Baffinland

Title: AEMP Update Meeting Notes	Date: April 3, 2014
Group/Organization: Baffinland	Meeting Location: Teleconference

Oliver Curran (BIM)	Anne Wilson (Environment Canada)
Jennifer St Paul Butler (BIM)	Paula Siwik (Environment Canada)
Megan Cooley (North/South)	Sean Joseph (NWB)
Christine Moore (Intrinsik)	Phyllis Beaulieu (NWB)
Laurie Ainsworth (PhiStat)	Jean Allen (AANDC)
Richard Cook (Knight Piesold)	Jamie Van Gulck (QIA)
Elizabeth Ashby (Knight Piesold)	Fernand Beaulac (BIM)

NOTES:

Please note that detailed comments regarding the slides were not incorporated as the presentation was distributed to the group ahead of the meeting.

- 60 days prior to operations, we are required to submit an AEMP
- ERP has been recommended to proceed but NIRB; still awaiting Minister's decision. We anticipate starting operations in September/October and submitting the AEMP 60 days prior
- November 2013, previous version submitted after a similar call
- Updated after the call and submitted December 2013
- Looking to show the work that has been done to update the group prior to submitting
- Changes made to Assessment and Response Framework – explained in depth by Christine and Megan
    - Q: If an EEM effect was identified, is that captured here? Is it something that would be treated separately?
        - A: It is applicable to the CREMP and EEM
- Richard and Megan reviewed the CREMP in detail (see attached presentation for relevant slides)
    - Q (Anne): Would it make sense to use median instead of mean to deal with non-detect?
        - A: We've looked at both as mechanisms for comparison but the way we are dealing with non-detects – currently, our study design is only based on detectable data for parameters where most data reports above MDLs. For parameters with a high proportion of data that reports below MDL, we have taken a 'proportion' approach to compare the percentages of data that report below MDLs.
        - Anne: I am interested to read the details about this approach. I don't think anyone else has used this approach.
    - Q (Anne): Want to know whether the Bray-Curtis method would be part of the CREMP monitoring for the EEM?
        - A: We haven't rolled forward with this at this point. Not to say this isn't something that couldn't be included later.
    - Q: How successful have you been at capturing Young of the Year so far?

        - A: We had good success at captures in the lakes last year and are confident it won't be an issue (i.e., that we can obtain reasonable sample sizes in the future)
    - Dale reviewed the EEM Study Design slides in detail (see attached presentation for relevant slides)
    - Q: What are the differences between the streams???
        - A: The Ref-3 is similar on a benthic basis but in terms of fish, different from the nearfield.
        - The fishless reach of Mary River was the only one that came back similar to nearfield (benthic)
        - Ref-3 was only location could capture 100 fish for comparison, but they were significantly different
    - Q: Is it your initial assessment that you can do a BACI?
        - A: We are exploring this option but can't speak to it at this time.
    - Q: How were the rivers for capture rates of YOY ARCH? Less friendly?
        - A: During our fall 2013 characterization, MRY-REF2 was the only stream environment that we were able to capture some YOY ARCH. Capture results from all other streams show older than YOY.
        - A: Does not have historical capture data on hand with YOY capture details, but Megan can compile some baseline data regarding YOY capture rates for waterbodies in the Mine Area.
    - Q: Does the fish barrier study consider various species and life stages of fish?
        - A: Focus is solely on ARCH. We're going to be looking in the open water season – there will be higher flows in spring when the fish are moving upstream and monitoring fall flows when fish are heading downstream into the lakes. Will be looking at different seasons and the effects various flow conditions may have on all fish life cycles/stages
        - A: Mine area streams/rivers freeze solid in winter and small tributaries are used seasonally (i.e., open-water season) primarily by juveniles (i.e., spawning/overwintering not applicable in these environments).
- Water and sediment quality benchmarks reviewed by Christine
- AEMP Reporting reviewed by Richard
    - Q (Anne): Very comprehensive presentation, may have further questions once reviewed. Benchmark development – for those parameters using 97.5 percentile approach for sediment, will the additional baseline collection in 2014 adequately characterize the baseline for that the AEMP benchmark development?
        - A (Christine): Yes, the benchmarks put forward will be well represented. We have more water quality data, and we're confident that the additional 2014 sediment baseline data will give us what we need.
    - Q (Anne): When you get to the method of AEMP benchmark development using twice the method detection limit, there can be a bit of noise in the data. Would 2xMDL be overly conservative? It might be a lower number than what would be feasible? I'll have to think about that more.
        - A (Christine): We had elevated detection limits in some data, during baseline review – there has been substitutions made in those cases. Right now, it has not been overly conservative. In instances when we need to, we go with the other guidelines.
    - Q (Anne): Nutrient loading study design (sp) – where is that at?
        - A (Richard): That is now part of the CREMP and won't be a separate component study, contrary to what had been indicated in the agenda.
    - Q: South of 60, more and more, people and mines, are surprised by selenium values. Do you anticipate this to be an issue?
        - A: In FEIS, we had higher detection limits, so it was flagged, in 2012 out of 75 samples around mine site we had 2 data points for selenium that were above method detection limits. We're mindful it can be an issue and we will keep our eye on it, but not expecting it to be a parameter of concern.