

# **EHS Considerations for Plant Upgrades and Expansions**

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# Agenda

## Environmental Considerations:

- **Air**
- **Water**
- **SPCC/FRP**
- **Emergency Response Plan**
- **RFS2**
- **RMP**

## Safety Considerations

- **PSM**
- **LOTO**
- **Confined Space**
- **Arc Flash**
- **Combustible Dust**



# Environmental Considerations

## Air

- **Is a permit needed?**
- **Agency Coordination**
- **Construction Permit**

## Water

- **Construction SWPPP and NOI – Needed if over 1 acre disturbed, 7 day notice**
- **Update SWPPP for General Permit for Industrial Activity**
- **Waste Water permit**



# Environmental Considerations

## SPCC/FRP

- **Changes in oil storage capacity or location**
- **Changes in response activity**
- **Changes to evacuation gathering points or other info on site maps**

## Emergency Response Plan

- **Not common for most upgrades, but don't forget to evaluate**



# Environmental Considerations

## RFS2

- **Make sure increase in capacity addressed by new pathway if needed**
- **If new pathway, updated 3<sup>rd</sup> party engineering review needed.**

## RMP

- **Not common, but consider changes in denaturant capacity and ammonia. If Emergency Planning Distance changes, update needed**



# Safety Considerations

## PSM

- **Make sure MOC followed and properly documented**
- **Updated P&IDs**
- **PHA**
- **Revised or new SOPs**
- **Revised or new Process Safety Information**
- **Document operator training on the changes**
- **PSSR**
- **Update MI program to include new or modified equipment**
- **Document that equipment installed per design specs and applicable codes and standards**



# Safety Considerations

## LOTO

- **Are new LOTO procedures needed?**

## Confined Space

- **New tanks or CSE?**
- **Update CSE inventory**
- **Proper labeling of CSE's**



# Safety Considerations

## Arc Flash

- **New equipment added to Arc Flash Survey**
- **Labeling**
- **Changes that may impact existing Arc Flash Survey**

## Combustible Dust

- **Changes to grain handling/receiving or DDGs?**
- **Dust Hazard Assessment**
- **NFPA essentially follows PSM requirements**







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