

**FINAL NOTES**  
**Virginia Solid Waste Management Regulations – Amendment 7**  
**9VAC20-80-10 *et seq***  
**Technical Advisory Committee (TAC) Public Meeting - June 19, 2008**

F. Scott Reed—Dominion Virginia Power

Bob Dick—Virginia Waste Industries Association (VWIA) and private consultants

Atman Fioretti—Sierra Club, Virginia Chapter --absent

Rick Guidry—(absent); represented by Mike Thomas--King George County Landfill, Inc.

Jerry Martin—Augusta County Service Authority--absent

Jimmy Sisson—Virginia Recycling Markets Development Council--absent

Fouad Arbid—(absent); represented by Steve Yob--Solid Waste Association of North America

Joe Levine—Southwest Virginia Solid Waste Management Association

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**(Others in attendance):** (1) Leslie Beckwith--facilitator; other staff members that were present to answer questions raised by the TAC: Deb Miller, Sanjay Thirunagari, Karen Sismour, Don Brunson, Jason E. Williams, Allen Brockman, and (2) names of public attendees: Mark Bingham (Republic), Jeff Fantell (Joyce Engineering, Scott Whitehurst (SPSA), Terri Phillips (Golder), and Ed Hollos (Resource International).

**Today's meeting notes:**

Leslie Beckwith reiterated that changes are present throughout the text sent to TAC members, but that *major* changes were highlighted in yellow. Leslie reminded substitutes that they need to make decisions for the groups they represent at this TAC message.

In Reference to Action Items either new or outstanding from the June 5 TAC Meeting:

Disposal capacity (was not yet provided) for this TAC meeting; in addition, a proposed definition for capacity has been prepared by TAC members Rick Guidry and Fouad Arbid, which they can send to Allen Brockman by email for distribution to the TAC for their consideration.

It was agreed that more discussion about definitions will be reserved until a later meeting, once the parts in sequence have been discussed. At that meeting, Brockman will provide information about the definitions that were deleted. However, today, Brockman provided a handout on definitional requirements from both the Virginia Code and EPA. Information on links to solid waste regulations from neighboring states were sent out to TAC members by email.

For the future discussion of definitions, DEQ staff will devise a new term (and definition) for a lesser unit—like a cell, to help make closure and phases more performance-based or triggered (there's a lot of closure before final closure) as related to info about what definitional requirements are set forth by the Code of Virginia and EPA.

Summary of New Action Items from June 5:

1. Clarification of Gypsum Board exemption as requested by TAC—Jason Williams by June 19 meeting—will be sent to the group after this meeting. This will be provided to the TAC by email.
2. & 3. Staff will check on origin of wording at 9 VAC 20-81-120 C 2 a (1) and (2) to make sure text is consistent with preexisting text and the necessary revision of text at 9 VAC 20-81- 120 D 1 d.—these determinations will be reserved until the future definitions discussion.

Leslie Beckwith asked Allen Brockman to summarize the results of the TAC survey on future meeting dates. Brockman indicated that the group tally decided that Aug 25 & Sep. 29 are the next meeting dates after our two July dates (7 and 21).

Today, Scott Reed joined the consensus of the rest of the TAC with respect to 9 VAC 20-81-97. Also, with regard to the following section (9 VAC 20-81-120 A 1): “The siting of all new sanitary, CDD and industrial landfills shall be governed by the standards set forth in this section. - A. Floodplains. - No new landfill shall be sited in a 100-year floodplain.” It was noted that this requirement was revised for CDD & Industrial in the new text. Consensus was reached minus Scott Reed, until today. At today's June 19<sup>th</sup> meeting, Scott Reed joined the consensus of the TAC affirming the new requirement for CDD & Industrial landfills in 9 VAC 20-81-120 A 1.

Jason Williams noted that 130 A may change slightly with further staff revisions, to make it consistent with the rest of the regulation with regard to the revised daily maximum intake rate terminology. Bob Dick commented that we should refer to “volume” rather than “cubic yards” (to allow the use of metric terms).

Leslie asked if there was any comment on the rest of 130.

Bob Dick asked about the source of 80 dBA requirement in 130 E. Deb Miller verified the 80 dBA requirement comes from the Federal OSHA level. The noise level was included in Virginia's 1988 solid waste regulations.

Bob Dick noted that it should be related to the landfill operation, not just a background noise threshold. Mark Bingham asked if the 80 dBA limit was related to long term exposure versus a one-time exposure. Mark Bingham and Deb agreed that we should reference the OSHA standard rather than list it as 80 dBA. The TAC consensus agreed to this reference approach.

Terri Phillips looked at 130 B and D and recommended that staff fix typographic errors in those sections.

Jason Williams mentioned a staff recommendation with regard to 130 H 1 to add in a “24-hour, 25 year for consistency” and delete section “c” for redundancy with “d.” Also Jason indicated that in “f,” the fire break now applies to sanitary and industrial landfills as well.

Bob Dick asked about 130 H 1 “e”: is the omission of a liner leachate collection system okay here for sanitary and industrial as well as CDD? Deb Miller—“Yes.”

Delete “Cause the discharge of” from H 1 b (2) –recommendation of Steve Yob and Jason Williams. Steve Yob asked what would constitute a nonpoint source at a landfill. (Jason said it would be when an industrial stormwater permit is required).

The TAC reached consensus on these above changes to 130 A through H.

The TAC reached consensus that “two percent” should be replaced with “2.0 %” in 9 VAC 20-81-130 I 1 a (3) (c).

Mike Thomas volunteered to come up with alternate language for I 1 b for more reasonable specifications. This will be brought back to the group for further discussion at the next meeting. ACTION ITEM.

Discussion progressed to “ I 1 c. Additional Alternate Liner Systems” This language was basically the same as in the existing regulations.

Terri Phillips asked about the source of “500 ft” in I 1 c 1 (a) (9) (a). Deb Miller replied that the “500 feet” comes from 9 VAC 20-80-770 (variances for the groundwater monitoring system). Terri asked why the groundwater distance should be considered in the alternate liner section at all. The TAC consensus was to delete the section of 130 I 1 c 1 (a) (9) reading “(a) The relevant point ...of the landfill unit.”

Leslie advised to change the reference in 130 I 1 c 1 (b): “(1) Sharp-Hansen, S., C. Travers, ... (1990)” to “current version of Multimed Model.”

At this point, the TAC took a break

On return from the break, Deb Miller agreed with Mike Thomas that, in 9 VAC 20-81-130 I 1 c 2 (a)(3), “composed of material having a hydraulic conductivity of  $1 \times 10^{-3}$

cm/sec or greater (lab tested).”, shall be deleted from this location in the text and restored to 9 VAC 20-81-210 and cross referenced to 130. -- ACTION ITEM for Deb Miller’s staff

Further, again with regard to 9 VAC 20-81-130 I 1 c 2 (a) (3), the group addressed whether the provision is needed. Mike Thomas, Steve Yob, and Bob Dick said they want to see (3) omitted. In contrast, Don Brunson said there should be an 18 inch buffer. Bob Dick pointed out that the sanitary landfill liner section is silent on such a buffer. Deb Miller agreed that her staff will strive to make the language more performance based—with the an inch buffer (not a drainage layer thickness) consistent for all three landfills. ACTION ITEM.

Mike Thomas suggested the language in 9 VAC 20-81-130 K for an add-on to the proposed revision to 9 VAC 20-81-130 I 1 c 2 (a) (3).

Jeff Fantell suggested moving the text in 9 VAC 20-81-130 K into the leachate control area (210) rather than in the drainage area (9 VAC 20-81-130 I). Deb’s staff agreed to make the suggested change and cross reference it with the remaining text, as needed, for the TAC to review before adopting 9 VAC 20-81-210. The TAC also wants to look at any revised language related to the 18 inch protective layer in 9 VAC 20-81-130 I. ACTION ITEM.

Deb Miller explained that 9 VAC 20-81-130 I 1 e (6): “A program for monitoring the witness zone ... in accordance with 9 VAC 20-81-250,” adds a requirement for submitting a plan for monitoring of a witness zone. The TAC supported this change by consensus.

9 VAC 20-81-130 J—The TAC supported this revised text: “except at CDD and industrial landfills ... is not a concern,” by consensus.

Next, the group discussed 9 VAC 20-130 L—Deb Miller suggested that we add specific clarification: “except for the exemption of double-lined CDD and Industrial landfills referenced in this section.” A TAC consensus supported this change.

Deb Miller explained that 9 VAC 20-130 M was a combination of existing 9 VAC 20-80 language from elsewhere in the regulation. A TAC consensus supported this change.

Jeff Fantell noted that in 9 VAC 20-81-130 N, the word “be” is missing from between “shall” and “designed.”

At the end of 9 VAC 20-81-130 P 1 b (4), Steve Yob (& Jeff Fantell) suggested the addition of “including an 18 inch protective layer.”

A consensus of the TAC directed the following rewording of 9 VAC 20-81-130 P 2 through 4 (concurrent reduction to P 2 through 3):

2. Written CQA plan. The owner or operator shall develop and implement a written CQA plan which shall include observations, inspections, tests, and measurements. The plan shall identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan shall include:

- a.) Identification of applicable units, and a description of how they will be constructed.
- b.) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.
- c.) A description of inspection and sampling activities for all unit components identified in P.1.b. of this section including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description shall cover: sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials and constructed components; plans for implementing corrective measures; and data or other information to be recorded.
- d.) Structural stability and integrity of all components of the unit identified in P.1.b. of this section;
- e.) Proper construction of all components of the liners, leachate collection and removal system, gas management system if required under J. of this section, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;
- f.) Conformity of all materials used with design and other material specifications.
- g.) The permeability of the soil liner. Soil liner construction will be demonstrated on a test pad where permeability will be confirmed using an in situ testing method.

3. Certification. Once construction is complete, the owner or operator has submitted to the department by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of this section. Documentation supporting the CQA officer's certification shall be submitted to the department upon request. An additional engineer's certification is required under the provisions of 9 VAC 20-81-490 A. Wastes shall not be accepted until the facility receives a Certificate to Operate (CTO) per 9 VAC 20-81-490 A.

Mike Thomas and Bob Dick agreed to reword 2 g (in new text above) from a technical approach to improve clarity and technical feasibility of this section—ACTION ITEM.

Jason Williams explained 3 (in text above) – Certification -- is a revision of the earlier section to better reflect actual procedures.

Mike Thomas asked about timing for report turnaround, so the landfills can build it into their schedules. Jason suggested that this type of stipulation would be more appropriate for section 490 A.

Leslie Beckwith suggested against certified mail and hand delivered mail to allow other options. Leslie will provide suggested language. Bob Dick suggested against the “shall

be submitted by the department upon request.” Deb Miller pointed out that we’ve had operators contest it without the citation in the regs. Jason suggested eliminating “upon request.” Deb proposed revised language for this. ACTION ITEM.

At this point, the TAC broke for lunch—12:30

After lunch, Jason Williams gave the TAC a background briefing on Section 140 – Operation Requirements.

Don Brunson discussed a potential revision for seeding of intermediate cover (9 VAC 20-81-140 A 1 d). Mark Bingham suggested addressing this as erosion control in performance measures. Don Brunson then retracted his proposal and said the last sentence of d may cover this.

Mark Bingham asked about the meaning of the term “vegetative cover.” Is mulch adequate for intermediate cover? No, Jason Williams answered. Bob Dick suggested then that we should use the concept for established “vegetation” instead. TAC consensus was reached on the following wording for 9 VAC 20-81-140 A 1 f:

“f. **Vegetation** shall be established and maintained on all exposed final cover material within four months after placement, or as specified by the department when seasonal conditions do not permit. Mowing will be conducted a minimum of once a year or at a frequency suitable for the **vegetation and climate**.”

Next, the TAC reached consensus over revised wording for 9 VAC 20-81-140 A 1 e (1) (as recommended by Don Brunson and Steve Yob):

“e. Final cover construction will be initiated and maintained in accordance with the requirements of 9 VAC 20-81-160 A.2 when the following pertain:

(1) An additional lift of solid waste is not to be applied within one year, **or a longer period as required by the facility’s phased development.**”

Joe Levine questioned the 33% and the short 30-day time limit in 9 VAC 20-81-140 A 1 g. Jason Williams explained that it was specified to address abandoned slopes. Bob Dick suggested extending the time to 60 days. Joe Levine suggested that the permit should be enough, without the 30 day or 60 day limit. Jason pointed out that the operations manual won’t be part of the permit in the future. Don Brunson suggested “90 days” to match the quarterly inspection schedule. The issue was referred to the TAC for a consensus vote—the TAC reached consensus on a time requirement of 60 days and 33% slopes, and the deletion of the final words: “whichever is least.”

Steve Yob questioned the wording of 9 VAC 20-81-140 A 5. Deb Miller explained that this was the wording of the existing regulation. The group entered discussion and then agreed to a consensus on wording proposed by Bob Dick: Adequate numbers and types of properly maintained equipment shall be available to a landfill for operation. Provision

shall be made for substitute equipment to be “**available or alternate means implemented to achieve compliance with A.1 of this section, within 24 hours**” should the former become inoperable or unavailable. The TAC also agreed to strike the last sentence: “Equipment and operators...and effectiveness.”

Joe Levine reserved his part in any consensus on 9 VAC 20-81-140 A 6 until we have agreed on the new definition for facility boundary.

Verbal notification for fires will be added to the appropriate section, in reply to a comment from the TAC on 9 VAC 20-81-140 A 8—Leslie Beckwith. ACTION ITEM

The final sentence of A 8 “The fire control plan...by the public.” was deleted at request of TAC (p. 17).

9 VAC 20-81-140 A 12 a —Mike Thomas mentioned that it is difficult to keep litter at the working face the night after a storm. He suggested “as practical.” Joe Levine questioned the weekly basis. The following revised wording was accepted by consensus of TAC:

- a. Litter should be confined to the active working face by fencing or other suitable control means. **All litter blown from the landfill operations must be collected.**

A 12 c—On the advice of Mike Thomas, the work “permitted” was replaced with “allowed.” The rest of new wording provided by Steve Yob—TAC Consensus:

- c. Salvaging may be allowed by a solid waste disposal facility operator, provided that it does not interfere with operation of the landfill, and to avoid the creation of hazards or nuisances.

Bob Dick asked about the inconsistency of open and active working faces in A 12 f and elsewhere. (fix typo – change “open” to “active.”)

Cite to FAA regulations in 9 VAC 20-81-140 A12 g (Mark Bingham supplied information)—Deb Miller staff ACTION ITEM.

New Free liquids language (9 VAC 20-81-140 A 16 a (1) (b) and (c)) provided by Leslie Beckwith and Mike Thomas in response to a question from Bob Dick:

- a. Free liquids.
  - (1) Bulk or noncontainerized liquid waste, unless:
    - (a) The waste is household waste; or
    - (b) The waste is leachate or gas condensate derived from that landfill; or

**(c) The waste is leachate derived from that landfill and the landfill is designed with a composite liner and leachate collection system as described in 9 VAC 20-81-130 I.1 and 9 VAC 20-81-130 K; or**

Steve Yob commented on 140 A 16 e. This reference needs to be updated. Mike Thomas will provide more information to the TAC after his upcoming meeting with the Health Department. ACTION ITEM

Steve Yob pointed out that in 140 A 16 f, “Director” should be replaced with “Department.”

Steve Yob pointed out that DEQ needs to add “HCFC’s to 140 A 17.

Bob Dick asked if 140 A 19 was entirely new. Jason Williams replied that some of it was derived elsewhere in the existing regulations. Mark Bingham suggested all downstream areas for potential impacts—Steve Yob disagreed unless you limit it as immediately adjacent—i.e. to the immediate property line. Steve Yob recommended moving gw and gas inspection requirements to the same operations manual section in the regulation. However, no changes to A 19 were suggested by a consensus of the TAC.

Leslie Beckwith asked the TAC members if we could shift meeting times to 9 to 3. The TAC agreed to make this shift.

The next meeting is July 7.

Action items will be announced in the minutes (earliest receipt of draft will be Monday).

TAC was advised to turn in any suggestions early so we can hand them out for TAC consideration in the July 7 meeting, to speed things up.

FINAL TAC ACTION ITEMS to TAC: Please look at

9 VAC 20-81-140 B (Page 19)—open burning at all landfills, use same language for CDD and Industrial.

9 VAC 20-81-140 B 11 (Page 20)—Fire Breaks, Do they work? Make a difference?

SUMMARY OF ALL ACTION ITEMS FROM TODAY:

1. Mike Thomas volunteered to come up with alternate language for 9 VAC 20-81-130 I 1 b for more reasonable specifications. This will be brought back to the group for further discussion at the July 7 TAC meeting.
2. Deb Miller agreed with Mike Thomas that, in 9 VAC 20-81-130 I 1 c 2 (a)(3), “composed of material having a hydraulic conductivity of  $1 \times 10^{-3}$  cm/sec or greater (lab tested).”, shall be deleted from this location in the text and restored to 9 VAC 20-81-210 and cross referenced to 130. -- Deb Miller’s staff
3. Further, again with regard to 9 VAC 20-81-130 I 1 c 2 (a) (3), the group addressed whether the provision is needed. Mike Thomas, Steve Yob, and Bob Dick said they want to see (3) omitted. In contrast, Don Brunson said there should be an 18 inch buffer. Bob Dick pointed out that the sanitary landfill liner section is silent on such a buffer. **Deb Miller agreed that her staff** will strive to make the language more performance based—with the an inch buffer (not a drainage layer thickness) consistent for all three landfills.
4. On moving the text in 9 VAC 20-81-130 K into the leachate control area (210) rather than in the drainage area (9 VAC 20-81-130 I). **Deb’s staff agreed to make the suggested change** and cross reference it with the remaining text, as needed, for the TAC to review before adopting 9 VAC 20-81-210. The TAC also wants to look at any revised language related to the 18 inch protective layer in 9 VAC 20-81-130 I.
5. Mike Thomas and Bob Dick agreed to reword 2 g (in new 9 VAC 20-81-130 P 2 text: “g.) The permeability of the soil liner. Soil liner construction will be demonstrated on a test pad where permeability will be confirmed using an in situ testing method.”) from a technical approach to improve clarity and technical feasibility of this section.
6. END of 9 VAC 20-81-130 SECTION NOTES: Mike Thomas asked about timing for report turnaround, so the landfills can build it into their schedules. Jason suggested that this type of stipulation would be more appropriate for section 490 A. Leslie Beckwith suggested against certified mail and hand delivered mail to allow other options. Leslie will provide suggested language. Bob Dick suggested against the “shall be submitted by the department upon request.” Deb Miller pointed out that we’ve had operators contest it without the citation in the regs. Jason suggested eliminating “upon request.” Deb proposed revised language for this.
7. Verbal notification for fires will be added to the appropriate section, in reply to a comment from the TAC on 9 VAC 20-81-140 A 8—Leslie Beckwith.
8. Cite to FAA regulations in 9 VAC 20-81-140 A12 g (Mark Bingham supplied information)—Deb Miller staff
9. on 140 A 16 e. This reference needs to be updated. Mike Thomas will provide more information to the TAC after his upcoming meeting with the Health Department. (Input from Mike Thomas)

10. FINAL TAC ACTION ITEMS to TAC: Please look at  
9 VAC 20-81-140 B (Page 19)—open burning at all landfills, use same language for  
CDD and Industrial.  
9 VAC 20-81-140 B 11 (Page 20)—Fire Breaks, Do they work? Make a difference?