



Monzeglio, Hope, NMENV

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 31, 2006 10:33 AM
To: Jim Lieb; Ed Riege
Cc: Price, Wayne, EMNRD; Powell, Brandon, EMNRD; Cobrain, Dave, NMENV; Monzeglio, Hope, NMENV
Subject: Ciniza Refinery Water Flow Meter Final Engineering Design
Attachments: Chavez, Carl J, EMNRD.vcf

Jim:

The OCD has completed its preliminary review of the water flow meter design. The supporting information provided was very helpful. OCD comments are provided below:

- 1) From past meetings and discussions with Giant, the OCD learned that aeration lagoon 1 (AL1) will flow directly into evaporation pond 1 (EP1) effectively bypassing aeration lagoon 2. Shouldn't the bypass from AL1 to EP1 be removed as this will change the results of the treatment system study? If Giant would like to keep the bypass, then another flow meter may be needed to monitor the flow rate between AL1 and EP1.
- 2) In the flow meter schedule table of Figure 4 of 5, Designation FM-4 Location should be changed to "Boiler Plant to EP2."
- 3) Be sure that the appropriate size flume is installed where the flow rate requires it and in consideration of maximum flow rate conditions for maximum production capacity at the plant. For example, extra large 60 degree V at appropriate locations should continue to be useful even at maximum flow rate conditions.

Please respond to the above comments and any comments that the NMED may have regarding the flow meters. Please contact me if you have questions. Thank you.

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

Monzeglio, Hope, NMENV

From: Chavez, Carl J, EMNRD
Sent: Thursday, August 31, 2006 11:28 AM
To: Jim Lieb; Ed Riege
Cc: Price, Wayne, EMNRD; Powell, Brandon, EMNRD; Cobrain, Dave, NMENV; Monzeglio, Hope, NMENV
Subject: Ciniza Refinery Dye Trace Study 2006 (June 19, 2006)
Attachments: Chavez, Carl J, EMNRD.vcf

Jim & Ed:

The OCD has completed its review of the above study and in consideration of the NMED's August 14, 2006 letter about the study. The NMED raised an interesting concern about the flow rate, duration or ability of the dye tracer relative to the flow rate to show up within the scope of the test, and especially at locations where there was discoloration present, but interpreted by Giant as negative indication of breakthrough. Since the OCD had approved the study during the turn-around, since it seemed to be an opportune time to conduct study, the OCD is wondering whether Giant's consultant should have compensated by increasing the flow rate to ensure the adequate time for the tracer to show up. Consequently, Section 4 "Dye Trace Study Conclusions" statement that "No cross-connects were detected, using dye, between the process sewer and storm sewer system at the refinery is in question. Is there a way to resolve this issue, i.e., retesting the locations in question under normal operating flow rate conditions?

Giant had plans to decommission the OAPIS and route OAPIS effluent to a fire water evaporation pond, but due to contact water in the OAPIS, there was verbal discussion with Giant that it may utilize 2 large size tanks to store and treat the water instead. Giant has estimated the average effluent (effluent contains refinery contact water) flow rate into the OAPIS to be about 9.2 gpm (Hubbell, Roth & Clark, INC. Figure 4 of 5 Water Flow Meter Final Engineering Design- 8/24/06 correspondence). There has been verbal mention of Giant utilizing 2 5000 bbl tanks to store and treat OAPIS effluent, but this has not been proposed to date. The OCD requests a time-table for actions to bring the OAPIS effluent situation into compliance?

In consideration of the time-table and steps to bring Giant's treatment system into compliance, the OCD proposes the following:

- 1) Either defend the low flow rate and coloration interpretation or propose to retest the tracer at locations where the tracer observations were questionable using appropriate flow rates and tracers that will be expected to be detected within appropriate time-frame.
- 2) It appears that all drains within process areas should be routed to contact area processing units for treatment. Installing a lip around adjacent stormwater drains does eliminate cross-contamination in and of itself. This will also prevent the needless plugging (i.e., #8, 12, 33, 46, 47, 64 & 77, of existing sewer drains that will help facilitate drainage and control stormwater.
- 3) The unplugging of storm drains, i.e.; #5, 11, 31, 38, 39 & 73, is encouraged by the OCD; however, in concurrence with Item 2 above.
- 4) During the study, stormwater line #77 and MH-12 could not be found. There is concern about potentially damaged lines, and that these drainage features are an integral part of the stormwater system. They need to be found and flow through these lines need to be tested to ensure their integrity or breach, and reconstruct them if necessary to provide for proper drainage and treatment.
- 5) A comparison schematic to scale of the process water vs. non-process water drains would help Giant with the above items. It was difficult for the OCD to compare storm and process drains based on submitted diagrams.

Thanks to Giant for coordinating and conducting the study to attempt to locate cross-connects and contamination that is going to the OAPIS. We look forward to resolving areas where tracer discoloration was evident. Perhaps there is a solution to this and we can arrange for a telephone conference call. Perhaps Trihydro Corporation's engineer can be included. Thank you.

Carl J. Chavez, CHMM
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9/5/2006

GREC

Monzeglio, Hope, NMENV

From: Jim Lieb [jlieb@giant.com]
Sent: Thursday, August 31, 2006 1:44 PM
To: Chavez, Carl J, EMNRD
Cc: Monzeglio, Hope, NMENV; Powell, Brandon, EMNRD; Cote Edward L.; Ed Riege; Steve Morris
Subject: RE: Ciniza Refinery Water Flow Meter Final Engineering Design

Carl:

Ciniza's responses to your comments:

- 1) The pipe from aeration lagoon #1 to evaporation pond #1 is an emergency overflow only and not a "bypass". As OCD suggested, we had a skimmer device built and installed on that overflow in lagoon #1. There are two transfer pipes that carry water from lagoon #1 to lagoon #2. The second pipe was installed about ten years ago to help insure there would be no overflow across the berm separation from lagoon #1 to evaporation pond #1.
- 2) Ciniza agrees to change FM-4 location to "Boiler Plant to EP2"
- 3) Ciniza is working with our engineering consultant HRC to ensure the flume and meters are sized adequately to handle maximum anticipated flows.

Ciniza Refinery appreciates your comments and assistance with suggestions for improvements with the BOD/Phenol study including the flow meters installation.
 For your information, I will be out of the office all next week.

By the way, I re-contacted Josh Rector at the NM Game & Fish Department regarding the sonic bird repeller device for our evaporation ponds but he has not replied yet.

Sincerely,

Jim Lieb

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]
Sent: Thursday, August 31, 2006 9:33 AM
To: Jim Lieb; Ed Riege
Cc: Price, Wayne, EMNRD; Powell, Brandon, EMNRD; Cobrain, Dave, NMENV; Monzeglio, Hope, NMENV
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9/5/2006