DRAFT
Version Date 02-06-01

FINAL RULEMAKING
ADMINISTRATION OF THE LAND RECYCLING PROGRAM
COMMENT AND RESPONSE DOCUMENT

INTRODUCTION

In assembling this document, the Department has addressed all pertinent comments associated with this package. For the purposes of this document, comments of similar subject material have been grouped together and responded to accordingly.

During the public comment period, the Department received approximately 38 comments from four companies and four organizations representing industry. Comments from the Independent Regulatory Review Commission are also addressed in this document.

Following is a list of corporations and organizations from which the Environmental Quality Board has received comments regarding the above referenced regulation during the official comment period. The ID number identifies each commentator who submitted a particular comment. That number is found in parentheses following the comment in the comment/response document.

The Document has been organized by issues commented on, rather than by rulemaking section. The reason for this is that some of the significant issues that were raised by commentators included proposed text in up to three major rulemaking sections, and one main section (250.303) dealt with three separate regulatory concept changes. The outline of the document is presented on the next page for the convenience of the reader.

Outline for COMMENT AND RESPONSE DOCUMENT

I. Comments on Nonuse Aquifer and Associated Public Notice (Comment#1-18)

A. **Modification of Section 250.303(b) to limit on-source-property area to area of "site" instead of whole property area.**
Comments #1-2 relate to Section 250.303(b).

B. **Incorporating notice and 45-day review period for municipalities and water suppliers.**
Comments 3-11 relate to Sections 250.5(d),(e), 250.303(c).

C. **Process for "precertification" of nonuse aquifer areas.**
Comments 12-18 relate to Sections 250.5(e), 250.6(e), 250.303(b), (c), and (f).

II. Comments Related to Calculation of MSCs (Comment #19-27)

A. **Table 5 – Physical and Toxicological Properties**
Comments 19-22 relate to Annex A, Table 5.

B. **MSCs for PCB Mixtures**
Comments 23-25 relate to Tables 1, 3A, 3B, 5.

C. **Comments on Updating MSCs and Retaining the Site-specific Standard**
Comment 26 relates to Tables 1, 3A, 3B, and 5.

D. **Suggestion of faster DEP method for correcting errors in the standards tables in the regulations**
Comment 27 is general to the rulemaking.

III. Comments Related to Definitions (Comment #28)

Comment #28 relates to Section 250.1

IV. Comments Related to Evaluation of Ecological Receptors (Comment #29-30)

Comment 29-30 relate to Section 250.311

A. **Clarification of which CPECs apply to the use of the ecological screen**

B. **Clarification of the term "release"**

V. Comments Related to Demonstrating Attainment Option (Comment #31-36)

Comments 31-36 relate to Sections 250.707 and 250.204.

A. Attainment option should not be limited to petroleum releases

B. Concern of Use of Characterization Samples for Attainment

C. Is this provision for underground storage tanks only?

D. What is the meaning of "full site characterization"?

E. Are traditional attainment methods allowed if full site characterization is done?

F. **What does the statement mean that all samples must meet the Statewide health standard?**

ID	Name/Address	Zip	Submitted 1 pg Summary	Provided Testimony	Req Final Rulemaking
1	Melissa M Fredrick Environmental Scientist Michael Baker Corporation Airport Office Park, Bldg 3 420 Rouser Road Coraopolis, PA	15108			
2	Lynn Ratzell Manager - Environmental Management. PPL Generation LLC Two North Ninth Street Allentown PA	18101-1179			
3	Dan Regan The Energy Association of Pennsylvania dregan@pagas.org				
4	Elizabeth K. Hunt, Executive Director Methacrylate Producers Association, Inc. 1250 Connecticut Ave, NW Suite 700 Washington, D.C.	20036			
5	Elizabeth K. Hunt, Executive Director Basic Acrylic Monomer Manufacturers, Inc. Connecticut Ave., N.W., Ste 700 Washington DC	20036			
6	A. L. Holmstrom Corporate Remediation Manager Rohm and Haas Engineering Division Box 584 Bristol PA	19007			
7	Wayne Belko, Chairman PEA Environmental Committee 800 N. Third St., Suite 301 Harrisburg PA	17102	X		
8	BP Exploration & Oil, inc. C/o Monica Gambino Babst, Calland, Clements & Zomnir, P.C. Two Gateway Center Pittsburgh PA	15222			
9	Independent Regulatory Review Commission				

Acronyms

POC	Point of compliance
PCB	polychlorinated biphenyl
PIP	public involvement plan
NIR	notice of intent to remediate
MSC	medium-specific concentration
EQB	Environmental Quality Board
CSSAB	Cleanup Standards Scientific Advisory Board
UST	underground storage tank
MCL	maximum contaminant level
IRRC	Independent Regulatory Review Commission
CPEC	constituents of potential ecological concern
HAL	health advisory level

I. Nonuse Aquifer Issues

The proposed regulations included three separate concepts in the nonuse aquifer requirements. They are shown below as "A., B., and C." and are related to one or more of Sections 250.5, 250.6, and 250.303 of the proposed rule.

A. Modification of Section 250.303(b) to limit on-source-property area to area of "site" instead of whole property area.

Comments #1-2 relate to Section 250.303(b).

Comment 1:

Section 250.303(b). Three commentators agree with the clarification provided regarding aquifer determinations and the insertion of the phrase "the site on the" when performing groundwater use calculations. This limitation will help further clarify the application of this section of the regulations to actual sites. (2,3,7)

Response 1:

The Department thanks the commentators for their input.

Comment 2:

The commentator had concerns that changes to Section 250.303(b) would in effect make changes to the Points of Compliance (POC) for attainment demonstration, internal to the property line.

The commentator notes that the Environmental Quality Board (EQB) has proposed revisions to the language of 25 Pa. Code §250.303(b). The revisions would mandate that the requirements for nonuse aquifer determination of subsection (c) are met within "the site on" the property rather than within the property. The EQB explains that this wording is needed because large properties could be disqualified even though the plumes are relatively small in comparison. Although BP understands the EQB's position on this issue, we question whether by designating the "site" within the property, the Department will be establishing points of compliance internal to the property boundary. BP would oppose any effort to impose points of compliance within the property boundary. Section 103 of Act 2 expressly defines the point of compliance for groundwater as "the property boundary or some point beyond. 35 P.S. §6026.103. It would be inappropriate to establish a point of compliance by regulation that conflicts with the statutory definition. BP does, however, support a mechanism whereby, on a case-by-case basis, a responsible party could request that the point of compliance be established within the boundary to accommodate issues that might arise, including issues related to nonuse aquifer designation. (8)

Response 2:

The Department did not intend to suggest that there are either Statewide health standard or site-specific standard groundwater Points of Compliance (POC) internal to the property boundary. It is the DEP's understanding that the Act 2 numeric standards are to be applied at the POC. Section 250.303(b) is not attempting to apply standards within the property ("behind" the POC) as determined by Section 250.302. Rather, this section is intended to establish the geographic area to which the conditions in Section 250.303(c) must apply in order for the site to *qualify* for a nonuse aquifer standard. As written in the existing version of Chapter 250, the geographic area includes the area within the property, as well as a minimum of 1000 feet downgradient of the POC. This proposed revision is attempting to limit the geographic area within the property to only that area which is contaminated (i.e., the "site").

The DEP's intention in applying Section 250.303 is to assure that anywhere the contamination exists (even if that's within the property), OR may reasonably migrate (assuming a minimum of 1000 feet), that there is (1) no wells being used for drinking or agricultural use, (2) the properties overlying said area are connected to public water (which demonstrates a "safe" supply of water) and (3) that the said area is a minimum distance away from a community groundwater well water supply source.

Once the remediator is granted the use of the Statewide health standard nonuse aquifer medium-specific concentration (MSCs), the demonstration of attainment must be demonstrated at the POC (normally property boundary) as determined by Section 250.302.

B. Incorporating notice and 45-day review period for municipalities and water suppliers.

Comments 3-11 relate to Sections 250.5(d),(e), 250.303(c).

Comment 3:

Commentators had concerns with the 45-day review period proposed in Section 250.5. One felt it should be reduced to 30 days. Another commentator believed that the requirements of Section 250.303(c) may be met through the use of local ordinances, suggesting that the 45-day review period of Section 250.5(e) may not be needed in those cases. (2,7)

Response 3:

DEP would like to acknowledge a suggestion made by PPL in their comment, that requirements of "Section 250.303(c) may be met through use of local ordinances." The DEP believes there is merit to stipulating that local ordinances could serve to satisfy requirements of Section 250.303(c)(1) &(2). Under this process, water suppliers

would be expected to be connected as a part of satisfying Section 250.303(c), (3)-(4), which provides opportunity for their input. The proposed rulemaking was modified to reflect the use of local ordinances.

Comment 4:

Commentators suggested the 45-day comment period referenced in Section 250.5 should be changed to 30 days.

Three commentators did not object to the additional requirements associated with the nonuse aquifer determination and believe that the need to send a notice to the municipality and water supplier serving the affected area prior to seeking a nonuse status will help to improve the process. However, the commentators suggest that the proposed 45-day time frame for comments should be reduced to 30 days. This change would make the non-aquifer determination notice requirements consistent with those associated with the NIR for site-specific standards. The commentators suggest that the comment and review periods should be as consistent as possible throughout the regulations. This consistency will aid in the timely progression towards remediation and closure of the sites. (2,3,7)

Response 4:

The Department discussed this issue with the Cleanup Standards Scientific Advisory Board (CSSAB) and initially planned to propose 30-days. During the discussions, it was realized that municipalities commonly meet once a month and the 30-day time period may not, in all cases, be enough time for the nonuse aquifer proposal to be considered by municipal boards and for the associated public input. Although this is not necessarily a factor with community water suppliers, the Department is declining to accept the commentator's suggestion and is retaining the 45-day period in the final rulemaking except where municipal ordinances are in place.

Comment 5:

One commentator expressed concern that changes to Section 250.5 would have the effect of deferring approval of nonuse aquifer determinations to the municipality (e.g. in effect giving them veto power over the non-use aquifer approval).

The EQB is proposing several changes to the procedure for obtaining nonuse aquifer determinations. The proposal contains a new requirement that applicants publish newspaper and municipal notices when a request for determination of nonuse aquifer is made. In addition, municipalities and public water suppliers will have an opportunity to comment on the nonuse aquifer designations made by the Department. In fact, the proposed amendments state that "at the time the request for a nonuse aquifer designation under the

Statewide health standard is made to the Department," the remediator shall send notice to every municipality and community water supplier servicing the area requested for designation as nonuse. 25 Pa. Code § 250.5(d). The municipality and community water supplier are then provided forty-five days to indicate to the Department and the remediator any information relevant to the nonuse status designation. Proposed 25 Pa. Code § 250.5.

Commentators recognize that it may be useful to contact the municipality and local community water system suppliers regarding current and planned future use of groundwater. In fact, BP notes that the EQB has included within the proposed amendments to 25 Pa. Code § 250.303, a discussion of methods appropriate for determining planned future use, which include verification with community water system suppliers. BP, however, believes that the approach under proposed § 250.5(d) creates a new requirement to obtain a nonuse aquifer determination prior to completion of the final report. It has been BP's experience that obtaining a nonuse aquifer determination has been very difficult and time-consuming. To the extent that a remediator must essentially secure the concurrence of both the municipality and community water supplier, the process is likely to become even more difficult and time-consuming. In general, the municipalities are ill-equipped to respond to such determinations and community water suppliers will be reluctant to state that groundwater will not be used as drinkable water in the future. Furthermore, we have identified no authority under Act 2 for DEP to defer such determinations to the local municipalities. BP recommends that the final rule clearly state that a nonuse aquifer determination may be submitted prior to the submission of Act 2 reports, but that such a request is not required prior to submission of the final report. If the remediator can demonstrate that groundwater is not drinkable and that an ordinance is in place prohibiting its use as potable water or otherwise that the groundwater will not be used in the future as drinking water, the remediator's nonuse aquifer determination should be approved in a timely manner by the DEP as part of its review of an Act 2 report. (8)

Response 5:

This comment refers to the perception that the rulemaking amendment effectively adds a requirement to obtain concurrence by the municipality and water supplier prior to approval of the nonuse aquifer determination by the Department. In fact, express concurrence by the municipality or water supplier is not required**.** The conditions upon which the Department will make its determination are based on the status of facts and not on individual preferences. Approval of use of the nonuse aquifer groundwater standards is and will continue to be those specified in Section

250.303(c). The purpose behind the notice and the 45-day period of review is to allow both the municipality and water supplier to identify information relevant to Section 250.303(c), which the Department may consider in making its final determination. For instance, the Department believes the municipality may be a source of knowledge of the existence of wells used for drinking water, and the water supplier should be a source of information of whether all properties are connected to public water--both examples of conditions relevant to Section 250.303(c) criteria.

It is true that by instituting a 45-day review period, this proposed amendment will require the remediator to wait a minimum of 45 days to receive their nonuse aquifer determination from the Department. The remediator, should, in their interest, file the nonuse aquifer determination request at the time of, or as soon as possible after, the filing of the Notice of Intent to Remediate (NIR). The second part of the comment is a suggestion that the existence of a local municipal ordinance prohibiting the use of groundwater for potable purposes could serve as a substitute for the 45-day review period. The Department believes there is merit to this suggestion and has modified the proposed regulations in Section 250.5(e).

Comment 6:

Section 250.5(d) states "the remediator shall send notice to every municipality and community water supplier servicing the area…." Will the remediator have to "send notice" through first class or registered mail? Will notice by phone or electronic mail suffice? The final-form regulation should include a clarification of the notice requirement. (9)

Comment 7:

Section 250.5(e) begins with the phrase "Upon receipt of a request…." What constitutes "receipt"? Additionally, upon receipt, the "municipality and community water supplier shall have 45 days to indicate…any information relevant to the requirements of §250.303." When does the 45-day time frame begin? The final-form regulation should indicate how receipt is documented. (9)

Comment 8:

We have several concerns with Section 250.303(f). First, the regulation refers to "receipt of a nonuse aquifer determination request, and receipt of the required public involvement plan." The final-form regulation should clarify what constitutes "receipt." (9)

Response to Comments 6,7,8:

The phrase "the remediator shall send notice" refers to a cover letter similar to the format of an NIR notice indicating the desire to have an area designated as a nonuse aquifer area. In this process a copy

of the actual request that is submitted to the DEP must accompany the cover letter. The DEP anticipated that these notices would be sent by certified mail, just as the NIR notices are now sent. The Independent Regulatory Review Commission (IRRC) has raised an appropriate issue of the future role of electronic mail. The DEP is examining how this and other opportunities for "e-commerce" can be incorporated into the Department's procedures. Implementation of the e-commerce concept will take time.

The phrase "Receipt of a request" refers to the receipt, by the municipality and/or community water supplier, of the nonuse aquifer notice cover letter and copy of the request as sent to the DEP. If certified mail is used, proof of such receipt is clearly documented. Clarification of suggested form of the receipt is in the revised Technical Guidance Manual, Section I, B, (9).

The purpose of this receipt is for the municipality and community water supplier to have time to review and provide comments, which may be relevant to the determination of a nonuse aquifer as outlined in Section 250.303(c), to the DEP. The DEP will make its decision on nonuse aquifer determination based on the satisfaction of the proposal to the conditions of Section 250.303(c).

Comment 9:

To harmonize the requirements applicable to precertification requests and nonuse determinations, proposed Section 250.6(e) should be expanded to allow public involvement plans to be developed by the parties remediating a site.

Under proposed Section 250.303(f), municipal authorities and political subdivisions are the only parties that can ask the Department of Environmental Protection ("DEP") for a nonuse determination. Accordingly, only these public bodies would be required to develop a public involvement plan under proposed Section 250.6(e).

These provisions, while consistent between themselves, fail to address what would appear to be the most likely scenario: a remediating party's desire to obtain a nonuse determination. The standards for Department approval of a remediating party's request are laid out in 25 Pa. Code § 250.303(b). Under the proposed amendments, the approval standards would include satisfaction of the Section 250.6, a set of requirements that can only satisfied by a municipal authority or political subdivision.

The disconnect between proposed Section 250.303(b), as amended, and proposed Sections 250.303(f) and 250.6(e) can be remedied by expanding Section 250.6(e) to allow a public involvement plan to be developed by the party remediating a site. This change would establish a direct link between remediating parties and the

standards the Department will apply to such parties' requests for nonuse determinations. (3)

Comment 10:

First, subsection 250.6(e) requires that a public involvement plan "…shall be developed by the person making a precertification determination request under §250.303(f)…." Section 250.303(f*)* allows only municipal authorities and political subdivisions to make a precertification determination request. Is this the intent? Should a company interested in remediating the site also be able to develop a public involvement plan? (9)

Comment 11:

Commentators have concerns that changes to Sections 250.5, 250.6 and 250.303 will reduce the effectiveness of the nonuse aquifer provisions in reviving brownfields.

Another new provision being proposed by the EQB relates to the precertification determination that a specific geographic area meets the conditions of 25 Pa. Code § 303(c), thereby qualifying as a nonuse aquifer. As proposed, the party requesting a nonuse aquifer determination must submit a notice to a local newspaper of general circulation and provide the notice to the applicable municipality by letter. The municipality may request a precertification determination from the Department that a given area meets the requirements for a nonuse aquifer designation.

The EQB believes that this process would expedite land reuse in urban areas where nonuse aquifer criteria clearly apply. However, a public involvement plan ("PIP") is required as part of the process. A PIP "shall" be developed by the municipality or political subdivision and must include a ninety-day comment period. Moreover, the PIP must be developed in conjunction with all municipalities serving the proposed nonuse aquifer area. Only after the ninety-day period is complete may the municipality or political subdivision submit a request to the Department for a nonuse aquifer precertification. The precertification, if granted, will remain in place for a period of three years.

BP believes that this precertification procedure is time-consuming, cumbersome and unlikely to be implemented by municipalities as currently drafted. As an initial matter, municipalities and political subdivisions should be permitted to request precertification determinations irrespective of whether a remediator is relying on a nonuse aquifer determination. As drafted, the responsible party would be required to make a "request," (see BP's comments at A. above) and wait at least ninety-days for any decision regarding the nonuse aquifer. (This time period does not take into account the time required for the municipalities involved to develop a PIP). In

addition, the EQB provides no rationale for selecting ninety-days rather than a thirty-day comment period, which is the required period of time for public participation under the current Act 2 regulations. Finally, once the responsible party requests a nonuse aquifer determination, the process will move out of the responsible parties' control and into the municipalities' control. The responsible party will be at the mercy of the municipalities' competing demands with no assurance that the project will move forward.

In order to encourage municipalities to make precertification requests to expedite the Land Recycling Program objectives, BP recommends that the Department separate the precertification request procedure from the remediator's nonuse aquifer determination. In other words, a responsible party should be able to proceed with a nonuse aquifer determination directly with the Department and the municipality should be free to pursue precertification absent a remediator's request for a nonuse aquifer determination. If any person applying for a nonuse aquifer determination can demonstrate the requirements of Section 250.303(c), the nonuse aquifer determination should be granted. If municipalities find it in their interest to obtain precertifications, that process should proceed independently of individual requests for nonuse aquifer determinations. (8)

Response to Comments 9, 10, 11:

Upon review of this and other public comments, the DEP acknowledges that the proposed wording related to the non-use aquifer provision changes was not clear and has made clarifications in the final rulemaking in Sections 250.5, 250.6, and 250.303. The intent with respect to public notice and participation in Sections 250.5, 250.6 and 250.303 is the following:

- For nonuse aquifer proposals made by remediators, no public involvement plan is required, only public notice to the municipality and the local water supplier. The noticed parties would have 45 days to provide to the DEP any comments they feel are relevant to the Section 250.303 requirements for nonuse aquifer determinations. Relevant proposed subsections are Section 250.5(d) and (e).

In these situations, a remediator is present, and time is most likely a factor in remediating and developing the property. The DEP and CSSAB felt that 45 days would be the minimum time needed by a municipality for adequately providing meaningful input to the DEP. As most municipalities meet monthly, this provides municipal response time in those cases.

- In addition to the process described in subsections (d) and (e), the proposed language provides for another process--one for situations where no remediator is present and no particular Act 2 "site" has been identified. In this second process, only municipal authorities or political subdivisions would be qualified to submit to the DEP a proposal for determining that Section 250.303(c)(1) and (2) requirements are satisfied within a specific geographic area. This submission is referred to in the proposed regulations as "precertification" and in the final rule as "non-use aquifer certification area. The Department has revised the final rulemaking to require the conditions under Section 250.303(c) in all cases. Relevant subsections are Sections 250.6(e), 250.303(b), (c) and 250.303(f)

For details on this change, see response in the section below.

C. Process for "precertification" of nonuse aquifer areas.
Comments 12-18 relate to Sections 250.5(e), 250.6(e), 250.303(b), (c), and (f).

Comment 12:

Commentators believe the 90-day public comment period will unnecessarily delay the process and that further public involvement in the nonuse aquifer determination is not authorized by Act 2.

Section 250.6(e)(2) requires a person making a precertification determination request to implement a public involvement plan. One component of the public involvement plan is a 90-day comment period. How was the 90-day time frame determined? Would 45 or 60 days be sufficient time for local governments to respond? One commentator pointed out the fact that the creation of a municipal ordinance is in itself a public process and therefore there is not sufficient justification for the need to establish a process under this rulemaking. (6, 9)

Comment 13:

The proposed rule changes (to Sections 250.5, 250.6, 250.303) set out new process requirements for obtaining a nonuse groundwater determination. These changes should be rejected in entirety for the reasons outlined below.

- Additional public notice is not authorized by Act 2

  A reading of the statutory language at Section 303, paragraph (h) does not authorize a public participation process for statewide standards. There was a deliberate act of the legislature to require public participation only at

site-specific cleanups. The statewide standards and nonuse criteria have been proposed under the administrative process for regulations and an additional public process is not necessary for each cleanup under statewide standards. The statute does provide for public notice through the filing and various publishings of a Notice of Intent to Remediate (NIR) and distributions to municipalities.

It is clear that the proposed changes cannot be allowed to stand under the provisions of Act 2.

- The remediation process is delayed 90+ days

  The proposed changes create a new process step for statewide standard cleanups conducted under §303 that was not envisioned under Act 2 or under the original Chapter 250 regulations. Under the proposed §250.6(e)(2), the new process will require a delay of at least 90 days, but more likely 120 days or more before the nonuse designation can be received.

  It was the standards and the process that won awards for the land recycling program. The §303 cleanup was envisioned as being able to go from start to finish in a relatively short period of time, without repeated reviews and approvals from PADEP officials. This change will have a negative impact on the process efficiency of the program. It is unnecessary to include this delay into the process.

- An acceptable alternate process is currently available

  PADEP can employ current procedures to accomplish the same ends as is proposed in this rulemaking. Specifically, the following steps would be used.

  An NIR, including the intent to use the nonuse aquifer statewide standards, would be submitted to PADEP. Public notice is provided both through its publication in the PA Bulletin, and through the requirement to provide copies to all municipalities affected. In addition, there is a requirement for a newspaper notice. PADEP could change its recommended standard notice language guidance to be more explicit about the request for a nonuse aquifer determination.

  The remediator should have the option of when in the remediation process to seek the nonuse determination from the Department. In order for PADEP to make a nonuse determination, a groundwater assessment must be

completed. The remediator can do that early in the process, at an appropriate time during the process, or where confident of the groundwater data, as part of the attainment approval at the end of the process. Where time is not critical, remediators would have less risk in obtaining the approval prior to the actual remediation.

Because the NIR reflects the intended use of the nonuse provision, the Department would have ample time to assure that community water suppliers were not affected currently or with currently planned uses of the aquifer. The Department issues permits to community water suppliers and , therefore, is best suited to assure these providers are contacted during the review period and their input is understood and incorporated into the Department's determination.

The NIR and any other submission to the Department is a public record and obtainable by the public from the Department. In addition, the NIR provides the contact name for the remediation and the public can obtain information directly from the remediator.

The need to contact community water suppliers is a sound addition to the review process. The remediator should not be in the middle of this process and there is no justification for the added requirements of this proposal. It would be reasonable to include a requirement that the remediator provide a copy of the NIR to the community water suppliers if PADEP would maintain the geographical listing of such suppliers and make it publicly available. (6)

Comment 14:

The 3-year re-evaluation period under Section 250.303(f) precertification makes the process impractical. One commentator felt it should be extended to at least 5 years.

One commentator felt the evaluation period should be eliminated altogether. The proposed changes state that a determination made under Section 250.303(c), through the use of a local ordinance, would automatically expire after 3 years. Upon expiration, the applicant has to request a renewal of the determination from the DEP. The commentators believe that the 3-year renewal period is unnecessary and counterproductive. The Act already provides for a "re-opener" if the conditions at the site change. In addition, the Act already requires deed notices for properties remediated under the nonuse aquifer designation. This deed notice serves as the ongoing mechanism that restricts current and future property owners from undertaking any activities that would be inconsistent with the

nonuse aquifer designation. By mandating that the nonuse aquifer determination is reapplied every three years, the Department will be effectively limiting the redevelopment of a countless number of properties. If the proposed language is finalized, landowners will be reluctant to use the Act 2 process because of the conditions placed on the release, since it is automatically revoked after 3 years unless the renewal request is made by the applicant (who is often not the landowner), and granted by the DEP. The nonuse aquifer status is crucial for redeveloping properties in settings where there are no current or potential uses for the groundwater. The commentators believe that the regulations already protect against any potential changes in the groundwater usage at a site and that the current provisions are adequate for the protection of human health and the environment. (2,7)

Comment 15:

The 3-year "sunset" clause proposed for Section 250.303(f) should be rejected as inconsistent with the language and purpose of Act 2.

Current regulations state that a nonuse aquifer determination must meet the requirements specified in 25 Pa. Code § 250.303(c). Proposed Section 250.303(f) would allow the 303(c) requirements to be met through citation to an appropriate local ordinance. This change, which would be a welcome advance standing on its own, is substantially negated by the last two sentences of Proposed Section 250.303(f). Under these sentences, nonuse determinations that are made in reliance on local ordinances expire automatically after three years, and may be renewed only if the applicant successfully requests Department renewal.

The proposed sunset provision is flawed on several counts. Under the proposed provision, only "the applicant" could make a renewal request. It may well be the case, however, that after three years the applicant is no longer on the scene, and the current party in interest, the landowner, would have no apparent standing to seek Department renewal.

More importantly, however, the 3-year sunset provision runs counter to the purposes of Act 2 itself. By imposing a three-year sunset provision, the regulations will, in effect, be halting the redevelopment of countless properties. Many of the brownfield sites that are remediated under Act 2 are cleaned up under Statewide health standards where a nonuse aquifer determination is suitable and justified. The nonuse aquifer status is crucial for redeveloping properties in settings where the groundwater is not used, nor likely to be used in the future. A landowner will not be as likely to undertake these efforts if the underlying nonuse determination will be automatically revoked after 3 years. Act 2 already provides for a "re-opener" if the site conditions, exposure

routes or other key factors change, and these statutory provisions are sufficient to be protective of human health and the environment now and in the future. The proposed sunset provision is unneeded and counterproductive, and it should be rejected in its entirety. (3)

Comment 16:

Finally, under Section 250.303(f), the nonuse aquifer determination "may be updated at any time additional *relevant* information comes to the attention of the Department." (emphasis added) For clarity, the final-form regulation should include examples of what type of information would be considered relevant to updating a nonuse aquifer determination. (9)

Response to Comments 12, 13, 14, 15, 16:

Part of the comments on Sections 250.6 and 250.303 are related to the misunderstanding that under the proposed rule, Section 250.6(e) and Section 250.303(f) apply to cases where individual remediators are proposing a nonuse aquifer determination. In fact, the DEP intended those requirements to only apply in cases where municipalities or redevelopment authorities propose such a determination, in the absence of any individual NIR. See the response to comments 9, 10, and 11 for further details.

In response to a public comments related to the "precertification" process involving municipal and redevelopment authority initiation of the nonuse aquifer request, the DEP has simplified the process in a way that addresses the comments, provides more local control, and provides better long--term public health protection. The details are given below:

- The proposed Sections 250.6(e) and 250.303(f) have been deleted, including the 3-year sunset provision.

- Section 250.303(c) has been modified to provide that conditions under Section 250.303(c)(1)&(2) can be satisfied by the documentation that the local municipalities have in place an ordinance (may be targeted to all or any designated part of the municipality) which prohibits the use of groundwater for drinking or agricultural purposes and requires the lateral connection to a public water supply for every property. (Tied to this, Section 250.5 (e) has been modified to acknowledge that the 45-day review period is not applicable if such an ordinance is in place covering a geographic area specified in Section 250.303(b)).

Comment 17:

Section 250.303(f) establishes a three-year expiration date for a nonuse aquifer determination made under this section. How was

the three-year period determined? Would a longer period of time suffice? Additionally, what does the renewal process entail? Is another public involvement plan required? (9)

Response 17:

There was no specific reason the Department chose the specific value of three years other than to choose a period which would coincide with a reasonable period of land use changes. The three-year renewal period was only intended to apply to the precertification process and paragraph (f) was drafted to apply only in cases where the precertification was being sought.

However, as discussed in the response to the previous comments, the Department has revised the nonuse aquifer provisions to eliminate the three-year recertification requirement.

Comment 18:

Commentators felt that requirements relative to the public notice requirements, Section 250.6(e) of the precertifications, should be clarified.

Subsections (c)(1) and (e)(3) require the public to have access to documentation at "convenient locations." For clarity, examples of "convenient locations" should be included in those subsections in the final-form regulation. (9)

Subsections (c)(1) and (e)(3) require the documentation to be available to the public at *convenient times.* They should include examples of convenient times. (9)

Subsections (c)(1) and (e)(5) require "A location near the proposed nonuse aquifer designation site for any public hearings and meetings…." The word "near" is vague and needs to be clarified. (9)

Response 18:

The Department has withdrawn the proposal to require public participation in the precertification process. DEP felt it was unnecessary since the municipal ordinance process serves as the process for the public to comment.

Details on the recommended performance criteria on the municipal ordinances can be found in the Technical Guidance Manual, Section II.C.(9) (related to institutional controls).

II. Calculation of MSCs

A. Table 5 – Physical and Toxicological Properties

Comments 19-22 relate to Annex A, Table 5.

Comment 19:

Appendix A, Table 5 lists the toxicity criteria and physical properties used to develop the MSCs. I would recommend providing a reference or source for each value (i.e., IRIS, NCEA). For example, the values listed for TCE are not recommended by either IRIS or NCEA. (1)

Response 19:

The Department agrees that it would be useful to provide the sources for the toxicological data. These sources have been added subject to size/formatting constraints for printing.

Comment 20:

The inhalation reference dose (RfDi) is listed as mg/m3. Reference doses are typically stated as mg/kg/day. Mg/m3 indicates references an inhalation reference concentration (RfC), rather than a dose. I would recommend changing this value to mg/kg/day in the table, and verify that the values listed are in mg/kg/day. (1)

Response 20:

The listed units for the inhalation reference dose are incorrect. The units should be mg/kg/day. The values themselves are the correct reference doses.

Comment 21:

Several changes to toxicological data have been made since the publication of the original regulations. Several commentators commended the EQB for doing so. The most recent values should be used before the proposed amendments are finalized. (1,4,5,8,9)

Response 21:

The Department agrees. The following changes were made in conjunction with the final regulations:

- Since the oral slope factor is no longer cited by any of the sources used in developing the toxicological values, the oral slope factor for beryllium was removed.
- In the proposed amendment, changes to the RfDo and RfDi were made for methyl methacrylate, but changes to the direct contact MSC for residential exposures were not. The residential direct contact value changed in the final regulation to 10,000 mg/kg. The proposed amendment did not correctly show that this value was being revised, so the MSC for methyl methacrylate was not included.
- For vinyl chloride, the RfDo was updated to 0.003 mg/kg/day, and the RfDi to 0.029 mg/kg/day.

Comment 22:

One commentator requested that the Department identify a consistent process for how it chooses the toxicological values used to calculate or recalculate the Statewide health MSCs. In addition, the commentator requested an explanation of the rationale for lowering the direct contact numeric values for naphthalene, 1,1,1-trichloroethane, and xylenes by as much as an order of magnitude. (8)

Response 22:

The Department recognizes its responsibility to use the most current and appropriate data in calculating the Statewide health standard MSCs. It also recognizes that there was no standardized methodology for deciding if newly available toxicological data are appropriate for this use. The Department requested that the CSSAB recommend a procedure for making such decisions that incorporates evaluation of the appropriateness and technical validity of new toxicological data. The CSSAB responded by providing the following:

When new toxicological data are available for any regulated substance, the first decision is whether the new source is from a "higher" ranked data source (according to the hierarchy in Section 250.605). If yes, then a determination is made as to whether the new value is based on route-to-route extrapolation assumptions, which are inappropriate. (e.g., port of entry effects). If appropriate, the new value is used. If not appropriate, or if the first decision point was answered "no", then a determination is made as to whether the original toxicity calculation was based on inappropriate route-to-route extrapolation assumptions; if not, then there would be no change in the toxicity value for that regulated substance. If this second determination finds that an inappropriate assumption was used, then professional judgment (by a person trained and experienced in the field of toxicology) is used to consider the change. Professional judgments would include consideration of the assumptions and the age of any retired study (e.g., retired NCEA provisional values). In cases where no data are available supporting the new toxicological value, no change would be proposed for use under Chapter 250.

This procedure, which is being incorporated into the Technical Guidance Manual, was used to evaluate both the current and newly available toxicological data for the revision to the regulations, and the proposed changes to existing data are the result of applying that procedure.

The Department recognizes that, as the result of using this procedure, some direct contact numeric values will increase, and

some will decrease, depending upon the magnitude of the changes to these toxicological data. Whether the actual MSC for a regulated substance will change depends on both the direct contact and the soil-to-groundwater numeric values, as the applicable MSC is the lower of these two values.

In the case of the three regulated substances mentioned in the comment, the decrease in the direct contact numeric values is the result of applying the above methodology to the available toxicological data. While the decreases in the numeric values may be significant, they will have little practical effect on the applicable MSCs for these compounds. Since the applicable MSC is the lower of the direct contact and the soil-to-groundwater numeric values, there will be little change in the MSCs for these substances. The groundwater standards for these substances, upon which both the 100 times groundwater MSC value and the generic value are based, are determined by an MCL or HAL rather than the toxicological data. For 1,1,1-trichloroethane and xylenes, there is no change in the soil-to-groundwater numeric values and , therefore, there is no effect on the applicable MSC for these substances because the direct contract value is higher than both of the options for soil-to-groundwater. In addition, the soil buffer option is not available for these substances. In the case of naphthalene, the applicable MSC will actually increase, because a change in the HAL increased both the 100X groundwater MSC numeric value and the generic value (the higher of these numbers, the generic value, increased from 5 to 25 mg/kg) and, therefore, the applicable MSC also increased.

B. MSCs for PCB Mixtures

Comments 23-25 relate to Tables 1, 3A, 3B, 5.

Comment 23:

The proposed new standards (Tables 1, 3A, 3B) for ground water and soil for Total Polychlorinated Biphenyls were not correctly calculated and/or presented in the revised Tables.

The commentators recognize the Department's obligation under the Act to use an MCL established by the EPA as an MSC for groundwater in aquifers used or currently planned to be used for drinking water or for agricultural purposes. However, the commentators believe that the Department should reconsider its proposal for establishing MSCs for Total Polychlorinated Biphenyls in soils in light of several potential inconsistencies that will arise with its use within the Act 2 program.

The MCL proposed by the EPA for Total PCB is applicable to community and non-community drinking water systems. As such, the commentators believe that the Department should limit the use

of the proposed MCL to the establishment of a Total PCB MSC for groundwater only. The current Aroclor-specific MSCs for soil and soil-to-groundwater are protective of the groundwater, based upon the risk model used by the Department. Using the proposed groundwater MSC for the calculation of a risk based value for direct contact and for soil-to-groundwater MSC would be neglecting many of the chemical and physical properties that were used to calculate the current Aroclor-specific values. The formula used to calculate the generic soil-to-groundwater standard requires a K_{oc} value. The K_{oc} values used by the Department to calculate these standards are listed in Table 5 of Appendix A. There is no K_{oc} value proposed for Total PCB; however, it appears that the Department used a value of 0 to calculate the proposed generic soil-to-groundwater standard of 0.0056 mg/kg.

The commentators are very concerned with the potential conflicts that will arise when the proposed Total PCB standards are applied to specific remediation projects. For instance, situations are very likely to arise where a soil analysis will result in the identification of one or more Aroclors in the soil. The values reported for these Aroclors may be well below the current standards for each particular Aroclor, yet above the proposed value for Total PCB. More importantly, if the current values for the individual Aroclors are considered to be protective of groundwater, then there will be a serious conflict when these values are compared to the proposed Total PCB values. In most instances the values proposed for Total PCB are well below the current values for each of the individual Aroclors. This contradiction may lead to the inconsistent application of clean-up standards among the various regional offices and to confusion as to which standard or standards should be applied to a particular remediation project. Finally, to assume that the sum of the individual Aroclors represents a Total PCB value relies on the erroneous assumption that the risks are cumulative and that the solubility and, therefore, the physical mobility of the individual Aroclors are the same. Current practical quantification limits for each of the Aroclors may also be incorrectly used to arrive at a Total PCB value, since this value is determined by merely adding the values of each individual Aroclor. Instances where Aroclor values are determined to be at or just below the PQL may be assigned "artificial" values, such as 1 mg/kg or 2 mg/kg, so that a Total PCB value can be calculated. These misapplications of the actual analytical data will result in costly and unnecessary remediation, without any additional protection of groundwater. (2,7)

Comment 24:

The proposed Medium Specific Concentration ("MSC", Table 3B) for PCBs is incorrect in its basis and level, and should be revised accordingly.

As proposed, the total PCBs, residential & non-residential 100x groundwater (GW) MSC and Generic Value standards would be 0.05 and 0.0056 mg/kg, respectively. The basis for these levels is unclear. The 100x GW MSC should calculate to 0.1 mg/kg, since the proposed GW MSC is 0.001 ppm. Furthermore, the generic value for the Aroclor specific standard ranges between 5 and 2000 times **higher** than the 100x GW MSC values. For this total PCB soil-to-groundwater standard, the generic value is proposed at 10 times **lower** than the proposed 100x GW MSC. Since the generic value is calculated using equilibrium partitioning method, the total PCB and Aroclor specific generic values should be similar as compared to the 100x GW MSCs, but instead they are ten times lower. It also appears the proposed state standards are inconsistent with and stricter than the federal counterparts (see, 40 C.F.R. § 761.61).

This may affect PCB site cleanups since industries have been only focusing on Aroclor specific standards under Act 2 cleanups if the DEP would attempt to address the potential ground water impacts from PCB releases. In current regulations, the Aroclor specific soil-to-groundwater standards that industries are typically concerned with range from 16 to 75 mg/kg, which is less than the typical direct contact cleanup standard. If these lower Total PCB soil-to-groundwater standards are accepted, they could change how the DEP views PCB site cleanups. This change in view is because a statewide health cleanup must meet the lower of the direct contact or soil-to-groundwater cleanup standards. With this lower total PCB soil-to-groundwater standard, the DEP will require PCB (total Aroclor) remediations to meet a 0.05 mg/kg standard to achieve a statewide residential health cleanup standard. Otherwise, the site remediator will be required to seek a site-specific standard that could require deed notices on the property in order to obtain an Act 2 release of liability (since the residential health bases cleanup standard was not met), or require a significantly greater excavation to meet the proposed statewide health standards. This would greatly increase the costs for PCB remediations and could make it much more difficult to clean up PCB sites on properties not owned by the remediator, i.e. rights-of-way. (3)

Comment 25:

One commentator noted that the standards and calculations for PCBs (Table 3B) in the proposed regulation are inconsistent with and more stringent than the federal standards of the U.S. Environmental Protection Agency. The standards for monitoring PCBs need to be clarified. If they are more stringent than comparable federal standards, the need for the higher standards should be justified. (9)

Response to Comments 23, 24, 25:

The Department erred in the calculation of the soil-to-groundwater generic value for Total PCBs. The consultant who provided K_{oc} values to the Department, at the request of the CSSAB, did not provide a K_{oc} value for Total PCBs because it is inappropriate to do so for such a diverse group of compounds, and any value would, as the commentators noted, neglect the specific characteristics of the individual Aroclor formulations, which are well known. Also, in stating the MCL, Table 1 incorrectly rounded the value to 1 µg/L. The final regulation will state the correct value of 0.5 µg/L.

The Department agrees that it is necessary to use the EPA MCL as the MSC for groundwater, and that it is inappropriate to establish an MSC for Total PCBs in soil. The final amendment contains the MCL as the MSC for total PCBs in groundwater. The soils tables (Tables 3A and 3B) do not include total PCBs, but retain the MSCs for the individual Aroclors. The total PCB groundwater MSC have been used as the endpoint for the soil-to-groundwater generic model, and the K_{oc} values for the individual Aroclors, as listed in Table 5A, have been used in the calculation.

C. Updating MSCs and Retaining the Site-specific Standard

Comment 26 relates to Tables 1, 3A, 3B, and 5.

Comment 26:

Two commentators commended the Department on using appropriate toxicological data for methyl methacrylate and ethyl methacrylate. One of those commentators also commended the Department on its retention of the option to use the site-specific standard to develop cleanup standards that are more appropriate for a particular site than the Statewide health MSCs because of specific site conditions. (4,5)

Response 26:

As stated previously, the Department intends to use the most current and appropriate toxicological data in calculating MSCs for regulated substances under the Statewide health standard.

From the inception of the Land Recycling Program, every remediator has had the choice of which standard will be attained in any remediation. The inclusion in Act 2 of three distinct standards (namely background, Statewide health, and site-specific) is what gives the program its flexibility and has enabled many sites to complete the Act 2 process successfully and receive the liability protection afforded by the act. The site-specific standard is a vital part of the program for the reason mentioned by the commentator…it provides for the establishment of risk-based cleanup levels based on exposure conditions that may differ

significantly from those used to derive the generic Statewide health standard MSCs.

D. Need for a faster method for correcting errors in the standards tables in the regulations.

Comment 27 is general to the rulemaking.

Comment 27:

Two commentators commended the Department for making corrections to typographical and calculational errors in the original regulations. However, they also commented that it took three years to make these corrections and in that time the Department required that the remediator go through the site-specific process, including the use of deed notices, in order to use the correct values.

The commentators suggested the Department use a more expeditious method for correcting such errors in the future. (2,7)

Response 27:

The DEP thanks the commentators for raising this point and suggestion. The Department does not wish to circumvent the public comment and other necessary administrative procedures under rulemaking to address this problem. Instead, the Department intends to propose more frequent rulemaking amendments if necessary to correct any identified errors.

III. Definitions 250.1

Comment 28:

Three commentators believe that the Department's clarification of the definition for "Agricultural purposes" is needed and fully agrees with it. (2,3,7)

Response 28:

The Department thanks the commentators for their input.

IV. Evaluation of Ecological Receptors

Comments 29-30 relate to Section 250.311.

A. Clarification of which CPECs apply to the use of the ecological screen.

Comment 29:

The Department's clarification to Section 250.311 (c) and (d) that limits the applicability of Constituents of Potential Ecological Concern (CPEC) to the release at a particular site is warranted and will allow for more meaningful ecological evaluations. (2,3,7)

Response 29:

The Department thanks the commentators for their input.

B. Clarification of the term "release."

Comment 30:

In Sections 250.311(c) and (d), the proposed amendment clarifies that the evaluation of constituents of potential ecological concern on a site includes those "associated with the releases at a site" and not background or naturally occurring constituents. The commentators believe that the regulations should further define the constituents of potential ecological impact to mean only those constituents that originate from the release being addressed by the remediator as opposed to any historical release at the site. (8,9)

Response 30:

The Department intended the term "the release" to refer to the release that is being addressed by the current remediation. The wording of these two sections has been clarified to emphasize this point.

V. Demonstrating Attainment during Excavation

Comments 31-37 relate to Sections 250.707 and 250.204.

A. Should not be limited to petroleum releases

Comment 31:

The Department is proposing new language to Section 250.707 that will allow for simplified soil attainment determinations for small petroleum releases that can be easily cleaned up with a small excavation and where no prior site characterization is performed. Three commentators believe that this revision will allow for a cost-effective approach to securing an Act 2 release for small petroleum cleanups. The commentators believe that this is an excellent idea and should be expanded to include all small spills that can reasonably be cleaned up, and see no reason to limit this cost-effective procedure to small releases of petroleum only. One commentator specifically supported subparagraphs 250.707(b)(1)(iii)(A) and (B) attainment demonstrations covered by the procedures in 250.707(b)(1)(iii)(B). Two of the commentators suggested revised wording for Section 250.707(b)(1)(iii)(B) that would both extend the use of this demonstration option to background standard cleanups and restrict its use to cleanups where the final report is submitted within 90 days of the spill or release. (2,3,7,8)

Response 31:

Section 250.707 was proposed to be limited to petroleum because the DEP and the CSSAB felt that it was critical to limit the concept to contaminants which could be easily detected by field observations and measurements and, therefore, could realistically be used in a "biased sampling" approach. Not all contaminants satisfy this condition because they don't readily exhibit properties, which can be seen, smelled, etc. The DEP and CSSAB felt that for petroleum cases this was most likely true, and these present the bulk of the small spill cases under Act 2. The Department does not agree with the suggested wording changes that would extend this option to the background standard, nor does it agree that it should be restricted to remediations being completed within 90 days of the spill or release.

B. Use of Characterization Samples for Attainment

Comment 32:

The Department is proposing amendments to Section 250.703 to address small excavation cleanups of petroleum releases where no prior site characterization is performed. The proposed amendment provides that where the soil is to be removed from the site, attainment applies to "the base of the excavation outlined by that irregular surface." (Proposed 25 Pa. Code §250.703(b)). The preamble to the proposed rule explains that the proposal amends this section to make it clear that attainment tests for soils are applied to the volume of soil initially found to be exceeding the selected standard unless the contaminated soil is removed from the site. If the contaminated soil is removed from the site, attainment sampling is applied to the base of the excavation outlined by that volume of soil.

To the extent that a remediator is only seeking a release of liability for the area subject to the excavation, the proposed sampling would appear to be appropriate. However, in circumstances where a site has been investigated and only a small portion of the property is subject to excavation, the remediator should be able to rely upon site characterization data from areas adjoining the excavation to demonstrate attainment for the site. It has been BP's experience that the Department will not allow the use of "site characterization" data to demonstrate attainment. BP believes that in those cases where soil has been evaluated and shown not to have been affected by the remediation, it should be permissible to use the results of the sampling to demonstrate attainment so long as the data are otherwise appropriate (e.g. the proper test method was used). (8)

Response 32:

The commentator appears to be identifying the situation where a larger area of the "site" was environmentally characterized and results of which indicated that only a small area needed to be excavated. Under the existing regulations, a remediator would still have to apply attainment sampling to the "small excavated area." At no time did the CSSAB consider that site characterization sampling followed by remediation would not require attainment demonstration. These final amendments will, however, give the remediator the option of demonstrating attainment by taking a limited number of samples that demonstrate that the soil remaining after excavation is not affected above the Statewide health standard soil MSCs.

C. Is this provision only for underground storage tanks?

Comment 33:

Two commentators said that it is unclear whether clause 250.707(b)(1)(iii)(B) is intended to cover any site of a petroleum release or only UST sites which would otherwise be considered "extensively contaminated" under the DEP's current storage tank guidance. (8,9)

Response 33:

This section was intended for any small petroleum release, not just a release from an underground storage tank. To add clarity, however, the Department has made clarifications to the final rule (see Section 250.707(b)(1)(iii)).

D. What is the meaning of "full site characterization"?

Comment 34:

Two commentators asked for clarification of the term "full site characterization." The proposed amendment provides no definition or guidance regarding the extent of a site where "full characterization" has been done. This absence of guidance could lead to significant debate when applied in the field. It is the understanding of the commentators that the required components of a "full site characterization" are listed in existing subsections 250.204(b)-(e). If so, subsection 250.707(b)(1)(iii) should cross-reference the subsections that describe a "full site characterization." (8,9)

Response 34:

"Full site characterization" refers to all the site characterization requirements listed in Section 250.204 (relating to Final Report). Note, Section 250.204 (a) states "The final report shall include site characterization information in subsections (b)-(e)." Section

250.707(b) refers to this because the DEP has found that for practical reasons, remediators of small excavation type cleanups don't typically make the effort to conduct an environmental site characterization prior to remediation; they instead dig and use field observations to guide the excavation (remediation). The wording will allow this in certain cases under specific conditions. Clarification of "full site characterization" refers to the requirements in Section 250.204 that have been added to Section 250.707(b)(1)(iii).

E. Are traditional attainment methods allowed if full site characterization is done?

Comment 35:

The regulation only addresses situations in which a "full site characterization" has not been done in association with an excavation remediation. What requirements apply when a "full site characterization" has been done? (9)

Response 35:

The intent is that a person has the option of doing full site characterization (as required by the existing rule) and using the statistical analysis options (e.g. 75%/10x) in Section 250.707. The current amendment only provides an additional option to persons not wishing to complete a site characterization. This section has been clarified in the final rule.

F. What does the statement mean that all samples must meet the Statewide health standard?

Comment 36:

Subsection 250.707(b)(1)(iii)(C) states: "All sample results shall meet the Statewide health standards." The subsection should cross-reference or identify the appropriate "Statewide health standards." (9)

Response 36:

The statement in clause (C) – "All sample results shall meet the Statewide health standard" is intended to mean that all the sample results values are at, or below, those listed in the Statewide health standard MSCs. This differs from the general 75%/10x rule, which allows some sample values to be above the MSCs, BUT does require more samples to be taken than that proposed in clause (C).

The new language in Section 250.707(b)(1)(iii), clauses (A)-(C) is intended to define a process whereby under certain conditions, fewer samples may be taken, and all those samples must be at or below the Statewide health standard MSCs. No statistical analysis

by the remediator beyond that is needed. It should be noted that prior to proposing this language, the DEP has analyzed the effect of limiting the sample numbers, and the effect that has on the statistical certainty of whether the true mean value of the site exceeds the standard. What the DEP (and CSSAB) has found is that when the number of samples is reduced, the certainty (statistical) goes down. When a smaller sample size is used than that proposed under the 75%/10x method, the uncertainty can be reduced by requiring that the concentrations of the samples taken be lower than that allowed under the 75%/10x method.