



**ESC**Spectrum

Ready to see how our StackVision DAS can help you meet refinery compliance and data requirements?

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# CASE STUDY

## StackVision™ DAS for Refineries

Customer Case Study with Pamela Hemphill, the Air Quality Coordinator of the Delek Refinery in Tyler, Texas.

### OVERVIEW

The Delek Refinery in Tyler, Texas produces gasolines, distillates, and propane products. The crude oil throughput capacity is 75,000 barrels per day, with products transported by truck and rail.

The refinery has a carbon monoxide (CO) boiler, two CEMS units in a Sulfur Recovery Plant, fuel gas, flare and 12 other CEMS sources.

Pam Hemphill is responsible for all projects pertaining to compliance with the EPA's Refinery Sector Rule (RSR).

She analyzes how to interpret the rules as they pertain to the Delek facility, and makes critical decisions on the data collection hardware and data management software necessary for compliance.



### CHALLENGE

The refinery's spreadsheet and outdated software system were not a good fit for their increasingly complex needs:

1

#### DATA ACCESS & DELAYS

Data in the spreadsheets was dependent on input from multiple departments and often had to be verified by others. Getting access to much-needed historical information was difficult.

2

#### REGULATORY CHANGES

The use of spreadsheets made it difficult to comply with evolving federal and state regulatory changes and more complex rules requiring additional calculations and timely responses for data requests.

3

#### OPERATIONAL INEFFICIENCIES

Maintaining spreadsheets, searching and validating data and addressing other issues was time-intensive and cumbersome.

4

#### LACK OF INTERDEPARTMENTAL COMMUNICATION

Different groups within the refinery were not clear on each other's activities and how they might impact underlying data.



## About StackVision

ESC Spectrum has been in air regulation compliance for nearly 50 years. Our Data Acquisition and Handling System (DAS or DAHS) is installed in facilities across many industries, including refineries, with 3000+ sources successfully reporting under NSPS, MACT rules and more.

Whether CEMS, COMS or CPMS, the ESC DAS can automate your data validation and averaging and also simplify your recordkeeping, QA and reporting.

1

The data controller continuously collects and validates air emissions monitoring data and sends it to the software for calculation, monitoring and reporting.

2

With ESC Spectrum's DAS, your facility can continuously monitor emissions data—while saving time, reducing errors, and reporting accurately.

3

The user-driven, innovative design keeps you on top of your compliance status and trends with a real-time set of tools and displays.

## Solution

The outdated software and spreadsheet solutions that Delek-Tyler utilized did not meet their ever-growing needs for RSR compliance, data management, and inter-departmental communication. Air Quality Coordinator Pam Hemphill sought to create a proactive compliance program informed by accurate, accessible current and historical data.

Previously, Ms. Hemphill relied on information tediously compiled into spreadsheets to analyze data points and confirm compliance. The data in the spreadsheets was dependent on input from multiple departments and often had to be verified by others; moreover, the environmental team was not always informed about impactful events such as calibration and maintenance and often included inherited, non-verifiable data. Getting access to much-needed historical information presented additional challenges.

To better address Delek-Tyler's flare monitoring needs, Ms. Hemphill decided to use ESC Spectrum's DAS software and 8864 Data Controller hardware.

She heard positive feedback from other facilities before deciding to evaluate StackVision. "There were great reviews from people who had been using ESC Spectrum for years," explained Ms. Hemphill. "You guys came out and did a presentation and when you left, everyone said 'we need 10 of those!' Everybody really liked what we saw...the fact that the data would be there and the DAS looks at the data and gives me an opportunity to validate it and...my CEMS technician {doesn't} have to go somewhere else to tell me that he is working on the equipment - it improves our communication."

Before utilizing StackVision, Ms. Hemphill relied on her DCS group to backfill data, a timely process which often left her in the dark regarding the status of the facility's compliance. "While it is a matter of compliance, that doesn't always get that kind of attention. For example, right now we have a turnaround going on, and it's all hands on deck and if we don't get this thing up and running on time, then we are shutting down parts of the refinery and we don't want to do that. It's not that we don't want to be in compliance, it's about that there are three people in the DCS group and there are 24 hours in a day."



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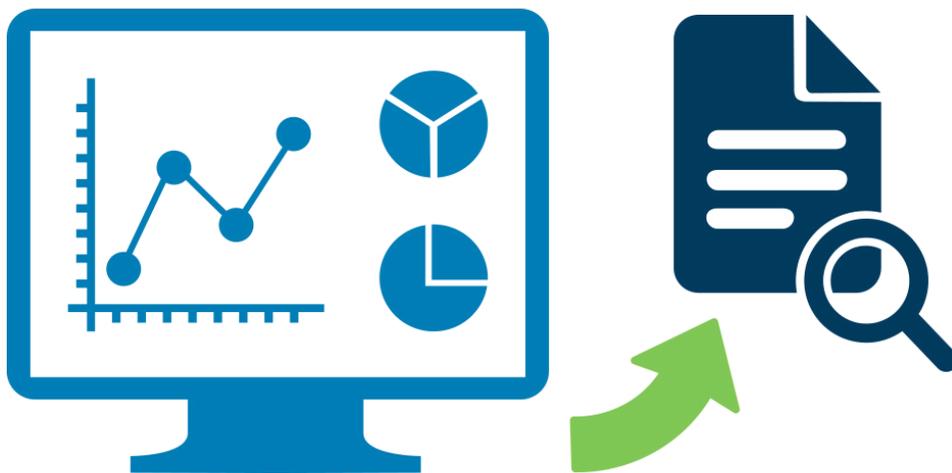


Similarly, if an analyzer did not provide the right data, she would ask an Analyzer Technician to retrieve it. After implementing StackVision, Hemphill was able to get the data she needed in a timely way. “{The} data is there for me and I can get it myself...if I am empowered to do that then I don’t have to infringe on other groups to show continuous compliance,” she said. “The easier you make this for me then the happier I am going to be because I don’t have to do it...I have six RSR projects that are all huge.”

Another reason ESC Spectrum was the right choice for Delek-Tyler was the availability of customized new user training for employees. New StackVision users were given the resources and guidance they needed to be successful, as well as easy 24/7 access to customer support for assistance. “The service we received even before being a user {was} incredible,” Ms. Hemphill noted.

“So far, it’s been awesome. The service we’ve gotten has been really good...I feel good about it and then after listening to all the conversations that I have heard, especially after you left the room...everyone is really happy with it. I am excited that the product is getting really good reviews from people that have been using it and they don’t feel like this was difficult to implement.”

By using ESC Spectrum’s powerful DAS solution, the facility was able to decrease time wasted in turnaround, relieve difficulties in accessing and maintaining historical data, improve interdepartmental communication, meet RSR flare monitoring requirements and help the Environmental group create an active compliance program.



## Additional Resources:

- Read about how StackVision helps refineries address the [Flare Monitoring Data Challenges](#)
- Read our two-part series “Bridging the RSR Compliance Gap” in Hydrocarbon Engineering
  - [Part 1](#)
  - [Part 2](#)