



*State of New Mexico*  
**ENVIRONMENT DEPARTMENT**



*Office of the Secretary*

SUSANA MARTINEZ  
Governor

JOHN A. SANCHEZ  
Lieutenant Governor

Harold Runnels Building  
1190 Saint Francis Drive, PO Box 5469  
Santa Fe, NM 87502-5469  
Telephone (505) 827-2855 Fax (505) 827-2836  
www.env.nm.gov

RYAN FLYNN  
Cabinet Secretary

BUTCH TONGATE  
Deputy Secretary

October 27, 2015

Honorable James R. Mountain  
Governor, Pueblo de San Ildefonso  
02 Tunyo Po  
Santa Fe, NM 87506

**RE: Summary of Meeting between NMED and Pueblo de San Ildefonso on October 21, 2015**

To the Honorable James R. Mountain:

The New Mexico Environment Department (NMED) would like to thank the Pueblo de San Ildefonso (Pueblo) for meeting with me and members of the Department of Energy Oversight Bureau (DOE-OB) on Wednesday October 21, 2015 at the Pueblo's Council Chambers. Dr. Patrick Longmire, Mr. Steve Yanicak and I attended on behalf of NMED. Former Governor, Mr. Terry Aguilar was in attendance representing the Pueblo. This letter serves to summarize the conversations that occurred during that meeting.

There were three topics discussed during this meeting: 1) The Department of Energy's (DOE) Environmental Assessment (EA) for Chromium Plume Control Interim Measure and Plume-Center Characterization; 2) Analytical results from the DOE-OB's ongoing pharmaceutical study at Los Alamos National Laboratory and, 3) Letter sent from the Pueblo de San Ildefonso to Governor Susana Martinez, dated October 19, 2015.

**Topic 1: Environmental Assessment (EA) for Chromium Plume Control Interim Measure and Plume-Center Characterization**

The Pueblo previously inquired about whether NMED would provide comments on DOE's EA for the chromium interim measures. We explained that staff from the DOE-OB had reviewed relevant portions of the EA (e.g., groundwater) and concluded that DOE's proposal was consistent with the NMED-approved interim measures work plans. Therefore, NMED does not plan to provide comments on the EA.

## **Topic 2: Analytical results from the DOE-OB's Pharmaceutical Study at Los Alamos National Laboratory (LANL)**

Dr. Longmire explained that the DOE-OB has conducted sampling of several wells, including one on Pueblo land (R-10A), over the last several months as part of a study to evaluate the presence of pharmaceutical/personal care products in groundwater in the area surrounding LANL. Dr. Longmire went on to explain that the analytical results revealed very low concentrations of several pharmaceutical/personal care products, such as caffeine, DEET© and Salicylic acid (a metabolite of aspirin). The concentrations were very low (parts per trillion). Mr. Aguilar asked about the source and what could be done about this situation. Dr. Longmire and Mr. Yanicak explained that based on the data we collected there is no way to pinpoint the source(s) of these contaminants. All four attendees also looked at a topographic map of the affected area and Dr. Longmire and Mr. Yanicak pointed out all of the potential drainages that may have contributed to migration of these contaminants.

We also explained that NMED has no regulatory authority over pharmaceutical products. We do not currently regulate them as a waste under the RCRA program nor does the NMED have groundwater standards for these products. I recommended that if the Pueblo has concerns about this matter, the most direct approach would be to consult directly with DOE and/or EPA. However, we agreed the DOE-OB will continue to provide technical support as necessary.

## **Topic 3: Letter sent from Governor Mountain to Governor Susana Martinez, dated October 19, 2015 (Letter)**

Mr. Aguilar stated he was aware of NMED's concerns with the Letter from Governor Mountain to Governor Martinez because he had spoken with Secretary Flynn the morning of October 21<sup>st</sup>. We were disappointed that we were not given an opportunity to discuss any of the issues identified in the letter in advance as Mr. Aguilar had previously agreed to provide a draft to Secretary Flynn. Mr. Aguilar also commented that due to the lingering concerns of the Pueblo's view regarding the injection wells, he felt it was more appropriate to raise the communication to a higher level.

While we respect the Pueblo's view regarding the injection wells, we did not feel the letter accurately described the communications that had occurred between NMED and the Pueblo regarding this issue. However, we all agreed that the ultimate goal was to avoid this type of situation in the future. Thus, I committed that NMED would continue coordinating regular calls/meetings between DOE-OB, HWB and Pueblo staff to facilitate the flow of information and address the Pueblo's questions and concerns. Mr. Aguilar thought this would be extremely beneficial. Dr. Longmire was designated to take the lead in scheduling these meetings. I added that it would be advantageous to have appropriate representatives from DOE, NMED and the Pueblo meet in the next few weeks to discuss the Letter and determine the best path forward, if the parties were amenable to forgoing the individual "Government to Government" relationships. Mr. Aguilar agreed with this approach.

The next discussion focused on the technical details of the injection wells. Dr. Longmire illuminated the following points related to installation of the injection wells:

- The injection wells will create localized groundwater divides, or mounds, to change the direction of groundwater flow and decrease the rate of groundwater flow in the regional

aquifer within the chromium plume. Changes in hydraulic properties, including hydraulic gradient and hydraulic conductivity within the regional aquifer resulting from the injection wells are anticipated to take place at several locations. These include monitoring wells R-42 (injection well 6), R-50 (injection wells 4 and 5), and R-44 and R-45 (injection wells 1, 2 and 3). Injection wells 4 and 5 are anticipated to decrease the groundwater-flow rate and direction east and west of monitoring well R-50. A decreasing groundwater-flow rate will reduce the rate of chromium transport in the regional aquifer.

- Chromium concentrations will decrease as the treated, injected water mixes with contaminated groundwater within the chromium plume, especially in the vicinity of monitoring well R-50. A decrease in mass and volume of chromium-contaminated groundwater leaving LANL should result from the injection wells located west and east of monitoring well R-50.
- Remediation of the regional aquifer without using injection wells would most likely result in a higher mass and volume of chromium-contaminated groundwater migrating from LANL over a much longer time frame compared to the combination of injection and extraction wells. Injection wells are typically used in conjunction with extraction wells during groundwater remediation to increase the efficiency and success of pump and treat and other applied technologies.

Mr. Aguilar thanked us for the explanation, but also relayed the concerns of the Pueblo regarding how they perceive injecting water back into the aquifer. According to Mr. Aguilar, this was a difficult concept for members of the Pueblo to understand and one they do not fully support. He also explained that because there is considerable uncertainty about the extent of the plume boundary, particularly within the zone between the proposed locations of the injection wells and the location of San Ildefonso Monitoring Well (SIMR)-2, the Pueblo was concerned about potential contamination in that zone being “pushed” onto Pueblo land and potentially contaminating SIMR-2. Finally, Mr. Aguilar explained that in addition to their concern regarding the injection wells, the Pueblo was concerned about the timing of installation of these wells. Mr. Aguilar believed that NMED’s approval of the interim measure work plans allows DOE to begin installing these wells as early as this fall.

I explained that NMED was sensitive to the Pueblo’s concerns about the injection of treated water within their sacred areas as well as the uncertainty associated with the chromium plume extent. However, without installation of another monitoring well (i.e., data point) on Pueblo land, there is no way of knowing the current extent of the chromium plume. NMED respects the Pueblo’s opposition to drilling another well on Pueblo land and will continue to defer to the Pueblo’s position on this issue. Based on the current data, NMED believes that the proposed installation of extraction and injection wells is the best technical approach to preventing the chromium plume from migrating onto Pueblo land. I added that the injection wells would not be installed in the fall of 2015. The DOE EA process must be complete and NMED’s Groundwater Quality Bureau (GWQB) must issue a permit prior to the installation of the injection wells. Neither of these actions will be complete by this fall.

Mr. Aguilar mentioned the possibility of installing a well (not necessarily a monitoring well), that could be utilized by the Pueblo for support of wildlife. Mr. Aguilar asked if this was a possibility as long as DOE and NMED could have access to the well for sampling. Dr. Longmire and I stated that it could be a possibility, but we’d need to discuss the details and better understand the Pueblo’s intentions for the well.

Finally, there was a lengthy discussion about water disposition pathways. Mr. Aguilar explained that the EA discussed several other options, one of which was construction of a pipeline and discharge point farther up Sandia Canyon. Mr. Aguilar asked about the regulatory issues with construction of this pipeline. I explained that despite the excessive cost, there were several other concerns. One, the area in question is blanketed with archeological sites, therefore, there would likely have to be additional surveys conducted in areas not already evaluated. Secondly, the EA covers land application and injection of treated water, not construction of the pipeline and discharging in Sandia Canyon. Therefore, if this option was to be considered now, the EA would have to be redone.

Mr. Aguilar acknowledged those concerns, but agreed that cost should not be the deciding factor. He also stated that it would be very helpful to the Pueblo to better understand NMED's involvement (e.g., GWQB, HWB, DOE-OB) in the project. He felt the Pueblo may not be receiving information on all parts of the project. I agreed and committed that NMED would schedule a meeting for Governor Mountain, Mr. Aguilar, Mr. Martinez, and any other interested members of the Pueblo to provide an overview of how NMED is involved in various aspects of the chromium project.

The above is a summary of the discussions that occurred on October 21, 2015. Please don't hesitate to contact me if you have any questions about the content of this letter.

Sincerely,



Kathryn Roberts  
Director  
Resource Protection Division

Cc: Terry Aguilar, Pueblo de San Ildefonso  
Raymond Martinez, Pueblo de San Ildefonso  
Mr. Steve Yanicak, NMED DOE-OB  
Dr. Patrick Longmire, NMED DOE-OB  
John Kieling, NMED HWB