Ciniza/Gallup

Monzeglio, Hope, NMENV

From: Jim Lieb [Jim.Lieb@wnr.com]

Sent: Monday, February 04, 2008 4:06 PM

To: Chavez, Carl J, EMNRD

Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV; Powell, Brandon, EMNRD; Ed Riege; Bryon Holbrook; Mark Turri; Jim Hallock; Mike L. Facker; Don Riley; Cote Edward L.

Subject: RE: Giant Ciniza Refinery (GW-32) Conceptual Design Report Storm Drain System Extension Report (October 2007)

Carl:

I provide answers to your questions below. We can discuss as you may wish during our meeting on February 11th. Please note that Western may decide to move the tanks to a location nearer to the location where we anticipate the as-yet-to-be-constructed process waste water treatment plant (WWTP) will likely be located. Moving the tanks to closer the future process WWTP will eliminate the need for pipeline cleaning (your question #1) as existing sewer lines will be utilized and new piping to the tanks is minimized. We will have an engineering company prepare an engineering design plan for the moved-tanks scenario if we decide to move them.

I will be glad to answer any questions you may have between now and the meeting.

Regards,
Jim Lieb

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Wednesday, January 16, 2008 2:40 PM
To: Jim Lieb; Ed Riege
Cc: Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV; Price, Wayne, EMNRD; Powell, Brandon, EMNRD
Subject: Giant Ciniza Refinery (GW-32) Conceptual Design Report Storm Drain System Extension Report (October 2007)

Mr. Lieb:

The New Mexico Oil Conservation Division (OCD) and New Mexico Environment Department have review the above subject report. It appears that the maximum treatment capacity of the NAPIS is 300 gpm. The estimated storage tank and operational flow volumes appear to be accurate and the design appears to be feasible. The agencies presume that the recently installed flow meters will be monitored to account for total flow volumes over time across the process areas and overall treatment system. The agency comments, questions, and recommendations based on the report are provided below.

Agency comments, questions, and recommendations based on the report are:

1) There is no mention or schematic of a pipeline cleanout system especially for the smaller diameter return line to the NAPIS from the storage tanks. We cannot assume that Giant will be capable of achieving maximum flow efficiency over time with hardness, scaling problems, blockage, etc. that may occur within the pipeline over time. Giant shall design the pipeline(s) to allow for cleanout to ensure maximum flow rates can be maintained for the treatment system. A pipeline cleanout schedule should be incorporated into the Refinery's O&M Plan. Please confirm that the pipeline will allow for cleanout as necessary to maintain flow rates. **We will design cleanouts into the pipelines if we decide to keep the two tanks where presently located as shown in the plan. Cleanings will be put on a regular schedule. Note: If we move the tanks closer to the future process waste water treatment plant, then cleanouts should not be necessary (the tanks would be very close to the existing storm and process sewers).**
2) There is no mention of insulation for the pipelines to ensure they will not freeze up and disrupt flow during the Winter. Please confirm that this will be addressed. **The pipelines would be buried below frost line so freezing should not be an issue. Electric heat tracing will be used in aboveground portions at the tanks.**
3) It would appear that most if not all flow (spills, leaks & any storm water) in the process areas will be routed to the NAPIS through process drains. Since Giant will place cups around the storm water drains to eliminate or minimize flow to the storage tanks, how much flow does Giant expect will flow to the storage tanks during normal operations? How tall are the cups? It would appear that storm water drain flow to the storage tanks would occur only during high precipitation events, emergencies, and when max. NAPIS flow rates are exceeded? **We have cups installed on the process**

sewer drains (the drains leading to the NAPIS). We have cups installed on the process sewer drains so that the NAPIS is not overwhelmed during storm events. The storm sewer drains do not need to have cups installed because we want the storm water drains to preferentially carry storm water as they are intended to do. Tetra-Tech's calculations in their report determined that the two tanks combined have sufficient capacity to handle large storm events. The storm sewers will carry storm water to the tanks during high precipitation storm events and emergencies. The tanks will temporarily accumulate the storm water. The accumulated water in the tanks will be pumped at a controlled rate into the NAPIS (so as not to overwhelm the NAPIS) for separation of water from any oils that maybe entrained with it. The water will then be treated (same as now occurs) in the benzene strippers for removal of benzene prior to discharge to the lagoons.

4) Page 14, Figure 3: There appear to be some locations that are not contributing to flow within the process areas. Does Figure 3 account for all man-made drainage within the process areas? If not, please explain why they are not accounted for in the flow estimations table. The agencies want to make sure all drainage is addressed within the process areas. **All storm sewer drains in the process area will be directed into the tanks.**
5) Do we need anymore flow meters to monitor individual or total flow volume(s) from the process area(s)? **Western does not believe any more flow meters are needed. All storm water will be commingled in the storm water tanks so it is not necessary to monitor individual flows from areas. Tetra-Tech determined the two tanks combined have sufficient volume to handle the largest expected rain event. We have several flow meters already installed to track flows from the process areas into the lagoons and first two evaporation ponds.**

6) How will liquids be discharged from the storage tanks when they are at capacity? The agencies observe that fluids from the process areas will be mixed with refinery chemicals that will flow into the storm water drains located within the process areas. Consequently, the agencies regard liquids stored in the storage tanks to be process water unless fluids within the storage tanks are tested and shown to meet WQCC WQSs before discharge into ponds, etc. Giant needs to address how fluids will be discharged from the storage tanks in the event of an emergency, over fill, etc. A contingency plan for discharging liquids into any ponds from the storage tanks seems in order; and **Water from the tanks will be pumped at a controlled rate into the NAPIS for oil/water separation and thence through benzene strippers. A clay berm/dike entirely surrounds the tanks in their current position. This dike was heightened and reinforced in 2007 and we believe contains more than 1 and 1/3 times the volume of both tanks. If Western decides to move the tanks to a new location as previously mentioned, Western will construct a clay dike around the tanks to hold 1 and 1/3 times the volume of the two tanks. The tanks will be equipped with an automatic tank gauging system such as the Rosemount-SAAB radar system so levels will be constantly monitored.**
7) Since the agencies consider the liquids in the storage tanks to be process water, how will giant construct the secondary containment system (berms, liner, containment volume of one and one-third the volume of the largest tank volume or total volume of interconnected tanks) around and under the storage tanks? **Please see my answer to your previous question.**

Please respond to the above comments and contact me if you have questions or wish to arrange for a telephone conference call to discuss the above items. Thank you.

Carl J. Chavez, CHMM
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(Pollution Prevention Guidance is under "Publications")