



## REMEDIATION AND REDEVELOPMENT DIVISION POLICY AND PROCEDURE

### Response Activity or Corrective Action Addressing Venting Groundwater Review and Authorization Procedure RRD-37

Original Effective Date: April 23, 2018  
Revision Date: November 30, 2020  
Distribution: All RRD Employees

#### **PURPOSE**

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The Remediation and Redevelopment Division (RRD) is responsible for the review and authorization of venting groundwater provided pursuant to Part 201, Environmental Remediation, and Part 213, Leaking Underground Storage Tanks, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 201 and Part 213). This policy and procedure provides RRD staff with direction for reviewing submittals associated with the discharge of venting groundwater.

#### **PROCEDURE**

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##### **Request for Mixing Zone-Based Groundwater-Surface Water Interface (GSI) Criteria**

RRD Resource Material – [Request for Calculation of Mixing Zone-Based Groundwater-Surface Water Interface Criteria](#) contains information on how to request the calculation of mixing zone-based criteria for the GSI pathway and details what information the request needs to contain to provide sufficient information to process the request. The request for Mixing Zone-Based GSI Criteria along with the supporting documentation should be submitted to the RRD Project Manager. The information should be submitted with the Request for Calculation of Mixing Zone-Based Criteria (form [EQP4483](#)), the information may be provided in another format so long as all the information that would be included with the form, including the certification and signature, is submitted.

For Part 213 corrective action a request for calculation of mixing zone-based GSI criteria should be submitted to EGLE independent of and prior to the submittal a Final Assessment Report (FAR) or Closure Report to allow the resulting criteria to be factored into the corrective action necessary to address the pathway. The request should be submitted with a Supplemental Information Cover Sheet (form [EQP4001](#)). The request needs to contain or reference relevant portions of the initial assessment report that provide site information and site characterization results (including a conceptual site model) with sufficient detail to allow reasonable estimates of the discharge flow rate, appropriate contaminants of concern and maximum concentrations of concentrations at the GSI to process a request for mixing zone-based GSI criteria.

For Part 201 response activities, a request for calculation of mixing zone-based GSI criteria should be submitted to EGLE independent of and prior to an NFA Report. It may be advantageous to request calculation of mixing zone-based GSI criteria early in the remedy evaluation to allow the resulting criteria to be used as part of the compliance assessment of the pathway. The request for development of mixing zone-based criteria should be submitted as or included within a response activity plan (ResAP), using the ResAP submittal

form (form [EQP4028](#)) unless otherwise required by an administrative order, order of agreement or judicial decree<sup>1</sup>. The submittal must contain sufficient information from site investigation to allow reasonable estimates of the discharge flow rate, appropriate contaminants of concern and maximum concentrations of concentrations will need to be provided to process a request for mixing zone-based criteria.

The request for development of mixing zone-based criteria requires EGLE action; therefore, these submittals must be reviewed under Part 201 and Part 213 in accordance with the Peer Review Procedure ([RRD-15](#)), and the Part 213 Final Assessment Report and Closure Report Processing and Audit Procedure ([RRD-26](#)).

Public notice of the use of mixing zone-based criteria is appropriate with the authorization of the discharge, not the calculation of the criteria; therefore, the review of a Part 201 ResAP requesting the criteria should be completed within 150 days, or an extension will need to be requested and granted. While there is not a statutory time frame for review of the Part 213 Supplemental Information, the priority and timeframes should be similar for both programs.

REVIEW OF THE ADEQUACY OF THE REQUEST FOR MIXING ZONE-BASED GSI CRITERIA	
WHO	DOES WHAT
RRD Project Manager	<ol style="list-style-type: none"> <li>1. Within 14 days of receipt of the ResAP or Part 213 submittal that includes a request for mixing zone-based criteria, request hydrogeology (geologist) review and coordinate with District/Superfund GSI TAPS point of contact (POC), as appropriate.</li> <li>2. Review the request using RRD Policy and Procedure No. 33 to ensure that the information provided as required is complete, accurate, and sufficient to calculate all appropriate GSI criteria.</li> <li>3. Within 60 days of receipt, schedule the ResAP or Part 213 submittal containing the request for mixing zone-based criteria for review by the District/Superfund Peer Review.</li> <li>4. Prepare the District Peer Review form.</li> </ol>
District/Superfund Peer Review	<p>In accordance with the Peer Review Procedure (<a href="#">RRD-15</a>)</p> <ol style="list-style-type: none"> <li>5. Peer Review members, including the District/Superfund GSI POC, attend the Peer Review meeting and discuss the details of the submittal:               <ol style="list-style-type: none"> <li>a. Determine whether complete, adequate, and accurate information has been provided to process the request for mixing zone-based criteria. Modifications to the request may be made to better reflect assumptions and/or site conditions so long as the requester is informed of the revisions.</li> </ol> </li> </ol>
RRD Project Manager	<ol style="list-style-type: none"> <li>6. Within 10 days of the District/Superfund Peer Review, based upon the Peer Review recommendation drafts either:               <ol style="list-style-type: none"> <li>a. Send correspondence to the person performing response activity or corrective action explaining any deficiencies or additional information necessary to process the request for the Field Manager/Superfund Unit Supervisor's signature.</li> <li>b. Send the documents to transmit the request for the development of mixing zone-based or site-specific GSI criteria from the RRD Liaison to the Water Resources Division (WRD) Liaison identifying the priority for response.</li> </ol> </li> </ol>

<sup>1</sup> A person shall proceed under section 20114b of the NREPA to undertake response activities that use mixing zone based GSI criteria. [MCL 324.20120e(7), MCL 324.20114b].

REVIEW OF THE ADEQUACY OF THE REQUEST FOR MIXING ZONE-BASED GSI CRITERIA	
WHO	DOES WHAT
RRD's WRD Liaison	7. Within 10 days of receipt of a peer review approved mixing zone-based GSI criteria request memo, review for completeness and transmit the memo to the WRD Liaison. Note: 80 days for review to transmit to WRD and 60 days for WRD calculation is 140 of 150 review days; time frames should be carefully monitored and reduced as much as possible.

**Calculation of Mixing Zone-Based GSI Criteria**

The WRD calculates mixing zone-based GSI criteria within 4 to 8 weeks (30-60 days), the time frame for review of the submittals should normally allow for 60 days, there should be some priority other than not having met the earlier time frame to make a priority 1 (30 day) request. WRD transmits the calculation to the RRD Liaison, who forwards a copy to the RRD Project Manager.

For some contaminants, both the chronic and acute GSI criteria will be developed, and compliance will be based on both criteria. In some circumstances where chemical-specific GSI criteria may not be protective of aquatic life due to the number or nature of toxic substances or unidentified substances, toxicity testing of the contaminant plume may be requested. There may also be contaminants which do not have mixing zone-based GSI criteria developed because existing contaminant levels present no reasonable potential to cause an unacceptable risk. Monitoring may be needed for these contaminants to verify that concentrations do not increase significantly.

TRANSMITTAL OF THE MIXING ZONE-BASED GSI CRITERIA	
WHO	DOES WHAT
RRD Project Manager	<p>Within 10 days (prior to 150 days or extended review time period) of receipt of calculated mixing zone-based GSI criteria, draft the transmittal letter to provide the requestor the calculated mixing zone-based GSI criteria for the Field Manager's/Superfund Unit Supervisor's signature. The <i>GSI Transmittal of Mixing Zone-Based Criteria</i> model document should be used as a template for the transmittal, with modifications if necessary. <i>Note: Forwarding a copy of the WRD interoffice memo is not appropriate.</i></p> <p>If the request for mixing zone-based GSI criteria is part of a ResAP that contains additional GSI response activities (e.g., on-going monitoring, contingencies, etc.) or response activities for other pathways the ResAP as a whole will need to be reviewed. If the ResAP is denied for other deficiencies the denial should provide for the transmittal of the mixing zone based-criteria using appropriate language from the <i>GSI Transmittal of Mixing Zone-Based Criteria</i> model document. If a ResAP that includes both the request for criteria and additional GSI response activities is approvable the transmittal will need to be combined as appropriate with the following authorization.</p>

**AUTHORIZATION OF VENTING GROUNDWATER ABOVE GENERIC GSI CRITERIA**

Requests for EGLE to authorize the discharge of venting groundwater above generic GSI criteria along with the supporting documentation should be submitted to the Project Manager. The submittals appropriate for each program include:

For Part 213: The calculated mixing zone-based GSI criteria that were transmitted to the requester should be incorporated as part of the description of corrective action to be implemented in the

Corrective Action Plan (CAP) of a FAR with a request for EGLE to authorize the discharge above generic GSI criteria. There may be situations when no further monitoring is needed and submittal of a FAR is not necessary. In those circumstances, a Closure Report can demonstrate compliance with the mixing zone-based GSI criteria and request for EGLE to authorize the discharge of venting discharge above generic criteria.

Part 201: The calculated mixing zone-based GSI criteria and request for EGLE to authorize the discharge above generic GSI criteria may be submitted as a part of a compliance evaluation for the GSI pathway in either a ResAP or No Further Action (NFA) Report, unless otherwise required by an administrative order, order of agreement, or judicial decree. EGLE may authorize venting groundwater above the generic GSI criteria in a ResAP if it is determined no on-going compliance monitoring is required. When on-going monitoring is necessary EGLE authorization of the venting groundwater above the generic GSI criteria will need sufficient information to determine the adequacy of compliance monitoring plans in an NFA Report.

Authorization of the venting groundwater, as a minimum, needs to be noticed in EGLE calendar.

AUTHORIZATION OF VENTING GROUNDWATER ABOVE GENERIC GSI CRITERIA	
WHO	DOES WHAT
RRD Project Manager	<ol style="list-style-type: none"> <li>1. Within 14 days of receipt of the FAR, Closure Report, ResAP, or NFA Report that includes a request for authorization of venting groundwater above generic GSI review coordinate with District/Superfund GSI TAPS POC, as appropriate.</li> <li>2. For a Part 213 FAR or Closure Report, prepare and send a Notice of Intent to Audit Letter.</li> <li>3. Review the submittal to ensure that the information provided is sufficient for further review.</li> <li>4. Within 60 days of receipt, schedule the Part 213 submittal for review by the District/Superfund Peer Review.</li> <li>5. Prepare the District Peer Review form.</li> </ol>

AUTHORIZATION OF VENTING GROUNDWATER ABOVE GENERIC GSI CRITERIA	
WHO	DOES WHAT
District/Superfund Peer Review	<p>In accordance with the Peer Review Procedure (<a href="#">RRD-15</a>)</p> <p>6. Peer Review members, including the District/Superfund GSI POC, attend the Peer Review meeting and discuss the details of the submittal:</p> <p>a. Evaluate the GSI data from the site, the response activity or corrective action proposed or implemented, and compliance monitoring plans if proposed to determine whether existing or proposed actions will be adequate to comply with the mixing zone-based GSI criteria.</p> <p>i. Determine whether on-going monitoring will be necessary. For a Part 213 Closure Report the determination must be made that no further monitoring is warranted to approve the Closure Report. For a Part 201 ResAP the determination must be made to authorize the venting groundwater above generic criteria.</p> <p>ii. For sites where on-going monitoring is necessary, determine what conditions or information will be necessary for a reauthorization of the discharge at 5 years. The reauthorization evaluation considerations include:</p> <ul style="list-style-type: none"> <li>- Source removal and expected effect on plume contaminants.</li> <li>- Site conditions that if modified (e.g., building removal or modifications) could result in altered redox conditions causing additional mobility, or changes in groundwater flow paths.</li> <li>- Receiving water flows (lakes, large river, or stream) and the effect of the low flow dilution changing over time; lakes remain a 10:1 dilution, for rivers acute mixing zone-based criteria would be an indication that stream flow fluctuations may not have a significant effect; low flow streams could be more susceptible to fluctuations.</li> <li>- Plume contaminants and the development of mixing zone-based criteria; are water quality standards available for all contaminants; is the basis for the water quality standard likely to change (tier 1 or tier 2 values); is the plume characterized to where no additional contaminants are expected to be identified.</li> <li>- Concentration trends and expected effect over time.</li> </ul> <p>iii For sites where on-going monitoring is determined necessary, develop appropriate performance objectives for the compliance monitoring.</p> <p>b. For Part 201 submittals: Determine whether there is significant public interest that would require more than publication in EGLE calendar.</p>

AUTHORIZATION OF VENTING GROUNDWATER ABOVE GENERIC GSI CRITERIA	
WHO	DOES WHAT
RRD Project Manager	<p>7. Within 10 days (with sufficient time prior to 180 days or extended review time period for public notice) of the District/Superfund Peer Review, based upon the Peer Review recommendation, drafts one or more of the following, as appropriate:</p> <ul style="list-style-type: none"> <li>a. Denial of the submittal.</li> <li>b. An EGLE calendar entry document for approval of a ResAP or FAR.               <ul style="list-style-type: none"> <li>i. Note the review must allow sufficient time for the notice to be published in EGLE Calendar.</li> <li>ii. Coordinate calendar notice with the RRD Communications Coordinator for placement in the calendar.</li> <li>iii. The calendar notice <b>must</b> occur prior to the date of an approval letter.</li> </ul> </li> <li>c. For a Part 201 submittal, if it was determined that there is significant public interest and more public participation is appropriate than EGLE calendar then prepare appropriate public notice/public meetings documents.</li> <li>d. Approval, or approval with modifications when allowed, of the submittal using the appropriate model approval document. The <i>GSI Discharge Authorization</i> model document should be used as a template for information that needs to be included, modified as appropriate to the situation.               <ul style="list-style-type: none"> <li>i. Based upon the Peer Review recommendation, if it was determined there was a need for on-going monitoring the appropriate provision for information to be submitted should be included.</li> <li>ii. If no on-going monitoring is required, just the authorization provision needs to be included.</li> </ul> </li> </ul>

ON-GOING OBLIGATIONS FOR AUTHORIZED VENTING GROUNDWATER DISCHARGES	
WHO	DOES WHAT
RRD Project Manager	<ul style="list-style-type: none"> <li>1. For any approval that requires on-going GSI compliance monitoring, review monitoring reports to determine continuing compliance.</li> <li>2. For any approval that requires reauthorization, coordinate review using the Peer Review process, considerations for reauthorization evaluation [see 6b above] and prepare appropriate draft documents as a result of the review.</li> </ul>

<sup>3</sup> MCL 324.20120e(10)(d); MCL 324.20120b; MCL 324.21304a(5)(b).

**REQUEST FOR CALCULATION OF SITE-SPECIFIC GSI CRITERIA**

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The party performing or proposing response activity or corrective action may submit a request for EGLE calculation or approval of site-specific GSI criteria to the RRD Project Manager. This can only be done if the site-specific GSI criteria comply with the water quality standard site-specific development under Part 31 and the numeric or nonnumeric site-specific criteria under Part 201 reflect best available information concerning toxicity or exposure risk<sup>3</sup>. If a person performing or proposing response activities or corrective action is considering pursuing site-specific GSI criteria, it may be useful to contact the RRD Project Manager early on for input.

**REVIEW OF THE ADEQUACY OF THE REQUEST FOR SITE-SPECIFIC GSI OR DEVELOPMENT OF SITE-SPECIFIC GSI CRITERIA**

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REVIEW OF ADEQUACY OF THE REQUEST OR DEVELOPMENT OF SITE-SPECIFIC GSI CRITERIA	
WHO	DOES WHAT
RRD Project Manager	1. Development of the information to calculate site-specific GSI criteria under the provisions of the Part 31 rules and Part 201 provisions can involve complex research and will need the expertise of toxicological staff potentially from both the WRD and the RRD. It will be important to coordinate with the GSI TAPS Team POC to provide input when requested by outside parties or with the review of proposals. 2. The GSI TAPS Team POC will assure that the TAPS Team recommendation is coordinated with input from the WRD and the RRD toxicological staff. The Peer Review process will be coordinated with the input from the TAPS Team recommendations.

**REVIEW OF ADEQUACY FOR A REQUEST FOR APPROVAL OF RESPONSE ACTIVITY OR CORRECTIVE ACTIONS RELYING UPON MONITORING FROM ALTERNATIVE MONITORING POINTS; ECOLOGICAL ASSESSMENTS; FATE AND TRANSPORT MODELS OR MODELS REQUIRING ECOLOGICAL INPUTS; A TECHNICAL IMPRACTICABILITY WAIVER; OR DE MINIMIS EFFECT DETERMINATION**

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REVIEW OF ADEQUACY OF THE REQUEST FOR APPROVAL OF OPTIONS FOR ALTERNATIVE COMPLIANCE DEMONSTRATIONS	
WHO	DOES WHAT
RRD Project Manager	1. The review of options for alternative compliance demonstrations (other than compliance with mixing zone-based criteria), de minimis effect determinations, or technical impracticability waiver will need GSI TAPS Team input to coordinate with the WRD resources, and allow the development of expertise for the GSI TAPS Team POCs. 2. The GSI TAPS Team POC will assure that the TAPS Team recommendation is coordinated with input from the WRD staff. The Peer Review process will be coordinated with the input from the TAPS Team recommendations.

## LINKS TO ADDITIONAL INFORMATION

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[Request for Mixing Zone Based GSI Criteria Transmittal to WRD](#)  
[Request for Calculation of Mixing Zone-Based Groundwater - Surface Water Interface Criteria Resource Material](#)  
[GSI Transmittal of Mixing Zone Based Criteria model document](#)  
[GSI Discharge Authorization model document](#)

## APPROVING AUTHORITY

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DIVISION DIRECTOR APPROVAL:



Mike Neller, Director  
Remediation and Redevelopment Division

## HISTORY

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Policy No.	Action	Date	Title
RRD-37	Original	4/23/2018	Response Activity or Corrective Action Addressing Venting Groundwater Review and Authorization
RRD-37	Revised	11/30/2020	Response Activity or Corrective Action Addressing Venting Groundwater Review and Authorization

## CONTACT/UPDATE RESPONSIBILITY

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Any questions or concerns regarding this policy and procedure should be directed to [EGLE-RRD@Michigan.gov](mailto:EGLE-RRD@Michigan.gov).

*An EGLE policy and procedure cannot establish regulatory requirements for parties outside of EGLE. This document provides direction to EGLE staff regarding the implementation of rules and laws administered by EGLE. It is merely explanatory, does not affect the rights of or procedures and practices available to the public, and does not have the force and effect of law. EGLE staff shall follow the directions contained in this document.*