Recordkeeping with Template Webinar Transcript

Hello everyone. Welcome to the How-to video for record keeping and navigating Nevada's air pollution control record keeping template. I'm Gregg Rosenberg, the major source compliance supervisor. This webinar will be recorded and posted to the DCNR YouTube channel and the NDEP website. This is the final webinar of our five-webinar series on various air pollution control topics. Just to recap, we've already talked about our enforcement process, What to expect during an inspection, source testing, and how to read your air quality operating permit. All of these webinars have been posted to our DCNR YouTube channel, and are on the NDEP website, along with their supporting documents, including this one. We'll be using the example permit from our first webinar to showcase how to properly maintain records and use the Excel template that is available on our website. As I mentioned, you can find both of these files in the links provided in the chat I'll be referring to the PDF example, permit often and will tell you what page of the PDF I'm referring to as we go through it. I'll also try side by side of the PDF with the Excel template as we go through. Because we've already addressed the how to read your air quality operating permit in a previous webinar, I'm going to assume that everyone has a baseline understanding of an air quality operating permit. If you would like to go more in depth on how to find information in your permit, I'd recommend watching the how to read your air quality operating permit webinar after this webinar.

This is again the last webinar in our series. We've already talked about our permitting and enforcement and some compliance aspects and now we are on our record keeping the final webinar of our presentation of our series.

Here's an overview of what we're going to be doing this webinar. First, we're going to have a brief synopsis of our Excel template before formatting the template for our needs. Then we'll go into a system-by-system format and fill out the information as we make adjustments to fit their needs for each system, while showing what happens when records indicate something is not what we would expect in the process. I'll be stopping for questions throughout, so feel free to enter either enter a question into the chat or raise your hand and we'll try to answer them. If we can't answer them now, we'll definitely get back to you with an answer after the webinar. We'll also have time for questions at the end.

Before we dive in, I want to explain the Why of records. As I mentioned in our first webinar, records are our surrogate to determine compliance with emission limits. The alternative to record keeping would be a constant source testing and or continuous monitoring. Which those of you who have one or both of these know how expensive, time consuming and stressful it can be. Records are going to be reviewed by our compliance team during inspections. If you have a smaller facility and need assistance and need assistance with record keeping, you can always reach out to the business environmental program at the University of Nevada, Reno to assist you. Now let's get into it.

Most facilities should be able to use this template with little to no modifications and be able to meet the requirements of an air quality operating permit. As you can see in this set up tab. There are a few comments that have been provided to assist you.

In the following tab, there are more comments provided to you, but they are hidden in order to allow you to see everything that needs to be entered. In order to see these comments, simply hover over the cells with a red corner in order to be able to view them. This tab has almost everything you need for record keeping. It has the system and unit descriptions; a list of questions that will black out sections that are not applicable; columns for the previous year's information if you have 12 month rolling limits; columns if you have time of day restrictions, hour restrictions, material throughput, fuel usage which depending on the unit you may need either material processed, fuel usage or both; equipment monitoring columns where you may need to record visible emission observations; air pollution control inspections, corrective action or maintenance information, and a column for other notes and comments to clarify records. Lastly, we have our annual totals section at the very end for hours, material throughputs and fuel usage, in case you have annual limits for some or all parameters.

Now the first thing we want to do is format this template for our needs, in this case, for our example permit. First, we're going to look at Page Six of the PDF of the permit, which is the first page of the actual permit and has the list of systems and emission units, and as we can see here, there are four systems which means we're going to need at least 4 tabs. However, because I've read the permits specific operating conditions, I know that System 3 has different throughput requirements for PF 1.003 and 1.004. And I know that by going to system 3 and looking at the specific operating conditions which is on page 20 of 30 on the PDF under subsection 4A and 4B we see it says, “each”. “That must be recorded for throughput and hours of operation.” And that keyword there is “each” and this is reaffirmed back up in subsection 2, where there are different throughput limits for PF 1.003 and PF 1.004. It also says that each emission unit has a limit of operations of 14 hours per day, but it also says in subsection 2C that there is a combined limit in tons per year for both emission units. So, in an abundance of caution, we'll format this spreadsheet in order to have three separate tabs for System 3, one for each emission unit and one for the combined annual limit. Just to confirm, the number of tabs we need, we have 4 systems in our permit, but one of those systems needs 3 tabs. So we're going to have 6 tabs total. I'm going to start by copying this tab 5 times.

I’d like to pause for questions too. Anyone have any questions able to follow along OK so far? We've got some thumbs up. Thank you.

Next, I'm going to rename these tabs. You don't to use the preset naming convention, but I am going to for this example. When we reach system 3 we're only going to enter the applicable emission unit number for each tab. When we get to the combined annual limit, we'll just enter “combined” instead of an emission unit number.

Alright, now that we're done naming the tabs, we want to make sure that the cells in the tabs are named correctly or the cells yet in the tabs are named correctly. And this is where we want to make sure that the system number and the emission unit numbers are correct.

Fortunately, I've already completed this portion in another spreadsheet, so we're going to move on to the next step. As you can see here, the emission unit numbers, and the system numbers have been correctly entered. I'm going to stop here for any questions that you may have so far. Alright, not seeing any. We'll go back to the setup tab.

And we're going to start by entering the calendar year that we're going to record for. If you're starting in the middle of the year, you can transfer information over to this spreadsheet or you can start from the date that you first plan on using it. Just keep in mind, you may need to enter additional information for annual limit purposes or making sure that those annual limits are kept up to date. Operating parameters units are in the units that you're required to keep your records in. Some of our most commonly used units are already provided in this column, but feel free to remove any that you don't use or add ones that you do need for a more thorough example and clarity, I'm going to delete all these and we're going to start from scratch. Combined units like tons per hour are generally not required to be added because the spreadsheet will automatically combine them when necessary. In this case of this permit, we'll look at the monitoring record keeping and reporting sections for each system to see what we must record. Let's start by going to System 1 in the specific operating conditions which is on page 16 and 17 of the PDF. Looking at subsections 2 and 4, we know that we have to record hours of operation, and we need to record material throughput in tons. So, we're going to enter tons and hours into our operating units section.

Next, we're going to go to the system tab, and we're going to start with our first area, which is answering these questions. So, the first question asks, “Does your system have our restrictions?” Well, if we look and we see this 14 hours per day, then yes, we have our restrictions. So, we'll enter, “Yes”. Just a note: another number you might see in your permit that indicates you don't have our restrictions is either 24 hours per day, or if it might be at a slightly older permit 8760 hours per year. That indicates that you do not have any hour restrictions. Since our answer is yes in this case, another question pops up. “Does this system have time of day restrictions?” Well, right underneath it, we can see that it says 4:00 AM to 8:00 PM only. So yes, we have time of day restrictions as well. Next question asks “What operating parameters do you have to keep track of?” System 1 only has material throughput as an operating parameter, so we're going to select material throughput which then you can see blacks out areas of this spreadsheet, like fuel usage. The fourth question asks, “Do you have 12 month rolling record keeping requirements?” To determine this, we look under the monitoring, record keeping, and reporting section, which in this case is subsection 4. If there is language similar to, “Record the throughput rate of ‘something’ on a cumulative basis for each 12-month rolling period, then we would select “Yes”, but if we look at subsection 4D and 4E, we see language that says, “The annual throughput rate shall be determined as the sum of the monthly throughput rates for the year of all previous months of that year”, and similarly for hours of operation under 4E, so because this is asking about calendar year, we're going to enter “No” which then blacks out the entire section for previous 12 month rolling or previous monthly annual average. Then the following question asks, “Do you have any VEO requirements?” Well, we can see here that there is no VEO requirements under the monitoring record keeping and reporting section, so we'll enter “No” which then blacks out the VEO column. And then the last question is, “Do you have add-on controls?” Well, if we look at the very top of this section in the permit, it says you have no add-on controls. So we would enter “No” which then blacks out the corrective action and the inspections for add-on controls. It's important to note that the Notes and Comments column will never be blacked out and should be used in any instance that may require clarification. We will go into what some of those instances may be when we get into the data entry portion of the webinar, which is a little bit later. We are now done with the questions and in order to clean up some of the blacked-out columns, we can hide them. Another important note is you should never delete any of these cells in this template if you use it. Before we move on to the next system let me hide everything and we can enter the operating parameter units as well. So, because we know our limits will have 4:00 AM for the start time. We'll have 8:00 PM for the end time. Fourteen hours for the limit, and here we'll enter the units in hours. Thirty tons per hour, and this is where you'll see this combined limit. And then we'll have the annual for the hours, which is 5110 for the year, and the material, which is 153,300 tons per year. Alright, does anybody have any questions before we move on to the set up for System 2?

Where is the copy of the commented PDF you are using?

I just highlighted some sections for emphasis during the webinar. I did not highlight any of the sections in our spreadsheet, but I can upload that after this webinar and provide that as a separate document.

Alright, so now we will move on to System 2, which is on pages 18 and 19 of the PDF. Again, looking at subsections 2 and 4, we need fuel consumption in standard cubic feet. So, we're going to enter standard cubic feet into this portion of our spreadsheet. And we also need the material throughput in tons, which we already have and hours of operation. We're with the units and now we can move on to System 2. Based on the permit requirements, we can operate for 24 hours per day, so we do not have our restrictions. For operating parameters, we have to keep track of again both material throughput and fuel usage. So, we'll enter both. Annual record keeping requirements are for calendar year only as it says in the permit, “For all previous months of that year.” So, we'll say “No” to this one. We do, if you see here, have visible emission observation requirements. VEO stands for visible emission observations and is a way to determine if there is opacity. So we'll put “Yes” for VEO requirements, and if we go to the top, we see we have some controls, a multi-cyclone, 4 cyclones in series, and a baghouse. So, yes, we have add-on controls. And then if we see what that looks like after the questions are done and we can hide certain sections of the permit. We can hide time of day restrictions because we don't need that. And we can hide the annual hours because there are no annual hour limits. And now we'll fill it out according to the permit limits. The frequency of VEOs which says monthly and the air pollution control inspections. In this case, we're going to say that the manufacturer's maintenance manual, which is what the requirement is, suggests monthly inspections. We'll put monthly for the frequency, but first we'll enter 24. We’ll enter hours. We’ll enter 29.4 tons per hour. For fuel usage, we have 36,036 standard cubic feet per hour. Again, the VEO is required monthly. And we're going to say the manufacturer maintenance records require monthly or suggest monthly inspections. And let’s stop for questions again.

Hearing none will go to System 3. And again, it says tons and hours, so we're not going to have to do any additions to our units and we'll just start with the questions. So, if we look right here, 14 hours per day. Yes, we have our restrictions. Time of day: 4:00 AM to 8:00 PM only. Yes, we have time of day restrictions. What parameters are we keeping track of? Well, we have our tonnage and no fuel usage. So, material throughput only. We do not have a 12-month requirement, it only talks about the calendar year, so we’ll put “No” for that. Any VEO requirements? Yes, there is a VEO requirement for 4E. And add-on controls, yes, water sprays. And then we'll enter the information on this one, so 4:00 AM and we'll also hide the unnecessary cells to clean this up a little bit. 8:00 PM. 14 hours. 30 tons for this emission unit because this is PF 1.003. We have a monthly requirement for VEO frequency. Then when it comes to the requirement for the frequency of air pollution control inspections, we actually see in subsection 5B that a federal requirement requires that water sprays in this particular emission unit be inspected periodically on at least a monthly basis. So we're going to put monthly here, but I would say even if there wasn't a federal requirement for this, in order to be a good facility, that is trying to do the best they possibly can, monthly is a good requirement to check for an air pollution control. And we'll put the annual limits. Alright, and then since the only difference between PF 1.003 and PF 1.004 are the tonnage allowances in the emission units, I've already entered that information on this tab with all the questions answered and you can see the differences in the annual and the daily material processed.

Okay, we have a question?

Yup. Yeah, we'll stop for questions now.

Do you have locks on the formulas, and can you clear just data input without resetting each year all the permit limits?

So, let's start with the first question, do you have locks on the formulas? No, this is completely editable in order to allow for maximum customization of what you need. Obviously, if you're not as proficient in Excel that might be difficult for you, which is why it's set up with all these equations already. However, if you do have some proficiency, which I do in an increasingly digital era. We do have more and more people being proficient in Excel. You are more than welcome to edit these as needed. That's why I purposefully didn't lock them. But if you feel the need to, you can always lock them yourself. And then what was the second question?

Can you clear just data input without resetting each year, all the permit limits?

So, I'm assuming you mean can you just copy this from year to year and not have to clear all the information but still change the calendar year in the setup tab. Is that what I'm understanding the question to mean? Assuming that is the question.

We would just clear it ourselves.

Yes. Yeah. So, and what I would probably recommend too is because this is a living document, a living template we’ll always be happy to take feedback from industry and figure out how to improve this. I would probably recommend every calendar year at least just looking at the new, if there is a new template out and then you can just use the that new template for each time. I know that might be difficult for facilities with larger permits, but something to consider if there are any changes. And again, this isn't a requirement, this is just something that might be a good jumping off point or something that might be helpful and beneficial to you if you're struggling with being able to meet those requirements of the permit for record keeping. Not seeing any more questions, we can move on to the combined tab.

Now for the combine tab. This is a special case. The only piece of information that we care about for this portion is the annual combined limit. So, we don't really need to answer any of the questions and we can go ahead and hide every single column except for the annual throughput. We will add the emission limit. Select the unit in tons. So now what we're going to do is, as the previous question alluded to, we're going to modify this in order to be able to better represent what we need. So first, we're going to start by entering an equal button in the column representing January of 2024. We're going to move to the system 3 PF 1.003 system tab. We're going to select the representative column for that. And then selects that cell. Then we're going to do a plus. Then we're going to go to the following emission unit and we're going to go over again to that cell and then we're going to press enter and that is going to give us our equation for this cell. Then we're going to copy this, and we're going to highlight all of these and we're going to paste this information and that is going to bring all of these cells down to the, again, representative cell. So now we have all of these that represent the sum of both emission units into a combined tab. I'll stop for questions again. I know that might have thrown some people. Alright, finally our last system of our permit, system 4. If we look at this guy, this is a diesel generator. Because of this, we're going to need diesel fuel in gallons. Then if we go to the Setup tab. Again, we can go to the units, and we can enter gallons, or gal for short. And we can go to this tab.

Gregg, if someone were to type the full word “gallons”, it'll just populate gallons, right?

Yeah. Gallons is totally fine. I just did it for short for easy representative purposes.

Okay.

And then we'll answer all these questions. So we'll start by saying, “Does this have hour restrictions?” No, 24 hours, so no hour restrictions. What operating parameters do you have to keep track of? It's a diesel generator, so fuel usage only. Do you have a 12-month requirement? According to this, there is no annual limit whatsoever for fuel usage so no, we don't have a 12 month; we don't even have a calendar month requirement. VEO: There are no VEO requirements. And are there add-on controls? No, there are no add-on controls. Now we can look at what this leaves us with, which is not much. We can hide this, hide the time of day, material throughput, equipment monitoring, except for the notes and comments column, and then we can actually hide this entire area because there is no annual limit for the fuel usage either, so we're going to hide this information as well. And now all we have, notes and comments, fuel usage, and hours of operation. We'll enter in the limits, so 24 hours, our gallons which is 46.2, and we get the gallons per hour. And then this is also kind of unique because if we actually read this requirement for record keeping, it says, “Monitor and record the fuel consumption of diesel rate on a daily basis for the emission unit in gallons by multiplying the maximum hourly fuel consumption rate in D2B…” So that is subsection 2B which is this 46.2 gallons. “… of this section and the total daily hours of operation.” So, we are multiplying that 46.2 by the hours of operation. So one thing that you'll see here is this hidden equation in this cell that is basically just for if you have time of day restrictions, it calculates the difference between the end of day and the beginning of day. We can actually delete that entire area for those equations. And then we what we're going to do is enter an equation into this that is going to calculate based on our gallons per hour. We're going to enter in 46.2 to our gallons per hour. And then we're going to enter in an equal sign. We're going to select this 46.2, and then we're going to multiply it, press the star button, that is the multiplication symbol in Excel, and then we're going to select that representative hours cell, and then we'll get the equivalent hours of operation. Now, you might ask yourself, why am I calculating gallons if I'm never able to exceed based on the gallons per hour and the way that it's calculated? This is mostly for annual admission reporting purposes. That's an important aspect that we use to determine emissions, and since this emission unit will not be able to really vary at all in fuel usage. That is how it's based off of for our annual emission reporting that you'll have to be doing every single year. So now I'm going to stop for questions before we move on to what happens when we enter data. Fortunately, again, I have another spreadsheet all set up with how data would look if it was entered or starting to be entered into our Excel workbook. Is there any questions right now?

We have a question. Why use maximum throughput for emission calculations rather than actuals?

In this case, some emission units do not require a fuel meter or any sort of way to determine fuel flow. Yeah, it's if it's not required. Sometimes it's just based on what the manufacturer has determined as the maximum fuel flow possibility, or because in this case, it doesn't change between. It's not able to use more or less gallons, so that's just how it's used, but it's still required because again for annual emission reporting purposes.

And if the facility were to have a fuel flow meter and wanted to use actual missions, you can also put that into the data as well because. It should be less than your maximum rate so.

Alright, well then, we will move on to our final area. So, in this case we have all of our data entered. I know you all were hoping that I would be entering this data manually, cell by cell. Unfortunately, that is not the case, but let's check out this contemporaneous log. It looks like the first day is fine on System 1, but the second and third day both light up for different reasons. On the second day we ended after our earliest possible time which is why we have in red right here and the total hours that they operated that day also exceeded that 14-hour limit. So we also see the material processed, they exceeded the 30 tons per hour limit as well. So what we would want here is 3 deviation reports which we can then enter into the notes and comments column that this would require 3 deviation reports. And we'll say deviation reports submitted on 1/5/2024. Alright. And then on this one, we also note that they started before the earliest possible start time. So, in this case we'll also enter and make sure our deviation reports are submitted and put in deviation reports submitted on that same day. Remember you have 15 days to submit a deviation report after the event occurred. And then we can also see how some of this information starts totaling up in the annual columns, with the total permitted limit and the material throughput. Now we'll stop for questions before moving on to System 2. If anyone has any questions.

We'll move on to System 2. Let's take a look at this data. So, the first thing we notice is that the start of the first day we have hours of operation, but no material throughput and because of this we have an error. This causes an error message to pop up and the BAPC will want to understand why there was number throughput to ensure that the information wasn't just missing, but is there for a purpose. In order to keep our regulator happy, what we're going to do is enter “0” in this cell and then we're going to note an explanation in the notes column, and we're going to say in this case there was some annual maintenance and no throughput was added. You can always wrap this text to see everything. So we see fuel usage was exceeded on the third day and we're going to want to make sure that a deviation report was submitted. Say it was reported the very next day. We also did our monthly, we'll say we did monthly VEOs. The monthly VEO must be conducted on the on one of the days of normal operation. So since in this case, on the first day normal operations didn't occur, there was only fuel usage and no material throughput. We're going to put know the VEO was not conducted on that day. Then we'll say, again being a good facility, we want to get it done sooner rather than later. We'll say yes, we did it on the second day. Then another question will have to be answered and will ask, “Was opacity observed?” And in this case, no, it was not observed, especially since we just did annual maintenance. And then we can also do our inspection frequency for our monthly inspections for this emission unit. And for this we'll put no, but we'll put yes right here, and we'll say this was when the last corrective action or maintenance was conducted was our annual maintenance. We're going to put, 2024, January 1st, 2024, on this date. And then we can continuously enter that for any remaining days until we have our next corrective action or maintenance date. Alright. I also did the same steps on this next tab as well. Explained another good thing to do is explain what was done during annual maintenance. So, in this case spray nozzles were replaced. Always a good thing to have entered all this information. This looks very, you know, like it's running as it should be. We did the same thing on this emission unit for system 3 and then we can go to our combined tab, which then sums everything up. And yeah, so that is everything for systems 2 and 3. Do we want to answer any questions before we move on to System 4?

So now we'll move on to System 4. Now system 4 is pretty easy because again, we don't really have to do anything. The equations are already calculated. We have everything that we need, and we just need to enter hours of operation so. As you can see, if you enter in this operated 10 hours, this operated then 20 hours. Whatever the case is, this information will populate itself and you will be able to use that for your annual mission reporting purpose, and it will keep the regulators happy that you're maintaining these hourly records. And that's it. That is all for our record keeping requirements. Does anybody have any last-minute questions about this? I can keep this up for a little bit before finishing up our presentation portion of this webinar.

Thank you all for joining us for our final webinar in our series. We've received some feedback from your previous webinar surveys and are looking at additional topics to discuss in the future. We want to thank everyone who has participated in any and all of these webinars. We hope that you've learned something. You can access the blank Excel template on our website under the download permit forms page under the compliance and Enforcement section as well as our guidance document that can assist with filling out the template. The record keeping webinar will be posted on our DCNR YouTube channel and our NDEP Air Home page on our website. If you have any additional questions, we can answer them at this time or feel free to contact me later if you have any. I'm also adding a link to the chat that is a six-question survey that will be open for a limited amount of time in order to get additional feedback. It’s a very easy six-question survey. I'll pull up the survey in a minute. This is also the link for our DCNR YouTube channel that has all of our previous air webinars. If you are interested in looking that information up.

We did get a question.

Yeah, what is it?

Question: Technical assistance available to add monitoring requirements? For example, paint.

Okay, so you're talking about like VOC content for permit requirements. Is that correct?

Yes.

So yes, yeah, we can absolutely have any technical assistance you need if you want to modify this spreadsheet that we've already developed. It would probably be the easiest if you don't have a record keeping requirement for like material throughput and its only VOC content. You could probably modify it slightly to use it for that, but we'll have, yeah, we can absolutely add it if you want to reach out to your inspector, or to me, or to Chad Myers, the minor source supervisor as well. We’d all be very willing to help. Here's the link for the for the six-question survey three of the questions are also optional, so it's very quick and easy and I hope that all of you please fill it out.

Also have just to continue on to the answering the questions. We also have our small business program through UNR business. BEP maybe we can put the link in that chat as well and they're able to help. They actually helped develop this with Gregg too, so they're very familiar with how it works. So, they can help you as well setup for specific scenarios or formulas too that are out there. So, Gregg will send you the chat for that.

Yep, there you go. There's a link right there, unrbep.org. Any other questions? Alright, not seeing any other questions. Again, thank you all for coming. This has been hopefully a very helpful series. I know that it's been eye opening for NDEP and the air program in helping us understand where the disconnect in knowledge and expertise is for each of these topics. Again, we're going to be looking at other webinars to do in the future, but this webinar series is concluded. I appreciate all of your time and thank you so much.