

**Partnership for Safe Water
Self-Assessment Completion Report-
Minimum Requirements for Phase III Directors Award**

Phase III CHECKLIST

Below is a checklist of the minimum requirements for your self-assessment completion report. Tips are also provided to assist in the preparation of the report. Please submit this checklist with your Phase III self-assessment completion report.

Utility Name: _____

Plant Name: _____

Contact for Report Questions: _____

Date Report Submitted: _____

Minimum requirements:

- Send Five (5) Copies of the Report.**
- Cover letter-** Make sure that you identify this as the "completion report" for Phase III of the Partnership and include a statement of regulatory compliance.
- Performance Assessment-** Written assessment that answers the Status questions listed in the "Self-Assessment Guide for Surface Water Treatment Plant Optimization" (pages 13-26). Identify areas for improvement. Evaluate performance shown on performance assessment data collection spreadsheets. Make sure you discuss spikes and possible causes.
- Performance Assessment Data Collection Spreadsheets-** Include the output from the Partnership software for raw and finished water turbidity for both baseline and most current year ending one month prior to the report submittal date (**two years** of turbidity data is required).
- Plant Schematic-** Include a line drawing of your plant with chemical application points labeled.
- Major Unit Process Evaluation-** Continue the written report following the "Guide" (pages 27-44). At a minimum answer the questions on page 44 and discuss the Major Unit Process Spreadsheet. Make sure you include different operating conditions and determine the effect on maximum plant capacity.
- Major Unit Process Evaluation Performance Potential Graph Spreadsheet-** Include the output from the Partnership software, unit process performance potential graph. Provide more than one output to illustrate various operating situations (one basin out-of-service, or a filter in backwash).

- Design Evaluation-** Continue the written report following the "Guide" (pages 45-66). Answer the status questions for each unit process and assemble performance-limiting factors.
- Operation Evaluation-** Continue the written report following the "Guide" (pages 67-84). Answer the status questions for process control testing and operator application of concepts. Assemble performance-limiting factors (any areas for improvement).
- Turbidity Graph Showing Individual Filter Performance Immediately Following Backwash-** Provide a turbidity graph of a complete filter run for each filter (or a representative number of filters). Make sure that turbidity readings are provided at frequent enough intervals (perhaps every two minutes) to illustrate the post-backwash filter performance (Figure 1 below is an example). Discuss the post-backwash turbidity spike and your strategy to reduce the intensity and duration of the spike. If you employ filter-to-waste, state your policy regarding when a filter is returned to service **and** include any studies that support your procedure. If there is a difference in the performance of one (or more) filters be sure to provide a discussion.
- Administrative Evaluation-** Continue the written report following the "Guide" (pages 85-97). Answer the status questions and assemble the performance limiting factors.
- Prioritization of Performance Limiting Factors and Action Plan-** Continue the written report following the "Guide" (pages 99-118). Summarize the performance limiting factors as in Table 7.2. Rank the performance limiting factors. Create an action plan (Figure 7.3) to address the performance limiting factors. The plan should include who is responsible and a projected completion date. These are the factors that you will need to discuss in your next annual report to the Partnership.

Self-Assessment Completion Report Tips

1. Write the report like you are telling a story. You are trying to explain to someone who has never been to your plant just how you do things and what your operation is like.
2. Provide your thoughts regarding any high turbidity results for the annual turbidity data and the individual filter profile. Let the reader know you see this too and that you have thought about it.
3. Do not include turbidity readings during filter backwash, filter-to-waste, cleaning, or meter calibration. Include only turbidity readings during filter operation.
4. Explain how you obtained your turbidity data. Is the turbidity data taken at a specific time? Is it the maximum value over a specified length of time? Is it taken from your computer system or a manual sample?
5. If your data does not yet meet the *Partnership* goals point this out and provide some plan to meet the goals over time.

6. Make sure that your data is consistent with your discussion. If you say that you always operate at a turbidity less than 0.1NTU, make sure your data shows this.
7. If you are operating outside of the recommended ranges (like a higher flow rate) make sure that you let the reader know you recognize this and that you have data that allow you to justify operating this way.
8. Listing several "performance limiting factors" is not a bad thing as long as you explain your plan of correction.
9. Show that the administration and operators are all on board when it comes to performance goals.
10. If you did not find any "performance limiting factors", you may have missed the biggest benefit of the self-assessment.
11. Use the Partnership software.
12. Look at the Phase III Template on the Partnership website at www.partnershipforsafewater.org, under the Program Requirements tab.
13. Reports can vary in length but many facilities have provided successful Phase III completion reports in 15-35 pages.
14. Be sure to include a summary of all changes/progress made since joining the Partnership program.
15. **Include as many as possible of your operations and maintenance staff in the evaluation. Explain HOW they were involved.**

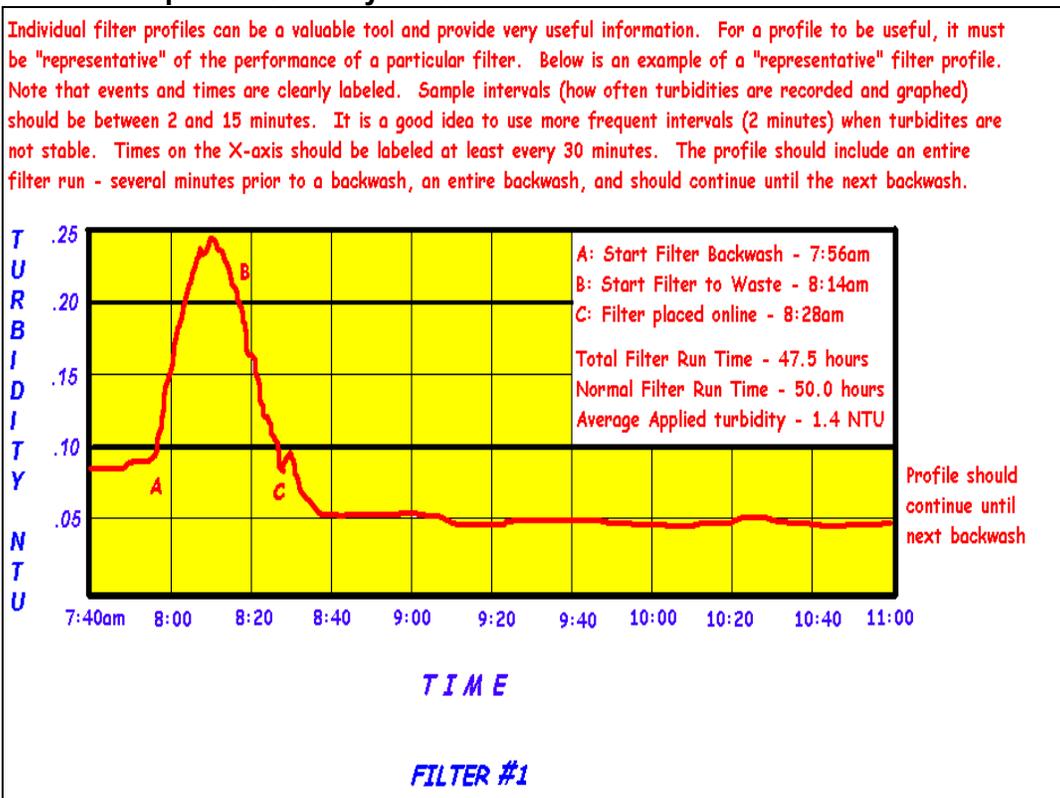


Figure 1

If you have more questions contact the Partnership for Safe Water at
 AWWA
 303-347-6169
 303-794-6303fax
partnership@awwa.org

Self-Assessment Guidance

Treatment Plants Undergoing Major Renovation

Progressive utilities are continuously evaluating current capabilities and improving their facilities to meet future demands. In some situations, treatment plants require major plant renovations (for example, additional basins or filters). These renovations present challenges to the utility and for the Partnership for Safe Water (Partnership) PEAC self-assessment completion report review team. Therefore, the Partnership for Safe Water provides the following guidance for utilities undergoing major renovations and considering participation in the Phase III self-assessment process:

- The Partnership encourages the use of the Phase III Self-Assessment process as a tool to help determine whether the planned renovations adequately addresses operational performance limiting factors
- Treatment plants should seriously consider the timing of Phase III report submittals in relation to the completion of the renovation. Construction should be far enough along that specific action plans addressing known performance limiting factors can be included in the submittal package.
- Plants undergoing major renovations must provide additional report content. Specific documentation should include operational activities used to optimize water quality of the existing plant and an explanation of how the renovation will improve operations and water quality.
- Include specific action plans describing how the renovation removes existing plant limitations and improves water quality. Statements such as "renovations will address this limiting factor" are inadequate.

For example, a filter plant currently experiencing a secondary turbidity spike following filter backwashes may provide information similar to the following:

- The potential cause of the secondary spike (e.g. old manual valves);
 - The operational techniques currently implemented to help improve the situation (e.g. provide a resting period before returning to service and opening valves as slowly as possible); and,
 - How the renovations will ultimately address the issue (e.g. installation of automated valves and improved filter to waste capabilities).
- Include significant future operational changes that may potentially affect the filtered water quality. Provide backup documentation (e.g. special studies) used to support the proposed change. Explain the water quality improvements expected after the renovation. If water quality improvements cannot be quantified, it may be necessary to postpone completion of the self-assessment until the results of the renovation are available.