



# COLLINS AEROSPACE

Goodrich Corporation Santa Fe Springs Facility

**March 7, 2024**

# SANTA FE SPRINGS (NORWALK) FACILITY



## Facility Fast Facts

<b>Location</b>	Southern California, ~ 22 miles (35 km) east of LAX Int. Airport
<b>Age of Facility</b>	76 yrs (Built 1945)
<b>Size</b>	191,632 ft <sup>2</sup>
<b>Headcount</b>	110
<b>Product Types</b>	Brakes and seals

# THREE CARBON FACILITIES WITHIN LS



- *SFS Facility is the only facility capable of 2D fabrication, CMC CVD, and non-friction composites applications*

**Headquarters in Troy, Ohio specializes in wheel & brake assembly**

# PRODUCTS, SERVICES AND CUSTOMERS



## COMMERCIAL BRAKES

16% of SFS Output

## CMC Products

8% of SFS Output



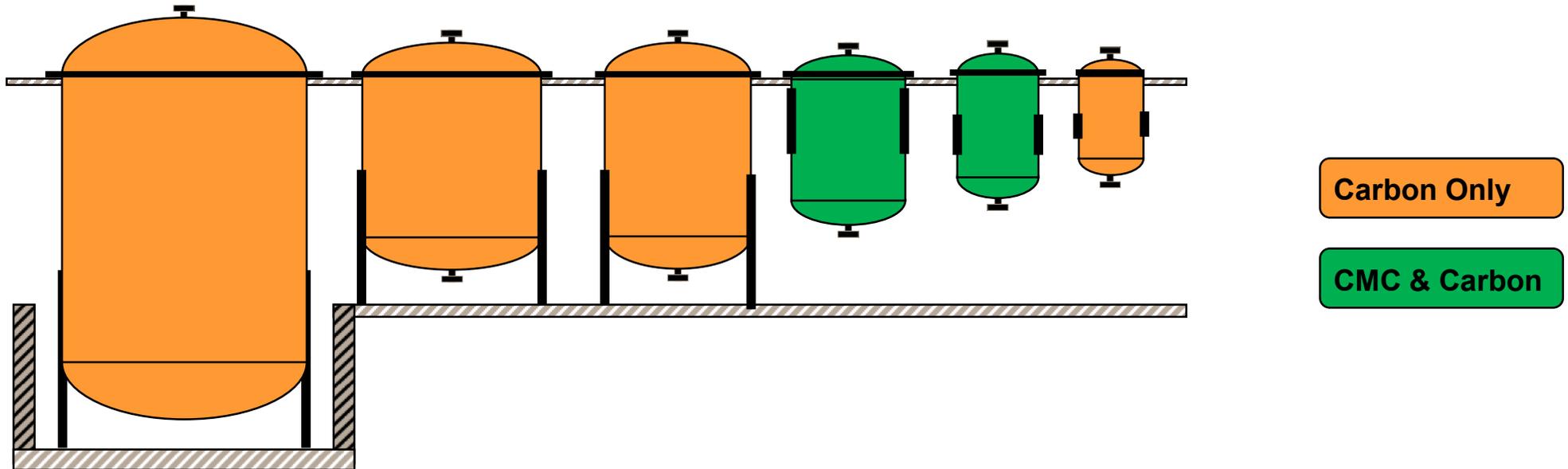
## REGIONAL & BUSINESS & Military

76% of SFS Output

# SFS CVD/CVI FURNACE CAPABILITY



- SFS is equipped with various sizes of furnaces, which is unique from the other two carbon sites
- Some furnaces are capable of different type of CVD process (SiC Deposition, Heat Treat)



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# INTERIM VARIANCE REQUEST

- Goodrich seeks an interim variance to operate a secondary air pollution control device beyond its permitted 12-month rolling limit.
  - The solenoid valve failure that caused the February event was an unanticipated mechanical failure that had never occurred before at the facility.
  - The emergency flare rarely operates for longer than 10-20 minutes
- Goodrich and the District have agreed on proposed interim variance conditions.

# FLARE LINE



View of the Flare from  
the Platform Level



View of the Flare from  
the Ground Level

### What led to the incident?

On Saturday, February 3, 2024, at about 7:30 pm, the Maintenance Technician reported that the Flare was actively burning process gas. The technician manually closed the valve from the furnace to the flare. Upon investigation, process gas was vented to the Flare due to a stuck solenoid isolation valve failure on one of the Furnace systems (112-ISV-113A). The valve failure caused process gas to vent to the Flare, where it was combusted, for approximately 16 hours. The information was investigated and confirmed by area managers at 9:22 pm. Goodrich notified SCAQMD at 9:50 pm.

### Contributors:

- **Contributor #1:** 112-ISV-113A valve to boiler was commanded to close, but it failed in open state. There was no fail alarm on the isolation valve.
- **Contributor #2:** The undetected valve failure caused gas to flow backward through system.
- **Contributor #3:** Flare timer was not activated because it is triggered only when individual furnaces are venting.



# FEBRUARY FLARE EVENT TIMELINE

## Saturday, February 3, 2024

- A mechanic discovered that a solenoid valve failed in the process gas system, causing process gas to vent to the emergency flare line instead of the boilers.
- Area managers investigated and confirmed the valve failure, and Goodrich notified the District.

## Tuesday, February 6, 2024

- Goodrich contacted the District to obtain confirmation of its report and was referred to District Counsel, who informed Goodrich that it should report the incident through 1-800-CUT-SMOG.
- At 1:01 PM, Goodrich filed Notification # 780091 with the District.
- A District Inspector called Goodrich to obtain more details and emailed Goodrich to request that it submit a written report within seven days.

## Friday, February 9, 2024

- Goodrich submitted the written report via email to the District Inspector.

## Thursday, February 15, 2024

- Goodrich followed up with the District Inspector, who provided Goodrich information regarding filing for a variance.
- Goodrich was not familiar with the variance process, having never required use of variance procedures.

## Friday, February 16, 2024

- Goodrich began preparing its variance application.

## Tuesday, February 20, 2024

- Goodrich retained counsel to support its efforts to obtain an interim and regular variance.

## Friday, February 23, 2024

- Goodrich filed its Petition for Variance.

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# GOOD CAUSE FACTORS

- **First**, Goodrich's Permit to Operate allows it to operate the emergency flare for 13 hours over a rolling 12-month period. Because of the February event, Goodrich is in violation of this condition. Goodrich's records show that it typically must use the flare for 10-20 minutes every month. The timing of those events is not possible to predict, so Goodrich is proactively seeking variance relief.
- **Second**, the February event was caused by an unanticipated solenoid valve failure. The valve at issue was within its recommended life span, and Goodrich had no notice that it would fail before it did fail.
- **Third**, Goodrich exercised diligence by promptly contacting the District following the February event. Goodrich filed its petition within four business days after the District indicated that it needed to file for a variance.
- **Fourth**, a denial of the interim variance will result in an unreasonable and unavoidable adverse impact to Goodrich because it would require a facility shutdown, which would cause approximately \$8 million in revenue losses and affect contractual commitments and critical supply chain obligations.

### Corrective Actions

#	Action Description	Completion / Planned Date
1	Isolated system to stop flaring and replaced failed solenoid on isolation valve.	2/3/2024
2	Programmed additional failure alarms to all incoming boiler and flare valves to ensure detection and immediate action by staff that are present in a control room on a 24-hour-per-day basis.	2/5/2024
3	Reviewed facility records to confirm no similar incidents occurred in prior 12- month rolling period.	2/5/2024
4	Submit a Petition for Variance to SCAQMD to continue to use the Flare Line and avoid violations per instance of use.	2/23/2024
5	Modify flare timer logic to detect any possible pathways for process gas to enter flare line.	3/8/2024
6	Update alarms on all valves to instruct operators on recommended actions and possible causes for flare operation. (pop up window)	3/16/2024
7	Submit permit modification application to SCAQMD to operate the flare >13 hrs. per calendar year.	3/31/2024
8	Modify flare timer programming to detect any possible pathways for process gas to enter flare line.	4/1/2024
9	Evaluate for IR camera as secondary input to trigger flare timer and alarms. If changes are required, document through MOC process.	4/5/2024
10	Shut down all furnaces in operation should a pathway to flare be opened during non-emergency scenario.	5/3/2024
11	Establish PM frequency for physically testing solenoid valves. Update Mechanical integrity program accordingly.	4/12/2024