

The official record for this rulemaking, as well as the public version, as described above will be kept in paper form. Accordingly, EPA will transfer any copies of objections and hearing requests received electronically into printed, paper form as they are received and will place the paper copies in the official rulemaking record which will also include all comments submitted directly in writing. The official rulemaking record is the paper record maintained at the Virginia address in "ADDRESSES" at the beginning of this document.

IX. Regulatory Assessment Requirements

This final rule establishes a tolerance under FFDCA section 408(d). The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled Regulatory Planning and Review (58 FR 51735, October 4, 1993). This final rule does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.*, or impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4). Nor does it require any prior consultation as specified by Executive Order 12875, entitled Enhancing the Intergovernmental Partnership (58 FR 58093, October 28, 1993), or special considerations as required by Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994), or require OMB review in accordance with Executive Order 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997).

In addition, since these tolerances and exemptions that are established under FFDCA section 408 (l)(6), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) do not apply. Nevertheless, the Agency has previously assessed whether establishing tolerances, exemptions from tolerances, raising tolerance levels or expanding exemptions might adversely impact small entities and concluded, as a generic matter, that there is no adverse economic impact. The factual basis for the Agency's generic certification for tolerance actions published on May 4, 1981 (46 FR 24950), and was provided to the

Chief Counsel for Advocacy of the Small Business Administration.

X. Submission to Congress and the General Accounting Office

Under 5 U.S.C. 801(a)(1)(A), as added by the Small Business Regulatory Enforcement Fairness Act of 1996, the Agency has submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the General Accounting Office prior to publication of this rule in today's **Federal Register**. This is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: August 12, 1997.

James Jones,
Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

2. Section 180.462 is amended to read as follows:

- a. By designating the existing text as paragraph (a) and adding a heading.
- b. By adding paragraph (b).
- c. By adding the headings and reserving paragraphs (c) and (d).

Section 180.462, as amended, reads as follows:

§ 180.462 Pyridate; tolerances for residues.

(a) *General.* * * *

(b) *Section 18 emergency exemptions.* A time-limited tolerance is established for the residue of the herbicide pyridate in connection with use of the pesticide under section 18 emergency exemptions granted by EPA. This tolerance will expire and is revoked on the date specified in the following table:

Commodity	Parts per million	Expiration/revocation date
Chickpeas	0.1	12/31/98

(c) *Tolerances with regional registrations.* [Reserved]

(d) *Indirect or inadvertent residues.* [Reserved]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[OPP-300533; FRL-5738-6]

RIN 2070-AB78

Sethoxydim; Pesticide Tolerances for Emergency Exemptions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes a time-limited tolerance for residues of sethoxydim and its metabolites containing the 2-cyclohexen-1-one moiety in or on horseradish. This action is in response to EPA's granting of an emergency exemption under section 18 of the Federal Insecticide, Fungicide, and Rodenticide Act authorizing use of the pesticide on horseradish in Illinois. This regulation establishes a maximum permissible level for residues of sethoxydim in this food commodity pursuant to section 408(l)(6) of the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996. The tolerance will expire and is revoked on September 30, 1998.

DATES: This regulation is effective August 22, 1997. Objections and requests for hearings must be received by EPA on or before October 21, 1997.

ADDRESSES: Written objections and hearing requests, identified by the docket control number, [OPP-300533], must be submitted to: Hearing Clerk (1900), Environmental Protection Agency, Rm. M3708, 401 M St., SW., Washington, DC 20460. Fees accompanying objections and hearing requests shall be labeled "Tolerance Petition Fees" and forwarded to: EPA Headquarters Accounting Operations Branch, OPP (Tolerance Fees), P.O. Box 360277M, Pittsburgh, PA 15251. A copy of any objections and hearing requests filed with the Hearing Clerk identified by the docket control number, [OPP-300533], must also be submitted to: Public Information and Records Integrity Branch, Information Resources and Services Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. In person, bring a copy of objections and hearing

requests to Rm. 1132, CM #2, 1921 Jefferson Davis Hwy., Arlington, VA.

A copy of objections and hearing requests filed with the Hearing Clerk may also be submitted electronically by sending electronic mail (e-mail) to: opp-docket@epamail.epa.gov. Copies of objections and hearing requests must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Copies of objections and hearing requests will also be accepted on disks in WordPerfect 5.1 file format or ASCII file format. All copies of objections and hearing requests in electronic form must be identified by the docket control number [OPP-300533]. No Confidential Business Information (CBI) should be submitted through e-mail. Electronic copies of objections and hearing requests on this rule may be filed online at many Federal Depository Libraries.

FOR FURTHER INFORMATION CONTACT: By mail: Virginia Dietrich, Registration Division 7505C, Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Office location, telephone number, and e-mail address: Crystal Mall #2, 1921 Jefferson Davis Hwy., Arlington, VA, (703) 308-9359, e-mail: dietrich.virginia@epamail.epa.gov.

SUPPLEMENTARY INFORMATION: EPA, on its own initiative, pursuant to section 408(e) and (l)(6) of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a(e) and (l)(6), is establishing a tolerance for residues of the herbicide sethoxydim, in or on horseradish at 4 part per million (ppm). This tolerance will expire and is revoked on September 30, 1998. EPA will publish a document in the **Federal Register** to remove the revoked tolerance from the Code of Federal Regulations.

I. Background and Statutory Authority

The Food Quality Protection Act of 1996 (FQPA) (Pub. L. 104-170) was signed into law August 3, 1996. FQPA amends both the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 301 *et seq.*, and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), 7 U.S.C. 136 *et seq.* The FQPA amendments went into effect immediately. Among other things, FQPA amends FFDCA to bring all EPA pesticide tolerance-setting activities under a new section 408 with a new safety standard and new procedures. These activities are described below and discussed in greater detail in the final rule establishing the time-limited tolerance associated with the emergency exemption for use of propiconazole on

sorghum (61 FR 58135, November 13, 1996)(FRL-5572-9).

New section 408(b)(2)(A)(i) of the FFDCA allows EPA to establish a tolerance (the legal limit for a pesticide chemical residue in or on a food) only if EPA determines that the tolerance is "safe." Section 408(b)(2)(A)(ii) defines "safe" to mean that "there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information." This includes exposure through drinking water and in residential settings, but does not include occupational exposure. Section 408(b)(2)(C) requires EPA to give special consideration to exposure of infants and children to the pesticide chemical residue in establishing a tolerance and to "ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to the pesticide chemical residue. . . ."

Section 18 of FIFRA authorizes EPA to exempt any Federal or State agency from any provision of FIFRA, if EPA determines that "emergency conditions exist which require such exemption." This provision was not amended by FQPA. EPA has established regulations governing such emergency exemptions in 40 CFR part 166.

Section 408(l)(6) of the FFDCA requires EPA to establish a time-limited tolerance or exemption from the requirement for a tolerance for pesticide chemical residues in food that will result from the use of a pesticide under an emergency exemption granted by EPA under section 18 of FIFRA. Such tolerances can be established without providing notice or period for public comment.

Because decisions on section 18-related tolerances must proceed before EPA reaches closure on several policy issues relating to interpretation and implementation of the FQPA, EPA does not intend for its actions on such tolerance to set binding precedents for the application of section 408 and the new safety standard to other tolerances and exemptions.

II. Emergency Exemption for Sethoxydim on Horseradish and FFDCA Tolerances

Unprecedented flooding events in the horseradish production areas in Illinois in the last few years have transported seeds and vegetative propagules to previously uninfested fields. Currently registered herbicides, as well as cultural practices (mechanical and hand weeding), do not provide adequate

control. Of particular concern was infestation by Johnsongrass. Johnsongrass causes losses by competing with the crop thereby reducing yields. Losses were also realized at the packing houses because of the similarity of horseradish roots to Johnsongrass rhizomes. After having reviewed the submission, EPA concurs that emergency conditions exist for this state. EPA has authorized under FIFRA section 18 the use of sethoxydim on horseradish for control of grass weeds in Illinois.

As part of its assessment of this emergency exemption, EPA assessed the potential risks presented by residues of sethoxydim in or on horseradish. In doing so, EPA considered the new safety standard in FFDCA section 408(b)(2), and EPA decided that the necessary tolerance under FFDCA section 408(l)(6) would be consistent with the new safety standard and with FIFRA section 18. Consistent with the need to move quickly on the emergency exemption in order to address an urgent non-routine situation and to ensure that the resulting food is safe and lawful, EPA is issuing this tolerance without notice and opportunity for public comment under section 408(e), as provided in section 408(l)(6). Although this tolerance will expire and is revoked on September 30, 1998, under FFDCA section 408(l)(5), residues of the pesticide not in excess of the amounts specified in the tolerance remaining in or on horseradish after that date will not be unlawful, provided the pesticide is applied in a manner that was lawful under FIFRA. EPA will take action to revoke this tolerance earlier if any experience with, scientific data on, or other relevant information on this pesticide indicate that the residues are not safe.

Because this tolerance is being approved under emergency conditions EPA has not made any decisions about whether sethoxydim meets EPA's registration requirements for use on horseradish or whether a permanent tolerance for this use would be appropriate. Under these circumstances, EPA does not believe that this tolerance serves as a basis for registration of sethoxydim by a State for special local needs under FIFRA section 24(c). Nor does this tolerance serve as the basis for any State other than Illinois to use this pesticide on this crop under section 18 of FIFRA without following all provisions of section 18 as identified in 40 CFR part 166. For additional information regarding the emergency exemption for sethoxydim, contact the Agency's Registration Division at the address provided above.

III. Risk Assessment and Statutory Findings

EPA performs a number of analyses to determine the risks from aggregate exposure to pesticide residues. First, EPA determines the toxicity of pesticides based primarily on toxicological studies using laboratory animals. These studies address many adverse health effects, including (but not limited to) reproductive effects, developmental toxicity, toxicity to the nervous system, and carcinogenicity. Second, EPA examines exposure to the pesticide through the diet (e.g., food and drinking water) and through exposures that occur as a result of pesticide use in residential settings.

A. Toxicity

1. *Threshold and non-threshold effects.* For many animal studies, a dose response relationship can be determined, which provides a dose that causes adverse effects (threshold effects) and doses causing no observed effects (the "no-observed effect level" or "NOEL").

Once a study has been evaluated and the observed effects have been determined to be threshold effects, EPA generally divides the NOEL from the study with the lowest NOEL by an uncertainty factor (usually 100 or more) to determine the Reference Dose (RfD). The RfD is a level at or below which daily aggregate exposure over a lifetime will not pose appreciable risks to human health. An uncertainty factor (sometimes called a "safety factor") of 100 is commonly used since it is assumed that people may be up to 10 times more sensitive to pesticides than the test animals, and that one person or subgroup of the population (such as infants and children) could be up to 10 times more sensitive to a pesticide than another. In addition, EPA assesses the potential risks to infants and children based on the weight of the evidence of the toxicology studies and determines whether an additional uncertainty factor is warranted. Thus, an aggregate daily exposure to a pesticide residue at or below the RfD (expressed as 100% or less of the RfD) is generally considered acceptable by EPA. EPA generally uses the RfD to evaluate the chronic risks posed by pesticide exposure. For shorter term risks, EPA calculates a margin of exposure (MOE) by dividing the estimated human exposure into the NOEL from the appropriate animal study. Commonly, EPA finds MOEs lower than 100 to be unacceptable. This 100-fold MOE is based on the same rationale as the 100-fold uncertainty factor.

Lifetime feeding studies in two species of laboratory animals are conducted to screen pesticides for cancer effects. When evidence of increased cancer is noted in these studies, the Agency conducts a weight of the evidence review of all relevant toxicological data including short-term and mutagenicity studies and structure activity relationship. Once a pesticide has been classified as a potential human carcinogen, different types of risk assessments (e.g., linear low dose extrapolations or MOE calculation based on the appropriate NOEL) will be carried out based on the nature of the carcinogenic response and the Agency's knowledge of its mode of action.

2. *Differences in toxic effect due to exposure duration.* The toxicological effects of a pesticide can vary with different exposure durations. EPA considers the entire toxicity data base, and based on the effects seen for different durations and routes of exposure, determines which risk assessments should be done to assure that the public is adequately protected from any pesticide exposure scenario. Both short and long durations of exposure are always considered. Typically, risk assessments include "acute", "short-term", "intermediate term", and "chronic" risks. These assessments are defined by the Agency as follows.

Acute risk, by the Agency's definition, results from 1-day consumption of food and water, and reflects toxicity which could be expressed following a single oral exposure to the pesticide residues. High end exposure to food and water residues are typically assumed.

Short-term risk results from exposure to the pesticide for a period of 1-7 days, and therefore overlaps with the acute risk assessment. Historically, this risk assessment was intended to address primarily dermal and inhalation exposure which could result, for example, from residential pesticide applications. However, since enactment of FQPA, this assessment has been expanded to include both dietary and non-dietary sources of exposure, and will typically consider exposure from food, water, and residential uses when reliable data are available. In this assessment, risks from average food and water exposure, and high-end residential exposure, are aggregated. High-end exposures from all 3 sources are not typically added because of the very low probability of this occurring in most cases, and because the other conservative assumptions built into the assessment assure adequate protection of public health. However, for cases in which high-end exposure can

reasonably be expected from multiple sources (e.g. frequent and widespread homeowner use in a specific geographical area), multiple high-end risks will be aggregated and presented as part of the comprehensive risk assessment/characterization. Since the toxicological endpoint considered in this assessment reflects exposure over a period of at least 7 days, an additional degree of conservatism is built into the assessment; i.e., the risk assessment nominally covers 1-7 days exposure, and the toxicological endpoint/NOEL is selected to be adequate for at least 7 days of exposure. (Toxicity results at lower levels when the dosing duration is increased.)

Intermediate-term risk results from exposure for 7 days to several months. This assessment is handled in a manner similar to the short-term risk assessment.

Chronic risk assessment describes risk which could result from several months to a lifetime of exposure. For this assessment, risks are aggregated considering average exposure from all sources for representative population subgroups including infants and children.

B. Aggregate Exposure

In examining aggregate exposure, FFDCA section 408 requires that EPA take into account available and reliable information concerning exposure from the pesticide residue in the food in question, residues in other foods for which there are tolerances, residues in groundwater or surface water that is consumed as drinking water, and other non-occupational exposures through pesticide use in gardens, lawns, or buildings (residential and other indoor uses). Dietary exposure to residues of a pesticide in a food commodity are estimated by multiplying the average daily consumption of the food forms of that commodity by the tolerance level or the anticipated pesticide residue level. The Theoretical Maximum Residue Contribution (TMRC) is an estimate of the level of residues consumed daily if each food item contained pesticide residues equal to the tolerance. In evaluating food exposures, EPA takes into account varying consumption patterns of major identifiable subgroups of consumers, including infants and children. The TMRC is a "worst case" estimate since it is based on the assumptions that food contains pesticide residues at the tolerance level and that 100% of the crop is treated by pesticides that have established tolerances. If the TMRC exceeds the RfD or poses a lifetime cancer risk that is greater than approximately one in a

million, EPA attempts to derive a more accurate exposure estimate for the pesticide by evaluating additional types of information (anticipated residue data and/or percent of crop treated data) which show, generally, that pesticide residues in most foods when they are eaten are well below established tolerances.

Percent of crop treated estimates are derived from federal and private market survey data. Typically, a range of estimates are supplied and the upper end of this range is assumed for the exposure assessment. By using this upper end estimate of percent of crop treated, the Agency is reasonably certain that exposure is not understated for any significant subpopulation group. Further, regional consumption information is taken into account through EPA's computer-based model for evaluating the exposure of significant subpopulations including several regional groups, to pesticide residues. For this pesticide, the most highly exposed population subgroup (children from one to six years old) was not regionally based.

IV. Aggregate Risk Assessment and Determination of Safety

Consistent with section 408(b)(2)(D), EPA has reviewed the available scientific data and other relevant information in support of this action, EPA has sufficient data to assess the hazards of sethoxydim and to make a determination on aggregate exposure, consistent with section 408(b)(2), for a time-limited tolerance for residues of sethoxydim and its 2-cyclohexen-1-one moiety on horseradish at 4 ppm. EPA's assessment of the dietary exposures and risks associated with establishing the tolerance follows.

A. Toxicological Profile

EPA has evaluated the available toxicity data and considered its validity, completeness, and reliability as well as the relationship of the results of the studies to human risk. EPA has also considered available information concerning the variability of the sensitivities of major identifiable

subgroups of consumers, including infants and children. The nature of the toxic effects caused by sethoxydim are discussed below.

1. *Acute toxicity.* 180 mg/kg/day. For acute dietary risk assessment, the Office of Pesticide Programs selected the developmental NOEL of 180 mg/kg/day from the developmental study in rats. At the developmental lowest observed effect level (LOEL) of 650 mg/kg/day, there were decreased fetal weights, filamentous tail, lack of tail, and delayed ossification. Acute dietary risk will be evaluated for the population subgroup of concern, females 13+ years.

2. *Short- and intermediate-term toxicity.* For short- and intermediate-term Margin of Exposure (MOE) calculations, the Office of pesticide Programs concluded that this risk assessment is not required, based on the lack of any observable effects in a 21-day dermal toxicity study in rabbits at the limit dose (1000 mg/kg/day) and the observation of no adverse effects in a developmental toxicity study in rabbits at 400 mg/kg/day, the highest dose tested (HDT).

3. *Chronic toxicity.* EPA has established the RfD for sethoxydim at 0.09 milligrams/kilogram/day (mg/kg/day). This RfD is based on a 1-year feeding study in dogs (MRID# 00152669) with a NOEL of 8.86 mg/kg/day and an uncertainty factor of 100 based on equivocal anemia in male dogs at the lowest effect level (LEL) of 17.5 mg/kg/day.

4. *Carcinogenicity.* Sethoxydim has not been classified with concern to carcinogenicity by the Office of Pesticide Programs. However, no positive tumor findings have been reported at this time.

B. Exposures and Risks

1. *From food and feed uses.* Tolerances have been established (40 CFR 180.412) for combined residues of sethoxydim and its metabolites containing the 2-cyclohexen-1-one moiety (calculated as the herbicide) in or on a variety of raw agricultural commodities (RACs) at levels ranging from 0.2 ppm to 50 ppm. Among them

are tolerances on several RACs of the root and tuber vegetables crop group, of which horseradish is a member: artichoke (3 ppm), carrots (1 ppm), potatoes (4 ppm), sweet potatoes (4 ppm), and sugar beet roots (1 ppm). Various food (40 CFR 185.2800) and feed (40 CFR 186.2800) additive tolerances are also established, at levels up to 75 ppm (peanut soapstock). Risk assessments were conducted by EPA to assess dietary exposures and risks from sethoxydim as follows:

i. *Acute exposure and risk.* The acute dietary (food only) risk assessment used tolerance level residues for all crops with sethoxydim tolerances and assumed 100% crop-treated. A Margin of Exposure (MOE) of 960 was calculated for females aged 13+ years, the population subgroup of concern. That acute dietary (food only) MOE should be viewed as a conservative risk estimate; refinement using percent crop-treated and anticipated residue levels or Monte Carlo analysis would result in a lower dietary exposure estimate. Acute dietary risk assessments are performed for a food-use pesticide if a toxicological study has indicated the possibility of an effect of concern occurring as a result of a one day or single exposure.

ii. *Chronic exposure and risk.* In conducting this chronic dietary risk assessment, the Office of Pesticide Programs has made very conservative assumptions which result in a conservative over-estimate of human dietary exposure; 100% of horseradish and all other commodities having tolerances for the regulable residue of sethoxydim will contain residues of same, and at the level of the tolerance. Refinement using anticipated residue values and percent crop-treated data would result in a lower chronic dietary exposure estimate.

The existing sethoxydim regulable residue tolerances (published, pending, and this Section 18 proposed tolerance) result in a Theoretical Maximum Residue Contribution (TMRC) that is equivalent to the following percentages of the RfD:

Population Subgroup	TMRC _{food} (mg/kg/day)	%RfD
U.S. population (48 states)	0.033266	37%
Nursing infants	0.020447	23%
Non-nursing infants (<1 year old)	0.057129	63%
Children (1-6 years old)	0.067039	74%
Children (7-12 years old)	0.049618	55%
Southern Region	0.033782	38%
Western Region	0.034829	39%
Hispanics	0.039524	44%
Males (13-19 years old)	0.033837	38%

The subgroups listed above are: (1) the U.S. population (48 states); (2) those for infants and children; and, (3) the other subgroups for which the percentage of the RfD occupied is greater than that occupied by the subgroup U.S. population (48 states).

2. *From drinking water.* Based on information in OPP files, sethoxydim is a non-persistent, but highly mobile compound in soil and water environments. There are no Maximum Contaminant Levels or Health Advisories established for sethoxydim residues in drinking water.

Limited monitoring data of ground water and surface water are available for sethoxydim. Exposure estimates using these data are listed below.

Adult Exposure: Groundwater
Sethoxydim Exposure (highest concentration detected in public supply wells) = $(1 \mu\text{g/L}) * (10^{-3} \text{ mg}/\mu\text{g}) \div (70 \text{ kg body weight}) * (2 \text{ L/day}) = 2.85 \times 10^{-5} \text{ mg/kg/day}$.

Sethoxydim Exposure (highest concentration detected in ground water) = $(42 \mu\text{g/L}) * (10^{-3} \text{ mg}/\mu\text{g}) \div (70 \text{ kg body weight}) * (2 \text{ L/day}) = 1.2 \times 10^{-3} \text{ mg/kg/day}$.

Children's Exposure: Groundwater
Sethoxydim Exposure (highest concentration detected in public supply wells) = $(1 \mu\text{g/L}) * (10^{-3} \text{ mg}/\mu\text{g}) \div (10 \text{ kg body weight}) * (1 \text{ L/day}) = 1 \times 10^{-4} \text{ mg/kg/day}$.

Sethoxydim Exposure (highest concentration detected in ground water) = $(42 \mu\text{g/L}) * (10^{-3} \text{ mg}/\mu\text{g}) \div (10 \text{ kg body weight}) * (1 \text{ L/day}) = 4.2 \times 10^{-3} \text{ mg/kg/day}$.

Estimates of Exposure: Surface Water.
The highest concentration of sethoxydim residues detected in a surface water sample was $0.87 \mu\text{g/L}$. The same calculations as above for ground water were used to estimate the exposure of adults ($2.49 \times 10^{-5} \text{ mg/kg/day}$) and children ($0.9 \times 10^{-4} \text{ mg/kg/day}$) to sethoxydim residues in surface water.

i. *Acute exposure and risk.* The Office of Pesticide Programs calculates a margin of exposure (MOE) to estimate the acute risk for drinking water, as follows:

$$\text{Acute MOE} = \frac{\text{Acute NOEL (mg/kg/day)}}{\text{Exposure (mg/kg/day)}}$$

The acute dietary endpoint is based on the developmental NOEL of 180 mg/kg/day from the developmental study in rats. Using the exposure estimates calculated above, the acute MOEs for adults and children are calculated to be $> 40,000$.

Using the surface water exposure estimates calculated above, the acute MOEs for adults and children are calculated to be > 1.8 million.

ii. *Chronic exposure and risk.* Because the Agency lacks sufficient water-related exposure data to complete a comprehensive drinking water risk assessment for many pesticides, EPA has commenced and nearly completed a process to identify a reasonable yet conservative bounding figure for the potential contribution of water-related exposure to the aggregate risk posed by a pesticide. In developing the bounding figure, EPA estimated residue levels in water for a number of specific pesticides using various data sources. The Agency then applied the estimated residue levels, in conjunction with appropriate toxicological endpoints (RfD's or acute dietary NOEL's) and assumptions about body weight and consumption, to calculate, for each pesticide, the increment of aggregate risk contributed by consumption of contaminated water. While EPA has not yet pinpointed the appropriate bounding figure for exposure from contaminated water, the ranges the Agency is continuing to examine are all below the level that would cause sethoxydim to exceed the RfD if the tolerance being considered in this document were granted. The Agency has therefore concluded that the potential exposures associated with sethoxydim in water, even at the higher levels the Agency is considering as a conservative upper bound, would not prevent the Agency from determining that there is a reasonable certainty of no harm if the tolerance is granted.

Using the surface water exposure estimates calculated above, the chronic risks are calculated to be $< 1\%$ of the RfD for both adults and children.

3. *From non-dietary exposure.*
Sethoxydim is currently registered for use on the following residential non-food sites: flowering plants, recreational areas, and buildings/structures (non-agricultural - outdoor). These residential uses comprise a short- and intermediate-term exposure scenario, but do not comprise a chronic exposure scenario. Since the TESC did not identify a short-term, intermediate-term, or chronic toxicity non-dietary endpoint, a short- and intermediate-term aggregate risk assessment is not required for this Section 18 action.

Short- and intermediate-term exposure and risk. The Office of Pesticide Programs determined that a risk assessment for short- and intermediate term exposure is not appropriate since no adverse effects were noted in toxicity studies conducted for this duration of exposure.

4. *Cumulative exposure to substances with common mechanism of toxicity.*
Section 408(b)(2)(D)(v) requires that, when considering whether to establish,

modify, or revoke a tolerance, the Agency consider "available information" concerning the cumulative effects of a particular pesticide's residues and "other substances that have a common mechanism of toxicity." The Agency believes that "available information" in this context might include not only toxicity, chemistry, and exposure data, but also scientific policies and methodologies for understanding common mechanisms of toxicity and conducting cumulative risk assessments. For most pesticides, although the Agency has some information in its files that may turn out to be helpful in eventually determining whether a pesticide shares a common mechanism of toxicity with any other substances, EPA does not at this time have the methodologies to resolve the complex scientific issues concerning common mechanism of toxicity in a meaningful way. EPA has begun a pilot process to study this issue further through the examination of particular classes of pesticides. The Agency hopes that the results of this pilot process will increase the Agency's scientific understanding of this question such that EPA will be able to develop and apply scientific principles for better determining which chemicals have a common mechanism of toxicity and evaluating the cumulative effects of such chemicals. The Agency anticipates, however, that even as its understanding of the science of common mechanisms increases, decisions on specific classes of chemicals will be heavily dependent on chemical specific data, much of which may not be presently available.

Although at present the Agency does not know how to apply the information in its files concerning common mechanism issues to most risk assessments, there are pesticides as to which the common mechanism issues can be resolved. These pesticides include pesticides that are toxicologically dissimilar to existing chemical substances (in which case the Agency can conclude that it is unlikely that a pesticide shares a common mechanism of activity with other substances) and pesticides that produce a common toxic metabolite (in which case common mechanism of activity will be assumed).

EPA does not have, at this time, available data to determine whether sethoxydim has a common mechanism of toxicity with other substances or how to include this pesticide in a cumulative risk assessment. Unlike other pesticides for which EPA has followed a cumulative risk approach based on a common mechanism of toxicity, sethoxydim does not appear to produce

a toxic metabolite produced by other substances. For the purposes of this tolerance action, therefore, EPA has not assumed that sethoxydim has a common mechanism of toxicity with other substances.

C. Aggregate Risks and Determination of Safety for U.S. Population

1. *Acute risk.* The aggregate (food + water) MOE value is and is 935, based on an MOE_{food} of 960 and a conservative MOE_{water} of 40,000. This aggregate MOE value does not exceed the Agency's level of concern for acute dietary exposure.

2. *Chronic risk.* Using the conservative TMRC exposure assumptions described above, and taking into account the completeness and reliability of the toxicity data, EPA has concluded that chronic aggregate dietary exposure (food + water) to sethoxydim will utilize 38% (37% from food + \leq 1% from water) of the RfD for the U.S. population. EPA generally has no concern for exposures below 100% of the RfD because the RfD represents the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risks to human health. Residential (outdoor) usage of sethoxydim does not comprise a chronic exposure scenario. EPA concludes that there is a reasonable certainty that no harm will result from chronic aggregate exposure to sethoxydim residues.

3. *Short- and intermediate-term risk.* Short- and intermediate-term aggregate exposure takes into account chronic dietary food and water (considered to be a background exposure level) plus short- and intermediate-term exposure scenarios from indoor and outdoor residential uses. Since the Office of Pesticide Programs did not identify a short-term, intermediate-term, or chronic toxicity non-dietary endpoint, a short- and intermediate-term aggregate risk assessment was not conducted for this duration of exposure.

D. Aggregate Cancer Risk for U.S. Population

Sethoxydim has not been classified by the Agency's Cancer Peer Review Committee. However, no positive tumor findings have been reported at this time in the evaluation of the cancer study in mice or the preliminary evaluation of the rat study.

E. Aggregate Risks and Determination of Safety for Infants and Children

1. *Safety factor for infants and children— i. In general.* In assessing the potential for additional sensitivity of infants and children to residues of

sethoxydim, EPA considered data from developmental toxicity studies in the rat and rabbit and a two-generation reproduction study in the rat. The developmental toxicity studies are designed to evaluate adverse effects on the developing organism resulting from maternal pesticide exposure during gestation. Reproduction studies provide information relating to effects from exposure to the pesticide on the reproductive capability of mating animals and data on systemic toxicity.

FFDCA section 408 provides that EPA shall apply an additional tenfold margin of safety for infants and children in the case of threshold effects to account for pre- and post-natal toxicity and the completeness of the database unless EPA determines that a different margin of safety will be safe for infants and children. Margins of safety are incorporated into EPA risk assessments either directly through use of a MOE analysis or through using uncertainty (safety) factors in calculating a dose level that poses no appreciable risk to humans. EPA believes that reliable data support using the standard 100-fold safety factor (usually 100 for combined inter- and intra-species variability) and not the additional tenfold safety factor when EPA has a complete data base under existing guidelines and when the severity of the effect in infants or children or the potency or unusual toxic properties of a compound do not raise concerns regarding the adequacy of the standard safety factor.

ii. *Developmental toxicity studies— a. Rats.* In the developmental toxicity study in rats, the maternal (systemic) NOEL was 180 mg/kg/day, based on irregular gait, decreased activity, excessive salivation and anogenital staining at the LOEL of 650 mg/kg/day. The developmental (pup) NOEL was 180 mg/kg/day, based on decreased fetal weights, filamentous tail, lack of tail, and delayed ossification at the LOEL of 650 mg/kg/day.

b. *Rabbits.* In the developmental toxicity study in rabbits, the maternal (systemic) NOEL was 320 mg/kg/day, based on a 37% reduction in body weight gain without significant differences in group mean body weights and food consumption at the LOEL of 400 mg/kg/day. The developmental (pup) NOEL was 400 mg/kg/day (HDT).

iii. *Reproductive toxicity study— Rats.* In the 2-generation reproductive toxicity study in rats, the maternal (systemic) and reproductive (pup) NOEL was \approx 150 mg/kg/day (HDT). There were no indications of toxicity, dose-related effects on fertility or difficult deliveries in either parental generation.

iv. *Pre- and post-natal sensitivity.* The toxicological data base for evaluating pre- and post-natal toxicity for sethoxydim is complete with respect to current data requirements.

The available data indicate that no developmental toxicity was observed in the rabbit study at the highest dose tested (400 mg/kg/day). Maternal toxicity was observed in the rabbit at the highest dose tested, and consisted of significant reductions in body weight gain and food consumption.

In the developmental study in rats, developmental toxicity was observed in the presence of significant maternal toxicity at a high dose level (650 mg/kg/day).

There was no parental or reproductive toxicity observed in a multi-generation reproductive toxicity study in rats at doses up to 150 mg/kg/day (HDT).

These data, taken together, suggest minimal concern for developmental or reproductive toxicity and do not indicate any extra pre- or post-natal sensitivity. Thus, these data support use of the standard uncertainty factor of 100. An additional safety factor is not needed to protect infants and children.

v. *Conclusion.* These data, taken together, suggest minimal concern for developmental or reproductive toxicity and do not indicate any extra pre- or post-natal sensitivity. Thus, these data support use of the standard uncertainty factor of 100. An additional safety factor is not needed to protect infants and children.

2. *Acute risk.* As calculated above, the acute dietary (food + water) MOE for females 13+ years (accounts for both maternal and fetal exposure) is 935, based on an MOE_{food} of 960 and a conservative MOE_{water} of 40,000. This dietary MOE does not exceed the Agency's level of concern. Further, this MOE should be viewed as a conservative risk estimate; data refinement and the use of Monte Carlo analysis would result in a lower acute aggregate exposure estimate. HED concludes that there is a reasonable certainty that no harm will result to infants and children from acute aggregate exposure to sethoxydim regulable residue.

3. *Chronic risk.* Using the conservative exposure assumptions described above, EPA has calculated that the percentage of the RfD that will be utilized by dietary (food only) exposure to the sethoxydim regulable residue ranges from 23% for nursing infants < 1 year old, up to 74% for children 1-6 years old. As calculated above, the percentage of the RfD that will be utilized by dietary (water) exposure ranges from < 1 to 5% from

ground water and <1% from surface water. Thus, the chronic aggregate (food + water) risk ranges from \approx 24-29% for nursing infants < 1 year old, to \approx 75-80% for children 1-6 years old. It has been determined by HED that residential uses do not comprise a chronic exposure scenario, and thus will not contribute to chronic aggregate risk. EPA generally has no concern for exposures below 100% of the RfD because the RfD represents the level at or below which daily aggregate dietary exposure over a lifetime will not pose appreciable risks to human health. Despite the potential for exposure to sethoxydim in drinking water and from non-dietary, non-occupational exposure, EPA does not expect the aggregate exposure to exceed 100% of the RfD. EPA concludes that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure to sethoxydim residues.

V. Other Considerations

A. Metabolism In Plants and Animals

The nature of the residue in plants and animals is adequately understood. The residue of concern is the combined residues of sethoxydim and its metabolites containing the 2-cyclohexen-1-one moiety (calculated as the herbicide), as specified in 40 CFR 180.412.

B. Analytical Enforcement Methodology

Adequate enforcement methodology (GLC/FPD-S) is available (Method I, Pesticide Analytical Manual, Vol. II) to enforce the tolerance expression.

C. Magnitude of Residues

Combined residues of sethoxydim and its regulated metabolites are not expected to exceed 4 ppm in/on horseradish as a result of this Section 18 use. A time-limited tolerance should be established for the regulable residue in/on horseradish at 4 ppm. There are no processed commodities from horseradish. Secondary residues are not expected in animal commodities as a result of this Section 18 use, as no livestock feed items are associated with horseradish.

D. International Residue Limits

There are no Codex residue limits established for sethoxydim, and no Canadian or Mexican residue limits for sethoxydim use on horseradish. Harmonization is thus not an issue for this Section 18 action.

E. Rotational Crop Restrictions.

There are no rotational crop restrictions associated with this use, and none are required As stated previously,

sethoxydim is a non-persistent, highly mobile compound in soil and water environments.

VI. Conclusion

Therefore, the tolerance is established for residues of sethoxydim and its metabolites containing the 2-cyclohexen-1-one moiety in or on horseradish at 4 ppm.

VII. Objections and Hearing Requests

The new FFDCA section 408(g) provides essentially the same process for persons to "object" to a tolerance regulation issued by EPA under new section 408(e) and (l)(6) as was provided in the old section 408 and in section 409. However, the period for filing objections is 60 days, rather than 30 days. EPA currently has procedural regulations which govern the submission of objections and hearing requests. These regulations will require some modification to reflect the new law. However, until those modifications can be made, EPA will continue to use those procedural regulations with appropriate adjustments to reflect the new law.

Any person may, by October 21, 1997, file written objections to any aspect of this regulation and may also request a hearing on those objections. Objections and hearing requests must be filed with the Hearing Clerk, at the address given above (40 CFR 178.20). A copy of the objections and/or hearing requests filed with the Hearing Clerk should be submitted to the OPP docket for this rulemaking. The objections submitted must specify the provisions of the regulation deemed objectionable and the grounds for the objections (40 CFR 178.25). Each objection must be accompanied by the fee prescribed by 40 CFR 180.33(i). If a hearing is requested, the objections must include a statement of the factual issues on which a hearing is requested, the requestor's contentions on such issues, and a summary of any evidence relied upon by the requestor (40 CFR 178.27). A request for a hearing will be granted if the Administrator determines that the material submitted shows the following: There is genuine and substantial issue of fact; there is a reasonable possibility that available evidence identified by the requestor would, if established, resolve one or more of such issues in favor of the requestor, taking into account uncontested claims or facts to the contrary; and resolution of the factual issues in the manner sought by the requestor would be adequate to justify the action requested (40 CFR 178.32). Information submitted in connection with an objection or hearing request

may be claimed confidential by marking any part or all of that information as Confidential Business Information (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2. A copy of the information that does not contain CBI must be submitted for inclusion in the public record. Information not marked confidential may be disclosed publicly by EPA without prior notice.

VIII. Public Docket

EPA has established a record for this rulemaking under docket control number [OPP-300533] (including any comments and data submitted electronically). A public version of this record, including printed, paper versions of electronic comments, which does not include any information claimed as CBI, is available for inspection from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The public record is located in Room 1132 of the Public Information and Records Integrity Branch, Information Resources and Services Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, Crystal Mall #2, 1921 Jefferson Davis Hwy., Arlington, VA.

Electronic comments may be sent directly to EPA at:

opp-docket@epamail.epa.gov.

Electronic comments must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

The official record for this rulemaking, as well as the public version, as described above will be kept in paper form. Accordingly, EPA will transfer any copies of objections and hearing requests received electronically into printed, paper form as they are received and will place the paper copies in the official rulemaking record which will also include all comments submitted directly in writing. The official rulemaking record is the paper record maintained at the Virginia address in "ADDRESSES" at the beginning of this document.

IX. Regulatory Assessment Requirements

This final rule establishes a time-limited tolerance under FFDCA section 408(l)(6). The Office of Management and Budget (OMB) has exempted these types of actions from review under Executive Order 12866, entitled Regulatory Planning and Review (58 FR 51735, October 4, 1993). This final rule does not contain any information collections subject to OMB approval under the Paperwork Reduction Act (PRA), 44

U.S.C. 3501 *et seq.*, or impose any enforceable duty or contain any unfunded mandate as described under Title II of the Unfunded Mandates Reform Act of 1995 (UMRA) (Pub. L. 104-4). Nor does it require any prior consultation as specified by Executive Order 12875, entitled Enhancing the Intergovernmental Partnership (58 FR 58093, October 28, 1993), or special considerations as required by Executive Order 12898, entitled Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (59 FR 7629, February 16, 1994), or require OMB review in accordance with Executive Order 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997).

In addition, since these tolerances and exemptions that are established under FFDC section 408 (l)(6), such as the tolerance in this final rule, do not require the issuance of a proposed rule, the requirements of the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*) do not apply. Nevertheless, the Agency has previously assessed whether establishing tolerances, exemptions from tolerances, raising tolerance levels

or expanding exemptions might adversely impact small entities and concluded, as a generic matter, that there is no adverse economic impact. The factual basis for the Agency's generic certification for tolerance actions published on May 4, 1981 (46 FR 24950), and was provided to the Chief Counsel for Advocacy of the Small Business Administration.

X. Submission to Congress and the General Accounting Office

Under 5 U.S.C. 801(a)(1)(A), as added by the Small Business Regulatory Enforcement Fairness Act of 1996, the Agency has submitted a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the General Accounting Office prior to publication of this rule in today's **Federal Register**. This is not a "major rule" as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 180

Environmental protection, Administrative practice and procedure, Agricultural commodities, Pesticides

and pests, Reporting and recordkeeping requirements.

Dated: August 15, 1997.

Peter Caulkins,
Acting Director, Registration Division, Office of Pesticide Programs.

Therefore, 40 CFR chapter I is amended as follows:

PART 180—[AMENDED]

1. The authority citation for part 180 continues to read as follows:

Authority: 21 U.S.C. 346a and 371.

2. In § 180.412, by adding text to paragraph (b) to read as follows:

§ 180.412 Sethoxydim: tolerance for residues.

* * * * *

(b) *Section 18 emergency exemptions.* A time-limited tolerance is established for combined residues of the herbicide sethoxydim and its metabolites containing the 2-cyclohexen-1-one moiety, calculated as the herbicide in connection with use of the pesticide under section 18 emergency exemptions granted by EPA. This tolerance will expire and is revoked on the date specified in the following table:

Commodity	Parts per million	Expiration/revocation date
Horseradish	4	September 30, 1998

* * * * *
[FR Doc. 97-22377 Filed 8-21-97; 8:45 am]
BILLING CODE 6560-50-F

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 180

[OPP-300529; FRL-5737-7]

RIN 2070-AB78

Chlorfenapyr; Pesticide Tolerances for Emergency Exemptions

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This regulation establishes time-limited tolerances for chlorfenapyr in or on cottonseed; cotton gin byproducts; milk; milk fat; meat of cattle, goats, hogs, horses, and sheep; fat of cattle, goats, hogs, horses, and sheep; and meat byproducts of cattle, goats, hogs, horses and sheep. This action is in response to EPA's granting of emergency exemptions under section 18 of the

Federal Insecticide, Fungicide, and Rodenticide Act authorizing use of the pesticide on cotton. This regulation establishes maximum permissible level for residues of chlorfenapyr in/on these food commodities pursuant to section 408(l)(6) of the Federal Food, Drug, and Cosmetic Act, as amended by the Food Quality Protection Act of 1996. These tolerances will expire and are revoked on July 31, 1999.

DATES: This regulation is effective August 22, 1997. Objections and requests for hearings must be received by EPA on or before October 21, 1997.

ADDRESSES: Written objections and hearing requests, identified by the docket control number, [OPP-300529], must be submitted to: Hearing Clerk (1900), Environmental Protection Agency, Rm. M3708, 401 M St., SW., Washington, DC 20460. Fees accompanying objections and hearing requests shall be labeled "Tolerance Petition Fees" and forwarded to: EPA Headquarters Accounting Operations Branch, OPP (Tolerance Fees), P.O. Box 360277M, Pittsburgh, PA 15251. A copy of any objections and hearing requests

filed with the Hearing Clerk identified by the docket control number, [OPP-300529], must also be submitted to: Public Information and Records Integrity Branch, Information Resources and Services Division (7506C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. In person, bring a copy of objections and hearing requests to Rm. 1132, CM #2, 1921 Jefferson Davis Hwy., Arlington, VA.

A copy of objections and hearing requests filed with the Hearing Clerk may also be submitted electronically by sending electronic mail (e-mail) to: opp-docket@epamail.epa.gov. Copies of objections and hearing requests must be submitted as an ASCII file avoiding the use of special characters and any form of encryption. Copies of objections and hearing requests will also be accepted on disks in WordPerfect 5.1 file format or ASCII file format. All copies of objections and hearing requests in electronic form must be identified by the docket control number [OPP-300529]. No Confidential Business