RESPONSE TO COMMENTS ON PROPOSED ENVIRONMENTAL STANDARD FOR RECYCLED-CONTENT LATEX PAINT

Please Note: Supporting information presented in the background document (introduction and environmental evaluation) will not be revised or re-issued; however, the comments on those sections have been taken into account in revising the standard itself.

1.1 Scope

1. Please amend verbiage to include Environmental Health, Safety, Disposal and Performance elements. This is consistent with the Introduction section. Air quality issues should restrict the use of recycled paint to exterior use only. Please remove interior references.

   Response: "Environmental" refers to and implies paint in the broad environment and includes health, safety, etc. Rewording would be inconsistent with past Green Seal standard language.

   This standard covers both interior and exterior products; we cannot remove the word interior. Manufacturers use and sell this product for both indoor and outdoor applications. The current VOC limit of 250g/l is consistent with EPA regulations for virgin paint used indoors, although test results to date have demonstrated that most RCP has VOC levels below 250g/l.

1.2 Definitions

Consolidated Paints

2. To reduce confusion please replace "virgin materials" with "virgin paint". The additives inclusion would include other materials.

   Response: Please see changes below; secondary industrial materials and virgin materials (definitions below) cover all the possible additions such as off batches, virgin paints, and other virgin additives such as pigments, etc.

   Proposed Change to Definition: *Consolidated Paints.* Paints that contain a minimum of 95% by volume post-consumer paint with a maximum of 5% by volume secondary industrial materials or virgin materials.

Latex Paints

3. Change "Water-based paints using a latex binder" **to** "Water-based paint containing latex binders."

   Response: Changes Made

   Proposed Change to Definition: *Latex Paints*: Water-based paint containing latex binders.

Paints

4. Please remove "mastic composition". These types of product are usually unsuitable for including in a paint-recycling program due to their very high viscosity and compositional variance with paint.

Response: Agreed, this is not necessarily needed for a recycled paint Standard

Proposed Change to Definition: *Paints*. Liquid or liquefiable composition that is converted to a solid protective, decorative, or functional adherent film after application as a thin layer. These coatings are intended for, but not restricted to, on-site application to interior or exterior surfaces of residential, commercial, institutional or industrial buildings.

Post Consumer Material

5. Please remove " for the purpose of recycling". The origin of the material is immaterial to the Standard.

Response: The nature of post-consumer materials used for recycling necessarily relates to the purpose for which they are used.

Pre-Consumer Material

6. I notice that the term “Pre-Consumer Material” only appears in the definition of “Recycled Paints”, but not in the definitions of “Consolidated Paints” or “Reprocessed Paints”. Since “Consolidated Paints” and “Reprocessed Paints” are presumably the two types of “Recycled Paints” the standard is about, I am thinking that either “Pre-Consumer Material” has to be added to the definitions of “Consolidated Paints” and “Reprocessed Paints”, or else the definition of “Pre-Consumer Material” has to be deleted and the term removed from the definition of “Recycled Paints”. I am also not sure I understand the difference between “Pre-Consumer Material” and “Secondary Industrial Materials”. If they are synonymous terms, then the option of deleting the definition of “Pre-Consumer Material” and removing the term from the definition of “Recycled Paints” would be the preferred fix above.

Response: Agreed, this is adding to the confusion and is redundant.

Proposed Change/Removal of Definitions: Remove the definition of *“Pre-Consumer Material”* and remove it from the definition of *Recycled Paints”* as the definition of “*Secondary Industrial Material*s” accommodates this concept.

Reprocessed Paints

7. The last line is very confusing as to what is intended. My interpretation is that the first "and" should be an "or". Also, what is meant by "recycled content"?

8. Reference is made to differing compositional requirements for Reprocessed Paints based on classification into “darker colors” or “whites and pastels.” Color perception can be highly variable. We would suggest holding all Reprocessed Paints to a single compositional requirement regardless of color, or assigning numeric values to distinguish two classes of colors. If the latter approach is preferred, we would recommend defining “darker colors” as those having Light Reflectance Values (LRV) of less than 50, and “whites or pastels” as those having LRV of 50 or greater. LRV measures are commonly used in the paint industry to characterize the relative brightness of different colors.

9. Please remove the first sentence - "Paints.....industrial materials". The location of the paint processing is immaterial to a criteria-based standard. There is no criterion to designate "dark” from light. This should be designated by a Delta L or other reflectance criteria. A criteria-based Standard must include guidance so the correct recycled paint percentage is certain in each product.

Response: We agree on the need to clarify the confusion in the definition of reprocessed paints, particularly what is meant by “total recycled content” and color categories. The intent of this Standard regarding differences in color was meant to be very basic and meant to be an ocular test only where lights and pastels have low or limited colorants added and darker ones have significant colorants added. The rationale for separating out the paints with significant colorant and ones with less relates to their feedstock availability. Although this is an important concept we agree that differentiating between color categories in this definition is confusing and not necessary. See proposed changes below.

Proposed Change to Definition: *Reprocessed Paints.* Paints that contain a minimum of 50% by volume post-consumer paint, with a maximum of 50% by volume secondary industrial materials or virgin materials.

10. It is interesting that three different categories have been defined, each with different thresholds for post-consumer recycled content (95%, 50% and 25%). You are probably aware that the State of California has a law (SABRC) that requires State agencies to purchase 50% of their product categories with minimal levels of post-consumer recycled content. In the paint category, California state agencies are required to purchase paint with a minimum of 50% post-consumer content. This level is only met by the "consolidated paint" and "darker colors" categories of paint, and not the "whites and pastels" category most likely to be used on State facilities. I would recommend that a minimum of 50% post-consumer content be used for this third category as well; otherwise our use of the standard for our paint purchases will likely be non-compliant with our Public Contract Code.

Response: The definition for Reprocessed paints was modified and a minimum of 50% by volume post-consumer material is the *only* limit, please see above.

Virgin Materials

11. The term " raw extracted form" is confusing. This should be "in their raw extracted state".

Proposed Change to Definition: *Virgin Materials.* Materials that contain no post-consumer waste or secondary industrial materials

VOCs

12. The use of the definition from the US EPA's Title 40 Sec 51.00 is not appropriate as this definition is based on VOCs reaction with sunlight and other chemicals in the atmosphere to form ozone/smog. It did not include chemicals that have been determined to have "negligible photochemical reactivity". Recycled latex paints will be used indoors, where photochemical reactions may not be as important as outdoors. Some chemicals in paints may not be photo-chemically active, but may cause adverse health effects in exposed occupants. I suggest using a definition based on the boiling point at standard pressure.

Response: This Standard is primarily addressing VOCs in relation to ozone interactions and smog formation. This definition is currently the most widely used definition for paints and coatings. Green Seal acknowledges that indoor air quality is an important issue, and in future standards other test methods and measurement units for indoor air quality will likely be referenced as they are developed and used.

Definitions-General

13. The list of definitions should include other terms used in the documents such as "Putrefaction", Hard settling of the pigment", curdling, VOC content, etc.

Response/ Proposed Addition of Definitions: Add definitions for Putrefaction, Hard Settling of Pigment, and Curdling:

Putrefaction.	A state of decay usually accompanied by an offensive odor.
Hard Settling of Pigment.	A settling of pigments that cannot be easily dispersed by simple mixing.
Curdling.	The process of forming semisolid lumps in a liquid

1.3 Collection and Sorting Protocols

14. What will be used to determine that the received product is in it's original container? A contractor will likely combine parts from multiple 5 gal "buckets" into one rather than shipping multiple, large, near empty containers. This would violate this part of the standard.

Response: Unlabeled 5gal buckets of paint from a contractor, for example, would not be permitted via the proposed sorting and screening protocols since they would not be in their original containers. Originality of containers will be noted by label identification as well as inspection of contents.

15. The definitions section should include guidance for the terms " *Identifiable*" – i.e., as per brand, type, etc. and what constitutes an "*intact*" label. Paint cans usually show wear and tear especially through obliteration of label content through drips and spills. Please include some guidance as what must be discernible to enable the sorter to conclude the paint label intact.

Response: We agree that this needs some clarification.

Proposed Change to Criterion: 1.3.1 Paint shall be received in its original container with a readable label, which, at minimum indicates the product type (e.g., latex), its intended application (e.g., interior, exterior), and gloss level.

16. How will this [Visually matching paint to label description] be achieved? What are the criteria for visually matching contents to label?

Response: This is a coarse initial screening to ensure that the can is indeed latex and not something else, e.g., if a latex paint they would examine for water on the top or solvent odors for surety.

17. This section must be amended to exclude water-based industrial, water-based marine or water-based automotive. The current wording is ambiguous.

18. [Commenter] wanted clarity on purpose of use.

Response: We propose to combine Criteria 1.3.3 and 1.3.4 into one Criterion and clarify.

Propose Change to Criterion: 1.3.3 Solvent based paints or specialty paints (e.g., industrial, marine, automotive, traffic-marking, etc.) shall not be used for the purposes of manufacturing a consolidated or reprocessed latex paint. If there is any doubt that the paint is latex then it shall be rejected.

19. Physical inspection should include stirring the contents, not just an inspection of the surface.

Response: It is agreed that some level of stirring of paint contents is important and should be included, see proposed changes below.

20. Offensive or irritating odor - some manufacturers are using ammonia in their formulations. I suggest removing the ammonia requirement.

21. Recycled paint is to be sorted or evaluated by smell or odor. This requirement would seem to set up a problematic inspection for employees from an occupational health perspective.

Response: Agreed. We will remove this item in the Criterion, which will address the concerns regarding ammonia and safety of odor testing.

22. Subsection 1.3.5 states that "to be determined usable" for recycling, paint "*shall be free of...Particulate matter" (among other things). T*his appears to be *inconsistent* with Subsection 1.3.7, which states that usable paints "shall be filtered…to ensure the removal of large particulate matter." We would suggest replacing the phrase "particulate matter" in Subsection 1.3.5 with the following: "Excessive debris, such as dirt, sand, gravel, sawdust, or similar foreign material."

23. The section states that paint will be free of particulate matter. Technically pigments are particulate matter, and further, in 1.3.7 paints are to be strained to remove large particulate matter. So, 1.3.5 needs a narrower definition of particulate matter that is not allowed.

24. Particulate matter are excluded from the reprocessing or consideration regime, why in 1.3.7 is there an indication of particular matter? This needs revision so the Standard provides consistency. Latex paint often has a ammonia odor and this should not be a criteria for exclusion under item H. Overall, the physical inspection section would be beyond what [commenter] has observed in recycled paint situations to be the common practice. An in-depth inspection of every can would take a fair amount of time and is it envisioned that the sorter would memorize Section 1.5 of the standard to cross-reference against the thousands of cans he/she may encounter during the inspection to fulfill item J? The Collection and Sorting Requirements Section J proposes an impossible situation. The ascertainment of heavy metals must be done by analytical testing.

Response: We agree that the section regarding particulate matter is confusing and inconsistent. See proposed Criterion changes below.

We believe that the inspection of every can for the proposed list of screening requirements is something that would constitute sound screening protocols and is something that can be done routinely. These are mainly visual estimates that are meant to be done quickly.

25. How are heavy metals or all the other Section 1.5 chemicals identified by physical inspection? This seems problematic/unworkable. Perhaps random lots should be tested, with the standard specifying the frequency of testing and recommended test protocols. Also, what would define a level of "free"? Is this LOQ, other?

Response: This is an initial visual screening to make sure that paints with noted heavy metals on their labels, e.g., older paints, are not used. Specific prohibited/restricted component testing is addressed in section 1.5 of this Standard. "Free" is qualified as being determined by a physical inspection only. Filtration steps and chemical constituents are addressed later in the Standard.

Proposed Change to Criterion:

1.3.5 To be determined usable for consolidation or reprocessing, each container of paint shall be free of the following as determined by a physical inspection including stirring of the contents to achieve uniform consistency:

A. Biological growth
B. Putrefaction
C. Skinning
D. Livering
E. Hard settling of the pigment
F. Significant interior and/or exterior corrosion of the container
G. Excessive debris, such as dirt, sand, gravel, sawdust, or similar foreign material
H. Curdling or other evidence of being frozen

I. As indicated by the label, any heavy metals or substances prohibited in Section 1.5 of this Standard, their common names, CAS numbers and/or other common terminology.

26. Interior and exterior products must be separated. [Commenter] standards will require that no interior products are contained in exterior recycled paint and no exterior in interior.

27. Sorting by use/service type (interior/exterior) is more critical than by gloss/sheen, which in turn is more critical than color. Mixing interior/exterior products could result in an incompatible mess or, at the very least, impact the short and long term performance characteristics.

28. I think the interior/exterior separation is a huge issue. Separating out interior and exterior paint would have a major impact on our operations, and I do not see a justification for it. I strongly oppose this proposed requirement.

29. Because mixing of interior and exterior paints produces a decent quality product (if processed effectively), perhaps an interior grade, exterior grade, and int/ext grade should be considered.

30. Interior and exterior may be separated; current market conditions of recycled does not necessarily justify greater classification of interior versus exterior. Plus, the level of effort needed for that specific classification would be a burden on production.

31. [Commenter] has been processing and marketing "100% recycled content" paint for over 15 years. We produce the type of paint the client is requesting. If they request interior only paint than we do the source separation. If we know the customer needs paint for an exterior surface we can do that. But for the most part, the paint product is a combination of the 2 types of paint and we have never had an issue with any client to date**.** Please don't ask recyclers to separate out the types of paint. This will cause issues such as color consistency, storage space, volume restrictions, additional labor charges, inventory carrying charges etc. Simply state what the requirements are for the quality of the paint and let us meet those requirements without putting irrelevant stipulations on our operations process.

Response:

We hope that with further long-term performance testing we can validate the successful combination of paints specifically formulated as interior with paints specifically formulated as exterior. It is important to note that these paints are formulated differently than paints specifically formulated as interior/exterior dual purpose paints. Further long-term testing will need to be done to ensure long-term performance consistency across batches.

Dual-purpose un-sorted consolidated paints combining interior and exterior products have been sold for years and some have passed MPI performance tests for various categories. The public and stakeholder comments strongly supported products sold for dual use. Therefore the issue is long-term performance quality.

Although a recycled paint made from both interior and exterior virgin paints may pass interior and exterior performance tests, there may still be several concerns. Typically, interior and exterior paints are formulated using different resins and additives. They differ in their flexibility, permeability, hardness, scrub resistance, etc. which could make for problems in long-term durability. The accelerated weathering tests done on exterior paints only approximate real world conditions.

Another concern is the changes being made by virgin paint manufacturers to produce interior paints with very low VOCs. The VOCs in "house paints" (whether exterior or interior) are really there for two reasons: first, they help the latex "droplets" of resin coalesce into a smooth film. They do this by affecting the rate of water evaporation and the mobility of the polymer chains. Without a coalescent, a traditional latex resin would not form a smooth film. Also, glycols are added to lower the rate of water evaporation and prevent the resin from freezing. The glycols may also have some function in coalescent action. In order to remove these VOCs from coatings, resin manufacturers have developed new resins that can coalesce without a coalescent solvent which is done in different ways. One way is to formulate a resin (long chain polymer) with different regions, some "hard" regions and some "soft" regions. Other resins have incorporated an internal coalescent. These resins seem to work well for interior coatings, where temperature fluctuations and surface irregularities are minimized. But on rough exterior surfaces exposed to wide variations in temperature, they probably would be unacceptable. These resins are found in more and more interior paints and their market share is going to increase, causing more problems with blending.

Although these are potential reasons for poor performance in dual-purpose paints combining interior and exterior products, there are no data available at this time to support these claims.

Given the above arguments it was decided to remove the criterion mandating the sorting of paints by use type, sheen/gloss, and color categories so as to leave this up to the manufacturer. Performance confirmation testing by MPI, however, will be more frequent for consolidated paints that do not sort by interior and exterior until consistency of results is validated.

Proposed Deletion of Criterion:

"1.3.6 Usable paint shall be sorted by color (including white) and major color categories, and may also be sorted by sheen/gloss and by use-type (interior/exterior) before combination into production batches."

32. What is meant by fine wire mesh? Filtration/particulate size is defined in 1.3.8 so mesh size should also be stated here.

Response: Agreed, this needs to be specified, however a criterion to this effect is not necessary in this Standard.

Propose Deletion of Criterion: "1.3.7. Paints shall be filtered through a fine wire mesh screen before combination into production batches to ensure the removal of large particulate matter."

Large particulate matter and foreign debris will be identified in earlier protocols and will be rejected.

33. This clause should require a level of filtration sufficient to meet the MPI requirements for fineness of grind. That way it can vary as requirements dictate.

Response: We need specific numbers here to be an auditable criterion so we need to make sure that the size we choose will be adequate to address the issue.

34. Why? [filter with a 300-micron filter] Intent is provided in 1.3.7 so intent should also be provided here

35. 250 micron filter is the industry standard for high quality rcp [recycled paint] products

36. The intention of this is unclear. If the purpose is to demand filtering during the sorting process, we offer this edit- " Sorted, preprocessed paint shall be filtered..." However if the intent is that finished paint be filtered, this statement is misplaced.

Response: 300 micron filter is the average filter size that was indicated by our stakeholders and has worked thus far in filtering products that pass fineness of grind tests. This is just the maximum limit. We will modify criterion to the following to clarify:

Propose Change to Criterion: 1.3.8 Prior to canning paint shall be filtered through a 300-micron or finer filter before final packaging.

1.4 Product-Specific Performance Requirements

37. This clause should have the added requirement that continued listing in the MPI APL is a requirement of approval under the recycled standard. That way if the manufacturer subsequently cannot maintain an MPI approval there is no question that they will also lose their certification under the recycled standard.

38. Please see the text below from the ANSI Essential Requirements: Due Process Requirements for American National Standards, January 2005 - 3.2 Use of Commercial Terms and Conditions. Section 1.4.1 of the Paint Standard appears to be in violation of this provision as the standard is requiring demonstration that the product being evaluated appears on the MPI Approved Products List. The criteria should be changed to allow the paint manufacturer to demonstrate conformance with the MPI standard (or equivalent as that is needed to meet the ANSI commercial terms and conditions provision).

> ***"3.2 Commercial terms and conditions***
> *Provisions involving business relations between buyer and seller such as guarantees, warranties, and other commercial terms and conditions shall not be included in an American National Standard. Generally, it is not acceptable to include proper names or trademarks of specific companies or organizations in the text of a standard or in an annex (or the equivalent). It is not acceptable to include manufacturer lists, service provider lists, or similar material in the text of a standard or in an annex (or*

the equivalent). Where a sole source exists for essential equipment, materials or services necessary to determine compliance with the standard, it is permissible to supply the name and address of the source in a footnote or informative annex as long as the words "or the equivalent" are added to the reference. In connection with standards that relate to the determination of whether products or services conform to one or more standards, the process or criteria for determining conformity can be standardized as long as the description of the process or criteria is limited to technical and engineering concerns and does not include what would otherwise be a commercial term or proper name."

Response: Within the standard-setting community the practice is to reference compliance to a particular standard, but not certification by a particular organization, therefore we propose a modification to the criterion. The intent is not to circumvent the MPI listing process; it is simply to use appropriate standard terminology. A similar reference to the MPI performance specifications is contained in the Canadian Environmental Choice Program (ECP) environmental standard for recycled latex paint. See proposed changes to the criterion below:

In addition, certified product manufactures are required to notify Green Seal of any change in status of their certified product that would affect compliance with the Green Seal environmental standard. See explanation regarding testing frequency. Re-evaluation via Green Seal's Compliance Monitoring program must be done annually in order to maintain Green Seal Certification.

39. Requiring that the product being evaluated appear in MPI's approved product list. Comment- this raises a lot of questions about how MPI will approve recycled paint products.

40. To get recycled paint approved for a particular MPI Detailed Performance Standard, will submission of a single sample of a single batch suffice? If not, then what will be required? On the one hand it seems reasonable to test several batches in order to prove that the product consistently meets the standards. However if each sample would require paying the full fee to MPI, then this would be prohibitive.

41. What is the definition of a product? We separate paint into 16 different colors- is each considered a separate product, or is our consolidated paint a single product regardless of color?

42. Can a single product be certified for both interior and exterior use?

43. What if our product is shown to meet the standards of MPI#44 (interior, gloss level 2), but sometimes the gloss level varies and therefore should fall under MPI#53 (interior, gloss level 1)? Since #44 is equivalent to or more restrictive than #53 in every requirement, can we just test the gloss level of a batch, then designate which one it falls under?

44. Currently [commenter] is producing over 500 separate batches per year of consolidated paint (300 gallons per batch), in 16 different colors. We are moving to making most colors in 1000-gallon batches, which should reduce our annual batches to under 200 each year. What would work well for us would be to have all of the paint we produce approved for #10 for

exterior use, as well as either #44 or #53 for interior use, depending on the gloss level of the specific batch.

45. Some clarification of these issues, in a manner that will be reasonable for consolidated paint production, is critical for the proposed standard.

46. In particular, performance standards (Section 1.4) should be developed that are workable and not cost-prohibitive for governments involved in consolidating paint. There needs to be flexibility in matters such as what defines a product line and how much sampling is sufficient to ensure the standards are being met. Price is a very important driver in the market where consolidated paint competes so the cost of testing could have a significant impact.

Response: MPI will codify their requirements for performance testing and monitoring before this Standard is issued and make them transparent.

47. Please make reference that the MPI documentation must be provided to the certifying Green Seal agent. Current verbiage does not make this clear

Response: That is implied and necessary for Green Seal's annual auditing and initial product evaluation.

48 This is a key area, and was my understanding as the main purpose of the standard. California has legislation that requires that State agencies purchase recycled content paint "when fitness and quality are equal". Once this is legitimately demonstrated, we may be able to take further actions to bring about purchases of recycled content paint on a significant number of State facilities. The Standard vaguely references MPI standards, but it is unclear what this entails or what level of this standard is required to be met (assuming that there is more than one level of performance testing included in the MPI standards.) I did not even see a link to the MPI standards in the document. I need more assurance that this meets the same performance criteria of virgin paint.

Response: This criterion has been revised to be clearer. Every product has to meet MPI detailed performance depending on the intended use and gloss level. There are many levels of MPI performance testing and it is up to the manufacturer to determine which MPI performance category is the best fit for their product(s).

Proposed Change to Criterion: 1.4.1 Documentation shall be provided demonstrating that the product meets the applicable Master Painters Institute (MPI) detailed performance standard for the appropriate MPI category.

The following footnote has been added:

[1] MPI detailed performance standards which outline the applicable performance requirements and testing frequencies may be obtained from the Master Painters Institute at http://www.paintinfo.com./

49. Due to the fact that differing quality control tests may be required for different MPI product categories, I feel this information would be most appropriate as a part of the MPI standard.

Response: We are trying to address the issue of consistency and would like to have the products more consistent before they go to MPI for testing, therefore reducing any chance of inconsistent results and failing MPI performance testing, and ultimately not meeting the Green Seal Standard. We have solicited input to identify simple tests that can be done in-house by manufacturers to improve consistency for all finished products. See proposed new Criterion below.

50. This should include regular testing for both environmental and performance. purposes. Environmental: One sample tested for every 100,000 gallons produced. Use qualified analytical lab. Test for all metals on the restricted compound list found in Green Seal's GS11 standard. Run EPA method 8260 and 8270 tests for volatile and semi-volatile organic compounds, including TICs, and test for formaldehyde. Allow up to 150 ppm of any compound on the GS11 restricted list. See 1.5

Performance: In-house test every batch for viscosity and gloss, if either falls outside the levels required by the relevant MPI standard, either adjustments made until the standard met, or that batch cannot be labeled as certified. Testing of a sample from every 100,000 gallons produced, by MPI for the relevant MPI standard

Response: This is the section on performance; environmental testing is appropriate in section 1.5. See proposed new criterion below.

51. As a minimum the paint should have QC criteria associated with process control as well as performance and must differentiate between interior and exterior coatings. Criteria should include resistance to marring, burnishing, biological growth, staining, and alkali (cleansers) - these are especially relevant to interior coatings. There should also be some values associated with hiding power (opacity), adhesion, reflectance, gloss, scrubbability / cleanability, dry time, consistency (viscosity), flexibility, and perhaps even applicability as well as resistance to dirt pickup for exterior coatings. Actual values will depend on the intended service (interior / exterior) and level of performance and gloss, i.e. MPI 52 Conventional latex, Level 3 (eggshell) / MPI 139 High Performance Architectural Latex, Level 3 (eggshell). As a minimum the target should be the MPI Conventional latex coatings.

52. [Commenter] has reviewed our quality control process for latex paint and we typically test (criteria varies with the specific product) - weight per gallon to ensure proper filling, a fineness of grind on a Hegman scale, a Brookfield viscosity test, sheen test, a color test, a pH determination for corrosion and viscosity control, a foaming test by actual rolling of product, a flocculation check by paint rub up testing, a tint strength for tinted products. However the rest of the document states that the MPI standards will be used here. Is this duplication?

Response: Many of these testing methods are addressed my MPI performance testing. This section is dealing with testing that can be done in-house by the manufacturer, relatively simply, to improve the consistency of the finished products.

Proposed New Criterion: Every batch shall be tested by the manufacturer, at a minimum, for pH, viscosity, fineness of grind, and gloss.

1.5 Product-Specific Health and Environmental Requirements

53. 1.5.1.1 and 1.5.1.2 [definitions of consolidated and reprocessed paints] are already addressed in the definitions section. No need for a repeat.

    Response: Agreed, there is no need to repeat the definitions of consolidated and reprocessed paints as they were already defined in the "definition" section of this Standard.

    Propose Delete Section 1.5.1 "Post-Consumer Material" and 1.5.1.1 [definition of consolidated paints] and 1.5.1.2 definition of reprocessed paint].

54. Should be revised as follows: "VOC content shall be calculated excluding water and exempt solvent, and with no adjustment for VOC from tinting colorant previously added."

55. Method 24 is unreliable at lower levels. Suggest other options such as labels, MSDS, etc.. Is there a better practical method?

56. I would recommend deletion of the other sentence, because the phrase "less water and less exempt solvents" is more commonly understood in the industry and regulatory community, and it would account for previously added tinting.

57. Calculations of VOC levels typically do not include VOCs from solvents contained in colorants. Since recycled paints may be highly colored. They may contain 50 g/l or more of VOC resulting from the colorants. For highly colored paints, the VOC maximum will be 250 g/L. For whites and pastels, the VOC maximum will be 200 g/L. VOC measurement shall performed using EPA Reference Test Method 24.

58. I would recommend that this section read:

    The manufacturer shall demonstrate that the VOC level of the product does not exceed ~~200g/l~~ 250 g/l, less water and less exempt solvents, as determined by the U.S. Environmental Protection Agency (EPA) Reference Test Method 24.

    ~~The calculation of VOC shall not include water but shall include tinting color previously added.~~

    I would recommend the 250 g/l limit over the 200 g/l limit for the following reasons:

    - Currently, high-gloss non-flat paints are allowed a limit of 250 g/l in over half of California. (This is also the case in Eastern States that adopted California rules recently.) The 250 g/l limit would allow these paints to be recycled.
    - All flat and non-flat paints in California were allowed to be up to 250 g/l through 2002, which I assume is still recent enough to make it into the feed stream of today's recycled paint. The 250 g/l limit would allow these paints to be recycled.

California architectural coating rules have a 250 g/l VOC limit for recycled paint. The 250 g/l limit would be consistent with this limit.

59. The exclusion of color tints to the total VOC limits does not make any sense. The important issue here is the total amount of VOCs that occupants are exposed to when the ready to use paint is applied. To exclude the contribution of VOCs from colorants, when they are added to the final product is providing wrong information to the consumer. I suggest that any VOC amount from recommended tinting or thinning procedures outside the primary production process be included in the VOC calculation

Response: For virgin paints, colorants added at the point of sale are never included in VOC calculations.

60. My concern is straightforward, i.e. that we avoid a situation in the marketplace where those most likely to purchase RCP, on the basis of the recycled-content attribute, might avoid doing so due to concerns that the paint is not lower VOC paint. This dilemma is reflected in the LEED IAQ and recycled-content credits, which would be mutually exclusive for RCP under the Draft Standard in its current form. Of course any choice of building materials involves evaluating trade-offs, and the Life Cycle Assessment field continues to show the complexity of trying to make apples-to-apples comparisons to inform those choices. Also, particularly in light of [other commenter] comments regarding the potential range of increased VOC content of RCP as a result of point-of-sale tinting, there doesn't seem to be a way around the issue that it may simply not be feasible as a part of this standard to require RCP manufacturers to meet, for example, the GS-11 requirement of <50 g/L for interior flats*?*

Response: This is likely unattainable for most consolidated recycled paints, however it is possible for some reprocessed paints to attain these levels. The proposed VOC level is a maximum level and manufacturers that meet this Standard and have verified lower VOCs (than 250 g/l) may sell their product as such.

61. Requiring a maximum level of 200 g/L VOCs. Comment- this should be changed to 250 g/L. Some samples of [commenter] reprocessed paint exceed 200 g/L, but all are under 250 g/l. This complies with EPA air quality rules. In addition, it should be noted that recycled paint is at a disadvantage, as VOC limits in EPA rules and elsewhere exclude the VOCs from tints added at the point of sale, whereas recycled paint is made from leftover paint that is already tinted. As mentioned in the environmental evaluation, tints can add an estimated 8 to 70 g/L to the paint. In particular darker colors will have VOC levels increased on the higher end of that scale.

62. I'm particularly glad we agree that the proposed VOC limit should be raised to 250 g/L -- the limit under which most recyclable latex paint was manufactured. I am especially concerned that the 200 g/L limit would narrow the options available to us as manufacturers, preventing us from recycling semi-gloss, gloss, and high-gloss latex enamels as such, since most of those products have VOC contents between 200 and 250. Of course, we can always blend them with lower-VOC flat paints (VOC content is generally proportional to resin content, which varies directly with gloss level), but that would reduce us to making only flat and

low-sheen recycled paint -- "commodity" type products -- rather than the full line needed to maximize marketability.

63. Subsection 1.5.2.1 requires the manufacturer to demonstrate that the VOC content of recycled latex paint "does not exceed 200 g/L as determined" by EPA Method 24. This limitation would unnecessarily restrict the range of recycling options available to the manufacturer, and thereby virtually guarantee the failure of the standard to achieve its essential purpose: to maximize recycling of latex paint. We strongly concur with the other commentators who have recommended a VOC limit of 250 g/L, if any limit is to be included in the standard.

No limit, in fact, is needed for recycled latex paint because no opportunity for VOC emission reduction exists. The latex paints to be recycled were manufactured in accordance with limits in effect at the time of manufacture; those products already contain some amount of VOC, and that amount will be released (to whatever extent VOC is released from latex paint) whenever the paint is recycled and used. As a practical matter, virtually all latex paints manufactured during the past 25 years meet a VOC content limit of 250 g/L. Using that as the limit for recycled paint would serve to ensure that no excess VOC is added during the recycling process, although even that seems unlikely. Latex paints are formulated to contain an optimum amount of VOC, which works with the latex resin in the paint to form dry, solid, durable films that adhere well to substrates. Too much VOC, or too little, compromises paint performance.

The pairing of VOC and resin explains why different kinds of paint have different VOC levels, and why a limit of 200 g/L would be too restrictive. Latex paints come in a range of finish types, from flat (or "matte") finish paints to eggshell, satin, semi-gloss, gloss, and high gloss (very shiny, glass-like finishes). In general, the shinier the paint, the more resin it contains, and the more VOC it requires for proper film-formation. The California Air Resources Board's most recent completed survey of architectural coatings verifies this. The survey, conducted in 2001 for coatings distributed in 2000, collected volume and composition data on four types of general-purpose latex topcoats (among many other coating types), and calculated their volume-weighted average VOC contents, as shown in the table below:

Flat Coatings:	96 g/L
Nonflat – Low Gloss:	128 g/L
Nonflat – Medium Gloss:	166 g/L
Nonflat – High Gloss:	203 g/L

VOC content data was provided by manufacturers for products as formulated, exclusive of tinting colorant added to produce custom colors. As the proposed Green Seal standard notes in Subsection 2.4.2, "colorants can account for 8 to 70 g/L of VOCs in consolidated paints." Thus, medium and high gloss latex paints could easily have average VOC contents approaching 250 g/L, when measured by EPA Method 24, which cannot distinguish the amount of VOC added with colorant. Also, information on the age of recyclable latex paints collected at household waste roundups seems to indicate that the average age is about six or seven years old, which makes the ARB survey data a good fit for paints being collected now.

The only practical effect of a VOC limit lower than 250 g/L would be to require that higher-VOC non-flat paints must be mixed with lower-VOC flat paints to produce a lower average VOC content. This would produce a limited finish range, tending to make recycled paint into a uniform commodity-type product that is less marketable than a full line of finishes. To preserve the widest possible range of recycling options, and maximize marketability, the 250 g/L limit would allow recycling of medium and high gloss paints as such, without excessive and costly testing to monitor compliance with a more restrictive limit (a problem that is compounded by the inherent unreliability of EPA Method 24 when measuring the VOC content of waterborne coatings).

Currently, a limit of 250 g/L for recycled paint is in place in the National Emissions Standards for Architectural Coatings, numerous California local district rules based on the ARB Suggested Control Measure for Architectural Coatings, Rule 1113 of California's South Coast Air Quality Management District, and various Northeast state regulations based on the ARB Suggested Control Measure. Moreover, virgin latex paints with VOC contents up to 250 g/L (in certain coatings categories) continue to be manufactured, sold, and used under each of these regulations, and should be allowed to be recycled as coatings of the same category.

64. The limit should be changed to 250 g/l to reflect the legacy nature of the recycled paint.

65. I believe that a VOC level of 250g/L should be the standard. Virtually all paints within our collection programs will be able to meet this criterion, as this is how they were manufactured over the last 20 years. I don't feel that recycled content paint should have a stiffer VOC limit than paints people are using from their basements as of today.

66. To be consistent with the Environmental Protection Agency (EPA), the California Air Resources Board (CARB) and the Ozone Transport Commission (OTC) –[commenter] suggests that Green Seal adopt a 250 g/l VOC limit for recycled coatings as opposed to the proposed 200 g/l VOC limit. The 200 g/l limit may not be achievable since older latex paints – especially non-flats may be greater than 200 g/l. Further the 200 g/l VOC limit may be difficult to achieve in states whose that have the current AIM National Rule VOC limits. NPCA is concerned that the 200 g/l limit would narrow the options available to recycled paint manufacturers, preventing them from recycling semi-gloss, gloss, and high-gloss latex enamels as such, since most of those products have VOC contents between 200 and 250. And while recycled paint producers could conceivably blend non flats with lower-VOC flat paints (VOC content is generally proportional to resin content, which varies directly with gloss level), that could force manufacturers to make only flat and low-sheen "commodity" type recycled latex paint products - rather than the full line needed to maximize marketability.

67. With new material, VOC's are tested / calculated for untinted / white product(s). Tints/colorants are high in VOC's and HAP'S. Because of this, darker hues can have very high VOC content and any tinting will add some VOC's/HAP's so testing to include previously added tints will tend to provide higher values than new material. For this program to be successful in attainment areas such as SCAQMD some allowances must be made for this difference. Of course this will have to be worked out between EPA and the

attainment areas. SCAQMD (South Coast Air Quality Management District - Southern Calif. area) Rule 1113 requirement will be 100 g/L effective 01 July 2006. At 200 g/L the recycled product will be out of date before anyone produces anything. Suggest providing two levels / types; one at 200 g/L and one at 100 g/L or less. In time there will be the lower VOC products available in the SCAQMD area that could go into this program and hence be able to meet the second requirement.

68. VOC limit should be 200 g/l due to use of various gloss levels.

69. Why would Green Seal not require the same VOC levels specified in other GS standards, which have also been adopted by LEED- GS-11 and GS03?

70. The VOC level of the product not to exceed 200 g/l is set too high. In Green Seal's document on Architectural Paints, the maximum acceptable VOC level for interior flat and non-flat paints were set at 50 and 150 g/l, respectively; for exterior, 100 and 200 g/l, respectively. This was in December 1999. Recycled paints should not have VOC levels set higher than virgin paints.
http://www.dgs.state.pa.us/dgs/lib/dgs/procurement/qa_lab/green/apaints.pdf
The 200 g/l is also higher than the level set by South Coast AQMD Rule 1113, where non-flat high gloss coatings have an interim VOC limit of 150 g/l effective July 1, 2006, and a final limit of 50 g/l effective on July 1, 2007. http://www.aqmd.gov/hb/2006/060126a.html
The Australian Ecolabel Program on Architectural and Protective Coatings set VOC limits between 14 - 75 g/l. For recycled paints the VOC level must not exceed 100 g/l.
http://www.aela.org.au/publications/AELA%2023-2005%20-%20Architectural%20Coatings.pdf The US EPA Region 10's "Building a Green Future Construction Specifications" requires acceptable primer products with total VOC below 50 g/l, and acceptable paint products with a total VOC below 1 g/l.
http://yosemite.epa.gov/r10/omp.nsf/webpage/Building+A+Green+Future+Construction+Specifications?OpenDocument
I suggest a total VOC level of the product not to exceed 100 g/l, with a goal towards 50 g/l.

71. Much has already been commented on the VOC limits, so I will limit my comments towards considering relaxing the VOC limits as currently stated - not to conflict with Federal EPA standards, but perhaps to consider allowing an exemption towards counting any VOCs at all on existing paint (they have already been counted once) towards air pollution control limits. I realize this does not address the actual indoor air quality concerns over VOCs. The comments already supplied by [above commenter] are worthy of serious consideration

72. I concur that it would be incorrect to base this green seal standard on the GSA standard A-A-3185, which is inconsistent with the EPA AIM rule.

I believe, as a result of my research, that we need to respond to the preference people express for low VOC paint over recycled paint, that the AIM rule (40 CFR 59) and the California South Coast Air Quality District Rule 1113 both allow a higher level of VOCs for recycled paint.

The California rule is more restrictive and thus a 250 g/l limit may be preferable for a green seal standard. However, recycled paint with higher VOCs can still be manufactured under

the EPA rules (40 CFR 59), which recalculate the VOCs based on the percent-recycled content. Under these rules, consolidated paint with 95 % recycled content has a recalculated VOC rate of 5% of the actual VOCs; reprocessed paint with 50% recycled content would have a recalculated VOC rate of 50% of actual VOCs. I don't know why the LEED standard, the Green Seal GS - 11 and the South Coast rules do not follow the same recalculation formula.

Response: This could give consumers a false sense of actual product VOC levels, particularly a concern if applied indoors.

73. VOC level for Consolidated paint should not exceed 250g/l while Reprocessed paint should not exceed 150g/l

74. From a user's standpoint, as a state agency that designs, builds, owns and operates millions of square feet of buildings, we would like a standard that would give us the confidence to be used indoors with Lower VOC levels. The current levels would likely only be used on exterior surfaces. We also would like to see California's Section 01350 incorporated into a paint standard to assure IAQ, but understand limitations from the types of paints returned or recycled.

75. Current paint VOC limits are:
Flat - !00 g/l (SCAQMD rule 1113) and 50 g/l USGBC/LEED)
Non-Flat - 50 g/l (SCAQMD rule 1113 effective 7/1/06), 150 g/l (SCAQMD rule 1113 effective until 7/1/06 and USGBC/LEED)
Recycled - 250 g/l (SCAQMD rule 1113).

This proposed GS standard proposes yet another limit of 200 g/l. Rather than creating yet another level/threshold, perhaps the standard can be modified to accommodate multiple levels with the claim/label tied to specific VOC levels, e.g. product shall conform to GS-XX/50 or GS-XX/100.

Additionally, using these VOC measurements continues to be a very crude and overly simplistic consideration regarding the potential impact of these products in the indoor environment. We need to stop perpetuating this misuse. There is in place and use a very good protocol designed to address in part long term emissions from products such as paint - widely referred to as CA 1350 and described in detail in CA/DHS/EHLB/R-174. Here is suggested language that could be included in the GS standard to address the long-term emission issue: *"The manufacturer shall demonstrate that the maximum concentration for any chemical emitted at 96 hours in emissions tests (following a ten-day conditioning period), shall not result in a modeled indoor air concentration greater than ½ the chronic reference exposure level (CREL) established by California Office of Environmental Health Hazard Assessment (OEHHA), except formaldehyde and acetaldehyde which shall not exceed ½ the OEHHA indoor chronic reference exposure level (REL). Testing shall be in accordance with CA/DHS/EHLB/R-174 - Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."*

Response: The measure of VOC by content and g/l is the current industry practice for virgin paint and the most suitable in today's marketplace for comparison with recycled paint.

Until another method is more universally accepted, we would prefer to use the one that is most recognized.

Overall Response:

1. Lower levels would be attainable for light colored flat recycled materials. Most of the paints coming in now are a wide range of sheens that have been previously tinted and some of which may be low VOC but some may be "traditional" paints that barely comply with the Federal EPA limit of 250g/l. Existing regulations for Virgin paints limit VOCs to 250 g/l. EPA, OTC, and CARB regulations limit virgin paints to 250g/l. The proposed VOC limit realistically accommodates the nature of the paint coming in as feedstock.

2. Lower VOC limits raised by comments regarding recycled paints are achievable but they are made from such a variety of products, some of which may be higher in gloss, color, and VOCs, and therefore it may be difficult.

3. Test Method: We recognize the inherent uncertainly of determining low VOC levels for latex paint with method 24. Methods are currently being developed to effectively test for these lower levels and when these methods are more widely accepted, they will likely be incorporated into this and other environmental standards.

4. "Exempt solvents" are implied in the test method in reference to the calculation of VOC level.

5. It is also important to note that this is a National Standard and the criteria must be most applicable to the widest possible consumer audience, not just one State or portion thereof, as that would restrict product applicability elsewhere.

6. It is clear from public comment that the VOC level limit should be 250 g/l to realistically accommodate the product in question. This will also fall within many federal and state VOC restrictions for virgin paints. Products that have a verified lower VOC content may sell it as such as 250 g/l is the maximum allowed.

Proposed Change to Criterion:

1.5.2.1 The manufacturer shall demonstrate that the finished products contain a maximum VOC level of 250g/l as determined by the U.S. Environmental Protection Agency (EPA) Reference Test Method 24.

The calculation of VOC level shall not include water but shall include tinting color previously added.

Information shall be provided to justify the basis used to select the batch samples for VOC level testing. The selection of test samples shall reflect typical batch sizes, variation in recycled paint input, and total number of batches produced.

76. 100,000 gal or annually seem excessive to me. Half that would be more appropriate.

77. What are the sampling protocols? If a "batch" size is 10,000 gals, would a sample be taken and consolidated with other batches to get a "total" / "average" or would each batch be tested separately? What is the extent of testing?

78. We agree with the above recommendations [1.5.2.1 and 1.5.2.2], although we would have no problem with a VOC level of 250.

79. The testing requirements seem quite infrequent, especially for a low volume manufacturer

80. Additionally, it would be good, but not necessary, to have some more specific sample-testing frequency protocols outlined in the Final Standard. For example, the Draft Standard mentioned testing for VOCs every 100,000 gallons. It wasn't clear to me if this same testing frequency will be used to randomly test for performance and other constituent levels.

81. The VOC testing protocol should be provide a statistically representative sampling which represents the frequency and variation of the recycled feed stock

82. Testing every 100,000 is totally inappropriate unless that represents a single lot/batch of product. Given the widely varying inputs possible for both consolidated and reprocessed paints, some more rational/extensive sampling protocol is required. As a minimum, grab sample testing on a least a monthly basis should be required. EPA Test Method 24 is on the whole a very inexpensive test to run. A quick [internet] search found that RTI labs charges $85 for the volatile test (http://www.rti.org/page.cfm?nav=64). Even with the other test components of water and density, the total comes to less than $400. That fee does not seem unreasonable on a monthly basis to provide some level of measured quality control assurance.

Proposed Deletion/Incorporation of Criterion:

We propose *deleting:* "VOC levels shall be tested every 100,000 gallons that is consolidated or reprocessed. If less than 100,000 gallons are produced in a year, testing shall be done annually as part of the Green Seal monitoring program." and *replacing* it with: " Information shall be provided to justify the basis used to select the batch samples for VOC level testing. The selection of test samples shall reflect typical batch sizes, variation in recycled paint input, and total number of batches product" which will be *added* to the prior VOC limit Criterion seen above.

This would give the manufacturers the flexibility to justify testing methods based on the variability of their product line and processes.

83. Regarding limits on aromatic content. Question- what is a "materials audit"? This is not defined in the proposed standard. Is it an audit of virgin products added during production?

Response: A materials audit encompasses a complete review of the product formula during the product evaluation.

84. 1.5.3./1.5.4 Remove these sections.(see 1.5.4 explanation)

85. Aromatic and Lead Compounds – [commenter] believes that recycled paint should be held to the same standards limiting lead compound use that apply to new (virgin) latex paint. We also believe that a requirement for periodic testing of recycled paint for lead compounds provides a useful check of the efficacy of the collection and sorting requirements in Section 1.3. Similar considerations should be developed for aromatic compounds and other chemical-specific limitations (see Section 1.5.4) that are included in the final standard.

86. See 1.5.2.1 - does not take into consideration the impact of tinting on aromatic compounds content. Also, as written, this requirement cannot be met. As written it states that, for every 100 g of aromatic compounds provided by the virgin products, the recycled products are to contain no more than 1 gm. You cannot have less in a recycled product than what you start with. Suggest deleting this part.

87. Should be held to the same standard as GS-11 for virgin paints

88. What test methods are recommended? Please define exactly which C chains must be tested for - the definition for aromatic compounds containing one or more 6-carbon benzene rings is not specific in light of the 1.0% by weight restriction.

Response: For these chemical component requirements, recycled paint is being treated just like virgin paint – these listed materials are not to be intentionally added to the product formulations. We are requiring this for the portion of the product over which the manufacturer has full control to ensure that these components are not added.

89. 1.5.3./1.5.4 Remove these sections.
The list included in the Chemical Component Restrictions includes substances that are not currently banned from virgin paint. All of the chemicals on the list can be legally used in modern consumer paint when they are accompanied with appropriate label and MSDS warnings. The selection of the correct label and MSDS depends on identification, quantification, evaluation and communication of chemical hazards. A specific example is lead. Current US regulations restrict the use to a maximum level of 0.06% on the dried paint film. This is in excess of what is allowed in this draft Green Seal standard. Only by assuring that the full complement of reprocessed or consolidated paints meet health, safety and regulatory compliance requirements can user's safety and environmental performance be guaranteed.

Response: We are developing an environmental leadership standard; therefore we have criteria above and beyond regulatory restrictions.

90. Delete - unnecessary / burdensome. The products have already been manufactured / already exist. The alternative is that the recycler gets propriety information (that can change batch to batch) from the manufacturer or undergo extensive testing on the starting materials. Another alternative is for the consumer to continue letting the left over product dry out and dispose of it in a landfill. There are many regulations in place that restrict the use / application of this laundry list of "baddies". This list is also simply lifted from Green Seals GS-11 and not reviewed for applicability to recycling of paint products.

91. Several statements refer to the ability of RCP manufacturers to "*demonstrate*" *negative requirements*, such as to demonstrate that certain materials were not used in the original manufacture of the paints being recycled, and that paint cans (I assume those used for the packaging of the RCP?) are not fabricated using lead. We believe the standard should be more specific in how we can demonstrate that something is not present or done. As RCP manufacturers we can read a label but everything on the list may not appear on the label, and it would be virtually impossible to contact and obtain the formulas of every paint used to make our product, particularly due to trade secrets and the age of the products.

92. Should be held to the same standard as GS-11 for virgin paints.

93. You may want to specify how the demonstration is to be done

94. Recyclers can read labels on paint cans and we can obtain MSDS sheets for some additional clues but there are few virgin paint manufacturers that are going to release the exact and complete ingredient listing on all of their paint products formulated over the last 25 years. (Not even Coca-Cola will release their ingredient listing and people consume their product). So we may need to give some thought to this issue unless the manufacturers will reveal this information to the recyclers.

    Response: For all product evaluations, Green Seal requires full disclosure of formulations, including trade secret and proprietary materials. The disclosure is typically provided under a confidentiality agreement.

95. The proposed Green Seal Standard does not address the fact that the hazardous material composition of the recycled paint product must somehow be considered in the development of hazard communication information, including hazard and precautionary labels and Materials Safety Data Sheets (MSDS). While the operational requirements for development of recycled product (see Section 1.3) provides for competent visible and physical inspection of the original (consumer provided) containers, the proposed standard does not cover the development of appropriate hazard and precautionary warnings in accordance with the Federal Hazardous Substances Act (FHSA), and MSDS in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS, or 29 CFR 1910.1200). While the latter standard requires chemical products to have all hazardous components above 1.0% by weight (and all carcinogens above 0.1% by weight) identified on the Materials Safety Data Sheet (MSDS) and an appropriate warning label that reflects the hazards of the hazardous chemical composition, such detail cannot be achieved using the operational criteria for the proposed standard. While a great deal of compositional certainty (and inherent absence of hazardous properties) can be obtained from close inspection of the required original containers, there is still a need for the proposed standard to reflect the compositional *uncertainty*. To this end we suggest that an appropriate disclaimer be included in the standard for use in producing a required MSDS for recycled paint, as follows:

    "NOTE: This product consists primarily of post-consumer recyclable latex paints. Composition of finished product may vary with feedstocks."

Our point here is further amplified by the fact that the proposed standard accepts compositional uncertainty for the consolidated paint content (95% post-consumer material) and reprocessed paint content (50% post consumer material), ***but extends additional restrictive requirements on any new (virgin) material.*** This inconsistent treatment of recycled and new (virgin) content should not be in the final standard.

Again, we must stress that new (virgin) paints are formulated in such a manner to have well-characterized composition and clear identification of hazardous components. Our concern is not for the beneficial recovery and reuse of these new (virgin) paints at the time of their disposal, but for the potential contamination (i.e. intentional consumer adulteration of leftover paint offered for resource recovery or co-disposal with other household hazardous wastes including thinners, pesticides among others) that can occur as a result of the product's use and recovery. While the proposed standard seeks to address this matter by operational constraints, we believe it is important to require conformance to all hazard communication requirements (FHSA and OSHA) and include an acknowledgement of the variable nature of the feedstock used.

96. Please specify how 'are not used' is to be determined. MSDS sheets accompanying the virgin materials or additives are only required to report the existence of these materials if present at or above 0.1%. Is that an acceptable threshold for 'are not used', or is some additional test method/verification required. If yes, please specify.

97. This list should include the followings: aqueous ammonia, crystalline silica, arsenic, triphenyl tins (TPT), tributyl tins (TBT), and various glycol ethers.

Response: Although it is understood that there is variability in the product feedstock and using post-consumer material of any type and that they bring some level of uncertainty, we agree that more effective hazards communication to the consumer would be a good idea (See proposed new Criteria and section heading below).

We are holding the virgin component of the product to the same environmental standard as virgin paints. Consumers purchasing copy paper with 50% post-consumer fiber, for example, have no idea whether that fiber was bleached with elemental chlorine or came from endangered forests. However, the marketplace understands the benefits of using post-consumer content even though there may have been upstream impacts from the material's "first life." With stringent sorting and screening protocols the post-consumer paint feedstock that is not suitable for use will be rejected from the manufacturing product stream. We are requiring these specific component restrictions for the portion of the product over which the manufacturer has control to ensure that these components are not intentionally added.

As noted in the Environmental Evaluation, the available research on recycled paint did not indicate the presence of hazardous materials in the incoming feedstock. The purpose of this criterion is prevent their intentional introduction as virgin additives into reprocessed consolidated recycled paints.

Although MSDS sheets are a regulatory requirement and the variability of post-consumer material is understood by many, it is agreed that for proper hazards communication that the following criterion be added in a revised label section:

Proposed Modification of the Label Section as well as New Criteria:

Label and Material Safety Data Sheets (MSDSs)

1. The packaging shall be accompanied by a brief statement discouraging improper disposal and encouraging consultation with local authorities for disposal requirements or recycling opportunities.

2. Unless otherwise approved in writing by Green Seal, the MSDS shall include the following statement:

> "This product consists primarily of post-consumer recyclable latex paints. Feedstock may vary."

3. Unless otherwise approved in writing by Green Seal, the label shall include the following statement:

> "This product consists primarily of post-consumer recyclable latex paints."

4. The manufacturer shall provide copies of relevant labels and MSDSs, which shall be prepared properly according to all applicable federal, state, and local regulations.

1.6 Product Packaging

98. You may want to specify how the demonstration is to be done.

99. Eliminate this provision. Paint cans for virgin paint are not restricted metal content.

100. What is meant by the phrase 'not fabricated with lead'. Does this mean that lead is not intentionally introduced at any point along the production life cycle (but still may in the can/component at some level? Does it mean that there can be no lead in the product or component, regardless of whether was applied/used intentionally? Does it have some other meaning? I believe there is some residual lead issue associate with tin-plating operations on steel, but perhaps this is no longer an issue.

Response: Solder to make the cans may still contain lead and could still be used. This criterion verifies this. Paints certified under GS-11 require this same validation.

101. These are not worded in a way that defines a requirement. Is it or isn't it?

Response: Agreed.

Proposed Change to Criterion: "Recyclable product containers shall be used where local recycling opportunities exist"

1.7 Certification Mark

102. Use of Certification Mark - 1.4.1 makes the listing on the MPI APL under the intended category a requirement prior to being evaluated for this standard. However, once on the MPI APL and designated as a recycled / reclaimed product why is this standard needed? Also, what are the consequences of losing the MPI listing: will they lose the Green Seal certification or will Green Seal continue to allow them to use their seal? For a product to be certified it must be with the understanding that it is to be under a continuous MPI listing.

Response: This is one of the purposes of eco-labeling to provide an environmental claim that is identifiable in the market place. Yes, if a criterion is not met in the Green Seal standard, such as performance, the product cannot be certified. This Criterion will be moved to an appendix and re-named.

103. *As stated in the previously listed ANSI section 3.2 regarding commercial terms of use,* "the process or criteria for determining conformity can be standardized as long as the description of the process or criteria is limited to technical and engineering concerns and does not include what would otherwise be a commercial term or proper name." *The specific stipulation of the Green Seal Certification Mark in 1.7.1, as well as the reference to requiring a license are in violation of this clause and therefore need to be removed. If possible, the process of determining conformity (e.g. certification) should be included in the standard, but it must be limited to technical and engineering processes, with references made to conformity assessment/certification bodies left as generic terms (e.g. independent third party).*

Response: We agree that this criterion is not appropriate in the main text of an environmental standard and will place it after the criteria, at the end, as an appendix.

Proposed Modification: *Change* **"1.7 Certification Mark"** *to*: **"Appendix**: **Labeling Requirements for Certification by Green Seal"**, which will appear at the end of the Standard along with the associated language but not labeled as a Criterion.

Whenever the certification mark appears on a package, the package shall contain a description of the basis for certification. The description shall be in a location, style, and typeface that are easily readable. Unless otherwise approved in writing by Green Seal, the description shall read as follows:

> (a) "This product meets Green Seal's environmental Standard for *Consolidated* recycled content latex paint based on its use of a minimum of 95% post-consumer material and product performance."
>
> (b) "This product meets Green Seal's environmental Standard for *Reprocessed* recycled-content latex paint based in its use of a minimum 50% by volume post-consumer material and product performance."

1.8 Label

104. One of the advantages of using latex paint is the easy clean up of brushes and rollers. Routinely the householders perform this task in a home sink using tap water. A more informative direction for users is "Place opened, empty containers in normal refuse for disposal. Contact your sanitation department or household hazardous waste coordinator for information concerning re-use, recycling or disposal of unused latex paint."

Response: There is so much variability in local disposal methods and agencies involved. This criterion allows for a range of responses and it allows flexibility by the manufacturer to craft their own regional-specific wording.

Proposed modification to Criterion, adding additional Criteria and modification of Section header:

See response under comment #97

105. I believe in most jurisdictions, surely in California VOC content must be included on paint labels.

106. This is in conflict with existing federal labeling regulations that require VOC labeling

107. If the specified VOC levels in the standard are adequate, then meeting the standard and saying so on the label should be enough. Printing specific VOC numbers on the label would be confusing to most consumers and for those who do understand them may lead to consumers trying to pick between two very acceptable products based on a meaningless differences in VOC numbers.

108. We would recommend revising Subsection 1.8.2 as follows: "When verified through the certification process, the VOC content shall be included, or a statement that "Maximum VOC content does not exceed 250 g/L."

109. [Commenter] suggests that the statement "When verified **t**hrough the certification process, the VOC levels shall be included" be modified or deleted since various Federal, State and local regulations require specific VOC labeling and the proposed statement contradicts many of the existing label constructs.

110. It is unclear how the standard would verify and certify compliance of recycled content paint products or manufacturers' products. This would add value and confidence in products certified to meet the standard.

Response: Because VOC labeling is required by law and any claim must be verified by Green Seal as part of a product evaluation and annual monitoring, we feel this criterion is unnecessary.

Propose Deletion of Criterion: "When verified by Green Seal, the VOC levels shall be included."

1.9 End-Of-Life Material Management

111. Help in financing this management besides local government—manufacturer's be responsible for part of the financial burden or reimburse local governments

112. We *recommend* that the statement "Latex paint can be dried by evaporation or the inclusion of saw dust, cat litter, or other non-toxic paint hardeners." Include a modifier that such actions may be considered "treatment" and disallowed in certain jurisdictions (California particularly).

    Response: This was not in the proposed criterion that went out for public comment. The proposed Criterion is: "Unused and unusable latex and non-latex paint shall be removed, utilized, and/or disposed of properly according to all applicable state, federal, and local regulations."

113. These are not worded in a way that defines a requirement. Is it or isn't it?

114. Remove this section. Location direction is not suitable for a criteria-based standard.

    Response: Location direction is applicable. The environmental impacts of transportation are noted in other environmental standards (e.g., LEED), and it is difficult to ensure that leftover paint sent to other countries would be subject to the same level of environmental, health, and safety regulations.

    Proposed Change to Criterion:. " Leftover paint from the consolidation or remanufacturing process shall be utilized locally and/or domestically where there are existing markets."

115. These are not worded in a way that defines a requirement. Is it or isn't it?

116. Please amend to "Manufacturer should recycle metal and plastic paint containers, pallets and packaging where there are existing markets." This version removes the ambiguous " Every effort shall be made to ".

    Proposed Change to Criterion: "Metal and plastic paint containers, pallets, and packaging shall be recycled where there are existing markets."

General Comments:

117. There also must be a requirement for batch numbering and retained batch samples.

    Response: This is already part of Green Seal annual audits and required.

118. I looked over the proposed spec and I have several concerns. We have structured our recycled program as an alternative to dumping paint into landfills. We produce a low cost, good quality latex product. The spec that you sent me would make the recycled paint program to expensive for the Counties to handle, and would create a need for another waste

stream to move the lower quality products. We sell the Counties a good product for around $5 per gallon. This spec would raise our costs to around $10 to $12 per gallon. At that price the spec writers would be better off with 1st quality products from a cost standpoint. If you are trying to find a use for leftover paints that are in the marketplace I feel that the proposed spec would require too much cost to be realistic. I believe the problem is that we want to find a use for leftover paint other than disposing it in landfills or other waste streams. I think that less emphasis should be put on the performance characteristics of the end product.

119. Make the standard more usable for consolidated paints (as it stands they have to meet the same standards as reprocessors who add virgin paint). Think about ways to make testing less costly so that the cost of the paint doesn't go up, and so that those recyclers making a quality product, and a go at business, can afford testing.

Response: We realize that cost may be a concern but unless the performance of the product is verified according to standards that the marketplace trusts, it will not find its way into the procurement stream.

120. Overall both the "standard" and "environmental evaluation" are weak, use of terminology is too loose, and there are too many convoluted statements to make this a viable "standard". How was this "standard" created? Did it go through an evaluation or balloting procedure or? The concept is commendable but execution is unusable.

Response: This is a draft and the reason for going out for public comment is to tighten the standard and language in order to make it more viable. It has gone through several iterations with a balanced stakeholder group and will continue to do so until reasonable effort has been made to reach a consensus via an official ballot.

121. Very supportive of the entire document and process!!

122. As a paint professional, I tend to have concerns about the performance properties of paint made from recycled content. These concerns are largely addressed by the fact that the RCP will go through the MPI product approval process, and will be tested to the same standards, and appear on the same lists as other latex paints. I am pleased that RCP will be available for use on Corps of Engineers facilities painting projects as soon as they begin to appear on the MPI approved products lists that we are already using.

123. Thank you for your excellent work in drafting the Proposed Standard for Recycled Content Latex Paint. The Standard is comprehensive and very helpful in moving us towards a seal of approval for recycled-content latex paint that will become nationally accepted. Excellent work. Congratulations are in order.

124. [Commenter] and its affiliated companies believe that the proposed Green Seal Environmental Standard for Recycled Content Paint can achieve the need for an accepted standard that will serve to maximize recycling and the marketability of recycled paints. We are thankful for the opportunity to provide comments on the proposed standards.

125. This environmental standard is much needed due to the large volume of paint collected by local governments in their hazardous collection centers. It will provide a way to recover and

reuse latex paints. This standard however only addresses latex paints but not alky paints and other painting products

Response: We appreciate your support.