

II. 26 NOTICES OF COMMENCEMENT FROM: 11/10/04 TO 11/30/04—Continued

Case No.	Received Date	Commencement Notice End Date	Chemical
P-04-0648	11/10/04	10/22/04	(G) Amine functional epoxy resin salted with organic acid
P-04-0672	11/15/04	11/05/04	(G) Isocyanate functional polyester urethane polymer
P-04-0691	11/15/04	11/05/04	(G) Urethane acrylic hybrid polymer
P-04-0712	11/23/04	11/04/04	(G) Azole polymer
P-04-0722	11/18/04	10/19/04	(G) Acrylic polymer
P-04-0723	11/18/04	10/19/04	(G) Acrylic polymer
P-04-0743	11/17/04	11/08/04	(G) Substituted phosphonic acid compounded with substituted urea
P-04-0759	11/24/04	10/25/04	(G) Aliphatic polyamine
P-04-0766	11/23/04	11/01/04	(G) Mineral/vegetable oil based alkyl
P-04-0769	11/18/04	11/08/04	(G) Substituted methyl ester of octadecanoic acid
P-04-0801	11/23/04	11/16/04	(G) Aluminum alkoxide complex

List of Subjects

Environmental protection, Chemicals, Premanufacturer notices.

Dated: December 7, 2004.

Vicki Simons,

Acting Director, Information Management Division, Office of Pollution Prevention and Toxics.

[FR Doc. 04-27672 Filed 12-16-04; 8:45 am]

BILLING CODE 6560-50-S

ENVIRONMENTAL PROTECTION AGENCY

[FRL-7850-1]

Notice of Availability of Draft National Pollution Discharge Elimination System (NPDES) General Permits MAG910000 and NHG910000 for Discharges From Groundwater Remediation and Miscellaneous Surface Water Discharge Activities in the States of Massachusetts and New Hampshire and Indian Country Lands in the State of Massachusetts

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Availability of Draft NPDES General Permits MAG910000 and NHG910000: Extension of Comment Period.

SUMMARY: On Friday, November 2, 2004, the Environmental Protection Agency's New England Regional Office (EPA-NE) published a Notice of Availability for the Draft National Pollutant Discharge Elimination System (NPDES) General Permits MAG910000 and NHG910000 for Discharges from Groundwater Remediation and Miscellaneous Surface Water Discharge Activities in the States of Massachusetts and New Hampshire and Indian Country Lands in the State of Massachusetts in the **Federal Register** (69 FR 63531). In response to requests from sources that may be eligible for coverage under these general permits,

EPA-NE is extending the comment period for these permits.

DATES: The comment period is being extended from December 17, 2004, to January 18, 2005. Comments must be received or postmarked by midnight on January 18, 2004. Interested persons may submit comments on the draft general permit as part of the administrative record to the EPA-NE at the address given below. Within the comment period, interested persons may also request in writing a public hearing pursuant to 40 CFR 124.12 concerning the draft general permit. Such requests shall state the nature of the issues proposed to be raised at the hearing. A public hearing may be held at least thirty days after public notice whenever the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on the draft permits, the Regional Administrator will respond to all significant comments and make responses available to the public at EPA-NE's Boston office. All public comments or requests for a public hearing must be submitted to the address below.

ADDRESSES: Written comments may be hand delivered or mailed to: Roger A. Janson, Director, Municipal Permits Branch (CMP), EPA-NE, 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023.

EPA also requests that comments be sent via e-mail to Rapp.Steve@EPA.GOV. However, no facsimiles (faxes) will be accepted. A copy of all comments and supporting materials should also be submitted to:

In MA: Mr. Paul Hogan, NPDES Permit Unit, MA Dept. of Env. Protection, 627 Main Street, Worcester, MA 01608.

In NH: Mr. George Berlandi, NH Dept. of Env. Services, Wastewater Engineering Bureau, 29 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095.

The draft permit is based on an administrative record available for public review at the EPA address listed above. Copies of information in the record are available upon request. A reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT:

Additional information concerning the draft permit may be obtained between the hours of 8 a.m. and 4 p.m., Monday through Friday excluding holidays from: Steven Rapp, Office of Ecosystem Protection, Environmental Protection Agency, 1 Congress Street, Suite 1100 (CPE), Boston, MA 02114-2023, telephone: (617) 918-1551, e-mail: Rapp.Steve@EPA.GOV.

SUPPLEMENTARY INFORMATION: The draft general permits may be viewed over the Internet via the EPA-Region 1 Web site. For dischargers in Massachusetts, see <http://www.epa.gov/ne/npdes/mass.html#dgp>. For dischargers in New Hampshire, see <http://www.epa.gov/ne/npdes/newhampshire.html#dgp>.

Dated: December 8, 2004.

Robert W. Varney,

Regional Administrator, Region 1.

[FR Doc. 04-27666 Filed 12-16-04; 8:45 am]

BILLING CODE 6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

[OW-FRL-7849-4]

Notice of Draft Aquatic Life Criteria for Selenium and Request for Scientific Information, Data, and Views

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Availability of Draft Aquatic Life Criteria Document for Selenium, and Request for Scientific Information, Data, and Views Pertaining to the Criteria.

SUMMARY: The Environmental Protection Agency announces the availability of a

draft aquatic life criteria document for selenium and requests scientific information, data, and views. The document contains draft water quality criteria recommendations for the protection of freshwater and saltwater aquatic life. EPA is soliciting information, data, and views on issues of science pertaining to the information the Agency used to derive the draft criteria. When completed and published in final form, the revised criteria will replace EPA's current recommended aquatic life criteria for selenium. EPA's recommended water quality criteria provide technical information for states and authorized tribes in adopting water quality standards, but themselves have no binding legal effect.

DATES: Scientific views, data, and information should be submitted by April 18, 2005.

ADDRESSES: Scientific information, data, and views may be submitted electronically, by mail, or through hand-delivery/courier. Follow detailed instructions provided in section C of the **SUPPLEMENTARY INFORMATION** section.

FOR FURTHER INFORMATION CONTACT: Charles Delos, e-mail delos.charles@epa.gov or postal address, Mail Code 4304T, U.S. EPA, 1200 Pennsylvania Avenue NW., Washington, DC 20460 at (202) 566-1097.

SUPPLEMENTARY INFORMATION:

A. Which Entities Might Be Interested?

Entities potentially interested in today's notice are those that discharge or release selenium to surface waters, and federal, state, tribal, and local authorities that regulate selenium levels in surface water. Categories and entities interested in today's notice include but are not limited to:

Category	Examples of interested entities
State/Local/Tribal Government	States, municipalities, tribes.
Industry	Mining, coal-fired power generation.
Agriculture	Irrigated agriculture.

This table is not intended to be exhaustive. Other types of entities not listed in the table may also be interested.

B. How Can I Get Copies of the Draft Document and Related Information?

1. *Docket.* EPA has established an official public docket for this action under Docket ID No. OW-2004-0019. The official public docket is the collection of materials that are available for public viewing at the Water Docket in the EPA Docket Center, EPA West,

Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Water Docket is (202) 566-2426. Alternatively, copies of the draft may be obtained from EPA's Water Resource Center by phone at (202) 566-2426, or by e-mail to center.water.resource@epa.gov or by conventional mail to: EPA Water Resource Center, 4101T, 1200 Pennsylvania Avenue NW., Washington, DC 20460.

2. *Electronic Access.* Use <http://www.epa.gov/waterscience/criteria/aqlife.html> to obtain the draft document. Use <http://www.epa.gov/fedrgstr/> to obtain this **Federal Register** document electronically.

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at <http://www.epa.gov/edocket/> to access the index listing of the contents of the official public docket and to access those documents in the public docket that are available electronically. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in section B.1. Once in the system, select "search," then key in the appropriate docket identification number.

Certain types of information will not be placed in the EPA Dockets. Information claimed as Confidential Business Information (CBI) and other information whose disclosure is restricted by statute, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. To the extent feasible, publicly available docket materials will be made available in EPA's electronic public docket. When a document is selected from the index list in EPA Dockets, the system will identify whether the document is available for viewing in EPA's electronic public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in section B.1.

It is important to note that EPA's policy is that data, information, and

views, whether submitted electronically or in paper, will be made available for public viewing in EPA's electronic public docket as EPA receives them and without change, unless the data or information contains copyrighted material, CBI, or other information whose disclosure is restricted by statute. When EPA identifies copyrighted material, EPA will provide a reference to that material in the version of the document that is placed in EPA's electronic public docket. The entire printed document, including the copyrighted material, will be available in the public docket.

Data, information, and views submitted on computer disks that are mailed or delivered to the docket will be transferred to EPA's electronic public docket. Data, information, and views that are mailed or delivered to the Docket will be scanned and placed in EPA's electronic public docket. Where practical, physical objects will be photographed, and the photograph will be placed in EPA's electronic public docket along with a brief description written by the docket staff.

C. How Do I Submit Scientific Information, Data, or Views?

You may submit scientific information, data, or views electronically, by mail, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page.

1. *Electronically.* EPA recommends that you include your name and mailing address, or e-mail address or other contact information, particularly if you submit data in tables or figures. Also include this contact information on the outside of any disk or CD ROM you submit, and in any cover letter accompanying the disk or CD ROM. This ensures that you can be identified as the submitter and allows EPA to contact you in case EPA has technical difficulties reading your submission or needs further information on the substance of your submission. EPA's policy is that EPA will not edit your submission, and any identifying or contact information provided in the body of the submission will be included in the official public docket, and made available in EPA's electronic public docket. If EPA cannot read your submission due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider it.

i. *EPA Dockets.* Your use of EPA's electronic public docket to submit data, information, and views to EPA electronically is EPA's preferred method for receiving submissions. Go directly to

EPA Dockets at <http://www.epa.gov/edocket> and follow the online instructions. Once in the system, select "search," and then key in Docket ID No. OW-2004-0019. The system is an "anonymous access" system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it.

ii. *E-mail*. Submissions may be sent by electronic mail (e-mail) to ow-docket@epa.gov attention Docket ID No. OW-2004-0019. In contrast to EPA's electronic public docket, EPA's e-mail system is not an "anonymous access" system. If you send an e-mail directly to the Docket without going through EPA's electronic public docket, EPA's e-mail system automatically captures your e-mail address. E-mail addresses that are automatically captured by EPA's e-mail system are included as part of the submission that is placed in the official public docket, and made available in EPA's electronic public docket.

iii. *Disk or CD ROM*. You may send your submission on a disk or CD ROM to the mailing address identified in section B.1. These electronic submissions will be accepted in WordPerfect or ASCII file format. Avoid the use of special characters and any form of encryption.

2. *By Mail*. Send an original and three copies of your submission to: Water Docket, Environmental Protection Agency, Mailcode: 4101T, 1200 Pennsylvania Ave., NW., Washington, DC 20460, Attention Docket ID No. OW-2004-0019.

3. *By Hand Delivery or Courier*. Deliver your submission to: EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC 20460, Attention Docket ID No. OW-2004-0019. Such deliveries are only accepted during the Docket's normal hours of operation as identified in section B.1.

D. What Are EPA Recommended Water Quality Criteria?

An EPA recommended water quality criterion is a level of a pollutant or other measurable substance in water that, when met, will protect aquatic life and/or human health. Section 304(a) of the Clean Water Act (CWA) requires EPA to develop and publish and, from time to time, revise, recommended water quality criteria to accurately reflect the latest scientific knowledge. Water quality criteria developed under section 304(a) provide guidance to states and tribes in adopting water quality criteria into their water quality standards under section 303(c). Once adopted by a state or tribe, the water quality standards then are a basis for developing

regulatory controls on the discharge or release of pollutants and other alterations of water quality. EPA's section 304(a) criteria also provide a scientific basis for EPA to develop any necessary federal water quality regulations under section 303(c) of the CWA.

The draft criteria in today's notice are based on the factors specified in section 304(a) of the Clean Water Act, including the kind and extent of effects of the pollutant on human health and aquatic organisms. Under the Clean Water Act, the EPA can not consider the economic and technical feasibility of meeting the draft criteria in their development. Economic and technical feasibility factors are considered by states and tribes when they adopt water quality criteria into their water quality standards under section 303(c) of the Act and when states, tribes, and EPA consider variance requests for regulatory controls. Moreover, states and tribes may also consider alternative scientifically-defensible approaches to adopting criteria into their water quality standards that may be different from approaches presented by EPA in final water quality criteria published under section 304(a).

E. What Is Selenium and Why Are We Concerned About It?

Selenium is a naturally-occurring element that is nutritionally essential. However, it has been toxic to aquatic life and terrestrial wildlife where concentrations were excessive. Under real-world field conditions, aquatic life is exposed to selenium primarily through the diet. When the input of a toxic substance to an organism is greater than the rate at which the substance is lost, the organism is said to bioaccumulate that substance. Although selenium bioaccumulates in aquatic organisms, it is not significantly biomagnified. That is, concentrations do not increase significantly in aquatic organisms at each successive level of the food chain. For aquatic life, the lowest toxic thresholds (the smallest levels at which toxic effects are noticeable) are generally associated with effects on larval offspring of the adult fish that were exposed to excessive selenium or with effects on juvenile fish.

Being a natural element, selenium is everywhere in the environment. Concerns about too much selenium in water have most often been associated with irrigation return flows from soils that are naturally high in selenium, ash pond discharges from coal-fired power plants (due to the selenium content of coal), and certain mining activities (due

to exposure of selenium-bearing soil or rock to weathering).

F. What Has EPA Done in the Past on the Aquatic Life Criteria for Selenium?

EPA's currently-recommended aquatic life water quality criteria for selenium were published in 1987. EPA made minor adjustments in the criteria concentrations when it converted the selenium criteria from a total recoverable (dissolved plus particulate) measurement basis to a dissolved measurement basis in 1995 and 1999 as follows: (a) In 60 FR 15366, March 23, 1995, only for the Great Lakes Initiative; (b) in 60 FR 22228, May 4, 1995, only for the saltwater criteria; and (c) in 64 FR 19781, April 22, 1999, optionally for freshwater nationwide.

In 1996, EPA proposed but did not complete an additional change in the freshwater acute criterion for the Great Lakes system (61 FR 58444, November 14, 1996). In 2000, EPA revoked the existing acute criterion for the Great Lakes system (65 FR 35283, June 2, 2000) in response to a lawsuit challenging the use of a single acute criterion applicable to selenite and selenate, the two common chemical forms of selenium (see *AISI v. EPA*, 115 F. 3d 979 (D.C. Cir. 1997)).

EPA's most recent compilation of criteria presents (a) the above-mentioned 1996 GLI proposed freshwater acute criteria, (b) the 1987 freshwater chronic criterion, and (c) the 1987 saltwater acute and chronic criteria as converted to dissolved in 1995. You can find the compilation at www.epa.gov/waterscience/standards/wqcriteria.html.

In 1998 EPA held a peer consultation workshop to evaluate possible courses of action regarding the selenium aquatic life criterion and notified the public of our intent to review the selenium criteria. In 1999, EPA announced its intention to revise its national aquatic life criterion for selenium and requested data (64 FR 58409, October 29, 1999).

In 2002, EPA prepared an early draft revision of its aquatic life criteria document and submitted it to peer review (Versar 2002, Lemly 2004). EPA considered the comments and suggestions submitted by the peer reviewers (U.S. EPA 2004b) and made many technical and scientific changes in response (U.S. EPA 2004a). In the future, EPA will review any scientific information, data, and views submitted in response to today's notice. The Agency will also continue to work closely with the U.S. Fish and Wildlife Service and other key federal agencies to arrive at final water quality criteria

for selenium which are protective of aquatic life.

Today's announcement of the draft aquatic life criteria document for selenium has no effect on EPA's human health criteria recommendation for selenium published in 2002 (see <http://epa.gov/waterscience/standards/wqcriteria.html>).

G. What Are the Draft Aquatic Life Criteria Values?

The draft selenium criteria recommendations state that freshwater aquatic life should be protected under the following conditions:

A. The concentration of selenium in whole-body fish tissue is not more than 7.91 µg/g (micrograms per gram) dw (dry weight). This is the chronic exposure criterion. In addition, if whole-body fish tissue concentrations exceed 5.85 µg/g dw during summer or fall, fish tissue should be monitored during the winter to determine whether the selenium concentration exceeds 7.91 µg/g dw.

B. The 24-hour average concentration of total recoverable (dissolved and particulate) selenium in water seldom (e.g., not more than once in three years) exceeds 258 µg/L for selenite, and likewise seldom exceeds the numerical value given by $\exp(0.5812[\ln(\text{sulfate})]+3.357)$ for selenate. These are the acute exposure criteria. At an example sulfate concentration of 100 mg/L, the 24-hour average selenate concentration should not exceed 417 µg/L. Sulfate is a commonly measured water quality parameter that has been found to have a mitigating influence on the acute toxicity of the selenate form of selenium.

Likewise, the draft selenium criteria recommendations state that saltwater aquatic life should be protected from acute effects of selenium if the 24-hour average concentration of selenite seldom exceeds 127 µg/L. Because selenium might be as chronically toxic to saltwater fishes as it is to freshwater fishes, the fish community should be monitored if selenium exceeds 5.85 µg/g dw in summer or fall or 7.91 µg/g dw during any season in the whole-body tissue of saltwater fishes.

H. What Would the Draft Aquatic Life Criteria Recommendations Protect?

The draft selenium criteria recommendations were derived from data on aquatic life and are intended to protect aquatic life. Specifically, the draft chronic exposure recommendation is designed to protect against mortality, reproductive interferences, and growth abnormalities in fish and other aquatic

organisms due to long-term excessive exposure to selenium in the aquatic food chain. The draft acute exposure recommendations are designed to protect against lethality or immobilization of aquatic organisms due to brief elevated exposure to selenium in water.

Although the draft recommendation took into account dietary exposure for aquatic life, no nationally-applicable scientific methodology yet exists to derive national water quality criteria to protect birds or terrestrial wildlife that consume fish, water, or aquatic plants and organisms that contain selenium. Therefore, this draft selenium recommendation is not designed to protect birds or terrestrial wildlife. (Similarly, EPA's existing 1987 water quality criteria for selenium were not designed to protect birds or wildlife.) However, EPA is working with the U.S. Fish and Wildlife Service and other interested federal agencies to develop selenium criteria protective of wildlife within the State of California. The California-specific wildlife criteria effort is separate from the national-scale draft aquatic life criteria announced in today's notice. Its development is on a different time track; it involves analysis of toxicity data for aquatic-dependent wildlife (not aquatic life); and it is intended to apply only to California.

I. How Do the Draft Aquatic Life Criteria Recommendations Differ From Previous Criteria Recommendations?

In contrast to the existing 1987 freshwater chronic criterion, which was expressed as a conventional water concentration, the draft freshwater chronic criterion sent to peer review in 2002 and the draft criterion announced in today's notice are each expressed as a whole-body fish tissue concentration (µg selenium per gram of fish tissue on a dry weight basis). At a given location or for a given water body, a fish tissue level of selenium can be used with a site-specific bioaccumulation factor to estimate the concentration of selenium in the water. A bioaccumulation factor is a measured or predicted ratio between the tissue concentration and the water concentration of a chemical, in this case, selenium.

Early in the process of developing these draft criteria, EPA concluded, and the peer reviewers agreed that a fish-tissue approach is better than a conventional water concentration approach to protect aquatic life from the chronic adverse effects of selenium. Because fish and aquatic invertebrates are exposed to selenium primarily through their diet rather than directly through water, the fish-tissue

concentration better reflects site-specific exposure and risk than does the water concentration. Therefore, using the fish-tissue approach allows users to consider site-specific factors in translating to a water concentration.

However, consistent with the type of toxicity tests used for their derivation, the draft aquatic life criteria to protect against the acute effects of selenium in fresh water and salt water are expressed as traditional water concentrations (total recoverable selenium). Expanding the toxicity database with a substantial number of more recent acute toxicity tests yielded relatively little change in the freshwater selenite criterion, but yielded a substantial increase in the selenate criterion due to repeated retesting of an amphipod that formerly appeared to have an anomalously low LC50, and due to normalization of the acute data for sulfate concentration. Normalization of all acute test results for sulfate concentration reveals that some species formerly thought to be highly sensitive were actually tested at low sulfate. Including sulfate in the draft criteria formula assures their protection at low sulfate concentrations. Expansion of the database caused the saltwater selenite criterion to decrease because a scallop, formerly untested, was found to be highly sensitive. A saltwater chronic criterion is not presented in the draft announced today, because EPA lacks sufficient and appropriate data to derive one.

J. Are There Particular Issues on Which EPA is Requesting Scientific Information, Data, and Views?

EPA is requesting information, data, and views on all facets of the science supporting the draft criteria recommendations for selenium, but it is particularly interested in the following topics:

1. The Appropriateness of Basing the Freshwater Chronic Criterion on a Tissue Concentration

Because the same water concentration may yield different amounts of bioaccumulation and therefore different levels of risk at different sites, EPA developed this draft criterion as a fish tissue concentration to reduce the need for resetting the criterion on a site-by-site basis. Where translation from the tissue benchmark to a water concentration is needed, a bioaccumulation factor (BAF), which may vary substantially from site to site, would need to be established.

Participants in the 1998 Peer Consultation Workshop suggested that a tissue-based approach for a selenium aquatic life criterion would be feasible

(U.S. EPA 1998). The underlying concept is different from that used historically for developing aquatic life criteria that are applied to the water column, the surrounding environment shared by a range of aquatic species. Nevertheless, this tissue-based approach appears to be appropriate because, at concentrations not far above the draft criterion, selenium is toxic to the offspring (embryos, larvae, or juveniles) of sensitive species, but not to the adult fish that might be present and from which an environmental sample could be taken.

EPA is requesting scientific information, data, and views on (a) the concept of protecting aquatic life by applying a criterion to whole-body fish tissue concentrations of selenium, (b) the appropriateness of applying a fish tissue-based water quality criterion uniformly across waterbodies to protect sensitive species, and (c) the possibility of applying the same criterion to invertebrate tissue where invertebrate samples are obtained with or in place of fish tissue samples.

Because EPA has not yet made decisions on the form or values of its final water quality criteria for selenium, EPA has not yet developed implementation procedures. Therefore, EPA is also interested in scientific information, data, and views on (d) approaches for sampling tissues, and (e) available data for deriving localized BAF values for translating the tissue concentrations to water concentrations, where needed for pollution control decisions.

2. Studies of Freshwater Aquatic Life Effects and Chronic Effect Concentrations

Based on studies involving exposure through a contaminated diet, the genus mean chronic EC20 (concentration effecting 20% of test organisms) for effects on larval or juvenile common sunfish (*Lepomis*) was found to be 9.5 µg/g dry weight whole body concentration of selenium in the adult parental fish or in the juveniles (depending on the study). This genus mean value is based on four studies. No data indicated that other genera were more sensitive than *Lepomis*. Useful chronic toxicity data were available for a rotifer (a small invertebrate), chinook salmon, rainbow trout, cutthroat trout, fathead minnow, flannelmouth sucker, razorback sucker, striped bass, and a mixture of sunfish.

One of the above studies was by Lemly (1993), who investigated overwinter survival of juvenile bluegill in the laboratory. This study consisted of a control (only background selenium

exposure) and one elevated selenium exposure level, both subjected either to (a) a temperature regime of 20 °C for 180 days, or (b) a temperature regime changing from 20 °C to 4 °C over the course of 60 days, and remaining at 4 °C for the remaining 120 days of the study. He observed substantially less survival when elevated selenium was combined with low temperature. The whole body concentration associated with mortality was 5.85 µg/g at Day 60 just prior to a significant increase in mortality, and 7.91 µg/g later in the study during and subsequent to the death of 40% of the organisms. For the same selenium exposure at 20 °C, mortality was 6% and whole body concentrations were 5.74 µg/g. Little mortality was observed at either temperature regime for unexposed organisms, but since there was only one selenium treatment, no concentration-response curve can be constructed.

One possible implication of the Lemly (1993) study might be that effects on overwinter survival of juveniles occur at lower concentrations than do effects on reproduction or early life stages. In the Monticello macrocosm study, at 4 to 5°C overwinter conditions, reproductive success and adult bluegill overwinter survival were unaffected at concentrations higher than those of the Lemly (1993) study (Hermanutz *et al.* 1996, corrected by Tao *et al.* 1999, and peer reviewed in Versar 2000).

Based on the Lemly (1993) results, to protect sensitive fish species under winter conditions, EPA has set the draft criterion at 7.91 µg/g, the concentration measured during the period of reduced survival, with the provision that winter monitoring should be performed if summer or fall tissue levels exceed 5.85 µg/g, the concentration occurring prior to the period of reduced survival. Three of five peer reviewers of the 2002 draft questioned whether the results from only one study should be used as the basis for lowering the nationally recommended criteria from 9.5 µg/g to 7.91 µg/g as EPA has done in this document. On the other hand, U.S. Fish and Wildlife Service (White 2002) has questioned whether 7.91 µg/g is sufficiently protective, citing the high mortality observed at that tissue concentration during the study.

EPA is requesting scientific information, data, and views on (a) the most appropriate interpretation and use of the Lemly (1993) results, and its applicability to a range of climatic regimes and fisheries types and (b) other data that may be relevant to the winter exposure issue. Because EPA expects it has seen all the available laboratory studies relevant to the issue, it is

particularly interested in field observations (such as age structure or species occurrence) that may be relevant to the selenium winter exposure issue under various climatic conditions. EPA is also requesting scientific information, data, and views on (c) approaches for accounting for different climatic conditions.

3. Alternative Values for the Freshwater Chronic Criterion

The current draft criteria document has set the aquatic life criterion for selenium at a whole body fish tissue concentration of 7.91 µg/g, with the provision that winter monitoring should be performed if summer or fall tissue levels exceed 5.85 µg/g. EPA is requesting information and analyses relevant to alternative fish tissue benchmarks. EPA will only consider analyses that have a formal, fully transparent, and reproducible derivation from laboratory or field data, where all the supporting information quantifies a toxic effect metric and an exposure metric.

EPA is also receptive to formally-derived benchmarks applicable to other aquatic media, such as water, sediment, or prey tissue. Again, the derivations should be transparent and fully reproducible from laboratory or field data.

4. Site-Specific Factors Affecting the Freshwater Chronic Criterion

Expressing the chronic criterion as a tissue concentration rests on the assumption that there is reasonable geographic uniformity in the tissue threshold, while the BAF, and therefore the water concentration threshold, may vary considerably across sites. EPA believes that the route of exposure affects the tissue threshold. The same tissue concentration, if accumulated through water-only exposure, appears to be more toxic than if accumulated via diet. Fish provided with an uncontaminated diet and exposed to very high water concentrations of selenium (for example, 300 µg/L in the Cleveland *et al.* (1993) study) may show effects when whole body concentrations exceed only 4 µg/g. When exposed through a contaminated diet but essentially uncontaminated water in the same study, effects were not observed until tissue concentrations exceeded around 13 µg/g.

Because EPA did not use studies involving uncontaminated diets coupled with high water exposures, the criterion assumes that the dominant environmental exposure route for the target species is dietary. Consistent with the views of the EPA peer consultation

workshop in 1998, EPA believes that this assumption corresponds to the real-world problems of selenium contamination.

While recognizing that the BAF can vary from site to site, EPA is requesting scientific information, data, and views on the general approach of using a uniform tissue benchmark (expressed as total selenium concentration in whole body) without regard to site differences that might include:

- The species to be protected,
- The type of water body,
- The character of the food web, for example, autochthonous versus nonseleniferous allochthonous,
- The form and concentration of selenium in the water or diet,
- The form of selenium in the sampled tissue,
- The nature of the selenium release,
- Interactions with other trace elements,
- Acclimation or adaptation,
- Hormesis,
- Climatic conditions, and
- Any other relevant site factors.

EPA is also requesting scientific information, data, and views relevant to the need for and appropriate basis for adjusting the tissue benchmark to account for site-specific factors.

5. Saltwater Chronic Criterion

For chronic exposure, we found no data that were useful for deriving a saltwater aquatic life criterion. However, selenium might be as toxic in the tissues of saltwater organisms as it is in the tissues of freshwater organisms. Therefore, the draft contains the cautionary recommendation that the status of the saltwater fish community be monitored if selenium exceeds 5.85 µg/g dw in summer or fall or 7.91 dw during any season (same as the freshwater benchmarks) in the whole-body tissue of saltwater fishes.

EPA is requesting scientific information, data, or views on (a) toxicity thresholds applicable to protecting saltwater organisms exposed to selenium through the food chain, or (b) the appropriateness of extending to saltwater what is known about freshwater toxicity thresholds.

6. Acute Criteria Concentrations

As discussed above, selenium toxicity problems have generally involved contamination of the food web. If the diet of the target species is not contaminated, very high water-column concentrations are needed to bring out effects, particularly when exposure is brief. As with bioaccumulative pollutants in general, acute toxicity (that is, toxicity from a brief sharp increase in

the water concentration) is of less concern than chronic exposure through the food chain.

Nevertheless, a large body of toxicity test data are available for brief water-only exposure. Therefore, EPA was able to derive acute criteria to protect aquatic life against the toxic effects of that type of exposure to selenium. For ambient freshwater, the draft selenite or Se (IV) acute criterion is 258 µg/L, and the draft sulfate-dependent selenate or Se (VI) criterion ranges from 109 to 1590 µg/L at sulfate concentrations from 10 to 1000 mg/L. For ambient saltwater the draft selenite acute criterion is 127 µg/L.

EPA is requesting scientific information, data, and views on the appropriateness of the draft values for the acute exposure criteria.

References

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Dated: December 9, 2004.

Geoffrey H. Grubbs,

Director, Office of Science and Technology.

[FR Doc. 04-27665 Filed 12-16-04; 8:45 am]

BILLING CODE 6560-50-P

FEDERAL RESERVE SYSTEM

Agency Information Collection Activities: Proposed Collection; Comment Request

AGENCY: Board of Governors of the Federal Reserve System

SUMMARY: On June 15, 1984, the Office of Management and Budget (OMB) delegated to the Board of Governors of the Federal Reserve System (Board) its approval authority under the Paperwork Reduction Act, as per 5 CFR 1320.16, to approve of and assign OMB control numbers to collection of information requests and requirements conducted or sponsored by the Board under conditions set forth in 5 CFR 1320 Appendix A.1. Board-approved collections of information are incorporated into the official OMB inventory of currently approved collections of information. Copies of the OMB 83-Is and supporting statements and approved collection of information instruments are placed into OMB's public docket files. The Federal Reserve may not conduct or sponsor, and the respondent is not required to respond to, an information collection that has been extended, revised, or implemented on or after October 1, 1995, unless it displays a currently valid OMB control number.

Request for comment on information collection proposal

The following information collection, which is being handled under this delegated authority, has received initial Board approval and is hereby published for comment. At the end of the comment period, the proposed information collection, along with an analysis of comments and recommendations received, will be submitted to the Board for final approval under OMB delegated authority. Comments are invited on the following:

- a. whether the proposed collection of information is necessary for the proper performance of the Federal Reserve's functions; including whether the information has practical utility;
- b. the accuracy of the Federal Reserve's estimate of the burden of the proposed information collection, including the validity of the methodology and assumptions used;
- c. ways to enhance the quality, utility, and clarity of the information to be collected; and

- d. ways to minimize the burden of information collection on respondents, including through the use of automated collection techniques or other forms of information technology.