



KAFB Bulk Fuels Facility  
ST-106 and SS-111  
SVE

# memo

## Shaw (a CB&I company)

To: Brent Wilson (KAFB)  
Wayne Bitner (KAFB)  
Scott Clark (KAFB)  
John McBee (USACE)  
Tom Blaine (NMED)  
Steve Reuter (NMED)  
Dave Cobrain (NMED)

From: Agnew, Diane

CC: Mike Amdurer (Shaw)  
Tom Cooper (Shaw)

Date: 12/4/2013

Re: SVE Expansion Metrics

---

Comments: The following three pneuolog wells are being considered for permanently piping into the existing SVE treatment system:

KAFB-106149  
KAFB-106154  
KAFB-106155

Both KAFB-106149 and KAFB-106154 are located in the footprint of the current treatment system radius of influence. These wells were selected because of their shallower screens and relatively low benzene concentrations. By adding these wells into the current treatment system we will be able to treat shallower portion of the vadose zone. We will also be able to reduce the amount of ambient air being used for dilution air while still treating some additional EDB.

KAFB-106155 was selected because it will increase the current radius of influence and because of observed high THC concentrations. This well will be pulsed, along with wells KAFB-106160 and KAFB-106161, to increase the footprint of influence, as well as target VOC and benzene concentrations in KAFB-106155 observed during quarterly monitoring.

SVE Expansion Metrics (approximate, will be confirmed during system design):

- Air volume extraction rates – 30-60% increase from current
  - Current: 600 cfm
- VOC mass removal rate (VOC: TPH, benzene, and EDB) – 20% increase from current.

---

KAFB4166



# memo

- 
- Current: 55 lb/hr total hydrocarbon
  - Burn rate – 20% increase from current for soil vapor
    - Current: 600 cfm of soil vapor and 1400 cfm of dilution air; heat release of approx. 1,000,000 BTU/hr total hydrocarbon and 100,000 BTU/hr of natural gas
  - Soil vacuum pressure – 20% increase from current
    - Current: 8 inch H<sub>2</sub>O
  - Radius of influence – increase; percent increase still being determined
    - Current: 300 feet
  - EDB removal (optimized EDB/TPH ratio) – increase from current; percent increase still being determined
    - Current (estimated): 100 grams/day
-