

Monzeglio, Hope, NMENV

From: Price, Wayne, EMNRD **Sent:** Mon 9/26/2005 10:30 AM
To: Monzeglio, Hope, NMENV; James Romero; Foust, Denny, EMNRD; eriege@giant.com
Cc: Cobrain, Dave, NMENV
Subject: RE: New Monitoring well GWM 2
Attachments:

OCD concurs!

Wayne Price-Senior Environmental Engr.
Oil Conservation Division
1220 S. Saint Francis
Santa Fe, NM 87505
E-mail wayne.price@state.nm.us
Tele: 505-476-3487
Fax: 505-4763462

From: Monzeglio, Hope, NMENV
Sent: Mon 9/26/2005 10:27 AM
To: James Romero; Foust, Denny, EMNRD; Price, Wayne, EMNRD; eriege@giant.com
Cc: Cobrain, Dave, NMENV
Subject: RE: New Monitoring well GWM 2

James

NMED approves the location of GWM-2. Giant must indicate how far below the base of the evaporation ponds GWM-2 was drilled (and GWM-3 upon completion). Giant must submit a revised map providing the new location of GWM-2. Upon completion of GWM-2 and GWM-3, these wells must be checked for fluids on a monthly basis until the new year 2006 and can then be incorporated into the groundwater monitoring plan.

If you have questions please contact me.

Hope Monzeglio

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
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hope.monzeglio@state.nm.us

From: James Romero [<mailto:jromero@giant.com>]
Sent: Mon 9/26/2005 9:27 AM
To: Monzeglio, Hope, NMENV; Foust, Denny, EMNRD; Price, Wayne, EMNRD
Subject: New Monitoring well GWM 2

Hi folks,

Attached is a picture of the new GWM-2 well which was installed over the weekend. This well is approximately 17' deep with 15' of screen and is dry. The well was moved closer to GWM-1 due to safety and access issues which were raised by our safety officer. I would like to get your approval of this well location asap since we still have precision onsite. <<Picture 042.jpg>>

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Installation Gwm-2

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Monzeglio, Hope, NMENV

From: James Romero [jromero@giant.com] **Sent:** Tue 9/20/2005 11:40 AM
To: Monzeglio, Hope, NMENV; Price, Wayne, EMNRD; Foust, Denny, EMNRD; Cobrain, Dave, NMENV; Price, Wayne, EMNRD
Cc: Steve Morris; Ed Riege; Johnny Sanchez
Subject: Proposal for new monitoring wells (GWM-2 and GWM-3)
Attachments:  gmw2and3locations.pdf(26KB)  cinizagmwells.DOC(45KB)

Per our conference call, we are submitting the following installation Procedures for GMW-2 and GMW-3 which was prepared by Precision Engineering. As we discussed, and with your approval, we'd like to begin drilling the week of September 26, 2005. Moreover, in addition to the procedures, you'll find a map which depicts the new well locations. Giant would like to formally request your review and approval of these plans. If there is any additional information you need or questions call Steve Morris at 505-722-3258. I'll be in training this week, however, I will be checking email.

<<gmw2and3locations.pdf>> <<cinizagmwells.DOC>>

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September 20, 2005

Mr. James Romero
Giant Refining Company
Ciniza Refinery
Route 3, Box 7
Gallup, New Mexico 87301

Re: Installation Procedures for GMW-2 and GMW-3
Ciniza, New Mexico

James,

Following are the proposed tasks for the installation of GMW-2 and 3. We have also included a section concerning the sampling and drilling of the boring in or near the proposed Fire Water Lagoon.

GMW-2 and GMW-3

Task I: Each well will be installed using auger drilling techniques. The boring will be advanced using 8-5/8 OD continuous flight hollow stemmed auger. As the auger is advanced the boring will be sampled continuously to the full depth using five (5) foot static split barreled continuously intruded auger samplers. The borings will be logged on site and the core will be photographed and discarded. It is understood that the well is to be terminated and completed above the alluvial sands encountered at the interface of the Chinle Group (likely Petrified Forest Formation). It is estimated that the borings will be on the order of twenty feet in total depth. If the sandy layer is encountered the boring will be abandoned and a new boring well will be advanced to the appropriate depth and a well installed. Abandonment will be performed by injecting bentonite/cement slurry at the bottom of the boring and continuously pumped until it flows onto the ground surface.

Task II: The two (2) borings will be converted to groundwater monitoring wells. Two (2) inch monitoring wells will then be installed. The construction of the wells will consist of placing fifteen (15) feet of number ten (10) slot schedule 40 PVC screen. The screen will be machine slotted. The well solid casing will be flush joint schedule 40 PVC riser. The riser will be extended to the surface and completed as an above ground mount as required. The screen will be sand packed using 10-20 sand. The sand will be environmental quality silica sand graded for uniformity and washed for a dust free product. The sanded portion of the wells will extend to a point two (2) feet above the top of the screen. This amount may be decreased if the top of the screen is within five (5) feet of the ground surface. Sand will be tremmied through the hollow stemmed auger as it is withdrawn from the boring. A two (2) foot bentonite plug will be placed on top of the sand pack. The plug will be placed as a three eighths (3/8) inch chip bentonite and hydrated to provide a dense, impermeable layer with high wall pressure to minimize annular seepage. It is not anticipated the borings will be fluid filled, therefore, it is planned that the bentonite chips will be artificially

hydrated. The boring will then be backfilled with a portland cement/ bentonite slurry to the surface. The well surface finish will include a lockable steel protective vault covering the thirty (30) inch casing extension for the above ground finish. Precision Engineering, Inc. will not provide locks for the project, but, is willing to provide locks at additional cost if they are required. Lockable casing plugs will be provided. The surface vault will be placed in a surface concrete pad. The wells will then be finished with a four foot square concrete pad that tapers away from the steel vault to a minimum thickness of four (4) inches at the edges.

Fire Water Storage Lagoon

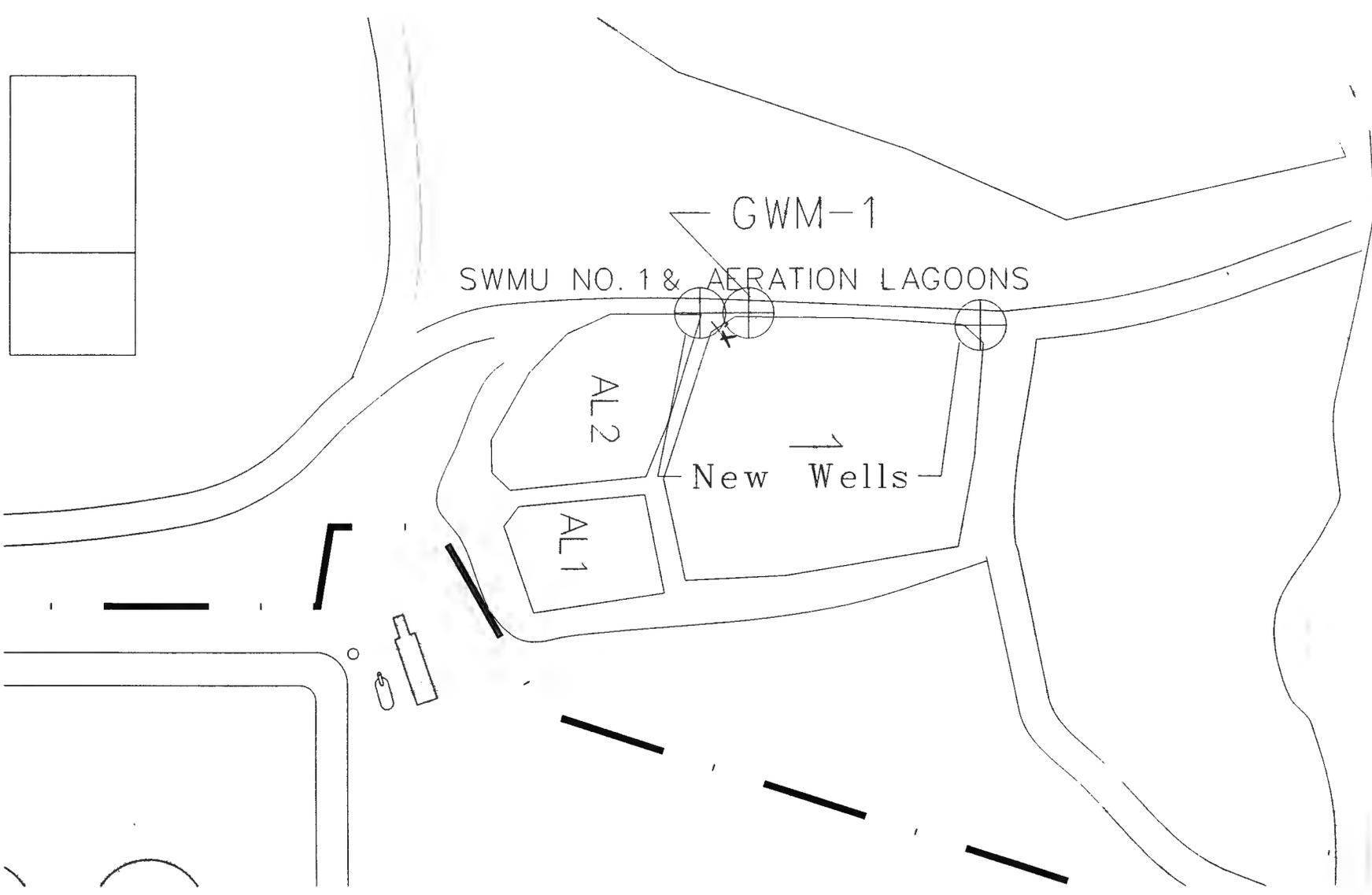
Task 1: A determination of the actual location of the proposed boring will be made. If possible the boring will be advanced on the lagoon floor. If access into the lagoon cannot be made without cutting a road, a suitable boring location will be identified adjacent to the lagoon. The boring will be advanced using 8- $\frac{5}{8}$ inch OD continuous flight hollow stemmed auger. The boring will be continuously sampled from the ground surface through the total depth of the boring. The boring will be advanced until contact is made with the Sonsela Member of the Petrified Forest Formation within the Chinle Group. Upon identification of the Sonsela Sandstone the boring will be terminated. Logging of the boring will be performed by William H. Kingsley. Because the boring will contact the Sonsela, a bentonite/cement slurry will be used to backfill the boring throughout its entire depth.

Task II: Samples taken from the upper fifteen (15) feet of the boring will be tested for vertical hydraulic conductivity. This thickness is approximate. If the boring is drilled outside the limits of the lagoon samples will be taken of materials representative of those cut by the side slope as well as those below the bottom of the lagoon floor. Some variation in the depth of the sample should therefore be anticipated. Sample depths for testing will be verified with the client prior to testing.

Should you have any questions or comments on the scope or proposed techniques used for the projects described above please contact our office.

Sincerely,
Precision Engineering, Inc.

William H. Kingsley, PE



SWMU NO. 1 & AERATION LAGOONS

GWM-1

AL2

AL1

New Wells

Monzeglio, Hope, NMENV

From: Monzeglio, Hope, NMENV **Sent:** Wed 9/21/2005 9:49 AM
To: James Romero; Price, Wayne, EMNRD; Foust, Denny, EMNRD; Cobrain, Dave, NMENV; Price, Wayne, EMNRD
Cc: Steve Morris; Ed Riege; Johnny Sanchez
Subject: RE: Proposal for new monitoring wells (GWM-2 and GWM-3)
Attachments:

NMED hereby approves the well and boring installation procedures as presented in the attachments to this email.

Hope Monzeglio

Hope Monzeglio
 Environmental Specialist
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 Hazardous Waste Bureau
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