

**SRR Board of Managers – May 11, 2016**

## **3H EVAPORATOR RECOVERY**

**Mike Borders**

**Tank Farms/ARP-MCU/ETF Project Director**

# 3H Evaporator Background

- **3H Evaporator Pot Discovered Leaking on Feb 17**
  - Leak was safely contained in a stainless steel lined cell (has since been cleaned/emptied)
  - 16 years into a 30 year design life
  - 3/8" Hastelloy G3 (ASTM SB-582)
  - Pot is insulated with Calcium Silicate in a Stainless Steel Lagging (15 gauge)
- **Realized ROMP Risk 344**
- **FY16 PEMP Impacts**
  - None expected
  - Puts burden of earnings in Tank Farms on ARP/MCU with reduced evaporator capacity
  - SRR has a mitigation plan that supports FY16 PEMP objectives with 3H down
- **3H Recovery Team with 7 Sub-Teams Established and Working**

# 3H Team Updates

- **Flowsheet Impact Team – Complete**
  - ◆ Developed and communicated system plan that supports a 3 year 25H Outage, while supporting H Canyon, DWPF, and Salt objectives
  - ◆ Pete Hill to brief specifics
- **Cell Cleaning Team - Complete**
  - ◆ Cell and external pot cleaning has been completed
- **Limited Operations Team - Suspended**
  - ◆ Leak location will not support a modified operating strategy



# 3H Team Updates

## ■ Leak Repair / Failure Analysis Teams – Working

- ◆ With liquid at 58", there was no decrease in level (below the steam chest)
- ◆ Leak focus areas – tube bundle steam chest, leg attachments, transition weld from cone to cylinder
- ◆ Leak location was not obvious from internal pot inspection
- ◆ Dye penetrate test is being planned
- ◆ Initiated efforts to model the evaporator (thermal and stress)
- ◆ Utilizing subject matter experts and corporate reach back experts to assist



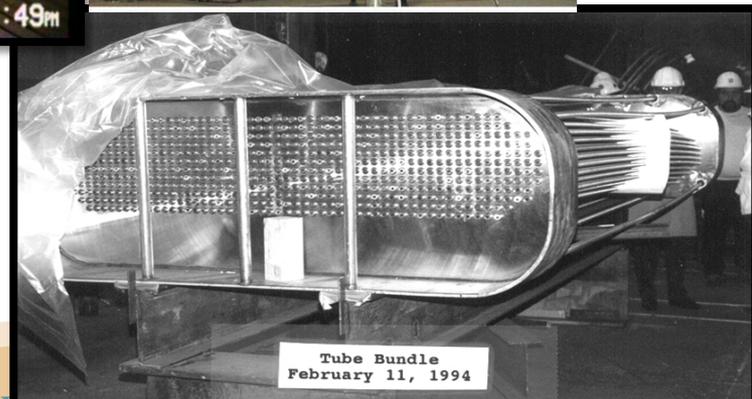
- Normal Operating Level – 95"
- Center of Steam Chest – 76"
- Bottom of Opening – 62"
- Stiffener Band – 37"
- Stiffener Band – 0"



## ■ Water Management Team – Working

- ◆ Initiated Modification for F Catch to Tank 3 Transfer
- ◆ Evaluating Thin Film Evaporator options

## ■ Replacement Team - Working



# 3H Evaporator Replacement Update

**Scope:** Purchase and install a replacement evaporator vessel for 242-25H, including removal of the failed vessel.

## Planning

- Estimate - \$17.9M (Incr only)
- Schedule – 3 yrs (3/16-3/19)

## Status

- Initiated Evap Spec Dev – 5/5/16
- Initiated Drawing updates
- Located As-Builts/Remotability
- Inv Finite Element Analysis
- Approved TTR
- Inv Supplier List / Best Value Deter
- Initiated Planning discussions on Evap Pot Removal/Rigging

