

**Monzeglio, Hope, NMENV**

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**From:** Jim Lieb [jlieb@giant.com]  
**Sent:** Wednesday, March 14, 2007 7:43 AM  
**To:** Monzeglio, Hope, NMENV  
**Cc:** Ed Riege; Ed Rios; Steve Morris; Kingsleywh@aol.com; Chavez, Carl J, EMNRD  
**Subject:** RE: Monitoring well installation work plan NAPI  
**Attachments:** Work Plan for Monitoring Well Installation.pdf

Hope,

I received the finalized monitoring well work plan from Bill Kingsley and have attached it to this email for your review and approval. If you have any questions, please reply to this email as the refinery phones are still out of order. I have asked Bill for a proposal for the installation of the wells.

Regards,  
Jim Lieb  
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**From:** Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]  
**Sent:** Tuesday, March 13, 2007 12:38 PM  
**To:** Ed Riege; Jim Lieb  
**Cc:** Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV  
**Subject:** Monitoring well installation work plan NAPI

Ed

Please provide me with a date the monitoring well installation work plan pertaining to the NAPI will be submitted. This was due 2/28/07, a due date created by Giant. If this cannot be provided to NMED/OCD within the week (by 3/16/07), and extension letter must be submitted. The extension letter must contain the new due date and an explanation why the extension is needed.

If you have any questions let me know.

Hope

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3/20/2007

# **Work Plan for Monitoring Well Installation Giant Refining Company, Ciniza Refinery, API Separator**

**March 13, 2007**

It is proposed to install three (3) monitoring wells adjacent to the API separator unit located at the Ciniza Refinery 17 miles east of Gallup, New Mexico. Geotechnical data obtained during the project development stage indicates there is a water bearing soil zone in the range of five (5) to eight (8) feet below the ground surface. Although continuous samples were not obtained during the geotechnical investigation, it is estimated the water bearing zone is on the order of three (3) feet in thickness. It is believed that below the bottom of the water bearing zone is a clay that is likely insitu weathered Chinle mudstones, although at this time this cannot be confirmed. At a depth of approximately fourteen (14) feet the geotechnical logs indicate the unweathered Petrified Forest Formation (Upper Chinle Group) is encountered. The Chinle Group materials are not water bearing at the depths investigated.

Based on this information it is proposed to monitor for potential contamination from the API Separator Secondary Containment System (APIS SCS) by installing monitoring wells up gradient and down gradient of the APIS SCS. The following tasks will be performed to install the monitoring wells:

1) Well locations will be identified. The locations will be near the exterior of the SCS. The up gradient well will be located within twenty (20) feet of the SCS, the down gradient well will be located within ten (10) feet of the SCS.

2) One boring will be drilled down gradient (west) of the APIS. The boring will be continuously sampled from the surface through the total explored depth. It is estimated the total depth of the boring will be on the order of twenty (20) to twenty five (25) feet deep. Once sampled, the boring will be converted to a monitoring well. The well will be installed such that the screen will be located below the base of the APIS. It is anticipated that the well will be installed in the Chinle Group mudstones and likely will be dry. It is the intent that the well will monitor for fluid accumulation below the APIS.

3) Two (2) wells will be installed and screened across the water bearing zone. One well will be installed up gradient of the APIS (east) and one down gradient (west) of the APIS. The two down gradient wells will be within ten (10) feet of each other. The screen will be sealed above and below the water bearing zone with a bentonite seal. The screen location will be determined based on the continuous sampling of the boring. The up gradient location will be bored and sampled continuously. Screen will be located based on the continuous log of the boring. The boring will be converted to the up gradient well.

4) All wells will be completed using above ground, lockable vaults.