

## CONSOLIDATED CSAP Q&As

**DATE: September 7, 2018**

**PROJECT NAME: Consolidated CSAP Q&As**

**THURBER PROJECT No: 21627**

The purpose of this document is to provide a single location for the numerous updates and clarifications that have been provided to Approved Professionals by ENV, Performance Assessors and Detailed Screeners.

### **Information Sources:**

- **CSAP Members Updates (Summer 2012 to Summer 2018)**
- **CSAP Lessons Learned Database (May 2010 to September 2016)**
- **CSAP Webinars, Professional Development Workshops**
- **ENV Communications**

### **SITE PROFILES**

**Q: For sites with Schedule 2 uses and no APECs, is it possible to request the Director issue a “No Site Investigation Required” decision at the time a Site Profile is submitted?**

A: Yes. The requirements for requesting a “No Site Investigation is Required” are provided in Section 3.3.3 in Procedure 12.

Reference – Procedure 12, Section 3.3.3

**Q: Is a Site Profile required for a site that has been contaminated by a leaking residential heating oil tank on a neighbouring property?**

A: While a residential heating oil tank is not considered a Schedule 2 use under the CSR, sites that receive a NOM become a Schedule 2 use site as per the CSR Schedule 2 E10. As such, there would be a trigger for an affected party to submit a Site Profile if requested by the local government and identify this Schedule 2 use. It is recommended that where possible, the provisions in Schedule 12 for requesting a “No Site Investigation Required” be considered.

Reference – ENV Communication

## **SITE INVESTIGATION**

**Q: For the purposes of a Detailed Site Investigation submitted to support a CoC or AiP application, can off-site delineation be demonstrated using risk-based standards or modelling?**

A: No. Off-site delineation must be fully completed to numerical standards even if the numerical exceedances are at acceptable levels when evaluated in a risk assessment. ENV considers risk assessment a method of remediation, not delineation.

Reference – CSAP Members Updates Summer 2012 and Winter 2018

**Q: If fill soil from an unknown source is identified at a site and it contains a concentration of a substance that exceeds an applicable numerical soil standard but that concentration is below the regional background concentration, would this be considered an AEC?**

A: No

Reference – email clarification from ENV dated December 21, 2017.

**Q: Should a sodium concentration reported by the laboratory as part of a general metals scan be compared to the CSR standard for sodium ion?**

A: A general metals scan is not the regulated method for determining sodium ion concentrations regulated in CSR Schedule 3.1. If sodium is not identified as a PCOC for the site, then sodium does not need to be compared to the CSR standard for sodium ion.

If salt is identified as a PCOC for the site, sodium ion concentrations need to be obtained using the regulated laboratory method (i.e. saturated paste). Sodium concentrations reported as part of general metals scan will not be sufficient for assessing this PCOC.

Reference: CSAP Lessons Learned Database dated May 1, 2010

**Q: Can a statistical evaluation be used for groundwater data to determine if it represents a single population?**

A: During site investigations, TG2 has been widely used for characterizing a volume of contaminated soil; however, it is noted that TG2 states at the outset that “Material such as soil, fill, sludge or water can become contaminated by similar processes and events. Analytical data derived from samples of these materials may therefore represent a single population. A statistical evaluation of the data may be done, and the specific volume of material that the data may represent may be characterized and classified.”

As such, it is allowable to use a statistical evaluation when characterizing groundwater at a site. It is recognized that for groundwater, demonstrating the data is representative of one population is likely to be more complex than for soil and as such, additional rationale and supporting evidence may be

required. The Interstate Technology and Regulatory Council (ITRC) provides resources for using statistics for evaluating groundwater.

Reference: Discussions with ENV and fellow APs

**Q: Can the absence of detectable concentrations of substances listed in Table 1 of TG4 be used to refine the list of vapour PCOCs when the contaminant source is not diesel or gasoline. For example, if a parameter is identified as a vapour PCOC at a site where poor quality fill has been identified as an APEC, can it be removed as a vapour PCOC if no detectable concentrations are reported in soil or groundwater?**

A: Yes, the substances listed in the Table 1 of TG4 can be removed as vapour PCOCs regardless of the source. Substances not listed in Table 1 of TG4 cannot be refined based on non-detectable concentrations in soil and groundwater data and must be assessed using the approaches described in TG4.

Reference: CSAP Members Update Summer 2018

**Q: When using soil vapour data obtained from a vapour probe or monitoring well to estimate indoor and/or outdoor air concentrations, what is the sample depth criteria for selecting the appropriate Vapour Attenuation Factor?**

A: The selection of a VAF is based on the distance between the bottom of the bentonite seal and the bottom of the existing or proposed building foundation (indoor exposure) and the ground surface (outdoor exposure).

Reference – Protocol 22, Table 1, footnote 2 and CSAP Lessons Learned Database (2010-05-01)

**Q: Can a single round of vapour sampling be considered sufficient to assess worst-case conditions at a site?**

A: TG4 includes a requirement to assess seasonal variations to ensure worst-case scenarios are measured at a site. However, TG4 also allows for the use of guidance from other jurisdictions and the ITRC has provided maximum ranges for seasonal variations. If measured concentrations are below the standards by these factors, a single round of vapour testing may be sufficient.

Reference – CSAP Professional Judgement Paper

## **NOTIFICATION REQUIREMENTS**

**Q: If risk assessment was conducted at a site but no physical remediation or risk management was conducted, is the submission of a Notification of Independent Remediation required?**

A: No. Fact Sheet 21 requires a NIR be submitted to ENV within three days of the start of any remediation activity that *“involves handling, managing (including risk management), or treating contamination.”* Further, the CSR defines risk management as *“actions, including monitoring, designed to prevent or mitigate risks to human health or the environment caused by contamination at a site.”* Risk assessment alone is not identified in Fact Sheet 21 or defined as risk management in the CSR, it is not considered remediation for the purpose of submitting a NIR. Therefore, submission of a NIR is not required when risk assessment alone is carried out at a site.

Reference – CSAP Members Update Winter 2014

**Q: Is a spill report required when soil and/or groundwater contamination is identified in relation to an undetermined release or discharge from a residential heating oil UST?**

A: Typically, no. An exception would be where contamination is indistinguishable from a recent release or discharge of heating oil in an amount greater than 100 L.

Reference – CSAP Members Update Spring 2016

**Q: Is submission of a NIR required in the case of independent remediation relating to emergency response to a spill of a polluting substance?**

A: In the case of an emergency response, a NIR is not required to be submitted to ENV. However, once the independent remediation is completed, a Notification of Completion of Independent Remediation must be submitted to ENV within 90 days regardless of whether or not the remediation was related to a spill response.

Reference – CSAP Members Update Spring 2016

## **INSTRUMENT APPLICATIONS**

### **Q: Does an Approval-In-Principle “lock in” the CSR standards at the time it is obtained for a future Certificate of Compliance application?**

A: No. When making a CoC application for a site with an existing AiP, the CSR standards and ENV protocols/guidance/procedures applicable at the time of the CoC application need to be considered. For example, if a site has an AiP that excludes drinking water use, the CoC application needs to consider the exclusion of this pathway based on current ENV requirements.

Reference: CSAP Lessons Learned Database dated May 1, 2010

### **Q: If multiple instruments are being requested as a single submission and are based on a single set of reports, are separate SoSCs required for each instrument?**

A: Yes. Each submission will require a separate SoSC; however, only a single fee of \$2,000 plus GST will be required by ENV to review all of the SoSCs.

Reference – CSAP Members Update November 2012

### **Q: Is a source parcel owner or responsible person required to consider communications that have been received from an affected parcel owner after the formal 30-day response window in cases where the submission has not yet been made to ENV?**

A: Yes.

Reference – CSAP Members Update Winter 2015

### **Q: For a risk-based standards submission, do the arm’s length review provisions apply to both the Risk AP and the Standards AP or only to the Risk AP?**

A: The arm’s length provisions apply to both the Risk AP and the Standards AP. ENV does not consider it acceptable for a Standards AP to self-review the numerical standards portion of a Protocol 6 submission (other than a SLRA) for a risk-based standards AiP or CoC. The arm’s length review requirement applies whether or not the contamination extends off-site.

Reference – CSAP Members Update Summer 2016

### **Q: Can an application for a Determination be made based on a Stage 1 Preliminary Site Investigation alone?**

A: Technically, yes. For a site with a Schedule 2 use but with no APECs identified (on or off-site), it is possible that a Stage 1 PSI will be sufficient for a Determination application. An example of this would be a site with above ground petroleum storage tanks that were recently installed, have secondary

containment and no records of releases or discharges to the environment. Regardless of the scenario, strong supporting rationale must be submitted with the application.

Reference – CSAP Members Update Spring 2016

**Q: Can an application for a Determination be made for a site with no Schedule 2 uses?**

A: ENV does not generally support requests for Determinations that a site is not a contaminated site for sites that are not captured under the CSR, effectively non-Schedule 2 use sites. If an application for a Determination for a non-Schedule 2 use is made, the same requirements apply as for a Schedule 2 use site. A Stage 1 PSI would be required and if APECs are identified (including, for example, an underground storage tank on a residential site), a Stage 2 PSI would be required to confirm the site was not contaminated.

Reference – CSAP Members Update Spring 2016

**Q: For affected properties or flow-through sites, can a SLRA be used to obtain a risk-based CoC without consideration of pathways beyond the boundaries of the affected property?**

A: ENV has confirmed that if a site is contaminated due solely to migration of contamination from another property and the site owner is not a responsible person, then a SLRA can be used to obtain a risk-based CoC without consideration of pathways beyond the boundaries of the affected property under HW-3, AW-3 and DF-2. The prohibition on groundwater migrating beyond the property boundary at concentrations > DW standards is also waived in this circumstance.

To use this approach, the following three conditions need to be met:

1. There must be sufficient field evidence, records/statements and data to demonstrate the owner's absence of responsibility for the source site;
2. The affected property must still be fully assessed to meet COC requirements; and
3. It must be demonstrated there is no potential for contaminant concentrations migrating onto to the property to change in the future, which could require monitoring in a PVP if the source site hasn't been investigated or remediated.

When using this approach, please also consider:

- The SoSC must indicate the flow-through nature of the contamination to explain why delineation of the entire extent of contamination beyond the property boundary has not been completed;
- ENV requests that correspondence with the source site owner be provided in the event there are notification requirements.
- An arm's length review would not be required.

Reference – CSAP Members Update Summer 2017

**Q: When is pre-approval from ENV required for submission review by an Approved Professional?**

A: Pre-approval may be required if:

- The applicant is a Responsible Party for a source parcel and the entire extent of contamination (including offsite) would not be delineated and/or remediated and would not be included in the instrument application.
- Local background substance concentrations derived by any methods for surface water, sediments, or vapour would be adopted.
- The application refers to a parcel currently subject to an investigation, remediation, pollution prevent, or pollution abatement order under the Act.
- The application is based on a RA that includes *de novo* modification of TRVs or derivation or use of a site-specific risk-based concentration.

APs are responsible to confirm submissions are admissible under Protocol 6.

Reference – CSAP Webinar September 2015

**Q: Can a risk-based instrument be issued without agreement from an impacted offsite property owner?**

A: As long as APs follow appropriate ENV guidance, a risk-based instrument can be issued by the Statutory Decision Maker despite not obtaining agreement from impacted/offsite property owner

- The Statutory Decision Maker must consider administrative fairness
- Persons potentially aggrieved by such a decision have right of appeal through the Environmental Appeal Board
- Common objections include: potential damages to municipal infrastructure, that risk conditions will result in an economically undevelopable parcel, and that the future value of the property for redevelopment has been impacted by the risk conditions

Reference – CSAP Webinar September 2015

**Q: When reviewing Administrative Guidance 11 communication, what must APs ensure is referenced?**

A: Administrative Guidance 11 communication must refer to the final RA conditions selected for the site.

Reference – CSAP Webinar September 2015

**Q: What is the purpose of a graphic conceptual site/exposure model?**

A: A CSM/CEM is a tool to simply demonstrate linkages between contamination sources and receptors.



Reference – CSAP Professional Development Webinar November 2016

**Q: Is a proposed risk control (e.g., vapour mitigation system to be installed on a future building, site to be capped with 1m of clean fill) eligible for a CofC?**

A: No, a site where the efficacy of the risk control cannot be tested/verified is eligible for a AiP, but not a CofC.

Reference – CSAP Professional Development Webinar November 2016

**Q: Where must the AP ensure monitoring and/or reporting requirements/recommendations be presented?**

A: These requirements must be detailed in the risk-based instrument.

Reference – CSAP Lessons Learned



## **PERFORMANCE VERIFICATION PLANS**

### **Q: When are PVPs not required?**

A: PVPs are not required for submissions where a PVP does not add value or further clarity beyond the inclusion of the risk controls in Schedule B of the CofC, and/or in specific cases (e.g., site groundwater not to be used as drinking water, asphalt paving maintenance) but applicants must provide rationale (e.g., serviced by municipal source, paving to be maintained by City) if not providing a PVP. In cases where a PVP was previously required but is not included based on the above, rationale must be provided. An example of this is that a PVP is no longer required for the risk control “groundwater from the site must not be used for drinking water purposes” for all sites. In cases where rationale is provided supporting the unlikelihood that groundwater would be used as a drinking water source (e.g., in an urban center; where a municipal water supply is available), the inclusion of this risk control in Clause 2 of Schedule B of the CofC is considered sufficient.

In cases where a site is considered to be Type 2 (based on the requirement for institutional and/or engineered risk controls) but a PVP is not required for the site based on the above or professional judgement, ENV has indicated that Schedule B of the CofC should include Clauses 1, 2 and 3.

Reference – CSAP Members Update November 2017

### **Q: When are inspections and/or monitoring of engineered controls required?**

A: Inspections and/or monitoring are not required for engineered controls if rationale is provided (e.g., pavement will be maintained by local government), the inclusion of the risk control in Clause 2 of Schedule B is considered sufficient, and there is no need to include a requirement for inspection. In cases where a site is considered to be Type 2 (based on the requirement for institutional and/or engineered risk controls) but a PVP is not required for the site based on the above or professional judgement, ENV has indicated that Schedule B of the CofC should include Clauses 1, 2 and 3.

Reference – CSAP Members Update November 2017

## **SOIL VAPOUR CONSIDERATIONS**

**Q: What assumptions/controls should be listed in Clauses 1 and 2 of Schedule B of the CofC when vapours are carried forward into a risk assessment and concluded to meet risk-based standards?**

A: The assumed building types/features/controls applied.

Reference – CSAP Members Update Winter 2018

**Q: What needs to be captured in the SoSC and COC if indoor ambient air samples collected from the parkade of a newly-constructed building meet applicable standards and therefore have been remediated?**

A: In the SoSC, indicate that the HVAC was not operating at the time of vapour sample collection and provide rationale for concluding that worst-case samples were collected. Revise Clause 1 of Schedule B of COC to read: “The documents listed in Schedule B indicate that indoor air within the underground parkade of the existing building at the site was measured to demonstrate substances in vapour meet the CSR numerical standards at the site. The assumption of the vapour assessment is: 1. The current building structure, configuration and depth must be maintained. Any change in the structure, configuration or depth of the current building at the site must be promptly identified by the responsible person in a written submission to the Director. An application for an amendment or new Certificate of Compliance may be necessary”.

Reference – CSAP Members Update Summer 2017

**Q: What is the site risk type if using a high density RL VAF for underground parkade with operational HVAC system?**

A: Type 2.

Reference – CSAP Members Update Fall 2016

**Q: When conducting soil vapour assessment and/or risk assessment for a future development, what scenarios must be included: current, future, or both?**

A: Both current and future site use scenarios.

Reference – CSAP Members Updates Summer 2015 and Summer 2018, Protocol 20, CSAP Risk Assessment Practice Guidelines

**Q: What are acceptable methods for VPHv in risk assessment?**

A: The following methods can be used:

1. The method used by ENV for derivation of the Schedule 3.3 VPHv (i.e., 2008 CCME CWS-PHCs TRV and fraction-specific surrogates).
2. The 1995 Golder approach and surrogate TRVs.
3. The 2008 CCME/Health Canada PHC approach for fraction-specific TRVs.
4. A combination of the above.

At this time, the only written guidance is the Golder surrogate approach. ENV accepts alternate scientifically-defensible approaches, if adequately documented.

Reference – CSAP Lessons Learned Database

**Q: Will ENV accept derived TDIs for hydrocarbon fractions?**

A: Yes, ENV will accept scientifically-defensible approaches to deriving TDI for hydrocarbon fractions (VPH and LEPH).

- The tolerable daily intake (TDI) for VPH was developed by prorating the TDI from a single sub-fraction to the mixture (e.g. The TDI for C<sub>8</sub>-C<sub>10</sub> aliphatics of 100 ug/kg.d was multiplied by 1/0.8 to obtain an estimated TDI for VPH of 125 ug/kg.d). The resulting TDI was lower than that based on the C<sub>8</sub>-C<sub>10</sub> aromatic sub-fraction. If the derived TDI is used to represent both the aliphatic and aromatic sub-fractions, the predicted risk would be conservative. Alternatively, the risk can be estimated for each sub-fraction using TDI derived for the aliphatic and aromatic sub-fractions respectively.

Reference – CSAP Lessons Learned

## **SCREENING LEVEL RISK ASSESSMENT**

### **Q: What is the acceptable approach if a SLRA fails for one or more pathways?**

A: A DQRA and risk-based CofC is required.

Reference – CSAP Members Update Spring 2017

### **Q: What are the precluding conditions for SLRA?**

A: As detailed in Protocol 13, SLRA must not be used to screen:

- Inorganic substances in soil or groundwater with a pH<5
- Bioaccumulative substances
- Contaminated vapour (as per Protocol 22 and Technical Guidance 4)
- Contaminated sediment or surface water except where the contamination qualifies as a beneficial use exemption.

Further, exposure pathways associated with the following conditions cannot be assessed under SLRA:

- Deep-rooting plants or trees in areas of soil or groundwater contamination at sites where wildlands, agricultural, or low-density residential land uses apply
- Very high permeability soil or complex hydrogeologic units
- Preferential pathways that transport contaminated groundwater direction to a receiving environment or water well
- Groundwater contamination that extends beyond a source parcel boundary and is not demonstrated to be stable or decreasing

Reference – CSAP Members Update Summer 2015, CSAP Professional Development Workshop November 2017

### **Q: What is a beneficial use under Protocol 13?**

A: Specific contaminants and eligible beneficial uses include:

- Zinc localized around galvanized materials
- Copper localized around copper pipe or bare copper wire
- Boron, chromium, copper, arsenic, chlorophenols, or PAHs localized around treated/preserved wood utility poles, structural timber/pilings
- Road salting

Soil, sediment, groundwater, or surface water contamination that does not extend more than 3m laterally from an eligible beneficial use is not considered to constitute an unacceptable risk. The beneficial use exemption applies to active or closed sites, so long as the beneficial use is ongoing (i.e., it

does not apply at sites where the use was historical). It does not apply to sites where the beneficial use material is/was produced or stored.

Reference – CSAP Professional Development Workshop November 2017, ENV Protocol 13

**Q: Can SLRA be used in tandem with DQRAs at complex sites?**

A: Yes, SLRA can be used to screen out inoperable pathways and to determine which pathways are carried forward to DQRA.

Reference – CSAP Professional Development Webinar November 2016

**Q: If you answer ‘no’ to a question on the SLRA questionnaire, do you need to answer subsequent questions in that section?**

A: No.

Reference – CSAP Professional Development Webinar November 2016

**Q: When dealing with Wide Area Contamination, is delineation and assessment required of contamination beyond your property boundary?**

A: No, you only need to address contamination on your property.

Reference – CSAP Professional Development Workshop November 2017

## **ECOLOGICAL RISK ASSESSMENT**

### **Q: When is completion of Protocol 20 required?**

A: Protocol 20 is required for all DERA, even when a DERA ends at the Problem Formulation.

Reference – CSAP Members Update Summer 2017

### **Q: When can Protocol 1 be used?**

A: Protocol 1 can only be used in conjunction with Protocol 13 or Protocol 20.

Reference – CSAP Members Update Summer 2017

**OTHER**

**Q: Do excavation/trench workers need to be included in risk assessment?**

A: No – if exposure is less than 90 days, excavation/trench worker exposure to contamination is discounted as a component of HHRA and falls under the *Workers' Compensation Act* and Occupational Health and Safety Regulation.

Reference – CSAP Members Update Winter 2016

**Q: When do HQs need to be summed?**

A: HQs need to be summed for substances sharing similar mechanisms of toxicity or target organs.

Reference – CSAP Professional Development Workshop October 2014