **ADDRESSES** section).

TABLE II–9.—WASTE CHARACTERIZATION AND RISK ESTIMATES WASTEWATER TREATMENT SLUDGE FROM THE PRODUCTION OF TRIARYLMETHANE PIGMENTS USING ANILINE AS A FEEDSTOCK

Constituents of concern	Plausible management		Other management				Waste characterization				
	Off-site non-haz fuel blending**		On-site boiler**		Municipal landfill***		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tendency	High end	Central tendency	High end	Central tendency	High end					
1,2-Diphenylhydrazine/Azobenzene*.	Insignificant risk for any constituent.	.....	Risk <1E–6	Risk <1E–6	Risk =5E–6	Risk =2E–5	370(J)			1 of 1	J
Aniline	.....	.....	HQ<1	HQ<1	Risk =2E–5	Risk =8E–5	31000			1 of 1	
Benzidine	.....	.....	Risk <1E–6	Risk <1E–6	Risk =2E–5	Risk =1E–4	6.3			1 of 1	
Combined carcinogen risk.	Insignificant risk for any constituent.	.....	Risk <1E–6	Risk <1E–6	Risk =5E–5	Risk =2E–4					

* Risk numbers based on HBL for 1,2-diphenylhydrazine.
** Inhalation exposure through air pathway.
*** Exposure through ingestion of contaminated ground water.

Notes:
All concentrations are in mg/l.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.

As shown in Table II–9, benzidine is present in this wastestream at concentrations that pose a substantial risk to human health and the environment (*i.e.*, equal to or greater than 1E–5 for carcinogens) for the municipal landfill management scenario. Benzidine was found to be present in several wastestreams from the manufacture of triarylmethane pigments using aniline as a feedstock, including wastewaters from both facilities that manufacture these pigments. The Agency believes that benzidine is either a raw material contaminant or a reaction by-product from the process.

Large quantities of aniline, typically in excess, are used as a raw material to this process. As a result, this wastestream was found to contain over three percent aniline. The calculated high-end individual cancer-risk level for aniline is 8E–5 for the landfill scenario.

In addition to benzidine and aniline, the waste was found to contain two other hazardous constituents that are believed to be by-products of the reaction and pose a significant risk at the concentrations detected for the municipal landfill management scenario. Two additional compounds presented in Table II–9, 1,2-diphenylhydrazine and azobenzene, coelute on the mass spectrum (see Section II.D, Description of Health and Risk Assessments, for a discussion on the Agency's approach to risk assessment for coeluting compounds). Both compounds are likely oxidation products of aniline, and may be present in the waste as reaction by-products. In addition to the uncertainty in establishing concentrations for each of the two compounds, the chemical pathway from aniline to these oxidation products suggests that either contaminant may be present at all or part of the concentration detected. The Agency conducted the risk assessment using the health-based levels for 1,2-diphenylhydrazine and azobenzene, independently. For disposal in a municipal landfill, the calculated high-end individual cancer-risk level for these coeluting compounds, based on the toxicity of 1,2-diphenylhydrazine, is 2E–5.

In addition to assessing the risks associated with the individual constituents found in the waste, the Agency considers the combined risk of constituents that co-exist in the wastestream. In the case of this wastewater treatment sludge, all of the constituents discussed above (*i.e.*, aniline, benzidine, and 1,2-diphenylhydrazine/azobenzene) are believed to co-exist in the wastestream. The processes that produce triarylmethane pigments using aniline as a feedstock are operated continuously all year. As a result, the constituents detected in the wastestream are likely to be present simultaneously in the waste. Therefore, the combined calculated risk of these individual constituents, for the municipal landfill scenario would be 2E–4 at the high end.

However, the risks associated with the current and plausible management practice for this wastestream (blending with non-hazardous fuel for combustion) are insignificant. As discussed in Section II.D, Description of Health and Risk Assessments, the Agency believes that the fuel blending

will continue. The relatively high organic content of the waste gives the material value as a fuel ingredient and, therefore, generators of this waste have an economic incentive to continue fuel blending. Therefore, the Agency is proposing not to list the wastestream as hazardous. If the NPDES program requirements were to change (*i.e.*, become more stringent) then those triarylmethane pigment producers that currently do not generate a sludge could be forced to generate a sludge due to their efforts to meet new NPDES requirements. In that case, the plausible management scenario would change, and other practices, such as landfilling, would become possible. The Agency may reopen this listing decision should this occur, and will use the risk levels associated with this management scenario to make a revised listing determination.

b. Wastewaters from the production of triarylmethane pigments using aniline as a feedstock.

Summary

The Agency is proposing not to list as hazardous wastewaters from the production of triarylmethane pigments using aniline as a feedstock. As shown in Table II–10, these wastewaters contain an average aniline concentration of 200 ppm. In addition, the wastewaters contain the same hazardous by-products found in the wastewater treatment sludge. Although this wastestream, if managed in surface impoundments, would meet the criteria set out in 40 CFR 261.11(a)(3) for listing a waste as hazardous and would be capable of posing a substantial present or potential risk to human health or the environment if released into the environment, the Agency has determined that management in surface impoundments is not plausible for this wastestream. The Agency believes this because 100% of this wastestream is managed in exempt tanks. The Agency has no reason to believe that this management practice will change. Risk associated with treatment in tanks is insignificant and, thus, the Agency is proposing not to list this waste as hazardous. However, for comparison purposes, the Agency has calculated the risks associated with disposal of this wastestream in a surface impoundment. If, based on comments, the Agency determines that it is not reasonable to assume that management in tanks is the correct plausible management scenario, the Agency probably would determine that management in a surface impoundment is the appropriate plausible management scenario.

Discussion

These wastewaters are generated from filtrations of process intermediates and products, flushing operations, equipment washdowns, floor washings, and process operations. Based on response data from the 1991 RCRA Section 3007 Questionnaire, a total of 757,080 metric tons, or 0.4 million gallons per day, of wastewater from the production of triarylmethane (TAM) pigments is generated. Information on generation relevant to this discussion is not included at the present time due to business confidentiality concerns. All of the wastewaters generated from TAM pigment production (using aniline as a feedstock) are treated in tanks prior to discharge to a POTW. The data presented in Table II–10 represent three samples collected from two TAM pigment-manufacturing facilities.

TABLE II–10.—WASTE CHARACTERIZATION AND RISK ESTIMATES WASTEWATERS FROM THE PRODUCTION OF TRIARYLMETHANE PIGMENTS USING ANILINE AS A FEEDSTOCK

Constituents of concern	Plausible management		Other management				Waste Characterization				
	Treat in tanks **		Treat in SI ***		Treat in SI ***		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tendency	High end	Central tendency	High end	Central tendency	High end					
1,2-diphenylhydrazine/ Azobenzene*.	Insignificant risks for any constituent.	.....			Risk=5E–6	R=1E–5	f.n.	f.n.	0.093 (J)	f.n.	J(2)
Aniline	.....	.....			Risk=7E–5	R=1E–4	f.n.	f.n.	108	f.n.	
Benzidine	.....	.....			Risk=1E–4	R=3E–4	f.n.	f.n.	0.006	f.n.	
Combined Carcinogenic Risk	.....	.....			Risk=2E–4	R=5E–4					

* Risk numbers based on HBL for 1,2-diphenylhydrazine.
** Inhalation exposure through air pathway.
*** Exposure through ingestion of ground water.
f.n. Relevant data are not included at the present time due to business confidentiality concerns.
Notes: All concentrations are in mg/l.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values.

As discussed earlier under Section II.D, Description of Health and Risk Assessments, the plausible management scenario selected for wastewaters usually is treatment in surface impoundments.

The risks associated with disposing these wastewaters in surface impoundments would be very high. Two hazardous constituents (aniline and benzidine) are present in the waste at concentrations that would pose substantial risks to human health and the environment (*i.e.*, greater than 1E–4 for carcinogens) for treatment in a surface impoundment. Large quantities of aniline, used in excess, are used as a raw material in this process. As a result, very high concentrations of aniline are present in the process waters. Even after recovery operations, EPA found high concentrations of aniline (in this case, an average of 200 ppm) remaining in the wastewater effluent discharged to the POTW.

Benzidine was found to be present in several wastestreams from the manufacture of triarylmethane pigments using aniline as a feedstock, and is believed to be either a raw material

contaminant or a reaction by-product. The risks posed by benzidine at the concentrations present in these wastewaters are 3E–4, using a surface impoundment management scenario.

The coeluting constituents, 1,2-diphenylhydrazine and azobenzene, which are likely by-products arising from the oxidation of aniline are present in the waste at a concentration resulting in a calculated risk level of 1E–5, based on the toxicity of 1,2-diphenylhydrazine (see Section II.D, Description of Health and Risk Assessments, for a discussion on the Agency's approach to risk assessment for coeluting compounds). The mass spectrum representing these two coeluting compounds was identified in all three wastewater samples collected from triarylmethane pigment operations.

However, based on the insignificant risks associated with the current and plausible management practice for this wastestream (treatment in tanks), EPA is proposing not to list wastewaters from the production of TAM pigments as hazardous. Although this wastestream would be hazardous if used for spray irrigation or handled in surface impoundments, the Agency does not believe that such management is plausible. The facilities generating the wastewater already are 100% invested in treating the waste in tanks prior to sending it to a POTW. In addition, this is not a strongly expanding segment of the industry, so the Agency does not anticipate more facilities starting up similar operations. Further, there is a general bias under most State industrial waste programs against allowing surface impoundments to be built. Thus, based on the risk associated with treatment in tanks, the Agency is proposing not to list this wastestream as hazardous.

c. Still bottoms or heavy ends from the production of triarylmethane dyes or pigments (K166).

Summary

The Agency is proposing to list still bottoms or heavy ends from the production of triarylmethane dyes or pigments as hazardous. This wastestream meets the criteria set out at 40 CFR 261.11(a)(3) for listing a waste as hazardous and is capable of posing a substantial present or potential risk to human health or the environment. Based on ingestion of contaminated ground water, EPA calculated high-end individual risk levels (greater than 1E–4) for carcinogens under both the baseline and plausible management scenarios. Two carcinogens pose high-end risks exceeding 9E–3 for the plausible management scenario of disposal in an on-site monofill. These two constituents pose very high levels of risk (greater than 1E–3) for the baseline management practice of disposal in a municipal landfill. In addition, one of these constituents has an HQ of 6 for the air pathway associated with management in an on-site boiler, a practice which is both a baseline management practice and a plausible management scenario.

Discussion

This wastestream includes distillation bottoms from the production of triarylmethane dye and pigments, which are generated from solvent and raw material recovery operations (*i.e.*, recovery of aniline, dimethylaniline, or other solvents).

TABLE II–11.—WASTE CHARACTERIZATION AND RISK ESTIMATES K166—STILL BOTTOMS OR HEAVY ENDS FROM THE PRODUCTION OF TRIARYLMETHANE PIGMENTS USING ANILINE AS A FEEDSTOCK

Constituents of concern	Baseline management				Plausible management				Waste characterization				
	On-site boiler		Municipal landfill		On-site boiler		On-site monofill		Avg. conc.	High conc.	Low conc.	# of pts	Notes
	Central tend.	High end	Central tend.	High end	Central tend.	High end	Central tend.	High end					
1,2-diphenylhydrazine/ Azobenzene *.	R=2E–6	R=6E–5	R=6E–4	R=2E–3	R=7E–6	R=1E–5	R>9E–3	R>9E–3	f.n.	f.n.	1700	2 of 2 .	
Aniline	HQ<1	HQ=6	R=2E–3	R=7E–3	HQ=3	HQ=6	R>9E–3	f.n.	f.n.	19000	2 of 2		
N-nitrosodiphenylamine/ Diphenylamine **.	no air HBL	no air HBL	R<1E–6	R<1E–6	no air HBL	no air HBL	R=1E–6	R=6E–6	580	.....	.....	1 of 2 .	J
Combined Carcinogen Risk.	R=2E–6	R=6E–5	R=2E–3	R=9E–3	R=2E–5	R=6E–5	R>9E–3	R>9E–3					

* Risk numbers based on HBL for 1,2-diphenylhydrazine.
** Risk numbers based on HBL for N-nitrosodiphenylamine.
f.n. Relevant data are not included at the present time due to business confidentiality concerns.
Notes:
All concentrations are in mg/kg.
J(#)—Samples where estimated concentrations are below quantitation limits, '(#)' indicates number of samples that are 'J' values

Information relevant to this discussion is not included at the present time due to business confidentiality concerns.

Process waters from the manufacture of triarylmethane dyes and pigments containing high levels of aniline or other raw materials and solvents sometimes are sent to a distillation column for recovery of the material for reuse in the process. As expected, the bottoms generated from the distillation contain high concentrations of the material being recovered. The concentrations of aniline present in two samples collected exemplify the concentrations of solvent contaminants anticipated in these wastes. Information on the concentration of aniline observed is not presented at his time due to business confidentiality concerns.

Based on data from the RCRA Section 3007 Questionnaire, four facilities generated a total of 1700 metric tons of this waste in 1991.

EPA has summarized the risk projections associated with this waste in Table II–11. The data presented in this table represent two samples from two facilities. These samples were collected from the two largest generators of this wastestream, both of which recover aniline from the wastewater. One of the remaining two facilities recovers other aniline derivatives (*i.e.*, N,N-dimethylaniline and N,N-diethylaniline) that are used as raw materials and solvents in the production of triarylmethane dyes. The second facility recovers chlorobenzene used as a solvent in the production of triarylmethane dyes and generates a still bottom waste that is reported to contain 50% chlorobenzene. This waste is already listed as F002, based on the use of the solvent chlorobenzene. Based on an evaluation of the processes generating these wastes and the contaminants reported to be present by industry, the Agency believes the risks posed are similar to those assessed in Table II–11. The data used to characterize these wastestreams, assess the risks posed by these wastes, and make a proposed listing determination on the waste grouping were obtained from the two samples collected by EPA and the 1991 RCRA Section 3007 Questionnaire responses. Waste management information relevant to this discussion are not included at the present time due to business confidentiality concerns.

As discussed earlier in Section II.D, Description of Health and Risk Assessments, the Agency conducted the risk assessment on these wastestreams using the two most widely used practices, the on-site boiler and municipal landfill as the current management scenario, and an on-site boiler (for the air pathway) and on-site monofill (for the ground-water pathway) as the plausible management scenario.

The risk posed by the presence of aniline in the concentrations found in the waste is estimated to be very high (*i.e.*, greater than 9E–3 for the ground-water pathway, and HQ=6 for the air pathway). Due to the imperfect nature of any recovery process, it is not unexpected that large quantities of aniline, or any other raw material or solvent being recovered, would be present in these still bottoms. Aniline was found in very high concentrations (*i.e.*, the low concentration was 1.9%) in both distillation bottom samples collected from triarylmethane pigment production. Information on the high concentration value is not included at the present time due to business confidentiality concerns.

In addition to aniline, the two sets of coeluting constituents present in the wastewater treatment sludge and wastewaters from these operations (*i.e.*, 1,2-diphenylhydrazine and azobenzene, and N-nitrosodiphenylamine and diphenylamine) also are present in the distillation bottoms (K166). These compounds are all likely by-products arising from the oxidation of aniline. The MS curve representing 1,2-diphenylhydrazine and azobenzene was identified in both distillation bottom samples collected from triarylmethane pigment operations. For the reasons discussed in Section II.D, the Agency conducted the risk assessment for these coeluting compounds independently. The resulting high-end individual cancer-risk level for this first set of coeluting compounds is greater than 9E–3. Likewise, the risk assessment for N-nitrosodiphenylamine and diphenylamine was conducted independently, as discussed in Section II.D. The resulting high-end individual cancer-risk level for this second set of coeluting compounds is 6E–6.

In addition to assessing the risks associated with the individual constituents found in the waste, the Agency considers the combined risks of constituents that co-exist in the wastestream. In the case of still bottoms from the production of triarylmethane dyes and pigments, all of the constituents are believed to co-exist in the wastestream. The distillation columns generating this residual process the same wastestream with each dye or pigment batch. As a result, the constituents detected are likely to be present simultaneously in the waste. The risk of each individual constituent is high, and the combined risks of these constituents are very high (greater than 9E–3 for the ground-water pathway and 6E–5 for the air pathway), both of which were considered in making this listing determination.

In addition to the very high risks posed by the plausible management practice (on-site boiler for the air pathway and on-site monofill for the ground-water pathway), the risks posed by the baseline management practice (on-site boiler for the air pathway and municipal landfill for the ground-water pathway) are also very high. Specifically, the risks posed by the current management practices are greater than 9E–3 for the ground-water pathway, and 6E–5 (carcinogens) and HQ=6 (non-carcinogens) for the air pathway.

In summary, the calculated risks associated with managing these still bottoms in on-site boilers, municipal landfills, and on-site monofills are all very high, based on each of the individual hazardous constituents in the wastestream and the combined risks due to carcinogens found in the wastestream as a whole. Therefore, based on the risks associated with both current management and plausible management practices for this waste, EPA is proposing to list as hazardous still bottoms or heavy ends from the production of triarylmethane dyes or pigments, designated EPA Hazardous Waste Number K166.

For the reasons stated above, the Agency is proposing to add the following constituents to Appendix VII to Part 261—Basis for Listing: 1,2-diphenylhydrazine, azobenzene, aniline, diphenylamine, and N-nitrosodiphenylamine.

In addition, azobenzene and N-nitrosodiphenylamine are proposed to be added to Appendix VIII to Part 261—Hazardous Constituents.

5. Wastes from the production of anthraquinone dyes and pigments.

a. Wastewater treatment sludge from the production of anthraquinone dyes and pigments.

Summary

EPA is proposing to deter the proposed listing determination for wastewater treatment sludges from the production of anthraquinone dyes and pigments at this time. Based on analysis of the sludge samples collected by the Agency, no constituents attributable to anthraquinone processes were detected. However, data supplied by industry indicate the presence of two constituents on the target analyte list for which no health-based levels and no adequate surrogates exist. Based on this discrepancy and the need to identify

surrogates for risk analysis, the Agency believes a deferral is appropriate for this wastestream.

Discussion

This sludge is generated from the treatment of wastewaters from anthraquinone dye and pigment manufacturing. Volume information reported by industry in the 1992 RCRA 3007 Questionnaire data is not included at the present time due to business confidentiality concerns.

Wastewater treatment sludge from the production of anthraquinone dyes and pigments is generated at 11 facilities. Sludge generated from 9 of the 11 facilities, which represents over 98% of the anthraquinone dye and pigment production volume, is commingled with wastewater treatment sludge from the production of azo pigments and/or dyes. Over 98% of the commingled sludge currently is managed in municipal landfills or is disposed in on-site monofills. Small fractions of the commingled sludge are managed under Subtitle C. Waste management and waste volume information relevant to this discussion is not included at the present time due to business confidentiality concerns.

Of the 11 facilities that generate this waste, the Agency collected samples from the three largest contributors to the wastestream and from one small contributor. Several compounds used in anthraquinone dye or pigment operations were expected to be present in the waste, based on facility production schedules, and were not detected. In addition, analysis of these samples did not produce any other contaminants attributable to anthraquinone dye or pigment operations (refer to the Background Document for this rulemaking located in the RCRA Docket for this rule (see **ADDRESSES** section) for the methodology used in identifying contaminants attributable to a process).

Several compounds used in the manufacture of anthraquinone dyes and pigments were dropped from the Agency's target analyte list for dye and pigment wastes, due to the absence of any health effects information and because of low usage rates (*i.e.*, the compound was used at only 1 or 2 facilities). Examples of anthraquinone-related compounds dropped from the target analyte list for these reasons include: 1-chloroanthraquinone, 1,4-dihydroxyanthraquinone-2-sulfonic acid, 1-amino-2-chloro-4-hydroxyanthraquinone, and 1-amino-4-bromo-2-anthraquinonesulfonic acid.

As stated above, the Agency's analysis of wastewater treatment sludge samples collected from anthraquinone dye and pigment operations did not produce any contaminants attributable to anthraquinone dye or pigment operations. However, industry data submitted on 11 sludge samples confirmed the presence of two target analytes, 1-aminoanthraquinone, and leucoquinizarine, at average concentrations of 1.5, and 1.4 ppm, respectively. Each of the two analytes was detected in three of the 11 samples.

The Agency did not find HBLs for either of the two compounds detected in this wastestream, 1-aminoanthraquinone and leucoquinizarine. In addition, the Agency was not able to identify any appropriate surrogate compounds to represent the toxicity of these compounds. If one or both of these compounds are potential carcinogens and behave in a similar manner to the potential carcinogen, 1-amino-2-methyl-anthraquinone, then the risk posed by the presence of the compounds in the waste would need to be examined further. The Agency is concerned about using this limited surrogate information as a basis for listing this waste as hazardous.

In summary, the Agency is proposing to defer a listing determination for wastewater treatment sludge from the manufacture of anthraquinone dyes and pigments at this time, and is requesting data on the toxicity of 1-aminoanthraquinone and leucoquinizarine or information on suitable surrogates for these compounds. EPA also would be interested in submission of further characterization data. EPA will evaluate carefully all public comments and information received in response to this notice. Based on comments or data received, the Agency, rather than deferring, may choose to promulgate a final determination to either list or not to list this waste as hazardous under RCRA.

b. Wastewaters from the production of anthraquinone dyes and pigments.

Summary

EPA is proposing not to list wastewaters from the production of anthraquinone dyes and pigments as hazardous. This wastestream is not considered to pose significant risks to human health and the environment, based on the analysis of samples of the waste. Several compounds used in the manufacture of anthraquinone dyes and pigments were expected to be present in the waste but were not detected. Only one compound attributable to anthraquinone processes, 3-aminoacetanilide, was detected in the waste, at low concentrations. Health effects information on this constituent does not currently exist, and risk estimates conducted using methylenephenylenediamine as a surrogate indicate no significant risks.

Discussion

Based on response data from the RCRA Section 3007 Questionnaire, the 1991 volume reported by the industry for wastewaters from anthraquinone dye and pigment production was 3,988,166 metric tons, or approximately 2.9 million gallons per day, generated at 25 facilities. Most of the wastewater currently is treated and discharged to a surface water under the NPDES system; the remainder is discharged to a POTW (with 5% pretreated prior to discharge). Additional information on volumes and waste managment is not included at the present time due to business confidentiality concerns.

Of the 25 facilities that generate this waste, the Agency collected a total of seven samples from the four largest contributors to the wastestream and from one small contributor. Information relevant to this discussion is not included at the present time due to business confidentiality concerns.

As stated above, several compounds used in anthraquinone dye and pigment operations were expected to be present in the waste, based on facility production schedules, and were not detected. In addition, only one compound attributable to anthraquinone dye and pigment production was detected in the waste (refer to the Background Document for this rulemaking located in the RCRA Docket for this rule (see **ADDRESSES** section) for the methodology used in identifying contaminants attributable to a process). This compound, 3-aminoacetanilide, was present in five of the seven samples collected, at an average concentration of 0.15 ppm. However, health effects information needed to assess the risk posed by this constituent does not currently exist. In order to estimate the potential risk from 3-aminoacetanilide, the Agency performed a risk assessment using methylenephenylenediamine as a surrogate compound. The Agency selected a surrogate compound that is structurally similar to the compound detected in the waste (*i.e.*, 3-aminoacetanilide), and is estimated, by means of structural activity relationships (SARs), to be more toxic than the subject compound. This assessment produced a groundwater concentration, prior to dilution and attenuation, of 1.5 times the HBL. Thus, the concentration at the receptor well, following dilution and attenuation,

would be expected to be less than the HBL. More detailed discussions on the risk assessment screening and surrogate compounds are presented in Section II.D of this preamble, Description of Health and Risk Assessments, and the Listing Background Document for this proposed rule, which is located in the RCRA Docket for this rulemaking (see ADDRESSES section).

In conclusion, because the one compound attributable to anthraquinone dye or pigment production detected in this waste is present in low concentrations, does not have health data needed to assess risk, and does not indicate a risk using surrogate toxicity data, the Agency is proposing not to list wastewaters from the manufacture of anthraquinone dyes and pigments as hazardous.

6. Wastewaters from the production of FD&C colorants.

Summary

EPA is proposing not to list wastewaters from the production of FD&C colorants as hazardous wastes. This wastestream is not considered to pose significant risks to human health and the environment, based on the analysis of samples of the waste. Only three constituents attributable to FD&C colorant processes were detected in the waste, and these do not present a risk at the concentrations observed.

Discussion

Based on the 1991 RCRA Section 3007 Questionnaire data, the volume reported by the industry for the wastewater stream from FD&C colorant production is 3,557,563 metric tons per year, or 2.6 million gallons per day. Information on the percentage of these wastewaters that are currently pretreated and discharged to a POTW and other waste management information relevant to this discussion is not included at the present time due to business confidentiality concerns.

The Agency collected three samples of wastewaters generated from FD&C operations and did not find any hazardous constituents present at concentrations that pose a risk above EPA's initial risk "level of concern" (*i.e.*, 1E–5 for carcinogens, and HQ of 1 or greater). The Agency believes that the samples of wastewaters from the manufacture of FD&C colorants are representative of the industry. In fact, wastewater samples were collected from the two largest-volume FD&C colorant producers in the country, in addition to one smaller manufacturer.

Several of the raw materials used in the manufacture of FD&C colorants were dropped from the Agency's target analyte list for analysis of dye and pigment wastes because the few existing health studies on these compounds indicate that the compounds are non-toxic. In addition, many of the raw materials used in the manufacture of FD&C colorants are compounds that contain sulfonic acid functional groups, for which analytical methods do not exist. Examples of FD&C raw materials dropped from the target analyte list for these reasons include *p*-toluidine-*m*-sulfonic acid, and sulfanilic acid.

The sulfonic acid functional group imparts water solubility to a compound, which generally results in lower toxicity. However, several of these materials may pose a risk when present in the wastestream without the sulfonic acid functional group. For example, without sulfonic acid functional groups, the two compounds listed above (*p*-toluidine-*m*-sulfonic acid and sulfanilic acid) are represented by *p*-toluidine, and aniline, respectively. In these cases, the precursors to the FD&C reactants (*i.e.*, prior to sulfonation) remained as target analytes even when the sulfonated compounds were not on the list. Information relevant to this discussion is not included due to business confidentiality concerns. (Refer to the Dye and Pigment Listing Background Document, located in the RCRA Docket for this proposed rulemaking (see ADDRESSES section), for details on the development of the target analyte list.)

From the three FD&C wastewater samples collected, the following three constituents were observed that are attributable to FD&C colorant production: Aniline, 3-hydroxyphenol, and phenol. During the risk assessment screening, the Agency found that the three constituents present in the waste (*i.e.*, aniline, 3-hydroxyphenol, and phenol) do not pose a risk at the concentrations detected. In fact, the ratios of maximum measured concentration in the wastestream to the HBL were less than 1 for aniline and phenol. Since there currently is no HBL available for 3-hydroxyphenol, the concentration of 3-hydroxyphenol was compared to that of a surrogate. 3-Hydroxyphenol is not expected to be a potential carcinogen. Furthermore, the Agency selected a surrogate compound that is structurally similar to the compound detected in the waste, and is estimated, by means of structural activity relationships (SARs), to be more toxic than the subject compound. Therefore, phenol was selected as a surrogate for this 3-hydroxyphenol, and the resulting ratio of concentration to HBL was also less than 1. This indicates that if the contaminant concentrations found in the waste were actually present in drinking water, the risks posed by ingesting the drinking water would be insignificant.

In conclusion, because the constituents in this wastestream were observed at concentrations that present insignificant risks, and no other hazardous constituents attributed to FD&C colorant production were detected, the Agency is proposing not to list wastewaters from the manufacture of FD&C colorants as hazardous.

7. Dusts and dust collector fines from the manufacture of dyes and pigments.

Summary

The Agency is proposing not to list dusts and dust collector fines from the manufacture of dyes and pigments because, based on an evaluation of current management and plausible management, this waste does not pose a substantial potential hazard to human health and the environment.

Discussion

Dusts and dust collector fines are generated during drying, grinding, and blending operations that occur during the manufacture of dyes and pigments. Dust collectors and baghouses generally are used to capture and collect the dust. The total volume of this wastestream reported in response to the 1991 RCRA Section 3007 Questionnaire is 143 metric tons. According to questionnaire data, some of the dusts and fines reported by the industry are recovered and recycled back to the manufacturing process or sold to shoe-polish manufacturers as a raw material. Information on the percentage handled in this manner is not included at the present time due to business confidentiality concerns. There is a distinct economic incentive for these facilities to continue reusing or selling dusts and fines in this way. This handling of dusts and fines is not expected to present any significant risk to human health and the environment.

Seventeen percent of the reported waste volume is generated by a facility that currently manages dusts and fines in a Subtitle C landfill and the Agency believes that this facility will continue to manage dusts and fines in such a manner. The dusts and fines generated at this facility from organic pigments covered by this listing determination are mixed with dusts and fines from inorganic pigments that contain lead and chromium. The entire volume of dusts and fines, comprised of the commingled organic and inorganic products dusts and fines, is characteristically toxic for both lead and chromium and, therefore, is a hazardous waste as defined by 40 CFR 261.24. It

is impractical for the facility to separate the dusts and fines covered by this listing determination from these characteristic inorganic dusts and fines and, thus, the facility manages the dusts and fines covered by this listing determination in a Subtitle C landfill. Analysis of existing plant design shows that dusts and fines are comingled in ductwork that is structured such that these wastes are mixed. Without significant re-design and construction, segregation of the wastes is impossible. The Agency does not believe that it is plausible for the facility to discontinue the practice of combining all of its dusts and fines wastes and disposing of such wastes at a Subtitle C facility given the physical arrangement of this facility. Management of this waste in a Subtitle C landfill is not expected to pose any significant level of risk to human health or the environment.

Information on the volume and the percentage of total volume disposed of in Subtitle D landfills is not included at the present time due to business confidentiality concerns.

The Agency believes the potential risks posed by the plausible management practices for this volume do not warrant a hazardous waste listing for dusts and fines.

Although, due to resource constraints, the Agency was unable to collect information on the characteristics of these dusts and fines, the Agency estimated a worst-case risk by estimating the risk associated with disposal of dusts and fines in a Subtitle D landfill based on the physical/chemical properties of a mobile dye product and the toxicological properties of a dye constituent known to be one of the most toxic and mobile dye or pigment waste constituents. This analysis demonstrated that the risk is below the initial level of concern associated with disposal of this waste in a Subtitle D landfill. Management of this waste in an on-site monofill was determined to be not plausible because the volumes generated would not justify an on-site monofill. For further information see the background document on risk assessment, available in the public docket for this rule.

The Agency requests comment on the approach used to determine risk posed by plausible management of the wastes and requests comment on the proposed determination not to list this waste.

9. Spent filter aids, diatomaceous earth, or adsorbents used in the production of azo, anthraquinone, or triarylmethane dyes, pigments, or FD&C colorants.

Summary

The Agency is proposing to defer a determination on whether to list spent filter aids, diatomaceous earth, or adsorbents used in the production of azo, anthraquinone, or triarylmethane dyes, pigments, or FD&C colorants as hazardous due to insufficient waste characterization data. The Agency is planning to collect additional information on this wastestream. EPA then will publish a supplemental notice with a proposed determination on whether to list this waste.

III. Waste Minimization

In the Pollution Prevention Act of 1990 (42 U.S.C. 13101 *et seq.*, Pub. L. 101–508, November 5, 1990), Congress declared pollution prevention the national policy of the United States. The act declares that pollution should be prevented or reduced whenever feasible; pollution that cannot be prevented should be recycled or reused in an environmentally safe manner wherever feasible; pollution that cannot be prevented/reduced or recycled should be treated; and disposal or release into the environment should be chosen only as a last resort. This section first provides a general discussion of some generic pollution prevention and waste minimization techniques that facilities may wish to explore and second discusses and requests comment on ways in which the hazardous waste listing determination program itself could be structured to better promote pollution prevention and waste minimization.

A. Generic Approaches to Waste Minimization

Waste minimization practices fall into three general groups: change in production practices, housekeeping practices, and practices that employ the use of equipment that by design promote waste minimization. Some of these practices/equipment listed below conserve water, others reduce the amount of product in the wastestream, while others may prevent the creation of the waste altogether. EPA acknowledges that some of these practices/equipment may lead to media transfers or increased energy consumption. This information is presented for general information, and is not being proposed as a regulatory requirement. Production practices include:

- Triple-rinsing raw material shipping containers and returning the rinsate directly to the reactor;
- Scheduling production to minimize changeover cleanouts;
- Segregating equipment by individual product or product "families;"
- Packaging products directly out of reactors;
- Steam stripping wastewaters to recovery reactants or solvents for reuse;
- Using raw material drums for packaging final products; and
- Dedicating equipment for hard to clean products. Housekeeping practices include:
- Performing preventive maintenance on all valves, fittings, and pumps;
- Promptly correcting any leaky valves and fittings;
- Placing drip pans under valves and fittings to contain leaks; and
- Cleaning up spills or leaks in bulk containment areas to prevent contamination of storm or wash wasters.

Equipment promoting waste minimization by reducing or eliminating waste generation include:

- Low-volume/high-pressure hoses for cleaning;
- Drum triple-rinsing stations;
- Reactor scrubber systems designed to return captured reactants to the next batch rather than to disposal;
- Material storage tanks with inert liners to prevent contamination of water blankets with contaminants which would prohibit its use in the process; and
- Enclosed automated product handling equipment to eliminate manual product packaging.

Waste minimization measures can be tailored to the needs of individual industries, processes, and firms. This approach may make it possible to achieve greater pollution reduction with less cost and disruption to the firm.

Defined process control and good housekeeping practices often can result in significant waste volume or toxicity reduction. Evaluations of existing processes also may point out the need for more complex engineering approaches (*e.g.*, waste reuse, secondary processing of distillation bottoms, and use of vacuum pumps instead of steam jets) to achieve waste minimization objectives. Simple physical audits of current waste generation and in-plant management practices for the wastes also can yield positive results. These audits often turn up simple non-engineering practices that can be implemented successfully.

B. Waste Minimization Approaches in the Listing Program

Section 1003 of the Hazardous and Solid Waste Amendments of 1984 says that one of RCRA's goals is to promote protection of human health and the environment and to conserve valuable

material and energy resources by "minimizing the generation of hazardous waste and the land disposal of hazardous waste by encouraging process substitution, materials recovery, properly conducted recycling, and reuse and treatment." Section 1003 further provides that it is a national policy of the United States that, whenever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. To further EPA's waste minimization goals, the Waste Minimization Branch (WMB) in EPA's Office of Solid Waste (OSW) established the RCRA Waste Minimization Action Plan to integrate source reduction and recycling into the National RCRA Program, and RCRA activities into the Agency's Pollution Prevention Strategy.

As described in that plan, EPA's program for evaluating which wastes should be listed as hazardous is an example of a regulatory program that can provide opportunities for encouraging and promoting real waste minimization. When a wastestream is listed as hazardous, it enters the hazardous waste management system. The requirements of that system can be costly and there are currently only limited ways for a waste entering the system to get out. Once it is listed as a hazardous waste, it remains a listed hazardous waste even after treatment and safe disposal, unless delisted pursuant to 40 CFR 260.20 and 260.22. Other than levels at which wastes typically are delisted, there is no target for a generator to shoot for which would allow their waste to be considered non-hazardous even if waste minimization actions are taken that ensure the waste is not likely to pose a hazard to human health and the environment. However, if a waste minimization-based exemption to the listing could be provided, generators would have the regulatory and economic incentive to meet the exemption. When the exemption is tailored to encourage and reward waste minimization efforts, then the generator could obtain the benefit of not generating a listed hazardous waste while furthering national waste minimization goals.

The Agency notes that there are several important considerations in developing listing determinations that encourage waste minimization. First, waste minimization-based listings must promote actual waste minimization and clearly not increase risk. In addition, the listings must be enforceable.

1. Actual Waste Minimization Must Occur. The Agency is interested in taking comment on developing listings that encourage reductions in volumes, reductions in concentrations of constituents of concern (without diluting constituents in an effort to reduce concentration), reductions in environmental loading of constituents of concern, and/or the removal of constituents of concern (or process derivatives of concern) from the manufacturing process, and/or the beneficial reuse, recycling, or reclamation of the wastestreams themselves, provided human health and the environment is protected. A waste minimization-based listing, for example, must be crafted so as not to result simply in cross-media transfer, and so as not to leave uncontrolled wastes reduced in volume or concentration, but still posing a significant hazard. The Agency believes that generators must make a commitment that waste minimization in fact would occur, and that a real investment in waste minimization techniques, equipment, and process changes would be carried out.

2. No Increase in Risk Can Occur. A waste minimization-based listing (or variable level) must protect human health and the environment and not increase risk. A hazardous waste listing achieves the goal of minimizing risk by placing a wastestream in the hazardous waste management system. Any exemption which takes a wastestream out of this system must be shown to provide an equivalent decrease in risk as that provided by the listing itself. It would be unacceptable, for example, for waste minimization actions simply to result in cross-media transfer of wastes. Chemical substitution that fails to reduce the risks posed by a wastestream is another example of a practice that would not be considered to be waste minimization. Another specific concern involves the possible presence of other constituents in a wastestream for which the waste was not specifically listed but which also may pose risk to human health or the environment. A waste minimization-based listing must consider the impact of letting the entire wastestream out of the hazardous waste management system.

3. Enforceability. The Agency is particularly concerned about the enforceability of waste minimization-based variance to a listing. In particular, the Agency has concerns about the following factors:

- The amount of testing or monitoring required,
- Ease by which a State inspector could check compliance,
- How a generator would demonstrate compliance with the waste minimization-based exemption,
- The likelihood that a State agency would adopt a waste minimization approach in its listing regulations, and
- The ability of a State agency to oversee an exemption.

Any waste minimization-based listing must account for these concerns. (Many of these issues now are being considered in EPA's deliberations on the Hazardous Waste Identification Rule.)

C. Specific Approaches to Waste Minimization

The Agency can and has used different regulatory mechanisms to promote waste minimization in the listing program. The discussion below will describe several options the Agency has identified as an approach to tailoring listings that encourages generators to use waste minimization practices. This approach could apply to any listing determination. Also included in this discussion are specific references to today's proposed listing determination for dyes and pigments.

Quantity-Based Listings

A potential method of structuring a waste listing to promote waste minimization would be to establish a quantity-based exemption for the wastes listed. Under such an approach, the listing of a specific wastestream would be accompanied by a quantity-based exemption for the specific wastestream involved. Quantity can refer to either a concentration of constituents in a waste (measured or calculated) or the mass of constituents released to the environment. The Agency believes that this approach would encourage waste minimization because a facility would have to meet a risk-based quantitation target for a wastestream in order to qualify for the exemption, thereby requiring reductions in the mass or concentration (or both) of the constituents of concern. In reducing mass loading or concentration (or both) of the wastes, the Agency's waste minimization goals are achieved.

A concentration basis is easier to measure and track than a limit based on loading or mass. Setting a limit based on loadings or mass addresses total loadings to the environment and recognizes waste minimization efforts that result in reductions in both mass of pollutant and volume of total wastestream. However, a mass loading approach poses significantly more burden in terms of monitoring and compliance and may not take into account concentrations of constituents in a waste. The Agency requests comment on the use of production or mass-based limits, and on possible monitoring approaches.

A variation on this approach is an adaptation of the "headworks rule" (40 CFR 261.3(a)(2)(iv)(A)–(E)) to a listing. The original rule, promulgated on November 17, 1981 (46 FR 56582) allows for calculated amounts of certain spent solvents, commercial chemical products, petroleum refining wastes, and laboratory residuals to be sent to a facility's wastewater treatment plant, and for the wastewaters and sludges (beyond the headworks) to be exempted from the mixture rule. The Agency also proposed in the March 1, 1994 carbamates listing proposal (59 FR 9808–9864) to provide a similar exemption to a wastewater proposed for listing in the same notice.

Under the "headworks" exemption approach (e.g., 40 CFR 261.3(a)(2)(iv)(H)), the wastewaters and treatment sludges would be exempt from the listing as long as the industry could show that the total quantity of hazardous constituents that pose risk in a wastestream, divided by the undiluted wastewater flow for wastewaters on an average weekly basis from the particular product process subject to the listing was less than a calculated quantity. The calculated quantity would be based on a risk assessment.

The Agency would have to be able to determine the relationship between the amount of raw material used and the presence of particular constituents in the wastestream. The Agency requests comment on whether determining such a relationship is feasible for the dye and pigment industries. To qualify for such an exemption, the facility would have to use existing inventory records of raw materials that go into the process. The facility can subtract the quantity of materials that, in fact, do not go into the wastewater treatment system, either by chemical reaction or material recovery techniques (*i.e.*, distillation, reuse, reverse osmosis, etc.). The facility may not subtract any quantity assumed to volatilize. The quantity of material left then would be converted to resulting levels of constituents expected to be generated based on quantity of raw material used. The levels of constituents then would be divided by the average weekly flow of the wastewaters into the headworks of the wastewater treatment system at the time the process is being run to determine total concentrations of constituents in wastewater. If the total concentration of constituents of concern is less than the amount calculated based on the risk assessment, the wastewaters and treatment sludges would qualify for the exemption. This approach has the advantage of determining concentrations in a mathematical, rather than an analytical way. The disadvantage is that it requires collection of process flow data and specific plant chemistry information.

The Agency realizes that constituent loading into the wastewater treatment system may have to be reduced significantly (up to two to three orders of magnitude in many cases) in order to qualify for an exemption of this sort. Therefore, the Agency solicits comment on whether such levels are achievable, and what other calculation methods may exist (such as one based on production mass).

Such an exemption would apply only after the wastewaters have arrived at the headworks of a facility's wastewater treatment system. The Agency would not allow it to apply to wastewaters before they reach the headworks. Generators who wish to qualify for such an exemption would be required to use flow statistics for the period in which the processes generating the wastewaters are being run. Finally, such an exemption would apply only to wastewater flow for that wastestream, not to flow figures from unrelated processes that serve only to dilute the wastewaters.

In addition, generators would be required to keep records of average weekly flow in the production processes, especially when the processes generating the listed wastewaters are run. When land disposal restrictions are applied to a waste subject to such an exemption, generators would need to comply with 40 CFR 268.7(a)(6), which states that the generator who has produced a waste subject to an exemption in 40 CFR 261.2–261.6 must keep a notification in the facility's file stating that such a waste has been generated, the fact that it is restricted, and the disposition of the waste.

The Agency seeks comment on the recordkeeping burden that accompanies its implementation. The Agency realizes that facilities that would wish to take advantage of such an exemption would be required to allow compliance personnel to examine process records (reaction rates, reactants, process flows, etc.) to verify that a facility is able to achieve the exemption. Therefore, the Agency solicits comments on this topic as well.

A quantity-based exemption in a listing determination bears a strong relationship to another ongoing Agency project which seeks to establish an exit from the hazardous waste management program. The Hazardous Waste Identification Rule (HWIR) project is an effort, in part, to set exit criteria for any listed hazardous waste so that materials which clearly fail to pose a threat to human health and the environment can exit the Subtitle C system. The HWIR concept, as currently envisioned, would be expected to be similar to that of a quantity-based exemption for a specific listed hazardous waste: a risk- based exemption process that employs analysis of multiple exposure pathways to determine a safe exit or exemption level. A principal difference between the HWIR concept under discussion and a quantity-based listing could be that HWIR is meant to apply to all listed wastestreams, while a quantity-based listing could be targeted to a specific wastestream in a listing determination. In that sense, a listing exemption could be considered to be more tailored to the known exposure routes of a specific wastestream and may be able to generate an exemption level which is specific to that wastestream. For example, if the listing determination analysis shows a wastestream in a listing can be managed only in tanks, then the exemption analysis could be focused on the exposure pathways affected only by tanks. The exemption levels for that wastestream could be tailored to those exposure routes (air pathways) and could be different than HWIR exit criteria. The Agency solicits comment on the advantages and disadvantages of a quantity-based exemption in listing determinations to a more generic exit level like that being contemplated in the HWIR project discussions.

Relationship to the Definition of Solid Waste

The Agency has observed in the dye and pigment and other industries that material recovery may be discouraged due to restrictions placed on materials designated as "solid and then hazardous" waste, as defined by RCRA. Over the past two years, the Agency's Definition of Solid Waste Task Force in the Office of Solid Waste examined possible modifications to the definition of solid waste to encourage environmentally sound recycling. A final report of the Task Force was issued on September 19, 1994.

An example in the dye and pigment industries of using as a product a material that ordinarily would be a waste involves the blending and sale of collected dusts and fines as inexpensive black pigments useful to shoe polish manufacturers.

D. Waste Minimization and the Dye and Pigment Industries

The dye and pigment industries have expended considerable effort to cooperate with the Agency on a voluntary waste minimization program, coordinated through ETAD. As part of

this effort, waste minimization, recycle, and reuse practices in the dye and pigment industries were described for all aspects of production in the "Pollution Prevention Guidance Manual for the Dye Manufacturing Industry" (EPA/741/B–92–001).

The Agency is interested in options to modify today's proposed listing determinations to support and enhance the voluntary waste minimization efforts already initiated by the dye and pigment industries. The Agency requests comment on the feasibility of the waste minimization-based listing approaches described above for the dye and pigment industries. EPA also solicits ideas and comments on other possible approaches to tailor the hazardous waste listings and promote waste minimization in the dye and pigment industries. In particular, the Agency requests comment on other approaches that may provide more flexibility for waste minimization and better assure that constituent reductions would be achieved through waste minimization (rather than through treatment).

EPA specifically requests comment on the feasibility of developing the quantity-based listing approach described above for the dye and pigment industries. The quantity-based approach is based on the Agency's experience with other industries in which production is continuous. Because of the batch nature of production and the multiplicity of chemicals involved in the dye and pigment industries, the quantity-based listing approach may be more difficult for this industry. The Agency requests comment on how these issues (*i.e.*, batch processes, multiple chemicals) might be addressed in a quantity-based listing approach or other waste minimization-based option.

The Agency also solicits comment on whether certain of the dye and pigment wastestreams are better candidates for waste minimization, and whether a waste minimization-based listing approach should target these wastes. Finally, EPA requests comment on the testing and monitoring needed to ensure proper implementation of a waste minimization listing approach. Based on the comments the Agency receives on the above issues, EPA may issue a supplemental proposal addressing a waste minimization-based listing approach for the dyes and pigments industry.

IV. Applicability of the Land Disposal Restrictions Determinations

A. Request for Comment on the Agency's Approach to the Development of BDAT Treatment Standards

RCRA requires EPA to make a land disposal prohibition determination for any hazardous waste that is newly identified or listed in 40 CFR part 261 after November 8, 1984, within six months of the date of identification or final listing (RCRA Section 3004(g)(4), 42 U.S.C. 6924(g)(4)). EPA also is required to set "* * * levels or methods of treatment, if any, which substantially diminish the toxicity of the waste or substantially reduce the likelihood of migration of hazardous constituents from the waste so that short-term and long-term threats to human health and the environment are minimized" (RCRA Section 3004(m)(1), 42 U.S.C. 6924(m)(1)). Land disposal of wastes that meet treatment standards thus established by EPA is not prohibited. The wastes being proposed for listing in this action would be subject to this requirement once a final rule is promulgated.

A general overview of the Agency's approach in performing analysis of how to develop treatment standards for hazardous wastes can be found in greater detail in Section III.A.1 of the preamble to the final rule that set land disposal restrictions (LDR's) for the Third Third wastes (55 FR 22535, June 1, 1990). The framework for the development of the entire Land Disposal Restrictions program was promulgated November 7, 1986. (51 FR 40572).

While the Agency prefers source reduction/pollution prevention and recycling/recovery over conventional treatment, inevitably, some wastes (such as residues from recycling and inadvertent spill residues) will be generated. Thus, standards based on treatment using "best demonstrated available technology" (BDAT) will be required to be developed for these wastes if a final rule listing them as hazardous is promulgated.

Treatment standards typically are established based on the performance data from the treatment of the listed waste or wastes with similar chemical and physical characteristics or similar concentrations of hazardous constituents. Treatment standards are established for both wastewater and nonwastewater forms on a constituent-specific basis. The constituents selected for regulation under the Land Disposal Restrictions Program are not necessarily limited to those identified as present in the listings proposed in this action, but include those constituents or parameters that will ensure that the technologies are operated properly.

Although data on waste characteristics and current management practices for wastes proposed in this action have been gathered as part of the administrative record for this rule, the Agency has not completed its evaluation of the usefulness of these data for developing specific treatment standards or assessing the capacity to treat (or recycle) these wastes.

Some treatment technologies previously promulgated for newly identified hazardous organic wastes are: chemical oxidation, wet air oxidation, activated sludge, steam stripping, activated carbon, solvent extraction, pyrolysis, thermal desorption, UV photolysis, ozonation, and incineration. A current description of these technologies and what types of wastes they are used to treat is available as a background document and can be obtained by contacting NTIS (National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (703)487–4650) and requesting document PB91–160556, "Treatment Technology Document," L. Rosengrant, dated January, 1991, USEPA–OSW.

EPA intends to propose treatment standards for K162 through K166 in a separate rulemaking. However, EPA specifically is soliciting comment and data on the following as they pertain to the proposed listing of dye and pigment industries wastes K162 through K166 as described in this action:

(1) Technical descriptions of treatment systems that are or could be used potentially for these wastes;

(2) Descriptions of alternative technologies that currently might be available or anticipated as applicable;

(3) Performance data for the treatment of these or similar wastes (in particular, constituent concentrations in both treated and untreated wastes, as well as equipment design and operating conditions);

(4) Information on known or perceived difficulties in analyzing treatment residues or specific constituents;

(5) Quality assurance/quality control information for all data submissions;

(6) Factors affecting on-site and off-site treatment capacity;

(7) Information on the potential costs for set-up and operation of any current and alternative treatment technologies for these wastes;

(8) Information on waste minimization approaches.

B. Request for Comment on the Agency's Approach to the Capacity Analyses in the LDR Program

In the land disposal restrictions determinations, the Agency must demonstrate that adequate treatment or recovery capacity exists to manage a newly listed waste with BDAT standards before it can restrict the waste from further land disposal. The Agency performs capacity analyses to determine if sufficient alternative treatment or recovery capacity exists to accommodate the volumes of waste that will be affected by the land disposal prohibition. If adequate capacity exists, the waste must be treated to meet the BDAT standard before land disposal. If adequate capacity does not exist, RCRA Section 3004(h) authorizes EPA to grant a national capacity variance from the effective date of the treatment standard for the waste for up to two years or until adequate alternative treatment capacity becomes available, whichever is sooner.

To perform capacity analyses, the Agency needs to determine the volume of the listed waste that will require treatment prior to land disposal. The volume of waste requiring treatment depends, in turn, on the waste management practices employed by the listed waste generators. Data on waste management practices for these wastes were collected during the development of this proposed rule. However, as the regulatory process proceeds, generators may decide to minimize or recycle their wastes or otherwise alter their management practices. Thus, EPA will update and monitor changes in management practices because these changes will affect the final volume of waste requiring commercial treatment capacity. Therefore, EPA needs information on current and future waste management practices for these wastes, including the volume of waste that are recycled, mixed with or co-managed with other waste and discharged under Clean Water Act provisions; and the volume and types of residuals that are generated by various management practices applicable to newly listed and identified wastes (*e.g.*, treatment residuals).

The availability of commercial treatment capacity for these wastes determines whether or not a waste is granted a capacity variance under RCRA Section 3004(h). EPA continues to update and monitor changes in available commercial treatment capacity because the commercial hazardous waste management industry is extremely dynamic. For example, national commercial treatment capacity changes as new facilities come on-line, as new units and new technologies are added at existing facilities, and as facilities expand existing units. The available capacity at commercial facilities also changes as facilities change their commercial status (*e.g.*, changing from a fully commercial to a limited commercial or captive facility). To determine the availability of capacity for treating these wastes, the Agency needs to consider currently available data, as well as the timing of any future changes in available capacity.

For previous land disposal restriction rules, the Agency performed capacity analyses using data from national surveys, including the 1987 National Survey of Hazardous Waste Treatment, Storage, Disposal, and Recycling Facilities (the TSDR Survey) and the 1987 National Survey of Hazardous Waste Generators (the Generator Survey). However, these surveys cannot be used to determine the volumes of dye and pigment wastes requiring treatment since these wastes were not included in the surveys. Additionally, these surveys may not contain adequate information on currently available capacity to treat newly identified wastes because the data reflect 1986 capacity and do not include facility expansions or closures that have occurred since then. Although adjustments have been made to commercially available capacity to account for changes in waste management through 1992, this was not done on a consistent basis across all waste management practices.

EPA gathered data on waste generation, characteristics and management practices for the listing determination of dye and pigment wastes in the RCRA Section 3007 Questionnaire of 1991. The Agency has compiled the capacity-related information from the survey responses and is soliciting any updated or additional pertinent information.

To perform the necessary capacity analyses in the land disposal restrictions rulemaking, the Agency needs reliable data on current waste generation, waste management practices, available alternative treatment capacity, and planned treatment capacity. The Agency will need the annual generation volumes of waste by each waste code including wastewater and nonwastewater forms, and soil or debris contaminated with these wastes and the quantities stored, treated, recycled, or disposed due to any change of management practices. EPA also requests data from facilities capable of treating these wastes on their current treatment capacity and any plans they may have in the future to expand or reduce existing capacity. Specifically, the Agency requests information on the determining factors involved in making decisions to build new treatment capacity. Waste characteristics such as pH level, BTUs, anionic character, total organic carbon content, constituents concentration, and physical form also may limit the availability of certain treatment technologies. For these reasons, the Agency requests data and comments on waste characteristics that might limit or preclude the use of any treatment technologies.

V. Compliance Dates

A. Notification

Under RCRA Section 3010, any person generating, transporting, or managing a hazardous waste must notify EPA (or an authorized State) of its activities. Section 3010(a) allows EPA to waive, under certain circumstances, the notification requirement under Section 3010 of RCRA. If these hazardous waste listings are promulgated, EPA is proposing to waive the notification requirement as unnecessary for persons already identified within the hazardous waste management universe (*i.e.*, persons who have an EPA identification number under 40 CFR 262.12). EPA is not proposing to waive the notification requirement for waste handlers who have neither notified the Agency that they may manage hazardous wastes nor received an EPA identification number. Such individuals will have to provide notification under RCRA Section 3010.

B. Interim Status and Permitted Facilities

Because HSWA requirements are applicable in authorized States at the same time as in unauthorized States, EPA will regulate EPA Hazardous Wastes Nos. K162 through K166 until States are authorized to regulate these wastes. Thus, once this regulation becomes effective as a final rule, EPA will apply Federal regulations to these wastes and to their management in both authorized and unauthorized States.

VI. State Authority

A. Applicability of Rule in Authorized States

Under Section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR part 271 for the standards and requirements for authorization.) Following authorization, EPA retains enforcement authority under Sections 3007, 3008, 3013, and 7003 of RCRA, although authorized States have primary enforcement responsibility.

Before the Hazardous and Solid Waste Amendments of 1984 (HSWA) amended RCRA, a State with final authorization administered its hazardous waste program entirely in lieu of the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities located in the State with permitting authorization. When new, more stringent Federal requirements were promulgated or enacted, the State was obligated to enact equivalent authority within specified time-frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

By contrast, under Section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by the HSWA (including the hazardous waste listings proposed in this notice) take effect in authorized States at the same time that they take effect in non-authorized States. EPA is directed to implement those requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. While States still must adopt HSWA-related provisions as State law to retain final authorization, the Federal HSWA requirements apply in authorized States in the interim.

B. Effect on State Authorizations

Because this proposal (with the exception of the actions proposed under CERCLA authority) will be promulgated pursuant to the HSWA, a State submitting a program modification is able to apply to receive either interim or final authorization under Section 3006(g)(2) or 3006(b), respectively, on the basis of requirements that are substantially equivalent or equivalent to EPA's requirements. The procedures and schedule for State program modifications under Section 3006(b) are described in 40 CFR 271.21. It should be noted that all HSWA interim authorizations currently are scheduled to expire on January 1, 2003 (see 57 FR 60129, February 18, 1992).

Section 271.21(e)(2) of EPA's state authorization regulations (40 CFR part 271) requires that States with final authorization modify their programs to reflect Federal program changes and submit the modifications to EPA for approval. The deadline by which the States must modify their programs to adopt this proposed regulation, if it is adopted as a final rule, will be determined by the date of promulgation of a final rule in accordance with 40 CFR 271.21(e)(2). If the proposal is adopted as a final rule, Table 1 at 40 CFR 271.1 will be amended accordingly. Once EPA approves the modification, the State requirements become RCRA Subtitle C requirements.

States with authorized RCRA programs already may have regulations similar to those in this proposed rule. These State regulations have not been assessed against the Federal regulations being proposed to determine whether they meet the tests for authorization. Thus, a State would not be authorized to implement these regulations as RCRA requirements until State program modifications are submitted to EPA and approved, pursuant to 40 CFR 271.21. Of course, States with existing regulations that are more stringent than or broader in scope than current Federal regulations may continue to administer and enforce their regulations as a matter of State law.

It should be noted that authorized States are required to modify their programs only when EPA promulgates Federal standards that are more stringent or broader in scope than existing Federal standards. Section 3009 of RCRA allows States to impose standards more stringent than those in the Federal program. For those Federal program changes that are less stringent or reduce the scope of the Federal program, States are not required to modify their programs. See 40 CFR 271.21(e). This proposed rule, if promulgated, would expand the scope of the Federal program by adding additional listed wastes. Therefore, States would be required to modify their programs to retain authorization to implement and enforce these regulations.

VII. CERCLA Designation and Reportable Quantities

All hazardous wastes listed under RCRA and codified in 40 CFR 261.31 through 261.33, as well as any solid waste that exhibits one or more of the characteristics of a RCRA hazardous waste (as defined in Sections 261.21 through 261.24), are hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended. See CERCLA Section 101(14)(C). CERCLA hazardous substances are listed in Table 302.4 at 40 CFR 302.4 along with their reportable quantities (RQs). RQs are the minimum quantity of a hazardous substance that, if released, must be reported to the National Response Center (NRC) pursuant to CERCLA Section 103. In this action, the Agency is proposing to list the proposed wastes in this action as CERCLA hazardous substances in Table 302.4 of 40 CFR 302.4, but is taking no action to adjust the one-pound statutory RQs for these substances.

Reporting Requirements. Under Section 102(b) of CERCLA, all hazardous substances newly designated under CERCLA will have a statutory RQ of one pound unless and until adjusted by regulation. Under CERCLA Section 103(a), the person in charge of a vessel or facility from which a hazardous substance has been released in a quantity that is equal to or exceeds its RQ immediately shall notify the NRC of the release as soon as that person has knowledge thereof. The toll-free number of the NRC is 1–800–424–8802; in the Washington, DC metropolitan area, the number is (202) 426–2675. In addition to this reporting requirement under CERCLA, Section 304 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) requires owners or operators of certain facilities to report the release of a CERCLA hazardous substance to State and local authorities. Immediately after the release of a RQ or more, EPCRA Section 304 notification must be given to the community emergency coordinator of the local emergency planning committee for each area likely to be affected by the release, and to the State emergency response commission of any State likely to be affected by the release.

If this proposal is promulgated as a final rule, releases equal to or greater than the one-pound statutory RQ will be subject to the requirements described above, unless and until the Agency adjusts the RQs for these substances in a future rulemaking.

VIII. Economic Impact Analysis

This section of the preamble summarizes the costs and benefits of the dye and pigment hazardous waste listings. Based upon the EIA, the Agency estimates that the listing of the five dye and pigment production wastes discussed above may result in nationwide, pre-tax, annualized costs of approximately $18.1 million for compliance in commercial Subtitle C landfills. The possible future costs of this listing including compliance with land disposal restrictions (LDRs) range from $20.3 to $70.7 million per year. The $70.7 million represents off-site incineration of non-wastewaters, while the $20.3 million assumes facilities with large non-wastewater waste volumes will construct on-site incinerators. A complete discussion of the EIA is available in the regulatory docket entitled "Costs and Economic Impact Analysis of Listing Hazardous Wastes from the Organic Dye and Pigment Industries," November 28, 1994.

A. Compliance Costs for Listings

The remainder of this section briefly describes (1) the universe of dye and pigment production facilities and volumes of the seven dye and pigment production wastes proposed to be listed, (2) the methodology for determining incremental cost and economic impacts to regulated entities, (3) the potential remedial action costs, and (4) economic impacts. Results of the analysis are summarized in Table VIII–1.

1. Universe of Dye and Pigment Production Facilities and Waste Volumes

In order to estimate costs for the EIA, it first was necessary to estimate the total annual generation of dye and pigment production wastes affected by this action. As described in Section II.B of this preamble, the portion of the dye and pigment industry producing products affected by this listing is composed of 33 manufacturers operating 49 facilities producing dyes and pigments. In 1992, U.S. sales of all organic dyes and pigments totalled 403 million lbs., with a value of $1,691 million. Total annual product volumes and waste quantities generated by these affected facilities were derived from a 1991 survey of the dye and pigment production industries. The production volume and, hence, waste volume for dyes and pigments varies year to year depending on which colors are popular. A season in which dark colors are in fashion will produce higher volumes of waste; it is not known which colors were predominant in the study year.

2. Method for Determining Cost and Economic Impacts

This section details EPA's approach for estimating the incremental compliance cost and the economic impacts attributable to the listing of dye and pigment production wastes. Because the dye and pigment production industries are moderately small (33 manufacturers currently operating 49 facilities), EPA was able to collect facility-specific information and estimate incremental costs at the wastestream level. For ten of the 49 facilities, however, some of the waste generation data were missing. In these cases, waste generation amounts were estimated. The information used in this analysis was collected in 1992 through RCRA Section 3007 Questionnaires, engineering site visits, and sampling and analysis of wastestreams.

Approach to the Cost Analysis

EPA's approach to the cost analysis for this rule was to compare the cost of current management practices, as reported in the RCRA Section 3007 Questionnaire by dye and pigment production facilities, with the projected cost of management to comply with the RCRA Subtitle C hazardous waste program. An additional analysis included the future cost to the industry of complying with land disposal restrictions. This difference in cost, when annualized,[9] represents the incremental annual compliance costs attributable to the rule.

Baseline or Current Management Scenario

Relying on survey responses and engineering site visits, EPA was able to determine the current (*i.e.*, 1991) management practices for the handling and disposal of dye and pigment production wastes. Current management practices varied among facilities and wastestreams, and included such practices as on-site monofilling, off-site incineration, on-site destruction in boilers, and off-site landfilling in municipal, industrial or Subtitle C landfills. These current management practices at each facility represent the baseline scenario of the analysis.

As part of the survey, EPA asked each facility to identify current costs for the management of dye and pigment production wastes. For this analysis, EPA relied on the industry's own waste-specific estimates concerning the cost of current management. EPA realizes that future events, such as waste minimization efforts, may change waste generation volumes and, thus, future waste management costs.

Post-Regulatory Management Scenarios

In estimating the cost of compliance with the listing of dye and pigment production wastes as RCRA hazardous wastes, EPA assessed the potential waste management on the part of industry to the listing and also assessed the management cost in response to LDRs.

Initial waste management, excluding land disposal restrictions, assumes all non-wastewaters will be sent to off-site Subtitle C landfills. Wastewaters are assumed to be handled in tanks, at an estimated cost of $18.1 million/yr. It is important to note that 81 to 95 percent of the total, annual, incremental compliance costs result from listing the non-wastewaters. The non-wastewaters comprise less than one percent of the quantity of the affected wastes.

There were two possible management strategies examined for the dye and pigment industries following the promulgation of LDRs. The first strategy, the higher-cost response, is waste management, including land disposal restrictions, with all non-wastewaters being sent to off-site incinerators. Wastewaters are assumed to be handled in newly-constructed treatment impoundments, which makes this strategy an upper-bound estimate ($70.7 million/yr) because the other option for wastewaters, handling in tanks, is marginally less expensive.

The second strategy for waste management assumes facilities with high waste volumes will construct on-site incinerators in which to treat their non-wastewaters, with the remaining facilities sending their wastes to off-site incinerators ($20.3 million/yr). Wastewaters are assumed to be handled in newly constructed treatment impoundments.

3. Potential Remedial Action Costs

In addition to dye and pigment production wastes, this listing can affect the management of soils, ground water, and other remedial materials. The Agency's "contained in" policy defines certain remediation wastes "containing" a listed hazardous waste as a RCRA hazardous waste. It is possible that areas of past dye and pigment waste management, spills, or disposal, which met the proposed listing description at the time they were placed on the land, still may have contaminant concentrations which exceed "contained in" levels. A person who disturbs such material can become a generator of RCRA hazardous waste. The likelihood of this imposing an additional burden is moderate because at least 9 of the 49 dye and pigment production facilities already are permitted TSDFs. Releases from all solid waste management units at these TSDFs, including those that in the future may be found to contain a waste meeting the dye and pigment listing descriptions, already are covered by facility-wide clean-up rules under 40 CFR 264.101. This issue will be more likely to arise from historical off-site management at facilities that were not TSDFs. The pre-tax, incremental cost of corrective action liabilities has been estimated at less than $8.8 million.

[9] Costs are discounted at a pre-tax rate of 4 percent over a 20-year period.

TABLE VIII–1.—TOTAL, INCREMENTAL, PRE-TAX, ANNUALIZED SOCIAL COSTS FOR THE DYE AND PIGMENT INDUSTRY FOR THE LISTING ACTION, AND LAND DISPOSAL RESTRICTIONS INCLUDING OFF-SITE INCINERATION AND ON-SITE INCINERATION BY EACH POST-REGULATORY WASTE CODE

Waste code	Total annualized costs for listing[10] ($ millions)	Total annualized costs for LDR off-site incineration[11] ($ millions)	Total annualized costs for LDR on-site incineration[12] ($ millions)
K162	2.77	24.76	5.83
K163	2.64	2.66	2.64
K164	8.50	38.98	7.38
K165	0.62	0.70	0.62
K166	3.50	3.53	3.53
RCRA	0.03	0.06	0.31
Total[13]	18.05	70.69	20.31

[10] The listing estimate assumes non-wastewaters will be managed in Subtitle C landfill and wastewaters will be handled in tanks.
[11] This upper-bound estimate assumes non-wastewaters are incinerated off-site and wastewaters are handled in newly constructed treatment impoundments.
[12] This lower-bound estimate which includes LDRs assumes the construction of on-site incincerators for facilities with non-wastewater volumes over 635 MT/yr. Wastewaters are handled in newly constructed treatment impoundments.
[13] Numbers may not add due to rounding.

4. Economic Impacts

The following economic impacts potentially are *overestimated* as a result of inconsistencies in the reporting in the RCRA Section 3007 Questionnaire responses. Some facilities were found to have reported production quantities on a pure product basis while reporting the average selling price per pound on a dilute product basis. This results in an underestimation of revenues, as a result of reduced production volumes, and an overestimation of economic impacts. In addition, some of the volume of several of the wastestreams is for co-managed wastes. The values of production for the co-generated products were not available and, thus, further underestimated revenues which resulted in overestimated economic impacts. Economic impacts were evaluated based on incremental, annualized compliance costs discounted at an after-tax rate of 7 percent over a 20-year period. Of the 49 facilities 9 facilities may incur potential "significant economic impacts" (*i.e.*, bear compliance costs that would require product cost increases of at least 5 percent) with one of these facilities facing product-line discontinuation. Sixteen of the 49 facilities are estimated to incur potential significant impacts assuming possible future costs for the high-cost LDR alternative. Economic ratios indicate potential closure or product-line discontinuation for 4 of the 16 significantly affected facilities. Under the low-cost LDR alternative, 15 of the 49 facilities are estimated to incur potential significant economic impacts. Two of the 15 significantly affected facilities are estimated to incur closure or product-line discontinuation.

5. Benefits of Listings

One objective of a population analysis is to estimate the number of cancer cases that could be avoided as a result of the implementation of the proposed rule. People drinking contaminated water from residential wells located near the source of contamination, people eating home-grown vegetables contaminated by blowing dust or vapors, and people breathing air contaminated by a disposal unit are the potentially exposed population for this rule. The Agency did not estimate the population risks from current practices or the incremental risk reduction from future actions as a result of the proposed regulation; however, preliminary analysis suggests that the incremental risk in terms of cancer cases avoided is expected to be near zero.

One benefit associated with this rulemaking is to place wastestreams the Agency has determined could pose a risk to human health and the environment into the hazardous waste management system. When wastestreams are placed in this system, the risk associated with their disposal is minimized by the requirements of this system.

The Agency, however, has historical information that shows damage to ground water and other sensitive environments has occurred during the management of wastes from the dye and pigment manufacturing operations. At ten dye and pigment facilities, the quality of ground water has been adversely affected by waste management activities, typically unlined waste trenches, aeration basins, and impoundments. One dye company had to purchase the deeds to three nearby residences and a gas station because VOC-contaminated ground water originating from the plant had contaminated surrounding drinking water wells. At another dye facility, a contaminated ground-water plume migrated under residential houses bordering the site. The residential wells, used for swimming pools and irrigation systems in the neighborhood, were condemned because of chemical contamination. Ground water was contaminated from land treatment of dye wastewater being sprayed onto a field, and passing through a layer of clay. Soil contamination near drum storage pads or drum wash areas has been documented at 7 dye facilities. As a result, the leachate from these soils possibly contributed to the ground-water contamination associated with many of the sites. Concentrations of volatile and semi-volatile organic compounds have been found in soils surrounding an on-site landfill at a dye facility. Finally, dye and pigment facilities are found on the Superfund National Priority List; further evidence that mismanagement of dye and pigment wastes have the potential to yield threats of concern to human health. In summary, although difficult to quantify precisely, a benefit of today's proposal is the prevention of additional or similar incidents occurring from similar management practices of dye and pigment wastes that potentially could degrade the quality of ground water or other sensitive natural resources.

In addition to the reduction of human health risk associated with the mismanagement of dye and pigment wastes proposed for listing in this rulemaking, there are a number of other benefits that are even more difficult to quantify.

The Subtitle C management framework for generators and permitted treatment storage and disposal facilities

establishes standards for hazardous waste handling, management, and remediation that: Reduce ecological risks, reduce natural resource damage, reduce the likelihood and severity of accidents, improve worker safety, promote facility-wide remedial programs, insure that adequate financial assurance is established to handle protective closure of waste management units, increase public participation, improve information availability on waste quantity and movement, ensure minimum uniform national standards, and create incentives for pollution prevention.

Ecological and Natural Resource Damage Reduction

The risk assessment for this listing has focused on the human health risks associated with plausible management of dye and pigment wastes. An additional concern, given the proximity of several facilities to surface waters and their associated wetland systems, is the potential for ecological damages to biota inhabiting surface waters and wetlands. In some cases migration to the surface water may be occurring via groundwater. EPA requests comments regarding the potential for ecological damages associated with the wastes proposed for listing in today's rulemaking.

In addition to direct ecological and human health damage there is evidence from EPA's contaminant fate and transport modelling and case studies of ground water, surface water, and soil degradation. While use of and human exposure to these natural resources may not be occurring now, their use in the future could be limited if they are contaminated. The Subtitle C waste management program will limit future releases and prevent natural resource damages. These benefits have not been quantified.

Reduce the Likelihood and Severity of Accidents

An important component of the Subtitle C system for both generators and permitted treatment, storage and disposal facilities is the need to establish waste analysis plans, contingency plans, emergency procedures, inspection programs, construction quality assurance and personnel training programs. In addition, permitted facilities also must have in place inspection programs and location standards. The costs of these programs have been included in the cost analysis, but the benefits are difficult to quantify. These Subtitle C programs may reduce risk to workers and nearby populations by reducing the chance of contaminant releases, accidental exposures, and catastrophic failures. In the event that accidents occur, these Subtitle C provisions increase the likelihood of quick action and ensure protection of human health and the environment. There are other programs that require similar planning (*e.g.*, OSHA, Section 112(r) of the Clean Air Act) and indirectly affect hazardous waste handling; RCRA regulatory provisions deal directly with accident prevention standards associated with the handling of hazardous wastes.

Promote Facility-Wide Remedial Programs

Those facilities that choose to obtain Part B permits for the treatment, storage and disposal of hazardous wastes will have the responsibility of ensuring that adequate corrective action programs are in place to control releases from all solid waste management units. The cost analysis included an evaluation of the cost of facility-wide corrective action while the risk assessment focused only on the risks associated with hazardous waste management units. Although difficult to quantify, there are risk-reduction benefits associated with the cleanup of releases from the solid waste management units in addition to those benefits associated with the handling of listed waste.

Financial Assurance To Insure Protective Closure of Waste Management Units

Permitted facilities are required to support financial mechanisms which ensure that adequate funds are available to close hazardous waste treatment, storage and disposal units in a manner that ensures long-term protection of human health and the environment. The costs of those financial assurance requirements have been included in the cost analysis; however, the benefits are difficult to quantify. Financial assurance has the benefit of insuring that owners and operators of hazardous waste facilities have sufficient financial resources to close their facilities in an environmentally-protective manner.

Increase Public Participation and Improve Information Availability

The Subtitle C system has the benefit of providing the information needed to empower local communities and waste managers, those most affected by and able to improve substandard waste management practices. The public participation provisions of the Subtitle C system ensure that information is provided to stakeholders regarding the risks to human health and the environment of a new or expanding waste management facility. Biennial reporting, required of all large quantity generators of hazardous waste, allows for more informed waste management decisions and capacity management. Finally, the manifest system, which is used to track the movement of wastes, ensures protective handling of hazardous wastes as they move in commerce.

IX. Executive Order 12866

Executive Order 12866 requires that regulatory agencies determine whether a new regulation constitutes a significant regulatory action. A significant regulatory action is defined as an action likely to result in a rule that may:

- 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, or state, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in Executive Order 12866.

EPA estimated the costs of the proposed listings and evaluated the other factors above to determine if this proposed rule making would be a major regulation as defined by the Executive Order. Today's proposed rule is estimated to have an annualized incremental cost of less than $19 million. Based on EPA's analysis of the other factors, today's proposed rule is considered a significant regulatory action because of the novel policy issues contained herein. As a significant regulatory action, it has been submitted to and reviewed by the Office of Management and Budget.

X. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) of 1980 requires Federal agencies to consider "small entities" throughout the regulatory process. Section 603 of the RFA requires an initial screening analysis to be performed to determine whether small entities will be affected by the regulation. If affected small entities are identified, regulatory alternatives that mitigate the potential impacts must be considered. Small entities as described in the Act are only those "businesses, organizations and

governmental jurisdictions subject to regulation."

For SIC 2865, Cyclic Crudes and Intermediates, the Small Business Administration defines small entities as those firms employing less than or equal to 750 employees. Based on this employment cutoff, approximately 61 percent, or 20 of the 33 affected dye and/or pigment manufacturers (*i.e.*, companies) are considered small entities. Under the listing alternative, which assumes disposal of wastewater treatment sludges/solids in an off-site commercial Subtitle C landfill and management of wastewaters in tanks, 7 of the 33 affected companies are estimated to incur potential significant economic impacts. Four of the 7 companies estimated to incur potential significant economic impacts are small entities. Although small entities are predominant in the affected industry, the proposed listings do not adversely affect small entities to a greater extent than large entities.

Under the Agency's Revised Guidelines for Implementing the Regulatory Flexibility Act, the Agency is committed to considering regulatory alternatives in rulemakings when there are any estimated economic impacts on small entities. The Agency obtained firm level employment data for the purpose of identifying and evaluating economic impacts on small entities. The statutory requirements of the RCRA program do not provide legal avenues to grant relief from the proposed listings to small entities. Because of statutory restrictions, the Agency is unable to exempt small entities or develop options to reduce economic impacts on small entities. The Agency must identify waste streams for listing without regard to the size of the entity being regulated. However, the possibility of enforceable agreements described previously may ameliorate the impact of listing on small entities.

XI. Paperwork Reduction Act

This rule does not contain any new information collection requirements subject to OMB review under the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.* Facilities will have to comply with the existing Subtitle C record keeping and reporting requirements for the newly listed wastestreams.

To the extent that this rule imposes any information collection requirements under existing RCRA regulations promulgated in previous rule makings, those requirements have been approved by the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and have been assigned OMB control numbers 2050–120 (ICR no. 1573, Part B Permit Application); 2050–120 (ICR 1571, General Facility Standards); 2050–0028 (ICR 261, Notification to Obtain an EPA ID); 2050–0034 (ICR 262, Part A Permit Application); 2050–0039 (ICR 801, Hazardous Waste Manifest); 2050–0035 (ICR 820, Generator Standards); and 2050–0024 (ICR 976, Biennial Report).

Release reporting required as a result of listing wastes as hazardous substances under CERCLA and adjusting the reportable quantities (RQs) has been approved under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.*, and has been assigned OMB control number 2050–0046 (ICR 1049, Notification of Episodic Release of Oil and Hazardous Substances).

List of Subjects

40 CFR Part 261

Environmental protection, Hazardous materials, Waste treatment and disposal, Recycling.

40 CFR Part 271

Environmental protection, Administrative practice and procedure, Confidential business information, Hazardous material transportation, Hazardous waste, Indians-lands, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Water pollution control, Water supply.

40 CFR Part 302

Environmental protection, Air pollution control, Chemicals, Emergency Planning and Community Right-to-Know Act, Extremely hazardous substances, Hazardous chemicals, Hazardous materials, Hazardous materials transportation, Hazardous substances, Hazardous wastes, Intergovernmental relations, Natural resources, Pesticides and pests, Reporting and recordkeeping requirements, Superfund, Waste treatment and disposal, Water pollution control, Water supply.

Dated: December 5, 1994.

Carol M. Browner,

Administrator.

For the reasons set out in the preamble, it is proposed to amend title 40 of the Code of Federal Regulations as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

1. The authority citation for Part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, 6922, and 6938.

2. In § 261.32, the table is amended by adding the subgroup "Organic dyes and pigments," and adding to this subgroup the following wastestreams:

§ 261.32 Hazardous wastes from specific sources.

* * * * *

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
* * * * * *		
Organic dyes and pigments:		
* * * * * *		
K162	Wastewater treatment sludge from the production of azo pigments	(T)
K163	Wastewaters from the production of azo pigments	(T)
K164	Wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants.	(T)
K165	Wastewaters from the production of azo dyes, excluding FD&C colorants	(T)
K166	Still bottoms or heavy ends from the production of triarylmethane dyes or pigments	(T)
* * * * * *		

Appendix VII to Part 261 [Amended]

3. Appendix VII to Part 261 is amended by adding the following wastestreams in alphanumeric order (by the first column) to read as follows:

APPENDIX VII—BASIS FOR LISTING HAZARDOUS WASTE

EPA hazardous waste No.	Hazardous constituents for which listed
K162	Aniline, 2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 4-aminotoluene, acetoacet-o-anisidide, acetoacet-o-toluidide, acetoacetanilide, 1,3-dinitrobenzene, 3,3'dimethylbenzidine, nitrobenzene, 2,4-dinitrophenol.
K163	2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 3-aminotoluene, 4-aminotoluene, aniline, acetoacet-o-anisidide, acetoacet-o-toluidide, acetoacetanilide, 2,4-dimethylaniline, 2,6-dimethylaniline.
K164	2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, aniline, diphenylamine, N-nitrosodiphenylamine, 3,3'-dimethoxybenzidine, 4-methylphenol, 1,3-dinitrobenzene, 2-methoxy-5-nitroaniline, 2,4-dinitrophenol, 2-aminotoluene, 4-aminotoluene.
K165	2-aminoaniline, 4-aminoaniline, 2-methoxyaniline, 2-aminotoluene, 3-aminotoluene, 4-aminotoluene, aniline.
K166	1,2-diphenylhydrazine, azobenzene, aniline, diphenylamine, N-nitrosodiphenylamine.

Appendix VIII to Part 261 [Amended]

4. Appendix VIII to Part 261 is amended by adding the following hazardous constituents in alphabetical order to read as follows:

Common name	Chemical abstracts name	Chemical abstracts No.	Hazardous waste No.
Acetoacetanilide	Butanamide, 3-oxo-N-phenyl-	102-01-2	
Acetoacet-o-anisidide	Butanamide, N-(2-methoxyphenyl)-3-	92-15-9	
Acetoacet-o-toluidide	Butanamide, N-(2-methylphenyl)-3-oxo-	93-68-5	
2-Aminoaniline	Benzenediamine, 1,2-	95-54-5	
4-Aminoaniline	Benzenediamine, 1,4-	106-50-3	
3-Aminotoluene	Benzenamine, 3-methyl-	108-44-1	
Azobenzene	Azobenzene	103-33-3	
2,4-Dimethylaniline	Benzenamine, 2,4-dimethyl-	95-68-1	
2,6-Dimethylaniline	Benzenamine, 2,6-dimethyl-	87-62-7	
1,3-Dinitrobenzene	Benezene, 1,3-dinitro-	99-65-0	
2-Methoxyaniline	Benzenamine, 2-methoxy-	90-04-0	
2-Methoxy-5-nitroaniline	Benzenamine, 2-methoxy-5-nitro	99-59-2	
4-Methylphenol	Phenol, 4-methyl-	106-44-5	
N-Nitrosodiphenylamine	N-Nitrosodiphenylamine	86-30-6	

* * * * *

PART 271—REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS

5. The authority citation for Part 271 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), and 6926.

6. Section 271.1(j) is amended by adding the following entry to Table 1 in chronological order by date of publication to read as follows.

§ 271.1 Purpose and scope.

* * * * *

(j) * * *

TABLE 1—REGULATIONS IMPLEMENTING THE HAZARDOUS AND SOLID WASTE AMENDMENTS OF 1984

Promulgation date	Title of regulation	Federal Register reference	Effective date
*	*	*	*
December 22, 1994	Listing Wastes from the Production of Dyes and Pigments.	[Insert Federal Register page in numbers].	[Insert effective date].
*	*	*	*

PART 302—DESIGNATION, REPORTABLE QUANTITIES, AND NOTIFICATION

7. The authority citation for Part 302 continues to read as follows:

Authority: 42 U.S.C. 9602, 9603, and 9604; 33 U.S.C. 1321 and 1361.

§ 302.4 [Amended]

8. Section 302.4 is amended by adding the following entries to Table 302.4 to read as follows. The appropriate footnotes to Table 302.4 are republished without change.

* * * * *

TABLE 302.4.—LIST OF HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES

Hazardous substance	CASRN	Regulatory synonyms	Statutory			Final RQ	
			RQ	Code+	RCRA Waste No.	Category	Pounds (Kg)
*	*	*	*		*		*
K162 Wastewater treatment sludge from the production of azo pigments	.....	.....	1*	4	K162		
K163 Wastewaters from the production of azo pigments	.....	.....	1*	4	K163		
K164 Wastewater treatment sludge from the production of azo dyes, excluding FD&C colorants	.....	.....	1*	4	K164		
K165 Wastewaters from the production of azo dyes, excluding FD&C colorants	.....	.....	1*	4	K165		
K166 Still bottoms or heavy ends from the production of triarylmethane dyes or pigments	.....	.....	1*	4	K168		
*	*	*	*		*		*

+—Indicates the statutory source as defined by 1, 2, 3, and 4 below.
4—Indicates that the statutory source for designation of this hazardous substance under CERCLA is RCRA Section 3001.
1*—Indicates that the 1 pound RQ is a CERCLA statutory RQ.

[FR Doc. 94–30767 Filed 12–21–94; 8:45 am]
BILLING CODE 6560–50–P

federal register

Thursday
December 22, 1994

Part III

Department of the Interior

Bureau of Indian Affairs

Tribal Consultation on Streamlining and Restructuring the Bureau of Indian Affairs; Notice

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Tribal Consultation on Streamlining and Restructuring the Bureau of Indian Affairs

AGENCY: Bureau of Indian Affairs, Department of the Interior.

ACTION: Notice of Tribal Consultation Meetings.

SUMMARY: Notice is hereby given that the Bureau of Indian Affairs (BIA) will conduct eleven consultation meetings to obtain oral and written comments concerning proposals to streamline, downsize, and restructure the BIA. The consultation will include information and discussion on:

1. NPR objectives;
2. The Federal Workplace Restructuring Act Requirements; and
3. The implications of the final report of the Joint Tribal/BIA/DOI Advisory Task Force on Reorganization of the Bureau of Indian Affairs.

DATES: January 9, 16, 17, 19, 20, 23, 25, 26, 27, 30, and 31, 1995, at locations listed in the **ADDRESSES** section of this notice. All meetings will begin at 9:00 A.M. and continue until 4:00 P.M. (local time).

ADDRESSES: Location sites, specific dates, and contact officials for the meetings are as follows:

Location	Local contact	Telephone
January 9, 1995: Minnesota, Minneapolis	Denise Horner	(612) 349–3631
January 16, 1995: Virginia, Arlington	Carol Bacon	(703) 235–3006
January 17, 1995: Nevada, Las Vegas	Walt Mills	(602) 379–6600
January 19, 1995: Oregon, Portland	Stan Speaks	(503) 231–6702
January 20, 1995: California, Sacramento	Ron Jaeger	(916) 484–4682
January 23, 1995: Montana, Billings	Pat Hayes	(406) 657–6315
January 25, 1995: South Dakota, Aberdeen	Don Whitener	(605) 226–7343
January 26, 1995: Alaska, Anchorage	Niles Cesar	(907) 586–7177
January 27, 1995: Oklahoma, Oklahoma City	Bill Collier	(405) 247–6673
January 30, 1995: New Mexico, Albuquerque	Joe Little	(505) 766–3170
January 31, 1995: New Mexico, Window Rock	Wilson Barber	(505) 863–8314

FOR FURTHER INFORMATION CONTACT: Diane Maybee or Deborah Maddox at the Office of the Assistant Secretary—Indian Affairs, MS–4160–MIB, 1849 C Street NW, Washington, DC 20240 or at (202) 219–2432 or (202) 219–3250.

SUPPLEMENTARY INFORMATION: The primary purpose of consultation is to provide information and to discuss options available to the Department of the Interior under the NPR, the Federal Workplace Restructuring Act, and other reorganization or downsizing directives. A packet of information for the January meetings will be distributed to Federally recognized Indian Tribes by the Bureau area office local contact person. The packets will also be available at each meeting. Some of the parameters imposed by the Office of Management and Budget and the Department of the Interior have been set forth in a tribal leader letter which was issued on November 10, 1994.

Written comments should be mailed in sufficient time to be received on or before January 31, 1995, to the Bureau of Indian Affairs, Office of the Assistant Secretary—Indian Affairs, MS–4160–MIB, 1849 C Street, NW., Washington, DC 20240, Attn: Diane Maybee. Written comments may be hand delivered to Room 4658 at the same address. Comments may also be telefaxed to the BIA at (202) 208–3575.

Following the consultation, the Bureau will finalize its streamlining implementation plan which incorporates the consultation comments, the mandates of the Office of Management and Budget, as well as the Department of the Interior and the Congress. To the extent feasible and under the constraints of existing federal mandates to downsize and streamline, the BIA will make a good faith effort to integrate and incorporate tribal concerns and recommendations into the final implementation plan which must be submitted to the Department of the Interior by February 28, 1995.

Travel to the consultation sessions will be paid by the tribal participants.

Dated: December 16, 1994.

Ada E. Deer,

Assistant Secretary, Indian Affairs.

[FR Doc. 94–31405 Filed 12–21–94; 8:45 am]

BILLING CODE 4310–02–P

federal register

Thursday
December 22, 1994

Part IV

Department of the Interior

Bureau of Indian Affairs

Proposed Finding Against Federal Acknowledgment of the United Houma Nation, Inc.; Notice

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Proposed Finding Against Federal Acknowledgment of the United Houma Nation, Inc.

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of proposed finding.

SUMMARY: Pursuant to 25 CFR 83.10(h), notice is hereby given that the Assistant Secretary proposes to decline to acknowledge that the United Houma Nation, Inc. c/o Mrs. Laura N. Billiot, Star Route, Box 95–A, Golden Meadow, Louisiana 70357, exists as an Indian tribe within the meaning of Federal law. This notice is based on a determination that the tribe does not meet three of the seven mandatory criteria set forth in 25 CFR 83.7. Therefore, the United Houma Nation does not meet the requirements necessary for a government-to-government relationship with the United States.

DATES: As provided by 25 CFR 83.10(i), any individual or organization wishing to challenge the proposed finding may submit factual or legal arguments and evidence to rebut the evidence relied upon. This material must be submitted within 180 calendar days from the date of publication of this notice. As stated in the new regulations, 25 CFR 83.10(i), interested and informed parties who submit arguments and evidence to the Assistant Secretary must also provide copies of their submissions to the petitioner.

ADDRESSES: Comments on the proposed finding and/or requests for a copy of the report of evidence should be addressed to the Office of the Assistant Secretary—Indian Affairs, 1849 C Street, N.W., Washington, DC 20240, Attention: Branch of Acknowledgment and Research, Mail Stop 2611–MIB.

FOR FURTHER INFORMATION CONTACT: Holly Reckord, Chief, Branch of Acknowledgment and Research, (202) 208–3592.

SUPPLEMENTARY INFORMATION: This notice is published in the exercise of authority delegated by the Secretary of the Interior to the Assistant Secretary—Indian Affairs by 209 DM 8.

The petitioner maintains that they are the descendants of the historical Houma Indian tribe. There is no evidence supporting this contention. The historical Houma Indian tribe continued to live near present-day Donaldsonville, Louisiana throughout the years the petitioner's antecedent community first formed on the lower bayous (between 1810 and 1830). There are no documented genealogical, social, or political connections between this tribe of Indians and the petitioner. There is also no evidence that the petitioner, as a group, descends from any other historical tribe, or from historical tribes which combined and functioned as a single autonomous entity.

There is no evidence that the petitioner's ancestors constituted a social community, Indian or non-Indian, before 1830. Because of this, the petitioner has also failed to meet criterion 83.7(b), maintenance of social community, and criterion 83.7(c), exercise of political influence, prior to 1830. Lacking the evidence for an ancestral community prior to 1830, there is, of course, no evidence for the exercise of political influence prior to 1830. The Federal acknowledgment criteria 83.7 (b) and (c) require the petitioner to provide evidence that they fulfill criteria 83.7 (b) and (c) *from the time of first sustained contact with Europeans* to the present.

The migration of the UHN ancestors, the majority of whom were non-Indian (primarily French, Acadian, German, and African) frontiersmen, to the founding Bayou Terrebonne settlement (north of present-day Montegut) started in the 1790's. Among the settlers on Bayou Terrebonne, some of whom became ancestors of the UHN, were the three Indian progenitors of the group. They moved there independently of each other; there is no indication that they were related to each other socially, politically, or genealogically, before moving to the bayou settlement. The tribal affiliation of the three Indian progenitors is not certain. One was quite possibly a Biloxi medal chief; the other two are identified in the earliest historical records only as "Indian women," with no specific tribal affiliation mentioned. There is no evidence that these three individuals descend from the same historical tribe or from historical tribes which combined and functioned as a single autonomous entity.

It is important to note that, for the first two generations that the founding UHN community was forming on Bayou Terrebonne (1790 to 1830), the petitioner's Indian ancestors and their descendants tended to marry non-Indians. In spite of this early marital pattern, and the fact that there are more non-Indian than Indian progenitors for the petitioner, the available evidence indicates that about 84% of the UHN's current members have Indian ancestry. The Indian ancestry originates from the three individual Indian progenitors mentioned above, the result of six generations of group endogamy between 1830 to 1950. It is not the result of descent, as a group, from a historical tribe.

By 1830, the petitioner's ancestors, the majority of whom were non-Indian, formed an identifiable separate and distinct community on Bayou Terrebonne. From 1830 to 1940, the limited evidence submitted by the petitioner indicates that they tended to marry each other more frequently than they married outsiders. The strongest evidence for social community from 1830 to 1880, however, is that more than half of the petitioner's ancestors lived in an isolated, exclusive settlement.

In the 1840's, the petitioner's ancestors started forming satellite settlements further south along Bayou Terrebonne, on Bayou Lafourche, and on other bayous toward the west. No contemporary descriptions of the petitioner's settlements between 1840 and 1880 were found. But based on the geographical isolation of the community on Bayou Terrebonne, we conclude that the petitioner did maintain a distinct settlement which encompassed 50% or more of its members, from 1830 to 1880. Under the revised regulations for Federal acknowledgment, this is considered sufficient evidence that the petitioner meets both criteria 83.7 (b) and (c) for that period as a single community.

By 1880, the limited evidence presented by the petitioner suggests that its members' ancestors had divided into several (six or more), socially and politically distinct, satellite communities, and no longer lived in a single community. From 1880 to 1940, the petitioner's ancestors maintained social integrity in these satellite communities, based on the evidence that 50% or more of them lived in geographical isolation. Within these relatively isolated communities, there is some limited evidence that political influence was exercised through the extended kinship structure, by elders known as *noncs* 'uncles' and *tantes* 'aunts'. This system of political influence may have been used effectively to control the behavior of individual community members, though the evidence is limited and sketchy.

From 1880 to 1940, there were some individuals who provided leadership on an *ad hoc* basis for individual communities, but never for the petitioner as a whole. One of the issues that brought forth leaders was in the fight to establish separate Indian schools for the children of UHN ancestors. Because the petitioner appears to have been composed of separate communities from 1880 to 1940, each of which may

have had its own leaders, rather than a single community with a comprehensive authority, the petitioner has not met criteria 83.7 (b) and (c) from 1880 to 1940, as a whole.

From 1940 to the present, the petitioner's members have emigrated from the lower bayou communities in greater numbers, especially to the suburbs of New Orleans. There has also been a continuous increase in out-marriage from 1940 to the present. Currently, two-thirds of the UHN members reside outside of the lower bayou communities. There is no evidence that indicates a social or political relationship between those who have emigrated and those who continue to reside in the bayou communities. There is also no evidence that the emigrants are related socially or politically among themselves. There is some limited evidence that emigrants from specific bayou communities may maintain political and social relations with relatives who remain in their natal bayou communities. Therefore, the petitioner has not met criteria 83.7 (b) and (c) from 1940 to the present as a whole.

The petitioner has not proven that it descends from a historical Indian tribe. In fact, there is no evidence for an antecedent community, Indian or non-Indian, prior to 1830. Since the UHN did not exist as a community until 1830, they are not a political community which is derived from a tribe existing at first sustained contact with Europeans until the present, and have not existed as a distinct political community derived from such a tribe since first settlement by Europeans in the area.

There is the possibility, though not well-documented at this time, that some or all of the component communities on the lower bayous may meet criteria 83.7 (b) and (c) from 1880 to the present, as separate communities. But the petitioner has not established any connection to a historical tribe prior to 1830. Nor did the petitioner submit its petition as a confederation, but rather as a single entity. For these combined reasons, there is no need to further evaluate the continued existence of separate communities from 1880 to the present, at this time.

There remains the possibility, however, that if the required connection is made to a historical tribe, the Assistant Secretary may wish to investigate further the possibility of acknowledging all or several of the component communities that comprise the UHN. This issue would only need to be investigated if the connection to a historical tribe is proven.

Since 1900, the petitioner's community has been identified consistently by anthropologists, state and Federal government representatives, residents of south Louisiana who are not members of the petitioning group, missionaries, journalists, and others, as "Indian" or by other terms which indicate at least some Indian ancestry. There is no evidence that anyone denied that the UHN were an Indian community since 1900. They therefore meet criterion 83.7(a), identification by outsiders as an Indian community since 1900.

The petitioning group has provided a copy of its governing document, which describes its membership criteria. Evidence indicates that the group is following its membership criteria satisfactorily.

No evidence was found that any of the members of the UHN are members of any federally recognized tribe.

No evidence was found that the petitioner or its members are the subject of congressional legislation which has expressly terminated or forbidden the Federal relationship.

Based on this preliminary factual determination, we conclude that the UHN does not meet criteria b, c, and e in 25 CFR 83.7. Since the UHN does not meet all of the seven mandatory criteria, we conclude that the UHN should not be granted Federal acknowledgment under 25 CFR part 83.

As provided by 25 CFR 83.10(h) of the revised regulations, a report summarizing the evidence, reasoning, and analyses that are the basis for the proposed decision will be provided to the petitioner and other interested parties, and is available to other parties upon written request. Comments on the proposed finding and/or requests for a copy of the report of evidence should be addressed to the Office of the Assistant Secretary—Indian Affairs, Bureau of Indian Affairs, 1849 C Street, NW., Washington, DC 20240, Attention: Branch of Acknowledgment and Research, Mail Stop 2611–MIB.

After consideration of the written arguments and evidence rebutting the proposed finding and within 60 days after the expiration of the 180-day response period described above, the Assistant Secretary—Indian Affairs will publish the final determination of the petitioner's status in the **Federal Register** as provided in 25 CFR 83.10(1).

Ada E. Deer,

Assistant Secretary—Indian Affairs.

[FR Doc. 94–31374 Filed 12–21–94; 8:45 am]

BILLING CODE 4310–02–M

federal register

Thursday
December 22, 1994

Part V

Department of the Interior

Bureau of Indian Affairs

Indian Gaming; Notice

DEPARTMENT OF THE INTERIOR

Bureau of Indian Affairs

Indian Gaming

AGENCY: Bureau of Indian Affairs, Interior.

ACTION: Notice of Approved Tribal-State Compact.

SUMMARY: Pursuant to 25 U.S.C. § 2710, of the Indian Gaming Regulatory Act of 1988 (Pub. L. 100–497), the Secretary of the Interior shall publish, in the **Federal Register**, notice of approved Tribal-State Compacts for the purpose of engaging in Class III (casino) gambling on Indian reservations. The Assistant Secretary, Indian Affairs, Department of the Interior, through her delegated authority, has approved the Slots Only Compact Between the Moapa Band of Paiute Indians and the State of Nevada, which was executed on August 30, 1994.

DATES: December 22, 1994.

FOR FURTHER INFORMATION CONTACT: Larry Scrivner, Acting Director, Indian Gaming Management Staff, Bureau of Indian Affairs, Washington, DC 20240, (202) 219–4068.

Dated: December 9, 1994.

Ada E. Deer,

Assistant Secretary, Indian Affairs.

[FR Doc. 94–31375 Filed 12–21–94; 8:45 am]

BILLING CODE 4310–02–P

federal register

Thursday
December 22, 1994

Part VI

Department of Housing and Urban Development

Office of the Assistant Secretary for Policy Development and Research

NOFA for Community Outreach Partnership Centers (COPC); Notice

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Policy Development and Research

[Docket No. N–94–3836; FR–3825–N–01]

NOFA for Community Outreach Partnership Centers (COPC)

AGENCY: Office of the Assistant Secretary for Policy Development and Research, HUD.

ACTION: Notice of Funding Availability (NOFA) for Fiscal Year 1995.

SUMMARY: This NOFA announces the availability of $7.125 million to implement the second year of a demonstration program to make grants to public and private nonprofit institutions of higher education to assist in establishing or carrying out research and outreach activities addressing the problems of urban areas. These funds shall be used to establish and operate Community Outreach Partnership Centers (COPC).

The NOFA contains information concerning:

(1) The principal objectives of the competition, the funding available, eligible applicants and activities and factors for award;

(2) The application process, including how to apply and how selections will be made; and

(3) A checklist of application submission requirements.

DATES: Application kits may be requested on or after December 27, 1994.

Applications must be physically received by the Office of University Partnerships, in care of the Division of Budget, Contracts, and Program Control, in Room 8230 by 4:30 p.m. Eastern Standard Time on [insert date that is 80 days after publication in the **Federal Register***].*

The above-stated application deadline is *firm* as to *date, hour* and *place*. In the interest of fairness to all competing applicants, the Department will treat as *ineligible for consideration* any application that is received after the deadline. Applicants should take this practice into account and make early submission of their materials to avoid any risk of loss of eligibility brought about by unanticipated delays or other delivery-related problems.

ADDRESSES: To obtain a copy of the application kit, contact: HUD USER, ATTN: COPC, P.O. Box 6091, Rockville, Maryland 20850. Requests for application kits must be in writing, but requests may be faxed to: 301–251–5747 (this is not a toll-free number). Requests for application kits must include the applicant's name, mailing address (including zip code), telephone number (including area code) and must refer to "Document FR–3825."

FOR FURTHER INFORMATION CONTACT: Jane Karadbil, Office of University Partnerships in the Office of Policy Development and Research, Department of Housing and Urban Development, 451 Seventh Street, S.W., Room 8110, Washington, DC 20410. Telephone Number (202) 708–1537 voice; (202) 708–1455 (TDD). (These are not toll-free numbers.)

SUPPLEMENTARY INFORMATION:

Paperwork Reduction Act Statement

The information collection requirements contained in this notice have been approved by the Office of Management and Budget (OMB) under section 3504(h) of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501–3520), and assigned OMB control number 2535–0084.

I. Purpose and Substantive Description

A. Authority

This competition is authorized under the Community Outreach Partnership Act of 1992 (42 U.S.C. 5307 note; hereafter referred to as the "COPC Act"). The COPC Act is contained in section 851 of the Housing and Community Development Act of 1992 (P.L. 102–550, approved October 28, 1992) (HCD Act of 1992). Section 801(c) of the HCD Act of 1992 authorizes $7.5 million for each year of the 5-year demonstration to create Community outreach Partnership Centers as authorized in the COPC Act. The Act also required HUD to establish a national clearinghouse to disseminate information about the program.

The Community Outreach Partnership Centers program was transferred to the Office of Policy Development and Research on August 15, 1994, as part of the Departmental reorganization which created the Office of University Partnerships. This new Office is responsible for four of the Department's grant programs for institutions of higher education—Community Outreach Partnership Centers program, Joint Community Development program, Community Development Work Study program, and the Doctoral Dissertation Grant program. In addition, the Office is responsible for a variety of new outreach initiatives to involve these institutions in local community development and revitalization partnerships.

B. Allocation and Form of Award

The competition in this NOFA is for $7.125 million to fund the second year of the Community Outreach Partnership Centers (COPC) Program authorized as indicated above. HUD has made $7.5 million available for the program for FY 1995. $210,000 has been taken off the top to correct a mathematical error in the funding of one of last year's grantees and $165,000 has been taken off the top to fund the clearinghouse in FY 1995. Thus, $7.125 million is available under this NOFA.

Each grant made under the COPC program will be for a maximum two year period of performance. The maximum size of any grant will be $750,000, while the minimum will be $250,000. HUD has the authority to reduce the grant amount. Several applications were disqualified last year because they exceeded the maximum amount. Each applicant must submit an application within this range. Institutions of higher education which received COPC grants in FY 1994 are not eligible to receive another COPC grant under this funding round.

C. Description of Competition

The Congress has mandated that the Department carry out "a 5-year demonstration to determine the feasibility of facilitating partnerships between institutions of higher education and communities to solve urban problems through research, outreach and the exchange of information."

The COPC Act stipulates that grants are to go to public and private institutions of higher education to establish and operate Community Outreach Partnership Centers (COPC). These COPCs shall: "(A) Conduct competent and qualified research and investigation on theoretical or practical problems in large and small cities; and (B) Facilitate partnerships and outreach activities between institutions of higher education, local communities, and local governments to address urban problems."

The specific problems that grants under the COPC program must focus on are "problems associated with housing, economic development, neighborhood revitalization, infrastructure, health care, job training, education, crime prevention, planning, community organizing, and other areas deemed appropriate by the Secretary."

Furthermore, the COPC Act states: "The Secretary shall give preference to institutions of higher education that undertake research and outreach activities by bringing together knowledge and expertise in the various

disciplines that relate to urban problems."

Local COPC programs must combine research with outreach, work with communities and local governments and address the multi-dimensional problems that beset urban areas. The Department is mindful that, for some institutions, such a comprehensive approach may be beyond the current capacity of the institution. Because HUD is interested in funding as wide a range of eligible institutions as possible, it is making a change in the focus of the program. This year applications do not have to be comprehensive in their approach to local problems. However, while single purpose applications (e.g., assisting the homeless, small business development) will not be eligible, a less than comprehensive scope, addressing three or more urban problems will be acceptable (see Selection Factor #1 for the comprehensive list of urban problems that the program can cover).

To be most effective during the term of the demonstration, the assisted research must have a clear near-term potential for solving specific, significant urban problems. The selected institutions must have the capacity to apply their research results and to work with communities and local institutions, including neighborhood groups, in applying these results to specific real-life urban problems.

D. Eligible Applicants

Applicants for this competition must be public or private nonprofit institutions of higher education granting four year degrees and accredited by a national or regional accrediting agency recognized by the Department of Education. Consortia of institutions are eligible to apply. The Department is interested in expanding the outreach capacity of not only colleges and universities but also junior, technical, and community colleges. While some four-year colleges will want to apply directly for a COPC, others may not feel they have the credentials or the capacity to operate a COPC. Two-year colleges by themselves are not eligible, but they can apply with a school offering a four-year program. But both four-year and two-year colleges by themselves have strengths they could bring to a COPC. Thus, a selection factor has been added to encourage the creation of such consortia. If the application is submitted on behalf of a consortium of institutions, one institution must be designated as the legal applicant. Each institution may be part of only one consortium or submit only one application, although the application can include various schools within the institution.

While the program focuses on "urban" problems, applicants do not have to be located in or assist urban areas.

E. Program Requirements

Grantees must meet the following program requirements:

1. *Responsibilities.* In accordance with section 851(h) of the HCD Act of 1992, each COPC shall:

"(a) Employ the research and outreach resources of its sponsoring institution of higher education to solve specific urban problems identified by communities served by the Center;

(b) Establish outreach activities in areas identified in the grant application as the communities to be served;

(c) Establish a community advisory committee comprised of representatives of local institutions and residents of the communities to be served to assist in identifying local needs and advise on the development and implementation of strategies to address those issues;

(d) Coordinate outreach activities in communities to be served by the Center;

(e) Facilitate public service projects in the communities served by the Center;

(f) Act as a clearinghouse for dissemination of information;

(g) Develop instructional programs, convene conferences, and provide training for local community leaders, when appropriate; and

(h) Exchange information with other Centers."

The clearinghouse function in (f) above refers to a local or regional clearinghouse for dissemination of information and is separate and distinct from the functions in (h) above, which relate to the provision of information to the National Clearinghouse which, as mentioned in section I.A. above will serve all funded COPCs.

2. *Match.* Grantees must meet the following match requirements:

(a) *Research Activities.* 50 percent of the total project costs of establishing and operating research activities.

(b) *Outreach Activities.* 25 percent of the total project costs of establishing and operating outreach activities.

This non-Federal share may include cash or the value of non-cash contributions, equipment and other allowable in-kind contributions as detailed in Attachment E of OMB Circular No. A–110, Grants and Agreements with Institutions of Higher Education, Hospitals, and other Nonprofit organizations.

Because there was confusion last year about the calculation of the match, an example is provided.

Assume that the total project cost for a COPC was $1 million, with $250,000 for research and $750,000 for outreach. Note that this project meets the requirement that no more than 25 percent of the total project costs be for research. The total amount of the match required to be provided would be $312,500. The research match would be $125,000 ($250,000 X 50 percent) and the outreach match would be $187,500 ($750,000 X 25 percent). The Federal grant requested would be $687,500 ($1 million minus the match of $312,500). In calculating the match, administrative costs should be applied to the appropriate attributable outreach or research component.

3. *Administrative.* The grant will be governed by the provision of OMB Circulars A–110 (Grants and Agreements with Institutions of Higher Education, Hospitals and other Nonprofit Organizations), A–122 (Cost Principles for Nonprofit Organizations), and A–133 (Audits of Institutions of Higher Education and other Nonprofit Institutions), as implemented at 24 CFR part 45.

F. Eligible Activities

Eligible activities include:

1. Research activities which have practical application for solving specific problems in designated communities and neighborhoods. Such activities may not total more than one-quarter of the total project costs contained in any grant made under this NOFA (including the required 50 percent match).

2. Outreach, technical assistance and information exchange activities which are designed to address specific problems in designated communities and neighborhoods. Such activities must total no less than three-quarters of the total project costs contained in any grant made under this NOFA (including the required 25 percent match).

Examples of outreach activities include, but are not limited to:

(a) Job training and other training projects, such as workshops, seminars and one-on-one and on-the-job training;

(b) Design of community strategies to resolve urban problems of communities and neighborhoods;

(c) Innovative use of funds to provide direct technical expertise and assistance to local community groups and residents to help them resolve local problems such as homelessness and housing discrimination;

(d) Assistance in business start-up activities for low-and moderate-income individuals and organizations, including business start-up training and technical expertise and assistance, mentor programs, assistance in

developing small loan funds, business incubators, etc; and

(e) Assistance to communities to improve consolidated housing and community development plans and remove impediments to design and implementation of such plans.

3. Funds for faculty development including paying for course time or summer support to enable faculty members to work on the COPC.

4. Funds for stipends for students (which can not cover tuition and fees) when they are working on the COPC.

5. Activities to carry out the "Responsibilities" listed under Section I.E.1.

G. Ineligible Activities

Ineligible activities are:

1. Research activities which have no clear and immediate practical application for solving urban problems or do not address specific problems in designated communities and neighborhoods.

2. Any type of construction, rehabilitation, or other physical development costs.

3. Costs used for day-to-day administration of regular programs of institutions of higher education, local governments or neighborhood groups.

II. Selection Criteria/Rating Factors

A. Rating Factors

As a result of a year of experience under the program, the Department has decided to streamline and revise the selection criteria. Changes are noted in the discussion of specific factors. HUD will use the following criteria to rate and rank applications received in response to this NOFA. The factors and maximum points for each factor are provided below. The maximum number of points is 100.

Rating of the "applicant" or the "applicant's organization and staff", unless otherwise specified, will include any sub-contractors, consultants and sub-recipients which are firmly committed to the project.

(1) (10 points) The demonstrated research and outreach resources available to the applicant for carrying out the purposes of the COPC Act. In rating this factor, HUD will consider the extent to which the applicant's organization and staff have recent, relevant and successful experience in:

(a) Undertaking research activities in specific communities which have clear near-term potential for practical application to significant urban problems associated with housing, economic development, neighborhood revitalization, infrastructure, health care, job training, education, crime prevention, planning and community organizing, and

(b) Undertaking outreach activities in specific communities to solve or ameliorate the impact of significant urban problems. Under this factor, HUD will also evaluate the capability of the applicant to provide leadership in solving community problems and in making national contributions to solving long-term and immediate urban problems. In the FY 1994 competition, research and outreach resources and local and national prominence were three separate selection factors.

(2) (10 points) The demonstrated commitment of the applicant to supporting research and outreach programs by providing matching contributions for the Federal assistance received. In rating this factor, HUD will provide an increasing number of points for increasing amounts of contributions beyond the statutory 50 percent for research and 25 percent for outreach. Maximum points will be awarded for applications that secure 50 percent more than the amount of match required. Points will also be awarded based on the tangibility of the match, with cash and services being rated higher than indirect contributions.

(3) (10 points) The extent of need in the communities to be served by the applicant. HUD will consider the extent to which the proposal clearly delineates a need or needs in the specific communities or neighborhoods (including colonias, where appropriate), that can be resolved through the activities of a COPC. The applicant must demonstrate how these needs were determined and how the COPC will help resolve these needs.

(4) (10 points) The demonstrated ability of the applicant to disseminate results of research and successful strategies developed through outreach activities to other COPC and communities served through this demonstration program. In rating this factor, HUD will evaluate the past experience of the applicant's staff and the scope and the quality of the applicant's proposal to disseminate information on its own and other COPC research results and strategies to: (a) local communities in its area and (b) other communities and COPC through the National Clearinghouse.

(5) (35 points) The projects and activities that the applicant proposes to carry out under the grant. This factor has two sub-factors: (a) effectiveness of the research strategy (10 points), and (b) effectiveness of the outreach strategy (25 points).

(a) In rating the effectiveness of the research strategy, HUD will consider the extent to which the applicant's proposal outlines a clear research agenda related to local needs that can be successfully carried out within the period of this grant; and

(b) Demonstrates how the research to be undertaken will fit into the outreach strategy and activities. In rating the effectiveness of the outreach factor, HUD will consider the extent to which:

(i) The application identifies a clear outreach agenda related to locally-identified needs that can be successfully carried out within the period of this grant;

(ii) The outreach agenda includes design of a community strategy to resolve community and neighborhood problems; and

(iii) The outreach program provides for on-site or a frequent presence in the communities and neighborhoods to be assisted through outreach activities.

(6) (10 points) The extent of neighborhood and neighborhood based organization participation in the planning and implementation of the COPC. In rating this factor, HUD will consider whether:

(a) One or more effective community advisory committees comprised of representatives of local institutions and a balance of racial/ethnic, gender and income mix of residents of the communities (and, where appropriate, colonias) to be served has been or will be formed to participate in identifying local needs to be addressed by the COPC and to form a partnership with the COPC to develop and implement strategies to address those needs;

(b) There is a plan for involving the community advisory committee(s) in the execution of the research and outreach agenda; and

(c) The outreach agenda includes training projects for local community leaders, when appropriate.

(7) (5 points) The application is submitted by a consortium composed of a variety of different kinds of post-secondary institutions. Maximum points will be awarded to consortia composed of universities, colleges and junior, technical or community colleges.

(8) (10 points) The overall concept and organization of the application. In rating this factor, HUD will consider:

(a) The interrelatedness of the components of the application, such as the relationship of the research capacity to dissemination and outreach activities; and

(b) The likelihood that the project can be initiated and completed within the two year grant period, as measured by such elements as sufficient staff,

realistic schedules, the quality of supervision and project management, and the likelihood that other related commitments essential to the project will be in place.

B. Selection Process

Applications for funding under this NOFA will be evaluated competitively and points will be awarded as specified in the Rating Factors section described above. Applications will be reviewed by a combination of external peers and internal reviewers. After assigning points based upon the factors all applications will be listed in rank order. Applications will then be funded in rank order until all available funds have been expended. However, in order to be funded, an applicant must receive a minimum score of 70. HUD reserves the right to fund all or portions of the proposed activities identified in each application, based upon the eligibility of the proposed activities.

If two or more applications have the same number of points, the application with the most points for rating factor (6) shall be selected. If there is still a tie, the application with the most points for rating factor (7) shall be selected.

If the amount of funds remaining after funding as many of the highest ranking applications as possible is insufficient for the next highest ranking application, HUD shall determine (based upon the proposed activities) if it is feasible to fund part of the application and offer a smaller grant to the applicant. If HUD determines that given the proposed activities a smaller grant amount would make the activities infeasible, or if the applicant turns down the reduced grant amount, HUD shall make the same determination for the next highest ranking application until all applications with scores of at least 70 points or available funds have been exhausted.

If HUD receives an insufficient number of applications to exhaust all funds, or if funds remain after HUD approves all approvable applications, HUD may negotiate increased amounts of grant awards up to an additional $250,000. Increased grants will be offered in rank order to applicants with scores of at least 70 points.

C. Geographic Distribution

HUD reserves the right to make selections out of rank order to provide for a geographic distribution of funded COPCs. The geographic balance that HUD will use, if it decides to implement this option, will be based on a combination of two adjacent standard HUD regions (e.g., Southwest and Southeast Regions, Great Plains and Midwest Regions, etc.). If the rank order does not yield at least one fundable COPC within each two region combination, then HUD may select the highest ranking application from such a combination, as long as the minimum score of 70 is achieved.

It is HUD's intent to fund at least one COPC that serves the colonias, as defined by Section 916(d) of the Cranston-Gonzalez National Affordable Housing Act, as long as the applicant receives a minimum score of 70.

III. Application Process

A. Obtaining Applications

To obtain a copy of the application kit, contact: HUD USER, ATTN: COPC, P.O. Box 6091, Rockville, Maryland 20850. Requests for application kits must be in writing, but requests may be faxed to: 301–251–5747 (this is not a toll-free number). Requests for application kits must include the applicant's name, mailing address (including zip code), telephone number (including area code) and must refer to "Document FR–3825." HUD strongly recommends the use of the fax transmission option to promote accuracy and expedite HUD response time.

B. Application Deadline

To be considered for funding, the application package must be physically received by the Office of University Partnerships, Office of Policy Development and Research, Department of Housing and Urban Development, in care of the Division of Budget, Contracts, and Program Control, Room 8230, 451 Seventh Street, SW., Washington, DC 20410 by 4:30 p.m. Eastern Standard Time on February 15, 1995. The application deadline is firm as to date, hour and place. In the interest of fairness to all competing applicants, the Department will treat as ineligible for consideration any application that is received after the deadline. Applicants should take this practice into account and make early submission of their materials to avoid any risk of loss of eligibility brought about by unanticipated delays or other delivery-related problems.

IV. Checklist of Application Submission Requirements

A. Application Content

The application kit contains instructions which must be followed in submitting an application. The following is a checklist of the application contents that will be specified in the Request for Grant Applications (the technical term for the application kit):

(1) Transmittal letter signed by the Chief Executive Officer of the institution;

(2) OMB Standard Form 424 (Application for Federal Assistance), Form 424B (Non-Construction Assurances) and Budget Summary;

(3) Executive summary of the proposed COPC;

(4) Statement of Work (no more than 15 pages) which must incorporate all eligible activities proposed in the application and detail how the proposed work will be accomplished. Following a task-by-task format, the Statement of Work must:

(a) Delineate the tasks and sub-tasks involved in each of the areas for which the COPC is responsible, including research activities, outreach/technical assistance activities, community advisory committee activities, local/regional clearinghouse activities, and other activities necessary to carry out the responsibilities delineated under Program Requirement #1, Responsibilities, outlined above.

(b) Indicate the sequence in which the tasks are to be performed, noting areas of work which must be performed simultaneously.

(c) State the intermediate and end products to be developed by task and sub-task.

(d) Provide a framework for, and be consistent with, the Project Management Work Plan requirements.

(5) Narrative summary of Project Management Work Plan.

(6) Narrative statement addressing each of the rating factors in Section II of this NOFA.

B. Certifications and Exhibits

Applications must also include the following:

(1) Drug-Free Workplace Certification.

(2) Form SF-LLL, Disclosure of Lobbying Activities, if applicable.

(3) Form HUD–2280, Applicant/Recipient Disclosure/Update Report.

V. Corrections to Deficient Applications

After the submission deadline date, HUD will screen each application to determine whether it is complete. If an application lacks certain technical items or contains a technical error, such as an incorrect signatory, HUD will notify the applicant in writing that it has 14 calendar days from the date of HUD's written notification to cure the technical deficiency. If the applicant fails to submit the missing material within the 14-day cure period, HUD will disqualify the application.

This 14-day cure period applies only to non-substantive deficiencies or

errors. Any deficiency capable of cure will involve only items not necessary for HUD to assess the merits of an application against the factors specified in this NOFA.

VI. Other Matters

Environmental Review

In accordance with 40 CFR 1508.4 of the regulations of the Council on Environmental Quality and 24 CFR 50.20(b) of the HUD regulations, the policies and procedures in this document relate only to the provision of research, training and technical assistance which do not result in physical change and therefore are categorically excluded from the requirements of the National Environmental Policy Act.

Federalism Impact

The General Counsel, as the Designated Official under section 6(a) of Executive Order 12612, *Federalism*, has determined that the policies and procedures contained in this notice will not have substantial direct effects on States or their political subdivisions, or the relationship between the federal government and the states, or on the distribution of power and responsibilities among the various levels of government. As a result, the notice is not subject to review under the Order. Specifically, the notice solicits participation in an effort to provide assistance to institutions of higher education for establishing and carrying out research and outreach activities addressing the problems of urban areas. The COPCs established under this notice will work with local communities to help resolve urban problems. The notice does not impinge upon the relationships between the Federal government and State or local governments.

Impact on the Family

The General Counsel, as the Designated Official under Executive Order 12606, *The Family*, has determined that this notice will likely have a beneficial impact on family formation, maintenance, and general well-being. The assistance to be provided by the funding under this NOFA is expected to help local residents to become self-sufficient by improving living conditions and standards. Accordingly, since the impact on the family is beneficial, no further review is considered necessary.

Documentation and Public Access Requirements: HUD Reform Act

HUD will ensure that documentation and other information regarding each application submitted pursuant to this NOFA are sufficient to indicate the basis upon which assistance was provided or denied. This material, including any letters of support, will be made available for public inspection for a five-year period beginning not less than 30 days after the award of the assistance. Material will be made available in accordance with the Freedom of Information Act (5 U.S.C. 552) and HUD's implementing regulations at 24 CFR part 15. In addition, HUD will include the recipients of assistance pursuant to this NOFA in its quarterly **Federal Register** notice of all recipients of HUD assistance awarded on a competitive basis. (See 24 CFR 12.14(a) and 12.16(b), and the notice published in the **Federal Register** on January 16, 1992 (57 FR 1942), for further information on these requirements.)

Prohibition Against Advance Information on Funding Decisions

HUD's regulation implementing section 103 of the HUD Reform Act is codified at 24 CFR part 4, and applies to this funding competition. The requirements of the rule continue to apply until the announcement of the selection of successful applicants.

HUD employees involved in the review of applications and in the making of funding decisions are restrained by part 4 from providing advance information to any person (other than an authorized employee of HUD) concerning funding decisions, or from otherwise giving any applicant an unfair competitive advantage. Persons who apply for assistance in this competition should confine their inquiries to the subject areas permitted under 24 CFR part 4.

Applicants who have questions should contact the HUD Office of Ethics (202) 708–3815. (This is not a toll-free number.) The Office of Ethics can provide information of a general nature to HUD employees, as well. However, a HUD employee who has specific program questions, such as whether particular subject matter can be discussed with persons outside the Department, should contact his or her Field counsel, or Headquarters counsel for the program to which the question pertains.

Prohibition Against Lobbying of HUD Personnel

Section 13 of the Department of Housing and Urban Development Act (42 U.S.C. 3537b) contains two provisions dealing with efforts to influence HUD's decisions with respect to financial assistance. The first imposes disclosure requirements on those who are typically involved in these efforts—those who pay others to influence the award of assistance or the taking of a management action by the Department *and* those who are paid to provide the influence. The second restricts the payment of fees to those who are paid to influence the award of HUD assistance, if the fees are tied to the number of housing units received or are based on the amount of assistance received, or if they are contingent upon the receipt of assistance.

The rule implementing section is codified at 24 CFR part 86. If readers are involved in any efforts to influence the Department in these ways, they are urged to read part 86, particularly the examples contained in Appendix A of the regulation.

Any questions about the rule should be directed to the Office of Ethics, Room 2158, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410–3000. Telephone: (202) 708–3815 TDD: (202) 708–1112. These are not toll-free numbers. Forms necessary for compliance with the rule may be obtained from the local HUD office.

Prohibition Against Lobbying Activities

The use of funds awarded under this NOFA is subject to the disclosure requirements and prohibitions of Section 319 of the Department of Interior and Related Agencies Appropriations Act for Fiscal Year 1990 (31 U.S.C. 1352) and the implementing regulations at 24 CFR part 87. These authorities prohibit recipients of federal contracts, grants, or loans from using appropriated funds for lobbying the Executive or Legislative Branches of the Federal Government in connection with a specific contract, grant, or loan. The prohibition also covers the awarding of contracts, grants, cooperative agreements, or loans unless the recipient has made an acceptable certification regarding lobbying. Under 24 CFR part 87, applicants, recipients, and subrecipients of assistance exceeding $100,000 must certify that no federal funds have been or will be spent on lobbying activities in connection with the assistance.

Protection of Human Subjects

45 CFR, part 46, Subtitle A on the protection of human subjects does not apply to the COPC program because the research activities to be conducted under the program are only incidentally regulated by the Department solely as part of it's broader responsibility to regulate certain types of activities whether research or non-research in nature.

Authority: 42 U.S.C. 5307 note.

Dated: December 5, 1994.

Michael A. Stegman,

Assistant Secretary for Policy Development and Research.

[FR Doc. 94–31419 Filed 12–21–94; 8:45 am]

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federal register

Thursday
December 22, 1994

Part VII

Department of Education

34 CFR Part 685
William D. Ford Federal Direct Loan Program; Final Rule

DEPARTMENT OF EDUCATION

34 CFR Part 685

William D. Ford Federal Direct Loan Program

RIN 1840–AC11

AGENCY: Department of Education.

ACTION: Final standards, criteria, and procedures.

SUMMARY: The Secretary of Education issues final standards, criteria, and procedures governing the alternative repayment and income contingent repayment (ICR) plans under the William D. Ford Federal Direct Loan (Direct Loan) Program for the academic year beginning July 1, 1994.

These standards, criteria, and procedures apply to loans under the Federal Direct Stafford/Ford Loan Program, the Federal Direct Unsubsidized Stafford/Ford Loan Program, the Federal Direct PLUS Program, and the Federal Consolidation Loan Program, collectively referred to as the Direct Loan Program.

EFFECTIVE DATE: December 22, 1994.

FOR FURTHER INFORMATION CONTACT: Ms. Rachel Edelstein, Room 3012, ROB–3, 600 Independence Avenue, SW, Washington, D.C., 20202, telephone: (202) 708–9406. Individuals who use a telecommunications device for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern time, Monday through Friday.

SUPPLEMENTARY INFORMATION: The Student Loan Reform Act of 1993, enacted on August 10, 1993, established the Direct Loan Program under the Higher Education Act of 1965, as amended (HEA). *See* Subtitle A of the Omnibus Budget Reconciliation Act of 1993 (Pub. L. 103–66). Under the Direct Loan Program, loan capital is provided directly to student and parent borrowers by the Federal Government rather than through private lenders. Borrowers under the Direct Loan Program are provided a range of repayment options, including an ICR plan.

The HEA directs the Secretary to consult with members of the higher education community and to publish a notice of standards, criteria, and procedures for the program's first year in lieu of issuing regulations using the Department's usual procedures. The Secretary's representatives have consulted with representatives of students, colleges, universities, proprietary schools, and educational associations, as well as representatives of the financial aid community, in developing this notice. In particular, the Secretary's representatives have had extensive consultations with the other members of the Direct Student Loan Regulations Negotiated Rulemaking Advisory Committee established to develop proposed regulations for the second and subsequent years of the program. See the Secretary's announcement of his intention to establish this Committee at 58 FR 68619 (December 28, 1993). The Secretary, in consultation with the above-discussed members of the higher education community, has determined that this notice is reasonable and necessary to the successful implementation of the first year of the program.

This notice modifies the provisions of the ICR plan and the alternative repayment plan for the 1994–95 academic year.

I. Background

On July 1, 1994, the Secretary published a final regulation governing the Direct Loan Program for the 1994–95 academic year. That regulation prescribes the formula used to determine the repayment amounts under the ICR plan for borrowers whose loans enter repayment during the 1994–95 academic year.

On August 18, 1994, the same formula was published in a Notice of Proposed Rulemaking relating to the 1995–96 and subsequent years of the Direct Loan Program. The Secretary received 98 comments on that NPRM, most of which include discussion of the ICR plan. In response to those comments, the Secretary made several changes to the ICR plan for the 1995–96 and subsequent academic years. The changes provide borrowers with better repayment terms than are currently available for the 1994–95 academic year. For example, the limit on the amount of interest that will be capitalized (or added to principal) was reduced from 50 percent of the original principal to 10 percent of the original principal, thereby reducing the cost of borrowing significantly for some borrowers whose monthly payments are lower than the amount of interest accrued. The new ICR formula also lowers the required monthly payment for many borrowers who have lower incomes.

This notice extends the revised ICR formula and its benefits, including the reduced level of capitalization, to borrowers whose loans enter repayment in the 1994–95 academic year. This notice also reduces the level of capitalization of interest on loans repaid under the alternative repayment plan for borrowers whose loans enter repayment in the 1994–95 academic year. Finally, this notice establishes a 30-year maximum repayment period for the alternative repayment plan.

The Secretary believes that it is desirable for all Direct Loan borrowers who choose the ICR plan to be subject to the same formula during the first years of this new program. As of this date, no Direct Loan borrowers have entered repayment under the ICR formula published on July 1, 1994, but some Direct Loan borrowers will enter income contingent repayment before the 1994–95 academic year is over. This notice provides that the revised ICR plan will apply to those borrowers.

The Secretary believes that applying one formula to all borrowers allows the Secretary to publish materials that clearly explain the repayment options to borrowers without having to discuss multiple formulas. Furthermore, having a single formula during the initial years of this program simplifies the administration of the program for schools and promotes a clear understanding of the repayment provisions.

II. Summary of Contents

Section 685.208 Repayment Plans

The Secretary has established the maximum repayment period allowable under the alternative repayment plan at 30 years. Further, under the alternative plan, interest that accrues and is not paid will be capitalized annually until the outstanding principal is 10 percent greater than the original principal amount.

Section 685.209 Income Contingent Repayment Plan

The Secretary has significantly modified the income contingent repayment (ICR) plan provisions. The Secretary is lowering the limit on interest capitalization that may occur when interest accrues, but is not paid, from 50 percent greater than the original principal amount to 10 percent greater than the original principal amount. Also, monthly payments will be limited to 20 percent of discretionary income (AGI minus the poverty level appropriate to the family size). This change eliminates the need for the previous family size offset of $7 and provides a new cap on the amount of income assessed. The Secretary is including years of repayment under the 10-year standard repayment plan and the 12-year extended repayment plan as years eligible for determining the 25-year period for loan forgiveness. The monthly repayment amount below which no payment is required under the formula calculation is $15. Under the

12-year standard amortization cap, the minimum payment is $15 (that is, a borrower must pay at least $15 each month). The 12-year standard amortization cap calculation has been modified to provide for the recalculation of the cap following periods of negative amortization because these periods result in an increase in the outstanding loan balance. The payback rate for married borrowers paying jointly under ICR will be calculated on the outstanding debt at the time the borrowers are approved for joint repayment. For borrowers repaying jointly, payments will be applied to interest on both accounts prior to principal reduction in either.

Section 685.209 (ICR plan) contains provisions governing the two monthly payment calculations, namely the formula amount and the capped amount, available for repayment of Direct Loans under the ICR plan. Borrowers may choose to repay either the formula amount or the capped amount. (See Appendix A for detailed examples illustrating, for single borrowers and for married borrowers who are repaying under the ICR plan, the calculations of the formula and capped monthly repayment amounts.)

Formula Amount

Calculation of the ICR formula monthly payment amount is described in paragraph (b) of this section. In general, the borrower's annual repayment obligation is the borrower's AGI multiplied by a "payback rate" that is based on the borrower's debt. The monthly payment is the annual repayment obligation divided by 12. The "payback rate" varies from four to 15 percent, calculated as described in paragraph (b)(2). The payment amount cannot exceed 20 percent of discretionary income (AGI minus the annual poverty level appropriate to the family size) divided by 12. If the calculated monthly payment is less than $15, the borrower is not required to make a payment. When a borrower is not required to make a payment, interest on the principal accrues and will be capitalized until the limitation on capitalization is reached.

Capped Amount

Calculation of the capped monthly payment amount is described in paragraph (c), and equals the monthly amount the borrower would repay over 12 years using standard amortization schedules. If the formula amount exceeds the capped amount, the borrower may choose to pay the capped amount. If the borrower chooses to pay the capped amount, the borrower's repayment period may be longer than if the borrower chooses to pay the higher formula amount.

Joint Repayment By Married Borrowers

This section includes provisions for joint income contingent repayment of Direct Loans by married borrowers. Negative amortization is minimized by attributing joint repayments first to the interest due on each spouse's account and then to principal. A step-by-step calculation of a combined repayment amount is included as Example 2 in Appendix A.

Repayment Period

Provisions governing the repayment period under ICR are contained in paragraph (d)(2). The maximum period is 25 years, excluding periods of authorized deferment and forbearance under §§ 685.204 and 685.205, respectively, and periods in which the borrower made payments under a repayment plan other than the 10-year standard or 12-year extended plans. The Secretary believes the exclusion of repayment periods under all other extended and graduated plans is needed to prevent potential borrower repayment abuses.

If a borrower repays more than one loan under ICR and the loans enter repayment at different times, a separate repayment period for each loan begins when the loan enters repayment. This approach ensures that no loan will be repaid under ICR for more than 25 years. If loans enter repayment at the same time, a single repayment period applies.

To encourage borrowers to begin repaying their loans and to limit negative amortization at the beginning of the repayment period, a borrower must make monthly payments of accrued interest until the Secretary calculates the borrower's monthly payment on the basis of the borrower's income. A borrower who is unable to make monthly payments of accrued interest or is unable to qualify for a deferment under § 685.204, may request forbearance under § 685.205.

Limit on Capitalization of Interest

The Secretary believes a limit on the amount of interest that is added to principal (the capitalization of interest) is desirable to prevent an excessive increase in a borrower's debt burden when the borrower's income is insufficient to cover accruing interest. Paragraph (d)(3) permits capitalization of unpaid interest until the outstanding principal amount is 10 percent greater than the original principal amount, a decrease from the 50 percent proposed in the NPRM. Thereafter, unpaid interest accrues but is not capitalized.

Consent to Disclosure of Tax Return Information

In order to repay a Direct Loan under ICR, a borrower must consent, on a form provided by the Secretary, to the disclosure of certain tax return information by the Internal Revenue Service to agents of the Secretary for purposes of calculating a monthly repayment amount and servicing and collecting a loan. The information subject to disclosure is taxpayer identity information as defined in 26 U.S.C. 6103(b)(6) (including such information as name, address, and social security number), tax filing status, and AGI. Paragraph (d)(5) describes the procedures for providing written consent and requires that consent be provided for a period of five years. If a borrower selects ICR but fails to provide or renew consent, or withdraws consent without selecting a different repayment plan, the Secretary designates the 10-year standard repayment plan for the borrower.

III. Waiver of Rulemaking

In accordance with the Administrative Procedures Act, 5 U.S.C. 553, it is the practice of the Secretary to offer interested parties an opportunity to comment on proposed regulations. However, Pub. L. 103–66 permits the Secretary to publish a notice in lieu of regulations for the first year of the Direct Loan Program and exempts the contents of the notice from the rulemaking requirements of section 431 of the General Education Provisions Act (recently revised and renumbered by Pub. L. 103–382 as section 437). In developing this notice, the Secretary's representatives have consulted extensively with the other members of the Direct Student Loan Regulations Negotiated Rulemaking Advisory Committee established to develop proposed regulations for the second and subsequent years of the program, and has taken into consideration the public comments submitted in response to the Secretary's invitation in the August 18, 1994 Direct Loan NPRM. The timely implementation of the ICR plan for borrowers entering repayment in academic year 1994–1995 does not permit the solicitation of further public comment. A public comment period would seriously delay operation of the Direct Loan Program and would prevent borrowers entering repayment during the first year of the program from receiving the same benefits as borrowers who enter repayment in the second year of the program. Therefore, the Secretary

finds that solicitation of public comments is impracticable and contrary to the public interest under 5 U.S.C. 553(b)(B). For the same reasons, the Secretary has decided to waive the 30-day delayed effective date under 5 U.S.C. 553(d).

List of Subjects in 34 CFR Part 685

Administrative practice and procedure, Colleges and universities, Education, Loan programs-education, Reporting and recordkeeping requirements, Student aid, Vocational education.

(Catalog of Federal Domestic Assistance Numbers: 84.268, William D. Ford Federal Direct Loan Program)

Dated: December 16, 1994.

Richard W. Riley,

Secretary of Education.

The Secretary revises part 685 of title 34 of the Code of Federal Regulations as follows:

PART 685—STANDARDS, CRITERIA, AND PROCEDURES FOR THE DIRECT LOAN PROGRAM

1. The authority citation continues to read as follows:

Authority: 20 U.S.C. 1087a *et seq.*

2. Section 685.208 is amended by revising paragraph (g) to read as follows:

§ 685.208 Repayment plans.

* * * * *

(g) *Alternative repayment.* (1) The Secretary may provide an alternative repayment plan for a borrower who demonstrates to the Secretary's satisfaction that the terms and conditions of the repayment plans specified in paragraphs (b) through (f) of this section are not adequate to accommodate the borrower's exceptional circumstances.

(2) The Secretary may require a borrower to provide evidence of the borrower's exceptional circumstances before permitting the borrower to repay a loan under an alternative repayment plan.

(3) If the Secretary agrees to permit a borrower to repay a loan under an alternative repayment plan, the Secretary notifies the borrower in writing of the terms of the plan. After the borrower receives notification of the terms of the plan, the borrower may accept the plan or choose another repayment plan.

(4) A borrower shall repay a loan under an alternative repayment plan within 30 years of the date the loan entered repayment, not including periods of deferment and forbearance.

(5) If the amount of a borrower's monthly payment under an alternative repayment plan is less than the accrued interest on the loan, the unpaid interest is capitalized until the outstanding principal amount is 10 percent greater than the original principal amount. After the outstanding principal amount is 10 percent greater than the original principal amount, interest continues to accrue but is not capitalized. For purposes of this paragraph, the original principal amount is the amount owed by the borrower when the borrower enters repayment.

(Authority: 20 U.S.C. 1087a *et seq.*)

3. Section 685.209 is revised to read as follows:

§ 685.209 Income contingent repayment plan.

(a) *General.* (1) Under the income contingent repayment plan described in § 685.208(f), a borrower may choose to repay under the formula described in paragraph (b) of this section or may choose to have payments capped as described in paragraph (c) of this section. The amount calculated under paragraph (b) of this section is called the "formula amount," and the amount calculated under paragraph (c) of this section is called the "capped amount."

(2) Borrowers may choose to repay either the formula amount or the capped amount when they enter repayment and may change between the options one time each year.

(3) The Secretary may determine that special circumstances, such as a loss of employment by the borrower or the borrower's spouse, warrant an adjustment to the borrower's repayment obligations.

(4) Married borrowers may repay their loans jointly if they meet the following requirements:

(i) The spouses have both chosen either the formula amount or the capped amount.

(ii) The spouses filed a joint Federal income tax return for the most recent year for which the Secretary has obtained income information.

(iii) The spouses submit a written request to the Secretary that includes their names and social security numbers.

(5) Examples of the calculation of monthly repayment amounts and tables that shows monthly repayment amounts for borrowers at various income and debt levels are included in appendix A to this part.

(b) *Formula amount.* (1) *General.* (i) If a borrower chooses to pay the formula amount under the income contingent repayment plan, the borrower generally makes monthly payments that are calculated using a percentage of the borrower's Adjusted Gross Income (AGI) called the "payback rate."

(ii) A borrower's monthly payment is equal to the borrower's AGI multiplied by the payback rate, divided by 12 months. However, a borrower's monthly payment is never larger than 20 percent of the borrower's discretionary income as defined in paragraph (b)(1)(iii) of this section, divided by 12 months. Additionally, if the monthly repayment amount is less than $15, the borrower is not required to make a payment.

(iii) For purposes of this section, discretionary income is defined as a borrower's AGI minus the amount of the "HHS Poverty Guideline for all States (except Alaska and Hawaii) and the District of Columbia" as published by the United States Department of Health and Human Services on an annual basis.[1] If a borrower provides documentation acceptable to the Secretary that the borrower has more than one person in the borrower's family, the Secretary applies the HHS Poverty Guideline for the borrower's family size.

(2) *Payback rate.* (i) A borrower's payback rate is based upon the borrower's Direct Loan debt when the borrower's first loan enters repayment and does not change unless the borrower obtains another Direct Loan or the borrower and the borrower's spouse obtain approval to repay their loans jointly under paragraph (a)(4) of this section. If the borrower obtains another Direct Loan, a new payback rate for all of the borrower's Direct Loans is calculated on the basis of the combined amounts of the loans when the last loan enters repayment. If the borrower and the borrower's spouse repay the loans jointly, the provisions under paragraph (b)(3) of this section apply.

(ii) If the total amount of a borrower's Direct Loans is less than or equal to $1,000, the payback rate is four percent. If the total amount of a borrower's Direct Loans is greater than $1,000, the payback rate is four percent plus an additional percent that begins at zero and increases at a rate of 0.2 percent for each additional $1,000 borrowed up to a maximum payback rate of 15 percent.

(iii) More specifically, if the total amount of a borrower's Direct Loans is greater than $1,000, the payback rate is the lesser of 0.15 or the following: 0.04 + (debt − 1,000) (0.000002).

[1] The HHS Poverty Guidelines are available from the Office of the Assistant Secretary for Planning and Evaluation, Department of Health and Human Services (HHS), Room 438F, Humphrey Building, 200 Independence Avenue, S.W., Washington, D.C. 20201

(3) *Exception for certain married borrowers.* (i) The combined monthly payment amount for married borrowers who repay their loans jointly under paragraph (a)(4) of this section and who repay the formula amount is the total of the individual monthly payment amounts for each borrower calculated under paragraph (b)(1)(ii) of this section.

(ii) The payback rate for each borrower is calculated separately on the basis of the amount of the outstanding debt on the borrower's Direct Loans at the time the borrower enters into joint repayment with the borrower's spouse. For purposes of this paragraph, the Secretary assumes that the AGI for each borrower is proportionate to the relative size of the borrower's individual debt.

(iii) For purposes of determining whether a borrower's payment amount is larger than 20 percent of the borrower's discretionary income under paragraph (b)(1)(ii), a portion of the appropriate HHS Poverty Guideline for the borrowers' family size is applied to each borrower in proportion to the relative size of the individual borrower's debts.

(iv) If the combined monthly repayment amount is less than $15, the borrowers are not required to make a payment.

(v) The amount of a borrower's individual monthly payment is applied to the borrower's debt, except that the Secretary credits joint payments toward interest accrued on any loan before any payment is credited to principal.

(c) *Capped amount.* (1) *General.* If a borrower's monthly payments calculated under the formula amount as determined in paragraph (b) of this section are greater than the capped amount calculated under paragraph (c)(2), the borrower may choose to repay the capped amount.

(2) *Calculation of the capped amount.* (i) The capped amount is the amount that a borrower would repay monthly over 12 years using standard amortization or $15, whichever is greater.

(ii) The amount of the cap is recalculated on an annual basis to include changes in the variable rate.

(iii) After periods in which a borrower makes payments that are less than interest accrued on the loan, the amount of the cap is recalculated. If the new cap is larger than the existing cap, the new cap is applied. If the new cap is smaller than or equal to the existing cap, the existing cap is applied.

(3) *Exception to the calculation of the capped amount for certain married borrowers.* The capped amount for married borrowers who repay jointly under paragraph (a)(4) of this section is the same amount as calculated under paragraph (c)(2) of this section except that the amount is based on the combined Direct Loan debt of the borrowers.

(d) *Other features of the income contingent repayment plan.* (1) *Alternative documentation of income.* If a borrower's AGI is not available or if, in the Secretary's opinion, the borrower's reported AGI does not reasonably reflect the borrower's current income, the Secretary may use other documentation of income provided by the borrower to calculate the borrower's monthly repayment amount.

(2) *Repayment period.* (i) The maximum repayment period under the income contingent repayment plan is 25 years.

(ii) The repayment period includes periods in which the borrower makes payments under the standard repayment plan and under extended repayment plans in which payments are based on a repayment period that is up to 12 years. The repayment period does not include periods in which the borrower makes payments under the graduated and alternative repayment plans or periods of authorized deferment or forbearance. The repayment period also does not include periods in which the borrower makes payments under an extended repayment plan in which payments are based on a repayment period that is longer than 12 years.

(iii) If a borrower repays more than one loan under the income contingent repayment plan, a separate repayment period for each loan begins when that loan enters repayment.

(iv) If a borrower has not repaid a loan in full at the end of the 25-year repayment period under the income contingent repayment plan, the Secretary cancels the unpaid portion of the loan.

(v) At the beginning of the repayment period under the income contingent repayment plan, a borrower shall make monthly payments of the amount of interest that accrues on the borrower's Direct Loans until the Secretary calculates the borrower's monthly repayment amount on the basis of the borrower's income.

(3) *Limitation on capitalization of interest.* If the amount of a borrower's monthly payment is less than the accrued interest, the unpaid interest is capitalized until the outstanding principal amount is ten percent greater than the original principal amount. After the outstanding principal amount is ten percent greater than the original amount, interest continues to accrue but is not capitalized. For purposes of this paragraph, the original amount is the amount owed by the borrower when the borrower enters repayment.

(4) *Notification of terms and conditions.* When a borrower elects or is required by the Secretary to repay a loan under the income contingent repayment plan, the Secretary notifies the borrower of the terms and conditions of the plan, including—

(i) That the Internal Revenue Service will disclose certain tax return information to the Secretary or the Secretary's agents; and

(ii) That if the borrower believes that special circumstances warrant an adjustment to the borrower's repayment obligations, as described in § 685.209(a)(3), the borrower may contact the Secretary and obtain the Secretary's determination as to whether an adjustment is appropriate.

(5) *Consent to disclosure of tax return information.* (i) A borrower shall provide written consent to the disclosure of certain tax return information by the Internal Revenue Service (IRS) to agents of the Secretary for purposes of calculating a monthly repayment amount and servicing and collecting a loan under the income contingent repayment plan. The borrower shall provide consent by signing a consent form, developed consistent with 26 CFR 301.6103(c)-1 and provided to the borrower by the Secretary, and shall return the signed form to the Secretary.

(ii) The borrower shall consent to disclosure of the borrower's taxpayer identity information as defined in 26 U.S.C. 6103(b)(6), tax filing status, and AGI.

(iii) The borrower shall provide consent for a period of five years from the date the borrower signs the consent form. The Secretary provides the borrower a new consent form before that period expires. The IRS does not disclose tax return information after the IRS has processed a borrower's withdrawal of consent.

(iv) The Secretary designates the standard repayment plan for a borrower who selects the income contingent repayment plan but—

(A) Fails to provide the required written consent;

(B) Fails to renew written consent upon the expiration of the five-year period for consent; or

(C) Withdraws consent and does not select another repayment plan.

(v) If a borrower defaults and the Secretary designates the income contingent repayment plan for the borrower but the borrower fails to provide the required written consent, the Secretary mails a notice to the

borrower establishing a repayment schedule for the borrower.

(Approved by the Office of Management and Budget under control number 1840–0693)

(Authority: 20 U.S.C. 1087a *et seq.*)

4. Appendix B is removed, and Appendix A to part 685 is revised to read as follows:

APPENDIX A—INCOME CONTINGENT REPAYMENT

Examples of the Calculation of Monthly Repayment Amounts

Example 1. A single borrower with $12,500 of Direct Loans and an Adjusted Gross Income (AGI) of $25,000.

Step 1: Calculate the payback rate. Because the borrower's debt is greater than $1,000, the payback rate is calculated on the basis of the formula in § 685.209(b)(2)(iii), as follows:

- Subtract $1,000 from the total amount of the borrower's Direct Loans: ($12,500 − $1,000=$11,500).
- Multiply the result by 0.000002: ($11,500×0.000002=0.023).
- Add the result to 0.04: (0.04+0.023=0.063).
- The result is the payback rate.

Step 2: Compare the calculated payback rate (0.063) to the maximum payback rate (0.15). Because the calculated rate is less than the maximum rate, the borrower's payback rate is 0.063.

Step 3: Calculate the annual repayment amount by multiplying the borrower's AGI by the payback rate: ($25,000×0.063=$1,575).

Step 4: Calculate the monthly repayment amount by dividing the annual repayment amount by 12 months: ($1,575÷12=$131.25).

Step 5: Calculate the borrower's discretionary income (AGI minus HHS Poverty Guideline for a family of one): ($25,000 − $7,360=$17,640).

Step 6: Multiply the borrower's discretionary income ($17,640) by 20 percent: ($17,640×.2=3,528).

Step 7: Divide the amount calculated in Step 6 by 12 months: ($3,528÷12=$294).

Step 8: Compare the amount calculated in Step 4 ($131.25) with the amount calculated in Step 7 ($294). The lower amount is the formula amount. The formula amount is $131.25. The borrower's monthly payment under the formula amount would be $131.25.

Step 9: Compare the monthly formula amount ($131.25) to the $15 floor repayment amount. Because the formula amount is greater than the $15 floor, the borrower's monthly formula amount is $131.25.

Step 10: Compare the formula amount calculated in Step 9 ($131.25) to the capped amount, which is the monthly amount the borrower would repay under a 12-year standard amortization schedule. If the interest rate is seven percent, the 12-year standard amortization amount is approximately $10.28 for every $1,000 of debt. In this example, since the borrower has $12,500 in debt, the capped amount is approximately $128.50 ($10.28×12.5). Because the formula amount ($131.25) exceeds the capped amount ($128.50), the capped amount is the minimum monthly repayment. The borrower has the option of paying the formula amount (or any higher amount).

Example 2. Married borrowers both repaying under the ICR plan with a combined Adjusted Gross Income (AGI) of $30,000. The husband has $5,000 of Direct Loans. The wife has $15,000 of Direct Loans. The couple has two children.

Step 1: Calculate the husband's payback rate. Because his debt is greater than $1,000, the payback rate is calculated on the basis of the formula in § 685.209(b)(2)(iii) as follows:

- Subtract $1,000 from the amount of the husband's loans: ($5,000 − $1,000=$4,000).
- Multiply the result by 0.000002: ($4,000×0.000002=0.008).
- Add the result to 0.04: (0.04+0.008=0.048).
- The result is the husband's payback rate.

Step 2: Compare the husband's calculated payback rate (0.048) to the maximum payback rate (0.15). Because the calculated rate is less than the maximum rate, the husband's payback rate is 0.048.

Step 3: Calculate the husband's assumed AGI by multiplying the couple's total AGI ($30,000) by the amount of the husband's loans ($5,000), divided by the total amount of the couple's debt ($20,000): ($30,000×$5,000÷$20,000=$7,500).

Step 4: Calculate the husband's annual repayment amount by multiplying the husband's assumed AGI ($7,500) by his payback rate (0.048): ($7,500×0.048=$360).

Step 5: Calculate the husband's monthly repayment amount by dividing his annual repayment amount by 12 months: ($360÷12=$30).

Step 6: Calculate the couple's discretionary income (AGI minus HHS Poverty Guideline for a family of four): ($30,000 − 14,800=$15,200).

Step 7: Calculate the husband's portion of the couple's discretionary income by multiplying the couple's discretionary income ($15,200) by the amount of the husband's loans ($5,000) divided by the total amount of the couple's debt ($20,000): ($15,200×$5,000÷$20,000=$3,800).

Step 8: Multiply the husband's discretionary income by 20 percent: ($3,800 − .2=$760).

Step 9: Divide the amount calculated in Step 8 by 12 months: ($760÷12=$63.33).

Step 10: Compare the monthly amount calculated in Step 5 ($30) with the monthly amount calculated in Step 9 ($63.33). The lower amount is the formula amount. The formula amount is $30. If the borrowers choose to repay the formula amount, the husband's payment would be $30.

Step 11: Calculate the wife's payback rate. Because her debt is greater than $1,000, the payback rate is calculated on the basis of the formula in § 685.209(b)(2)(iii) as follows:

- Subtract $1,000 from the amount of the wife's loans: ($15,000 − $1,000=$14,000).
- Multiply the result by 0.000002: ($14,000×0.000002=0.028).
- Add the result to 0.04: (0.04+0.028=0.068).
- The result is the wife's payback rate.

Step 12: Compare the wife's calculated payback rate (0.068) to the maximum payback rate (0.15). Because the calculated rate is less than the maximum rate, the wife's payback rate is 0.068.

Step 13: Calculate the wife's assumed AGI by multiplying the couple's total AGI ($30,000) by the amount of the wife's loans ($15,000), divided by the total amount of the couple's debt ($20,000): ($30,000×$15,000÷$20,000=$22,500).

Step 14: Calculate the wife's annual repayment amount by multiplying the wife's assumed AGI ($22,500) by her payback rate (0.068): ($22,500×0.068=$1,530).

Step 15: Calculate the wife's monthly repayment amount by dividing the annual repayment amount calculated in Step 14 ($1,530) by 12 months: ($1,530÷12=$127.50).

Step 16: Calculate the wife's portion of the couple's discretionary income by subtracting the husband's portion of the couple's discretionary income calculated in Step 7 ($3,800) from the couple's total discretionary income calculated in Step 6 ($15,200): ($15,200 − $3,800=$11,400).

Step 17: Multiply the wife's discretionary income ($11,400) by 20 percent: ($11,400×.2=$2,280).

Step 18: Divide the amount calculated in Step 17 by 12 months: ($2,280÷12=$190).

Step 19: Compare the monthly amount calculated in Step 15 ($127.50) with the monthly amount calculated in Step 18 ($190). The lower amount is the formula amount. The formula amount is $127.50. If the borrowers choose to repay the formula amount, the wife's payment would be $127.50.

Step 20: Calculate the couple's combined monthly formula amount by adding the husband's monthly formula amount calculated in Step 10 ($30) and the wife's monthly formula amount calculated in Step 19 ($127.50): ($30+$127.50=$157.50).

Step 21: Compare the couple's combined monthly formula amount ($157.50) to the $15 floor repayment amount. Because the combined formula amount is greater than the $15 floor, the couple's combined monthly formula amount is $157.50.

Step 22: Compare the formula amount calculated in Step 21 ($157.50) to the capped amount, which is the amount the couple would repay under a 12-year standard amortization schedule. If the interest rate is seven percent, the capped amount is approximately $10.28 for every $1,000 of debt. In this example, since the couple has $20,000 in debt, the capped amount is approximately $205.60 ($10.28×20). Because the formula amount ($157 50) does not exceed the capped amount ($205.60), the couple's combined monthly repayment amount is the formula amount of $157 50

Note: The following tables will not appear in the Code of Federal Regulations

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Income Contingent Repayment Plan

Formula Amount: Sample First-year Monthly Repayment Amounts for a Single Borrower (Family of 1) at Various Income and Debt Levels

	Initial Debt																							
Income	$2,500	$5,000	$7,500	$10,000	$12,500	$15,000	$17,500	$20,000	$22,500	$25,000	$30,000	$35,000	$40,000	$45,000	$50,000	$55,000	$60,000	$65,000	$70,000	$75,000	$80,000	$85,000	$90,000	$100,000
$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9,000	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27
10,000	36	40	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
12,500	45	50	55	60	66	71	76	81	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
15,000	54	60	66	73	79	85	91	98	104	110	123	127	127	127	127	127	127	127	127	127	127	127	127	127
17,500	63	70	77	85	92	99	106	114	121	128	143	158	169	169	169	169	169	169	169	169	169	169	169	159
20,000	72	80	88	97	105	113	122	130	138	147	163	180	197	211	211	211	211	211	211	211	211	211	211	211
22,500	81	90	99	109	118	128	137	146	156	165	184	203	221	240	252	252	252	252	252	252	252	252	252	252
25,000	90	100	110	121	131	142	152	163	173	183	204	225	246	267	288	294	294	294	294	294	294	294	294	294
30,000	108	120	133	145	158	170	183	195	208	220	245	270	295	320	345	370	375	375	375	375	375	375	375	375
35,000	125	140	155	169	184	198	213	228	242	257	286	315	344	373	403	432	438	438	438	438	438	438	438	438
40,000	143	160	177	193	210	227	243	260	277	293	327	360	393	427	460	493	500	500	500	500	500	500	500	500
45,000	161	180	199	218	238	255	274	293	311	330	368	405	443	480	518	555	563	563	563	563	563	563	563	563
50,000	179	200	221	242	263	283	304	325	346	367	408	450	492	533	575	617	625	625	625	625	625	625	625	625
55,000	197	220	243	266	289	312	335	358	380	403	449	495	541	587	633	678	688	688	688	688	688	688	688	688
60,000	215	240	265	290	315	340	365	390	415	440	490	540	590	640	690	740	750	750	750	750	750	750	750	750
65,000	233	260	287	314	341	368	395	423	450	477	531	585	639	693	748	802	813	813	813	813	813	813	813	813
70,000	251	280	309	338	368	397	426	455	484	513	572	630	688	747	805	863	875	875	875	875	875	875	875	875
75,000	269	300	331	363	394	425	456	488	519	550	613	675	738	800	863	925	938	938	938	938	938	938	938	938
80,000	287	320	353	387	420	453	487	520	553	587	653	720	787	853	920	987	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
85,000	305	340	375	411	446	482	517	553	588	623	694	765	836	907	978	1,048	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063
90,000	323	360	398	435	473	510	548	585	623	660	735	810	885	960	1,035	1,110	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125
95,000	340	380	420	459	499	538	578	618	657	697	776	855	934	1,013	1,093	1,172	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188
100,000	358	400	442	483	525	567	608	650	692	733	817	900	993	1,067	1,150	1,233	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250

Capped Amount: Monthly Repayment Amounts Will Never Exceed the Values in the Following Line:

Initial Debt																								
$2,500	$5,000	$7,500	$10,000	$12,500	$15,000	$17,500	$20,000	$22,500	$25,000	$30,000	$35,000	$40,000	$45,000	$50,000	$55,000	$60,000	$65,000	$70,000	$75,000	$80,000	$85,000	$90,000	$100,000
$26	$53	$79	$105	$131	$158	$184	$210	$237	$263	$315	$368	$421	$473	$526	$578	$631	$683	$736	$789	$841	$894	$946	$1,051

Income Contingent Repayment Plan

Formula Amount: Sample First-year Monthly Repayment Amounts for a Borrower with a Family of 2 at Various Income and Debt Levels

	Initial Debt																								
Income	$2,500	$5,000	$7,500	$10,000	$12,500	$15,000	$17,500	$20,000	$22,500	$25,000	$30,000	$35,000	$40,000	$45,000	$50,000	$55,000	$60,000	$65,000	$70,000	$75,000	$80,000	$85,000	$90,000	$100,000
$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
2,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12,500	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
15,000	54	60	66	73	79	85	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86
17,500	63	70	77	85	92	99	106	114	121	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128	128
20,000	72	80	88	97	105	113	122	130	138	147	163	169	169	169	169	169	169	169	169	169	169	169	169	169	169
22,500	81	90	99	109	118	128	137	146	156	165	184	203	211	211	211	211	211	211	211	211	211	211	211	211	211
25,000	90	100	110	121	131	142	152	163	173	183	204	225	246	253	253	253	253	253	253	253	253	253	253	253	253
30,000	108	120	133	145	158	170	183	195	208	220	245	270	295	320	336	336	336	336	336	336	336	336	336	336	336
35,000	125	140	155	169	184	198	213	228	242	257	286	315	344	373	403	419	419	419	419	419	419	419	419	419	419
40,000	143	160	177	193	210	227	243	260	277	293	327	360	393	427	460	493	500	500	500	500	500	500	500	500	500
45,000	161	180	199	218	236	255	274	293	311	330	368	405	443	480	518	555	563	563	563	563	563	563	563	563	563
50,000	179	200	221	242	263	283	304	325	346	367	408	450	492	533	575	617	625	625	625	625	625	625	625	625	625
55,000	197	220	243	266	289	312	335	358	380	403	449	495	541	587	633	678	688	688	688	688	688	688	688	688	688
60,000	215	240	265	290	315	340	365	390	415	440	490	540	590	640	690	740	750	750	750	750	750	750	750	750	750
65,000	233	260	287	314	341	368	395	423	450	477	531	585	639	693	748	802	813	813	813	813	813	813	813	813	813
70,000	251	280	309	338	368	397	426	455	484	513	572	630	688	747	805	863	875	875	875	875	875	875	875	875	875
75,000	269	300	331	363	394	425	456	488	519	550	613	675	738	800	863	925	938	938	938	938	938	938	938	938	938
80,000	287	320	353	387	420	453	487	520	553	587	653	720	787	853	920	987	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
85,000	305	340	375	411	446	482	517	553	588	623	694	765	836	907	978	1,048	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063	1,063
90,000	323	360	398	435	473	510	548	585	623	660	735	810	885	960	1,035	1,110	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125	1,125
95,000	340	380	420	459	499	538	578	618	657	697	776	855	934	1,013	1,093	1,172	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188	1,188
100,000	358	400	442	483	525	567	608	650	692	733	817	900	983	1,067	1,150	1,233	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250	1,250

Capped Amount: Monthly Repayment Amounts Will Never Exceed the Values in the Following Line:

Initial Debt																								
$2,500	$5,000	$7,500	$10,000	$12,500	$15,000	$17,500	$20,000	$22,500	$25,000	$30,000	$35,000	$40,000	$45,000	$50,000	$55,000	$60,000	$65,000	$70,000	$75,000	$80,000	$85,000	$90,000	$100,000
$26	$53	$79	$105	$131	$158	$184	$210	$237	$263	$315	$368	$421	$473	$526	$578	$631	$683	$736	$789	$841	$894	$946	$1,05

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Part VIII

Department of Health and Human Services

Public Health Service

Announcement of Availability of Grants for Adolescent Family Life Demonstration Projects; Notice

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Public Health Service

[0905–ZA84]

Announcement of Availability of Grants for Adolescent Family Life Demonstration Projects

AGENCY: Office of Adolescent Pregnancy Programs, Office of Population Affairs, PHS, HHS.

ACTION: Notice.

SUMMARY: The Office of Adolescent Pregnancy Programs (OAPP) requests applications for grants under the Adolescent Family Life (AFL) Demonstration Projects Program. These grants are for community-based and community-supported demonstration projects to: (1) Find effective means of preventing pregnancy by encouraging adolescents to abstain from sexual activity through provision of age-appropriate education on sexuality and decision-making skills, and (2) establish comprehensive and integrated approaches to the delivery of services to pregnant adolescents, adolescent parents and their children. Funds are available for approximately 10–15 projects, which may be located in any State, the District of Columbia, the territories of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, Commonwealth of the Northern Mariana Islands, Republic of Palau, Republic of the Marshall Islands and the Federated States of Micronesia.

DATES: To receive consideration grant applications must be received by the Grants Management Officer by March 22, 1995. Applications will be considered as meeting the deadline if they are either (1) received on or before the deadline date, or (2) postmarked on or before the deadline date and received in time for submission to the review committee. A legibly dated receipt from a commercial carrier or U.S. Postal Service will be accepted in lieu of a postmark. Private metered postmarks will not be accepted as proof of timely mailing. Applications which do not meet the deadline will be considered late applications and will be returned to the applicant.

ADDRESSES: Requests for application kits may be faxed to (301) 594–5980. Application kits may also be obtained from and applications delivered by the U.S. Postal Service must be submitted to: Grants Management Office, OPA, East-West Towers, Suite 200, West Building, 5600 Fishers Lane, Rockville, MD 20857. Applicants hand-delivering a proposal or using a commercial carrier such as Federal Express should use the following address: Grants Management Office, OPA, East-West Towers, Suite 200, West Building, 4350 East-West Highway, Bethesda, MD 20814.

FOR FURTHER INFORMATION CONTACT: Grants Management Office at (301) 594–4012 or Program Office at (301) 594–4004. Staff are available to answer questions and provide limited technical assistance in the preparation of grant applications.

SUPPLEMENTARY INFORMATION: Title XX of the Public Health Service Act, 42 U.S.C. 300z, *et seq.*, authorizes the Secretary of Health and Human Services to award grants for demonstration projects to provide services to pregnant and nonpregnant adolescents, adolescent parents and their families. (Catalog of Federal Domestic Assistance Number 93.995) Title XX authorizes grants for three types of demonstration projects: (1) Projects which provide "care services" only (*i.e.*, services for the provision of care to pregnant adolescents, adolescent parents and their families); (2) projects which provide "prevention services" only (*i.e.*, services to prevent adolescent sexual relations); and (3) projects which provide a combination of care and prevention services.

The Office of Adolescent Pregnancy Programs (OAPP) intends to make available approximately $4.5 million to support an estimated 10–15 new demonstration projects. An applicant may submit a proposal for a *local* care, prevention or combination care/prevention project *or* for a *national multi-site* prevention project with at least two sites in different States. The awards for care projects will range from $200,000 to $400,000. The awards for local prevention projects will range from $150,000 to $250,000. Funding for national multi-site prevention projects and for combination care/prevention projects may be higher, in proportion to the effort proposed. *These grants will be awarded for a period of one year, and the availability of funding for later years is uncertain. Therefore, we encourage applications from experienced organizations which are currently operating programs and which have the capability of expanding and enhancing these services to serve significant numbers of adolescents according to the guidelines specified in this announcement.* Additional funds may be available in Fiscal Year 1996 and following years. If funds do become available, grantees funded under this program announcement will be eligible to reapply for continued funding.

Grants are funded in annual increments (budget periods). Funding for all approved budget periods beyond the first year of a grant is contingent upon the availability of funds, satisfactory progress of the project, and adequate stewardship of Federal funds. A grant award may not exceed 70 percent of the total cost of the project for the first year. The non-Federal share of the project costs may be provided in cash expenditures or fairly evaluated in-kind contributions, including plant, equipment and services.

The specific services which may be funded under Title XX are listed below under Care Programs and Prevention Programs. Applicants who propose to provide a Combination of Care and Prevention Services Program must meet the requirements for each type of program.

The Public Health Service (PHS) is committed to achieving the health promotion and disease prevention objectives of Healthy People 2000, a PHS-led national activity for setting priority areas. This announcement is related to the priority area of Family Planning. A midcourse review of the objectives is presently ongoing, and the proposed revisions are contained in a draft. A notice of Availability and Request for Comment on the Healthy People 2000 Midcourse Revisions was published in the **Federal Register** on October 3, 1994 (59 FR 50253). Requests for copies of the *Draft for Public Review and Comment: Healthy People 2000 Midcourse Revisions* can be faxed to (301) 594–5980 or mailed to: OAPP/OPA, East-West Towers, Suite 200, West Building, 5600 Fishers Lane, Rockville, MD 20857. A new PHS report, *Healthy People 2000 Midcourse Review and Revisions*, featuring the final revisions and a status report on progress in achieving targets for the year 2000, will be published in 1995.

The following application requirements contain information collections subject to OMB approval under the Paperwork Reduction Act of 1980 (P.L. 96–511). These information collections have been approved by OMB under control number 0937–0189.

Eligible Applicants

Any public or private nonprofit organization or agency is eligible to apply for a grant. Grants are awarded only to those organizations or agencies which are determined to demonstrate the capability of providing the proposed services and meet the statutory requirements.

Care Programs

Under this announcement, funds are available for local care demonstrations only and not for multi-site national projects. The project site must be identified in the application rather than selected after the grant is awarded.

Under the statute the purpose of care programs is to establish innovative, comprehensive, and integrated approaches to the delivery of care services for pregnant adolescents and adolescent parents under 19 years of age at program entry, with primary emphasis on unmarried adolescents who are 17 years old or younger and for their families. This includes young fathers and their families.

The OAPP encourages the submission of care applications which propose to do the following: (1) Add care services to supplement existing adolescent health services in school, hospital or other community settings, (2) provide care services to minority or other disadvantaged populations, (3) continue services to clients after the delivery of the baby to enable them to acquire good parenting skills and to ensure that their children are developing normally physically, intellectually and emotionally, (4) stress self-sufficiency skills, such as school completion (in mainstream or alternative schools and GED programs) and/or job training preparation and placement, and (5) involve males and promote male responsibility. Applicants should base their approaches upon an assessment of existing programs and, where appropriate, upon efforts to establish better coordination, integration and linkages among such existing programs.

Applicants for care projects are required to provide, either directly or by referral, the following 10 core services:

(1) Pregnancy testing and maternity counseling;

(2) Adoption counseling and referral services which present adoption as an option for pregnant adolescents, including referral to licensed adoption agencies in the community if the eligible grant recipient is not a licensed adoption agency;

(3) Primary and preventive health services, including prenatal and postnatal care;

(4) Nutrition information and counseling;

(5) Referral for screening and treatment of venereal disease;

(6) Referral to appropriate pediatric care;

(7) Educational services relating to family life and problems associated with adolescent premarital sexual relations including:

(a) Information about adoption,

(b) Education on the responsibilities of sexuality and parenting,

(c) The development of material to support the role of parents as the providers of sex education, and

(d) Assistance to parents, schools, youth agencies and health providers to educate adolescents and preadolescents concerning self-discipline and responsibility in human sexuality;

(8) Appropriate educational and vocational services;

(9) Mental health services and referral to mental health services and to other appropriate physical health services;

(10) Counseling and referral for family planning services.

Note: Funds provided under Title XX may not be used for the provision of family planning services other than counseling and referral services unless appropriate family planning services are not otherwise available in the community. In accordance with sec. 2006(a)(17) of Title XX (42 U.S.C. 300z–5(a)(17)), applicants must make maximum use of services available under the Title X Family Planning Program in providing this required core service.

In addition to the 10 required core services listed above, applicants for care projects may provide any of the following supplemental services:

(1) Referral to licensed residential care or maternity home services;

(2) Child care sufficient to enable the adolescent parent to continue education or to enter into employment;

(3) Consumer education and homemaking;

(4) Counseling for the immediate and extended family members of the eligible person;

(5) Transportation; and

(6) Outreach services to families of adolescents to discourage sexual relations among unemancipated minors.

Prevention Programs

Under this announcement, funds are available for both local and national projects. A national project must have at least two sites in different States.

The primary purpose of prevention programs is to find effective means of reaching adolescents, both male and female, before they become sexually active in order to encourage them to abstain from sexual activity. There is general agreement that early initiation of sexual activity brings not only the risk of unintended pregnancy but also substantial health risks to adolescents, primarily infection with sexually transmitted diseases (STDs), including HIV. Accordingly, applicants must provide services that help pre-adolescents and young adolescents acquire knowledge and skills that will instill healthy attitudes and encourage and support the postponement of early sexual activity. Such services must also include the provision of medically accurate information relating to reducing the risk of unintended pregnancy and disease for adolescents who may be or become sexually active.

Under this announcement, OAPP will not fund proposals to develop new prevention curricula. Applicants must propose to use existing and available educational materials/curricula which are consistent with this program announcement.

The OAPP encourages the submission of prevention applications which propose to do the following: (1) Add prevention services to supplement existing adolescent health education programs or health service programs in school or other community settings, (2) provide prevention services to minority or other disadvantaged populations, (3) use curricula which have been demonstrated and evaluated to be effective, (4) include medically accurate information on sexuality, contraception, sexually transmitted diseases (STDs) and HIV/AIDS, (5) offer educational services to parents to assist them in communicating with their children about sexuality, contraception, STDs and HIV/AIDS, and (6) involve males and promote male responsibility.

Applicants for prevention programs are not required to provide any specific array of services; a proposal may include any one or more of the following services as appropriate:

(1) Educational services relating to family life and problems associated with adolescent premarital sexual relations including:

(a) Information about adoption,

(b) Education on the responsibilities of sexuality and parenting,

(c) The development of material to support the role of parents as the providers of sex education, and

(d) Assistance to parents, schools, youth agencies and health providers to educate adolescents and preadolescents concerning self-discipline and responsibility in human sexuality;

(2) Appropriate educational and vocational services;

(3) Counseling for the immediate and extended family members of the eligible person;

(4) Transportation;

(5) Outreach services to families of adolescents to discourage sexual relations among unemancipated minors;

(6) Pregnancy testing and maternity counseling;

(7) Nutrition information and counseling; and

(8) Referral for screening and treatment of venereal disease.

Combination Care and Prevention Services Programs

Applicants proposing to provide both care and prevention services must meet the requirements for both categories as described above. They must also propose to make a substantial effort in each of the two areas and indicate clearly in the application and budget the proportion of effort to be expanded in each component.

Evaluation

Section 2006(b)(1) of Title XX requires each grantee to expend at least one percent but not more than five percent of the Federal funds received under Title XX on evaluation of the project. As this is a demonstration program, all applications are required to have an evaluation component of high quality consistent with the scope of the proposed project and the funding level. All project evaluations should monitor program processes to determine whether the program has been carried out as planned and measure the program's outcomes. Waivers of the five percent limit on evaluation (see sec. 2006(b)(1)) may be granted in cases where a more rigorous or comprehensive evaluation effort is proposed.

Section 2006(b)(2) requires that an organization or an entity independent of the grantee providing services assist the grantee in evaluating the project. The OAPP strongly recommends extensive collaboration between the applicant organization and the proposed evaluator in the development of the intervention, development of the evaluation hypothesis(es), identification of the variables to be measured and a timetable for initiation of the intervention, baseline measurement, and ongoing evaluation data collection and analysis.

Application Requirements

Applications must be submitted on the forms supplied (PHS 5161–1, Revised 7/92) and in the manner prescribed in the application kits provided by the OAPP. Applicants are required to submit an application signed by an individual authorized to act for the applicant agency or organization and to assume for the organization the obligations imposed by the terms and conditions of the grant award. *Applications sent by FAX will not be accepted.*

Applicants must be familiar with the entire statute, which is included in the application kit, to ensure that they have complied with all applicable requirements.

It should be noted that grantees may not teach or promote religion in their AFL project. Each grant project must be accessible to the public generally, not just to those of a particular religious affiliation.

Under section 2011(a) of the Act, AFL projects may not provide abortions or abortion counseling or referral either directly or through subcontract and may not advocate, promote or encourage abortion. However, if both the adolescent and her parents request abortion counseling, a project may provide referral for such counseling.

Additional Requirements

Applicants for grants must also meet the following requirements:

(1) *Requirements for Review of an Application by the Governor.* Section 2006(e) of Title XX requires that each applicant shall provide the Governor of the State in which the applicant is located a copy of each application submitted to OAPP for a grant for a demonstration project for services under this Title. The Governor has 60 days from the receipt date in which to provide comments to the applicant.

An applicant may comply with this requirement by submitting a copy of the application to the Governor of the State in which the applicant is located at the same time the application is submitted to OAPP. To inform the Governor's office of the reason for the submission, a copy of this notice should be attached to the application.

(2) *Review Under Executive Order 12372.* Applications under this announcement are subject to the review requirements of E.O. 12372 State Review of Applications for Federal Financial Assistance, as implemented by 45 CFR part 100 (Intergovernmental Review of Federal Programs). E.O. 12372 sets up a system for state and local government review of proposed Federal assistance applications. As soon as possible the applicant (other than federally-recognized Indian tribal governments) should contact the Governor's Office in each state in the area to be served for information regarding the particular review process designed by the state. For proposed projects serving more than one State, the applicant is advised to contact the Governor's Office of each affected State. The State comment(s) should be forwarded to the Grants Management Office, Office of Population Affairs, East-West Towers, Suite 200, West Building, 5600 Fishers Lane, Rockville, MD 20857. Such comments must be received by the Office of Population Affairs by May 22, 1995 to be considered.

The application kit contains information to guide applicants in fulfilling the above requirements.

Application Consideration and Assessment

Applications which are judged to be late or which do not conform to the requirements of this program announcement will not be accepted for review. Applicants will be so notified, and the applications will be returned. All other applications will be reviewed by a multidisciplinary panel of independent reviewers and assessed according to the following criteria:

(1) The capacity of the proposed applicant organization to provide rapid and effective use of resources needed to conduct the project, collect data and evaluate it. This includes personnel, time and facilities. (30 points)

(2) The applicant's rationale for use of the proposed approach and its worth for testing and/or replication based upon its previous demonstration, review of the literature and/or evaluation findings. (20 points)

(3) The applicant's presentation of an appropriate project design, consistent with the requirements of Title XX, including a clear statement of goals and objectives, reasonable methods for achieving the objectives, a reasonable workplan and timetable and a clear statement of results or benefits expected. (30 points)

(4) The applicant's presentation of a detailed evaluation plan, indicating an understanding of program evaluation methods and reflecting a practical, technically sound approach to assessing the project's achievement of program objectives. (20 points)

Final grant award decisions will be made by the Deputy Assistant Secretary for Populations Affairs. In making these decisions, the Deputy Assistant Secretary for Population Affairs will take into account the extent to which grants approved for funding will provide an appropriate geographic distribution of resources, the priorities in sec. 2005(a), and the other factors in sec. 2005, including consideration of:

(1) The applicant's capacity to administer funds responsibly;

(2) The incidence of adolescent pregnancy and the availability of services in the geographic area to be served;

(3) The population to be served;

(4) The community commitment to and involvement in planning and implementation of the demonstration project;

(5) The organizational model(s) for delivery of service;

(6) The usefulness for policymakers and service providers of the proposed project and its potential for complementing existing adolescent health models;

(7) The reasonableness of the estimated cost to the government considering the anticipated results.

OAPP does not release information about individual applications during the review process until final funding decisions have been made. When these decisions have been made, applicants will be notified by letter of the outcome of their applications. The official document notifying an applicant that an application has been approved for funding is the Notice of Grant Award, which specifies to the grantees the amount of money awarded, the purpose of the grant, the terms and conditions of the grant award, and the amount of funding to be contributed by the grantee to project costs.

Dated: November 1, 1994.

Felicia H. Stewart,

Deputy Assistant Secretary for Population Affairs.

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