SUMMARY

RC QUESTIONS, COMMENTS & CONCERNS ON QUALITY CONTROL (QC)

JUNE 1, 2023

encorp re
RECYCLE

SUMMARY OF RC QUESTIONS, COMMENTS & CONCERNS ON QUALITY CONTROL (QC)

The following document presents a summary of the questions, comments and concerns raised by redemption centres (RCs) during an engagement webinar on Quality Control (QC), as well as actions that will be undertaken - where applicable - by Encorp to address them.

On May 24, 2023, Encorp Atlantic held a *Quality Control Q&A Webinar* for RC operators. The overall goal of the webinar was to engage RCs in discussion and provide an opportunity to better understand Encorp's QC process. It aimed to:

- Make QC more transparent by providing more detailed insights into how Encorp's current QC measures work and what Encorp looks for during QC.
- Introduce Encorp's new reporting tool (*Accuracy Trend Report*) and *Accuracy Awards*, which will be launched in the fall of 2023.
- Give RCs the opportunity to ask questions and voice concerns.

Two team members from Encorp - Colette Boucher (Vice-president – Finance) and Gilles Doucette (Director of Operations), as well as the statistician who developed Encorp's QC methodology (Jacques Allard – Atlantic Statistical Analysis Inc.), led the webinar presentation and answered questions from participants.

The webinar was structured following this meeting agenda:

1) Introduction

2) Encorp's QC Measures
- **Why do we need QC?**
- **Fairness**
- **Open door policy**
- **Recent changes to QC (April 1, 2023)**
- **Monitored Mode**
- **Accelerate Mode**
- **Abnormal Bags/Tubs**
- **FAQ**

3) What do we check for during QC?
- **Procedures at processing centre**
- **Deposit-bearing vs. non-deposit-bearing containers**
- **Non-acceptable containers**
- **FAQ**

4) New tool – QC Accuracy Trend Report
- **Example of an RC with a good accuracy trend**
- **Example of an RC with a worrisome accuracy trend**
- **FAQ page**

5) Accuracy Award

6) Open Q&A session

The official slide deck from the webinar is available on Encorp's website via its *Quality Control* webpage (*RC Operators* menu): https://encorpatl.ca/rc-operators/quality-control/. The webinar's slide deck will remain on Encorp's website as useful complementary information to the official document explaining Encorp's QC program, titled *Encorp's Quality Control (QC) Measures* (which has been available on the website for RCs since 2019).

Furthermore, also available on Encorp's *Quality Control* webpage is an example of the new reporting tool presented to RCs during the webinar, which Encorp proposes to start issuing to RCs monthly starting in the fall of 2023: the *Accuracy Trend Report*. The goal of this new reporting tool is to help RC operators stay on top of their QC results and take action earlier. In the document provided on Encorp's website, there are examples of accuracy trend graphs for two fictitious RCs (one with a good accuracy trend and one with a more worrisome accuracy trend), as well as an FAQ with insights on interpreting the graphs shown.

Finally, there is information on the *Quality Control* webpage about Encorp's announced intent to start giving out *Accuracy Awards* twice per year, beginning in the fall of 2023, to RCs that have shown excellent accuracy trends over the past 12 months (estimated average error between -1% and +1% and estimated relative standard deviation of the errors less than 5%). RCs will receive prizes to share with their employees as part of these awards. Encorp hopes this recognition among peers will foster the sharing of best practices among RC operators, and Encorp will explore ways to facilitate this knowledge exchange.

More information about the launch of the *Accuracy Trend Report* and *Accuracy Awards* will be provided in communications to RCs closer to their launch.

Participants

The French session of the *Quality Control Q&A Webinar* was held on May 24, 2023, at 9:30 am. It had participation from five RC representatives and two Department of Environment representatives.

The English session of the *Quality Control Q&A Webinar* was held on May 2023 at 11:30 am. It had participation from 14 RC representatives, one representative from the Eastern Recyclers Association (ERA) and one from the Department of Environment.

All RCs, regardless of whether or not they attended the webinar, received a follow-up email from Encorp the next day on May 25, 2023, with links to all the presentation materials (made available via Encorp's *Quality Control* webpage).

Summary - Questions, Comments & Concerns Received by RCs

Prior to Webinar
Encorp received the following questions and comments prior to the webinar from the Eastern Recyclers Association (ERA). It had prepared answers to these, which were addressed among the presentation slides during the webinar itself.

Question/Comment/Concern	Answer provided by Encorp	Action(s) to be taken by Encorp
Are damaged bulking containers (i.e., ripped bags) exempt from QC?	Not necessarily. Encorp encourages RCs to inspect bulk bags/tubs before use and not use damaged bulk bags/tubs (ex.: holes big enough to drop containers, large tears, etc.). Damaged bulk bags/tubs should be returned to Encorp.	Encorp will make sure to inform its service providers to be more careful about inspecting bulking materials and returning damaged bulking containers back to Encorp.
Why aren't "trends of inaccuracies" clearly defined with a clear trigger point of when an RC's performance requires it to change from Monitored to Accelerated Mode?	A trend of inaccuracy means that a substantial number of bags/tubs are reporting consistent errors. This may occur early in Monitored QC and require the RC to be moved to Accelerated Mode. Experience has shown that using a mathematical algorithm to trigger Accelerated Mode is not feasible. Some RC's counts become inaccurate by a large amount within a short time period, others do so over a year, and others simply vary a lot near 0. An RC whose counts are only impacted by naturally occurring errors will not be penalized, even if it is moved to Accelerated QC mode.	Encorp will add more detailed explanations to its *Quality Control (QC) Measures* document related to the "trends of inaccuracies" wording and include these revisions among any other necessary document content improvements in a revised version that will be republished/reposted to its website (fall 2023).
Why is it that upon completion of the Accelerated QC sampling process, if an RC is entitled to reimbursement, it returns to Monitored Mode, but if an RC is penalized with a chargeback, it remains in Accelerated Mode for another round of 225 bags/tubs?	If Encorp keeps an RC that under-reports its counts in the Accelerated Mode, it is doing the counting for the RC – which is not the purpose of QC. Once the RC receives its report that it is under-reporting along with its reimbursement, it should look into fixing the issue that is causing under-reporting. Note that Encorp's new *Accuracy Trend Report* will also show RCs much earlier if they are under-reporting (or over-reporting) their counts – giving them the opportunity to correct.	n/a

Why does an abnormally "high" quantity detected on a tag send the bag/tub directly to QC, but an abnormally "low" quantity detected on a tag does not?	Low-quantity tags are not sent to QC because Encorp gives the RC an opportunity to correct the number on the tag. (Processing centre takes a photo, and Encorp follows up with a phone call to RC.) High quantity tags are sent to QC because it is the only way Encorp can truly validate if the quantity is indeed accurate. There is an expectation that most bulk bags/tubs can only fit a certain number of containers. When the count on the tag is flagged as abnormally high, it could be a counting error, or it could be because the bag/tub has lots of small containers, and the only way to know for sure is to verify via QC. Note that Encorp has on many occasions reimbursed RCs for bags with tags flagged as having an abnormally high quantity - the container count was actually over what was reported on the tag. RCs should also be reassured by the fact that abnormal bags/tubs that are sent to QC are verified, but they are not included in the Monitoring or Accelerated QC computations, or in the *Accuracy Trend Report*, unless they have also been randomly selected within the Monitoring or Accelerated QC protocol.	n/a
Are ceramic beverage containers rejected?	Ceramic is a contaminant for glass. It is very important that ceramic containers ARE NOT placed in bulk tubs with glass. Ceramic is NOT an acceptable container type. It is not one of Encorp's current material sorts. Encorp is working with the Department of Environment to resolve the issue. ANBL will stop selling these containers. In April 2023, Encorp advised RCs that they can refund ceramic alcohol containers to their customers – but that they should set these containers aside for now. Encorp will pay RCs the refund and handling fee on these, but it is still looking into the best way to collect them and track them until ANBL no longer has any on its shelves. A communication is in the works with instructions to RCs on what to do with ceramic containers.	Encorp will be issuing a follow-up communication to RCs in the summer of 2023 when it is ready to collect ceramic containers. RCs can rest assured that Encorp will be paying RCs the refund and handling fee for all ceramic containers collected.

Are private-label (homebrew) containers rejected?	Yes. RCs should NOT accept these from customers. Homebrew containers usually have no label and cannot be found on ANBL's product list.	n/a
Are RCs penalized if contaminants are found in bags/tubs?	Any penalty Encorp charges for contamination needs to be supported with proof of costs being incurred and only done in extreme cases. If an RC receives contaminated shipping materials (bags/tubs) from Encorp's service providers, it should take a photo and send it to Encorp (Gilles Doucette). The RC can still use it, but Encorp will have proof that the contamination was not the RC's fault.	Encorp will continue ongoing communications with RCs on the issue of contamination.
Historically PET and aluminum represent 90% of redeemed containers in NB. In Monitoring QC, why does 20% of the sample consist of containers of type "Others"? That is <u>twice</u> the actual representation of product being processed at the RC.	When using a random sample to estimate an *average* (like the average error), most often the quality of the estimate depends only on the sample *size* (e.g., 10, 50, 100 bags or tubs) and not on the sampling *ratio* (e.g., 1%, 5%, 25% of the bags and tubs). The quality of the estimate depends on the sampling *ratio* only when the sampling ratio is larger than approximately 25%, a situation which does not occur in the Encorp QC. That is why sample sizes for non-PET and non-aluminum recipients are relatively high. When estimating the *total error*, the number of bags in each sort class (Aluminum, PET, Glass, Others) is taken into account: the average error is multiplied by the number of bags or tubs in the sort class. The quality of the estimate also depends on the consistency of an RC's errors. It is much more difficult to assess an RC whose bag-level errors vary between, say, –500 and +500 than one whose bag-level errors vary between, say, –50 and +50. The sampling protocol also takes into account this dependency.	n/a

Why does the ratio of bags and tubs (PET vs. Aluminum vs. Other) change so dramatically when changing from Monitoring QC to Accelerated QC? The ratio of products being sent for QC should remain constant throughout the QC modes and be a correct representation of volumes being processed at an average RC in New Brunswick.	While this statement may intuitively appear correct, it is mathematically incorrect. Encorp has chosen to focus on the accuracy of the RC's total count (i.e., the total for all sorts combined). The sample allocation between the sort classes is mathematically optimized to obtain the best estimate of the true total count given the sample sizes (50 or 225 bags and tubs per 6 months).	n/a
The policy for chargeback for abnormal tag quantities should ALSO require the error to be greater than 2%, not just greater than $10. With the current model, a bag of sort 6 having a labelled quantity of 5000 units could be levied a chargeback of $10 for an error rate of 1.3 %. (based on 5 cent deposit, 5.176 cent handling fee, and 5.176 cent administration fee). It should not be acceptable to levy a chargeback when the result is actually within the acceptable limits.	Encorp seldom chargebacks an administration fee on abnormal tag quantities. The chargeback does equate to roughly 2% if you only consider the handling fee and the deposit. However, Encorp will review its policy on abnormal tags by reviewing data and past adjustments.	Encorp will review its $10 threshold for chargebacks (abnormal tags quantities). Revisions to the chargeback threshold - if applicable - will be included among any other necessary content improvements to Encorp's *Quality Control (QC) Measures* document, which will be republished/reposted to Encorp's website (fall 2023).

During Webinar (Q&A Session)
Encorp received and addressed the following questions and comments written in the webinar's chatroom – as well as verbally from participants - during an open Q&A session and discussion at the end of the webinar.

Question/Comment/Concern	Answer provided by Encorp	Action(s) to be taken by Encorp
Some water bottles often don't have labels, do we need to refuse them?	Technically, RCs are supposed to refuse them if they do not have a label.	n/a
I had a bag open yesterday in the Enviropactor truck, could it end up at QC?	Yes, the bag could go to QC, but RCs should rest assured that one-off bags with inaccurate counts do not significantly affect the RC's accuracy trend.	n/a
Are the new QC Accuracy Trend Reports available right now?	No, they will be sent to RCs starting in the fall of 2023. In the meantime, RCs can call Encorp anytime to check on how their centre is performing on QC.	Encorp will launch the *Accuracy Trend Report* for RCs in the fall of 2023. More information will be communicated to RCs on this topic in the Summer RC Journal and subsequent communications.
Our centre has a special permission to send certain recyclables by the pound, are we going to be penalized by QC for that?	RCs can choose whichever method they feel most accurately reflects the container count in the bag/tub. However, they should verify the accuracy of their method often. If they find their method is negatively affecting their overall accuracy trend, they may want to make some adjustments.	n/a
What has the accuracy rate been for the past 3 years, and how many RCs have been in Accelerated QC Mode in the past 3 years?	Accuracy for the past 3 years has been very good overall. There are generally between 6 and 8 RCs in Accelerated QC Mode for a 6-month period, and it is often the same RCs that go back in Accelerated Mode after the sampling period ends. Encorp hopes the new *Accuracy Trend Report*, as well as the launch of new *Accuracy Awards*, will encourage and help more RCs to take action to correct their accuracy trend and stay in Monitored QC Mode.	Once Encorp launches the *Accuracy Awards (*fall 2023), it will facilitate the sharing of best practices from RCs that maintain excellent accuracy trends with all RCs.

Just curious how RCs can account for broken glass in the tubs. In theory, if someone was within 1-2% on actual count, but then there's another 2-4% breakage of bottles, what does that mean for the RC?	Customers shouldn't come with broken bottles, and they shouldn't end up in bulk tubs, though Encorp recognizes that mistakes happen. Overall, this should have a minimal effect on an RC's accuracy trend, as QC looks at multiple bags/tubs and not just one-offs to establish the trend line. Also, the recounts done at QC check for the neck of the bottle specifically (each bottleneck counts as one bottle), so it does not matter if the bottle broke when in transit.	n/a
Ceramic, large steel alcohol cans, and small steel alcohol cans are all part of the program, but there is no sort for these… What is the solution? **Do you want RCs to mix steel alcohol containers with steel non-alcohol containers?** **For large alcohol steel cans (20 cents deposit), do you want RCs to reimburse consumers 10 cents and then only get reimbursed 5 cents ourselves?**	Encorp is currently working with ANBL to phase out ceramic and ceramic products will be taken off the shelves in the coming weeks (summer 2023). RCs should continue accepting them from customers and giving customers their refund. RCs should then simply set ceramic containers aside and wait for more instructions from Encorp. Do NOT mix ceramic in with glass. A communication will be sent to RCs when Encorp is ready to collect the ceramic containers. For the steel cans, they can all go in sort 8 (non-alcohol steel), since there is a very small volume of alcohol steel cans. For each large alcohol steel can with a 20-cent deposit, RCs can add to their tag count two 5-cent units in order to be properly reimbursed a 10-cent refund. As of April of 2024, it is anticipated that Encorp's sort list will be reduced and able to mix alcohol and non-alcohol for many sorts.	A communication regarding ceramic containers will be sent in the summer of 2023 to RCs once Encorp is ready to collect the ceramic containers. RCs can rest assured that Encorp will be paying RCs the refund and handling fee for all ceramic containers collected. Encorp will send communications to RCs to reinstate instructions about steel cans. Encorp will keep RCs updated on its Sort List and anticipated changes for April 1, 2024.
What period of time will the first Accuracy Trend Report RCs receive cover?	The *Accuracy Trend Report* each RC receives will cover a 2-year period. Since there is no QC for the period of October 2022 to March 2023, Encorp must wait until the fall to gather at least 6 months of recent data before issuing the first report.	RCS will be notified by Encorp in the fall of 2023 once their first *Accuracy Trend Report* is ready. It will keep RCs informed, in the meantime, via its RC Journals and subsequent communications.
Will Rayan only do QC on glass?	Yes, Rayan does and will continue to only do QC on glass.	n/a

Can Hebert's Recycling counters count crushed cans?	Hebert's Recycling is responsible for QC for all non-glass materials. They don't have a counter system; they manually do the recounts. This means yes, they can count crushed cans. As long as the cans are not flattened like a hockey puck (need to be able to see the markings or "Return for Refund" message), they can be tossed in bulk bags.	n/a
Why does the QC process chargeback for all bags shipped even though particular sorts are not over/under the allowed 2% error range? **For example, if some sorts are over-reported and others are not, why include those that are not over-reported in the overall chargeback?**	Encorp actually only chargebacks on bags/tubs QC'd in Accelerated Mode based on material sorts. Each material sort's results are taken into consideration, and the aggregate total needs to be below -2% for a chargeback to be applied. For example, if an RC has: -3% on PET = -30,000 containers +2% on Aluminum = +20,000 containers 0% on Other & Glass = 0 containers Container adjustment will be -10,000 containers (assuming RC has an overall accuracy below -2%).	As of May 25, 2023, Encorp added wording in its *Quality Control (QC) Measures* document to specify that RCs only get chargeback by material sort. Encorp will also do some content improvements to its *Quality Control (QC) Measures* document and republish/repost the document to its website (fall of 2023). The new revised version will feature an extra page with a clear example of an RC's Accelerated Mode report card's results in order to better explain chargeback calculations.

This system is really old – let's not claw money back from the centres, let's focus on helping RCs get accurate counts. It feels like Encorp is trying to take money back from RCs and ignoring them when they're cheating themselves.	Encorp's QC program was designed on the premise that QC should only validate if the measures the RC has in place – to ensure accurate counts - are working – it is still the responsibility of RCs to properly sort and count containers. Once the RC receives a report that it is under-reporting along with its reimbursement, it should look into fixing the issue that is causing under-reporting.	Encorp's new *Accuracy Trend Report* (to be launched in the fall of 2023) will help show RCs much earlier if they are under-reporting (or over-reporting) their counts – giving them the opportunity to correct.
Encorp has increased the percentage of glass being QC'd because they're interested in the weight of the glass – will this skew the overall results? RCs will pay far more attention to what they sort the most, and less attention to what they sort a small amount of, which is why sorts like glass are more likely to be inaccurate. This is why it's so concerning to be paying so much attention to weight.	Encorp's QC computations use statistical formulas to scale the glass properly - the amount of glass checked won't skew the results.	n/a
Will all the webinar be posted online, especially about the unacceptable containers?	The *Quality Control Q&A Webinar* presentation will be posted to Encorp's website *Quality Control* page. Encorp has also recently added the list of things which make a container "unacceptable" (broken, contaminated, unidentifiable, etc.) to its *Beverage Containers List* page. Both of these pages can be found on encorpatl.ca under the *RC Operators* menu.	As of May 25, 2023, documents from the webinar and information on unacceptable containers have been posted by Encorp to its website.
It's concerning that one RC per year will be randomly chosen to be placed in Accelerated Mode. This is a waste of resources by Encorp and puts extra pressure on the RC.	This is a fairly standard procedure for QC. It is necessary to ensure the QC process works as intended and is a cost Encorp feels is necessary to absorb. RCs don't need to be concerned about this, as an RC that normally has an excellent accuracy trend will continue to have an excellent accuracy trend in Accelerated Mode.	n/a

RCs want to be provided with real numbers instead of an accuracy trend line. Why can't Encorp just provide each RC with a detailed monthly report showing the results for each bag/tub QC'd?	The reason Encorp focuses on an accuracy trend line and not on giving RCs a detailed monthly report showing the results of each bag QC'd is that it does not want RCs to focus on single bags – the accuracy trend line provides a far more accurate account of how an RC is performing. One can easily be misled by looking at individual numbers, which could have been on-off errors, and Encorp does not want that to happen.	n/a
Is someone going to let the RCs know if their numbers suddenly go astray, or is Encorp going to hide those numbers until their next Accuracy Trend Report comes out?	The new *Accuracy Trend Report* will be issued monthly – and this should give RC owners an indication early enough of whether they need to act or not.	n/a
Does Encorp have a percentage of the population of NB that uses the Beverage Containers Program? **Why does Encorp use RCs for advertising rather than using the postal service? (Clarification: Why does Encorp send RCs materials for the public instead of doing campaigns and advertising throughout the province?)**	The current UBC redemption rate at RCs across NB is approx. 64%. Encorp does not currently have data on the percentage of the population that redeems their UBCs at RCs. Public education materials sent to RCs by Encorp are intended as handouts for RC customers. Encorp also does some public education via its website and social media. In the past, it was not Encorp's mandate to do public education and promotions for the Beverage Containers Program. Now that the program is moving to *Extended Producer Responsibility* model, Encorp's mandate will include communications & outreach.	A communication plan is in the works, Encorp's communications team has expanded, and public communications and education will be increasing tremendously.

If you went to an RC for a day, you would find a large quantity of unacceptable containers coming into an RC... Garbage, drugs, cigarettes, out-of-province containers, containers with labels peeled off, old bottles, etc. Yet, according to Encorp's standards, all these bottles are contaminated or in unacceptable condition. What should we tell the public? What is the objective here… Are we not interested in cleaning up our environment?	Encorp agrees there is a need to educate the public more on how to prepare their containers for recycling and what is acceptable and not at RCs. This is something Encorp has recently flagged as necessary and is currently working on and will include in its communication campaigns once the posters, social media ads, educational info for the website, and other communication tools are ready.	Encorp will issue a survey in the summer of 2023 to RCs to gather more information about the type of items RCs receive daily from the public. This will help create new communication tools to educate the public on what is acceptable and what is not acceptable at RCs and how to better prepare their recyclables.
The bulk bags these days get holes in them much quicker than before – will abnormally low quantities in a bag trigger a QC check?	Abnormally low quantities reported on a tag trigger a photo to be taken of the bag. Then Encorp checks the photo and may call the RC to ask them about the tag – to make sure the quantity indicated is indeed the quantity that was intended. If an RC loses many containers in transit (from holes in bag), this does not trigger a QC selection.	n/a
Does Hebert's Recycling actually have dedicated staff for QC, and are they actually reliable?	Yes, there's enough QC work to keep dedicated staff busy. Encorp also does regular audits on their work (up to 4 times per year) to ensure they remain accurate. Also, thus far, they are finding that some RCs are consistently accurate, and some are consistently inaccurate – this shows that their QC counts are reliable.	n/a

Truckers are sometimes asking RC personnel to under-fill bags.	This should not be happening. If this happens, Encorp would like RCs to please contact its Director of Operations (Gilles Doucette) for clarification. RCs should only take directions regarding logistical issues from Encorp.	Encorp will send a communication to its service providers as well as all RCs informing them that drivers must not give instructions to RCs and that RCs should only follow instructions received from Encorp – when in doubt or in disagreement, they should contact Encorp's Director of Operations for clarification.