



August 13, 2020

Mr. Kevin Collins
Response and Remediation Program, Land Protection Branch,
Georgia Environmental Protection Division
2 Martin Luther King, Jr. Drive, SE, Suite 104
Suite 1054 East
Atlanta, Georgia 30334

Submitted electronically to kevin.collins@dnr.ga.gov

RE: GBA Comments on EPD's Area Averaging Approach to Soil Compliance for Direct Contact Exposure Scenarios

Dear Mr. Collins:

On behalf of the Georgia Brownfield Association ("GBA"), attached are our group's comments on the Draft Area Averaging Approach to Soil Compliance for Direct Contact Exposure Scenarios. The GBA appreciates being afforded an opportunity to submit its thoughts about this important regulatory undertaking. GBA recognizes that the Division has spent numerous hours preparing the draft, and we hope that our comments will help improve the final product.

As you will see, GBA has suggested revising a number of the provisions of the draft guidance document. Rather than highlighting one or two those comments, GBA is prepared to discuss its recommendations and the reasons for them at the Division's convenience. Thank you again for affording GBA an opportunity to comment on the Draft Area Averaging Approach to Soil Compliance for Direct Contact Exposure Scenarios.

Sincerely,

A handwritten signature in blue ink that reads "Dustin J. Heizer".

Dustin Heizer, President, Georgia Brownfield Association
On behalf of the Georgia Brownfield Association Board of Directors

cc: Kelly Andrews Saunders, HL Strategy
Jason Metzger, Georgia EPD

Attachment

Georgia Brownfield Association Comments
on
Area Averaging Approach
to
Soil Compliance for Direct Contact Exposure Scenarios
External Review Draft
Dated June 24, 2020
by
Georgia Environmental Protection Division
Land Protection Branch

The Georgia Brownfield Association (GBA) submits the following comments on the Georgia Environmental Protection Division (EPD)'s "Area Averaging Approach to Soil Compliance for Direct Contact Exposure Scenarios" External Review Draft dated June 24, 2020 (the "Guidance"). The comments herein refer to the section and page number of the Guidance.

Comment 1. Clarify that Discrete, Composite and Incremental Sampling Approaches are Acceptable (Sec. 1.0 Introduction, pages 1, 2, 6, 12, and 17)

The Guidance initially states that the area averaging approach utilizes discrete samples. However, later in this section (paragraph 4), the Guidance states that using composite and incremental soil sampling results is acceptable. The Guidance should clarify that it is not limited to discrete samples.

The Hazardous Site Response Act (HSRA) states that soil averaging approaches may include results from discrete or composite sampling methods [Chap. 391-3-19-.07(7)(d) and (9)(c)].

The U.S. Environmental Protection Agency (EPA) (1996) states that the objective of surface soil sampling is to estimate the mean constituent concentration. The physical "averaging" that occurs during compositing is consistent with the intended use of the data. Compositing allows sampling of a larger number of locations while controlling analytical costs.

Recommendation: The initial statement in this section and in other sections of the Guidance should clearly state that discrete, composite and incremental sampling approaches are all acceptable.

Comment 2. Subsurface Soil Averaging (Sec. 1.0 Introduction, page 1)

We appreciate EPD's efforts to emphasize that the Guidance applies only to direct contact exposure scenarios, and that there exists additional guidance – namely, the *Frequently Asked Questions for Evaluating the Soil-to-Groundwater Migration Pathway* (Oct. 18, 2019)(referred to herein as the "FAQ") – that addresses the demonstration of compliance with leaching values for the soil to groundwater pathway. However, considering the time, attention, and focus that has been given to the development of area averaging approaches for direct contact scenarios, we believe that it would be helpful, as a reminder, to include language in the Guidance that emphasizes that the FAQ specifically addresses area averaging approaches in

the context of the soil to groundwater pathway. The FAQ addresses such approaches in Paragraph (b) of its response to Question 8 of the FAQ.

Recommendation: The following language should be inserted in between “... to groundwater pathway, ...” and “... see EPA’s FAQs ...” on page 1 of the Draft Guidance (**in bold**): ... **including the use of area averaging approaches to demonstrate compliance with this pathway, ...**

Comment 3. Delete Solid Waste Management Units [Sec. 2.0 Key Area Averaging Concepts, Decision Unit (DU), page 2]

Solid Waste Management Unit (SWMU) is a regulatory term-of-art under the Resource Conservation and Recovery Act (RCRA) corrective action program. EPA’s definition of SWMU [e.g., EPA, 1987; 1990] may or may not be applicable to the various non-RCRA programs covered by the Guidance.

Recommendation: Delete the reference to SWMU in the Guidance for non-RCRA programs. Alternatively, clarify that a SWMU should only be considered a potential decision unit under the RCRA corrective action program.

Comment 4. Definition of Surface Soil (Sec. 2.0 Key Area Averaging Comments. Page 3)

The Guidance describes how the EPA and the Georgia Voluntary Remediation Program (VRP) define surface soil differently, but does not reference HSRA’s definition, which was revised to “soil within one foot of the land surface.”

Recommendation: A brief comment should be added to emphasize that HSRA defines surface soils as being within one foot of land surface [Chap. 391-3-19-.07(8)(d)2 and (9)(d)2].

Comment 5. Range of Sampling Approaches (Sec. 4.0 Choosing a Sampling design, pages 6 through 9)

5.a) The Guidance states that there are two commonly accepted types of sampling designs: systematic, or grid sampling; and biased, or judgmental sampling. However, several additional sampling designs are later referenced in the Guidance. EPA (2002, Table 2-2) lists five “common” sampling designs: judgmental (biased), simple random, stratified, systematic grid, and composite.

Recommendation: These five designs (and incremental sampling) should be mentioned and used consistently throughout the Guidance.

5.b) On page 6, the Guidance introduces a “simple random sampling” design. This type of design is not clearly defined, and its use is not described in the Guidance. As mentioned above, EPA (2002) lists the simple random approach as one of the five common designs presented in Table 2-2 and as described in more detail in Chapter 5 of that document.

Recommendation: Additional information on the simple random sampling design should be included in the Guidance.

5.c) On page 6, the Guidance mentions a “stratified random sampling” design. Stratified random sampling is just one subtype of stratified sampling design discussed in EPA (2002), which appears to be a hybrid of two different EPA approaches (stratified and simple random) noted in Table 2-2. EPA (2002) notes that some

sites can be separated into strata known or thought to be more homogenous with respect to certain characteristics. Sampling results from these strata should be less variable when compared to results from the entire site. The specific approaches to sampling these strata are not limited to “random sampling”; systematic, grid-based, and composite sampling approaches may also be appropriate.

Recommendation: A systematic and grid or composite approach could also be used to sample the strata. On page 7 of the Guidance EPD acknowledges that strata can be sampled using a systematic and grid approach in addition to random sampling. This section should also note that composite sampling is also an option for the strata. It would be more appropriate for the description of stratified sampling to include a broader range of options, consistent with the information in EPA (2002).

5.d) The Guidance mentions on page 7 that once a known release area is identified, it can be sampled using a “biased and/or statistical” approach.

Recommendation: Following the reference to “biased . . .”, the option of using a composite (or incremental) approach should be inserted into this sentence of the Guidance.

Comment 6. Reasonable Number of Soil Samples (Sec. 5.0 Establishing a Decision Unit, page 12)

GBA supports EPD’s approach to not mandate a specific, minimum number of samples to be collected at a site. We agree that a sufficiently representative number of samples should be collected. Site-specific conditions and, where needed, consultation with an EPD regulatory compliance officer should dictate how many soil samples need to be collected.

Comment 7. EPA’s Removal Management Levels (RMLs) (Sec. 6.0 Dataset and Action Levels, page 13)

Per EPA (2020a) the intent of RMLs is to assist the On-Scene Coordinator in decision-making during short-term Superfund removal actions.¹ Because RMLs are applicable to short-term, removal actions at Superfund sites, they are not necessarily health protective levels for chronic exposure to an individual chemical. In addition, RMLs do not address cumulative risk from exposure to multiple chemicals. EPA (2020a) concludes by stating that RMLs “are not meant to define protective levels.”

The Guidance states that RMLs “represent the highest end of USEPA’s acceptable risk range.” Granted, a 10^{-4} risk level corresponds to the upper-end of USEPA’s generally acceptable risk range of 10^{-6} to 10^{-4} as discussed in the National Contingency Plan (NCP), 40 CFR § 300.430. However, the NCP gives no analogous recommended range (*e.g.*, hazard quotient of 3) for non-carcinogenic threats. GBA is not aware of another

¹ Superfund divides response actions to hazardous substance releases into two categories: removal actions and remedial actions. Removals generally consist of short-term interim measures taken to prevent imminent harm and exacerbation of a release. Remedial actions generally comprise the long-term treatment, containment, etc. that is the permanent solution to a release. EPA (2020a) typically uses RML for short-term removals actions for single chemicals and EPA (2020b) uses Regional Screening Levels (RSL) for longer-term remedial actions for multiple chemicals.

USEPA document stating that RMLs (calculated at a hazard quotient of 3) represent the high end of an analogous acceptable hazard range.

The Guidance states that chemicals in a DU that exceed RMLs should be remediated. As noted in our Comment No. 9 (below), just because an action level (such as an RML) is exceeded does not necessarily trigger remediation such as soil treatment or removal.

Recommendation: The Guidance should clarify that RMLs may or may not be applicable at a given site.

Comment 8. Lead Action Levels (Sec. 6.0 Dataset and Action Levels, page 13)

The Guidance states that RMLs are not available for lead. Therefore, screening levels for lead are not included in the Guidance. GBA agrees with the Guidance that lead cleanup levels in soil should be based on blood-lead levels in children or adults. The Guidance continues by mentioning the EPA's Integrated Exposure Uptake Biokinetic (IEUBK) model and Adult Lead Model (ALM) can be used.

Recommendation: For clarity, it would be helpful to state in the Guidance that additional information on the IEUBK model is available at Chap. 391-3-19-.07(7)(c)3 and for the ALM at Chap. 391-3-19-.07(9)(d)2(i) and Appendix IV of HSRA.

Comment 9. Response to Action Level Exceedance (Sec. 6.2 Achieving Compliance, page 16)

The Guidance states that if the EPC for a constituent (a/k/a regulated substance) exceeds the action level, then corrective action must be implemented to remove or treat some or all of the soil. However, for example, HSRA provides that a responsible party may control, via engineering or institutional controls, the regulated substances or the property where the regulated substances are located [Chap. 391-3-19-.07(10)(a)]. In a similar manner, the VRP allows the use of engineering and/or institutional controls to prevent exposure to constituents above action levels. The technical impracticability of remediation and an assessment of constituent levels at a point of exposure are also options under the VRP (OCGA § 12-8-108).

Recommendation: This section should be clarified to acknowledge that removal or treatment are not the only possible responses when an action level exceedance occurs. It may be appropriate and acceptable to address exceedances of soil action levels using engineering and/or institutional controls.

References

- EPA. 1987. Definition of Solid Waste Management Unit for the Purpose of Corrective Action Under Section 3004(u), Publ. No. OSWER Dir. 9502.00-5; dated July 24. Accessed here: <https://nepis.epa.gov/Exe/ZyPDF.cgi/9100UBGI.PDF?Dockey=9100UBGI.PDF>
- EPA. 1990. Corrective Action for Solid Waste Management Units (SWMUs) at Hazardous Waste Management Facilities. Federal Register, Vol. 55, No. 145, pages 30,798 – 30,884; dated July 27. Accessed here: <https://www.epa.gov/sites/production/files/2016-03/documents/55fr30798.pdf>
- EPA. 1996. Soil Screening Guidance: User's Guide, Publ. No.: Publication 9355.4-23; dated July. Accessed here: <https://semspub.epa.gov/work/HQ/175238.pdf>

- EPA. 2002. Guidance on Choosing a Sampling Design for Environmental Data Collection for Use in Developing a Quality Assurance Project Plan, EPA QA/G-5S, Publ. No.: EPA/240/R-02/005; dated December. Accessed here: <https://www.epa.gov/sites/production/files/2015-06/documents/g5s-final.pdf>
- EPA. 2020a. Regional Removal Management Levels for Chemicals (RMLs), User Guide May 2020. Accessed here: <https://www.epa.gov/risk/regional-removal-management-levels-rmls-users-guide>
- EPA. 2020b. Regional Screening Levels (RSLs) - Generic Tables as of: May 2020. Accessed here: <https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables>