

NOTICE OF FINAL RULEMAKING
DEPARTMENT OF ENVIRONMENTAL PROTECTION
ENVIRONMENTAL QUALITY BOARD
[25 PA CODE CH. 250]
Administration of the Land Recycling Program

The Environmental Quality Board (Board) by this order amends 25 Pa. Code, Chapter 250 (relating to Administration of the Land Recycling Program) to read as set forth in Annex A. These amendments satisfy the obligation of the Department of Environmental Protection (Department), as specified in 25 Pa. Code §250.11, to review new scientific information that relates to the basis of medium-specific concentrations (MSCs) as it becomes available and to propose appropriate changes for consideration by the Board no more than 36 months after the effective date of the most recently promulgated MSCs.

This final-form rulemaking was adopted by the Board at its meeting of _____

A. Effective Date

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final rulemaking.

B. Contact Persons

For further information contact Troy Conrad, Program Manager, Land Recycling Program, P.O. Box 8471, Rachel Carson State Office Building, Harrisburg, PA 17105-8471, (717) 783-7816, or Keith Salador, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 783-8075. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users). This proposal is available electronically through the DEP Web site (<http://www.dep.state.pa.us>).

C. Statutory Authority

This final rulemaking is being made under the authority of sections 104(a) and 303(a) of the Land Recycling and Environmental Remediation Standards Act (Land Recycling Act, or Act 2) (35 P. S. §§ 6026.104(a) and 6026.303(a)), and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20). Section 104(a) of the Land Recycling Act authorizes the Board to adopt Statewide health standards as well as appropriate mathematically valid statistical tests to define compliance with the Land Recycling Act and other regulations that may be needed to implement the provisions of the Land Recycling Act. Section 303(a) of the Land Recycling Act authorizes the Board to promulgate Statewide health standards for regulated substances for each environmental medium and to promulgate methods used to calculate the standards. Section 1920-A authorizes the Board to formulate, adopt and promulgate rules and regulations that are necessary for the proper work of the Department.

D. *Background and Purpose*

25 Pa. Code § 250.11 (relating to periodic review of MSCs) requires the Department to review new scientific information that is used to calculate MSCs under the Statewide health standard and propose appropriate changes to the Board at least every 36 months. Such changes serve the public as they are based on the most up-to-date health and other scientific information to protect human health. In addition, the changes serve the public and regulated community as they provide clear information on what is required to clean up contaminated sites. The final rulemaking was reviewed by the Cleanup Standards Scientific Advisory Board (CSSAB). The final rulemaking was discussed and approved at the CSSAB meeting held on December 17, 2014. The CSSAB supported all aspects of the proposal except the retention of the groundwater MSC for Methyl Tertiary Butyl Ether (MTBE). As discussed further in Section G (Summary of Comments and Responses on the Proposed Rulemaking) the CSSAB asserted that the MTBE groundwater MSC was based on aesthetic considerations under a U.S. Environmental Protection Agency (EPA) published drinking water advisory rather than specific health-based criteria as required in Act 2 and the regulations thereunder. The final rulemaking was reviewed by the Storage Tank Advisory Committee (STAC) on March 3, 2015. STAC supported all aspects of the final rulemaking except for the groundwater MSC for MTBE, reiterating the same objection as the CSSAB.

E. *Summary of Regulatory Requirements*

§ 250.5. Public notice by applicant.

Changes to this section add the requirement that documented proof of the mailing of municipal notices and the arranging for publication of newspaper notices that are required by Act 2 shall be submitted at the same time the NIR, plan, or report is submitted to the Department. This will allow the Department to assure that the municipality and the public are notified of the NIR, plan or report in a timely fashion.

§ 250.7. Fees.

Changes to this section clarify that the Department may waive the fee for resubmission of a plan or report if the resubmission is related to correcting minor administrative or technical deficiencies.

§ 250.301. Scope.

Changes to this section add certain regulated substances to the list of substances classified as mutagens based on recently published scientific information.

§ 250.304. MSCs for groundwater.

Prior to the January 2011 edition of the *Drinking Water Standards and Health Advisories*, EPA Office of Water Publication No. EPA 820-R-11-002 (January, 2011), when EPA published a lifetime Health Advisory Level (HAL) and a 10^{-4} Cancer Risk concentration for a chemical, the lifetime HAL concentration would include an adjustment for cancer risk. Starting with the January 2011 edition of the *Drinking Water Standards and Health Advisories*, EPA changed its Cancer Classification system and started publishing lifetime

HALs that did not include adjustments for cancer risk even when a 10^{-4} Cancer Risk concentration was also published.

Language in § 250.304(c) clarifies that a published lifetime HAL concentration would not be used as the MSC for substances that are designated as likely to be carcinogenic if the lifetime HAL does not include an adjustment for cancer risk. For these cases the MSC will be calculated based on the equations in §§ 250.306 (relating to Ingestion numeric values) and 250.307 (relating to Inhalation numeric values).

Section 250.304(g) includes additional references related to the determination of solubility values.

§ 250.306. Ingestion numeric values.

Due to new information about the toxicology of trichloroethylene (TCE), values for oral cancer slope factors for TCE were added and the formula for calculating the MSC for TCE was revised.

Due to new information published by EPA in Exposure Factors Handbook 2011 Edition, EPA/600/R-090/052F, the average body weight and the associated ingestion factors were changed.

§ 250.307. Inhalation numeric values.

Due to new information relating to the toxicology of TCE, values for inhalation unit risk for TCE and the formula for calculating the MSC for TCE were changed.

Appendix A, Tables 1-7.

Changes to the “Medium-Specific Concentrations” tables were made for certain regulated substances. Information was updated on the “Physical and Toxicological Properties” tables and the “Threshold of Regulation Compounds” table. The “Default Values for Calculating MSCs for Lead” table (Table 7) was inadvertently omitted from the previous version of the regulation and has been reinserted.

F. Summary of Changes to the Proposed Rulemaking

§ 250.5. Public notice by applicant.

The proposed version of this section stated that specific documented proof of the mailing of municipal notices and arranging for the publication of newspaper notices is required at the same time the Notice of Intent to Remediate (NIR) is submitted to the Department. This would have required remediators to wait for public notice documents in advance of submitting reports and NIRs to the Department. Act 2 requires these notices to be made at the same time the NIR or report is submitted to the Department. (35 P. S. §§ 6026.302(e), 6026.303(h), 6026.304(n), and 6026.305(c)). Language in this section was changed to allow remediators to provide reasonable proof of publication by submitting the proposed text of the newspaper notice and the anticipated publication date at the same time that the NIR is submitted. This will allow the Department to assure that the municipality and the public are notified of the NIR, plan or report in a timely fashion, in accordance with the statute.

§ 250.304. *MSCs for groundwater.*

Subsection (g) of § 250.304 provides references for sources of solubility limits used in calculating the groundwater MSCs. The reference “*Riddick, J.A., et al (1986)*” was added to the list of sources in this subsection.

§ 250.307. *Inhalation numeric values.*

The changes to equations in this section are to correct a typographical error that occurred between approval and publishing of the January 7, 2011 rulemaking.

Appendix A, Tables 1-7.

Updates to toxicity values published after the proposed rulemaking caused existing MSCs for certain regulated substances to change. In addition, triethylene glycol was added based on new data EPA published in the Provisional Peer-Reviewed Toxicity Values.

G. *Summary of Comments and Responses on the Proposed Rulemaking*

On May 17, 2014, the Board published a *Pennsylvania Bulletin* notice of proposed rulemaking and written public comment period on the proposed amendments to Chapter 250. The comment period opened on May 17, 2014 and closed on June 17, 2014. The Board received comments from 2 commentators in addition to comments from the Independent Regulatory Review Commission (IRRC).

A commentator noted that the residential soil MSC for vanadium is proposed to be decreased by 100 times from 1,500 mg/kg to 15 mg/kg. Furthermore, the commentator asserts that vanadium background concentrations in Pennsylvania range from a minimum of 15 mg/kg to a maximum of 150 mg/kg with an average of 80 mg/kg (Dragun, 2005¹ / USGS, 1981²). Therefore, the commentator felt it would be more practical to set the MSC at the maximum background concentration of 150 mg/kg. A similar argument was made by the commentator for arsenic, which has background concentrations ranges from 3.8 mg/kg to 31 mg/kg. IRRC requested an explanation of the scientific data relied upon for lowering the MSCs for vanadium and arsenic and to explain how the new standards are necessary to protect the public health.

The Provisional Peer-Reviewed Toxicity Value (PPRTV) oral reference dose (RfD_o) of 0.00007 mg/kg-day published by EPA (*Provisional Peer-Reviewed Toxicity Values for Vanadium and Its Soluble Inorganic Compounds Other than Vanadium Pentoxide, EPA, 2009*) is the basis for the change in the vanadium MSCs. The prior MSCs for vanadium were based on a RfD_o published by EPA in the Health Effects Assessment Summary Tables (HEAST). This PPRTV RfD_o is based on a peer-reviewed toxicity analysis that undergoes

¹ Dragun, James and Chekiri, Khaled. “*Element in North America Soils.*” Amherst Scientific Publishers: Amherst, Mass. 2005.

² Boerngen, J.G and Shacklette, H.T., “*Chemical Analysis of Soils and Other Surficial Materials of the Conterminous United States.*” Open File Report 81-197. U.S. Geological Survey. 1981.

greater rigor than the RfD_o published in HEAST. The Board and the CSSAB assign greater weight to a PPRTV RfD_o than a HEAST RfD_o consistent with 25 Pa. Code §250.605(a) (relating to development of site-specific standards). Therefore, this new value is the appropriate human health level for vanadium under the Land Recycling Act.

The Land Recycling Act and the regulations promulgated thereunder require the calculation of Statewide health standard MSCs based on human health toxicity values only and not on background soil levels. However, the Land Recycling Act does recognize that human health toxicity values for any naturally occurring regulated substance may result in standards that are numerically less than the background levels at specific sites in the Commonwealth. In this case, the Land Recycling Act states that persons are not required to remediate below the background standard (35 P.S. § 6026.303(d)) (relating to Statewide health standard). Therefore, persons may use the background standard pursuant to the requirements of the Land Recycling Act and the regulations promulgated thereunder.

A commentator also noted that neither the CSSAB nor the STAC support the groundwater and soil-to-groundwater MSCs for MTBE. The commentator concurs with the CSSAB and STAC assessment that the proposed MTBE calculations do not use specific health-based standards. The commentator also supports the recommendations submitted by the two DEP advisory committees and recommends that the proposed rulemaking be altered to reflect science-based calculations in this one regard. IRRC requested that the advisory committees' concerns related to the MSCs for MTBE be addressed in the Preamble and the Regulatory Analysis Form of the final-form regulation. IRRC also requested an explanation of how the MTBE MSCs meet the criteria established in Act 2 and how the MTBE MSCs adequately protect public health, safety and welfare.

The Land Recycling Act requires federally or state promulgated groundwater MCLs and HALs to be the groundwater MSC. (35 P.S. § 6026.301(c)). Currently six regulated substances have groundwater MSCs that are federally promulgated MCLs which are solely based on secondary effects (aesthetic thresholds, e.g. taste and odor). Since the Land Recycling Act requires the use of MCLs and HALs when available, the Act therefore allows for groundwater MSCs to be based on drinking water standards that are not health-based, but are aesthetic-based. EPA may include taste and odor considerations as well as health-based calculations in its promulgation of MCLs. (42 USCS § 300f(2)).

In the original Chapter 250 regulations published in the *Pennsylvania Bulletin* on August 16, 1997, the Board promulgated a groundwater MSC for MTBE of 20 µg/L based on a draft lifetime HAL published by EPA. In subsequent publications of the federal drinking water standards, EPA listed MTBE under a separate table, titled Drinking Water Advisories, with an advisory level of 20 µg/L. EPA concluded that despite limited health-based information, the drinking water advisory is consistent with human health protection goals. The Board decided not to propose a change in the MSC for MTBE because the drinking water advisory level reflects no change in the degree of protectiveness from the original draft HAL. EPA continues to indicate that it is further evaluating MTBE for an MCL determination.

H. *Benefits, Costs and Compliance*

Benefits

The Department updates the Statewide health standard MSC values on a regular basis to assure that environmental response actions at contaminated sites are remediated using current EPA guidance and toxicological information. This will ensure the protection of the public health and environment from exposure to regulated substances where it has been determined that lower concentrations of regulated substances are required to meet the standards established by the statute. This will also avoid unnecessary expense for remediators when remediating contaminated property for redevelopment where it has been determined that higher concentrations of regulated substances are protective and meet the standards established by the statute.

Compliance Costs

These technical amendments to the Land Recycling regulations will affect owners, operators and purchasers of properties and facilities who volunteer or are required to perform remediation of contaminated sites. These changes are not expected to add any significant costs to the cleanup of contaminated sites under this program. Some cleanup standard concentration values will be lower and some will be higher. The net overall cost should be negligible.

Compliance Assistance Plan

The Land Recycling Program will disseminate information concerning these updates using the Department web site and e-mails to environmental consultants involved in the program.

Paperwork Requirements

No forms or reports are required beyond those established by Act 2.

I. *Pollution Prevention*

The Pollution Prevention Act of 1990 (42 U.S.C.A. §§ 13101—13109) established a national policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance requirements.

During remediation of a contaminated site, potential sources of pollution are often removed in order to attain the Act 2 standards, thus eliminating or minimizing the potential for continued migration.

J. *Sunset Review*

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

K. *Regulatory Review*

Under Section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on April 28, 2014, the Department submitted a copy of this proposed rulemaking, published at 44 Pa.B. 2980 (May 17, 2014), to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the House and Senate Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing the final rulemaking, the Department has considered all comments from IRRC and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P. S. § 745.5a(j.2)), on _____, 2015, these final-form regulations were deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on _____, 2015, and approved the final-form regulations.

L. *Findings of the Board*

The Board finds that:

- (1) Public notice of the proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at *1 Pennsylvania Code* §§ 7.1 and 7.2.
- (2) A public comment period was provided as required by law, and all comments were considered.
- (3) These regulations do not enlarge the purpose of the proposal published at 44 *Pennsylvania Bulletin* 2980 (May 17, 2014).
- (4) These regulations are necessary and appropriate for the administration and enforcement of the acts identified in Section C of this order.

M. *Order of the Board*

The Board, acting under the authorizing statutes, orders that:

- (a) The regulations of the Department of Environmental Protection, 25 Pennsylvania Code, Chapter 250, are amended to read as set forth in Annex A.
- (b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.
- (c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.
- (d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (e) This order shall take effect immediately.

John Quigley
Acting Chairperson
Environmental Quality Board