



NTN/PFAS Sample Decanting Bag Sampling

Items needed:

- Field Form - Field Observer Report Form (FORF), as started the previous week
- SiteID barcode labels
- Sample bag and bucket containing sample to be processed
- Extra lid in protective bag returned from site
- Tyvek lab coat
- Clean laboratory gloves
- Balance or scale
- Calibration weights (100 g and 1 kg), if available
- 1-L sample bottle and sample bottle shipping box
- Logbook, if used

Precautions:

Use care when handling the sample bottle, sample bucket, and lid to avoid contaminating the sample. NTN samples are analyzed for sodium, chloride, and potassium all of which are present in sweat. Oils present on skin are difficult to remove. Detergents are not used to clean the lids or bottles.

If the sample is frozen, allow the sample to thaw completely with the lid on before decanting. Do not place the sample bucket on or near a heat source. NTN samples should be allowed to melt at room temperature.

Instructions:

1. Prior to weighing the sample, with the lid still on the bucket, wipe down any excess moisture on the outside of the bucket, bag and lid to get the most accurate weight of the sample.
2. Verify calibration of balance, if calibration weights are available. If the calibration is off by more than 1g and the scale cannot be corrected, record the difference in Block 10 **Remarks** block of the field form.



Figure 1. Check balance with calibration weight.

3. Weigh the sealed bucket containing last week's sample. Enter the mass (Bucket + Bag + Strap + Plug + Lid + Sample) in Block 6 **Bucket Sample Weight** of the field form (2. Bucket/Bag+Lid+Sample). Complete this step each week, regardless of whether precipitation occurred during the week. Network operating procedures require that the sample bucket be changed at least once every 194 hours (8 days and 2 hours).

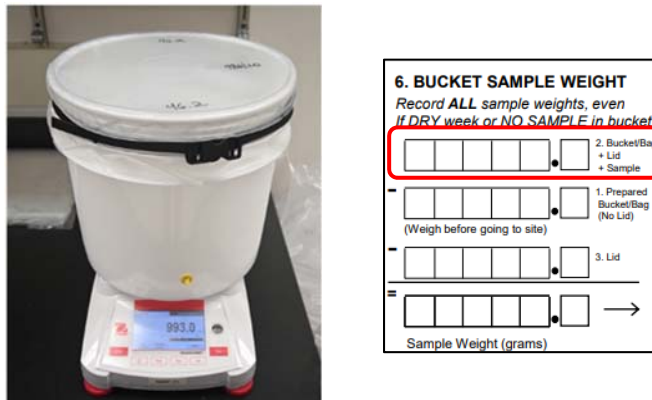


Figure 2. Weigh bucket, bag, strap, plug, and lid.

4. The mass of the bucket/bag should have been entered on the field form the previous week. Enter the lid weight in Block 6 **Bucket Sample Weight** of the field form. These values are written on the outside of the lid. Calculate the Sample Weight

The image shows a field form titled '6. BUCKET SAMPLE WEIGHT'. The form has instructions: 'Record ALL sample weights, even if DRY week or NO SAMPLE in bucket.' It has four rows of boxes for data entry, each with a label to its right. The first row is labeled '2. Bucket/Bag + Lid + Sample'. The second row is labeled '1. Prepared Bucket/Bag (No Lid)' and is labeled '(Weigh before going to site)'. The third row is labeled '3. Lid' and is highlighted with a red box. The fourth row is labeled 'Sample Weight (grams)' and has an arrow pointing to the right.

Figure 3. Complete Block 6: Bucket Sample Weight on field form.

5. If the bucket is empty (i.e., no precipitation occurred during the week), skip to step 13. Otherwise, continue to step 6.
6. **Put on the Tyvek lab coat and a pair of clean laboratory gloves.** Remove the lid from the sample bucket by grasping the far edge of the lid and pulling the lid toward you. This eliminates the possibility that the sample may be contaminated by clothing fibers or sweat passing over the exposed sample. Place the used lid in the provided poly mailer, do not reuse once the lid is removed for decanting.



Figure 4. Remove lid from bucket.

7. Tilt the bucket toward you to inspect the sample for physical contamination (e.g., pollen, leaves, dirt). Do not lean over the open bucket. Doing so may lead to contamination of the sample (e.g., human hair, clothing fibers). Note any contaminants in Block 5 (**Sample Conditions**) of the field form. Answer yes or no to each contaminant.

5. SAMPLE CONDITION		YES	NO		YES	NO		YES	NO
Check type of contamination for all field buckets before and after decanting. Describe all contamination in Block 10, including any not listed here.		2	1	1. Bird droppings	2	1	3. Soot/ash/dirt particles	2	1
		2	1	2. Cloudy or discolored	2	1	4. Insects/animal matter	2	1
								5. Leaves/twigs/pollen/plant matter	
								6. Handling contamination	

After decanting into sample bottle, look closely at sample and field bucket and double-check your entry.

Figure 5. Complete Block 5: Sample Condition on the field form.

8. Remove a clean sample bottle from its zipped bag and uncap the bottle. The cap should be placed upright on a clean surface to prevent contaminating the cap.
9. Decant as much of the sample as possible into the sample bottle. Note the following:
 - do **not** remove the bag or bucket strap,
 - do **not** swirl the sample before decanting,
 - pour slowly, look for a portion of the bag with few creases, the sample will follow any creases in the bag,
 - avoid decanting physical contaminants into the bottle,
 - use both hands, one on either side of the bucket, to support the bucket,
 - hold the handle against the side of the bucket with one hand to keep it from moving,
 - avoid contacting the lip of the bucket to the mouth of the bottle,
 - do **not** discard low volume samples. All samples, regardless of volume, should be submitted for analysis,
 - sample volume greater than the volume of the sample bottle may be discarded, and
 - decant the NADP sample before decanting sample for other studies.



Figure 6. Decant the sample into the sample bottle.

10. Cap the sample bottle. Ensure the cap is tight to prevent the sample from leaking during shipment.
11. Using a permanent marker, write the site ID, Date/Time Off, and any contamination observed in the sample on the outside of the zipped sample bag.

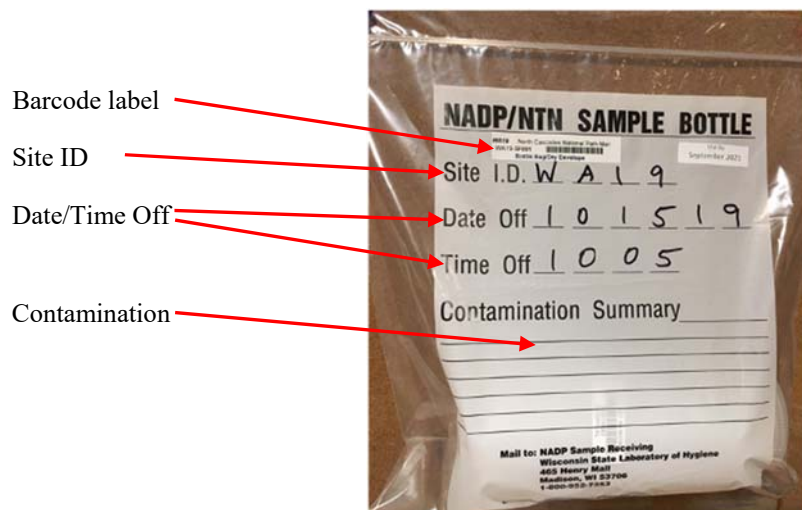


Figure 7. Complete sample bottle bag information.

12. Re-seal the sample bottle in its zipped bag.

13. Place a bar code label on the field form, and its matched pair on the outside of the zipped sample bag, or on a dry sample envelope if no precipitation occurred during the week.

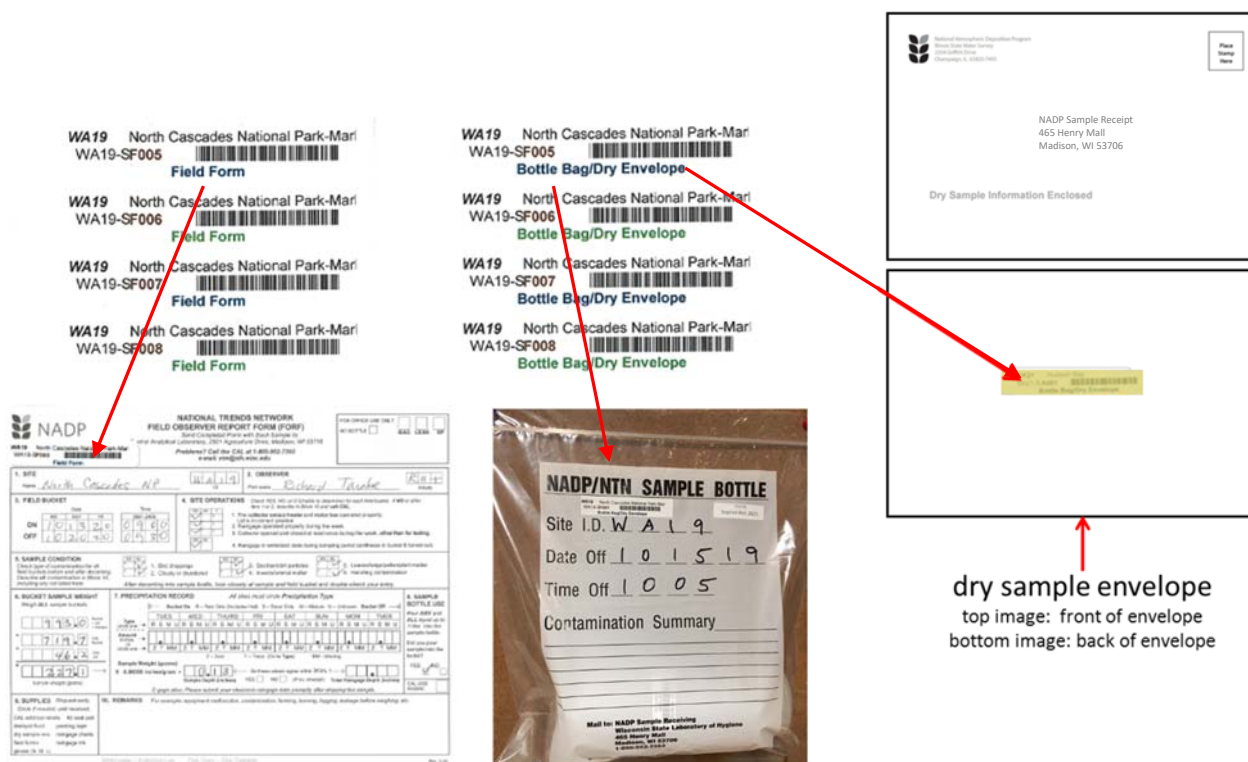


Figure 8. Adding SiteID barcode labels to sample field form, bottle bag, and dry sample envelope.

14. Complete Block 8 **Sample Bottle Use** to indicate whether sample is decanted to a sample bottle and will be shipped to the laboratory for analysis. If sample is present, it should be decanted and submitted for analysis.
15. The standard NTN FORF is used as the Chain-of-Custody (CoC) for routine PFAS collections from NTN sites. Any PFAS specific information can be provided in the Block 10: Remarks section. Inspect the field form and complete any missing fields.
16. Indicate any supplies that are needed in Block 9 (Supplies) of the field form. **When you only have three (3) clean lids remaining, ship the poly mailer (with 7 used lids) back to the NADP Analytical Laboratory (NAL).**
17. Use a sample bottle shipping box to ship the bagged sample bottle and the completed field form to the address shown below for analysis.

8. SAMPLE BOTTLE USE Pour ANY and ALL liquid up to 1-liter into the sample bottle. Did you pour sample into the bottle? YES <input type="checkbox"/> NO <input type="checkbox"/>
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NADP Sample Receiving
WI State Laboratory of Hygiene
465 Henry Mall
Madison, Wisconsin 53706

18. If no precipitation occurred during the week, mail the completed field form in one of the dry sample envelopes provided. Alternatively, the field form can be scanned/photographed and sent electronically to ntn@slh.wisc.edu.

For Weeks the Quarterly QC is performed

19. If this was the week the quarterly QC procedures were performed then following pour off of the sample, carefully retrieve the sample bag from the bucket, and fold per provided instructions (see Appendix below or SOP *PFAS_2213_Bag_Folding_Instructions*). Place the folded bag into a small Ziploc bag (4"x15") and return in the same box as the 1L sample bottle.
20. The extra lid returned from the site (in the protective bag) will be used to cover the sample during next week's visit.
21. **Return the used lids to the shipping address listed below when there are seven (7) used lids. There will be a sticker on the poly mailer with the Site ID. If the sticker is missing, clearly mark on the outside of the poly mailer the NADP Site ID.** The use of the poly mailer will reduce shipping costs.

Ship the used lids back to the NAL:

NADP Supply Receiving
WI State Laboratory of Hygiene
465 Henry Mall
Madison, Wisconsin 53706

Appendix: PFAS Instructions for Folding/Packaging the NTN Sample Bag

1. Complete the NTN sample decanting procedures as per steps 1-11 above. Any sample that remains in the bag after filling the 1L bottle should be discarded before folding the bag. Remove the bucket strap.
2. **Wearing the Tyvek lab coat and clean gloves**, carefully remove the bag from the bucket by working the bag up from the bucket. **Keep the bag fold (part of bag that folds over outside of bucket) intact.** It is important not to unfold it completely, as anything that was on the bag fold outside of the bucket can contaminate the inside of the



bag.

Figure 9. Folded sample bag removed from bucket.

3. With the sample bag removed (keeping fold intact), pull the bottom corners to remove creases and ensure all remaining water in the bag is removed along with any large debris items (i.e. anything that can be easily/cleanly removed).



Figure 10. Flatten out sample bag with fold still intact.

4. Place the bag on a clean flat surface (clean area with DI/RO water if necessary). Carefully flatten the bag and remove creases in the bag. Evacuate as much air out of the bag as possible.
5. Grasp the top corners and fold the bag along the red dashed line towards you (fold “the fold” halfway).

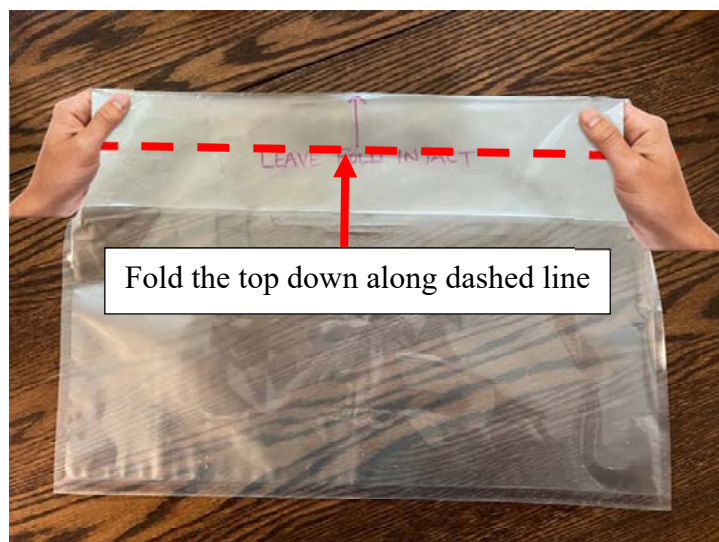


Figure 11. With fold intact, the first fold is along red dashed line.

6. Holding the folded over part, fold the bag again towards you along the red dashed line.

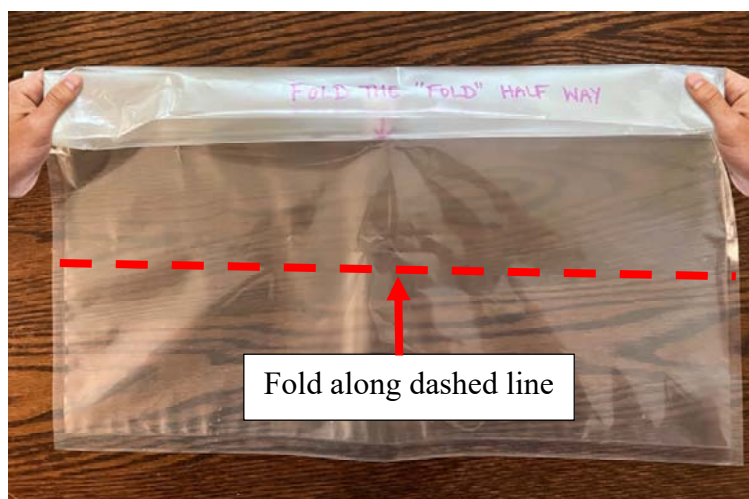


Figure 12. Second fold.

7. Fold the bag again towards you along the red dashed line.

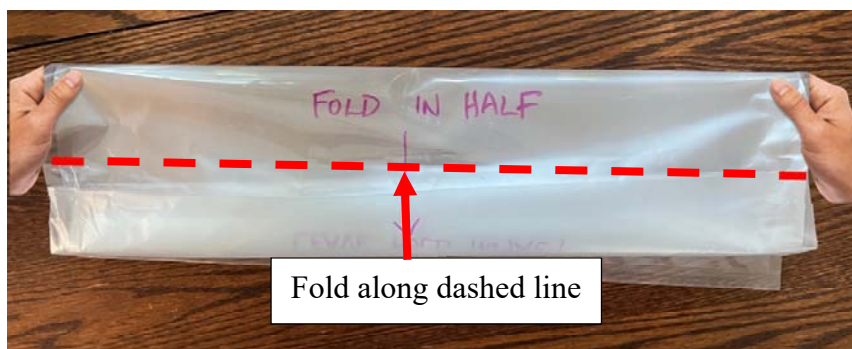


Figure 13. Third fold.

8. Fold the bag again along the red dashed line.

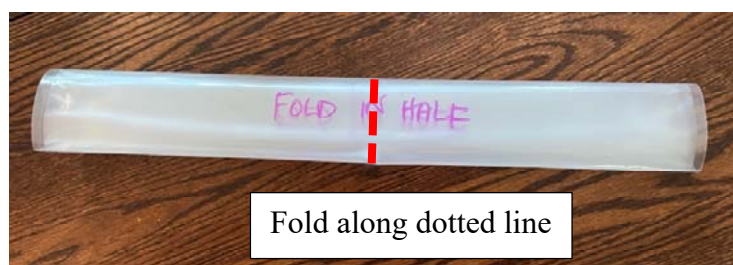


Figure 14. Final fold.

9. The bag should look like the folded bag below.



10. Place the bag into the 4"x15" bag provided.



11. Write the Site ID, Sample On and Sample Off dates on the outside of the 4"x15" bag.
12. Note any comments regarding the procedure on the field form (FORF).
13. Place the folded bag, the field form (FORF), and the 1L sample bottle into the 1L shipping box and ship back to the lab.
14. If you have any questions or comments, please contact 1-800-952-7353.