

Attachment A. Discussion Document Concordance Table

The following table presents the information provided in the letter as it pertains to applicable Discussion Document questions (ECCC 2022).

Question	Response
<p>Q1. What are some of the challenges you face in relation to the definitions of HW and HRM?</p>	<p>While the railway industry continues to examine alternative reuse options for used rail ties, there are a limited number of existing facilities able to accept and reuse rail ties for beneficial purposes. RAC and its members are concerned that a designation such as HRM may limit the number of facilities that are willing to take used rail ties as a low carbon fuel alternative due to increased public scrutiny. This designation could also introduce additional permitting requirements and reduce investment, both of which would further reduce options for used rail tie reuse.</p> <p>Used rail ties provide a viable fuel source for power generation and other industrial processes. Reuse as fuel provides a beneficial end-of-life option for used rail ties as a low carbon fuel. The alternative of landfilling would have a much larger environmental impact than combustion for power and other industrial purposes.</p>

Question	Response
<p>Q4. What criteria or characteristics should be considered by the Department for further review to define waste and recyclable materials and distinguish them?</p>	<p>RAC and its members do not believe TCLP extraction test criteria (Schedule 2) and chemical concentrations (Schedule 7) are applicable to used rail tie management for the following reasons:</p> <ul style="list-style-type: none"> • Used rail ties are transported as whole ties. They contain no free liquids and therefore have no environmental risk while in transit. • TCLP was devised to simulate the leaching characteristics of wastes that are disposed of in a landfill. Approximately 99% of used rail ties are reused as fuel for power and other industrial purposes. • The criteria in Schedule 7 are not risk-based, and are not fit for purpose for the storage, transportation, or recycling of used rail ties. There is also no analytical test for creosote.
<p>Q6. Are there thresholds for substances that should be updated based on technical/scientific information?</p> <p>Q7. What challenges have you encountered when using leachate or concentration thresholds?</p>	<p>The XBR, Schedule 7 lists 173 chemicals, all of which are given an assay limit of 100 mg/kg (0.01% by weight; except for PCB) in column 4. These limits do not appear to be risk-based or based on toxicity calculations. For example, some chemicals are benign at 0.01%, such as acetic acid (which is present at 6% in household vinegar, which far exceeds the 100 mg/kg limit). It is unknown how the 100 mg/kg limit was derived for compounds in Schedule 7.</p> <p>Also, although creosote is listed, it is not a single chemical but is made up of many different organic chemicals. There is no laboratory analytical test that can determine exactly how much creosote is in a material. Previous analytical data included the presence of several chemicals that are known to be present in creosote, and when these chemicals were summed, it indicated that greater than 100 mg/kg of creosote materials may be present in previously treated used rail ties. Also, since naphthalene is an ingredient of creosote, it could create a duplicate measurement.</p> <p>Schedule 2 is based on leachate extraction through the Toxicity Characteristic Leachate Procedure (TCLP). TCLP was devised to simulate the leaching characteristics of wastes that are disposed of in a landfill as it is a test that determines whether various hazardous compounds can be leached out of a waste material, potentially polluting groundwater, or surface water around a landfill. The TCLP is not a total assay of hazardous compounds and is not applicable for the reuse of used rail ties.</p>
<p>Q22. Are there any additional exclusions that should be proposed? If so, why?</p>	<p>While ECCC may consider changing Schedule 2 and/or 7 criteria or requirements, exemptions for HW or HRM designations may also be considered, such as by excluding:</p> <ul style="list-style-type: none"> • wood waste products if treated with preservatives or wood protection products registered under the Pest Control Products Act; or • based on end use criteria, such as alternative low carbon fuel use. <p>A designation such as HW or HRM could jeopardize used rail tie reuse options, discourage right-of-way clean-up, and incentivise landfilling – all of which negatively impact the environment.</p>