

2020 VIAP SCREENING LEVELS PUBLIC COMMENT SUMMARY

COMMENT	COMMENTER	RRD RESPONSE
Generally feel that having public SLs for multiple media that can be used at a majority of sites is a useful tool.	GEOSYNTEC	The VIAP Screening Levels (SLs) are intended to be a voluntary tool that may be used to determine that site conditions do not present a risk and allow a quick regulatory closure or warrant a more site-specific evaluation, at the majority of sites.
GENERIC CRITERIA; SITE-SPECIFIC CRITERIA; SCREENING LEVELS		
De facto generic criteria Means to implement generic criteria Unclear how will use screening levels versus site-specific criteria Publishing genericized cleanup criteria for VIAP that has not been promulgated In effect making a set of SLs enforceable criteria – forced to use as SSTLs	CHEM COUNCIL CHAMBER GR CHAMBER MMA SES-Hollemans	The VIAP SLs are not generic criteria they are a voluntary tool. As the comments state, “a screening level is a very conservative value used to eliminate site conditions from further consideration because the site clearly does not present a risk at these levels.” If site conditions are consistent with assumptions used to develop the VIAP SLs a person may voluntarily propose to use the values as Part 201 site-specific criteria or Part 213 site-specific target levels (SSTLs). The availability of the VIAP SLs does not affect a person’s options to propose their own site-specific values for department review and approval
Screening level nomenclature inconsistent with the guidance	CHAMBER MMA	The terms, VIAP screening levels, site-specific criteria, and site-specific target levels are used appropriately in context with Part 201 & Part 213. Consistent with statutory language any use of the VIAP SLs as criteria must be site-specific because it is not generic. VIAP SLs may voluntarily be used as Part 201 site-specific criteria or Part 213 SSTLs when actual site conditions meet those used to develop the VIAP SLs.
Proposed criteria are not site-specific Site-specific criteria based on actual site conditions hence name	MMA MAST	
Don’t appear to reflect actual site-specific scenarios commonly encountered Reflect conditions not consistent with those typically found in MI	CHEM COUNCIL MMA	The scenarios for the VIAP SLs are consistent with the most common conditions encountered for the 1700 sets of volatilization to indoor air site-specific criteria or SSTLs the department has assisted in developing.
Department should adopt the CSA recommendations	MMA	The VIAP SLs are not a generic criteria rule set.
Department should review comments on 2017 proposed rule set	MPA/MCAS MMA	
Goals of rules package should be clarity of EGLE expectations, practices, and requirements	ENVIROLOGIC	
INCONSISTENT WITH THE LAW		
Inconsistent with law - Sec. 20120f Options to develop site-specific criteria dismisses Sec. 20120f Ignoring approved approaches of Sec 20120f Alternative under Part 201 when generic criteria do not apply are site-specific criteria is multiple methods under Sec. 20120f including EPA VISLs and ITRC PVI	CHEM COUNCIL MMA SES-Hollemans MAST	The VIAP SLs are a voluntary tool to evaluate the VIAP and are not inconsistent with Sec. 20120f. The methods of Sec. 20120f are based on assessment of site conditions with criteria, such as generated from EPA’s VISL Calculator, the J&E model, or based on a distance from contamination determined by criteria. Statutorily, if generic criteria or RBSLs are not used or do not apply, the alternative is site-specific

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Sec. 20120f allows addressing VIAP without generic or site-specific criteria	CHAMBER	criteria or SSTLs consistent with the information in the VIAP SL documents.
Is the best available information regarding toxicity IRIS or developed following PA 581	AECOM	The VIAP SLs are not generic criteria developed under Sec. 20120a(3)
Inconsistent with law - Use of assumptions for nonresidential workers that exceed 10 hours Department cannot publish guidance inconsistent with the statute – prohibited by Sec. 20120a(3)(d) Unreasonable assumptions- all SLs assume 24 hour exposure	CHEM COUNCIL MMA CHAMBER	
Proposed screening levels represent non-promulgated criteria Sec. 20120a(17) requires generic criteria be promulgated – should follow the law and promulgate new generic criteria instead of generating unenforceable criteria under the guise of screening levels	MAST	Sec. 20120a(17) requires generic criteria to be promulgated, the VIAP SLs are not generic criteria developed under Sec. 20120a.
UNREASONABLE ASSUMPTIONS		
Unreasonable assumptions – Default attenuation factor 0.03 is too conservative (95 percentile) for nonresidential industrial scenario Default attention of 0.03 is too conservative especially for nonresidential	CHAMBER SHELL AECOM	The VIAP SLs are a voluntary tool. Without use of a single groundwater attenuation factor a groundwater VIAP SL could not be generated and to -date the best available vapor attenuation value is the EPA value of 0.03. The use of screening levels, by their nature, may mean they are too conservative for some scenarios. If at a site, it is identified that they are conservative for specific site conditions, Part 201 site-specific criteria or Part 213 SSTLs that address those conditions may be proposed for department review and approval.
Unreasonable assumptions – commercial building is too conservative for industrial sites	CHAMBER	
Unreasonable assumptions – sand is too conservative	CHAMBER	
Unreasonable assumption – compounding effect of conservative assumptions	CHAMBER	
Unreasonable assumption – based on super sensitive populations of children and pregnant woman exposed to chemicals for much of life or pregnancy	MPA/MACS	The assertion that the VIAP SLs for all substances are based on these assumptions is incorrect. A subset of the substances is based on development effects that occur with exposures during pregnancy using a process that EPA concurred was appropriate.
Unreasonable assumption – groundwater in contact with a residential basement	MMA	The development of the shallow groundwater VIAP SLs is based on documented shallow groundwater conditions of numerous sites throughout the state and addresses the shallow groundwater condition that does not allow use of values developed using the EPA VISL calculator or J&E model. The sump area is incorrectly stated as 44 inches. The sump is included in the area that allows vapor to migration from groundwater without attenuation. The area also includes cracks, expansion joints, and openings. This area is estimated and rounded to 1% of the entire floor and foundation area and may
Unreasonable assumptions – residential use of extremely large open basement sump Use of 44 inch sump	CHAMBER MMA	
Based on extremely conservative generic assumptions – generic exposure assumption is direct volatilization of a source to indoor air	SES-Hollemans	
Unreasonable assumption – vapor migration through wet intact concrete	MMA	

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		<p>underrepresent the actual openings in many structures.</p> <p>The VIAP SLs use a diffusion coefficient for vapors migrating through concrete that is supported by RRD and consultants' field demonstrations. There is not an assumption that the concrete is wet.</p>
LACK OF TRANSPARENCY		
Lack of Transparency - Need to publish all basis for developing	CHEM COUNCIL CHAMBER GR CHAMBER MMA	<p>All of the equations, input values (including acceptable air concentrations), toxicity reviews, etc., for development of the VIAP SLs tables is a large volume of information that has not been of interest to the majority of those using the ~1700 sets of values RRD has assisted in developing.</p> <p>RRD has made available the relevant subsets of information when requested and will continue to provide specific information upon request.</p> <p>The subset of substances that have been reviewed by EGLE's Toxic Steering Group (TSG) includes acceptable air concentrations, an updated report is expected to be finalized and publicly available shortly.</p>
Lack of Transparency – Missing information includes toxicity data to determine the acceptable air concentrations	CHAMBER	
Lack of Transparency – Missing information includes the input values for sand	CHAMBER	
Provide toxicity information and rationale for selection - Publish department's best available information Publish toxicity endpoints and their basis should be mechanism to up-date	AECOM ECS-Kulpanowski	
Lack of Transparency – Missing information includes the EGLE Calculator	CHAMBER	
Lack of Transparency - Missing information includes acceptable air concentrations Original D.1. included indoor air screening levels why are they not included, are MSSSLs still applicable	CHAMBER AECOM	
Did not involve a stakeholder process Lack of engagement with the regulated community	CHAMBER GR CHAMBER	RRD considers soliciting comments from ~6,500 GovDelivery RRD News subscribers a stakeholder process that includes engagement with the regulated community.
PROGRAM CONCERNS		
Exceedingly conservative – little or no risk Proposed criteria will make properties with insignificant risks into Part 201 Facilities	CHEM COUNCIL MMA	<p>Comments noted, revisions to VIAP SLs documents will not address these comments.</p>
Create a barrier to reinvestment and reuse	GR CHAMBER	
If adopt screening levels as guidance without promulgating rules will not be enforceable and will add confusion for property transactions (facility & due care) Provide explanation of how SLs should be applied to a purchaser's obligation to determine whether their property is a facility for BEA and due care purposes	SES-Holleman ECS-Kulpanowski	
Concern for costs of additional investigation Lead to greater expense for unnecessary further evaluation and review, mitigation, institutional controls, legal negotiations, and complication of or real estate transactions	MPA/MACS SES-Holleman	

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VIAP SL Table includes an exhaustive list of compounds and guidance associated with selection and application of the SLs must be easy to understand and utilize	SPEEDWAY	
Concern with ITRC guidelines not applying to many/most sites Attempting to prevent the use of ITRC PVI Guidance by developing checklist with additional precluding factors	MPA/MACS SES-Holleman	Comments noted, they are not related to development of VIAP SLs and cannot be addressed by modifications to the VIAP SLs documents.
Concern expanding list of chemicals that must be analyzed Concern labs cannot analyze for compounds being added to indicator parameter list	MPA/MACS SPEEDWAY	
Concern with presence or potential presence of chlorinated solvents	MPA/MACS	
Will not meet goal of increased site closures	MAP/MACS	
EGLEs slow review process has negative impact on brownfield redevelopment projects	ENVIROLOGIC	
MI is supposed to follow risk-based approach to address releases under Part 213 however is apparent EGLE's interpretation of risk-based approach is that no contamination is the only acceptable risk	MAST	
EGLE has not published recommendation for vapor barriers that could be used to mitigate VI risk	ECS-Kulpanowski	
VI Program is moving target with no way for regulated community to understand its obligations Not transparent because centralized through a VI Specialist – all decisions made by one person who changes requirements over time	ECS-Kulpanowski	
VIAP needs to be self-implementing to not defer investment in brownfield sites Site-specific VIAC should be self-implemented – inefficient to continue practice of requiring EGLE to develop and/or approve all site-specific calculations	ENVIROLOGIC	The requirements for department approval for site-specific criteria are statutory and there are no exceptions available for brownfield sites
VIAP SLs DEVELOPMENT COMMENTS		
Defining the depth to groundwater based on depth to top of the capillary zone and heterogenous lithology is not recommended Depth to first encountered groundwater to include the capillary zone is not the same as saturated groundwater and does not reflect the groundwater table, not used consistently for D.1, C.7. and the SSVIAC/SSTL questionnaire What is technical basis for including transient perched groundwater, the capillary zone, and	SHELL ENVIROLOGIC AECOM ECS-Kulpanowski	Revisions made to address this comment.

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<p>heterogenous lithology in determining the depth to groundwater How is groundwater defined, water table, first encountered groundwater, not trapped groundwater</p>		
<p>Don't allow for varied attenuation factors</p>	CHEM COUNCIL	<p>The VIAP SLs are a voluntary tool. VIAP SLs could not be generated without a default attenuation factor. Part 201 site-specific criteria or Part 213 SSTLs may be appropriate if a differing attenuation factor is justifiable.</p>
<p>SLs for petroleum hydrocarbons should account for the potential for biodegradation</p>	HALEY&ALDRICH	<p>Bio-attenuation must be evaluated with specific site conditions that cannot be accounted for in VIAP SLs.</p>
<p>There is no mention of NAPL in any of the proposed documents. Was the presence of NAPL considered in development of the VIAP SLs, if so what type & what conditions</p>	ENVIROLOGIC	<p>The presence of residual NAPL was considered in the development of the VIAP SLs and the soil and groundwater residential SLs are appropriate to use to define a vapor source. The presence of migrating NAPL precludes defining the extent of the vapor source.</p>
<p>Proposing additional conditions not specified in rule or statute to render SVIIC & GVIIC not applicable EGLE has added several conditions to checklist C.1. for when generic criteria do not apply that are not listed in the rules Is acute toxicity a new precluding factor for generic criteria</p>	SES-Holleman MAST AECOM	<p>All conditions that make the SVIIC or GVIIC not applicable, or require site-specific evaluation are included in statute and rule. Further evaluation when NAPL conditions are present is included in rules. The J&E model limitations are part of the assumptions used to develop the generic criteria and have been made available consistent with statutory requirements. The acute risk not addressed by SVIIC or GVIIC requires a site-specific evaluation under statute, rule, and the RBCA process.</p>
<p>The dose of any acute exposure will be higher than a chronic exposure</p>	SES-Holleman	<p>Generally, this statement is correct but the EGLE/MDHHS TSG has identified a set of substances where that is not the case. The SLs are developed to address the acute toxicity where such information is available.</p>
<p>Add a statement that if none of the items on checklist C.1. (generic criteria application) are checked there is no need to complete C.7</p>	ECS-Kulpanowski	<p>RRD does not concur with these proposals. While the GVIIC & SVIIC remain enforceable criteria, as described above if there are substance with short-term/acute risks they must be addressed with a site-specific evaluation, and the VIAP soil gas SLs may be necessary even when GVIIC & SVIIC apply.</p>
<p>Revise summary graphic to include generic SVIIC & GVIIC as 1st option</p>	ECS-Kulpanowski	
<p>Position that once provided SSTLs required to comply with the SSTLs for all media regardless of applicability of generic criteria is not consistent with RBCA No reason SVIIC should not apply in cases where GVIIC do not apply, why are they provided when requesting GW SSTLs Should be able to use SVIIC, EGLE GW SLs, and EPA VISL soil gas SLs for site Collection of soil gas data must be compared to soil vapor SLs but no requirement to compare to SS-VIAC if GVIIC & SVIIC apply.</p>	SES-Sampson SES-Holleman ECS-Kulpanowski	<p>As described above, while the GVIIC & SVIIC remain enforceable criteria if there are substances with short-term/acute risks they must be addressed with a site-specific evaluation, and the VIAP soil gas SLs may be necessary even when GVIIC & SVIIC apply. The unrestricted VIAP SLs are a voluntary tool that are provided to assist for the majority of situations where site conditions do not met all of the requirements for the GVIIC & SVIIC to apply in the evaluation of a vapor source, determination of the inclusion zone, and application of existing tools for further evaluation.</p>

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		<p>RRD experience has shown it is a rare instance where the GVIIC do not apply because of depth of groundwater and the SVIIC apply because there is no sump, so the unrestricted VIAP site-specific criteria for all media have been provided for voluntary use. If the combination of the various sources of values is appropriate for the site-conditions, the use of the EPA VISL soil gas SLs may be proposed as Part 201 site-specific criteria under Sec. 20120f or Part 213 SSTLs for department review and approval.</p> <p>In the infrequent instances where the GVIIC & SVIIC meet all requirements to apply, and there are no substances with short-term/acute risks the GVIIC & SVIIC will be appropriate to use to determine a vapor source, and the VIAP soil gas SLs are a voluntary tool to further assess the risk; or a person may propose site-specific values for department review and approval.</p>
<p>Revise the should to shall be for the following and provide the legal citations: A site-specific evaluation should be conducted for compliance and/or due care purposes if the generic GVIIC and SVIIC are not applicable, if there are hazardous substances present that have short-term risk concerns, and/or soil gas data (including sub-slab) have been collected.</p>	<p>ECS-Kulpanowski</p>	<p>Revision made to address this comment</p>
<p>Why are residential SS-VIAC based on number of stories – the Residential High-Rise Apartment is defined as 6 stories or more.</p>	<p>ECS-Kulpanowski</p>	<p>The residential VIAP SLs are based on a residential building with a basement, and the VIAP SLs may be applied to a residential structure with less than 6 floors. By definition, a high-rise apartment is 6 or more stories. The high-rise apartments have certain key building characteristics and requirements, such as air exchange rates, that influence vapors as they migrate into the structure differently than the assumptions for the residential SLs.</p>
<p>Need all assumptions for soil gas VIAP SLs to determine if developed of site-specific VIAP criteria is worthwhile</p>	<p>ENVIROLOGIC</p>	<p>As included in the summary graphic, the soil gas VIAP SLs use EPA’s default attenuation factor. Unlike the variation for attenuation factors based on depth to groundwater, experience has shown site-specific attenuation factors for near surface soil gas results in minimal changes for soil gas values.</p>
VIAP SLs COMMENTS REGARDING SPECIFIC SUBSTANCES		
<p>For 2,2,4-TMP there are no currently technically defensible Tier 1 or Tier 2 toxic studies, should not use Tier 3 tox value</p>	<p>SHELL</p>	<p>While toxicity value selection for the development of the VIAP SLs is not subject to the prescriptive process presented in the Part 201 statute for deriving generic cleanup criteria, the selection of the inhalation toxicity value for 2,2,4-trimethyl pentane (TMP) is consistent with that process. The Part 201 inhalation reference concentration (RfC) represents the initial threshold screening level (ITSL) developed by the EGLE Air Quality Division (AQD) in accordance with Michigan’s air toxics rules and remains the</p>

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		published ITSL on the AQD website. The RfC used in the development of the TMP VIAP SLs was initially published in the March 25, 2011 Part 201 generic cleanup criteria tables and has been used without challenge ever since to derive the residential and nonresidential SVIIC and volatile soil inhalation criteria for this substance.
Proposed residential near surface groundwater concentration for 1,4-dioxane (1,900 ppb) is not protective of public health	B. BAILEY	RRD & DHHS toxicologists along with EGLE’s TSG reviewed information provided by Dr Bailey in May 2020 and provided a response.
Consideration should be given to the February 2020 USEPA Draft Risk Evaluation for TCE	HALEY&ALDRICH	The TCE VIAP SLs do not take into consideration the February 2020 EPA draft risk evaluation findings. The EPA evaluation underwent peer review in March 2020 and was released for public comment until 4/27/2020. The EPA docket indicates that there were 17,833 comments/submissions received. The timeframe for final determination by EPA is unknown. The department committed in 2017 to using final documents in the development of toxicity values used in the development of criteria and screening levels to better ensure transparency and predictability of decision making.
Explain the difference for the residential SVIIC for naphthalene being 250,000 and the SS-VIAC being 67	ECS-Kulpanowski	The methodology and equations differ for the calculation of the SVIIC and the VIAP Soil SLs. The VIAP Soil SLs when compared to the generic SVIIC, better reflect best available information. In 2017, the department director formally stated that while the current GVIIC & SVIIC values remain enforceable criteria when applicable, they have been documented to not be protective of public health. The VIAP SLs reflect the department’s judgment of the concentrations necessary to not pose an unacceptable risk to public health.
The proposed SLs for Phenanthrene are illegal – the AQD ISTL is not calculated using the process specified in Part 55; need to update the reference dose	ECS-Kulpanowski	RRD does not concur with this statement. RRD toxicologists have conferred with AQD toxicologists and the ITSL used as the toxicity input for the phenanthrene VIAP SLs remains valid.
The proposed SS-VIAC for Acenaphthylene is incorrectly footnoted for data not being available – information provided	ECS-Kulpanowski	The resource provided by the comment submitter is a subscription-based chemical information service that the department does not have access to and would be unable to make available to interested parties requesting to review the basis of the information therein. This is inconsistent with the department’s goal to ensure transparency and predictability of data selection for the development of generic cleanup criteria and screening levels.
A concentration of 1 ppb benzene in the groundwater should not indicate a VI issue A residential site with benzene in shallow groundwater that is fit for human consumption will require further evaluation	SES-Sampson SES Hollemans	The VIAP SLs are based on the statutory risk factors and the resulting values are what the department has determined necessary to meet those risks. The values for ingestion of groundwater for drinking water are not readily comparable to the inhalation

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		screening levels due to the different exposure routes. The benzene maximum contaminant level goal is zero as a human carcinogen, but the drinking water standard is determined by balancing the adverse health effects of a particular chemical against the feasibility and costs of treating water sources for consumption.
The residential soil screening level for mercury is lower than the statewide default background	GEOSYNTEC	Comment noted, additional guidance is under development by EGLE Soil Background TAPS Team
VIAP NONRESIDENTIAL DEFINITION – NONRESIDENTIAL SLS COMMENTS		
Doctor’s offices and medical facilities should be considered nonresidential Doctor’s office has historically been included in definition of nonresidential uses	ENVIROLOGIC AECOM	While the 2014 statutory definitions of “nonresidential” would include land uses for doctor offices and medical, the nonresidential criteria and these screening levels were not developed to address these uses. The nonresidential description included in the documents is consistent with Sec. 20120a(3) as it specifies the facility characteristics that determine the applicability of the nonresidential VIAP SLs. Similarly, campground and recreational areas, while defined as nonresidential, do not meet the facility characteristics that determine the applicability of nonresidential VIAP SLs. For uses not consistent with the development of nonresidential VIAP SLs it does not mean residential VIAP SLs are required to be used, rather a site-specific evaluation is required.
Campgrounds and recreational areas have not historically been included as sensitive or residential use If residential definition is changed will it be reflected in new RC templates	AECOM	
Define “intermittent” as used in D.1.	AECOM	As used in defining the facility characteristics that determine the applicability of the nonresidential VIAP SLs “intermittent presence” common dictionary definition applies for the term, as coming and going at intervals, not continuous, occasional. The term “healthy adult worker” is consistent with EPA risk assessment practice and indicates that it is not a sensitive population. “All appropriate nonresidential uses” as used in D.1, is defined by the what is provided in the same section for the facility characteristics that determine the applicability of the nonresidential VIAP SLs, not all nonresidential uses as defined by statute.
What is the intent of “healthy” in the statement: Nonresidential VIAP screening levels are developed for healthy adult workers ... Inclusion indicates RP could be required to provide evidence workers in a structure are healthy – subjective term – prohibited by privacy laws from collecting	AECOM	
Define “All Appropriate Nonresidential Uses”	AECOM	
Provide additional information as why nonresidential SLs do not apply for the former resident now used as nonresidential	ENVIROLOGIC	The former residential structure that has been converted to office use is not routinely constructed slab-on-grade, and has different building characteristics (e.g., air exchange) that make the nonresidential VIAP SLs inappropriate.
VIAP SLs APPLICATION COMMENTS		
Application of screening levels to basements but not slab on grade is not justified SSVIAC for slab-on-grade would be equal to or greater than the SLs	SHELL GEOSYNTEC ENVIROLOGIC HALEY&ALDRICH AECOM	The residential VIAP SLs were developed based on the presence of a basement. A person could voluntarily choose to propose to apply these values for a residential slab-on-grade structure as Part 201 site-specific criteria or Part 213 SSTLs; or they could

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<p>Shallow GW VIAP SLs should apply to residential slab-on-grade structures with GW ≤5 ft and the not in contact GW VIAP SLs should apply ≥5 ft or slab on grade SLs should be provided</p> <p>Use of the SLs should be allowed for any site which has conditions aligned with or more conservative than the input parameters</p> <p>Why are residential criteria not applicable to slab-on-grade, should be overly conservative</p>		<p>adjust inputs appropriately as site-specific criteria or SSTLs so that the results are not more conservative than necessary.</p>
<p>Application of proposed criteria does not evaluate the mass and separation distance to determine if you need to further evaluate the VIAP</p> <p>Do not consider source location and mass relative to a receptor and existing tools to evaluate whether VIAP is complete pathway</p>	<p>SES-Sampson SES-Hollems</p>	<p>Relevant pathways require evaluation, there is no regulatory requirement to determine if a pathway is complete for closure.</p> <p>The VIAP SLs are a voluntary tool to allow evaluation of a vapor source, determination of the inclusion zone, and application of existing tools for further evaluation; or a person may propose site-specific values.</p> <p>The documentation explaining the development of the VIAP SLs is not intended to provide the additional guidance for these evaluations. An update of the department’s 2013 VI Guidance Document is underway that will further address these areas.</p>
<p>The documents do not appear to address releases to surface soils that are not located near an existing building or releases on properties where no buildings exist</p> <p>Assumes an infinite source and does not address de minimus releases, near surface releases, releases not near buildings or small volumes remaining after soil excavation</p>	<p>ECS-Kulpanowski</p>	
<p>Can approval for use be done in FAR or CR or is a separate submittal required</p>	<p>AECOM</p>	<p>With the roll-out of the VIAP SLs additional information will be provided that these may be approved for use as Part 213 SSTLs with the submittal of a Part 213 Final Assessment Report or Closure Report. Documentation that conditions are appropriate for their use (e.g. Checklist C.7) will need to be part of the submittal.</p>
<p>Options to address VIAP needs to include developing site-specific criteria using provisions of Sec 20120a</p>	<p>MMA</p>	<p>The references to developing site-specific criteria consistent with Sec. 20120b are broad enough to cover proposed use of provisions of Sec. 20120a where appropriate.</p>
VIAP SLs DOCUMENTS GENERAL COMMENTS		
<p>VIAP SL tables, lowercase (sol) footnote is not defined</p>	<p>ENVIROLOGIC</p>	<p>Footnote (S) for water solubility is included, “sol” used as the basis for VIAP SLs based on water solubility (consistent with Rule 8(2)) will be added to the (S) footnote.</p>
<p>Typo in D.1 line 159 (missing “be” in front of representatively)</p>	<p>AECOM</p>	<p>Revision made to address this comment.</p>
<p>What does it mean when a second value is provided in parenthesis (e.g., sec-butylbenzene, diacetone alcohol)</p>	<p>ENVIROLOGIC</p>	<p>Historically the generic criteria table presented both the Csat [Footnote (C)] value and the health-based value for substances when Csat was greater than the calculated value. Because this table does not list Csat values both were provided, with the calculated value list first and Csat provided in parenthesis. This will be clarified in Footnote (C).</p>

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Most of SLs are similar to RIASLS & MSSLS, including the TSRIASLS are TSRIASLS still going to be used to assess potential risks	AECOM	For the substances that EGLE’s TSG has developed Recommended Interim Action Screening Levels (RIASLs), the VIAP SLs use the same acceptable air concentrations, but not all of the same inputs as what was previously provided as media specific SLs. When appropriate, time-Sensitive RIASLs may adjust the acceptable air concentrations as documented in the TSG RIASL Report. The interim response SLs, with the 2020 update, remain valid for determining the need and timing for interim response actions, but are not appropriate for compliance determinations.
Are nonresidential screening levels appropriate, although overly conservative, for building ≥ 50,000 square ft	AECOM	A person could voluntarily propose to use the more conservative values as Part 201 site-specific criteria or Part 213 SSTLs.
Provide the EGLE shallow groundwater attenuation factor in Overview Graphic	AECOM	There is not a generic attenuation factor for shallow groundwater. The shallow groundwater VIAP SLs are based 99% on a diffusion coefficient for vapors migrating through concrete that is supported by RRD and consultants field demonstrations, and an equation for direct diffusion from an 1% area that includes cracks and openings that allows vapor to migrate from groundwater without attenuation.
Provide detailed explanation of numerical difference between SS-VIAC and generic residential SVIIC & GVIIC with side-by-side comparison of algorithms	ECS-Kulpanowski	The determination that the SVIIC & GVIIC do not represent values that are protective of public health negates the usefulness of any kind of side-by-side comparison, and there would be nothing available to compare for shallow groundwater and soil vapor.
For hazardous substances that have short term risk concerns should explain how SS-VIAC address the acute toxicity concerns	ECS-Kulpanowski	In the VIAP SLs Tables, those that address short-term risks basis are noted as “st” or “dev”. For any substance designated as “st” or “dev” that may be regulated under Part 213, evaluation of the possible acute vapor hazard is required [Sec. 21307(2)(a)]. Additional guidance for this evaluation is under development.
Clarify for a gasoline release if a site-specific evaluation is only required for toluene as a short-term risk or for all CoCs	ECS-Kulpanowski	
Summary graphic option 2 allows for multi-layer J&E Model but EGLE has not published guidance or procedures to accomplish that	ECS-Kulpanowski	The purpose of identifying the J&E multi-layer model is to identify different options that may be considered. There are multiple methods and models that can be used; however, each of those models have limitations associated with it and are usually developed for specific situations. If a person elects to use a multi-layer model, they need to evaluate it to see if it is appropriate for their site conditions. RRD has not published guidance for methods and models where there is otherwise readily available guidance.
How is “heterogenous soils” defined, it should be defined as intended by the J&E Model	ECS-Kulpanowski	Included in with information on soil VIAP SLs is the statement that “Documentation of appropriate site characterization including characterization of heterogenous soils must be provided for department review and approval to justify use of

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		USDA soil types other than sand.” Though no reference is provided, the term as used is based on the principals and the limitations identified by the J&E model. The model is only appropriate for use where the entire soil being evaluated consists of properties that are likely to be consistent in how vapor migrate through it (e.g., a single soil type).
Add the 12-hour nonresidential workday exposure screening levels also A majority of nonresidential requests have come back for 12-hour evaluation	POLL	The VIAP SLs are a voluntary tool. The nonresidential VIAP SLs are consistent with a screening level being a conservative value used to eliminate site conditions from further consideration because the site clearly does not present a risk at these levels. An adjustment of the workday was rarely requested with the 1700 sets of volatilization to indoor air site-specific criteria or SSTLs the department assisted in developing. If at a site, it is identified that they are conservative for specific site conditions, Part 201 site-specific criteria or Part 213 SSTLs that address those conditions may be proposed for department review and approval.
Including other building characteristics not consistent with the basic assumptions seems vague and purposeless What other building characteristics would be applicable	ENVIROLOGIC AECOM	The explanation of the development of the VIAP SLs and the Checklist contains this broad statement. Due to wide variation of building characteristics and construction techniques utilized throughout the state overtime listing all possible variation was not feasible and this phrase was used as a catchall for situations not otherwise specifically provided.
Would be appreciated if SLs were also published that are considered appropriate for the most conservative residential and nonresidential scenarios	AECOM	While there are circumstances that are known to produce more conservative values than the VIAP SLs, there has been no effort to determine the most conservative scenarios due to the wide range of variability of building characteristics and construction techniques across the state over time.
EGLEs proposed documents give the false impression that SS-VIAC can be based on site-specific factors, in practice the impediments are insurmountable	ECS-Kulpanowski	RRD does not have information that confirms this statement. Experience has shown that attempts to establish some building inputs site-specifically (e.g., air exchange rates) have not been successful, while environmental data gathered site-specifically has been successful.
Inconsistency with direction of who needs to complete the SSVIAC questionnaire Move location and sublocation codes to area that must be completed by EGLE Clarify to depth below grade of first encountered groundwater	ENVIROLOGIC	Revisions made to address this comment.
Use of “appropriate”, “representative” and “sufficient” have potential for subjective application and enforcement by the agency	AECOM	Comment noted.
Appendix D.1 provides more detail than Appendix C.7. and should be presented first	ENVIROLOGIC	Comment noted.
The information in C.7. is redundant to D.1.	ENVIROLOGIC	Comment noted.

2020 VIAP SCREENING LEVELS PUBLIC COMMENT SUMMARY

COMMENT	COMMENTER	RRD RESPONSE
Suggest revision to Checklist to “If YES/NO is selected for any of the following then x must be completed” C.7. If/Then statements are cumbersome, a decision flowchart would be better suited	SPEEDWAY ENVIROLOGIC	Comment noted.
TDLs for soil vapor in additions to the existing TDLs for groundwater and soil would be helpful	GEOSYNTEC	Comment noted.
Over sixty of the hazardous substances for soil vapor are not on standard laboratory lists for common analytical methods	GEOSYNTEC	Comment noted.
Reliance on soil data where soil gas cannot be analyzed is wrought with challenges	GEOSYNTEC	Comment noted.
Trying to separate Part 201 methodology or applicable criteria from Part 213 for VIAP	SES-Sampson	Comment noted.

List of Commenters:

AECOM – Jamie Timmins-Berrtan
 B. BAILEY – Dr. Bob Bailey
 CHAMBER – Michigan Chamber
 CHEM COUNCIL – Michigan Chemical Council
 ECS – Environmental Consulting Solutions – Steve Kulpanowski
 ENVIROLOGIC – Envirologic Technologies, Inc. – Alisa Lindsay, Jeff Hawkins, David Stenink, David Warwick
 GEOSYNTEC- Geosyntec Consultants – Sam Baushe
 GR CHAMBER – Grand Rapids Chamber
 HALEY&ALDRICH – Haley & Aldrich, Inc.
 MAST- Gary Mast
 MMA – Michigan Manufacturers Association
 MPA/MACS – Michigan Petroleum Association/Michigan Association of Convenience Stores- Mark Griffin
 POLL – Jason Poll -RRD Project Manager
 SES-Holleman – SES (Advantage) Environmental – Adam Hollemans
 SES-Sampson – SES Advantage – Thomas Sampson
 SHELL – Shell Global Solutions – Matt Lahvis
 SPEEDWAY – Speedway – Jason Siemen

Acronyms and Abbreviations

2013 VI Guidance Document – EGLE Guidance Document for the Vapor Intrusion Pathway, May 2013
 Csat – Soil saturation concentration
 DHHS – Michigan Department of Health and Human Services
 EGLE – Michigan Department of Environment, Great Lakes, and Energy
 EGLE TSG – EGLE Toxics Steering Group, consisting of toxicologists from EGLE, DHSS, and Michigan Department of Agriculture and Rural Development
 EPA – United States Environmental Protection Agency
 EPA VISL Calculator – EPA Vapor Intrusion Screening Level Calculator
 GVIIC – Groundwater volatilization to indoor air criteria (Part 201 generic criteria or Part 213 RBSLs)
 ITSL – Michigan Air Toxics Initial Threshold Screening Level
 J&E Model – Johnson and Ettinger Model to Evaluate Site-Specific Vapor Intrusion into Buildings
 NAPL – Nonaqueous Phase Liquids as defined by Part 201 & Part 213, including mobile, migrating and residual NAPL
 Part 201 - Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended

2020 VIAP SCREENING LEVELS PUBLIC COMMENT SUMMARY

Part 213 - Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended

RBCA – Risk Based Corrective Action process as incorporated into Part 213

RBSLs – Part 213 Risk-Based Screening Levels which are the Part 201 generic criteria

RRD – Remediation and Redevelopment Division

SLs – Screening Levels

SSTLs – Part 213 site-specific target levels

SSVIC - Soil Volatilization to Indoor air Criteria (Part 201 generic criteria or Part 213 RBSLs)

EGLE TAPS Team – EGLE Technical Assistance and Program Support Team

TCE - Trichloroethylene

VIAP – Volatilization to Indoor Air Pathway

USDA – United States Department of Agriculture