



UOP MEROX HEALTH CHECK

UOP Technical Service Expertise with Client collaboration result in:
IMMEDIATE operational optimization + **FUTURE** targeted revamp scope solutions

UOP understands that your facility is unique, we've designed the Health Check to deliver a custom solution that fits your needs. Our dedicated global team of Technical Services Specialists visit your site and identify operational areas of improvement, adjusting key process variables and reviewing operational best practices with your operators. Further collaboration with the client on short/long term processing, product specification, and sustainability goals produce highly customized revamp solutions.

Every Merox unit goals are different. That's why UOP's Merox Health Check is tailored to your refinery.

The goal of the Health Check is to improve the Merox unit operations and maximize its utilization. If changes in Feed Flow, impurity levels, and/or product specifications are anticipated, the Health Check scope can be expanded to determine the capability of existing assets and potential modifications. Overall, the Health Check's most valuable outcome is the close collaboration between UOP and You, our Client, resulting in the formation of a complete customized operating and equipment solution. This makes the Health Check a critical tool for maximizing Merox Unit utilization and sustainability while minimizing waste and unlocking its full potential.

If you answer "Yes" to any of these questions, a Health Check is right for you:

- Has your feed rate or mercaptan concentration changed, or will it change in the future?
- Do you need the flexibility to process a wide range of mercaptan feeds?
- Do you have a Merox Unit that is affecting upstream or downstream units?
- Throughput bottleneck, high acid consumption, caustic carryover
- Have your product sulfur specifications been reduced?
- Do you want to reduce caustic consumption and other Operating Expenses?
- Has your facility's performance shifted over time?
- Are you experiencing recurring operational or equipment issues?
- Have you had significant unit engineer or operator turnover and need some refresher training?
- Would you like ideas on making the unit more sustainable and lowering its' carbon footprint?



THE PROCESS

Our team of global experts will meet with you to understand your current operation, performance goals, and operating drivers. This will ensure that our engineers are focused on generating the most value for your business. The Health Check Site Visit is a quick and painless process, typically taking about one week per unit to complete without any process disruptions.

Two types of health checks:

Operational Review - Understand current operation to provide UOP Best Practices, optimization guidance, and recommendations to improve operations.

Vessel Capacity Check/

Debottlenecking Study – In addition to the Operational Review, this will provide:

- Scoping of modification to accommodate:
 - Feed rate or mercaptan changes > 10%
 - Tighter product specifications
- Vessel capacity review
- New Equipment recommendations
- Some specifications can be released without the Schedule A Process

For more information

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CASE STUDY #1 (USA REFINERY)

- **SITUATION:** FCC LPG Merox Unit was a bottleneck for FCC Unit capacity and limited production of alkylate.
- **RESULT:** An 8% increase in capacity was achieved by improving operations. Further minor capital modification resulted in \$7 MM per year increased revenue from debottlenecking FCC & Alky.

CASE STUDY #2 (USA REFINERY)

- **SITUATION:** Instability of C₄ Merox Unit product sulfur led to high HF acid consumption in Alkylation unit.
- **RESULT:** Operational improvements recommended in the Health Check led to a reduction in product total sulfur of up to 15 wppm. This directly led to a 40% reduction in HF acid consumption, with an overall annual savings of >\$200 K.

