

Directions received from Ian Smith, Director, Source Protection Programs Branch, Ministry of Environment, as per letter dated November 5, 2010

No.	Direction	Response	Status	Section
1	The AR be revised to include the enumeration of threats related to the application of nutrients, specifically the application of agricultural source material, non agricultural source material, and commercial fertilizer. Additional details for this direction: It was unclear if by not including these enumerations the persons undertaking these activities that are or would be significant drinking water threats were notified during the consultation process. Should this be the case the appropriate consultation should be conducted with persons identified as undertaking any of these activities that are significant drinking water threats as per direction number 20 below.	In an IPZ with a vulnerability score of 9 or 10, the land application of nutrients may be a significant threat. Through an examination of 2006 aerial photography, and the circumstances that would make that threats significant, it is determined that area within the Wallaceburg IPZ-1 (score of 9), does not have significant threats related to this activity. The LAWSS and Petrolia IPZ scores are lower than 9. Therefore, there are no significant threats related to these activities in the SCR SPA. Text to describe the analysis and findings will be added to the AR. The AR will also be revised to remove this analysis from data gaps, since the work is completed. Technical memos documenting this work will be referred to in the report, and added to the list of references in the Appendices.	Done	Section 7 Table 7-1, Section 7.2.1 and 7.2.5, 7.4, Section 9.1 Table 9-1, Section 6 Table 6-1, Appendix 12
2	The AR be revised to describe the correct methodology that was used to enumerate threats related to ASM generation (livestock), throughout the AR. Additional details for this direction: Two different methods were described in the report; one in the introductory section and one in the section that discusses the specific threat. The Source Protection Authority must clarify what method was used in the actual enumeration of threats and document this in the AR.	The method followed will be clearly documented as was done for the LTV AR. Text will be added to Section 7. For the assessment of chemical threats related to the land application of nutrients, vulnerable area is examined (only if a threat can exist there), while the agricultural managed land refers to all agricultural managed land including cropland and pastureland. For the assessment of chemical threats related to the use of land for livestock grazing, pasturing or outdoor confinement area or animal yard, the whole of the farm itself is examined, while the agricultural managed land refers to only that agricultural managed land being assessed, i.e. grazing land, pasture land, outdoor confinement area or animal yard. No significant threats were found related to this activity.	Done	Section 7.1.1.3
3	The AR include impervious surface maps for HVAs and SGRAs as required by the technical rules. Additional details for this direction: The percent of impervious areas must be included if these areas are areas where there could be threats.	Map 7-1 shows impervious surface areas for all vulnerable areas (IPZ, HVA and SGRA) in the SCRSPA. New maps 7-1a, 7-1b and 7-1c will replace Map 7-1, to show IPZ, HVA and SGRA impervious surface areas on different maps.	Done	Map 7-1 in Appendix 1, Section 7.1.1.1, references to these maps in Section 7.2.1
4	The AR be revised to correct map 7.8 to fix the errors that suggest there could be drinking water threats in an incorrect area and misses an area where they could exist. Additional details for this direction: A yellow area on the map showing where activities can be significant moderate or low contains a pencil like section south of the intake and the delineated IPZ which shouldn't be coloured. In addition, above this, there is a section of the IPZ-1 that is not coloured yellow when it should be.	The Map 7-8 in Appendix 1 will be corrected in the right hand figure showing threats levels.	Done	Map 7-8 in Appendix 1
5	The AR be revised to remove references and work plans associated with the confirmation of existing threats (tier 2 risk assessment). Additional details for this direction: this additional work is not required as part of the AR work plan. This work can be conducted as part of the development of policies in the source protection plan. Despite the impact to the overall number of threats identified in the AR this information would not change the policies that the SPC is required to include in their plan.	Text on the confirmation of significant threats will be removed from Section 7.1.5 (Local guidance and technical studies), Section 9.1 (data gaps) and section summary 9 work plan tables. Text in Section 7.3 (Tier-2 risk assessment), Section 9.2 (Next steps), all system summaries and summary 7 will be revised to note that the site-specific risk assessment to be a part of the development of the source protection plan.	Done	Section 7.1.5, 7.3, Section 9.1 Table 9-1, Section 9.2, section summaries 4, 7, and 9, all three system summaries
6	The AR be revised to remove the work plan for sampling programs to identify issues.	Discussed with MOE. Table 5-6 will be moved from Section 5.5 (Work Plan) to Section 5.7 (Data Gaps) to indicate that the source of some of the identified issues is a data gap and how to fill that data gap. Text in Section 5-7 will be added to describe this data gap. Also added text on the technical studies as section 5.4, and inserted list of technical reports as Table 5-5.	Done	Section 5.4, 5.5, 5.6 and 5.7, Table 5-7, section summary 5, 9

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7	The AR be revised to remove work plans for issues where it has not been determined that the source of the issues is partially or fully anthropogenic. Additional details for this direction: Since the SPC does not have information that will determine if the source of the contaminant for the issue in the AR that meets the criteria in technical rule 114 the SPC is not required to document any further in the AR.	Discussed with MOE. Table 5-6 will be moved from Section 5.5 (Work Plan) to Section 5.7 (Data Gaps) to indicate that the source of some of the identified issues is a data gap and how to fill that data gap. Text in Section 5-7 will be added to describe this data gap. Also added text on the technical studies as section 5.4, and inserted list of technical reports as Table 5-5.	Done	Section 5.5, 5.6 and 5.7, Table 5-7, section summary 5, 9
8	The AR be revised to remove the work plans to identify threats and delineate issue contributing areas. Additional details for directions 7, 8 and 9: The technical rules allow or require work plans for specific type of work. The identification of issues or the determination if the issue is anthropogenic or not is not one of the allowed work plans. Any future information that the SPC becomes aware of to identify issues and that may impact the conclusions of the AR can be added at a future date.	Discussed with MOE. In Table 5-6 in Section 5.5, a note will be added to state that all issues are identified as allowed under Rule 115.1. In Section 5.5, 5.6, and Section 7.1.4, text will be revised to state that some of the issues identified are naturally occurring, while the source of the rest of the issues is yet to be determined. Therefore all issues identified are as per Rule 115.1 and are currently not subject to Rules 115 and 116. If more information becomes available to the SPC to determine if an issue is wholly or partially due to anthropogenic sources, then work to satisfy Rule 115 or a work plan to satisfy rule 115 must be included in a subsequent AR. Work plans will be removed from Section 7.4, Section 9.1 (data gaps) and section summary 9 work plan tables. Text related to this work will be removed from section summaries 5 and 7.	Done	Section 5.5 and 5.6, Section 7.1.4 and 7.4, Section 9.1 Table 9-1, Section summary 9 Table 1, Section summary 5, Section summary 7
9	The AR be revised to correct the rounding errors in the grand totals presented for each of the sub watersheds in table 3-1.	Table 3-1 will be corrected in Section 3.	Done	Section 3.2.5 Table 3-1
10	The AR be revised to include a description of the analysis undertaken for each factor set out in technical rule 92 that contributes to the area vulnerability factor which was used to determine the vulnerability factor for each IPZ-2 for each of the three intakes under assessment.	More text will be added to Section 4 to describe each factor set out in Rule 92 for the determination of the area vulnerability factor, for each of the three intakes IPZ-2s (factors are Percentage of the Area of the IPZ-2 that is Composed of Land, Land Cover, Soil Type, Permeability of the Land, Slope of the Land, Hydrological, Hydrogeological, and Transport Pathways).	Done	Section 4.2.6
11	The AR be revised to ensure the uncertainty analysis documented is consistent with rule 14. Additional details for this direction: The rationale for setting the uncertainty factor is unclear and the level of information provided currently in the AR suggests that the uncertainty level for the scoring is low but it does not indicate how this level was determined using the factors listed in rule 14.	Section 4.2.7 provides a summary of the uncertainty, and points the readers to Appendix 13 for more details. Appendix 13 will be revised to provide additional discussion of these factors: calibration/validation, area and source vulnerability factor accuracy (in assessing vulnerability of hydrological features). The other factors of data, methods and models used are already provided.	Done	Appendix 13
12	The AR be revised to correctly identify that the centre point of the IPZ-1 is the entry point where raw water enters a system not the intake crib. The Source Protection Committee shall reword 'from the crib' to 'from the entry point where raw water enters a system' to be consistent with the rules.	Reference to 'intake crib' could not be found. In Section 4.2.3 (IPZ-1 delineation), text referring to the 'where the intake draws its water from the lake', 'intake centre', and 'intake' related to the IPZ-1 delineation, will be replaced with 'from the entry point where raw water enters a system' to be consistent with the technical rules.	Done	Section 4.2.3
13	The AR be revised to clarify the on-shore portion of the IPZ-1 for the Lambton Area Water Supply. The SPC must ensure the on-shore portion of the IPZ-1 in the marina area matches the legend colour for the on-shore portions of the IPZ-1 to ensure consistency in the mapping.	The difference in color between the legend and the map will be corrected in the right-side frame of Map 4-2.	Done	Appendix 1 Map 4-2

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14	The AR be revised to include an explanation of the method used to delineate the percentage of managed land areas and livestock density. Additional details for this direction: It appears that the method used is correct but there are insufficient details to fully determine this or explain the method used here.	The response to Direction 14 is the same as for Direction 2. The method followed will be clearly documented as was done for the LTV AR. Text will be added to Section 7. For the assessment of chemical threats related to the land application of nutrients, vulnerable area is examined (only if a threat can exist there), while the agricultural managed land refers to all agricultural managed land including cropland and pastureland. For the assessment of chemical threats related to the use of land for livestock grazing, pasturing or outdoor confinement area or animal yard, the whole of the farm itself is examined, while the agricultural managed land refers to only that agricultural managed land being assessed, i.e. grazing land, pasture land, outdoor confinement area or animal yard. No significant threats were found related to this activity.	Done	Section 7.1.1.3
15	The AR be revised to clarify that the Source Protection Committee can only add local threats, other than the 21 prescribed drinking water threats, upon approval from the Director.	Minor text revision will be made.	Done	Section 7.1.2, Section summary 7, LAWSS summary
16	The AR be revised to correct the HVA and SGRA mapping references in the report. Additional details for this direction: Map 4-7 and Map 4-8 should be referenced as Map 4-5 and Map 4-7.	In Section 4.4 (HVA), the Map 4-5 (HVA) is correctly referred to. Map 4-6 (aquifer vulnerability) is also referred to. In Section 4.5 (SGRA), Map 4-7 (SGRA delineation) is correctly referred to. Map 4-6 (aquifer vulnerability) and Map 4-8 (SGRA vulnerability score) is also referred to. The text describing the maps referenced in Section 4.4 and 4.5 will be revised to better clarify what the maps show.	Done	Section 4.4, 4.5
17	The AR be revised to correct the terminology around conditions in the report. Additional details for this direction: The AR must be clarified that the regulation limits the tools to address conditions when developing policies for significant drinking water threats.	Based on clarification and further information received from MOE, the introductory paragraph in Section 6 on page 6-1 will be revised so it clarifies that "... activities that are significant DWT must be managed...", and the reference to conditions in that statement will be removed. This is because Part IV tools of the CWA do not apply to conditions. Text throughout Section 6 will be revised to ensure correct reference is made to the rules that describe what conditions are, as per directions also received on the Lower Thames Valley AR. Text in Section 6.1.3 below Table 6-2, and in Section 7.1.3 will be revised to make reference to rule 68 (event based IPZ-3), 126 (identifying conditions), 140.1 and 141 (conditions that are significant threats).	Done	Section 6 and Section 7.1.3, section summary 6
18	The AR be revised to correct the range for moderate and low threat risk levels in the report to ensure consistency with the rules. Additional details for this direction: The range is greater than 60 but less than 80 for moderate, and greater than 40 and up to 60 for low.	Range for moderate and low risk levels in the proposed AR were based on Rules 128 (2) (significant risks), Rule 133 (2) (moderate) and Rule 136 (2) (low). MOE has since confirmed that we are already in compliance with this direction, and no changes to the AR are necessary.	No change required.	NA
19	Update Section 5.2 to correctly reference how issues can lead to the identification of significant drinking water threats to ensure the public understands any activity or condition in an issue contributing area can be considered a significant drinking water threat as it relates to that issue.	Text will be revised to indicate that significant threats can be identified through the issues, conditions or event based approach.	Done	Sections 5.2, 6.1.3, 7.1.1, 7.1.3, 7.1.4, section summary 5, section summary 7
20	Once the AR is revised based on these directions, the Source Protection Authority shall consult with the Source Protection Committee and with those persons or bodies impacted by the changes in an appropriate manner before resubmitting the amended AR in accordance with the Act and provide proof thereof with the resubmitted AR.	Discussed with MOE. Notice will be posted on the website as well as in local newspapers. There are no additional property owners affected or to be consulted with. The notice will indicate in a general sense the amendments made to the report, and will invite stakeholders and the general public to comment on the report within the comment period. The notice will also encourage them to call or visit the SCRCA to discuss concerns or questions. The report will be posted for a 15 day comment period on the website, and hard copies made available at the SCRCA. There will be no public meeting.		NA

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21	The Source Protection Authority shall include the resubmitted AR a memo or document outlining the changes made to the AR, as per these directions, including chapter references in the AR where changes were made; and	This document outlining the changes made to the AR as per the MOE directions will be sent to the MOE with the amended proposed AR. Section 1 will be updated to reflect this amended proposed AR. Also text will be included in section 1 to indicate that the terms updated or amended AR used throughout the report refers to a future version following approval of this amended proposed AR. Minor corrections to table numbers in Section 1. Table 1-5 added to show summary of consultation on the report.	Done	Cover letter, Appendix 4 along with MOE directions letter, Section 1, section summary 1, section summary 9.
22	The AR is to be submitted to the ministry in the form of both hard and electronic version for the ministry's review.	Hard copies and CDs of the report will be sent to the Ministry of Environment on or before February 28, 2011.		NA