

Authority: 49 U.S.C. 1348(a), 1354(a), 1510; E.O. 10854; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983); 14 CFR 11.69.

§ 71.181 [Amended]

2. Section 71.181 is amended as follows:

Alliance, OH [Revised]

That airspace extending upward from 700 feet above the surface within a 6.5 mile radius of Berlin Airpark Airport, Alliance, Ohio (lat. 40°59'05" N., long. 81°02'32" W.), and within a 5.5 mile radius of Tri-City Airport, Sebring, Ohio (lat. 40°54'22" N., long. 81°00'02" W.).

Issued in Des Plaines, Illinois, on May 20, 1988.

John H. Bacon,

Acting Manager, Air Traffic Division.

[FR Doc. 88-12314 Filed 6-1-88; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 95

[Docket No. 25593; Amdt. No. 343]

IFR Altitudes; Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Correction to final rule.

SUMMARY: The FAA published an Amendment in Docket No. 25593, Amdt. No. 343 to Part 95 of the Federal Aviation Regulations (53 FR 83 15364; April 29, 1988). In that amendment, a typographical error listed the effective date incorrectly. This action corrects that error and changes the effective date to May 5, 1988.

EFFECTIVE DATE: May 5, 1988.

FOR FURTHER INFORMATION CONTACT:

Donald K. Funai, Flight Procedures Standards Branch (AFS-230), Air Transportation Division, Office of Flight Standards, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: (202) 267-8277.

SUPPLEMENTARY INFORMATION: This amendment to Part 95 of the Federal Aviation Regulations (14 CFR Part 95) prescribes new, amended, suspended, or revoked IFR altitudes governing the operation of all aircraft in IFR flight over a specified route or any portion of that route, as well as the changeover points (COPs) for Federal airways, jet routes, or direct routes as prescribed in Part 95. The specified IFR altitudes, when used in conjunction with the prescribed changeover points for those routes, ensure navigation aid coverage that is adequate for safe flight operations and free of frequency interference.

The reasons and circumstances which create the need for this amendment

involve matters of flight safety, operational efficiency in the National Airspace System, and are related to published aeronautical charts that are essential to the user and provide for the safe and efficient use of the navigable airspace. In addition, those various reasons or circumstances require making this amendment effective before the next scheduled charting and publication date of the flight information to assure its timely availability to the user. The effective date of this amendment reflects those considerations. In view of the close and immediate relationship between these regulatory changes and safety in air commerce, I find that notice and public procedure before adopting this amendment is unnecessary, impracticable, and contrary to the public interest and that good cause exists for making the amendment effective in less than 30 days.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore—(1) is not a "major rule" under Executive Order 12291; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. For the same reason, the FAA certifies that this amendment will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 95

Aircraft, Airspace.

Issued in Washington, DC, on May 20, 1988.

Robert L. Goodrich,

Director of Flight Standards.

[FR Doc. 88-12312 Filed 6-1-88; 8:45 am]

BILLING CODE 4910-13-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 261

[SW-FRL-3390-4]

Hazardous Waste Management System: Identification and Listing of Hazardous Waste; Final Exclusion Rule

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or Agency) today is

granting a final exclusion from the lists of hazardous wastes contained in 40 CFR 261.31 and 261.32 to Syntex Agribusiness, Inc., for certain solid wastes to be generated at the Denney Farm site in McDowell, Missouri by the EPA Mobile Incineration System. This action responds to a delisting petition received by the Agency under 40 CFR 260.20, which allows any person to petition the Administrator to modify or revoke any provision of Parts 260 through 268, 124, 270, and Title 40 of the Code of Federal Regulations, and under 40 CFR 260.22, which specifically provides generators the opportunity to petition the Administrator to exclude wastes on a "generator-specific" basis from the hazardous waste lists.

EFFECTIVE DATE: June 2, 1988.

ADDRESSES: The public docket for this final rule is located at the U.S. Environmental Protection Agency, 401 M Street SW., (Sub-basement), Washington, DC 20460, and is available for public viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Call (202) 475-9327 for appointments. The reference number for this docket is "F-88-SSEF-FFFFF." The public may copy a maximum of 50 pages of material from any one regulatory docket at no cost. Additional copies cost 20 cents per page.

FOR FURTHER INFORMATION CONTACT: The RCRA Hotline, toll-free at (800) 424-9346, or (202) 382-3000. For technical information concerning this notice, contact Robert Kayser, Office of Solid Waste (WH-563), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 382-4536.

SUPPLEMENTARY INFORMATION:

I. Background

A. Authority

Under 40 CFR 260.20 and 260.22, facilities may petition the Agency to remove their wastes from hazardous waste control by excluding them from the lists of hazardous waste contained at 40 CFR 261.31 and 261.32. Petitioners must provide sufficient information to EPA to allow the Agency to determine that (1) the waste to be excluded is not hazardous based upon the criteria for which it was listed, and (2) that no other hazardous constituents are present in the wastes at levels of regulatory concern.

B. History of this Rulemaking

Syntex Agribusiness, Inc. (Syntex), located in Springfield, Missouri, petitioned the Agency to exclude from hazardous waste control certain waste it intends to generate. After evaluating the

petition, on September 3, 1987, EPA proposed to exclude Syntex's waste from the lists of hazardous waste contained at 40 CFR 261.31 and 261.32, conditional upon Syntex meeting certain monitoring, sampling, and analysis requirements (see 52 FR 33439). Syntex's petition was for an "upfront" exclusion. A petitioner may request an upfront exclusion for wastes that have not yet been generated or that will be subject to further treatment. An upfront delisting petition (when treatment is planned) allows an exclusion to be granted based on untreated waste characteristics, pilot-scale treatment data if available, and process descriptions. The exclusion would include batch testing requirements, such as analytical testing of representative samples obtained from the full-scale system. These data can be used to verify that the treatment system, once on-line, is operating as described in the petition. The Agency may specify verification testing limitations (i.e., the maximum allowable levels of hazardous constituents of concern in the waste) in the conditions of the granted exclusion; when the actual levels of the constituents of concern are below these levels, the waste will not be considered hazardous.

This rulemaking addresses public comments received on the proposal and finalizes the proposed exclusion.

C. Other Related Exclusions

Today's exclusion represents the third exclusion related to EPA's Mobile Incineration System. The first exclusion was granted to EPA's Releases Control Branch (RCB) on July 25, 1985 (see 50 FR 30271). That exclusion covered the residues from the incineration of several categories of liquid wastes from dioxin-decontamination activities at the Syntex facility in Verona, Missouri, as well as various related contaminated solids. That exclusion was a conventional exclusion (in contrast with Syntex's upfront exclusion granted in today's rulemaking) which was based on the evaluation of residues from the MIS's trial burn demonstration.

The second exclusion for residues from the MIS was granted to RCB on March 11, 1988 (see 53 FR 7903) for residues from the incineration of dioxin-contaminated cancellation pesticides (i.e., 2,4,5-T and Silvex). That exclusion was an upfront exclusion which was based on RCB's characterization of the untreated pesticides and identification of potential products of incomplete combustion. The March 11, 1988, exclusion was made conditional upon specific monitoring, sampling, and analysis requirements which were

designed to confirm that the residues are non-hazardous.

II. Disposition of Petition

A. Syntex Agribusiness, Inc.

1. Proposed Exclusion

Syntex petitioned the Agency for an upfront exclusion from EPA Hazardous Waste No. F020 of incineration residues from the treatment of wastewater treatment sludge, previously held in a lagoon at Syntex's Springfield, Missouri facility, in the EPA Mobile Incineration System (MIS). Syntex based its petition on the expected low concentrations of the listed constituents in the incineration residues. In the proposed rule, the Agency concluded that data submitted by Syntex, in conjunction with the verification testing conditions which the Agency proposed to require as part of a final exclusion, substantiated Syntex's claim that the listed constituents of concern would not be present in the incineration residues at or above levels of regulatory concern. Furthermore, Syntex submitted data on other non-listed hazardous constituents expected to be present in the sludge and potentially present in the incineration residues as products of incomplete combustion. The verification testing conditions attached to the exclusion are designed to ensure that these constituents will not be present in the incineration residues at or above levels of regulatory concern. See 52 FR 33439, September 3, 1987, for a more detailed explanation of why EPA proposed to grant Syntex's petition for these incineration residues.

2. Agency Response to Public Comments

General. The Agency received public comments on the proposed rule from six different interested parties. The commenters were generally in favor of the Agency's proposed decision to exclude the incineration residues from the treatment of Syntex's lagoon sludge. As will be discussed in more detail below, several commenters submitted detailed comments arguing that the proposed testing requirements and accompanying delisting levels were too conservative.

Several commenters stated that the conditions of the proposed exclusion were so conservative that the impact of the exclusion would be to discourage future incineration of similar dioxin-contaminated materials, despite clear Congressional preference for permanent treatment of hazardous waste. The Agency strongly disagrees. EPA believes that the successful incineration of the lagoon sludge and upfront exclusion of the resultant incineration residues will

encourage an otherwise reluctant commercial hazardous waste management industry to step into the dioxin management business. EPA also believes that the conservative approach to the exclusion of these materials demonstrates a commitment to meeting statutory requirements to ensure protection of human health and environmental safety while encouraging permanent treatment solutions.

Two commenters stated that the proposed low delisting levels for certain organics, particularly dioxin, would require the MIS to operate with extended residence times to ensure destruction of these constituents to the delisting levels. The commenters believed that this is unnecessary and will (1) effectively reduce the capacity of the MIS, (2) significantly increase operating costs, and (3) deter future thermal treatment of hazardous wastes. One commenter questioned whether the MIS would be able to achieve the low delisting levels for dioxin when operating at capacity. One commenter also questioned whether the Agency could justify imposing higher operating costs when health-based standards for dioxin are uncertain.

The Agency acknowledges that effective hazardous waste treatment and detoxification can be quite expensive and time-consuming. The Agency also recognizes that its conservative approach to protecting human health and the environment may cause increased treatment costs compared with less protective approaches. Notwithstanding, the Agency believes that the availability of upfront exclusions, even with conservative conditions, will encourage such treatment. The Agency also believes that the conservative conditions applicable to today's exclusion are necessary to protect human health and the environment, can be realized by the MIS, will permit treatment of these wastes, and will serve to demonstrate that the MIS can generate non-hazardous residues when incinerating the Syntex lagoon sludge. (Information is in the docket reflecting the 1985 Denney Farm trial burn and process descriptions of the MIS and demonstrating the likely ability of full-scale operations to meet delisting levels.)

Two commenters stated that the Agency failed to provide an adequate opportunity to comment on the proposal. The commenters believed that the administrative record for the proposal was inadequate to evaluate the conservative assumptions employed and calculations used in deriving health

based numbers and delisting levels; the presence of certain constituents; and the difference in approach from the 1985 exclusion and other Agency activities. Although EPA believes that the record was and is fully adequate to support the proposal and final action, the Agency has provided in today's rulemaking preamble additional information to address specific concerns raised by this and other commenters. This information includes historical background on the 1985 exclusion for the MIS and on the evolution of the Delisting Program's rulemaking activities and criteria over the past three years. Because many of the health-based levels used to set delisting levels have been published in previous delisting decisions and were available in the docket, and because the Delisting Program's analytical approach and the MIS technology have been subject to extensive public notice and comment and were fully referenced in the notice of proposed rulemaking, the Agency believes that the administrative record was replete with necessary and sufficient information upon which the interested parties could comment. Further, the Agency believes that the proposal, the documents referenced therein, and the background documents contained in the regulatory docket contained adequate information upon which to evaluate the likely presence of constituents of concern. These documents included the calculations, equations, health-based regulatory levels, and solubilities used to determine the maximum allowable treatment residue concentrations.

One commenter noted that the proposed rule did not indicate where the incineration residues will be disposed. The commenter was concerned that if the residues are disposed of at the Syntex Springfield site, several endangered or threatened species could be impacted and recommended that the Agency coordinate with the Fish and Wildlife Service to determine if impacts to specific fish and wildlife resources could occur. In response to these comments, the Agency notes that the specific disposal sites for the incineration residues were not identified because the disposal scenarios had not been finalized at the time of the proposal. In addition, petitioners are responsible for complying with all relevant federal, state and local regulations. States may also enforce more stringent requirements than the Federal RCRA program, and may choose not to delist listed wastes. Further, petitioners are also independently responsible for complying with any applicable regulations or controls

established by the Fish and Wildlife Service regarding endangered species.

The Agency believes, in response to the commenter's specific concern with the potential impact of the petitioned wastes on fish and wildlife, that the environmentally conservative maximum allowable treatment residue concentrations established in today's rule should be protective of the environment, including fish and wildlife. The excluded waste volumes are finite and relatively small, which will minimize any potential impacts. Further, the impact on fish are expected to be virtually nonexistent due to the dilution of the finite volume of wastewater by a fish-bearing stream or river that might receive the waste. The chronic value for 2,3,7,8-TCDD (one of the major constituents of concern in the petitioned waste) in rainbow trout is $<0.001 \mu\text{g/l}$ (Ambient Water Quality Criteria for 2,3,7,8-Tetrachlorodibenzo-p-dioxin, U.S. EPA, Office of Water Regulations and Standards, February, 1984) in comparison with the maximum allowable wastewater concentration of 0.002 ppt ($2 \times 10^{-6} \mu\text{g/l}$) established in today's rule.

The remainder of this section addresses specific aspects of the proposal on which the Agency received comment, including differences from previous related exclusions, EPA's modeling approach, and specific comments on the proposed conditions. In responding to comments and in considering approaches to and criteria for the proposed and final exclusions, the Agency has kept an open mind and has applied its best, current technical judgment.

a. Differences from 1985 Exclusion.

One commenter characterized the proposal as "a startling and largely unexplained departure" from the approach used in the original exclusion for the MIS in 1985 (see 50 FR 30272, July 25, 1985). The commenter noted that the materials covered by the 1985 exclusion fall into the same categories of dioxin-contaminated wastes (F020, F022, F023, F026, F027, and F028) and will be processed in the same incinerator as the Syntex waste, yet are subject to different delisting criteria.

The Agency's approach to the evaluation of petitions has evolved since the 1985 exclusion. Since that time, for example, the Agency has adopted the organic leachate model (OLM) as an analytical tool in reviewing delisting petitions (see 51 FR 41084, November 13, 1986). The OLM allows the Agency to evaluate the potential mobility of hazardous organic constituents. In addition, the Agency has implemented

the requirements of the Hazardous and Solid Waste Amendments of 1984 (HSWA) that the delisting process consider all factor (including additional constituents) which could cause a waste to be hazardous rather than only those factors for which a waste was listed. EPA has also published a guidance manual (see "Petitions to Delist Hazardous Wastes — A Guidance Manual", U.S. EPA, Office of Solid Waste, (EPA/530-SW-003), April 1985) which outlines the information needed in a delisting petition. Further, the recent cancelled pesticides final rule (see 53 FR 7903) and today's final rule are examples of the Agency's current ability to evaluate and to grant "upfront" exclusions.

One of the major differences between the 1985 exclusion and the Syntex proposal is that the Syntex proposal was for an "upfront" exclusion; that is, the treatment residues from the incineration of the Syntex lagoon sludge have not yet been generated and therefore have not been characterized. In the case of the 1985 exclusion, RCB had submitted actual analytical data on treatment residues for the EP toxic metals and hazardous organic compounds (identified in the petition as potential constituents of concern), including dioxin. Upon evaluation of these data, the Agency determined that batch testing was only necessary for the three metals listed in the conditions of that exclusion. Because similar data for the Syntex treatment residues do not yet exist, the Agency is requiring as part of this final exclusion extensive verification sampling and analysis of the incineration residues when generated.

A second difference is that the materials to be incinerated in these two cases are different, i.e., contaminated soils and solvents versus wastewater treatment sludge. A comparison of the constituents of concern for the two matrices shows differences in the constituents of concern, as well as varying concentrations of constituents of concern, as well as varying concentrations of constituents common to both matrices. As a result of these inherent differences, the exclusions for the two matrices are slightly different.

The levels of regulatory concern for the metals differ for the two petitions due to application of the vertical and horizontal spread (VHS) model (see 50 FR 48896, November 27, 1985). As discussed in the preamble to Syntex's proposed exclusion, the VHS model results in a scale which suggests that a large volume of waste exhibiting a particular extract level could be considered hazardous, while a smaller

volume of the same waste could be considered non-hazardous (see 52 FR 33441). Because the waste volumes of the two petitions vary, levels of concern for metals in these wastes also vary.

Further discussions of specific differences between the 1985 exclusion and the Syntex proposal, as well as discussions of the differences between the cancelled pesticide final exclusion and the Syntex proposal, are provided later in today's notice in Sections II.A.2.c. ii, iv, and v.

Thus, differences between these actions properly reflect differences in the petitioned wastes and the Agency's evolving technical expertise in assessing the hazards of wastes proposed for exclusions. These differences have been publicly noticed in numerous post-1985 actions that appeared in the *Federal Register* and were fully referenced in the proposal. The Agency believes strongly that it should be able to apply superior methods of analysis or more accurate information when they become available to ensure protection of human health and the environment. Of course, commenters are encouraged to assess the Agency's evolving methodologies and to comment on specific criteria where proposed. Specific challenges to the analysis for the proposed exclusion of the Syntex sludge are described below.

In light of the public comments on the differences between the recent and the 1985 exclusions for the MIS, the Agency has reevaluated the data submitted in 1985, as well as data collected more recently on the MIS residues in order to respond to public comment. These evaluations confirmed the ability of the MIS to generate non-hazardous residues complying with the conditions specified in today's exclusion when treating materials listed in the 1985 rule. Thus, the Agency continues to believe that the differences between the 1985 exclusion and the recent exclusions for the MIS are appropriate and that the 1985 exclusion is protective of human health and the environment.

b. *Comments on the Use of the OLM and VHS Models.—General.* One commenter was concerned that the proposed delisting criteria were generated from the VHS model with no adjustments of the criteria made on the basis of actual health effects. The commenter stated that the extreme range of levels of concern suggested by the model (i.e., 15 percent toluene in the solid residues and 0.002 ppt dioxin in the wastewater) indicate that adjustments be considered to reflect the "real issues" of protecting human health and the environment, while encouraging the use of proven technology.

In response to this comment, the Agency notes that its evaluation was based on a reasonable worst-case disposal scenario for the petitioned wastes. In particular, the Agency looked at the potential health effects due to the ingestion of contaminated groundwater. The range of delisting criteria are a function of the significant differences in constituent toxicities. The Agency has also considered other exposure scenarios and models, and the validity of the assumptions and evaluations made using the VHS and OLM models. As will be discussed later, the Agency has eliminated certain constituents from the testing requirements because the Agency has determined that they cannot realistically be expected to be present in the incineration residues at the levels of regulatory concern. The Agency has also responded to certain comments regarding the method of estimating the levels of concern and has adjusted the VHS model calculations accordingly. Further details are provided later in today's notice.

The Agency also believes that the Delisting Program, particularly through the implementation of upfront exclusions, provides incentives for waste treatment using proven technologies. The identification of target levels of concern that operators can use for process design and optimization will encourage permanent treatment while protecting human health and the environment.

Appropriateness of Modeling Approach. Three commenters expressed concern regarding the Agency's use of the OLM and VHS models as factors in setting the delisting levels, criticizing the conservative assumptions and parameters of the models. For the purposes of today's rule, EPA has considered the appropriateness of the OLM/VHS model approach and of the models' parameters. First, the Agency determined that a reasonable worst-case approach would be appropriate before relieving a waste from the protective management constraints of RCRA Subtitle C. Second, the Agency decided that a landfill exposure scenario would be appropriate. EPA assessed the nature of the solid residues which will be generated by the MIS and concluded that landfilling is the most reasonable worst-case disposal scenario. (Due to the lack of organic content in the residues following incineration, land treatment would probably not be used. Similarly, management in an impoundment is not expected.) In terms of the liquid residues, EPA determined that the groundwater dilution of constituents afforded by application of the VHS model was appropriate, given

past management practices for the MIS's scrubber water (i.e., land application).

The Agency further considered whether the OLM/VHS model was the landfill model of choice. The primary criteria in this evaluation were (1) the need to apply a generic model (i.e., non-site specific), and (2) the need to apply an environmentally conservative model. Further, the Agency believes that a conservative approach is particularly warranted in regard to upfront exclusions, because the petitioner has not yet generated any residues and therefore has not provided any waste characterization.

One commenter disagreed with the Agency's application of the OLM and VHS models to this particular waste, noting that these models "assume a worst case disposal of a waste in a municipal landfill with aggressive leachate at pH 5.2 because of the degradation of the municipal solid waste". The commenter believed that it is highly unlikely that the residues would be accepted by a municipal landfill and that the residues will most likely be buried in a capped site designed to minimize water contact and infiltration. The Agency, however, cannot rule out a municipal landfill as a reasonable worst-case disposal scenario because delisted wastes are not subject to Subtitle C controls. Further discussion of other models considered and constituent mobility is provided below.

Consideration of Other Models. The Agency considered the appropriateness of other exposure assessment models which have been developed specifically for dioxin as alternatives to the OLM/VHS model approach. An approach developed by the Center for Diseases Control (CDC) was considered as an alternative (see Kimbrough, R.D., H. Falk, P. Stehr, 1984. Health Implications of 2,3,7,8-Tetrachlorodibenzo-dioxin (TCDD) Contamination of Residential Soil, *J. Tox. Env. Health*, 14:47-93). The CDC concluded through its modeling effort that concentrations of 2,3,7,8-TCDD above 1 ppb in residential soil are unsafe. Several commenters believed that the Agency should adopt the CDC 1 ppb standard rather than the proposed delisting levels, which they claimed were excessively conservative.

The major differences between the CDC approach and the VHS model are summarized below:

- The CDC used a significantly different unit cancer risk (a factor used to compute a regulatory dose) from that used by EPA to set the health-based regulatory level. Because the CDC unit risk factor is lower, a higher concentration could be set for the same

degree of overall risk than if EPA's factor were used.

- The CDC approach considers exposures to dioxin contaminated soil via ingestion, dermal absorption, and inhalation, while the VHS model considers ingestion of ground water.

- The CDC analysis was originally meant to specify acceptable levels of contamination which have become fixed to residential soils. The delisting levels determined by the VHS model represent raw waste concentrations.

The 1 ppb action level for residential soils recommended by CDC corresponds to an acceptable dose level of 636 femtograms/kilogram/day (fg/kg/day). CDC calculated that the Virtually Safe Dose (equivalent to a cancer risk of 10^{-6}) for dioxin falls within the range of 28 fg/kg/day to 1,428 fg/kg/day, but justified the chosen value of 636 fg/kg/day as acceptable in the context of their specific analysis. If the unit cancer risk of 6.4 fg/kg/day calculated by EPA (Health Assessment Document for Polychlorinated Dibenzo-p-dioxins, U.S. EPA, 1985) is used in the methodology presented by CDC, the resultant "action level" would be about 100-fold less than the 1 ppb level, i.e., on the order of 10 ppt (see the docket to this notice for the calculations supporting this estimation). Despite the numerous differences in the exposure scenarios and modeling approaches, this level is comparable to the levels of concern predicted by the OLM/VHS model analysis for solids. (Additional discussion on challenges to the Agency's unit cancer risk used in the proposal and today's rulemaking as being overly conservative is presented in Section II.A.2.c.v.)

In general, the exposure scenarios considered in the CDC approach are appropriate for dioxin. However, the use of EPA's unit risk number with the CDC assumptions results in a similar, conservative level of concern as the use of the OLM/VHS model. Furthermore, the CDC analysis did not take into account other routes of exposure, including ground water and food chain bioaccumulation. Under certain circumstances, the Agency believes that bioaccumulation may be an equally significant exposure route as those addressed in the CDC approach.¹ The

Agency also notes that a number of assumptions used in the CDC approach, including estimated soil ingestion rates, have been revised or have been the subject of serious scientific debate since the development of the CDC action level. Based on the uncertainty associated with the underlying assumptions of the CDC approach and the difference in unit cancer risk levels, the Agency decided that the CDC approach is not a preferable alternative to the VHS model for evaluating this petition at this time. Furthermore, EPA does not believe that the values obtained by employing the VHS model, as confirmed by the modified CDC approach, are excessively conservative.

The Agency also considered application of developmental work by EPA's Office of Research and Development (ORD) for the evaluation of dioxin-related delisting petitions. ORD is currently preparing a detailed exposure assessment document for dioxin. One portion of this work evaluates a variety of potential exposure routes for dioxin-contaminated soils and assigns estimated risk levels to these exposure routes for a given scenario. The Delisting Program has evaluated the merits of this approach and believes that, when finalized, this approach will be a valuable tool. ORD's work, however, has not been released for use at this time and is undergoing extensive peer and Science Advisory Board (SAB) review. Given the preliminary nature of this approach, the Agency has determined that the ORD approach should not be used at this time. However, application of ORD's draft document to the facts of this case supports the low levels of concern predicted by the OLM/VHS model approach (i.e., low ppt level). (This information has also been placed in the docket.)

Migration and Attenuation. Two commenters submitted comments regarding the appropriateness of the VHS model for setting delisting levels for dioxin, insoluble organics, and metals. Specifically, the commenters noted that the VHS model does not include consideration of actual migration potential of a compound because the model does not account for attenuative mechanisms (such as sorption) which would retard the flow of hydrophobic compounds (such as dioxin) in ground water. The commenters believe that the omission of a migration factor in the VHS model will result in an overestimation of receptor

concentrations of dioxin, other organic constituents, and metals. One commenter specifically listed hydrogeological conditions which affect the mobility of metals, such as pH, redox conditions, ionic strength, mineralogy, and solid-phase surface area. One commenter also cited draft studies and experiments which attempt to demonstrate low mobility of dioxins.

The Agency acknowledges that sorption effects can play an important part in the migration of contaminants through ground water. Sorption effects, however, are highly variable from site to site and are dependent on many factors, such as soil characteristics and other hydrogeologic conditions. In keeping with the reasonable worst case approach, the Agency has determined not to consider site-specific sorption variables in applying the VHS model to these wastes. An important aspect of this reasonable worst-case scenario is that soil and aquifer conditions would not favor the attenuation of contaminants. Given the known existence of mobilizing factors such as infiltration of acidic leachate or precipitation, leachate mounding, and exceedance of soil attenuation capacity, the Agency continues to believe that this conservative approach is appropriate for the purposes of delisting hazardous wastes. Thus, sorption effects, in fact all attenuative effects including degradation, are assumed to have no effect on the receptor concentrations of ground-water contaminants. For very hydrophobic compounds, this assumption is very conservative. The Agency notes, however, that this assumption becomes significantly less conservative when the hydrophobic compounds are codisposed or leached with solvents which tend to mobilize hydrophobic compounds.

One commenter also stated that the time frame for dioxin to reach the compliance point in the VHS model scenario is on the order of tens of thousands of years and that the dioxin is likely to degrade before actually reaching the receptor. However, the length of time required for contaminants in an aquifer to reach a potential receptor may be highly variable; full analysis of dioxin mobility would necessarily require a substantial amount of site-specific information. As discussed above, the Agency does not believe it appropriate to consider site-specific information in this analysis, especially when the Agency cannot discount the possibility that the wastes may be exposed to solubilizing agents which will tend to mobilize any dioxin remaining in the residues. For these

¹ Rappe, C., H.R. Buser, D.L. Stalling, L.M. Smith, and R.C. Dougherty, 1981. Identification of Polychlorinated Dibenzofurans in Environmental Samples. *Nature*, 292:524-526.

Kuehl, D.W., P.M. Cook, A.R. Batterman, D.B. Lothenback, B.C. Butterworth and D.L. Johnson, 1985. Bioavailability of 2,3,7,8-Tetrachlorodibenzo-p-dioxin from Municipal Incinerator Fly Ash to Freshwater Fish. *Chemosphere*, 14:427-437.

Jensen, D.J., R.A. Hummel, N.H. Mahle, C.W. Kocher and H.S. Higgins, 1981. A Residue Study on

Beef Cattle Consuming 2,3,7,8-tetrachlorodibenzo-p-dioxin. *J. Agric. Food Chem.*, 29:265-268.

reasons, the Agency has assumed in using the VHS model that (1) attenuation is insignificant, and (2) soil and aquifer conditions do not favor the degradation of contaminants en route to the receptor point.

Waste Volume. One commenter disagreed with the solids waste volume that the Agency used in the VHS model calculations to determine the levels of concern listed in Conditions (3), (4), and (5) of the proposal. The solids volume used in the proposal included the volume of soils covered by the 1985 exclusion that the petitioner indicated might be co-incinerated with the sludge. The commenter stated that the soil volume should not be incorporated in the VHS model calculation because the soils are currently covered by the 1985 exclusion and the rulemaking only sought an exclusion for the residues from the incineration of Syntex's 775 cubic yards of sludge.

The Agency uses the maximum waste volume estimated by petitioners to calculate the maximum allowable constituent concentrations (i.e., the waste-specific delisting levels) against which the waste residue or its leachate must be tested. Generally, lower waste volumes result in higher (less stringent) delisting levels for individual constituents. The Agency has considered various ways to respond to this comment and has selected an approach which (1) adopts a solids waste volume based solely on sludge incineration, and (2) prohibits co-incineration of sludge and soil. The Agency believes that it would be inappropriate to grant the commenter's full request to allow co-incineration and to promulgate an exclusion based on sludge volumes alone. If co-incineration were to occur, the resultant mixed residues could not be segregated (for the purposes of analysis or disposal) into the volume derived from the sludge and the volume derived from the soils. Thus if the VHS model results used in the exclusion are derived from a sludge-only waste volume, it is not appropriate to allow co-incineration which would result in the generation of a different waste volume. Condition (1) of today's exclusion, presented later in this notice, has been modified to include a prohibition of co-incineration.

The Agency does not believe that this prohibition will be burdensome to the petitioner for a number of reasons. First, the original basis for co-incineration was that 1985 MIS trial burn data suggested that co-incineration with diluent soils might facilitate sludge feed and minimize particle size during combustion. In addition, the soils would

also provide a heat sink for the sludge (a heat sink is needed in cases where the heat content of a material to be incinerated exceeds the heat capacity of the incinerator). These concerns have been mitigated by the recent modifications to the MIS described in the proposal to this rule (and available in the docket) which have improved the MIS's ability to successfully treat wastes such as the Syntex sludge. Specifically, an oxygen enriched burner has been added to the kiln. This modification has reduced air flow through the secondary combustion chamber and thus allows for the incineration of high heat content wastes such as the Syntex sludge without the addition of soil to act as a heat sink. In addition to recent changes to the MIS, the Syntex sludge has dried over the past three years which will facilitate feeding this material to the MIS without the use of diluent soils. Thus, based on the MIS modifications and best engineering judgment, the Agency believes that co-incineration is unnecessary and that it is appropriate to revise the waste volume used in the evaluation of Syntex's petition.

The Agency originally calculated a maximum expected volume of residues based on Syntex's estimation of (1) the sludge volume reduction due to incineration, and (2) a maximum sludge to soil mixing ratio. Syntex estimated that 775 cubic yards of sludge would be incinerated and would undergo a 63-67 percent volume reduction during incineration. The Agency accepted this volume reduction estimate as reasonable given the water and organic content of the sludge. (However, the Agency conservatively assumed a 60 percent sludge volume reduction in subsequent calculations.) The Agency's original calculations assumed that, prior to incineration, the sludge would be mixed with diluent soils in a ratio of one pound of sludge to 3.5 pounds of soil. The Agency is now discounting this added volume since co-incineration will be prohibited under Condition (1). The revised maximum volume of solid residues is now estimated to be 310 cubic yards, that is, 40 percent of the original sludge volume (i.e., 775 cubic yards x 0.4).

The resultant revisions to Conditions (3), (4), (5), and (6) are presented later in today's notice. (Condition (2) was not affected by this change because it covers wastewaters.) A new Condition (4) has been added in section II.A.2.c.iii below. As a result, proposed Conditions (4)-(7) have been renumbered (5)-(8), respectively.

Leaching. One commenter stated that the organic leachate model (OLM) is inappropriate for predicting the leaching capacity of highly insoluble compounds because (1) highly insoluble compounds are not well represented in the OLM leaching data base, (2) the insoluble compounds that are represented show a poor correlation with the adopted model, and (3) actual leaching data from municipal incinerator ash show that the OLM overpredicts dioxin leaching levels by a factor of 100.

In response to these comments, some background information on the OLM is appropriate. The OLM was constructed using 353 data pairs representing 53 wastes bearing 73 different constituents. A number of the wastes sampled were bound in hydrophobic matrices (e.g., lumpy oil refinery sludge, viscous chemical manufacturing sludge, and tar/dirt mixtures from production of methyl ethyl ketone), other wastes were bound in inorganic matrices, and one waste type represented incinerator ash (API sludge/incinerator ash). The commenter is correct that the correlation coefficient determined solely for the low solubility constituents in the leaching data base is low. However, the correlation coefficient for any general subset of data studied in a regression analysis will be lower than the correlation coefficient for the overall data set. Part of what the commenter noticed is due to the fact that the low correlation coefficient was generated from a small data set.

The Agency agrees, however, that the variability of leaching data in general is partly responsible for the low correlation. In keeping with the reasonable worst-case approach, the Agency is taking a conservative stance in regard to the high variability in the leaching data on mobility of hydrophobic compounds. For this reason, the municipal incinerator ash data cannot be considered by itself. Even if the municipal incinerator ash data were added to the leaching data base, the paucity of these data would result in little or no effect on the general correlation coefficient.

VHS Model Assumptions. One commenter stated that the VHS model is overly conservative because it assumes that the exposed individual ingests all of his or her water from a drinking water well directly downgradient from the disposal site and that the well is only 500 feet from the disposal site. The commenter did not, however, suggest any data supporting different assumptions.

The Agency agrees that the model assumption that the receptor well is

directly downgradient from the disposal site is a worst case assumption. It is not, however, an impossible configuration. Instances of drinking well contamination from municipal landfills are plentiful (see 50 FR 48902, November 27, 1985 for several specific examples). The Agency, therefore, continues to believe that a receptor point situated to receive the highest concentration of contaminant is not unlikely. Further, the Agency often assumes in risk assessment of ingestion scenarios that the exposed 70 kg individual ingests 2 liters a day from a contaminated source over a 70 year life span and continues to believe that this assumption is appropriate. For example, see the notice of data availability for the Water Quality Criteria (45 FR 79318, November 28, 1980), the proposed drinking water standards (50 FR 46936, November 13, 1985), and the proposed expansion of the toxicity characteristic for hazardous wastes (51 FR 21648, June 13, 1986). While these exposure assumptions will not be true for all exposed individuals or all exposure scenarios, the Agency continues to believe that they are appropriate reasonable worst case assumptions.

Conservation of Mass. One commenter disagreed with the application of the VHS model for dioxin because it does not, in general, conserve mass. That is, due to the simplifying assumptions used in the VHS model, the initial velocity of a contaminant entering the aquifer is determined only by the velocity of the ground water, the vertical dispersivity of the aquifer, and the width of the disposal unit. The commenter claimed that this initial velocity is also affected by the properties of the waste materials and net infiltration into the ground water. The commenter stated that, by not considering these factors, the VHS model can overestimate or, more likely, underestimate the dilution that may occur in an aquifer.

EPA acknowledges that the VHS model is more likely to overpredict (rather than underpredict) the receptor concentration of contaminants in any given waste due to the conservative nature of the assumptions underlying the model. EPA also recognizes that all models do not always predict factual values accurately. Notwithstanding, EPA believes that the VHS model provides a useful analytical tool for the evaluation of the hazards posed by these wastes. EPA has considered and rejected the use of alternative models and approaches for this specific petition, as described above. Commenters may, however, demonstrate that more specific

alternatives are scientifically valid and adequate to replace such assumptions.

c. Specific Comments on Proposed Verification Conditions.—i. *Condition 1—Compliance with Permit Conditions.* The purpose of Condition (1) is to ensure efficient destruction of the constituents of concern by monitoring the operation of the MIS. In response to public comment, the condition has been modified and clarified from the proposal to require compliance with specific permit conditions rather than test burn parameters.

During the time period when EPA was preparing this final rule, the Agency was also finalizing the exclusion for the residues from the incineration of the cancelled pesticides. Very similar comments were received on the two proposed exclusions, many from the same commenter. In preparing responses to these comments, the Agency's approach to upfront exclusions has been refined. Consequently, the Agency is modifying the language in the conditions to improve their clarity.

The revised condition addresses one commenter's concern that, as previously worded, EPA may have been requiring repeated demonstrations of the MIS's ability to achieve the required destruction and removal efficiency (DRE) (see 40 CFR 264.343(a)(2)). This was not the Agency's intent since the DRE demonstration occurs as part of the permitting process rather than through delisting. Further, the MIS has successfully demonstrated its ability to achieve the required DRE for a number of waste matrices and thus additional demonstrations would be unnecessary.

The modified condition requires that the petitioner analyze any residues generated whenever the MIS is operating outside of the limits relevant to the mechanical operation of the incinerator as specified in its permit. The Agency is specifically concerned with a hypothetical situation where the MIS experiences a mechanical system failure (i.e., failure of the secondary combustion chamber (SCC) or the air pollution control system, failure of the kiln to fire, etc.) after Syntex has made a successful demonstration under Condition (7) of the exclusion and has terminated the daily analytical testing specified in Conditions (2) through (6). Although the Agency does not expect these failures to occur, the modified condition requires Syntex to conduct verification testing on the incinerator residues should such a scenario occur.

In addition, the modified condition prohibits co-incineration of the Syntex sludge and diluent soil, as discussed above.

Revised Condition

Condition (1): The incinerator is monitored continuously and is in compliance with operating permit conditions. Should the incinerator fail to comply with the permit conditions relevant to the mechanical operation of the incinerator, Syntex must test the residues generated during the run when the failure occurred according to the requirements of Conditions (2) through (6), regardless of whether or not the demonstration in Condition (7) has been made. Co-incineration of the Syntex sludge and diluent soils is prohibited under this exclusion.

ii. *Conditions (2) and (3)—Metals Analyses.—Differences between Syntex Proposal and 1985 Exclusion.* One commenter questioned why the proposal imposed more stringent maximum allowable leachate and treatment residue concentrations for mercury, chromium, and selenium than the 1985 rule, as well as limitations for the remainder of the EP toxic metals, nickel, and cyanide that have no counterpart in the 1985 rule. As discussed earlier, the Agency is requiring in this exclusion that the residues be tested for all of the EP toxic metals, nickel and cyanide because the Syntex proposal is for an upfront exclusion of treatment residues that have not yet been generated or characterized. A similar approach was taken for the development of conditions for the exclusion for the cancelled pesticides. In the case of the 1985 exclusion, RCB had submitted actual analytical data on treatment residues. Upon evaluation of these data, the Agency determined that batch testing was only necessary for the three metals listed in the conditions of that exclusion. No such data exist for the Syntex or cancelled pesticides treatment residues since they were not generated at the time of proposal.

The commenter also questioned why the specific delisting levels for chromium, mercury, and selenium proposed for Syntex are different than the levels listed in the conditions for the 1985 exclusion. As discussed earlier, the delisting levels have been determined by back-calculating from the health-based regulatory levels through the VHS model and are a function of the waste volume. Since the waste volume covered by the 1985 exclusion differs from the volume covered by the Syntex proposal (as well as the expected waste volume from the treatment of the cancelled pesticides), the dilution factors differ and the resultant delisting levels also differ.

Differences between Syntex Proposal and Other EPA Program Levels for Metals. The commenter requested an

explanation of why the proposed delisting levels are lower than the EP Toxicity characteristic limits. The general purpose of the hazardous waste characteristics, such as the EP Toxicity characteristic, is to regulate the worst, rather than all, of the hazardous wastes exhibiting a given characteristic. Wastes leaching concentrations of the EP toxic metals at levels below the EP Characteristic (100 times the National Primary Drinking Water Standards) are not necessarily non-hazardous. Rather, such wastes may be listed as hazardous if, pursuant to the criteria for listings contained in 40 CFR 261.11 of the regulations, these lesser concentrations in combination with other factors are deemed to pose substantial present or potential threats to human health and the environment. Thus, levels established by application of delisting criteria (e.g., the VHS model) that are below the EP Toxicity characteristic levels may properly be considered to be an indication of a waste's hazardousness.

One commenter questioned whether the levels of concern specified in proposed Conditions (2) and (3) are higher than indigenous levels of metals in soils in Missouri. While specific response to this comment is not possible because the commenter did not provide data on actual native soil concentrations of metals, the Agency believes that the commenter may be inappropriately comparing total metal concentrations in soils with the leachable or mobile metal concentrations listed in the conditions of this exclusion. Nevertheless, the Agency is constrained by (1) its legislative mandates to consider wastes (which do not include uncontaminated native soils) and their potential risk to human health and the environment, and (2) the delisting petition evaluation which currently does not consider site-specific factors such as background soil levels because the wastes, once excluded, are no longer subject to Subtitle C control.

The commenter also questioned why the levels of concern specified in proposed Conditions (2) and (3) for metals are significantly lower than levels established by the U.S. Department of Agriculture (USDA) for regulating land application of municipal sludge and lower than other levels suggested for cattle feed or compost growing soil. While it is unclear which levels the commenter is referencing, differences in statutory requirements and goals among different regulatory programs and agencies, will, in some cases, result in different levels of concern. Where possible, when programmatic goals and assumptions

are similar, EPA attempts to coordinate with other agencies and similar internal programs. For example, maximum contaminant levels (MCLs) established under the Safe Drinking Water Act are used as health-based regulatory levels in delistings. The agency believes that the health-based levels set for the landfill/groundwater reasonable worst-case scenario employed here are necessary to protect human health and the environment in accordance with the mandates of RCRA.

The commenter also questioned why the Agency is requiring such rigorous treatment when data from municipal incinerators indicates that ash from such incinerators can exceed the MIS's delisting levels for both dioxins listed in proposed Condition (5) and the metals listed in proposed Conditions (2) and (3). The Agency believes that the levels of metals and dioxins commonly found in municipal incinerator ash are not relevant to Syntex's delisting petition. Issues related to the presence of metals and dioxin in municipal incinerator ash will be considered in the Agency's overall decision on appropriate management standards for such ash.

Health-based Regulatory Levels. One commenter submitted specific comments on the MCLs which the Agency used in the proposed exclusion as the health-based regulatory levels for the EP toxic metals. The commenter argued that the drinking water standards (MCLs) should not have been used by EPA in establishing the proposed Syntex delisting levels for metals. The commenter claimed that the MCLs are based on chronic exposure scenarios, and would necessarily overestimate the adverse health impact under a scenario where "the MCL is reached only transiently".

The Agency believes that the steady-state VHS model provides a reasonable worst case evaluation of this petition for constituents of concern at a receptor well. In most cases, the concentration of a constituent in the leachate represents only a small fraction of the total mass of the constituent in the waste. Sustained leaching of the constituent is possible, which would lead to chronic exposure to the chemical over long time periods. Therefore, the Agency believes that use of health-based standards (such as MCLs) derived for chronic exposures is valid for evaluation of the Syntex petition.

The commenter also raised a variety of questions concerning the bases of the MCLs for a number of the metals. The Agency's response to these comments is available in the docket to today's rule (see "Response to Public Comments on

Health-based Levels Used in the Syntex Proposed Exclusion", May, 1988). The Agency is in the process of revising the MCLs, and all of the points raised by the commenter were acknowledged by EPA in a proposed rule (50 FR 46936, November 13, 1985). As discussed in the docket, EPA does not believe that the questions raised warrant the use of different health-based levels for these constituents in this rulemaking.

The same commenter also challenged the health-based levels used to establish delisting levels for nickel and cyanide. The commenter further questioned why analysis of these constituents was necessary since neither nickel nor cyanide were detected in the untreated sludge. This commenter, in providing comments on the proposed exclusion for the cancelled pesticides, also identified a number of differences in the health-based regulatory levels used for the Syntex and cancelled pesticides proposals. The commenter correctly attributed these differences to updates in the health-based regulatory levels and requested that the Syntex exclusion be finalized using the revised values.

The Agency notes that the nickel standard used to calculate the maximum allowable nickel leachate levels in the incineration residues has been revised from the 0.35 ppm value used in the proposal to 0.5 ppm, to reflect the current reference dose for nickel and in direct response to the commenter's request to use the more current and appropriate values. The bases for the health-based levels are described in detail in a proposed rule establishing restriction levels for the land disposal of "California List" metals and cyanide (see 52 FR 29994, August 12, 1987). These proposed health-based levels were established for the same exposure route as the MCLs (i.e., drinking water), and the Agency believes these levels are adequate for setting delisting levels in this rule. For both chemicals, the commenter noted the uncertainty in the bioavailability of these chemicals when ingested in food or water. The Agency agrees that some uncertainty exists in this area, but believes that the safety factors incorporated into the health-based levels appropriately address these (as well as other) uncertainties.

In response to the commenter's statement regarding the absence of nickel and cyanide in the untreated sludges, the Agency notes that the petitioner did not submit total constituent or leaching data for either nickel or cyanide in the untreated sludge. The commenter's claim that these constituents are absent in the sludge is therefore unsubstantiated.

Furthermore, cyanide is a possible product of incomplete combustion which may form during the incineration process and was listed in Attachment A of the petitioner's March 9, 1987 submittal as a potential constituent of concern. For these reasons, EPA believes that the requirement for analyses of nickel and cyanide in the treatment residues is justified.

Revised Condition. As described below, Conditions (2) and (3) have been modified to address concerns raised by public comment regarding their ambiguity, the waste volume used in the calculation of the maximum acceptable levels for solids, and an update to the nickel standard. Following EPA's refined approach to upfront exclusions, the conditions have been changed to clarify the sampling requirements and to revise the maximum acceptable solid treatment residue concentrations. The technical subject matter of the conditions has not been changed except as specifically discussed.

One commenter expressed confusion regarding the sampling frequency for the wastewater in Condition (2) and the materials to be sampled in Condition (3). The conditions, as presented below, have been modified to address these comments.

One commenter requested that the sampling requirements for Condition (3) be modified so that Syntex can combine the three solid residues (i.e., kiln ash, cyclone ash, and separator sludge) and analyze one sample rather than three (as originally proposed). The Agency has decided to allow proportional compositing of the kiln and cyclone ash due to their expected similarities. The Agency is continuing to require separate analysis of the separator sludge, however, due to known matrix differences and potential compositional differences between the sludge and the ashes which would be masked by compositing. The separator sludge may contain higher concentrations of the more volatile toxic metals and will also contain salts and other compounds which may affect the hazardousness and analysis of the waste. The conditions have been modified accordingly as presented below.

One commenter questioned why proposed Conditions (2) and (3) in the proposal were not subject to the same termination provisions as the organics and dioxin testing conditions (i.e., proposed Conditions (4) and (5), respectively). As will be discussed later in more detail in the context of Condition (7), the Agency agrees with the commenter that Conditions (2) and (3) should be subject to termination under certain circumstances and has

modified the exclusion to terminate Conditions (2) and (3) if Syntex can demonstrate that four consecutive batches (one batch of residue from each eight hour burn) of the petitioned residues are non-hazardous with respect to the respective delisting levels of the EP toxic metals, nickel, and cyanide.

The Agency notes that Condition (2) in the proposal contained a typographical error in the maximum allowable wastewater levels for arsenic, chromium, lead and silver (see 52 FR 33443). The level of concern should have been 0.61 ppm rather than 0.061 ppm. The final exclusion contains the corrected value.

The maximum allowable solid treatment residue concentrations in Condition (3) have been recalculated, as discussed earlier, to account for the revised solid treatment residue volume. The revised conditions are presented below:

Revised Conditions

Condition (2): Four grab samples of wastewater must be composited from the volume of filtered wastewater collected after each eight hour run and, prior to disposal, the composite samples must be analyzed for the EP toxic metals, nickel, and cyanide. If arsenic, chromium, lead, and silver EP leachate test results exceed 0.61 ppm; barium levels exceed 12 ppm; cadmium and selenium levels exceed 0.12 ppm; mercury levels exceed 0.02 ppm; nickel levels exceed 6.1 ppm; or cyanide levels exceed 2.4 ppm, the wastewater must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations. Analyses must be performed according to SW-846 methodologies.

Condition (3): One grab sample must be taken from each drum of kiln and cyclone ash generated during each eight hour run; all grabs collected during a given eight hour run must then be composited to form one composite sample. A composite sample of four grab samples of the separator sludge must be collected at the end of each eight hour run. Prior to disposal of the residues from each eight hour run, an EP leachate test must be performed on these composite samples and the leachate analyzed for the EP toxic metals, nickel, and cyanide (using a distilled water extraction for the cyanide extraction) to demonstrate that the maximum allowable treatment residue concentrations listed below are not exceeded. Analyses must be performed according to SW-846 methodologies. Any residue which exceed any of the levels listed below must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations.

Constituents	Maximum allowable solids treatment residue EP leachate concentrations ¹ (mg/l)
Arsenic.....	1.6
Barium.....	32
Cadmium.....	0.32
Chromium.....	1.6
Lead.....	1.6
Mercury.....	0.065
Nickel.....	16
Selenium.....	0.32
Silver.....	1.6
Cyanide.....	6.5

¹ Corresponds to a maximum waste volume of 310 cubic yards.

iii. **Condition (4)—MEP Test Method for Stabilized Incineration Residues.** One commenter expressed concern that existing data generated by the MIS under the 1985 exclusion show chromium, mercury, and selenium levels which exceed both the levels established in the 1985 exclusion and the levels proposed for Syntex. The Agency acknowledges that the MIS, at times, can generate residues with hazardous levels of mobile metals. The significant degree of toxicity reduction which occurs during incineration is, under certain circumstances, accompanied by an increase in the mobility and concentration of toxic metals in resultant incineration residues. This is due to the oxidative atmosphere found in incinerator kilns. This phenomenon is the basis for the Agency requirement that Syntex test each batch of wastes for certain mobile metal concentrations.

In an amendment to its petition, Syntex has indicated that it intends to stabilize incineration residues that contain hazardous levels of mobile metals using a Portland cement-type stabilization. The Agency recognizes that management of incineration residues often includes chemical treatment of the solid waste matrices to bind mobile metals. The resultant stabilized wastes are frequently created by mixing the solid incineration residues with Portland cement or other similar products. The Agency has previously granted petitions for stabilized wastes. See, for example, 50 FR 37365, September 13, 1985; 51 FR 41310, November 14, 1986; and 53 FR 15422, April 29, 1988. Similarly, incineration followed by ash stabilization was recently proposed as Best Demonstrated Available Technology (BDAT) for certain hazardous petroleum refining wastes (which contain a combination of certain organics and metals) under 40

CFR Part 268 (i.e., the land disposal restrictions rules) (see 53 FR 11742, April 8, 1988). Data from previous delisting petitions and data gathered as part of the development of the land disposal restriction rules indicate that stabilization can be an effective means of reducing the mobility of toxic metals.

For chemically stabilized wastes, the appropriate method to test for concentrations of toxic metals in waste leachate is the Multiple Extraction Procedure (MEP), rather than the Extraction Procedure. See SW-846, Method 1320. Thus, if Syntex stabilizes its ash or sludge residues, it must use the MEP and compare the resultant leachate concentrations to the delisting levels of concern listed in Condition (3). Thus, Condition (4) has been added to require the appropriate test method in the event that Syntex stabilizes any of the solid incineration residues. (Proposed Conditions (4)-(7) have been renumbered (5)-(8), respectively.)

The Agency assumed a maximum waste volume of 400 cubic yards as input to the VHS model to determine the maximum acceptable MEP concentrations in the stabilized waste. This volume assumes worst case conditions that all of the solid treatment residues will be stabilized and that stabilization will result in a 30 percent volume increase. This worst case volume resulted in the same maximum allowable treatment residue concentrations as listed in Condition (3) because the VHS model predicts similar dilution effects for all waste volumes under 475 cubic yards. Thus, Condition (4) requires that the petitioner meet the delisting levels specified for metals in Condition (3). Additionally, Condition (4) is subject to termination provisions similar to those for Condition (3), i.e., Syntex may discontinue testing (upon EPA approval), except that Syntex must continue to stabilize subsequent batches in order to avoid future testing. This requirement is necessary to ensure that future batches, after testing for mobile metals has terminated, are not hazardous due to leachable metal levels.

If Syntex chooses to stabilize the solid residues, the Agency is requiring that the sampling and analyses for organics and dioxins listed in Conditions (5) and (6) be conducted on the residues prior to stabilization. The basis for this requirement is twofold: (1) For organics (including dioxin), analysis of the incinerator solid residues is much easier than the analysis of stabilized residues and thus lower and more protective analytical quantitation limits would be achieved, and (2) analysis of the unstabilized residues is more

environmentally conservative because it discounts any dilution of constituent concentrations which may occur during stabilization. Further, stabilization is currently used primarily to minimize the mobility of metals and is not well demonstrated for organics. For these reasons, the Agency believes that the appropriate sampling point for organics analysis is prior to stabilization, if used.

Additional Condition

Condition (4)—If Syntex stabilizes any of the kiln and cyclone ash or separator sludge, a Portland cement-type stabilization process must be used and Syntex must collect a composite sample of four grab samples from each batch of stabilized waste. An MEP leachate test must be performed on these composite samples and the leachate analyzed for the EP toxic metals, nickel, and cyanide (using a distilled water extraction for the cyanide leachate analysis) to demonstrate that the maximum allowable treatment residue concentrations listed in Condition (3) are not exceeded during any run of the MEP extraction. Analyses must be performed according to SW-846 methodologies. Any residue which exceed any of the levels listed in Condition (3) must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations. (If the residues are stabilized the analyses required in this condition supercede the analyses required in Condition (3).)

iv. Condition (5)—Organics Analyses. One commenter claimed that the sampling conditions were too ambiguous to provide notice upon which to comment. Although the Agency disagrees, several minor modifications have been made to Condition (5) to clarify the condition. Specifically, the sampling requirements have been clarified to refer to the more specific language of revised Conditions (2) and (3), the termination language (i.e., removal of batch testing requirements) has been moved to Condition (7), the calculation of the solids levels has been revised because of the change in estimated waste volume discussed earlier, and revised health-based regulatory levels have been used to calculate the levels of concern for a number of constituents. These changes, which are discussed in more detail below, do not alter the technical effect of the conditions except as specifically discussed.

Differences between Syntex Proposal and 1985 Exclusion. One commenter believed that the Maximum waste residue concentrations proposed for organics are excessively low and are not necessary to protect human health and the environment. The commenter questioned why any testing for organics is necessary, because the 1985 exclusion did not require batch testing

for organics. The Agency refers the commenter to the discussions earlier in this notice regarding the differences between the 1985 exclusion and the upfront exclusions proposed in 1987 and 1988 for Syntex and the cancelled pesticides.

Differences between Syntex Proposal and Other EPA Program Levels for Organics. One commenter questioned why the maximum allowable waste concentrations for the organics are less than the levels proposed by EPA for the expanded Toxicity Characteristic (see 51 FR 21648, June 13, 1986). As was discussed earlier with respect to a similar question about the delisting levels for metals and the EP toxicity characteristics levels, the Agency believes it is appropriate that the delisting criteria be more conservative than the hazardous waste characteristics.

Health-based Regulatory Levels. One commenter on the proposed exclusion for the cancelled pesticides pointed out a number of differences in the health-based regulatory levels used for the Syntex and cancelled pesticides proposals. The commenter correctly attributed these differences to updates in the health-based regulatory levels and requested that the Syntex exclusion be finalized using the revised values. In direct response to this comment, the Agency has updated the health-based regulatory levels to use the more current and appropriate values for four constituents of concern, specifically, chloroform, 1,2-dichloroethane, dichloroethane, and 2,3,4,6-tetrachlorophenol. Slight modifications (due to the application of a consistent policy on the use of significant figures) were also made to the health-based regulatory levels for dibenz(a,h)anthracene, toluene, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol. The references for the revised numbers are available in the docket.

One commenter stated that it was impossible to comment on the acceptability of the proposed delisting levels because the health-based regulatory levels were not published in the proposal. These health-based regulatory levels were, however, placed in the docket to the notice and were thus available for review to substantiate any comment. Although the Agency believes that availability of such information in the docket fully complies with applicable requirements for notice, the Agency intends to publish such numbers in future proposals.

One commenter objected to the Agency's intention, as stated in the

proposal, to add new constituents to the list of constituents in proposed Conditions (4). The Agency has not added any additional constituents to the list in condition (5) (proposed condition (4)).

Constituents of Concern. One commenter believed that the proposal was unclear as to how the list of constituents required to be analyzed as a condition for exclusion was developed since the list did not exactly match the combined lists in Tables 1 and 2 of the proposal. The Agency notes that benz(a)anthracene was inadvertently omitted in Table 2 of the proposal. Table 2 presented potential products of incomplete combustion and other hazardous constituents of concern identified in Table 4 of the 1985 proposed exclusion (see 50 FR 23725) and should have included benz(a)anthracene. Additionally, as was stated in the Syntex proposal, a number of constituents were not included in the condition because health-based regulatory levels are not available.

In response to a comment discussed earlier which stated that the Agency should consider actual health effects, the Agency has eliminated the testing requirements for toluene, 2,3,4,6-tetrachlorophenol and 2,4,5-trichlorophenol in the solid residues since the maximum allowable treatment residue concentrations exceed 1,000 ppm. As discussed in the cancelled pesticide proposal (see 52 FR 7903), the Agency believes that it is highly unlikely that these constituents could be present at such high levels following incineration in the MIS. This conclusion is supported by (1) analytical test results on residues generated previously by the MIS (see Tables 4 and 5, 50 FR 23725, June 5, 1985 and additional data in the docket to this notice), and (2) the MIS's demonstrated ability to achieve 99.9999 percent destruction and removal efficiency (DRE) as required by 40 CFR 264.343(a)(2).

Calculation of Maximum Allowable Residue Concentrations. One commenter requested clarification on how the Agency calculated the maximum allowable treatment concentrations. While this information was provided in the proposal and in the docket to the proposal, the process used in these calculations is reiterated here. The maximum allowable concentrations represent the maximum waste concentrations which could be managed in the reasonable worst case scenario described by the VHS model and would not exceed the Agency's health-based regulatory level at a drinking water well (i.e., compliance point) 500 feet

downgradient from the hypothetical disposal site. The maximum allowable levels were back-calculated from the health-based regulatory levels for the constituents of concern through the VHS and OLM models. The maximum expected waste volume of the solid residues was used to determine the aquifer dilution which would occur as the landfill leachate moved through the aquifer to the compliance point. The health-based regulatory levels were divided by this dilution factor to calculate the maximum allowable leachate concentrations for each of the constituents of concern. These maximum allowable leachate concentrations were in turn used in the OLM (which predicts leachate concentrations from total waste concentrations and constituent solubilities) to back-calculate the maximum allowable solid waste concentration. The calculations for the maximum allowable wastewater concentrations assumed that the leachate concentrations would be equivalent to the total wastewater concentrations, that is, the wastewater itself would be introduced directly into the aquifer.

Revised Condition

As a result of the comments and factors discussed above, the condition has been modified:

Condition (5): Syntex must generate, prior to disposal of residues, verification data from each eight hour run for each treatment residue (i.e., kiln and cyclone ash, separator sludge, and filtered wastewater) to demonstrate that the maximum allowable treatment residue concentrations listed below are not exceeded. Samples must be collected as specified in Conditions (2) and (3). Analyses must be performed according to SW-846 methodologies. Any solid or liquid residues which exceed any of the applicable levels listed below must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations.

Maximum Allowable Wastewater Concentrations (ppm):

Constituents	Concentrations ¹
Benz(a)anthracene	1×10 ⁻⁴
Benzo(a)pyrene	4×10 ⁻⁵
Benzo(b)fluoranthene	2×10 ⁻⁴
Chloroform	0.07
Chrysene	0.002
Dibenz(a,h)anthracene	9×10 ⁻⁶
1,2-Dichloroethane	0.06
Dichloromethane	0.06
Indeno(1,2,3-cd)pyrene	0.002
Polychlorinated biphenyls	1×10 ⁻⁴
1,2,4,5-Tetrachlorobenzene	0.13

—Continued

Constituents	Concentrations ¹
2,3,4,6-Tetrachlorophenol	12
Toluene	120
Trichloroethylene	0.04
2,4,5-Trichlorophenol	49
2,4,6-Trichlorophenol	0.02

¹ Assumes 3,000,000 pounds of wastewater will be generated.

Maximum Allowable Solid Treatment Residue Concentrations (ppm):

Constituents	Concentrations ²
Benz(a)anthracene	1.1
Benzo(a)pyrene	0.43
Benzo(b)fluoranthene	1.8
Chloroform	5.4
Chrysene	170
Dibenz(a,h)anthracene	0.083
Dichloromethane	2.4
1,2-Dichloroethane	4.1
Indeno(1,2,3-cd)pyrene	330
Polychlorinated biphenyls	0.31
1,2,4,5-Tetrachlorobenzene	720
Trichloroethylene	6.6
2,4,6-Trichlorophenol	3.9

² Corresponds to a maximum waste volume of 475 cubic yards.

v. Condition (6)—Dioxin Analyses. In response to public comment, EPA has made several modifications to proposed Condition (5). These include: Revised maximum allowable solid treatment residue concentrations to account for the revised treatment solids waste volume, use of Method 8290 instead of the Region VII High Resolution Gas Chromatography/High Resolution Mass Spectrometry (HRGC/HRMS) method for dioxin analysis, and specification of practical quantification limits (PQLs). These modifications, as well as other issues of concern to the commenters, are discussed in more detail in the following subsections.

Differences between Syntex Proposal and 1985 Exclusion. One commenter objected to the inclusion of testing for dioxin because it is inconsistent with the 1985 exclusion and because the commenter did not believe these levels were accurate. As stated earlier, the conditional testing requirements have been added to verify that the MIS can treat Syntex's sludge as successfully as the petitioner claims it can. If the petition were a conventional petition instead of an upfront petition, the conditional testing requirements may not have been needed. One commenter also claimed that the sampling conditions were too ambiguous to provide notice upon which to comment.

Although the Agency disagrees, several minor modifications have been made to Condition (6) to clarify the condition.

One commenter referenced the 1985 exclusion, pointing out that explicit limits were not set for dioxin at that time, and that the Agency should be consistent and apply similar criteria to the Syntex petition. As stated earlier in the Agency's response to general comments, the Agency's general approach to dioxin and that of the delisting program have developed considerably since the 1985 exclusion was promulgated, and the 1985 exclusion was not an upfront exclusion. Quantitative evaluation criterion, such as the OLM/VHS modeling approach, were not available at the time of the 1985 exclusion. It is, therefore, not appropriate to apply the same criteria to the Syntex petition as were used in 1985.

One commenter noted that the dioxin levels in the proposal are significantly more conservative than the levels considered in the 1985 exclusion. The commenter further noted that the Agency indicated in 1985 that the 1985 detection limit levels for dioxin in solids and aqueous media were not of regulatory concern, even though lower levels were achievable. In 1985, the Agency viewed the determination of dioxins by HRGC/HRMS as an experimental method. The Agency now believes that the better detection limits that are available (see discussion below on Method 8290), and the more conservative levels proposed for this exclusion, are more consistent with the Agency's unit cancer risk values and with the evolution of its reasonable worst case modeling approach. The agency also believes that the development of a more conservative approach is a reasonable means of ensuring protection of human health and the environment.

One commenter submitted a catalog of thermal treatment units which have treated dioxin-contaminated materials in the U.S. and claimed that few of these units have achieved the dioxin delisting levels specified in the proposed exclusion. The Agency has examined the commenter's catalog and has concluded that the referenced thermal treatment units may indeed have actually achieved the delisting levels of concern, as each unit achieved non-detectable levels of dioxin in their ash. Without more information, there is no means to know whether the units did or did not achieve the delisting levels. Notwithstanding, the Agency notes that in some cases the detection limits achieved were equivalent to or below the PQLs finalized in today's exclusion.

The agency also notes that if the data presenting detected levels of TCDD in the 1985 exclusion from the then experimental HRGC/HRMS analysis were re-evaluated using the Delisting Program's current evaluation criteria, the detected levels of 2,3,7,8-TCDD and TCDDs in the 1985 petitioned residues would have fallen below current levels of concern. Specifically, Table 8 of the proposal for the 1985 exclusion (see 50 FR 23727, June 5, 1985) presented uncertified analytic results of 0.7 ppt of 2,3,7,8-TCDD and 2.6 ppt of TCDDs in the kiln ash. Using the Toxicity Equivalent Factors currently in use by EPA and presented in the Syntex proposal (Risk Assessment Forum, "Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzo-p-Dioxins and Dibenzofurans (CDDs and CDFs)", October, 1986), these levels are equivalent to 0.72 ppt TCDD equivalents ($0.7 \text{ ppt} + (2.6 \text{ ppt} - 0.7 \text{ ppt}) \times (0.001) = 0.72 \text{ ppt}$). This TCDD equivalent value, when evaluated in the OLM/VHS model with the estimated solids volume of 2.4 million pounds for the 1985 exclusion, results in a compliance point concentration of 0.1 parts per quadrillion (ppq), which is below the health-based regulatory level of 0.2 ppq. Therefore, the 1985 exclusion, if reevaluated today, would pass the same analysis required for the Syntex (and for the cancelled pesticides) petition.

One commenter expresses confusion regarding the Agency's discussion of the calculation of the 2,3,7,8-TCDD toxicity equivalent on p. 33444 of the proposed rule. The sentence of concern to the commenter should have read "The toxicity equivalent levels are calculated by multiplying the factors listed below by any detected levels of tetra-, penta-, or hexachlorodibenzo-p-dioxin or -furan and summing the values for comparison to the equivalent levels set in Condition (5)." The underlined text was inadvertently omitted in the proposal.

Health Based Regulatory Levels and Differences between Syntex Proposal and Other EPA Program Levels for Dioxin. One commenter noted that the levels of concern in the proposed exclusion are higher than standards proposed by the State of Missouri and that the higher levels proposed by EPA may thus have adverse impacts on fish and wildlife resources. While the commenter did not identify specific constituents of concern or standards from the State of Missouri, the Agency assumes that the commenter was referring to the State's zero discharge criteria for dioxin under the National Pollution Discharge Elimination System

(NPDES) program. The Agency believes that the level of concern finalized in today's rule of 0.002 ppt of 2,3,7,8-TCDD equivalents in the petitioned wastewater is not of concern because the finite volume of wastewater to be generated would be subject to significant in-stream dilution which would occur if the waste were discharged directly. The Agency notes, however, that petitioners who successfully petition the EPA for an exclusion for their wastes are still responsible for compliance with any more stringent state and local regulations which may be applicable.

In contrast, as stated above, several commenters objected to the proposed dioxin delisting levels as being unreasonably low in light of the Center for Disease Control (CDC) level of 1 ppb for residential soils. Another commenter stated that the proposed delisting levels for dioxin are far more restrictive than the levels currently used in Missouri (i.e., the CDC's 1 ppb level) to designate residential properties as "dioxin sites". This commenter believes that, if the CDC level is in fact correct, other property where potential exposure to the public would be equal to or less than exposure for residential use should be "delisted" at 2,3,7,8-TCDD levels below 1 ppb. One commenter believes that the proposed delisting level of 0.5 ppt for solids is unnecessary to protect the public health and that the decrease in risk between 1 ppb and 0.5 ppt will be very small and difficult to quantify.

As discussed earlier, the Agency believes that the CDC and VHS model approaches result in similar levels of concern when equivalent health-based levels are used as the basis for the analyses. The Agency believes that reasonable worst case assumptions, including the use of conservative health-based levels, are appropriate in establishing protective delisting levels for this exclusion.

One commenter challenged the Agency's unit cancer risk value used to derive the dioxin health-based regulatory level for the VHS model groundwater exposure scenario in this exclusion. The Agency acknowledges that the value used is conservative, but continues to believe that this conservative unit cancer risk value is appropriate for the purposes of this delisting evaluation. The Agency's full response to these comments is available in the docket to this rule (see "Response to Public Comments on Health-Based Levels Used in the Syntex Proposed Exclusion", April 1988).

Maximum Allowable Dioxin Treatment Residue Concentrations.

Some commenters on the Syntex proposal expressed confusion about the presentation of the dioxin delisting levels and the discussion of the detection limits. A number of commenters were concerned that the Agency was requiring that the petitioner achieve detection limits that are as low as the delisting levels. As stated in the Syntex proposal, the Agency recognizes that analytical results at the delisting levels are not currently achievable using available technology and rather intended that the petitioner use the best available analytical method. Further discussion on detection limits is presented later in this section.

The revised maximum allowable solid treatment residues concentration is 5 ppt due to the revised solid residue volume.

Required HRGC/HRMS Method. One commenter stated that the Agency should only require the petitioner to use Method 8290, which is a high resolution gas chromatography, low resolution mass spectrometry (HRGC/LRMS) method, since the Agency granted an exclusion for the 1985 petition on the basis of Method 8290 results. The commenter stated that it is arbitrary of the Agency to require HRGC/HRMS analysis now when HRGC/LRMS was adequate before. Although the Agency stated in 1985 that "in evaluating the detection limits set for kiln ash, CHEAF media, and other solids for the CDDs and CDFs, the Agency does not consider these levels to be of concern", this statement and the means by which the Agency evaluated concerns reflected the technological limits on abilities to detect constituents. Given the levels of concern predicted by the delisting modeling tools, EPA believes that the petitioned residues should be analyzed by the best available method which achieves practical quantitation limits which are as close as possible to the delisting levels. The modeling tools used to determine the maximum allowable treatment residue concentrations were not available at the time of the 1985 exclusion. In addition, HRGC/HRMS methods were experimental technology at that time and no sufficiently refined and established for routine use. Given the current availability of the delisting modeling tools which predict that low levels of dioxin may be of concern, and the availability of HRGC/HRMS analysis, the Agency believes that it is appropriate to make improvements in the methodology used in 1985 in order to develop environmentally and technically responsible exclusions.

The Syntex proposal stated that the Region VII HRGC/HRMS analytical

method would be used when analyzing the petitioned residues for dioxin. As previously noted, subsequent to the publication of the Syntex proposal, the Agency proposed and granted an exclusion for the residues from the incineration of dioxin-contaminated cancelled pesticides. Very similar comments were received on the two proposed exclusions and on the analytical method for detecting dioxin, many from the same commenter (Syntex). In preparing responses to these comments, the Agency's approach to upfront exclusions has been refined. Subsequently the Agency has determined to modify Syntex's exclusion to require use of Method 8290 (which is very similar to the Region VII HRGC/HRMS method). Method 8290, as described in the cancelled pesticides proposed and final exclusion, has been subjected to a rigorous development and single laboratory validation process by the EPA Office of Solid Waste (OSW) and the Environmental Monitoring and Systems Laboratory in Las Vegas (EMSL/LV). A full description of the method is available in the docket to this notice.

One commenter protested the Agency's proposed requirement that a HRGC/HRMS method be used to analyze the residues for dioxin. The commenter objected to the use of a method which is complex, costly, has not been subject to general notice and comment through rule-making, and is not in final form. The commenter further stated that laboratories are inexperienced in detecting dioxin homologs other than the 2,3,7,8-TCDD homolog. As stated in the cancelled pesticides proposal and further discussed in the cancelled pesticides final rule, Method 8290 has been subjected to single laboratory validation (see ORD Publication EPA 600/4-86-004, "Protocol for the Analysis of 2,3,7,8-Tetrachlorodibenzo-p-dioxin by High Resolution Gas Chromatography/High Resolution Mass Spectrometry", January, 1986). HRGC/HRMS analysis has been available for several years, and while it is a sophisticated method, it is no longer an experimental procedure. Contrary to the commenter's concerns, a number of Agency and commercial laboratories have participated in the development of this method and are skilled in the detection of a variety of dioxin and furan homologs. As described above, EPA is using Method 8290 in response to challenges to the use of the Region VII HRGC/HRMS method. EPA has received comment on the operation and use of Method 8290 on the cancelled pesticides proposal. Further,

SW-846 methods can be used as regulatory requirements in delistings by incorporation into actual rulemakings. This was proposed to be done for the Region VII method, and is being done for Method 8290 in response to the challenges to the Region VII method.

The commenter also expressed concern with the ambiguity associated with the Agency's stated intent to evaluate analytical data to ascertain whether the analytical methods have been conducted properly. The Agency's evaluation of the sufficiency of chemical analyses is multifaceted and readers are referred to SW-846 and the written protocol for individual methods for further discussion of quality assurance procedures. Generally, the Agency considers the results of accuracy and precision QA/QC data as measures of the usefulness of analytical results.

One commenter expressed confusion regarding the Agency's evaluation of detected homologs at levels below the maximum allowable treatment residue concentrations. In response, all detected homologs will be included in the calculation of the 2,3,7,8-TCDD toxic equivalent concentration, regardless of whether the individual homolog is detected above or below the applicable maximum allowable concentration for 2,3,7,8-TCDD equivalents listed in Condition (6).

One commenter recommended that toluene be used instead of benzene in the extraction phase of the analysis. As presented in the protocol for Method 8290, toluene is an acceptable extraction solvent for soil matrices and thus can be used in the analysis.

The Agency acknowledges that there are complications associated with the use of HRGC/HRMS methods. Nevertheless, the Agency is responsible for choosing an analytical method which is best suited for measuring the potential hazard of the Syntex incineration residues, not the method which is most convenient and inexpensive. Given the need for high analytical sensitivity to assure careful analyses of residue constituents, the Agency has selected Method 8290. Additionally, the Agency notes that there are a number of laboratories which are familiar with and experienced in the conduct of Method 8290 and therefore would know how to evaluate dioxin homologs properly and whether the method was properly being implemented. Many of these laboratories participated in the development of the method and should be able to provide analytical services with a minimal turn-around and adequate quality control.

Practical Quantitation Limits (PQLs). Several commenters objected to the detection limits specified in the proposal, claiming that they could not be achieved. Further, one commenter objected to the use of these levels and the HRGC/HRMS approach because it would produce false positive results. To further clarify proposed Condition (5) in response to these comments, EPA is specifying in Condition (6) that the petitioner achieve certain practical quantitation limits (PQLs) when analyzing the petitioned residues for dioxin. Several commenters suggested that routinely achievable detection limits (i.e., PQLs) be specified in the exclusion. EPA currently believes that laboratories that are performing Method 8290 on incineration matrices (which are fairly free of interferences) should be able to achieve PQLs of 15 ppt for solids and 120 ppq for wastewaters. The Agency will require these PQLs as the maximum acceptable PQLs. As discussed previously in the cancelled pesticides proposal and final rule, EPA will specify in exclusions involving dioxin that petitioners provide PQLs rather than minimum detection limits (MDL) for the following reasons:

- PQLs provide a reasonable degree of certainty that true values, rather than false negatives (or false positives), are presented. (If the true sample concentration is equal to the MDL, the analytical results will not be quantitative, i.e., will be reported as "less than the MDL" on about 50 percent of all analyses.)

- The PQL takes into account a number of factors that are generally difficult to control and that contribute to the uncertainty associated with the MDL, such as high background levels, significant matrix interference, and operator and instrument variability. PQLs therefore provide a greater degree of certainty as to the actual constituent concentrations.

Other examples of instances where the Agency suggests the use of PQLs or is proposing to establish PQLs (rather than MDLs) include a proposed rulemaking for setting PQLs for volatile organic contaminants in drinking water (see 50 FR 46902, November 13, 1985) as well as SW-846 Methods 8240 and 8270 for gas chromatography/mass spectrometry (GC/MS) measurements of organic contaminants.

PQLs are usually determined through interlaboratory studies of the analytical methods. In the absence of rigorous interlaboratory studies, the Agency has estimated PQLs to be from approximately 3 to 10 times the MDL. Based on data submitted by a number of EPA laboratories which have routinely

conducted Method 8290, the MDL for 2,3,7,8-TCDD is generally below 5 ppt for solids and 40 ppq for wastewaters. Using a factor of three to determine the resultant PQL, most highly qualified laboratories should be able to achieve PQLs for 2,3,7,8-TCDD of 15 ppt for solids and 120 ppq for wastewaters. The Agency believes these PQLs are also appropriate for all tetra- and pentachlorinated dibenzo-p-dioxins and dibenzofurans (TCDFs and PeCDFs), while PQLs for the hexachlorinated homologs (HxCDDs and HxCDFs) should be 37 ppt for solids and 300 ppq for wastewaters. The basis for the use of these low PQLs for dioxin is that the petitioned residues to be analyzed will be relatively free of interferences due to the incineration process.

Revised Condition

In response to public comment, the condition has been modified as follows:

Condition (6): Syntex must generate, prior to disposal of residues, verification data from each eight hour run for each treatment residue (i.e., kiln and cyclone ash, separator sludge, and filtered wastewater) to demonstrate that the residues do not contain tetra-, penta-, or hexachlorodibenzo-p-dioxins or furans at levels of regulatory concern. Samples must be collected as specified in Conditions (2) and (3). The TCDD equivalent levels must be less than 2 ppq for the wastewaters and less than 5 ppt for the solid treatment residues. Any residues with a detected dioxins or furans in excess of these levels must be retreated or must be disposed as acutely hazardous. Method 8290, a high resolution gas chromatography and high resolution mass spectroscopy (HRGC/HRMS) analytical method, must be used. For tetra- and pentachlorinated dioxin and furan homologs, the maximum practical quantitation limit must not exceed 15 ppt for solids and 120 ppq for wastewaters. For hexachlorinated dioxin and furan homologs, the maximum practical quantitation limit must not exceed 37 ppt for solids and 300 ppq for wastewaters.

vi. Condition (7)—Termination Provision and Data Submittal Requirements. Several commenters approved of the concept of termination of the verification testing after an appropriate demonstration. One commenter suggested that the Agency develop a statistical approach to determine the appropriate time to stop testing. The Agency agrees that upfront exclusions for certain wastes (specifically, wastes that are variable) may require a different type of termination provision since analytical data from four consecutive batches may not be representative of constituent variability within the total waste volume. Syntex, however, made an adequate demonstration that the untreated sludge is uniform and the

Agency therefore determined that the minimum number of samples specified in 40 CFR 260.22(h) (i.e., four) would be adequate to support the termination provision with the caveat that the four samples (of each residue) be taken from consecutive batches and all samples pass the delisting criteria.

In response to public comment, proposed Condition (6) has been modified to include the termination language which was originally incorporated as part of proposed Conditions (4) and (5), and to apply to Conditions (2), (3), and (4) (which discuss testing requirements for the EP toxic metals, nickel, and cyanide and have been modified and added), to provide for termination upon demonstration of four consecutive clean batches. While Syntex has not substantiated the abuse of these metals and cyanide in the waste to be incinerated, the Agency believes that the verification testing required will be adequate to insure that the incineration residues will not contain hazardous levels of these substances. If hazardous levels are in fact detected, continuous testing would be necessary and all hazardous batches would need to be retreated or disposed in accordance with Subtitle C.

Revised Condition

Condition (7): (A) The test data from Conditions (1), (2), (3), (4), (5) and (6) must be kept on file by Syntex for inspection purposes and must be compiled, summarized, and submitted to the Section Chief, Variances Section, PSPD/OSW (WH-563), US EPA, 401 M Street, S.W., Washington, D.C. 20460 by certified mail on a monthly basis and when the treatment of the lagoon sludge is concluded. All data submitted will be placed in the RCRA docket.

(B) The testing requirements for Conditions (2), (3), (4), (5), and (6) will continue until Syntex provides the Section Chief, Variances Section, with the results of four consecutive batch analyses for the petitioned wastes, none of which exceed the maximum allowable treatment residue concentrations listed in these conditions and the Section Chief, Variances Section, notifies Syntex that the conditions have been lifted.

vii. Condition (8)—Certification Provisions. No comments were received on proposed Condition (7) and no modifications were made except to renumber it as Condition (8).

3. Final Agency Decision

For the reasons stated in the proposal, the Agency believes that the incineration residues from the treatment of the Syntex lagoon sludge, when subject to the verification testing requirements specified in the exclusion, should be removed from hazardous

waste control. The Agency, therefore, is granting a conditional final exclusion to Syntex Agribusiness, Inc. for the incineration residues generated from the treatment of lagoon sludge from Syntex's Springfield, Missouri site in the EPA Mobile Incineration System. These wastes are listed as EPA Hazardous Waste No. F020 and will be generated at the Denney Farm site in McDowell, Missouri. The exclusion remains in effect unless the wastes or waste volumes vary from those described in the petition, proposal, and this notice. The facility would require a new exclusion if the treatment process is altered, and accordingly would need to file a new petition. The facility must treat any such wastes as hazardous unless and until a new exclusion is granted.

Although management of the wastes covered by this petition is relieved from Subtitle C jurisdiction, the generator of a delisted waste must either treat or dispose of the waste in an on-site facility, or ensure that the waste is delivered to an off-site storage, treatment, or disposal facility, either of which is permitted, licensed, or registered by a State to manage municipal or industrial solid waste. Alternatively, the delisted waste may be delivered to a facility that beneficially uses or reuses, or legitimately recycles or reclaims the waste, or treats the waste prior to such beneficial use, reuse, recycling, or reclamation.

III. Effective Date

This rule is effective immediately. The Hazardous and Solid Waste Amendments of 1984 amended section 3010 of RCRA to allow rules to become effective in less than 6 months when the regulated community does not need the 6-month period to come into compliance. That is the case here because this rule reduces, rather than increases, the existing requirements for persons generating hazardous wastes. In light of the unnecessary hardship and expense

which would be imposed on this petitioner by an effective date 6 months after promulgation and the fact that a 6-month deadline is not necessary to achieve the purpose of Section 3010, EPA believes that this rule should be effective immediately. These reasons also provide a basis for making this rule effective immediately under the Administrative Procedure Act, pursuant to 5 U.S.C. 553(d).

IV. Limited Effect of Federal Exclusion

The final exclusion being granted today is being issued under the Federal (RCRA) delisting program. States, however, are allowed to impose their own, non-RCRA, regulatory requirements that are more stringent than EPA's, pursuant to section 3009 of RCRA. These more stringent requirements may include a provision which prohibits a Federally issued exclusion from taking effect in the State. Since a petitioner's waste may be regulated under a dual system (i.e., both Federal (RCRA) and State (non-RCRA) programs), petitioners are urged to contact their State regulatory authority to determine the current status of their wastes under State law.

V. Regulatory Impact

Under Executive Order 12291, EPA must judge whether a regulation is "major" and therefore subject to the requirements of a Regulatory Impact Analysis. This rule to grant an exclusion is not major since its effect is to reduce the overall costs and economic impact of EPA's hazardous waste management regulations. This reduction is achieved by excluding wastes generated at a specific facility from EPA's lists of hazardous wastes, thereby enabling the facility to treat its waste as nonhazardous. There is no additional economic impact, therefore, due to today's rule.

VI. Regulatory Flexibility Act

Pursuant to the Regulatory Flexibility

Act, 5 U.S.C. 601-612, whenever an Agency is required to publish a general notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis which describes the impact of the rule on small entities (i.e., small businesses, small organizations, and small governmental jurisdictions). The Administrator may certify, however, that the rule will not have a significant economic impact on a substantial number of small entities.

This amendment will not have an adverse economic impact on small entities since its effect will be to reduce the overall costs of EPA's hazardous waste regulations and is limited to one facility. Accordingly, I hereby certify that this regulation will not have a significant economic impact on a substantial number of small entities. This regulation, therefore, does not require a regulatory flexibility analysis.

List of Subjects in 40 CFR Part 261

Hazardous materials, Waste treatment and disposal, Recycling.

Date: May 26, 1988.

Jeffery Denit,

Deputy Director, Office of Solid Waste.

For the reasons set out in the preamble, 40 CFR Part 261 is amended as follows:

PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

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

Authority: Secs. 1006, 2002(a), 3001, and 3002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 U.S.C. 6905, 6912(a), 6921, and 6922).

2. In Appendix IX, add the following waste stream in alphabetical order to Table 1 as indicated:

Appendix IX—Wastes Excluded Under §§ 260.20 and 260.22

TABLE 1—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES

Facility	Address	Waste description
Syntex Agribusiness.....	Springfield, MO.....	Kiln ash, cyclone ash, separator sludge, and filtered wastewater (except spent activated carbon) (EPA Hazardous Waste No. F020 generated during the treatment of wastewater treatment sludge by the EPA's Mobile Incineration System at the Denney Farm Site in McDowell, Missouri after June 2, 1988, so long as: (1) The incinerator is monitored continuously and is in compliance with operating permit conditions. Should the incinerator fail to comply with the permit conditions relevant to the mechanical operation of the incinerator, Syntex must test the residues generated during the run when the failure occurred according to the requirements of Conditions (2) through (6), regardless of whether or not the demonstration in Condition (7) has been made.

TABLE 1—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES—Continued

Facility	Address	Waste description
		(2) Four grab samples of wastewater must be composited from the volume of filtered wastewater collected after each eight hour run and, prior to disposal the composite samples must be analyzed for the EP toxic metals, nickel, and cyanide. If arsenic, chromium, lead, and silver EP leachate test results exceed 0.61 ppm; barium levels exceed 12 ppm; cadmium and selenium levels exceed 0.12 ppm; mercury levels exceed 0.02 ppm; nickel levels exceed 6.1 ppm; or cyanide levels exceed 2.4 ppm, the wastewater must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations. Analyses must be performed according to SW-846 methodologies.
		(3) One grab sample must be taken from each drum of kiln and cyclone ash generated during each eight hour run; all grabs collected during a given eight hour run must then be composited to form one composite sample. A composite sample of four grab samples of the separator sludge must be collected at the end of each eight hour run. Prior to the disposal of the residues from each eight hour run, an EP leachate test must be performed on these composite samples and the leachate analyzed for the EP toxic metals, nickel, and cyanide (using a distilled water extraction for the cyanide extraction) to demonstrate that the following maximum allowable treatment residue concentrations listed below are not exceeded. Analyses must be performed according to SW-846 methodologies. Any residues which exceed any of the levels listed below must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations.
		Maximum Allowable Solids Treatment Residue EP Leachate Concentrations (mg/L)
		Arsenic—1.6
		Barium—32
		Cadmium—0.32
		Chromium—1.6
		Lead—1.6
		Mercury—0.065
		Nickel—16
		Selenium—0.32
		Silver—1.6
		Cyanide—6.5
		(4)—If Syntex stabilizes any of the kiln and cyclone ash or separator sludge, a Portland cement-type stabilization process must be used and Syntex must collect a composite sample of four grab samples from each batch of stabilized waste. An MEP leachate test must be performed on these composite samples and the leachate analyzed for the EP toxic metals, nickel, and cyanide (using a distilled water extraction for the cyanide leachate analysis) to demonstrate that the maximum allowable treatment residue concentrations listed in Condition (3) are not exceeded during any run of the MEP extraction. Analyses must be performed according to SW-846 methodologies. Any residues which exceed any of the levels listed in Condition (3) must be retreated to achieve these levels or must be disposed in accordance with all applicable hazardous waste regulations. (If the residues are stabilized, the analyses required in this condition supercede the analyses required in Condition (3).)
		(5) Syntex must generate, prior to disposal of residues, verification data from each eight hour run from each treatment residue (i.e., kiln and cyclone ash, separator sludge, and filtered wastewater) to demonstrate that the maximum allowable treatment residue concentrations listed below are not exceeded. Samples must be collected as specified in Conditions (2) and (3). Analyses must be performed according to SW-846 methodologies. Any solid or liquid residues which exceed any of the levels listed below must be retreated to achieve these levels or must be disposed in accordance with Subtitle C of RCRA.
		Maximum Allowable Wastewater Concentrations (ppm):
		Benzo(a)anthracene— 1×10^{-4}
		Benzo(a)pyrene— 4×10^{-5}
		Benzo(b)fluoranthene— 2×10^{-4}
		Chloroform—0.07
		Chrysene—0.002
		Dibenz(a,h)anthracene— 9×10^{-6}
		1,2-Dichloroethane—0.06
		Dichloromethane—0.06
		Indeno(1,2,3-cd)pyrene—0.002
		Polychlorinated biphenyls— 1×10^{-4}
		1,2,4,5-Tetrachlorobenzene—0.13
		2,3,4,6-Tetrachlorophenol—12
		Toluene—120
		Trichloroethylene—0.04
		2,4,5-Trichlorophenol—49
		2,4,6-Trichlorophenol—0.02
		Maximum Allowable Solid Treatment Residue Concentrations (ppm):
		Benzo(a)anthracene—1.1
		Benzo(a)pyrene—0.43
		Benzo(b)fluoranthene—1.8
		Chloroform—5.4
		Chrysene—170
		Dibenz(a,h)anthracene—0.083
		Dichloromethane—2.4
		1,2-Dichloroethane—4.1
		Indeno(1,2,3-cd)pyrene—330
		Polychlorinated biphenyls—0.31
		1,2,4,5-Tetrachlorobenzene—720
		Trichloroethylene—6.6
		2,4,6-Trichlorophenol—3.9

TABLE 1—WASTES EXCLUDED FROM NON-SPECIFIC SOURCES—Continued

Facility	Address	Waste description
		(6) Syntex must generate, prior to disposal of residues, verification data from each eight hour run for each treatment residue (i.e., kiln and cyclone ash, separator sludge, and filtered wastewater) to demonstrate that the residues do not contain tetra-, penta-, or hexachlorodibenzo-p-dioxins or furans at levels of regulatory concern. Samples must be collected as specified in Conditions (2) and (3). The TCDD equivalent levels for wastewaters must be less than 2 ppq and less than 5 ppt for the solid treatment residues. Any residues with detected dioxins or furans in excess of these levels must be retreated or must be disposed as acutely hazardous. Method 8290, a high resolution gas chromatography and high resolution mass spectroscopy (HRGC/HRMS) analytical method, must be used. For tetra- and pentachlorinated dioxin and furan homologs, the maximum practical quantitation limit must not exceed 15 ppt for solids and 120 ppq for wastewaters. For hexachlorinated homologs, the maximum practical quantitation limit must not exceed 37 ppt for solids and 300 ppq for wastewaters.
		(7)(A) The test data from Conditions (1), (2), (3), (4), (5) and (6) must be kept on file by Syntex for inspection purposes and must be compiled, summarized, and submitted to the Section Chief, Variances Section, PSPD/OSW (WH-563), US EPA, 401 M Street, S.W., Washington, D.C. 20460 by certified mail on a monthly basis and when the treatment of the lagoon sludge is concluded. All data submitted will be placed in the RCRA docket.
		(B) The testing requirements for Conditions (2), (3), (4), (5), and (6) will continue until Syntex provides the Section Chief, Variances Section, with the results of four consecutive batch analyses for the petitioned wastes, none of which exceed the maximum allowable treatment residue concentrations listed in these conditions and the Section Chief, Variances Section, notifies Syntex that the conditions have been lifted.
		(8) Syntex must provide a signed copy of the following certification statement when submitting data in response to the conditions listed above: "Under civil and criminal penalty of law for the making or submission of false or fraudulent statements or representations, I certify that the information contained in or accompanying this document is true, accurate, and complete. As to the (those) identified section(s) of this document for which I cannot personally verify its (their) accuracy, I certify as the company official having supervisory responsibility for the persons who, acting under my direct instructions, made the verification that this information is true, accurate and complete."

[FR Doc. 88-12362 Filed 6-1-88; 8:45 am]
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DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 566

[Docket No. 71.1; Notice 3]

Manufacturer Identification

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.
ACTION: Final rule; correction.

SUMMARY: This document corrects two citation references in 49 CFR Part 566, *Manufacturer Identification*. Part 566 requires motor vehicle and motor vehicle equipment manufacturers to supply NHTSA with information identifying themselves, and describing their products.

DATES: This correction is effective June 2, 1988.

FOR FURTHER INFORMATION CONTACT: John F. Tilghman, Office of the Chief Counsel, National Highway Traffic Safety Administration, 400 Seventh Street NW., Washington, DC, 20590, (202) 366-2992.

SUPPLEMENTARY INFORMATION: On November 2, 1971, NHTSA published a final rule adding Part 566, *Manufacturer Identification*, to title 49 of the Code of

Federal Regulations (CFR). (36 FR 20977, November 2, 1971.) This Part requires a manufacturer of motor vehicle or motor vehicle equipment to supply NHTSA with information identifying the manufacturer, and describing its products.

It has come to the agency's attention that § 566.6 incorrectly refers to § 566.4 in two instances. In the first instance, there is a reference to manufacturers required to submit information under § 566.4. In the second instance, there is a reference to information specified under paragraphs (a) through (c) of § 566.4. In both instances, the correct reference is § 566.5, not § 566.4.

These technical corrections to Part 566 impose no new duties or obligations on any party, nor alter existing ones. Making these amendments simply ensures that the public will have a correct copy of Part 566 requirements. For the preceding reasons, NHTSA finds that notice and comment on this correction notice are unnecessary, and that there is good cause for making the amendments effective in less than 30 days.

Therefore, 49 CFR 566.6 is amended as follows:

PART 566—[AMENDED]

1. The authority citation for Part 566 continues to read as follows:

Authority: Secs. 112 and 119, National Traffic and Motor Vehicle Safety Act (15

U.S.C. 1401 and 1407); delegation of authority at 49 CFR 1.50.

2. Section 566.6 is amended as follows:

§ 566.6 Submittal of information.

In § 566.6, remove internal references to "§ 566.4" and add in its place, "§ 566.5."

Issued on May 26, 1988.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 88-12320 Filed 6-1-88; 8:45 am]

BILLING CODE 4910-59-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 661

[Docket No. 80482-8082]

Ocean Salmon Fisheries Off the Coasts of Washington, Oregon, and California

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of inseason adjustment.

SUMMARY: NOAA announces an inseason adjustment to the recreational ocean salmon management measures in the subarea from the Queets River to Klipsan Beach, Washington. The adjustment modifies the southern boundary of this subarea (currently at

Klipsan Beach) to Leadbetter Point, Washington, during July 3-10, 1988. The Director, Northwest Region, NMFS (Regional Director), has determined, in consultation with representatives of the Pacific Fishery Management Council, the Washington Department of Fisheries (WDF), and the Oregon Department of Fish and Wildlife (ODFW), that the adjustment is necessary to prevent a shift in fishing effort into this subarea and to prolong the recreational fishery. This action is intended to maximize the harvest of chinook and coho salmon in this subarea without exceeding the ocean share of chinook salmon allocated to the recreational fishery.

EFFECTIVE DATE: Effective on May 27, 1988. Comments on this adjustment will be received until June 13, 1988.

ADDRESS: Comments may be mailed to Rolland A. Schmitt, Director, Northwest Region, NMFS, 7600 Sand Point Way NE., BIN C15700, Seattle, WA 98115-0070. Information relevant to this notice has been compiled in aggregate form and is available for public review during business hours at the same address.

FOR FURTHER INFORMATION CONTACT: William L. Robinson at 206-526-6140.

SUPPLEMENTARY INFORMATION:

Regulations governing the ocean salmon fisheries are codified at 50 CFR Part 661. Management measures for 1988 were effective on May 1, 1988 (53 FR 16002, May 4, 1988). The 1988 recreational fishery for all salmon species north of Cape Falcon, Oregon, is divided into three subareas. From the U.S.-Canada border to the Queets River, Washington (northern subarea) and from the Queets River to Klipsan Beach, Washington (central subarea), the season will open on July 3. From Klipsan Beach to Cape Falcon, Oregon (southern subarea), the season will open on July 11. The seasons in all three subareas will continue through the earliest of September 5, attainment of subarea coho quotas, or attainment of an overall quota of 29,800 chinook salmon for the area between the U.S.-Canada border to Cape Falcon, Oregon.

A shift in fishing effort of vessels that normally operate in the southern

subarea into the central subarea is anticipated during July 3-10, the period when the central subarea is open and the southern subarea is still closed. According to the best available information, this increase in fishing effort could likely result in earlier closure of the recreational fishery north of Cape Falcon due to a more rapid attainment of the overall chinook quota, with a large portion of the quota of 50,000 coho salmon for the central subarea remaining unharvested. By moving the southern boundary of the central subarea, which is currently at Klipsan Beach, northward to Leadbetter Point, Washington, the shift in fishing effort should be prevented. This boundary modification is intended to prolong the recreational fishery and to maximize the available harvest of chinook and coho salmon in the central subarea as established in the preseason announcement of the 1988 management measures.

Therefore, NOAA issues this notice to adjust the recreational salmon fishery in the exclusive economic zone (EEZ) from the Queets River to Klipsan Beach, Washington, by modifying the southern boundary of this subarea (currently at Klipsan Beach) to Leadbetter Point, Washington (46°38'10" North latitude) from 0001 hours local time July 3, 1988 through 2400 hours local time July 10, 1988. The closure from 6 to 200 nautical miles of shore remains in effect (53 FR 16002). Beginning at 0001 hours on July 11, 1988, the southern boundary of the central subarea will again be at Klipsan Beach (46°28'12" North latitude).

This notice must be issued as soon as possible to provide immediate notification to fishermen and charter boat operators and to prevent scheduling difficulties or inopportune charter trip bookings. The Secretary has determined, therefore, that good cause exists to issue this notice immediately without affording a prior opportunity for public comment. Therefore, this notice is effective on the date of filing for public inspection with the Office of the Federal Register. Public comments on this notice will be received at the above address for a period of 15 days after the effective date.

Federal regulations at § 661.21(b)(1)(v) authorize the modification of management boundaries if certain findings are made as described in the appendix to 50 CFR Part 661, Section III.B. Accordingly, the Regional Director has determined this inseason adjustment is consistent with fishery regimes established by the U.S.-Canada Pacific Salmon Commission, ocean escapement goals, conservation of the salmon resource, any adjudicated Indian fishing rights, and the ocean allocation scheme in the ocean salmon fishery management plan as revised by the emergency rule implementing the 1988 management measures. This inseason adjustment is based on consideration of the predicted sizes of salmon runs, harvest quotas, and hooking mortality limits for the area and total allowable impact limitations, and predicted fishing effort for the area to the end of the scheduled season.

This notice does not apply to treaty Indian fisheries or to other fisheries which may be operating in other areas.

The Regional Director consulted with representatives of the Pacific Fishery Management Council, WDF, and ODFW regarding an adjustment of the recreational fishery between the Queets River and Klipsan Beach, Washington. The representative of WDF confirmed that Washington will manage the recreational fishery in state waters adjacent to this subarea of the EEZ in accordance with this federal action.

Other Matters

This action is authorized by § 661.23 and is in compliance with Executive Order 12291.

List of Subjects in 50 CFR Part 661

Fisheries, Fishing, Indians.

Authority: 16 U.S.C. 1801 *et seq.*

Dated: May 27, 1988.

Ann D. Terbush,

Acting Director, Office of Fisheries Conservation and Management, National Marine Fisheries Service.

[FR Doc. 88-12421 Filed 5-27-88; 4:57 pm]

BILLING CODE 3510-22-M