10 tips for easy and successful GHG verifications

Insider secrets from expert verifiers

Locus TECHNOLOGIES

INTRODUCTION

After completing hundreds of verifications for greenhouse gas reports, Locus' team of verifiers has identified thousands of errors and missteps that GHG reporters commonly make when assembling their reports.

Unfortunately, verifiers like Locus are prevented from providing consulting advice directly to their reporters (due to regulatory conflict of interest requirements), so we aren't allowed to share findings with our reporters that would make their job easier, or that would make their reports more accurate. The verifier is only allowed to state whether or not the report meets the requirements of the regulations.

Here, for the first time, is what your verifier is *really* thinking, but isn't legally allowed to tell you directly: a list of the most common issues that are causing reporters additional time or cost, and how to avoid them.

Minimize your copy-and-paste

1

Any sort of manual transfer of data is very likely to introduce errors into your report. We frequently see data transcription errors, misalignment of values with dates, and accidental 'auto-fill' data in spreadsheets. Verifiers are trained to focus on these processes and check them more thoroughly.

Avoid this by using tools to bring your input data together electronically as much as possible:

- **Import utility bill data from online sources**
  Utility bill data is commonly used as inputs for emissions reports. This data can typically be obtained online so that you don't need to manually type it into a spreadsheet.

- **Ask IT staff to set up connections with meter readings**
  If you are using internally-metered data, those meter readings are often recorded electronically for most facilities. Ask your IT staff how to set up a direct connection to that data source, and you'll never have to type in numbers from a photocopied field log again.

- **Export data to XML from your GHG software**
  Most reporters enter their final reporting data manually into the online reporting tools eGGRT or Cal-eGGRT. But modern GHG emissions software now includes features to export data to XML formats, which can be directly uploaded to these systems. This saves you time and reduces the potential for transcription errors in submitting your data.

Know the accuracy of your input data

2

Most reporting programs with a verification element include some requirements for accuracy of input data that is used for calculation of emissions or covered product data.

If you are collecting any of your own data through meters, scales, lab equipment, or other devices, it's not enough to collect the data— you also need to somehow confirm the accuracy of those devices. This is typically done through calibration records, routine tests, or third-party vendors that provide these services.

- **Keep a living collection of your accuracy documentation**
  One of the best practices we've observed on this topic is to assemble any accuracy documentation as it comes in, either in a simple binder or digital file system. This is always easier than trying to locate records that could be up to 18 months old by the time the verification is underway.

Make sure you can follow your calculations from start to finish

3

Part of the requirement for verification is for the verifier to recalculate your emissions and compare the recalculated total to the report. The percent difference between the reporter value and the verifier-calculated value is documented by the verifier as part of every verification process.

To do this, the verifier is going to start with your raw input data, and replicate your entire emissions calculations. If any discrepancies are identified, the verifier is required to trace back the source of the discrepancy to the point where the reporter's calculations deviate from the verifier's calculations.

This means that the verifier must be able to view each step in the reporter's calculation process. Unfortunately, this is where reporters using specialized emissions calculations software or continuous emissions monitoring systems (CEMS) often have difficulty. Many of these systems have a very simple interface where the user enters data, and then views the final report.

The calculations lie *between* those steps, and many software systems operate as a 'black box' where intermediate calculations cannot be viewed.

- **Negotiate full access to your emissions calculations**
  Work with your software vendor or system configuration specialist to make sure you have full transparency into your emissions calculations, and you'll save yourself from some potential issues later on.

Use the *de minimis* reporting option whenever it makes sense

4

In California and other cap and trade programs, the *de minimis* option allows you to report small emissions sources using alternative calculation or estimation methods. This can avoid some of the scrutiny and accuracy requirements during verification. Unfortunately, your verifier cannot direct you to report something as *de minimis*, because making that recommendation would be considered a conflict of interest.

If you have a smaller emissions source with input data that may be questionable in accuracy, or following a slight deviation from the regulation-required calculation method, the *de minimis* option can be a lifesaver to avoid detailed inquiries into that source.

- **Take advantage of the de minimis option liberally— but wisely**
  Even when reporters opt for the *de minimis* option, it isn't always applied to the maximum potential benefit. You may have small emissions sources calculated using revenue-based input data following the standard calculation method. There is no advantage to reporting those emissions as *de minimis*, because they already likely meet all reporting requirements. Rather, you may want to reserve this option for a slightly larger emissions source using an internal fuel meter. Look at your emissions sources in terms of how confident you are in their calculation, and if the emission totals are small enough, choose the ones where you have the most doubt and report them as *de minimis*.

If you are reporting product data, know where to get information on its origin

5

Another very common issue encountered with facilities is the documentation of covered product data. To a verifier in a cap and trade program, the product data has many of the same accuracy and verification requirements as the emissions data.

Unfortunately, the facility environmental staff that are completing the emissions report typically don't have much information on the production process, or how the product totals are determined. It is relatively easy to ask your facility manager or accounting department for an annual total and plug it into your report.

However, your verifier is required to dig deeper into that total to make sure it meets the accuracy and reporting requirements. You will probably need to trace the data back to the scales, meters, or other devices that are used to determine the product total.

Sometimes, the verification inquiries can even work to your advantage. In one case, our verification team found that a glass manufacturing facility was reporting their sellable product total, when the regulations allow for all produced totals— whether sellable or not. In this case, the facility was *under-reporting* their product total, which would have cost them an additional $80,000 in emissions allowances. Fortunately, through the verification process this issue was identified and corrected before they needed to purchase those emissions allowances.

- **Gather information on product origin data prior to verification**
  Before your verifier asks, it helps to ask around your facility to know where this data originates. Find out who has access to this data, and either gather the information so you have it ready for your verifier, or make sure the people who have this information are ready to produce it on demand.

Aggregate your sources (if you can)

6

Many reporters forget that they aren't required to report every source individually. Aggregation allows you to report multiple sources together as a group. This can greatly simplify reporting if you are using the same fuel at several sources.

Keep in mind that there are certain restrictions on aggregation— for example, you cannot combine energy generating units with other sources. But in most cases, aggregation can be applied to simplify your data entry.

- **Report multiple sources together as a group to simplify reporting**
  If your sources originate from the same offsite provider, you may be able to aggregate your sources and report based on the revenue meter, avoiding reliance on internal submeters. Using aggregation also reduces the amount of required metadata that you would have to enter for each source.

Use revenue-based data sources whenever possible

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As most reporters are aware, revenue-based data sources (where the quantity is directly used in a financial exchange between two non-related entities) are assumed to be acceptably accurate for emissions reporting. If you are basing your emissions on utility invoices, this is why your verifier isn't asking to check the accuracy of those meters.

However, sometimes verifiers find reporters relying on internal meters or scales instead of the revenue-based devices for various reasons. This may be because the internal meter data is already assembled on other internal facility reports and is therefore more convenient to obtain, or because the data is collected more frequently and therefore requires less prorating to match the reporting period.

- **If you don't have comprehensive accuracy and maintenance documentation for your internal meters, use revenue-based data sources instead**
  If you rely on these meters, the verifier is required to ask about the accuracy and maintenance of those measurement devices. If you can provide that information, that is great. However, if that would be a struggle, you may want to avoid that whole discussion by using your revenue-based devices instead.

Accept that emission totals may be different for other reporting programs

8

One of the most common responses that a reporter provides after a verifier has requested modifications to the report is *"but that doesn't match what I reported for [some-other-reporting-program]!"*

Every verifier knows that although the authors of these regulations and reporting protocols have made efforts to maintain consistency between these reporting programs, some differences remain.

One notable example is in the global warming potentials for methane and N_2O. As of the 2016 reporting year, the California regulations still incorporate these factors from the 2011 version of the EPA regulations, although the EPA adopted new values in 2014.

These factors cause slight differences between reported emissions totals for these two programs. This is *perfectly fine*. Embrace the difference!

If you get advice from a regulator, get it in writing

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Often, due to ambiguity or confusingly written requirements, you may want to get help from a regulator to determine how to correctly assemble your report. This can often be a great help and save you hours of effort reviewing regulations, since a regulator can give you just the information you need.

However, sometimes you can get different interpretations of the regulations from different consultants. In addition, even within these regulatory agencies, not all staff members agree on certain topics when you talk to them one-on-one.

- **Ask your consultant for an email or written document outlining their recommendations**
  If you are relying on the regulator's input to prepare your report, and especially if you are relying on their interpretation of a specific regulation, it is always a good idea to ask them to send an email or other written correspondence to confirm what you just discussed. This not only gives you the opportunity to confirm what you just heard, but it can also be included in your documentation of your emissions report. Then your verifier can directly see what you have been instructed to do, and they do not need to get another regulator's opinion about whether it is actually consistent with the regulations.

Work with your verifier– not against them 10

Verification involves a somewhat complicated working relationship between the verifier and the reporter. The verifier is hired by the reporter to meet the verification requirements. In order to complete that task, the verifier must ask many questions and, ultimately, request more work from the reporter to provide documentation and revise the report, as needed.

Sometimes you may be reluctant to provide data to your verifier, thinking that you do not want them to uncover more errors. However, this almost always makes the verification process more difficult, because verifiers are required to provide a certain level of review for all data. They are frequently audited by the governing body for the reporting program to make sure they aren't skipping any part of the process.

You might consider asking your verifier to "look the other way" on something, but this is a very risky move— not only for the verifier (who could lose their credentials), but also for you, the reporter (who could be required to complete a hasty and expensive re-verification).

- **Honesty is the best policy**
  Be direct and honest with your verifier, and they can usually help you find a way to get the best verification outcome.

- **Realize that your success is also the verifier's success**
  Your verifier likely wants to issue a positive verification statement for the facility just as much as you do. In the interest of maintaining a positive working relationship, the verifier really wants the reporter to succeed in resolving all their issues and getting that positive verification statement. And frankly, it takes a *lot* more work for the verifier to document and submit an adverse statement than a positive statement.

At Locus, whenever a reporter checks off the last item on their issues log, there is an audible cheer around the verification office. Even if they can only officially say "that is acceptable", your verifier is cheering for you. Moreover, if you apply the lessons learned from our verification findings, you can get to that end more easily this time and the next time.

Get comprehensive insight into your operational data—it's easy to link multiple data sources (electronic and manual) to the cloud platform.

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HOW CAN WE HELP?

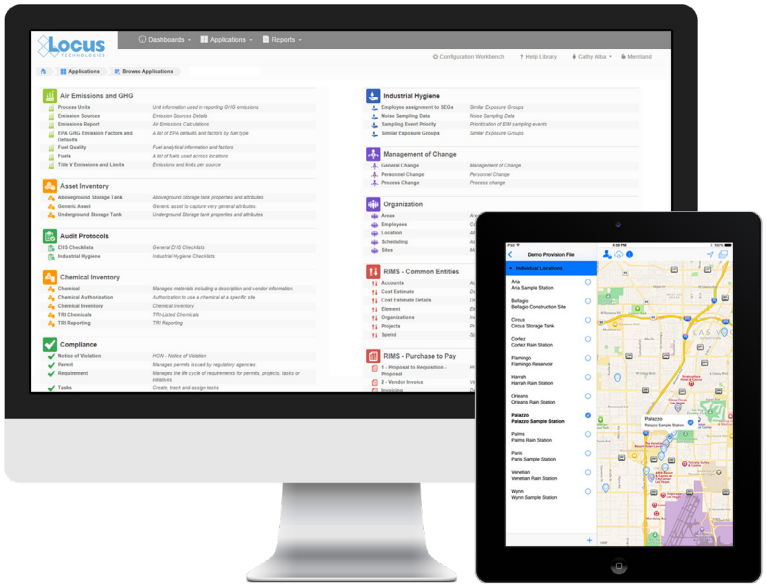
Locus has been conducting verifications since the program began. Not only do we have expert verifiers on staff (with a stellar record—none of our verifications have ever been overturned!); we also have comprehensive EHS & sustainability software solutions to make the process less painful.

In fact, Locus is the only software vendor that is an approved GHG verifier under the California Air Resources Board (CARB).

Visit our website to learn more and to contact our verification team to discuss your verification needs.

locustec.com >

Additional helpful resources



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