

NOTICE OF INTENT

Department of Environmental Quality
Office of Environmental Assessment
Environmental Planning Division

Toxicity Equivalency (TEQ) Concept in Dioxin Criteria
(LAC 33:IX.1113) (WQ052)

Under the authority of the Environmental Quality Act, R.S. 30:2001 et seq., and in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., the secretary gives notice that rulemaking procedures have been initiated to amend the Water Quality regulations, LAC 33:IX.1113 (Log #WQ052).

The proposed rule incorporates the toxicity equivalency (TEQ) concept by using toxicity equivalency factors (TEFs). The TEQ concept is used to estimate the risks associated with exposure to chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans (CDD/CDF), as well as 2,3,7,8-TCDD. This procedure uses a set of derived TEFs to convert the concentration of any CDD/CDF congener into an equivalent concentration of 2,3,7,8-TCDD. This action is required to more accurately estimate human health risks associated with exposure to dioxin and dioxin-like compounds. Current recommendations from both the Environmental Protection Agency (EPA) and the World Health Organization (WHO) incorporate the TEQ concept as a better estimate of risk than using dioxin. The basis and rationale for the proposed rule are to protect human health. The EPA is encouraging states to adopt the TEQ guidelines proposed by WHO, as these recommendations reflect current scientific thinking. Adoption of the TEQ concept will enable the department to better fulfill its mission of maintaining a healthful environment for the public.

This proposed rule meets an exception listed in R.S. 30:2019(D)(2) and R.S. 49:953(G)(3); therefore, no report regarding environmental/health benefits and social/economic costs is required. This proposed rule has no known impact on family formation, stability, and autonomy as described in R.S. 49:972.

A public hearing will be held on January 26, 2004, at 1:30 p.m. in the Galvez Building, Oliver Pollock Conference Room C111, 602 N. Fifth Street, Baton Rouge, LA 70802. Interested persons are invited to attend and submit oral comments on the proposed amendments. Should individuals with a disability need an accommodation in order to participate, contact Lynn Wilbanks at the address given below or at (225) 219-3550. Free parking is available across the street in the Galvez parking garage when the parking ticket is validated by department personnel at the hearing.

All interested persons are invited to submit written comments on the proposed regulation. Persons commenting should reference this proposed regulation by WQ052. Such comments must be received no later than February 2, 2004, at 4:30 p.m., and should be sent to Lynn Wilbanks, Office of Environmental Assessment, Environmental Planning Division, Regulation Development Section, Box 4314, Baton Rouge, LA 70821-4314 or to FAX (225) 219-3582 or by

e-mail to lynn.wilbanks@la.gov. Copies of this proposed regulation can be purchased by contacting the DEQ Public Records Center at (225) 219-3168. Check or money order is required in advance for each copy of WQ052.

This proposed regulation is available for inspection at the following DEQ office locations from 8 a.m. until 4:30 p.m.: 602 N. Fifth Street, Baton Rouge, LA 70802; 1823 Highway 546, West Monroe, LA 71292; State Office Building, 1525 Fairfield Avenue, Shreveport, LA 71101; 1301 Gadwall Street, Lake Charles, LA 70615; 201 Evans Road, Building 4, Suite 420, New Orleans, LA 70123; 111 New Center Drive, Lafayette, LA 70508; 104 Lococo Drive, Raceland, LA 70394 or on the Internet at <http://www.deq.state.la.us/planning/regs/index.htm>.

James H. Brent, Ph.D.
Assistant Secretary

**Title 33
ENVIRONMENTAL QUALITY
Part IX. Water Quality**

Chapter 11. Surface Water Quality Standards

1113. Criteria

A. – C.6.f. ...

Table 1						
Numerical Criteria for Specific Toxic Substances						
(In micrograms per liter (µg/L) or parts per billion (ppb) unless designated otherwise)						
Toxic Substance	Aquatic Life Protection				Human Health Protection	
	Freshwater		Marine Water		Drinking Water Supply¹	Non-Drinking Water Supply²
	Acute	Chronic	Acute	Chronic		

Other Organics						
<u>2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD)</u> <u>Chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans (TEQ)¹²</u>	--	--	--	--	0.71 ppq ⁹	0.72 ppq
Metals and Inorganics						

Footnotes 1 – 11 ...

¹²The dioxin toxicity equivalency (TEQ) concentration is obtained by multiplying each congener's toxicity equivalency factor (TEF) times its respective concentration and then taking the sum of all calculated values.

Congener	TEF
<u>2,3,7,8-Tetrachlorodibenzo-p-dioxin</u>	<u>1</u>
<u>1,2,3,7,8-Pentachlorodibenzo-p-dioxin</u>	<u>1</u>
<u>1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>
<u>1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>
<u>1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin</u>	<u>0.1</u>
<u>1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin</u>	<u>0.01</u>

<u>Octachlorodibenzo-p-dioxin</u>	<u>0.0001</u>
<u>2,3,7,8-Tetrachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,7,8-Pentachlorodibenzofuran</u>	<u>0.05</u>
<u>2,3,4,7,8-Pentachlorodibenzofuran</u>	<u>0.5</u>
<u>1,2,3,4,7,8-Hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,6,7,8-Hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,7,8,9-Hexachlorodibenzofuran</u>	<u>0.1</u>
<u>2,3,4,6,7,8-Hexachlorodibenzofuran</u>	<u>0.1</u>
<u>1,2,3,4,6,7,8- Heptachlorodibenzofuran</u>	<u>0.01</u>
<u>1,2,3,4,7,8,9- Heptachlorodibenzofuran</u>	<u>0.01</u>
<u>Octachlorodibenzofuran</u>	<u>0.0001</u>

Table 1A – Footnote d ...

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:967 (October 1991), repromulgated LR 17:1083 (November 1991), amended LR 20:883 (August 1994), LR 24:688 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division, LR 25:2402 (December 1999), LR 26:2547 (November 2000), LR 27:289 (March 2001), LR 30:**

**FISCAL AND ECONOMIC IMPACT STATEMENT
FOR ADMINISTRATIVE RULES LOG #: WQ052**

Person

Preparing

Statement: Keith Sepulvado

Phone: (225) 219-3587

Dept.: Environmental Quality

Office: Environmental Assessment

Return

Address: P.O. Box 4314
Baton Rouge, LA 70821-4314

Rule

Title: TEQ Concept in Dioxin Criteria
(LAC 33:IX.1113)

Date Rule

Takes Effect: upon promulgation

SUMMARY

(Use complete sentences)

In accordance with Section 953 of Title 49 of the Louisiana Revised Statutes, there is hereby submitted a fiscal and economic impact statement on the rule proposed for adoption, repeal or amendment. THE FOLLOWING STATEMENTS SUMMARIZE ATTACHED WORKSHEETS, I THROUGH IV AND WILL BE PUBLISHED IN THE LOUISIANA REGISTER WITH THE PROPOSED AGENCY RULE.

I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

No significant effect of this proposed rule on state or local governmental expenditures is anticipated.

II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

No significant effect on state or local governmental revenue collections is anticipated.

III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NON-GOVERNMENTAL GROUPS (Summary)

No significant costs and/or economic benefits to directly affected persons or non-governmental groups are anticipated.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

No significant effect on competition or employment is anticipated.

Signature of Agency Head or Designee

James H. Brent, Ph.D., Assistant Secretary
Typed Name and Title of Agency Head
or Designee

LEGISLATIVE FISCAL OFFICER OR DESIGNEE

Date of Signature

LFO 7/1/94

Date of Signature

**FISCAL AND ECONOMIC IMPACT STATEMENT
FOR ADMINISTRATIVE RULES**

The following information is requested in order to assist the Legislative Fiscal Office in its review of the fiscal and economic impact statement and to assist the appropriate legislative oversight subcommittee in its deliberation on the proposed rule.

- A. Provide a brief summary of the content of the rule (if proposed for adoption or repeal) or a brief summary of the change in the rule (if proposed for amendment). Attach a copy of the notice of intent and a copy of the rule proposed for initial adoption or repeal (or, in the case of a rule change, copies of both the current and proposed rules with amended portions indicated).

The revised dioxin rule incorporates the toxicity equivalency (TEQ) concept by using toxicity equivalency factors (TEFs). The TEQ concept is used to estimate the risks associated with exposure to chlorinated dibenzo-p-dioxins and chlorinated dibenzofurans (CDD/CDF), as well as 2,3,7,8-TCDD. This procedure uses a set of derived TEFs to convert the concentration of any CDD/CDF congener into an equivalent concentration of 2,3,7,8-TCDD.

- B. Summarize the circumstances which require this action. If the Action is required by federal regulation, attach a copy of the applicable regulation.

This action is required to more accurately estimate human health risks associated with exposure to dioxin and dioxin-like compounds. Current recommendations from both the Environmental Protection Agency (EPA) and the World Health Organization (WHO) incorporate the TEQ concept as a better estimate of risk than using only dioxin.

- C. Compliance with Act II of the 1986 First Extraordinary Session
(1) Will the proposed rule change result in any increase in the expenditure of funds? If so, specify amount and source of funding.

The proposed rule will not result in any increase in the expenditure of funds to the state.

- 2) If the answer to (1) above is yes, has the Legislature specifically appropriated the funds necessary for the associated expenditure increase?

- (a) _____ Yes. If yes, attach documentation.
(b) _____ No. If no, provide justification as to why this rule change should be published at this time.

This question is not applicable.

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

I. A. COSTS OR SAVINGS TO STATE AGENCIES RESULTING FROM THE ACTION PROPOSED

1. What is the anticipated increase (decrease) in costs to implement the proposed action?

No significant increase or decrease in costs to implement this rule is anticipated.

COSTS	FY 03-04	FY 04-05	FY 05-06
PERSONAL SERVICES	0	0	0
OPERATING EXPENSES	0	0	0
PROFESSIONAL SERVICES	0	0	0
OTHER CHARGES	0	0	0
EQUIPMENT	0	0	0
TOTAL	0	0	0
MAJOR REPAIR & CONSTR.	0	0	0
POSITIONS(#)	0	0	0

2. Provide a narrative explanation of the costs or savings shown in "A.1.", including the increase or reduction in workload or additional paperwork (number of new forms, additional documentation, etc.) anticipated as a result of the implementation of the proposed action. Describe all data, assumptions, and methods used in calculating these costs.

This is not applicable.

3. Sources of funding for implementing the proposed rule or rule change.

This is not applicable.

SOURCE	FY 03-04	FY 04-05	FY 05-06
STATE GENERAL FUND	0	0	0
AGENCY SELF-GENERATED	0	0	0
DEDICATED	0	0	0
FEDERAL FUNDS	0	0	0
OTHER (Specify)	0	0	0
TOTAL	0	0	0

4. Does your agency currently have sufficient funds to implement the proposed action? If not, how and when do you anticipate obtaining such funds?

The department currently has sufficient funds to implement the amendment.

B. COST OR SAVINGS TO LOCAL GOVERNMENTAL UNITS RESULTING FROM THE ACTION PROPOSED.

1. Provide an estimate of the anticipated impact of the proposed action on local governmental units, including adjustments in workload and paperwork requirements. Describe all data, assumptions and methods used in calculating this impact.

No significant impact is anticipated on local governments, including adjustments in workload and paperwork requirements.

2. Indicate the sources of funding of the local governmental unit which will be affected by these costs or savings.

No significant effect on any sources of funding of local governmental units is anticipated to result from the implementation of the proposed rule.

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

II. EFFECT ON REVENUE COLLECTIONS OF STATE AND LOCAL GOVERNMENTAL UNITS

- A. What increase (decrease) in revenues can be anticipated from the proposed action?

No significant increase/decrease in revenues is anticipated.

REVENUE INCREASE/DECREASE	FY 03-04	FY 04-05	FY 05-06
STATE GENERAL FUND	0	0	0
AGENCY SELF-GENERATED	0	0	0
RESTRICTED FUNDS*	0	0	0
FEDERAL FUNDS	0	0	0
LOCAL FUNDS	0	0	0
TOTAL	0	0	0

*Specify the particular fund being impacted.

- B. Provide a narrative explanation of each increase or decrease in revenues shown in "A." Describe all data, assumptions, and methods used in calculating these increases or decreases.

This is not applicable.

III. COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NONGOVERNMENTAL GROUPS

- A. What persons or non-governmental groups would be directly affected by the proposed action? For each, provide an estimate and a narrative description of any effect on

costs, including workload adjustments and additional paperwork (number of new forms, additional documentation, etc.), they may have to incur as a result of the proposed action.

No significant effect on directly affected persons or non-governmental groups is anticipated.

- B. Also provide an estimate and a narrative description of any impact on receipts and/or income resulting from this rule or rule change to these groups.

No significant impact on receipts and/or income is anticipated.

IV. EFFECTS ON COMPETITION AND EMPLOYMENT

Identify and provide estimates of the impact of the proposed action on competition and employment in the public and private sectors. Include a summary of any data, assumptions and methods used in making these estimates.

No significant impact is anticipated on competition or employment in the public or private sector.