

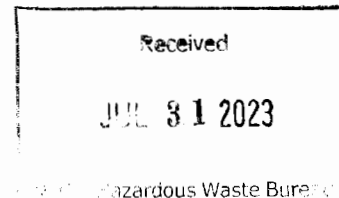


DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)

 ENTERED

27 July 2023

Colonel Michael J. Power, USAF
Commander
377th Air Base Wing
2000 Wyoming Blvd SE
Kirtland AFB NM 87117



Mr. Ricardo Maestas
Hazardous Waste Bureau Acting Chief
New Mexico Environment Department
2905 Rodeo Park Drive East Building 1
Santa Fe NM 87505-6303

Dear Mr. Maestas

This letter is in response to the New Mexico Environment Department (NMED) Hazardous Waste Bureau's (HWB's) disapproval letter, dated November 8, 2022, on the Work Plan for Groundwater Monitoring, dated April 2021. NMED directed the Air Force to develop two additional work plans related to groundwater monitoring activities at the Bulk Fuels Facility (BFF) Release Site, Solid Waste Management Units ST-106/SS-111. A detailed accounting of the regulatory correspondence on this subject is attached to this response letter. For the reasons summarized below and highlighted in the attached "Regulatory History on Groundwater Monitoring for the Bulk Fuels Facility Release Site" (Attachment), the Air Force, under technical and legal advice from and coordination with the Office of the Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure, respectfully declines to submit a revised groundwater monitoring work plan at this time. The Air Force will continue to monitor groundwater using the NMED-approved work plans for the BFF site and submit the quarterly monitoring reports.

The State of New Mexico received its initial authorization on January 25, 1985, from the U.S. Environmental Protection Agency (U.S. EPA) to implement its base hazardous waste management program. On January 2, 1996, New Mexico received authorization to implement Hazardous and Solid Waste Amendments (HSWA) corrective action program. New Mexico received its most current authorization from the U.S. EPA on October 16, 2007. This federal authorization goes to the State of New Mexico not specifically to the NMED HWB so any action by any NMED branch is binding on NMED and the State.

Kirtland Air Force Base's (Kirtland AFB's) Hazardous Waste Facility Permit ("Permit" - No. NM9570024423) requires the Base Commander to sign and certify each submittal. Each Base Commander at Kirtland AFB has taken this responsibility very seriously. The Air Force has not "*cherry-picked*" data as alleged by the NMED HWB in its January 19, 2023, letter responding to the Air Force's "Request for Clarification," dated December 28, 2022.

KAFB5305



Subsequent Base Commanders and the Air Force project team stand behind the commitments made by their predecessors. We are “one Air Force” and the State of New Mexico and members of this community have a right to rely on prior Air Force commitments made under NMED-approved work plans. Changes in leadership at the Secretary of the Air Force, Kirtland AFB or project team members do not affect our ability to meet our obligations.

The Air Force has a right to rely on the prior approvals provided by NMED unless the NMED HWB can demonstrate a significant change in site conditions. The approvals of these certified work plans and other documents by the NMED Chief Scientist or the Director of the Resource Protection Division from 2015 through 2018 are valid and meet the requirements of the Permit; they are also consistent with the federal authorization of New Mexico’s federal Resource Conservation and Recovery Act (RCRA) program.

The following discussion addresses three topics of concern to the Air Force. First, the NMED HWB’s conflicting direction regarding the consolidation of five NMED-approved work plans and recent direction for submittal of two work plans related to groundwater monitoring. Second, NMED HWB’s assertion that sampling methods need to be modified due to passive groundwater sampling yielding unrepresentative data. Lastly, NMED HWB’s determination that the six years of groundwater data collected under NMED-approved work plans is unrepresentative.

In NMED’s October 2, 2020, letter, NMED established a requirement to consolidate five NMED-approved groundwater monitoring work plans. NMED stated in this letter,

“A single groundwater monitoring work plan to consolidate all monitoring conducted will increase efficiency, facilitate review of groundwater monitoring reports, and likely reduce overall costs associated with monitoring and reporting.”

The Air Force met this requirement on April 26, 2021, by submitting a consolidated groundwater monitoring work plan. The NMED HWB took approximately 19 months to review this work plan, which was merely a compilation of NMED-approved sampling techniques. On November 8, 2022, the NMED HWB issued its disapproval letter that directly contradicted prior NMED approvals, created unnecessary delays, required two groundwater monitoring work plans, and increased costs associated with groundwater sampling. Approximately 50 percent of comments received in the November 8, 2022, disapproval letter directly conflicted with historical NMED direction and approvals. Consistency in regulatory direction is required by the Air Force to reduce delays in progressing this project forward.

NMED approved the Air Force’s January 2017 work plan proposing the use of passive sampling at applicable wells on May 31, 2017, and the Air Force is still using passive sampling. The Air Force is concerned with NMED’s assertion that six years of groundwater data collected following NMED’s direction to use passive sampling techniques is unrepresentative. The Air Force stands by the data it has collected with the use of approved passive sampling techniques and will continue to use this method to collect representative samples. Under Kirtland AFB’s RCRA Permit section 1.23.1, the Air Force obtains representative samples by collecting data under an NMED-approved work plan:

“The Permittee shall take representative samples and measurements in accordance with the procedures in this Permit and 40 C.F.R. § 264.13(a)(1). All samples and measurements taken by the Permittee under any requirement in this Permit shall be representative of the waste, media, equipment or structure being sampled. This includes, but is not limited to, sampling and analysis of waste, treatment residues, soil, groundwater, spills, and includes sampling of media for purposes of conducting corrective action pursuant to Part 6 of this Permit. To obtain a representative sample of a waste stream the Permittee shall use an appropriate method from Appendix I of 40 C.F.R. Part 261 or an equivalent method approved by the Department” (emphasis added).

NMED HWB’s disapproval letter, dated November 8, 2022, and clarification letter, dated January 19, 2023, stated that the passive sampling method described with in the April 2021 “Work Plan for Groundwater Monitoring” is yielding unrepresentative data. As detailed in the Attachment, the Air Force strongly disagrees due to these methods being approved by NMED historically. The NMED HWB’s original approval of the passive sampling method was based on recommendations from hydrogeology advisory technical working group meetings, which evaluated the same comparative data that the NMED HWB most recently cited to argue that the data collected under this method is unrepresentative.

Passive sampling techniques have been used nationwide since the 1990s. The United States Geological Survey, as an independent third-party agency, continues to use passive sampling techniques to monitor the sentinel well network for the BFF site. Passive sampling methods are also currently being used at other Department of Defense and Department of Energy installations across the United States. The position on passive sampling taken by the NMED HWB is particularly disconcerting since NMED is using the passive sampling methodology at the Fruit Avenue Plume Superfund Site near Kirtland AFB.

Lastly, the use of active sampling will adversely impact residential neighborhoods in the International District due to noise and blocked roads. Passive sampling was initially proposed due to the accuracy of the method and the significant reduction in impacts to local neighborhoods. Therefore, the Air Force will continue to use passive sampling consistent with the NMED-approved work plans.

The Air Force is also deeply concerned about NMED HWB’s repeated suggestions that the six years of groundwater data collected under NMED-approved work plans from May 31, 2017, to the present is unrepresentative. On the contrary, the Air Force asserts that we have successfully defined the nature and extent of contamination in all affected media to the degree necessary to evaluate potential remedies in the Corrective Measures Evaluation (CME) and make recommendations to NMED HWB. NMED also agreed that the RCRA Facility Investigation (RFI) phase was near completion on July 22, 2021, at the Groundwater Treatment System Open House. NMED HWB’s unsupported decisions to unnecessarily extend the RFI phase by changing sampling methods combined with discarding six years of valid data will significantly delay the implementation of the final remedy, which is very important to the residents of the International District and adjoining neighborhoods.

The Air Force will continue to monitor the site through the implementation of the NMED-approved work plans. The Air Force remains committed to the remediation of the impact from the BFF release and looks forward to working with NMED to resolve these issues and focus on getting to the CME. If you have any questions or concerns, please contact Mr. Ryan Wortman at commercial line (505) 853-3484 or email ryan.wortman.3@us.af.mil.

Sincerely

POWER.MICHAEL Digitally signed by
L.J.1017246581 POWER.MICHAEL.J 1017246581
Date: 2023.07.27 13:18:20 -06'00'
MICHAEL J. POWER, Colonel, USAF
Commander

Attachment:

Memorandum For Bulk Fuels Facility Release Project Solid Waste Management Units ST-106/SS-111

cc:

NMED Resource Protection Division (Shean), letter and CD
NMED HWB (Maestas, Andress), 2 Hard Copies/2 CDs
NMED-HWB (Cobrain, Wear), letter and CD
NMED GWQB (Romero), letter and CD
EPA Region 6 (King, McKinney), letter and CD
AFCEC/CZ (Clark, Kottkamp, Segura), electronic only
Public Info Repository, Admin. Record/Info. Repository (AFB/Miranda), Hard Copy/CD
USACE-ABQ District Office (Watts-Gravette, Moayyad, Hernandez), Electronic



**DEPARTMENT OF THE AIR FORCE
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Kirtland Air Force Base's (Kirtland AFB's) Hazardous Waste Facility Permit ("Permit" - No. NM9570024423) requires the Base Commander to sign and certify each submittal. Each Base Commander at Kirtland AFB has taken this responsibility very seriously. The Air Force has not "*cherry-picked*" data as alleged by the NMED HWB in its January 19, 2023, letter responding to the Air Force's "Request for Clarification," dated December 28, 2022.

Subsequent Base Commanders and the Air Force project team stand behind the commitments made by their predecessors. We are “one Air Force” and the State of New Mexico and members of this community have a right to rely on prior Air Force commitments made under NMED-approved work plans. Changes in leadership at the Secretary of the Air Force, Kirtland AFB or project team members do not affect our ability to meet our obligations.

The Air Force has a right to rely on the prior approvals provided by NMED unless the NMED HWB can demonstrate a significant change in site conditions. The approvals of these certified work plans and other documents by the NMED Chief Scientist or the Director of the Resource Protection Division from 2015 through 2018 are valid and meet the requirements of the Permit; they are also consistent with the federal authorization of New Mexico’s federal Resource Conservation and Recovery Act (RCRA) program.

The following discussion addresses three topics of concern to the Air Force. First, the NMED HWB’s conflicting direction regarding the consolidation of five NMED-approved work plans and recent direction for submittal of two work plans related to groundwater monitoring. Second, NMED HWB’s assertion that sampling methods need to be modified due to passive groundwater sampling yielding unrepresentative data. Lastly, NMED HWB’s determination that the six years of groundwater data collected under NMED-approved work plans is unrepresentative.

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Sincerely

MICHAEL J. POWER, Colonel, USAF
Commander

Attachment:

Memorandum For Bulk Fuels Facility Release Project Solid Waste Management Units ST-106/SS-111

cc:

NMED Resource Protection Division (Shean), letter and CD

NMED HWB (Maestas, Andress), 2 Hard Copies/2 CDs

NMED-HWB (Cobrain, Wear), letter and CD

NMED GWQB (Romero), letter and CD

EPA Region 6 (King, McKinney), letter and CD

AFCEC/CZ (Clark, Kottkamp, Segura), electronic only

Public Info Repository, Admin. Record/Info. Repository (AFB/Miranda), Hard Copy/CD

USACE-ABQ District Office (Watts-Gravette, Moayyad, Hernandez), Electronic

40 CFR 270.11
DOCUMENT CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

MICHAEL J. POWER, Colonel, USAF
Commander, 377th Air Base Wing

Date



**DEPARTMENT OF THE AIR FORCE
377TH AIR BASE WING (AFGSC)**

Memorandum For Bulk Fuels Facility Release Project Solid Waste Management Units ST-106/SS-111

ATTENTION: New Mexico Environmental Department Hazardous Waste Bureau

SUBJECT: Regulatory History on Groundwater Monitoring for the Bulk Fuels Facility Release Site

1. Purpose

The State of New Mexico received authorization on January 25, 1985, from the U.S. Environmental Protection Agency (U.S. EPA) to implement its base hazardous waste management program. On January 2, 1996, New Mexico received authorization to implement HSWA corrective action. New Mexico received its most current authorization from the U.S. EPA on October 16, 2007. This federal authorization goes to the State of New Mexico not the New Mexico Environment Department (NMED) or the NMED Hazardous Waste Bureau (HWB).

Kirtland Air Force Base's (KAFB's) Hazardous Waste Facility Permit ("Permit" No. NM9570024423) requires the Base Commander to sign each submittal with the following language in Part 1.32 "*The Permittee shall sign and certify all applications, reports, or other information submitted to the Department or required by this Permit, in accordance with 40 CFR 270.11(a)(3)*". The referenced certification language is "*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*" (40 CFR 270.11(d)(1)).

The approval of these certified work plans and other documents by the NMED Chief Scientist or the Director of the Resource Protection Division from 2015 through 2018 are valid and meet the requirements of the Permit and are consistent with the federal authorization of New Mexico's federal RCRA authorization. The U.S Air Force (USAF) has a right to rely on the prior approvals provided by NMED unless the NMED HWB can demonstrate a significant change in site conditions.

The following memorandum discusses the regulatory direction received from NMED regarding groundwater monitoring (GWM) activities for the Bulk Fuels Facility release (BFF) since 2015. Critical data sets collected under NMED-approved work plans are impacted by the recent determinations from the NMED HWB regarding data usability for decision making purposes.

2. Statements Regarding Clear and Present Danger Associated with Groundwater Contamination

May 2015: On May 14, 2015 (Kirtland AFB, 2015a), the USAF submitted an optimization request letter to NMED outlining recommendations developed at hydrogeology technical working groups. The advisory technical working group included experts from the USAF, NMED, U.S EPA, United States Geologic Survey, University of New Mexico, Albuquerque Bernalillo County Water Utility Authority, City of Albuquerque, and Bernalillo County. Experts collaboratively reviewed the GWM program and made recommendations captured in the May 2015 letter. The optimization recommendations included removing analytes that were non-detect for the site and reducing redundancies in the monitoring reports.

December 2015: On December 16, 2015 (Kirtland AFB, 2015b), the USAF submitted a second phase optimization letter and technical memorandum to NMED. This was a follow-up letter to the May 2015 letter and outlined the advisory hydrogeology technical working group's recommendations to optimize current monitoring and reporting practices to better align with requirements under NMED guidance and industry standards to achieve a more effective monitoring and reporting program.

January 2016: On January 20, 2016 (NMED, 2016), NMED approved the December 2015 optimization letter. The approval reduced sampling frequency and redundant analytical methods. Five analyses were determined by NMED as not being necessary to inform risk, monitor site conditions, or to support future site decisions. These analyses included methods for TPH. According to Resource Conservation and Recovery Act (RCRA) Permit Part 1.38, the approved submittal became enforceable under and controlling over any contrary or conflicting requirements in the Permit, and under Part 1.23.1, all data gathered under approved methods are considered representative.

January 2017: In January 2017 (Kirtland AFB, 2017), the USAF submitted the Work Plan for Bulk Fuels Facility Expansion of the Dissolved-Phase Plume Groundwater Treatment System Design, Revision 2 (Kirtland AFB, 2017) to NMED. This work plan documented recommendations from NMED and the advisory hydrogeology technical working group. These recommendations included the transition to passive sampling technologies for specific GWM wells based on comparison data evaluated by the NMED and the advisory hydrogeology technical working group. This comparison data included data collected by passive and active sampling techniques and is the same data set that NMED included in their November 8th, 2022, disapproval letter.

May 2017: On May 31, 2017 (NMED, 2017), NMED approved the January 2017 work plan. This approval listed GWM wells in which the use of passive sampling methods was appropriate. This NMED-approved work plan is still used to collect most groundwater samples to date and will continue to be followed until this Work Plan is approved. According to RCRA Permit Part 1.38, the approved submittal became enforceable under and controlling over any contrary or conflicting requirements of the Permit, and under Part 1.23.1, all data gathered under approved methods are considered representative.

October 2020: On October 2, 2020 (NMED, 2020), NMED HWB established a requirement for the USAF to submit a consolidated GWM work plan. This letter outlined five NMED-approved work plans that would be consolidated into one site-wide GWM work plan. This letter did not require any changes to the approved methods. Additionally, this letter established a requirement to update this consolidated work plan on an annual basis.

April 2021: On April 26, 2021 (Kirtland AFB, 2021), the USAF submitted the consolidated work plan to the NMED HWB, which combined the five NMED-approved work plans into one site-wide work plan as requested.

February 2022: Based on NMED HWB's October 2020 letter requirement to submit an annual update to the GWM work plan, the USAF submitted an extension request for this annual update requirement because NMED had not issued a response letter to the April 2021 GWM work plan (Kirtland AFB, 2022a).

February 2022: On February 15, 2022 (NMED, 2022b), the NMED HWB responded to the USAF request to discontinue semi-annual groundwater modeling. The NMED HWB deferred a decision on this request indicating that they were evaluating the reliability of the data collected at this site. This was the first indication that the NMED HWB was questioning the data collected under NMED-approved work plans.

November 2022: On November 8, 2022 (NMED, 2022a), NMED HWB issued an official disapproval letter to the April 2021 GWM work plan submittal. This disapproval letter did not acknowledge NMED's 2017 approval of the use of passive sampling technologies (established on May 31, 2017); the letter stated that all data generated by these methods were not representative. NMED HWB included the same comparative analysis that NMED and the advisory hydrologic technical working Group evaluated in 2016 to determine passive sampling was appropriate for the BFF. Additionally, NMED HWB stated that the use of passive sampling did not comply with RCRA and could not be used for decision-making purposes. This statement was inaccurate since RCRA regulations do not preclude the use of passive sampling and passive sampling methods are currently being used at other Department of Defense and Department of Energy installations across the United States. Furthermore, NMED's statement contradicted the provisions set forth in Part 1.23.1 of the RCRA Permit. Finally, this disapproval required the reimplementation of TPH testing. This disapproval letter also directed the USAF to develop an additional GWM work plan to outline the installation of active sampling systems, directly contradicting the October 2020 requirement to have one, site-wide GWM work plan.

December 2022: On December 22, 2022 (Kirtland AFB, 2022b), the USAF submitted a clarification and extension request for this Work Plan. The November 2022 disapproval letter only allowed two months to submit the Work Plan, which the USAF could not achieve given the significant changes that were required. The USAF requested clarification regarding technical and regulatory justification for the requested additional active sampling system work plan, the NMED HWB's inability to locate previous approvals in their own records, and NMED HWB statements regarding the RCRA compliance and representativeness of sampling data. The USAF requested a revised NOD letter following NMED HWB's review of historical approval letters (NMED HWB stated in their disapproval letter the Department could not locate the approval to

use passive sampling methods). The USAF cited Interstate Technology & Regulatory Council guidance that directly contradicts the validity of NMED HWB's comparison evaluation and cautions that "data representative" cannot be reliably determined through a comparison evaluation of different sampling methods (Interstate Technology & Regulatory Council, 2004).

January 2023: On January 19, 2023 (NMED, 2023a), the NMED HWB issued a response to the USAF's December 2022 clarification and extension request. NMED HWB granted half the requested extension, which required the revised monitoring plan to be submitted by March 1, 2023, and the active sampling plan to be submitted in April 2023. This response letter did not indicate that any of the requirements in the disapproval letter would be amended and reiterated that data collected under the previous NMED-approved work plans were not representative.

The NMED HWB stated the additional monitoring work plan was not in conflict with its October 2020 direction to have one consolidated groundwater work plan for the site. The only clarification as to the context of this additional work plan requirement was to include information regarding replacement equipment, methods, and timelines.

The NMED HWB stated that the comparisons study evaluated by NMED, and the advisory hydrogeology technical working group was biased. The NMED HWB falsely accused the USAF of cherry-picking data to support the use of passive sampling because 2017 data was not included. As documented above, the work plan containing this comparison study was submitted in January 2017 before 2017 data was collected.

February 2023: On February 28, 2023 (Kirtland AFB, 2023), the USAF sent an extension and meeting request for the Groundwater Monitoring Work Plan. The USAF requested clarification on NMED HWB's statement made in its January 19, 2023 letter, seeking NMED HWB's reasoning for asserting that its approved work plans were approved without appropriate technical review.

March 2023: On March 31, 2023 (NMED, 2023b) the NMED HWB denied this extension request and directed the USAF to submit a work plan as soon as possible. The NMED HWB did not acknowledge the meeting request in this denial letter or respond to the USAF's comments about NMED HWB's allegation that its previous approvals were not reviewed by technical staff.

April 2023: The NMED HWB and USAF representatives met on April 26, 2023, to discuss issues related to work plan modifications. USAF stated that current methods yield representative data and are RCRA-compliant because the sample collection methods were approved by NMED (see Part 1.23.1 of the RCRA Permit) and became part of the RCRA Permit per Part 1.38. The USAF requested the guidance document NMED is implementing to determine representativeness of the historical data set or for NMED to reconsider their position on the historical data. To date, the NMED HWB has not provided the requested information or provided a reference to an EPA-approved numerical analytical method for determining the representativeness of historical samples through the comparison of samples collected using different sampling methods. Please note, the EPA RCRA guidance document, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, EPA 530-R-09-007, March 2009 states that the degree of representativeness of a given sample is almost never known (EPA, 2009).

Additionally, NMED noted the RCRA Permit Part 6.5.17.4 “Well Purging” specifically the purging of 75% of one borehole volume. This requirement was not specified in the November 8, 2022, disapproval letter.

On April 28, 2023 (NMED, 2023c), the NMED HWB issued a letter requiring the Groundwater Monitoring Work Plan and Active Sampling System Work Plan be submitted by July 31, 2023. The NMED HWB stated that data collected under the new work plan would be “evaluated relative to data previously acquired at the site.” Again, no guidance document for this evaluation has been provided.

3. Summary of Conflicting Regulatory Direction

NMED HWB required modifications to the April 2021 Groundwater Monitoring Work Plan to follow both the RCRA Permit Part 6.5.17. and *Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers, EPA-542-S-02-001*, May 2002 (EPA, 2002). However, these two documents have conflicting requirements regarding well purging. As stated in Part 6.5.17.4 of the RCRA Permit (NMED, 2010), borehole volume purging (75% of one borehole volume) will be performed prior to low-flow sample collection. Note: This is a permit-driven requirement to conduct borehole volume purging to a predetermined volume (75% of the borehole volume) and is not contained or referenced in the above EPA guidance document. The current NMED-approved active sampling low-flow sampling techniques do not require a specific purge volume. However, these methods utilize field parameter stabilization to demonstrate representative groundwater is sampled and these methods are in accordance with EPA guidance document (EPA, 2002). Therefore, this newly required hybrid sampling approach should not be confused with the traditional low-flow (active) purging and sampling currently approved being performed at the BFF site. The USAF maintains that, with the transmissive nature of the aquifer, excessive pumping of the monitoring well may cause stratification of the contaminant concentrations in the aquifer and may dilute or increase the contaminant concentrations depending on the sample location relative to the plume.

Due to the above-described contradictions with historical NMED approvals and recent direction, the Air Force respectfully declines to submit a revised groundwater monitoring work plan at this time. The Air Force will continue to monitor groundwater using the NMED-approved work plans for the BFF site and submit the quarterly monitoring reports.

References

Kirtland Air Force Base (AFB). 2015a. Correspondence from Colonel Tom D. Miller, Commander, Kirtland AFB, New Mexico to Mr. John Kieling, Manager, RCRA Permits Management Program, Hazardous Waste Bureau, New Mexico Environment Department. *Technical Memorandum: Requested Changes to the First Quarter Calendar Year 2015 and Subsequent Reports*. May 14.

- Kirtland AFB. 2015b. Correspondence from Colonel Eric H. Froehlich, Commander, Kirtland AFB, New Mexico to Mr. John Kieling, Manager, RCRA Permits Management Program, Hazardous Waste Bureau, New Mexico Environment Department. *Re: Requested Optimization of Monitoring and Reporting, Second Phase, Bulk Fuels Facility Spill Site.* December 16.
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