

UOP MEROX HEALTH CHECK

Unlock Value in Your UOP Merox™ Process Unit with a Collaborative Performance Assessment using Current Processing Limitations and Future Operating Vision to Establish a RoadMap for Your Facility to Improve Performance & Meet Your Goals.

Thrive in Challenging Times

The UOP Merox HealthCheck is a customizable solution built upon a proven HealthCheck process, yielding solid results over the last decade, driven by the deep expertise of UOP Specialists. Onsite assessment will identify key areas of improvement and operational best practice review with your operations staff will position your facilities for success. Further collaboration to understand your short and long term processing objectives, product specification requirements, and sustainability goals produce revamp solutions aligned with your vision.

The goal of the Health Check is to improve the Merox unit operations and maximize the asset's utilization as a critical component of your facility. If changes in capacity, impurity levels, and/or product specifications are anticipated, the Merox HealthCheck scope can be expanded to determine the capability of existing assets and potential modifications. The Merox HealthCheck is a vital tool for maximizing critical asset utilization while minimizing waste and unlocking its full, sustainable 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 (bottleneck, high acid consumption, caustic carryover)?
- Have your product sulfur specifications been reduced or will they be reduced in the future?
- 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. Process refresher and operational best practice review will improve operations effectiveness. 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

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.

CASE STUDY #3 (USA REFINERY)

- **SITUATION:** Desire to increase capacity for kerosene Merox unit by 35%.
- **RESULT:** Health Check identified unit limitations and allowed some immediate improvement. Subsequent reload and minor debottlenecking enabled a total unit capacity increase of nearly 50%, improving profitability by more than \$5MM per year.¹

¹Based on Honeywell UOP analysis of margin improvements using observed incremental capacity and the market value of kerosene and diesel in North America.

For more information

<https://uop.honeywell.com>

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