



**One Grand Street  
Coldwater, Michigan 49036  
Telephone: 517-279-9531  
Facsimile: 517-278-2947  
E-mail: [cbpu@cbpu.com](mailto:cbpu@cbpu.com)**

Dear Valued Customer:

August 13, 2010

The Coldwater Board of Public Utilities (CBPU) is pleased to offer annual oil testing of liquid filled transformers for our large commercial electric customers. This service will be coordinated by the CBPU staff and provided by S.D. Myers, Inc. (SDMI), a third party testing company.

The CBPU regularly tests critical liquid filled transformers and believes that we may be able to extend some cost savings to you through the economies of scale along with providing constancy in analysis, reporting and recommendations.

If you would like to take advantage of this liquid filled transformer testing service, please review the attached SDMI service information; choose testing package a) CriticalPac for \$160.00 or b) DistributionPac for \$70.00; and contact the CBPU to register. In the event that testing cannot be performed on the CBPU testing date i.e. requires a scheduled outage add a) \$350 service charge, b) \$850 specified date, c) \$1,400 weekends.

CBPU staff will schedule annual liquid filled transformer sampling and testing in the fall. You will be provided a written test report and recommendations from SDMI and have the opportunity to discuss clarifying questions and recommendations directly with SDMI engineers and chemists.

The cost of this service will be added to your CBPU monthly utility bill and the service can be terminated by contacting the CBPU in advance of the annual sampling.

Large commercial electric customers that own their own liquid filled primary voltage transformers are strongly encouraged to consider this service offering.

Regards,

Charles Bauschard  
Engineering Manager

In cooperation with S. D. Myers & Coldwater Board of Public Utilities in an effort to bring together constancy in analysis, **reporting** and recommendation Coldwater Board of Public Utilities is making available to you the services of the nations largest and most trusted Transformer Diagnostic, Analytical provider.

S. D. Myers Inc. has been in business for over 45 years and specializes in working along side the transformer owner to help you realize the longest reliable life from your electrical equipment. Our 45 years of technical experience and historic transformer data gathered from thousands of transformers and other pieces of electrical equipment give us the ability to compare your test numbers against a large data base of numbers in order to make the correct recommendations.

There are many reasons to participate and a predictive/preventative maintenance program, here are a few:

- 1. To Determine the Interior Condition of Transformers:**  
The life of the insulation is the life of your transformer. You need to be sure that your equipment operates in the oil's sludge free range. Transformer oils have a predicted aging pattern. When unusual variations occur, the causes can be investigated. Thus, a thorough oil-testing program will detect the majority of problems that can occur within your transformers, incipient faults or sudden failure.
- 2. To Plot Annual Trends:**  
While a single set of test results on transformer oil will reveal the formation of decay products, it is like constructing a graph with only one reference point. A thorough oil test program will show the progressive oxidation of the fluid, which enables you to determine the optimum point at which to perform oil reclamation.
- 3. To Classify Oils:**  
Reliable recommendations may be made concerning the degree of service required, whether energized preventative or corrective maintenance or de-energized de-tanking is necessary.
- 4. To Avoid Unscheduled Plant Outages:**  
By performing the recommended tests, the potential for catastrophic failure is reduced, thus reducing the potential for liability claims related to personal injury and property damage.



180 South Avenue  
Tallmadge, Ohio 44278

www.sdmyers.com  
330.630.7000

Through the latest studies provided by organizations such as **IEEE, EPRI, and S.D. Myers, Inc.**, we are able to pride ourselves on quality service and technical expertise when it comes to analyzing transformer fluids to determine the condition of the insulation system- the life of you transformer.

You also have Chemists and Electrical Engineers available to you- just a toll free telephone call away.

Included in the testing, S.D. Myers, Inc., will provide the manpower, materials, and equipment to pull the samples without (in most cases) a power shutdown. Also, a complete survey of the physical condition of the electrical devices will be made, including appropriate location identification and nameplate.

S.D. Myers, Inc., technicians are **First Aid, CPR trained and OSHA qualified**. This allows the technicians to properly pull accurate samples by following all safety rules put into place.

S.D. Myers, Inc. uses all top quality sample containers for the sampling process. A precisely ground syringe is used to perform the Gas Chromatography test, by using these syringes; we eliminate losing any atmospheric gases from effecting the results. The Karl Fischer moisture test is performed by using a plastic coated glass bottle containing a desiccant tablet to ensure that the bottle is completely dry prior to sampling. A plastic container is used for most other tests.

We also keep a sample of the oil on file for one year, in case any maintenance work is required and the PCB content is needed.

Upon arrival to our laboratory, your samples are checked in and labeled appropriately. From check in, to each individual test station, your samples are handled with the utmost care and precision. More than one half of our laboratory technical personnel have been with SDMI for at least twelve years and the average level of experience for all technical staff is more than ten years.

The reporting process utilizes an easy to read color-coded test report (see insert). Our report incorporates each years test results to enable you to easily see any trends that are developing inside of your units and will be sent to you by a Coldwater Board of Public Utilities representative.

Upon completion of the laboratory analysis, our experts evaluate every piece of equipment tested and give service recommendations to the CBPU Representative. If any reports warrant immediate attention, we will call to go over them with your CBPU representative should you have any questions you are welcome to talk directly with an S D Myers Representative that will answer any questions you may have.

S.D. Myers, Inc. has been pioneering transformer fluid diagnostic testing for over 45 years. We believe that our testing and reporting methods give transformer owners the detailed and comprehensive data that they need in order to determine the necessary maintenance services needed to provide the longest usable life for their transformers.

You can choose between the following Test Packages:

A) For transformers that is critical to the operation of your facility **CriticalPac**:

1. Oil Screen test includes...Acid Neutralization number, Interfacial Tension, Specific Gravity, Color, Visual examination/Sediment, Dielectric Strength (D877)
2. Karl Fisher moisture expressed in parts per million, Percent Saturation and Percent Moisture by Dry Weight
3. Dissolved Gas Analysis
4. Liquid Power Factor run at 25 degrees C and 100 degrees C
5. DBPC (Inhibitor test)
6. ICP-Dissolved Metals
7. Furanic Compounds

B) For less critical transformers **DistributionPac**

1. Oil Screen test includes...Acid Neutralization number, Interfacial Tension, Specific Gravity, Color, Visual examination/Sediment, Dielectric Strength (D877)
2. Karl Fisher moisture expressed in parts per million, Percent Saturation and Percent Moisture by Dry Weight
3. Dissolved Gas Analysis

If you have any questions or need additional information, please contact your Coldwater representative, if they can not help you contact your S. D. Myers representative Brian Carpenter @ 800-444-9580 ext 3903 [brian.carpenter@sdmyers.com](mailto:brian.carpenter@sdmyers.com) .