To: Kaspar, Paul[kaspar.paul@epa.gov]
From: Schwab, Kay
Sent: Wed 11/19/2014 7:56:09 PM
Subject: LOOP related info: TX Strategic Petroleum Reserves (SPRs): TX0092827 (Big Hill) and TX0074012 (Bryan Mound), ICIS data, misc. other info.
TX0074012 Bryan Mound Statement of Basis_012214.pdf
TX0074012 Bryan Mound Final Permit effective_110114.pdf
TX0074012 Bryan Mound_Response to comments_2014.docx
TX0092827 Big Hill Satement of Basis_012214.pdf
TX0092827 Big Hill Final Permit effective_110114.pdf
TX0092827 Big Hill_Response to comments_2014.docx
WET Limit and DMR Data Report - Paul (vs.3).xlsx

Paul,

Please take a look at the suggested info for LDEQ to consider regarding the need to require WET biomonitoring at LOOP Outfall 004 (brine discharge).

Feel free to edit as you see fit.

Thanks

K

In addition to the 2 TX Strategic Petroleum Reserves (SPRs), 2 other active SPRs are LA0053031, West Hackberry, Lake Charles, LA (has an out-of-service diffuser & uses deepwell injection of brine);

and LAG480540 Bayou Choctaw, Baton Rouge, LA (uses deepwell injection of brine & is covered by the Light Commercial General Permit).

The 2 Texas SPRs below both require WET biomonitoring and both discharge into the Gulf of Mexico, TX Segment No 2501, offshore -- rather than into the more "sensitive" territorial seas portion that LOOP discharges into. It is also noted that Big Hill & Bryan Mound are "Federal Facilities" and that LOOP is a for-profit entity owned by Marathon, Valero & Shell.

Big Hill: effective Nov. 1 2014, "001" is a "mix of brine + other" with diffuser ~5 miles offshore

(velocity min., 18 FPS & max. 20 FPS; density max. 1160 kg/m^3 (on a 3 month rolling avg.); CD 2.6%; 1/qtr WET, Mysidopsis bahia & Menidia beryllina)

1) "H" (p.13) prohibits oxygen scavengers and states permit will be reopened to add DO requirements if permittee wants to use them.

2) "I" (p.13) restates some of the "new" effluent table requirements and calls for a **max. flow rate of brine 1.7 million barrels per day.** It also requires non-contact digital magnetic principal based flow measuring device, etc...

3) According to the Response to Comments (RTC), Big Hill **has passed WET for 10 years!!** PP-14-15 of the Fact Sheet (FS) explain the rationale for including WET (i.e, the usual) and **denies** permittees **request to reduce** WET to semi-annual at the beginning of permit term (…but is eligible for reduction later).

Bryan Mound: effective Nov. 1 2014, "001" is just " brine" with diffuser ~3.5 miles offshore

(velocity min., 18 FPS & max. 20 FPS; density max. 1210 kg/m^3 (on a 3 month rolling avg.); CD 2.9%; 1/qtr WET; Mysidopsis bahia & Menidia beryllina)

1) This one does not prohibit oxygen scavengers.

2) This one does not include any additional "Other Requirements" like max. flow rate of brine.

3) According to the Response to Comments (RTC), Bryan Mound **has passed WET for 16 years!!** P. 12 of the FS explains the rationale for including WET and also **denies** permittees **request to reduce** WET to semi-annual at the beginning of permit term (…but is eligible for reduction later).

** See the attached ICIS pull for WET data for the TX SPRs (122 pages !!)

** Note: For this recent permit reissuance of the TX SPRs, modeling was performed with an updated version of CORMIX which more precisely models the multi-port diffusers and the brine itself.

** We won't know until we try, but I think Taim can work with LDEQ/LOOP to determine the most user-friendly AND protective velocity/density/critical dilution for WET, and determine if there is a need to add additional brine storage or if LOOP can "juggle" brine handling through operation of the existing caverns & brine reservoir.

The "Old" Studies:

"Vol 1: Executive Summary" which came out in 1998, provides an "overall recommendation" that "**monitoring should continue"** (p.49).

To follow-up on LDEQ's concern regarding sending the wrong message on requiring studies and then not using them, it appears that based on the documentation provided, that these studies were required as conditions to obtaining state and federal licenses to construct/operate LOOP (p.4) …and were not initiated as permit conditions.

This 1998 report also explains that the Environmental Monitoring Program (EMP) was developed under mandate of the Superport Environmental Protection Plan, a regulation of the State of Louisiana, implementing the Offshore Terminal Act.

The "Technical Information for the LOOP Marine and Estuarine Monitoring Program Revisions" of the 1998 report discusses monitoring of the brine diffuser (p.52) and brine monitoring (p. 58).