

Introduction

Cartridge Filter Analysis Procedure

DHP analysis of a cartridge filter consists of the following steps:

- A.** Obtain the background information on the conditions at which the filter was operated.
- B.** Examination of the shipping container for damage incurred during shipment.
- C.** Examination of the external construction of the filter, including the shell, fibers/membrane, and o-ring seals, for damage incurred during operation and/or shipping.
- D.** Examination of the filter media throughout its entire depth.
- E.** Preservation of samples for further testing if necessary.
- F.** Examination of the foulant including a microscopic evaluation involving wet mounts, gram stains, and other various assessments.
- G.** Examination of individual fibers to help isolate and identify foulant material.
- H.** Loss on Ignition (If enough foulant is present) to determine the relative make up of the foulant with regards to being organic or inorganic.
- I.** Examination of the foulant and/or the scalant found on the filter surface, including EDS and FTIR analysis.
- J.** Performance of additional (approved by Client), tests as required to determine the cause of the problem. Additional tests such as Scanning Electron Microscope (SEM) photos, foulant extraction studies, and other test may be performed when they are approved as necessary. Any test or tests that are not listed in the proposal will incur an additional cost.
- K.** Preparation and submittal of a "Final Report", which documents step-by-step the findings of the analysis. This report includes one to two dozen photos of all external, internal and typical microscopic findings. A final "Statement of Results" summarizes the findings.
- L.** The final report is written to act as a training document as well as a technical report.