January 28, 2022

Reinhard Knerr, Manager
U.S. Department of Energy, Carlsbad Field Office
P.O. Box 3090
Carlsbad, New Mexico 88221

RE: Discharge Permit Renewal and Modification, DP-831, Waste Isolation Pilot Plant

Dear Mr. Knerr:

The New Mexico Environment Department (NMED) issues the enclosed Discharge Permit Renewal and Modification, DP-831, to the U.S. Department of Energy (Permittee) pursuant to the New Mexico Water Quality Act and the New Mexico Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

NMED sent you a draft permit dated September 24, 2020 and also made the draft available to the public for a 30-day comment period. NMED received comments from you and members of the public during two separate public comment periods and a public hearing held on September 7th and 8th, 2021. NMED considered the comments but did not make changes to the Discharge Permit for the reasons described in the enclosed Response to Comments.

The Discharge Permit Fee of $12,650.00 will be paid through the grant between DOE and NMED.

NMED advises you to submit an application for renewal or renewal/modification at least 180 days prior to January 27, 2027, the end of the Discharge Permit term, in order to avoid a lapse in permit coverage which could result in enforcement action.

This approval is issued pursuant to WQCC Regulation 20.6.2.3109 NMAC, and the NMED Delegation Order dated May 24, 2021, through which the Cabinet Secretary has delegated this authority to sign a Discharge Permit to the Chief of the Ground Water Quality Bureau. If you have any questions, please contact Avery Young at (505) 699-8564. Thank you for your cooperation during the application review process.

Sincerely,

Justin D. Ball, Acting Chief
Ground Water Quality Bureau

Encl: Response to Comments on Draft DP-831
    Discharge Permit Renewal and Modification, DP-831
cc: Michael Kesler, District Manager, NMED District III
   John Romero, Office of the State Engineer
   Eric Hall, DWB, UOCP
   Mike Brown, U.S. Department of Energy, mike.brown@wipp.ws
   Rick Chavez, AECOM, rick.chavez@wipp.ws
   Joni Arends, Concerned Citizens for Nuclear Safety, jarends@nuclearactive.org
   David Ganaway, Amentum Management Services – Regulatory Environmental Services,
   David.ganaway@wipp.ws
   Janet Greenwald, Citizens for Alternatives to Radioactive Dumping, contactus@cardnm.org
   Don Hancock, Southwest Research and Information Center, srhdon@earthlink.net
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RESPONSE TO COMMENTS
Discharge Permit, DP-831
Waste Isolation Pilot Plant
January 28, 2022

On March 8, 2020, and on October 1, 2020, the New Mexico Environment Department (NMED) Ground Water Quality Bureau (GWQB) published notice of the availability of a draft version of the above-referenced groundwater Discharge Permit or “Permit” and invited the public to comment on that Permit. In accordance with 20.6.2.3109(B) NMAC, NMED provides the following responses to comments received in response to those notices and comments made at or after the DP-831 hearing beginning on September 7, 2021.

COMMENTS RECEIVED WITH NMED’s RESPONSES IN ITALICS

Comments from Joni Arends on behalf of Concerned Citizens for Nuclear Safety:

1. **Written Comment**: “Inconsistent availability of documents. Table of Public Involvement Activities on PIP page 3 does not include two of the document repository locations in Eddy County described in the Fact Sheet. They are the Eunice Public Library and Carlsbad Public Library. Further, the Table of Mandated Public Involvement Activities on PIP page 8 does not list under Public Notice (PN-2) that the PIP will also be available, along with the draft permit and fact sheet.”

   **NMED Response**: The Public Involvement Plan is outside the scope of the Discharge Permit.

2. **Written Comment**: “PIP does not include the NMED Spanish phone number: 1-800-327-1857 for Relay New Mexico found in the Fact Sheet and PN-2. Under the PIP Non-English Language Speaker Assistance the Spanish phone number is not provided.”

   **NMED Response**: See response to Comment 1.

3. **Written Comment**: “NMED does not provide justification for using a 30-mile radius for the EJSCREEN analysis for this proposed permit. NMED uses a 50-mile radius for the EJSCREEN for its Hazardous Waste Permit for WIPP, which is up for renewal in 2020. What is NMED’s justification for reducing the radius used?”

   **NMED Response**: See response to Comment 1.

4. **Written Comment**: “Occasional contact with LEP persons. Following EJSCREEN analysis, NMED states, “[T]he Bureau considers the potential for Limited English Proficiency (LEP) contact with the permitting process to be ‘occasional’.”

   **NMED Response**: See response to Comment 1.
5. **Written Comment:** “Conclusion. Given the reduced EJSCREEN radius, the omission of the Spanish phone number in the PIP, and the inconsistencies between the PIP and Fact Sheet about where the document repositories are located, of course, NMED would come to the conclusion that the potential for LEP contact is “occasional.” CCNS urges NMED to correct these errors and re-issue the PIP, the PN-2, and Fact Sheet to fulfill its obligations under NMED’s *Public Participation Policy 07-13.*”

   **NMED Response:** See response to Comment 1.

6. **Written Comment:** “General Comment: Delete all references to [proposed] Salt Cell 5 to [proposed] Salt Storage Pond 5 in the Table of Contents. P. 2.”

   **NMED Response:** NMED does not have the discretion to exclude a proposed discharge location identified by the Permittee if the proposal and the associated requirements of a discharge permit are protective of groundwater.

7. **Written Comment:** “General Comment: Delete all references to [proposed] Salt Cell 5 and [proposed] Salt Storage Pond 5 in first bulleted paragraph and last full paragraph at the bottom of p. 2 of 38.”

   **NMED Response:** See response to Comment 6.

8. **Written Comment:** “General Comment: Is the HDPE pipe proposed for installation “to collect and transmit by gravity the leachate and stormwater runoff from [proposed] Salt Cell 5 to [proposed] Salt Storage Pond 5” double-lined? P. 2 of 38.”

   **NMED Response:** The pipes as proposed are not double lined, and according to the State of New Mexico Uniform Plumbing Code it is not required to be so. NMED does note that PVC and HDPE pipes have potential degradation issues due to UV damage; however, this buried pipe does not have a UV degradation concern. Furthermore, this pipe is not pressurized through utilization of a pump and is therefore less apt to leak.

9. **Written Comment:** “General Comment: Page 3 of 38: delete reference to proposed Salt Cell 5 and proposed Salt Storage Pond 5 in the first paragraph (bolded), as well as in bolded language on p. 6 of 38.”

   **NMED Response:** See response to Comment 6.

10. **Written Comment:** “General Comment: Add the following acronyms to the table on p. 4: LLDP, HDPE, and leak detection, collections, and recovery systems (LDCRS).”

    **NMED Response:** NMED added HDPE and LDCRS to the table of acronyms in the draft discharge permit dated September 24, 2020, and to the Permit. NMED defines LLDP in the Discharge Permit Summary of the draft discharge permit dated September 24, 2020, and did not add the definition to the Permit since the summary is the only location within the documents that acronym is used.

11. **Written Comment:** “General Comment: Section III. Authorization to Discharge includes reference to proposed Salt Cell 5 and proposed Salt Storage Pond 5, which must be deleted. P. 5 of 38.”
NMED Response: See response to Comment 6.

12. **Written Comment:** “General Comment: The draft permit does not require calibration of monitoring equipment and flow measurement devices within a certain range of measurement, e.g., +/- 1%.”

   **NMED Response:** NMED identifies a single flow measurement device at the WIPP Facility which is an ultrasonic flow meter on the Facility’s water supply. The Permittee uses the supply flow meter to estimate the volume of domestic wastewater discharged to the Facultative Lagoon System. NMED has added a meter calibration permit condition in the draft discharge permit dated September 24, 2020 and to the Permit.

13. **Written Comment:** “General Comment: Add a Condition requiring DP-831 documents be posted to the WIPP Electronic Public Reading Room, such as the semi-annual monitoring reports (Condition 29) and groundwater monitoring data and reports (Condition 62).”

   **NMED Response:** As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record, which does not include a condition to require documents be posted to the WIPP RCRA Permit Electronic Information Repository. The WQCC regulations identify the necessary public notice procedures and document availability requirements. NMED has fulfilled all regulatory and statutory document availability related requirements. Furthermore, DP-831 documents such as those referenced in the Comment are available to the public through NMED’s implementation of the State’s Inspection of Public Records Act (IPRA) process.

14. **Written Comment:** “Operational Plan Comment: Part A, # 3 must include requirements to meet the manufacturer’s specifications for inspections and maintenance for the impoundment liners. p. 6 of 38.”

   **NMED Response:** Synthetic liner manufacturers do not provide specifications for inspection and maintenance of liner materials after installation. NMED does have guidance for the installation of synthetic liners and uses standard operational requirements for the inspection and maintenance of synthetic liners and included them in the Permit. NMED therefore declines to revise Condition 3.

15. **Written Comment:** “Operational Plan Comment: Part A, # 4 – The Groundwater Discharge Permit Guidance for Synthetically Lined Lagoons – Liner Material and Site Preparation at No. 3, under Lagoon Design and Site Preparation Requirements, “Lagoon volume shall be designed to allow for a minimum of [two feet] 24 inches of freeboard.” What is the justification for requiring one foot of freeboard throughout most of the permit? One foot of freeboard does not comply with NMED Guidance and Requirements.”

   **NMED Response:** The Permittee constructed and began operation of the impoundments authorized to have one foot of freeboard prior to NMED developing its 2007 synthetic liner guidance. In addition, the Permittee designed the stormwater impoundments authorized to have one foot of freeboard and constructed them with that specification. NMED has required all
impoundments constructed after 2007 and any new impoundments to meet the minimum of two feet of freeboard requirement in the guidance.

16. **Written Comment**: “Operational Plan Comment: Part B, # 5 – should the time period in the first sentence be revised from “three years” to “two years”? Three years conflict with the later requirement to submit the solids removal and disposal plan to NMED for approval “within two years and two months following the effective date of this Discharge Permit....” Further, such as change would be consistent with Condition # 15. P. 10 of 38.”

**NMED Response**: NMED revised Conditions 5 and 15 with the correct deadlines; however, the contingency condition requiring solids removal and disposal was revised to, “The Permittee shall ensure that the solids removal and disposal plan is submitted to NMED within 120 days of the determination of excess solids,” in order to not have conflicting deadlines.

17. **Written Comment**: “Operational Plan Comment: P. 11 of 38: Delete proposed Salt Storage Pond 5 and proposed Salt Cell 5 from the Part D title, as well as on p. 20 of 38, and p. 33 of 38.”

**NMED Response**: See response to Comment 6.

18. **Written Comment**: “Operational Plan Comment: Part D, # 19 – delete this Condition, which references the proposed Salt Storage Pond 5.”

**NMED Response**: See response to Comment 6.

19. **Written Comment**: “Operational Plan Comment: Part D, # 20 – delete this Condition, which references the proposed Salt Storage Pond 5 and proposed Salt Cell 5.”

**NMED Response**: See response to Comment 6.

20. **Written Comment**: “Operational Plan Comment: Part D, # 21 – delete this Condition, which references the proposed Salt Storage Pond 5 and proposed Salt Cell 5.”

**NMED Response**: See response to Comment 6.


**NMED Response**: See response to Comment 6.

22. **Written Comment**: “Monitoring and Reporting Comment: Part D, # 46 – delete reference to proposed Salt Storage Pond 5.”

**NMED Response**: See response to Comment 6.

23. **Written Comment**: “Monitoring and Reporting Comment: Part D, # 47 – delete reference to proposed Salt Storage Pond 5.”

**NMED Response**: See response to Comment 6.
24. **Written Comment:** “Monitoring and Reporting Comment: Part D, # 49 – delete this Condition, which references Salt Storage Pond 5.”

*NMED Response: See response to Comment 6.*

25. **Written Comment:** “Monitoring and Reporting Comment: Part D, # 51 – delete reference to the proposed Salt Storage Pond 5.”

*NMED Response: See response to Comment 6.*

26. **Written Comment:** “Closure Plan Comment: Part D, # 75 – delete reference to proposed Salt Storage Pond 5.”

*NMED Response: See response to Comment 6.*

27. **Written Comment:** “Discharge Permit Summary Comment: The *Groundwater Discharge Permit Guidance for Synthetically Lined Lagoons – Liner Material and Site Preparation* requires at No. 3, under Liner Material Requirements, “Under no circumstance shall a synthetic liner material less than 40 mils in thickness be accepted.” Nevertheless, for the Domestic Wastewater description and comments, Effluent Lagoon A, B, and C are lined with 30-mil LLDPE synthetic liner. Under the Non-Domestic Wastewater description and comment, the Evaporation Pond H-19 uses a 36-mil Hypalon synthetic liner. It is unclear why relaxed requirements are allowed.”

*NMED Response: Evaporation Pond H-19 and Effluent Lagoons A, B, and C were constructed prior to the guidance being issued. Since these impoundments do not meet the guidance standards, NMED has required monitoring wells to be installed downgradient of the impoundments to monitor the efficacy of the liners. Following the issuance of the draft discharge permit, WIPP notified NMED that the liner thicknesses for Effluent Lagoon A, Effluent Lagoon B, and Effluent Lagoon C have been field verified as 60-mil HDPE and the Permit reflects this change; however, NMED has not changed the requirement to have monitoring wells downgradient of these impoundments.*

28. **Written Comment:** “Discharge Permit Summary Comment: The *Guidance* at No. 3, under Lagoon Design and Site Preparation Requirements, “Lagoon volume shall be designed to allow for a minimum of [two feet] 24 inches of freeboard.” Nevertheless, for the Domestic Wastewater description and comments, none of the impoundments are required to meet a minimum of two feet of freeboard. Each of the seven permitted lagoons only requires one foot of freeboard. Under the Storm Water Control heading, all three Storm Water Ponds require one foot of freeboard. Under the Non-Domestic Wastewater heading, the Evaporation Pond H-19, Salt Storage Pond 1, and Salt Storage Pond 2/3, require one foot of freeboard. The Brine Salt Storage Pond 4 (to be constructed) requires one foot of freeboard. It remains unclear why the relaxed requirements are allowed.”

*NMED Response: See response to Comment 15.*

29. **Oral Comment:** Information Repository - “I'm trying to say that the Environment Department has, under the Groundwater Quality Bureau, has usage regulatory authority which is cited here on this
page. In the [Los Alamos] permit for 1793, they cite 20.6.3.31O7A NMAC as the basis for allowing -- for putting this permit Condition No. 12 into the DP-1793 permit. That's the extent of my testimony.

The effort for an information repository, and I'm using the example of the electronic public reading room which is very similar, that the Environment Department Groundwater Quality Bureau has used in two major permits for Los Alamos National Laboratory, another DOE site in New Mexico.

Adding the condition to the permit is reasonable because as we have experienced during the pandemic, it is a reliable and easy resource for the public to access. If you have a computer. Having to figure out how to contact Ms. Young to ask for documents is burdensome, not only for the public, but also, I believe, the Department. To be able to access the material on the WIPP home page -- from the WIPP homepage, that would be modeled after the information repository required by the hazardous waste permit would be very helpful to the public, especially as we move forward with the number of different activities that are going on with regard to the waste Isolation Pilot Plant.”

*NMED Response: See response to Comment 13.*

**Comments from Janet Greenwald on behalf of Citizens for Alternatives to Radioactive Dumping:**

30. **Written Comment:** “This organization opposes the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831. Those facilities are essential for the new shaft and associated drifts, which are part of the "Forever WIPP" expansion, which this organization strongly opposes. Further, we object to including facilities essential for the new shaft, when construction of the shaft has not been permitted by the NMED that can only happen after public comments, negotiations, and a hearing, which have not occurred. This organization and many others oppose "Forever WIPP," and there is substantial public interest in WIPP expansion, including the new shaft and associated drifts. This organization requests negotiations and a hearing on the draft permit. Please delete Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day discharge volume from the permit.”

*NMED Response: See response to Comment 6. In addition, GWQB groundwater discharge permits are issued independent of other NMED or Federal permits.*

31. **Oral Comment:** “I want to speak about environmental justice in relationship to WIPP. This is the second hearing that I have spoken at which expands WIPP. The first was the shaft, an expanded shaft, a very large shaft, which is termed by some people as a utility shaft because it is so large, much larger than is needed for ventilation. And now we’re dealing with the expansion of salt storge and water storage. And soon we’ll be dealing with more issues of expansion.

In the meantime, it is -- it seems to be common knowledge that bomb-grade plutonium is headed for WIPP, or that’s the preferred alternative. So it doesn’t take much smarts to relate the two issues. If you’re going to bring bomb-grade plutonium to WIPP, you’re going to have to expand.
But this -- the issue of expansion is not an issue that the Department of Energy or the New Mexico Environment Department wishes to hear about. And so the truth of the situation is hidden from the public. And my contention is the first tenet of environmental justice is to be open and truthful with the public.

We are a minority state. Our median income is low. We are plagued with illness from testing bombs, from digging uranium, from the Paseo Grande fire and other nuclear issues.

So, environmental justice in respect to this expansion of -- the mandates of environmental justice are not met. And as I say, it begins with truthfulness and then there needs to be in depth, an in-depth look at the larger community in New Mexico which is already suffering from all the different nuclear projects in the State.

I’m trying to speak for people that aren’t here. For my friend at Acoma who lost her mother, her husband and her two sons all to contamination, and for workers at Los Alamos who have a group in my little town of Dixon, New Mexico, a support group for people who have been contaminated. All these people are forgotten, and in dealing with this issue of expansion, I feel like they have been forgotten again.

NMED Response: NMED has conducted all public participation activities associated with the DP-831 permitting and hearing processes in accordance with NMED Policy 07-13, Public Participation Policy.

32. Written Comment: “I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. Those facilities are essential for the new Shaft 5 and associated drifts, which are part of the "Forever WIPP" expansion, which I strongly oppose.

Further, I object to including facilities essential for the new Shaft 5, when construction of the shaft has not been permitted by the New Mexico Environment Department (NMED). There is overwhelming public opposition to permitting the new Shaft 5, as well as many technical and legal problems.

I oppose "Forever WIPP." I am part of a growing movement in opposition to WIPP expansion, including the new Shaft 5 and associated drifts. I am opposed to the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831.

I request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day be deleted from the DP-831 draft permit.”

NMED Response: See responses to Comments 6 and 30.

33. Written Comment: “It took my husband who was an IT person for Bernalillo County and various corporations for twenty plus years fifteen minutes to figure out how to participate in the DP-831 hearing. How can a process that is that complicated be considered environmentally just when many New Mexicans do not even have computers and are not fully computer literate? We are a state with a low median income but the NMED is not really looking at that truth when they call out for public participation. At the very least, how to participate should be clearly stated on the public notice, not require five clicks to find the information.
The expansion of WIPP is being hidden from New Mexicans under the guise of many incidental expansions. This is just one more example of environmental injustice: there is nothing just about hiding the truth. It is an ancient ploy when subjugating those who have little resource to fight back against the injustice of having themselves and their children put to risk.”

NMED Response: See response to Comment 31.

34. Written Comment: “Ms. Corral informed me that if a friend of mine wanted to testify at the recent WIPP water discharge hearing after noon that she could contact Madai or go to the chat box. My friend decided not to testify. I was grateful to Ms. Corral for that information but I later realized that other people who wanted to testify after noon would not have that information. They would go by what was posted on NMED documents which did not give out that information. By not giving out the full information that a member of the public needed to testify, NMED either inadvertently or intentionally limited public participation at the hearing.”

NMED Response: The dates and times of the hearing and information on how to make a public comment were made publicly available on NMED’s website and in public notice documents issued by NMED prior to the hearing.

Comments from Don Hancock on behalf of Southwest Research and Information Center:

35. Written Comment: “The new shaft has not been permitted for construction by NMED. On December 22, 2017, the Department of Energy (DOE) and co-permittee Nuclear Waste Partnership (NWP) submitted a Request for Determination of Class to the NMED Hazardous Waste Bureau (HWB) for a new shaft and connecting drifts. SRIC and others submitted comments that the request must be considered as a Class 3 modification. On August 15, 2019, DOE withdrew the 2017 request and submitted a Class 3 modification request for the new shaft and connecting drifts. On January 16, 2020, DOE submitted a request for Temporary Authorization (TA) to begin construction of the new shaft. As of this date, NMED has provided a Technical Incompleteness Determination on the Class 3 modification, but has not taken final action on either the TA or Class 3 request.

Thus, it is uncontested that construction of the new shaft cannot begin because there is no TA or approved modification. Consequently, there can be no discharge, and DOE cannot state that it intends to use Salt Cell 5 and Salt Storage Pond 5 when it does not have the required HWA permit to construct the new shaft and associated drifts. Additionally, NMED should not approve a discharge permit with facilities that are only needed for the new shaft and connecting drifts, while at the same time not permitting construction of the new shaft and connecting drifts.”

NMED Response: See response to Comment 30.

36. Written Comment: “There is very significant public interest in the new shaft because it is part of the “Forever WIPP” expansion plans. There have been extensive comments from several organizations, including SRIC, and dozens (and perhaps more) of individuals opposing WIPP expansion and the new shaft and connecting drifts that have been submitted to Ricardo Maestas of the NMED HWB. The significant public interest is because the new shaft and connecting drifts
are part of a DOE plan to substantially expand WIPP, including its physical facilities outside the
long-established surface and underground footprint, its operating lifetime for waste disposal from
25 years to 80 years or longer, and the types and amounts of waste allowed.

Limits for WIPP were initially established by the Consultation and Cooperation (C&C) Agreement
signed by the Governor of New Mexico and Secretary of Energy on July 1, 1981. The C&C
Agreement has been modified, and it includes limits and requirements for WIPP. The WIPP Land
Withdrawal Act (LWA, Public Law 102-579) also provides numerous limits and requirements for
WIPP. The law also states that the C&C Agreement remains in full force and effect. However, DOE
has recently taken actions to exceed some of those limits and has released documents that
describe some expansion plans. Among other documents, the DOE Carlsbad Field Office Draft
2019-2024 Strategic Plan declares the objective of operating WIPP through 2050 to emplace, not
the up to 6.2 million cubic feet of defense transuranic (TRU) waste allowed by the C&C Agreement
and LWA, but the entire “existing defense TRU waste inventory.” DOE’s December 2019 Final
Supplement Analysis of the Complex Transformation Supplemental Programmatic Environmental
Impact Statement states that waste will be disposed at WIPP until sometime after 2080. There is
very significant public interest and opposition to those plans, including the new shaft and
connecting drifts.”

NMED Response: The Hazardous Waste RCRA Permit and the storage of TRU waste are outside
the scope of the DP-831 proceeding.

37. Written Comment: “The Public Notice, Fact Sheet, and draft Permit are deficient because they do
not state that the Salt Cell 5 and Salt Storage Pond 5 are part of the facilities needed for the new
shaft. Subsection F(3) of 20.6.2.3108 NMAC provides that the Public Notice shall include “a brief
description of the activities that produce the discharge described in the application.” Subsection
I(1) of 20.6.2.3108 NMAC provides that the Fact Sheet and draft permit also shall provide that
description.

The Public Notice includes no mention of the new shaft, even in the “Activities that Produce the
Discharge,” which only includes the “to be constructed Salt Reduction System,” which does not
include the new shaft. Thus, neither SRIC, nor any member of the public, would know from the
notice that the renewed and modified permit relates to facilities required by the new shaft and
connecting drifts. The Fact Sheet does not mention the new shaft. The Fact Sheet does mention
the Salt Cell 5 and the Salt Storage Pond 5. Regarding “Description of the Proposed Discharge,”
the Fact Sheet states: “The stockpiles currently storing salt, or that will be used in the future as
salt is mined from the Facility’s underground panels, are referred to as Salt Cells 2, 3, and 5.” Since
there is current mining of Panel 8 and perhaps future mining of Panel 10, that description does
not imply that the new shaft and connecting drifts are a source for the new Cell 5. Neither SRIC,
nor any member of the public, would know from the Fact Sheet that the renewed and modified
permit relates to facilities required by the new shaft and connecting drifts. The draft permit does
not mention the new shaft and connecting drifts. The draft Permit does include the language
about Salt Cells 2, 3, and 5 contained in the Fact Sheet and mentions the capacity of Salt Storage
Pond 5. The draft permit does not even include a map that shows the locations of the new Salt
Cell 5 and the Salt Storage Ponds 4 and 5 and the Brine Retention Ponds East and West, which
would show that the new cell and Pond 5 are near the new shaft. Neither SRIC, nor any member
of the public, would know from the draft permit that the renewed and modified permit relates to
facilities required by the new shaft and connecting drifts.
Thus, the Public Notice, Fact Sheet, and draft Permit are all legally deficient in not adequately describing the activities that produce the discharge and that Salt Cell 5 and Storage Pond 5 are for the new shaft and connecting drifts. They also do not provide even location information and map from the application from which that required description could be determined.”

NMED Response: *The draft discharge permits and associated Fact Sheets dated March 2, 2020, and September 24, 2020, and the Permit include mined salt as the waste discharged to the salt cells.*

38. **Written Comment:** “The Permit application clearly states that Salt Cell 5 and Salt Storage Pond 5 are for the new shaft and connecting drifts. The permit application states: “Salt Cell 5 adds a new salt storage location (Latitude: 32 22 21.02, Longitude: 103 48 7.44), which will receive overburden and salt from the construction of Shaft 5 and its associated underground connecting drifts. Salt Storage Pond 5 (Latitude: 32 22 20.25, Longitude: 103 48 13.22) will receive both the leachate and storm water in contact with mined salt located in Salt Cell 5. Salt Storage Pond 5 will increase the quantity of the current industrial wastewater maximum permitted discharge volume by 1,292,499 gallons per day (gpd), which is based on the total inflow from a 24-hour, 100-year rainfall event (5.84 inches).” At 3.

The permit application also states: “Industrial Wastewater – Salt Cell 5 and Salt Storage Pond 5 (Modification – New Shaft). Salt Cell 5 will be designed to contain 5,224,000 cubic feet of loose salt materials from the construction of Shaft 5 and the associated drifts.” At 12.

The permit application also has similar information that Salt Cell 5 and Salt Storage Pond 5 are for the new shaft and connecting drifts on pages 21 and 26. So there is no question about their purpose, based on the application. Thus, not including the required description in the Public Notice, Fact Sheet, and draft Permit does not even adequately convey what is in the application. The application also includes APPENDIX C - Shaft # 5 Pond Drawings. However, each of the drawings is titled for “WIPP Exhaust Shaft.” However, the new shaft is not an exhaust shaft, so that is obsolete and inaccurate information.”

NMED Response: *GWQB discharge permits do not regulate the source of the waste or wastewater but only regulate the discharge itself. NMED has included a reference to Shaft 5 in the Permit only as reference for explaining the modification of the Discharge Permit.*

39. **Written Comment:** “There is no adequate NEPA analysis for the Salt Cell 5 and Salt Storage Pond 5. The DOE must comply with the National Environmental Policy Act (NEPA). The NEPA analysis of the new shaft is the Supplement Analysis for the New Permanent Ventilation System (DOE/EIS-0026-SA-11), November 2017.

That document makes no mention of Salt Cell 5 or Salt Storage Pond 5. The document has two brief mentions of “construction and operation of lined evaporation ponds.” (at 20). But the SA has no description of the size of the two facilities, no location description or map showing the facilities, and no analysis of the impacts. The document does mention DP-831, but does not state that the discharge permit would need to be modified to accommodate the new facilities. Thus, SRIC strongly believes that there is no adequate NEPA analysis to support the construction and operation of the new shaft, Salt Cell 5, and Salt Storage Pond 5. SRIC also believes that NMED should not permit facilities that do not have adequate, required NEPA documentation.”
NMED Response: NMED does not administer or oversee the NEPA process for the federal government. The Permit does state that it is the Permittee’s responsibility to comply with all applicable local, state, and federal regulations or laws.

40. Written Comment: “Correct typographical error Discharge Permit Summary, page 2 of 5 – Salt Storage Pond 1 – capacity is missing a comma and should be 3,301,634 gallons.”

NMED Response: NMED agrees and has revised the Discharge Permit Summary.

41. Written Comment: “The current Public Notice and Fact Sheet are legally inadequate
A. Neither the Public Notice of October 1, 2020, nor the Fact Sheet of September 2020 describe that the draft permit is revised and re-issued from the draft permit dated March 2, 2020. This is fundamental information that should be included in both documents. Absent that information, NMED would apparently be in violation of Subsection F of 20.6.2.3108 NMAC that requires issuance of a draft permit or notice of intent to deny within 60 days of determining that the application is administratively complete.

B. Neither the Public Notice of October 1, 2020, nor the Fact Sheet of September 2020 describes that Salt Cell 5 and Salt Storage Pond 5 are required for the new shaft #5. That inadequacy is in violation of Subsection F(3) of 20.6.2.3108 NMAC that provides that the Public Notice shall include “a brief description of the activities that produce the discharge described in the application,” and Subsection I(1) of 20.6.2.3108 NMAC that provides that the Fact Sheet and draft permit also shall provide that description. The failure to follow the regulations was pointed out in SRIC’s April 22, 2020 comments at #3, so it is incomprehensible that the violation continues. The violation is especially puzzling since the draft permit was modified on page 3 of 43 to state: “Salt Cell 5 adds a new salt storage location, which will receive overburden and salt from the construction of Shaft 5 and its associated underground connecting drifts. Salt Storage Pond 5 will receive both the leachate and stormwater in contact with mined salt located in Salt Cell 5.” The addition of the description that the new shaft produces the discharge in the draft permit does not remedy the violations of Subsection F(3) of 20.6.2.3108 NMAC and Subsection I(1) of 20.6.2.3108 NMAC. As SRIC discussed in the April 22, 2020 comments, from the Public Notice and Fact Sheet neither SRIC, nor any member of the public, would know from the Fact Sheet that the renewed and modified DP-831 relates to facilities required by the new shaft and connecting drifts.

SRIC notes that new Map 1 does show the approximate locations of Salt Cell 5 and Salt Storage Pond 5, as SRIC requested in its April 22, 2020 comments.

Nonetheless, the inadequate Public Notice and inadequate Fact Sheet must be remedied by reissuing the Public Notice and Fact Sheet to comply with the regulations.”

NMED Response: See response to Comment 37. In addition, Subsection H of 20.6.2.3108 NMAC states that NMED shall issue a draft permit for public comment “within 60 days after the department makes its administrative completeness determination and all required technical information is available.” (Emphasis added). Due to the comments NMED received during the March 2020 comment period, NMED completed another technical evaluation of the application and reissued the draft permit in a timely manner once all required technical information was made available.

42. Written Comment: “Additional information since the SRIC April 22, 2020 comments:
A. A Temporary Authorization (TA) for the new shaft was issued by Stephanie Stringer of NMED on April 24, 2020.1 AR 200415.

B. SRIC strongly opposed the TA and appealed the TA decision to the New Mexico Court of Appeals on April 27, 2020. Case #: A-1-CA-38924.2 AR 200421.

C. On June 11, 2020, the New Mexico Court of Appeals issued its Order Dismissing SRIC’s Appeal because “we do not have jurisdiction over this case.” ¶ 6. AR 200605.5


E. On September 17, 2020, the New Mexico Supreme Court issued its Order overturning the Court of Appeals Dismissal Order and ordered that the Court of Appeal “proceed in Southwest Research v. NM Environment Department, Ct. App. No. A-1-CA-38924, in accordance with the Rules of Appellate Procedure,” thereby finding that the Court of Appeals does have jurisdiction.5 AR 200918. Thus, the legality of the April 24, 2020 TA remains much in question.

F. On September 9, 2020, the WIPP permittees requested a reissuance of the TA for another 180 days.6 AR 200907.

G. On September 11, 2020, SRIC submitted comments strongly objecting to re-issuing the TA.7 AR 200908. Among many other things, the comments noted that, regarding the draft permit for the new shaft that was issued on June 12, 2020, Public Notice 20-03, “97 percent of those commenting object to the draft permit.”

H. On September 29-30, 2020, Avery Young and Ricardo Maestas of NMED conducted an inspection of the new shaft construction.8 AR 201011.

I. On October 24, 2020, the TA expired. As of this date, it has not been re-issued, and NMED has issued a verbal direction to the permittees “to suspend shaft construction by midnight October 24th an await NMED’s response.” Attachment 1.

Those events support SRIC’s April 22, 2020 comments that the new shaft has not been permitted by NMED and that there is very significant public interest in the new shaft because it is part of the “Forever WIPP” expansion plans. Consequently, NMED cannot issue DP-831 that allows Salt Cell 5 and Salt Storage Pond 5 which are part of new shaft #5, which is prohibited by law. NMED cannot permit an illegal facility. Because of the significant public interest, NMED must hold negotiations and a public hearing, unless the requests for public hearing are withdrawn.”

NMED Response: See responses to Comments 6 and 30.

43. Written Comment: “Comments on changes to the draft permit.

SRIC notes that there are a few changes in the September 24, 2020 draft permit, as compared with the March 2, 2020 draft permit. However, those changes are not readily apparent since there is no redline/strikeout version of the draft permit, nor does the Fact Sheet describe changes that were made to the March 2, 2020 draft permit. The omission of such changes is inappropriate, since it requires SRIC and other members of the public to spend significant time comparing the two documents. The federal Clean Water Act specifically requires public participation:

Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this chapter shall be provided for, encouraged, and assisted by the Administrator and the States. 33 U.S.C. § 1251(e).

Since SRIC believes that yet another Public Notice and Fact Sheet are required to comply with the regulations, as stated in #1 above, SRIC requests that the new Public Notice and revised
Fact Sheet briefly describe the changes from the previous draft permit, and any other changes if the draft permit is further revised. A redline/strikeout version of the draft permit should be provided."

NMED Response: The GWQB does not have the authority to regulate groundwater discharges using federal statute or regulations, e.g., the Clean Water Act. A redline/strikeout version of the draft discharge permit dated September 24, 2020, does not exist in a manner that is appropriate to be released and is not a regulatory requirement defined in the WQCC regulations.

44. Written Comment: “Additional condition requested.
Because Administrative Record (AR) documents regarding DP-831 are not available on the Ground Water [Quality] Bureau website, nor on the WIPP website, SRIC and other members of the public have great difficulty in reviewing relevant documents in the AR. Therefore, in these comments SRIC has referenced Hazardous Waste Bureau WIPP AR documents. A method to alleviate that problem would be for DP-831 to include a condition, similar to WIPP Permit Part 1.14.1, that DOE is required to post such documents on the WIPP website. SRIC requests that such a condition be included in DP-831. Such documents should include, at a minimum, the permit, permit renewal application, permit modification requests, and required monitoring reports, such as the Semi-Annual Discharge Monitoring Reports, and Notices of Discharges. Such a condition would also be consistent with 33 U.S.C. § 1251(e), cited in #3 above.”

NMED Response: See response to Comment 13.

45. Oral Comment: “So the question is should a condition be and can a condition be that would provide an additional location accessible to the public for information related to DP-831.
Specifically, as I have said in my testimony, the discharge permit, the applications for renewal/modification, et cetera, the monitoring reports that are required under the groundwater regulation, the compliance orders or noncompliance orders, violations, et cetera, that are required, under our public information, required to be put in, and should there be an index, should those documents be searchable and printable and should there be an index to those documents.

The information repository that exists on the WIPP home page currently has all those provisions. It has functioned for more than ten years. I, and many other members of the public, have accessed those documents. They are not solely available on the WIPP web page, they are available in other places, as DP-831 documents are, and would continue to be with this permit. But they are accessible.

The DOE website is designed to make information and documents regarding WIPP easily available to the public in kind of searchable forms with the index so they can be done. I and many other people, I, many times, have used the WIPP web page to access documents in the information repository. I know for a fact that I have referred many other people to it as an easy way to find documents and to access them, to read them, to download them, to use them for public information. The same thing precisely would happen with these documents be -- if the DP-831 documents were put on the WIPP web page, many people would access them, just like they access other documents.
So I think it is clear that this would be a benefit to public information and therefore, public participation. The documents would be available in a timely manner in a continuing manner, so people would be able to access them and use them as they choose.

As I say, the administrative record in this proceeding already shows that a WIPP information repository is relevant to this proceeding.

So on the WIPP homepage, www.wipp.energy.gov, when you go to that website, in the upper left-hand corner has the WIPP logo, it says Waste Isolation Pilot Plant, WIPP, NWP DOE, LANL, CTAC, SNL. And then along the banner when you first open the page, in the middle is RCRA permit information repository. So anyone who goes to the WIPP home page can go directly to that information repository or not. There are, of course, other choices where they can go. And so what the request is and the condition would be is an addition at the top of the home page banner that has DP-831 permit information repository that people could click on or not to access the documents that we’ve talked about.

These documents, as I say, this is -- yes, this is a federal government website paid for by the U.S. taxpayers, you and me and lots of other people. And so it is part of WIPP’s operation and frankly, part of WIPP’s public information. I -- I am surprised -- I would be surprised if -- in all the years I have worked with DOE officials and the website and the RCRA information repository, I have never heard that it is costly, onerous.

On the other hand, I have heard that they do get lots of clicks and lots of people using it. And in some cases, people come to the home page looking for that, and then look around for other information about WIPP that DOE wants to provide on the web page.

So for my standpoint, I’m a public information standpoint, it is good to have one accessible place for lots of WIPP-related documents so people can go to that website to get information and in this case, they could get information that’s not currently available on the WIPP website regarding DP-831, and the permit and Permit Modification Request monitoring report, notices of non-compliance as we heard about yesterday in the Permittee’s testimony and the NMED testimony.

So all of these things would be a benefit to the public for sure, and arguably would be beneficial as well to the Department of Energy if they would try it out and see, or obviously their other choice is just to agree to do it without it being an impose condition.

So the documents that would be provided on this DP-831 repository include the documents that we have talked about. And I say, they are available. Let’s look at where otherwise they are available.

They are available in the administrative record, which is certainly one source of information but that source of information is not always updated, it is not easily accessible as we have found out during this process. And so this would be a further benefit for the public to have these documents readily available on an ongoing basis, not just when there is a renewal application or something of that sort, which is how they’ve been made available in the last few months to most people.

If we had this information repository, they would be readily available to people all -- at all times, and in an easily accessible form. So I think it is clear that this would be a benefit to the public and it is desirable to do.”
46. **Oral Comment:** “This issue of WIPP’s -- sorry, SRIC’s history is uncontested. We did not comment on or participate in DP-831 permits until April of last year when the original draft permit was issued. We explained at the time the reason we were participating is because of the inclusion of Salt Cell 5 and Salt Storage Pond 5, which are not -- which are for the new Shaft 5 which is not permitted. It was not and still is not permitted. So the questions is as other --

So SRIC was not involved in the previous DP-831 proceedings and there were no public hearings retired. That’s undisputed in the record. So that goes to the question of why the Secretary determined there was significant public interest in this proceeding of 831. It is because of SRIC’s involvement, comments on and showing along with the other five parties who requested hearing and submitted comments that there was substantial public interest in Salt Cell 5 and Salt Storage Pond 5, such that there was significant public interest and we did need to do a hearing. SRIC’s comments in this proceeding are quite clear in the record that had Salt Cell 5 and Salt Storage Pond 5 not been included, we would not have requested a hearing. So that’s just the fact that needs to be there. It needs to be clear on the record. So that’s -- that’s important.

Related to that why was this different? There are three other new impoundments in this renewal and modification, all of which are for facilities on the surface that had already been -- for the permanent ventilation system which has already been permitted by NMED. So therefore, there were no objections because those facilities were already permitted eight months before this application was submitted.

So that’s why there is significant public interest in this proceeding. That’s why SRIC was involved, looking at the record of the five parties that requested, all of them requested elimination or deletion of Salt Cell 5 and Salt Storage Pond 5.

So that establishes why people were interested and why there was significant public interest in this discharge permit, not related to other permitting procedures.”

*NMED Response: NMED welcomes any public interest regardless of previous interest or not. Additionally, see response to Comment 6.*

47. **Oral Comment:** “So then the question is, are Salt Cell 5 -- another question is, is Salt Cell 5 designed based on the capacity of 5,224,000 cubic feet that would come from mining the shaft, the new shaft and the two associated drifts.

There is, in fact, no evidence in the record that that’s the case and in fact, our calculations were that it is much less. The overburden, the rock would be much less than the 5 million plus cubic feet. And the record confirms that, the cross-examination of Dr. Vajda confirmed that. And so again, is that, therefore, a misrepresentation of fact. Is there -- has there been an omission of material facts related to the capacity of Salt Cell 5?”

*NMED Response: NMED does not regulate the origin of a wastewater. If the Permittee would like to utilize an authorized discharge location (salt cell) to discharge waste (mined salt) in a manner consistent with the discharge permit, NMED does not have the authority to require any additional actions through the WQCC regulations.*
48. **Oral Comment:** “So in my written testimony regarding the information repository, one of the bases for it that I cited was the Clean Water Act, and specifically, the provision of the Clean Water Act that says public participation in the development, revision and enforcement of any regulation, standard, effluent limitation, plan or program established by the administrator or any State under this chapter shall be provided for, encouraged, and assisted by the administrator and the States, in this case, the State of New Mexico. 33 USC § 1251 (E).

Why did I cite the Clean Water Act? Because that’s the appropriate law.

So the New Mexico Water Quality Act NMSA 74-6-22 states, “Federal Act means the Federal Water Pollution Control Act, its subsequent amendment and successor provisions.” The epa.gov website history of the Clean Water Act states that the Clean Water Act is -- hold on just a second so I can give you the correct quote -- this is the epa.gov/law-regulations/history-clean-water-act. It says, “Federal Water Pollution Control Act of 1948 --” the law that New Mexico Water Quality Act refers to -- “was the first major U.S. law to address water pollution. Growing public awareness and concerns for controlling water pollution led to sweeping amendments in 1972. As amended in 1972, the law became commonly known as the Clean Water Act (CWA).” Government has -- the federal government has stressed the importance of public participation in water quality issues. The New Mexico legislature stressed the importance of public information and public participation on water quality issues, including under the New Mexico Water Quality Act and under the groundwater regulations. Therefore, this provision proposed condition for WIPP home page DP-831 information repository is fully justified.”

**NMED Response:** See responses to Comments 13 and 43.

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Comments from Scott Kovac on behalf of Nuclear Watch New Mexico:

49. **Written Comment:** “Nuclear Watch New Mexico opposes the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831. Those facilities are essential for the new shaft and associated drifts, which are part of the "Forever WIPP" expansion, which our organization strongly opposes. Further, we object to including facilities essential for the new shaft, when construction of the shaft has not been permitted by the NMED that can only happen after public comments, negotiations, and a hearing, which have not occurred. Nuclear Watch New Mexico and many other groups oppose "Forever WIPP," and there is substantial public interest against WIPP expansion, including the new shaft and related drifts. Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day discharge volume should be deleted from the renewed permit as prejudicial actions biased towards an expansion of WIPP that have yet to be debated and approved. If Salt Cell 5 and Salt Storage Pond 5 prematurely remain in the permit, the fact that the salt put in each of these is to be mined from an unapproved new shaft (Shaft 5) and unapproved new drifts must be included in this permit. And the fact that Shaft 5 may not be approved for construction must be included in this permit.”

**NMED Response:** See responses to Comments 6 and 30.

50. **Written Comment:** “Nuclear Watch New Mexico strongly believes that there is not adequate NEPA analysis to support the construction and operation of the new shaft, Salt Cell 5, and Salt
Storage Pond 5. We also believe that NMED should not permit facilities that do not have adequate, required NEPA documentation.”

**NMED Response:** See response to Comment 39.

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**Comments from Dave McCoy on behalf of Citizen Action New Mexico:**

51. **Written Comment:** “CANM objects to the approval of DP-831 that would further the relationship of Salt Cell 5 and Salt Storage Pond 5 to the development of an additional shaft for nuclear weapons waste. CANM is strongly opposed to the continued production of nuclear weapons and the nuclear and toxic waste stream generated that would be facilitated by DP-831. DP-831 puts the cart before the horse in assisting a backdoor approval for a new shaft and facility to receive additional nuclear waste that has not yet been permitted for construction. The addition of a new shaft for more nuclear waste would result in WIPP operations well beyond the expiration of its current permit in 2024. Any proposal for what would result in WIPP expansion or permitting of any further operations need to be reviewed in full perspective given public endangerment from WIPP’s failed safety operations resulting in fire, explosion and worker exposures that caused a $2,000,000,000 cost to the taxpayer along with years of delay. While the discharge permit for storm water may seem disconnected to the poor operation of WIPP, CANM believes that the totality of the circumstances in relation to waste operations and expansion of nuclear weapons production must be considered before DP-831 is approved. There is also the matter of the upcoming expiration of the LANL RCRA hazardous waste permit. Please delete Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day discharge volume from the permit.”

**NMED Response:** See responses to Comments 6 and 30.

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**Comments from Deborah Reade:**

52. **Written Comment:** “Public Involvement Plan Comment: NMED relies too heavily and only on EJSCREEN as they do in all PIPs. What is particularly bad about this PIP is that NMED has arbitrarily chosen only a 30 mile radius for their EJSCREEN. We had hoped, after the URENCO discharge permit EJSCREEN radius was extended to 50 miles that other PIPs would follow. 50 miles is standard for EIS demographic investigations and was the radius used in the WIPP RCRA permit Volume Mod PIP. NMED has provided no justification for picking a 30 mile radius or for limiting the radius to 30 mile in one WIPP permit after using a 50 mile radius in another permit. If NMED had extended to 50 miles they would have found that there was a majority of minority people in the area (55%). In addition, the people who speak a language other than English at home increases from 25 to 35%, and significantly, those who don’t speak English well doubles from 5 to 10%. NMED said there were fewer linguistically isolated households than the state average within 30 miles, but that does not appear to be true if you go out to 50 miles. NMED has no criteria on which to base choosing an EJSCREEN radius and should always pick the most conservative radius (in this case the largest and most commonly used). NMED needs to develop some kind of criteria as this decision should not be left to someone’s best guess.”
53. **Written Comment:** “Public Involvement Plan Comment: There are several other problems with the DP-1481 PIP starting with the lack of information for the general public on how to appeal or revise the PIP. In fact, there is no formal process at all to allow the public to respond when problems are found in the PIP. The public has no clear path to request corrections, make suggestions, or provide community-based, local input. Thus problems continue and the PIPs, including this one, having little or no public involvement of any kind in their creation, are of only limited use.”

54. **Written Comment:** “Public Involvement Plan Comment: And, of course, the PIP is not translated into Spanish. How can members of the affected community who are LEP even have any idea what the PIP is about, let alone try to gauge its adequacy or make suggestions to improve it? Just finding the PIP online would be almost impossible if you are LEP, as the PIP website is also completely in English as are almost all Ground Water Quality Bureau (GWQB) pages and most of the rest of NMED’s website. Nothing about accessing information at NMED is user-friendly if you are LEP. The PIP acknowledges that the affected community has a significant percentage of persons with low English proficiency and thus allows for translation of some notices and announcements. It also requires all public notices to include information that interpretation is available and that translation can be arranged. However, the PIP limits the amount of language assistance that is provided to what is possible within the Bureau’s "budget and time limitations." These limitations have resulted in a completely inadequate amount of translation so that it is impossible for LEP Spanish speakers to inform themselves enough to provide comments, make their needs known and to participate on an equal level with English speakers.

Interestingly, NMED never says they can only work with applicants or permittees as their "budget and time limitations allow." Instead, NMED provides thousands of dollars of their employees’ work time and provides other resources to help applicants and Permittees. There are usually only pennies on the dollar left for NMED to assist the LEP public. The pitiful amount of translation of information recommended by this PIP is said to be all that NMED can afford. A note is made "[f]ees collected from the permittees...are not sufficient to cover [even] these costs." Yet NMED had a chance to raise those fees and chose not to. The public, and especially the LEP public, should not have to suffer without adequate information because of the Bureau’s poor planning and poor budgeting.

NMED made a commitment in the Resolution Agreement to "ensure that all 'vital' information related to the ...permit process is accessible to LEP persons in a language they can understand." and that "...vital information...that is available to the public in English, whether in written form or orally, will, at a minimum, be available to the non-English speaking public through a qualified interpreter or through translation depending on the circumstances." Yet, again, NMED has not translated the permit, nor have they created and translated an adequate Fact Sheet containing a summary of all vital information in the draft permit and all other vital information. (More on the Fact Sheet is described below.) This is presumably because of NMED’s time and budget constraints. However, the permitting process should not go forward until all vital information available to English speakers has been translated directly or adequately summarized and
translated for LEP Spanish speakers. Again, it is not okay to short circuit the public process while proceeding full speed ahead for the permittees.”

**NMED Response:** See response to Comment 1.

55. **Written Comment:** “Public Involvement Plan Comment: The PIP overly relies on using only EJSCREEN and information in the ACS report to provide information on the affected community’s needs, concerns, history, and demographics. This is despite the warnings in EPA's EJSCREEN Fact Sheet not to use EJSCREEN "as the sole basis for...decision-making or making a determination regarding the existence or absence of EJ concerns." It also says that EJSCREEN should be supplemented with "...additional information and local knowledge..." But NMED appears to have no interest in using local knowledge as they have made no effort to identify stakeholders in the affected community nor any effort to create partnerships with most private and public entities or to share information with affected communities, with environmental and environmental justice organizations, religious institutions, public administration, environmental, law and health departments at colleges and universities and relevant community service organizations.

What is critically important is that because of the lack of local knowledge, this PIP, like all NMED’s PIPs, covers almost none of the community's concerns or needs or their history. The only concerns mentioned are language and disability needs—and even attention to those is minimal. All other concerns of the community are completely ignored though NMED has been told of them over and over again in comments, letters, during hearings, in complaints, in negotiations, etc. for years. NMED knows of the high cancer death rate and low life expectancies in southeastern New Mexico, the enormous level of pollution, the multiplicity of polluting facilities both permitted and unpermitted, the lack of access to medical care, the low income, high numbers of LEP persons, the rural nature of the area, and other social concerns of area residents. Yet again, NMED has chosen to ignore all of these, both in the PIP and in the formation of the draft permit. Not a word on any of this history or on any of these needs and concerns is anywhere in the PIP, public notice or permit. This is a significant deficiency.”

**NMED Response:** See responses to Comments 1 and 31.

56. **Written Comment:** “Public Notice Comment: This public notice has no publication date on it as with most of NMED's documents. It does state that the 45 day comment period ends on April 22, 2020 so counting back the publication date would be 3/8/20. This is also the online date given. However, downloading the Fact Sheet and the Public Notice from the website shows a date of 3/11/20 in the title of both documents. It's thus unclear when this public notice was actually published in the required newspapers or in other ways. It has been impossible for most of the comment period to check this date as the Record is inaccessible.”

**NMED Response:** This issue was remedied on the public notice that was published on October 1, 2020.

57. **Written Comment:** “Public Notice Comment: The Discharge Locations section of this notice is inadequate. Though the locations are described by type, they are not described by location in relation to the rest of the facility. In fact, it is even unclear if all these systems, cells and impoundments are above or below ground.”
NMED Response: The public notice conforms with all requirements of 20.6.2.3108(F) NMAC.

58. Written Comment: “Public Notice Comment: The Activities that produce the discharge section is also inadequate. It is unclear what "salt cells" are and too vague about what "other miscellaneous industrial non-hazardous wastewaters" are.”

NMED Response: The public notice conforms with all requirements of 20.6.2.3108(F) NMAC.

59. Written Comment: “Public Notice Comment: Potential Contaminants are listed only as nitrogen compounds, dissolved solids and chloride. It is not mentioned that any radioactive materials could be contaminants though they are monitored under this draft permit. Since the entire WIPP facility is devoted to radioactive waste, even if NMED can't regulate all the radioactive materials present, it should still tell the public what could be in the discharges. More could be present than NMED can monitor and that all should have been included here. In addition, the Fact Sheet refers to one-time monitoring of "a comprehensive list of chemical constituents," none of which are mentioned here. This section is deficient.”

NMED Response: The listed contaminants in the Potential Contaminants section are contaminants that NMED expects to find related to the wastewater that the Permittee discharges at this Facility. NMED does not expect to find radioactive materials in the discharges associated with DP-831.

60. Written Comment: “Public Notice Comment: Accessing documents is confusing as one document is described as a "Fact Sheet" online but is described in the repositories in Eddy County as "the permit summary." NMED employees and this commenter have some experience to understand that this is only one document, but that isn't true of the general or LEP public. They have no idea whether these are two different documents or the same document so this is completely confusing for those with little knowledge of how to participate. And because LEP individuals have no access to the permit itself or to the administrative record, it is important to include extra information and clarifications that we just intuitively understand. It's difficult to imagine not knowing what we know, but it's necessary. NMED says they want to increase public participation but confusion like two different document names helps to lower public involvement.

The public notice tries to describe how the public can participate in a hearing and the procedures to be followed by the Secretary in making a final determination about the Draft Permit. However, the notice states that "members of the public may file technical testimony prior to the hearing and may provide verbal and written comments during the hearing itself." The statement about technical testimony is incorrect (though the second part of the statement is fine). Technical testimony can only be presented at the hearing itself though people can file a "statement of intent to present technical testimony" before the hearing. In the pre-hearing period, the public may "provide a general written statement concerning the Draft Permit, Application or Petition...” [20.1.4.300B(2) NMAC] This is how it should have been described in the public notice—as general written statements, not technical testimony. Providing incorrect information on how to participate, again, only helps to lower public involvement and makes this section of the public notice deficient.

At the end of the paragraph the public notice also states that "NMED will approve, approve with conditions or disapprove the Permit based on the Administrative Record and/or Final Order from the NMED Cabinet secretary." Again, this is incorrect and confusing. The decision is not based in
any way on the "Final Order from the ... secretary." The Final Order is the decision. A decision cannot be based on itself! The decision is made by the Secretary based only on information in the Administrative Record. NMED has stated this clearly in other documents and this should be cleared up in any future public notices. Wording this required statement in this way is confusing and incorrect and also makes this section of the notice deficient.

Finally, the public notice says that "Requested translation, interpretation services and accommodations or services for persons with disabilities will be arranged to the extent possible." In fact, NMED must meet certain minimal translation, interpretation and accommodation requirements—period. Not to do so is discriminatory. If NMED cannot meet these minimum requirements so that the process is not discriminatory, NMED must stop the process until it can run a non-discriminatory public participation process.”

NMED Response: The reference to the permit summary was a mistake, which NMED corrected in the public notice published on October 1, 2020. Pursuant to 20.1.4 NMAC, for a member of the public to present technical testimony at a hearing, they must file a Notice of Intent to Present Technical Testimony on or before the deadline in the Notice of Hearing, but no later than fourteen days prior to the hearing. After the Final Order from the Secretary of NMED is issued the permitting bureau still needs to issue a discharge permit or permit denial. NMED removed the phrase “to the extent possible” for the public notice published on October 1, 2020.

61. Written Comment: “Fact Sheet Comment: The first paragraph says the fact sheet is required by Subsection I of 20.6.2.3108 NMAC but this requirements does not appear to be part of that Subsection. Please clarify where NMED found this requirement and what the specific language of the requirement is.”

NMED Response: 20.6.2.3108(I) NMAC is the correct citation for the fact sheet, it states, “The department shall prepare a fact sheet for every draft permit for a discharge at a federal facility, except for discharges comprised solely of domestic liquid waste, and for other draft permits as determined by the Secretary. The fact sheet shall include: (1) the information in Paragraphs 1-4 of Subsection F of 20.6.2.3108 NMAC; (2) the information in Subsection J of 20.6.2.3108 NMAC; and (3) a brief summary of the basis for the draft permit conditions, including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record.”

62. Written Comment: “Fact Sheet Comment: General Facility Information. The description of the very complex geology and hydrology at WIPP is too thin, though the description of the human caused contaminated shallow groundwater is quite interesting. However, when writing for the general public, a description other than "anthropogenically created" should be used as that is very user un-friendly! It almost seems to hide the fact that WIPP created this contaminated water and is now a hazardous waste generator. This is important to understand since this contaminated water appears to be the result of the failure of a previous version of this discharge permit. This should lead people to look more closely to see if the provisions of this version of the permit are now adequate.

Also, a reference is made later to water percolating through the "vadose zone" but this zone is not described here, which it should be. The laterally continuous water-bearing zone in the Culebra has no depth described. Other geologic formations are described with thicknesses but require a calculation to figure where they start and end except for the Salado Formation. Calculations
shouldn't be necessary here and this critically important section needs to be fleshed out much more.”

**NMED Response:** NMED revised the Fact Sheet dated September 2020 to refer to the anthropogenically created groundwater as human created instead. NMED also included more geological and hydrological information in the Fact Sheet, including geologic formation thicknesses.

63. **Written Comment:** “Fact Sheet Comment: Description of the Proposed Discharge. This section is again, deficient. Typos make it more confusing. Industrial wastewater is described as non-hazardous. Is it also non-radioactive? This needs to be clarified. Where evaporites go after treatment is also not described. It is totally insufficient to describe "other miscellaneous industrial non-hazardous wastewaters" and leave it at that. You must list every source for all waters. Stating the 100-year storm capacities for various impoundments etc. is a nice touch, however. Remember, LEP persons only know what is written in this Fact Sheet and the Public Notices.”

**NMED Response:** NMED revised the Fact Sheet dated September 2020, to clarify that non-hazardous wastewater was also non-radioactive and expanded the description of the sources of industrial wastewaters.

64. **Written Comment:** “Fact Sheet Comment: Operational Plan and Monitoring and Reporting conditions. Both of these sections are so deficient that it is impossible to list everything. Again—get specific. It is totally unclear how many monitoring wells there are, (except for 4 that are very nicely described) or where they are, how deep each of them is, whether any are in the vadose zone, whether proper vadose zone monitoring is taking place, and mostly what contaminants are being monitored. The one-time monitoring states they are looking for a "comprehensive list of chemical constituents" but what are they? Certain NMED-regulated radioactive constituents are listed but could other radioactive constituents possibly be in the discharge as well? This needs to be clarified. The summary of the semi-annual monitoring reports is very well done.”

**NMED Response:** NMED revised the Fact Sheet dated September 2020, to include more information in these sections.

65. **Written Comment:** “Fact Sheet Comment: Additional Studies. This is also well done and provides a good explanation of why a new workplan is required.”

**NMED Response:** NMED does not have a response to this comment.

66. **Written Comment:** “Fact Sheet Comment: Contingency Plan. This is a critical part of the permit but basically says nothing. "Standard language" has been totally insufficient in previous permits so a detailed description here is necessary. It is impossible for the LEP public who have no access to the permit to know if the language here is adequate. In fact, I would say that this entire section should be copied and translated word for word from the permit. Anything else does not provide the same amount of vital information to LEP persons as is available to English speakers who can read the permit. Again, because of NMED's previous bad language in this section of another permit, they must go the distance to prove that this part of the permit is adequate.”
NMED Response: The Fact Sheet complies with 20.6.3108(I) NMAC as written; therefore, NMED declined to change this section of the Fact Sheet.

67. Written Comment: “Fact Sheet Comment: Closure Conditions. Again, there is not enough detailed information here. However, the statement that closure requirements survive the discharge permit is good to know. This is the first time the vadose zone is mentioned in the Fact Sheet and there should be more information on this. It is stated that there is a condition for properly closing the Facility in accordance with the WIPP Land Withdrawal Act and other rules and regulations, but the full condition needs to be described. It is unclear if the condition truly meets these laws' requirements. Particularly since the Land Withdrawal Act includes timelines and volume limitations, it is unclear if the permit truly is in compliance with the Act.”

NMED Response: The Fact Sheet complies with 20.6.3108(I) NMAC as written; therefore, NMED declined to change this section of the Fact Sheet.

68. Written Comment: “Fact Sheet Comment: General Terms and Conditions. Again, more detail is required—though perhaps not as much detail as is needed in previous sections. In particular, the requirement to comply with other laws etc. should be quoted in its entirety.”

NMED Response: The Fact Sheet complies with 20.6.3108(I) NMAC as written; therefore, NMED declined to change this section of the Fact Sheet.

69. Written Comment: “Discharge Permit Comment: The modification including Salt Cell 5 and Salt Storage Pond 5 is premature. These items have not been approved yet and hopefully will never be approved. To permit discharge from these areas when they don't exist is not the correct way of doing things. If they are approved, then modify the permit. NMED appears to be trying to do an end run around the public by approving Salt Cell 5 here in a discharge permit when it should be part of a RCRA permit.”

NMED Response: See response to Comment 30.

70. Written Comment: “I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the DP-831 groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP). Those facilities are essential for the proposed Shaft 5 and associated drifts, which are part of the "Forever WIPP" expansion, which I also strongly oppose.

Further, I object to including facilities essential for Shaft 5 in this modification, when construction of that shaft has not been permitted by the New Mexico Environment Department (NMED). The optics of this schedule are terrible for NMED. They suggest that either the Department has already decided to permit Shaft 5 despite not finishing its public process, or that the Department doesn’t mind wasting the time and resources of the hearing requestors and everyone else if Shaft 5 is not permitted and Salt Cell 5 and Salt Storage Pond 5 are therefore not needed. In fact, if Shaft 5 were not permitted and these facilities were not needed, I for one, would probably have withdrawn my request for a hearing. Perhaps the other hearing requestors would have withdrawn as well which would have made the hearing unnecessary—saving the Department and the taxpayers significant expense.
There is another result of this accelerated schedule for DP-831. As a hearing requestor and someone who wanted to be a party to the hearing, I found that speeding up this hearing so that it occurred while it was necessary to write documents for the previous Shaft 5 hearing has made it impossible for me to be a party to this proceeding. I am not a lawyer nor working for an environmental organization, except as a volunteer, and I am working full time on my businesses. Therefore, as a member of the public I could not give both hearings the attention they needed. I could not participate in the DP-831 hearing in a meaningful way because of the compressed schedule of piggybacking one hearing on top of another.

I would have objected to such an accelerated schedule at the June 2, 2021 pre-hearing meeting for these two reasons—that the hearing should be held after we knew whether or not the new facilities linked to Shaft 5 would even be needed and that rushing the hearing so it piggybacked on the Shaft 5 hearing made it impossible for members of the public like me to participate fully in the DP-831 public process. However, I never had the opportunity to object to the fast pace of the DP-831 schedule. At the time of the pre-hearing meeting I did not have access to the internet and was trying to use a land-line to call into the meeting. The phone call-in number required me to enter a password to join the meeting, but the Webex information provided included no phone password. (I've included the information for the pre-hearing meeting below.) Through another requestor, Ms Arends, I informed the meeting that I had been provided no password yet nothing was done to make it possible for me to participate in the meeting. The meeting wasn’t paused for even five minutes while a password was created for me nor was it rescheduled. My needs were completely ignored and I was prevented from participating in the pre-hearing meeting which has resulted in my inability to participate as a party in the hearing at all. Thus, the public process has been defective, hurried, and obstructive.

Because of the intense work necessary to finish post-hearing submittals for the WIPP Shaft 5 modification, this has been the first time I’ve been able to submit this information. NMED’s current practice of speeding up or slowing down the public process in many permit proceedings for the benefit of the permittees and applicants while completely ignoring the needs of the public makes one wonder if the Department truly understands the point of “public participation” as provided for in laws, regulations and policies.”

NMED Response: See responses to Comments 6 and 30.

71. Written Comment: “I believe it was an improper ruling to agree that the two EPA guidance documents were irrelevant to this proceeding, particularly as Mr. Vigil’s argument that they had no relevance was based on an incorrect assumption: that no other laws had to be taken into consideration in this proceeding other than groundwater laws and regulations. However, as I pointed out, and to which Mr. Pullen agreed during cross examination, Title VI of the Civil Rights Act (42 U.S.C. §§ 2000d to 200d-7) (the Act) is an applicable law to this proceeding. The New Mexico Environment Department (the Department or NMED) and the Ground Water Quality Bureau (the Bureau) must also meet the requirements of that Act. Guidance is not law, it is true, but the documents show what must be done to avoid the discrimination that has so long been a part of the Department’s permitting public participation program.”

NMED Response: See response to Comment 31.
72. **Written Comment:** “In addition, it was improper to rule against entering the Informal Resolution Agreement into evidence. It was clear that, as she said, Ms Arends was not entering this document for the purposes of litigation, grievance, or adjudication. In fact, it was clear that she was entering the document again, as guidance of what the Bureau must do in order not to discriminate. This document is very pertinent to the Civil Rights Act aspects of public participation for DP-831 because it shows not only what should be done (as the two EPA guidance documents do) but also what both EPA and NMED believe must be done to avoid discrimination in NMED’s programs. Though based on the two EPA guidance documents, not everything from the documents is included in the negotiated Agreement—only those items that the Department believed were most important. As such, the Agreement should have been allowed in as evidence to show what the Department itself believes to be the important actions that every permit public process should take.”

*NMED Response: See response to Comment 31.*

73. **Written Comment:** “Finally, Mr. Pullen made the statement that “We never take things out of the Administrative Record, only add to it.” (not an exact quote, but close.) I believe Mr. Pullen misspoke. When he was managing the Waste Control Specialist (WCS) discharge permit DP-1817, more than 100 separate documents were removed from the Administrative Record (AR) for the Public Hearing from what had been represented to me and to Ms Arends as the “Administrative Record for WCS.” These representations were made to us when we were researching the physical Record in the Bureau’s office during one of the draft permit comment periods. Though we had both requested to view the Administrative Record and both had been told that what we were researching was indeed the Administrative Record for WCS, as documented both orally and in writing in multiple emails, when we exclaimed about the shrunken AR for the hearing we were told that what we had been told was the WCS Administrative Record, was in fact, “never the Administrative Record” as declared by Jennifer Hower, NMED’s General Counsel. I was also told, in an email from Mr. Pullen that,

> “I also attach an AR Index for WCS through February 2017 (needs updating). Understand that we (GWQB) generally only prepare a Record Index in preparation for a hearing or some other legal action.” (A screen capture of the 2017 email is attached.)

The Ground Water Quality Bureau actually has a history of not indexing an Administrative Record during draft permit comment periods and then removing multiple documents from that Record—some of them important and pertinent to the proceeding—when the Record was finally indexed for the hearing.”

*NMED Response: Although additional documents may exist in the paper file, not all documents in the paper file are part of the administrative record.*

**Comments from the Waste Isolation Pilot Plant:**

74. **Written Comment:** “Discharge Permit Summary, Non-Domestic Waste Water
The freeboard information for Salt Storage Pond 5 in the Discharge Permit Summary, Non-Domestic Waste Water table attached at the end of the draft permit is inconsistent with draft permit Condition #4 shown below.

The permittee shall preserve a minimum of one foot of freeboard between the liquid level in all the impoundments and the elevation of the top of the impoundment liner, except the Brine Retention Ponds East and West shall maintain two feet of freeboard. In the event that the permittee determines that the specified freeboard cannot be preserved in the impoundments, the permittee shall enact the contingency plan set forth in this Discharge Permit.

The Description and Comments for the Salt Storage Pond 5 in the Non-Domestic Wastewater table states that this impoundment is “...permitted two feet of freeboard...” This is inconsistent with permit Condition 4 (shown above) which requires one foot of freeboard. Please revise the entry to make the Discharge Permit Summary table and permit Condition 4 consistent by changing “...permitted two feet of freeboard...” to “…permitted one foot of freeboard...” so that the description reads as shown in the redline strike out text below:

To be constructed, 60-mil HDPE liner, 200-mil geonet drainage layer, and a second 60-mil HDPE liner with a leak detection system; disposal by evaporation; permitted one foot of freeboard; capacity of 6,355,404 gallons.”

NMED Response: NMED agrees with this edit and has made the appropriate revisions to the Discharge Permit Summary. Although the Discharge Permit includes a one-foot freeboard requirement for Salt Storage Pond 5, NMED expects the Permittee to adhere to the design specifications for the freeboard in the impoundment.

75. Written Comment: “Draft Discharge Permit Condition #54:” Recommend changing the word “measure” to “estimate” in reference to hydraulic conductivity in Condition #54 as shown in the redline strikeout text below. Aquifer parameters estimates are not obtained through measurement, but calculated based on hydraulic data obtained through the aquifer testing. The permittee shall perform aquifer testing to determine the local hydraulic properties of the aquifer near the monitoring wells required by this Discharge Permit and that contain groundwater within 60 days of the complete installation of each new monitoring well. The purpose of the aquifer testing shall be to quantify the movement of groundwaters in the vicinity of each well or piezometer. Aquifer testing shall be performed in wells in both the shallow groundwater and in the natural groundwater in the Dewey Lake Formation where groundwater is present. Aquifer testing shall estimate hydraulic conductivity, transmissivity, and storage coefficient and shall be performed utilizing procedures previously utilized at the facility so as to produce comparable results. The estimated hydraulic properties for each monitoring well shall be submitted to NMED within 120 days of the installation of the monitoring wells in a cumulative well report.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

76. Written Comment: “Permit conditions 6, 12, 13, 17, and 22 require that the permittee shall maintain and install fences to control access by the general public and animals. As stated, without specifics to the animal(s) that the fence is intended to control, it could then be perceived that any
animal found in the controlled area would result in a permit violation. A large array of taxa is considered to belong to the animal kingdom."

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

77. Written Comment: “Permit condition 16 has a typo for the acronym for leak detection, collection, and recovery systems; LDRCS rather than LDCRS.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

78. Written Comment: “Discharge Permit Summary, Domestic Wastewater Table: Update liner thicknesses in the summary table. The liner thicknesses for Effluent Lagoon A, Effluent Lagoon B, and Effluent Lagoon C have been field verified as 60-mil high-density polyethylene (HDPE)."

NMED Response: NMED agrees with this edit and has made the appropriate revisions to the Discharge Permit Summary.

79. Written Comment: “Draft Discharge Permit Conditions #9, 13, 17, and 19: Delete the height requirement regarding fencing. The following is proposed replacement language.

The fences shall meet BLM standards for domestic livestock fences, consist of a minimum of six-foot chain link or field fencing and locking gates.

The Bureau of Land Management (BLM) specifies standards for domestic livestock fences. Fencing is commonly used to control domestic livestock to achieve safety and vegetation management objectives. Fences are examples of structural improvements, which improve livestock grazing management, improve watershed conditions, and enhance wildlife habitats.

The following is proposed replacement language to the following conditions:

Condition 9: The Permittee shall maintain, throughout the term of this discharge permit, the Exclusive Use Area barbed wire fence that encompasses Storm Water Ponds 1, 2, and 3 to limit access by livestock. The fences shall meet BLM standards for domestic livestock fences.

Condition 13: The Permittee shall maintain, throughout the term of this discharge permit, the Exclusive Use Area barbed wire fence that encompasses Brine Salt Storage Pond 4 to limit access by livestock. The fence shall meet BLM standards for domestic livestock fences.

Condition 17: The Permittee shall maintain, throughout the term of this discharge permit, the barbed wire fence that encompasses Evaporation Pond H-19 to limit access by livestock. The fence shall meet BLM standards for domestic livestock fences and have a locking gate.

Condition 19: The Permittee shall maintain, throughout the term of this discharge permit, the Exclusive Use Area barbed wire fence that encompasses Salt Storage Ponds 1, 2, and 3 to limit access by livestock. The fences shall meet BLM standards for domestic livestock fences.”

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NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

80. **Written Comment:** “Draft Discharge Permit Conditions #51, 52, 53, 54, and 55: Update the respective conditions in the Draft Permit to reflect work performed to date on the monitoring wells. A DOE status report letter (20-0296) was sent to the NMED Ground Water Quality Bureau in November 2020.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

81. **Written Comment:** “Draft Discharge Permit Condition #51: Change “within 120 days of well completion” to “within 120 days following the effective date of this Discharge Permit (by DATE)”.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

82. **Written Comment:** “Draft Discharge Permit Condition #52: Change “within 120 days of well completion” to “within 120 days following the effective date of this Discharge Permit (by DATE)”.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

83. **Written Comment:** “Draft Discharge Permit Condition #53: Change “within 120 days of well completion” to “within 120 days following the effective date of this Discharge Permit (by DATE)”.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

84. **Written Comment:** “Draft Discharge Permit Condition #54 (third paragraph): Change “within 120 days of the installation of the monitoring wells” to “within 120 days following the effective date of this Discharge Permit (by DATE)”.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

85. **Written Comment:** “Draft Discharge Permit Condition #55: Change “within 120 days of the installation of the monitoring wells” to “within 120 days following the effective date of this Discharge Permit (by DATE)”.”

NMED Response: As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

86. **Written Comment:** “Draft Discharge Permit Conditions #11 and 22: Update respective conditions in the Draft Permit to reflect work performed to date on the new impoundments.”
A DOE status report letter (20-0297) was sent to the NMED Ground Water Quality Bureau in November 2020.

**NMED Response:** As ordered by the NMED Secretary’s Final Order dated December 30, 2021, NMED has issued the Discharge Permit in the manner set forth in the Hearing Record.

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**Comment from Kyle Marksteiner on behalf of Dale Janway, Mayor of Carlsbad:**

87. **Oral Comment:** “Thank you for the opportunity to comment on WIPP’s draft groundwater discharge permit which will protect groundwater near the facility. Protecting the groundwater around WIPP is, of course, one of the most significant environmental protection obligations and we appreciate the Department of Energy and the New Mexico Environment Department’s diligence on this issue. This is certainly a very thorough plan and we believe it remains highly protective of WIPP’s workforce and the environment.

The current permit modification consists of the addition of one new Salt Storage Cell and four new liquid impoundments. The plan that WIPP and the NMED have developed to ensure that these new, as well as the existing facilities will continue to be protective is very comprehensive. We support this draft permit and encourage its approval.”

**NMED Response:** NMED does not have a response to this comment.

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**Comment from Basia Miller:**

88. **Oral Comment:** “New Mexico is a poor state with a scattered population of communities of various origins. Our land, air and water risks being occupied and contaminated and our people risk being uninformed by the nuclear industry. Observing explicit processes and the implied social contract are safeguards for the community. I have two examples of process that fall outside of these boundaries.

First of all, NMED and the Bureau’s inadequate communications to the protected class of people of low English proficiency who need to have the critical documents available in Spanish on the website, in newspapers and on radio. It is especially important during the pandemic when public libraries are closed.

In yesterday’s hearing, Avery Young replied to a question -- excuse me -- about the availability of critical documents in Spanish. She said -- and I think I have this right, and I apologize for not have the complete context. She said about translations, if they weren’t available, quote, we did not receive a request to translate.

This is short-sighted and sums up what I heard yesterday during cross-examination on the issue of availability. Call NMED, talk to someone there, and they will explain everything. It leaves parts of the publishing of information up to the initiative of one or many individuals in the public.

This method of communication cannot elicit robust public participation. The Bureau has failed in its responsibility to inform the public and adjust to pandemic conditions. Most importantly, a
protected class of people is prevented from participating in the PMR process in a fully meaningful and equal way.”

NMED Response: NMED identified and translated the required documents into Spanish for this permitting action. Ms. Young was referring to requests to translate any other document in the administrative record.

89. Oral Comment: “My second example. Shaft No. 5 is still being built under temporary authorization. How can Salt Cell 5 and Salt Storage Pond 5, which are essential to Shaft 5, be part of the groundwater discharge permit, DP-831, when construction of the shaft has not been permitted?

I respectfully request these two facilities be removed from the application for the groundwater discharge permit.

To conclude, NMED and the nuclear industry have not adequately acknowledged the pandemic, have not adequately engaged the population, and are not moving forward in a coherent reasonable fashion.”

NMED Response: See responses to Comments 6 and 30.

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Comment from Roger Nelson:

90. Written Comment: “The DP-831 permit modification should be approved - but with additional conditions as described below.

Environmental sampling by NMED, DOE and the Carlsbad Environmental Monitoring and Research Center (CEMRC) depends on ephemeral accumulations. Air filters become laden and compromise flow after a few days, and so must be exchanged daily, or at best weekly. Such short accumulated air samples require extraordinary radiochemistry sensitivity to “expose” levels above detection limits. Soil samples to measure deposition accumulation are subject to both detection limits, as well as to the unknown effect of resuspension between sampling events. But what if there were a sampling regimen that consistently accumulated particulate deposition over months, years, and even decades? If that sample could amplify a radiological “signal”, by accumulating year after year, it would be a powerful indicator of WIPP’s radiological footprint. NMED has that sampling tool readily available to them, and should consider its implementation as part of the WIPP DP-831 permit modification approval process. It does not involve air or soil sampling. Maybe surprisingly, NMED’s Ground Water Quality Protection Bureau has an important role to play as well.

The next part of this comment is meant to be metaphorically descriptive. Imagine a team of designated WIPP workers who have a part time assignment from their usual day jobs. Once a month or so, these fine workers are given fine-whisk brooms and diligently sweep the entire paved area within the fenced controlled perimeter. It would take an entire day to accomplish. Litter is discarded, but the swept up dust and dirt is collected in a container (imagine a drum of dust and dirt as the result of their labor). Next month, the paved area of the site is again swept, and the dust/dirt is added to the container. The WIPP motto "start clean and stay clean" takes on a real meaning and outcome to the phrase. This drum will eventually contain the cumulative
radiological “signal” from day-to-day WIPP activities of unloading waste and emplacing it underground. That signal is registered by the cumulative particulate on the paved surfaces upon which the work is performed. It includes material from worker's boots that have unloaded shipments, deposition from any unfiltered airborne particulate, and any other radioactive sources on the site. Yes, it will be mixed (diluted) with natural particulate, blown over the site and deposited by aerodynamic effects. But if there is any radiological accumulation, it will be because of WIPP operations. Over the months and years (decades?), a random mixed sample of this accumulating surface deposition in that drum might show an increasing radiological signature representative of WIPP. It would literally be the radiological signature of WIPP’s very “footprint”: the dust and dirt directly cumulatively deposited from operations on the WIPP site!

That was storytelling. It is not proposed that WIPP workers periodically sweep up paved surfaces within the perimeter. They don’t need to. Nature will do it for them. While the northern Chihuahuan desert doesn’t get a lot of rain, the average interval between rainfall events is about 3-4 weeks. That means that on average every month or so, nature’s janitor sweeps the paved surfaces of WIPP and deposits the sediment loading into one of several evaporation ponds. Those are the very ponds NMED is bound (under NPDES) to regulate! And once trapped in the sediment of a pond, there is essentially no vector for resuspension. Many WIPP evaporation ponds maintain a wet surface year round. Those that do evaporate to dryness result in hydrated dried cake sediments that sorely resist wind erosion between periodic runoff inundation.

An environmental sampling opportunity to measure the WIPP radiological footprint has been overlooked by NMED. An annual sample of sediment (a few samples per pond) could provide a powerful demonstration of WIPP’s radiological impact. It’s just like groundwater pollution from runoff of any other industrial site, but in WIPP’s case, the evaporation ponds concentrate the "signal" (and keep it contained within the lined pond). If evaporation pond sediment shows measurable radiological increment over the years, that would be significant, and an indicator for NMED that should be recorded. It is not suggested that this sediment sample regimen might tease out any past time-dependent signature. Sediment “core” segmentation could not provide definitive historical patterns because of unknowable shallow mixing currents over the years. No, sediment sampling beginning in any year would only be considered an “in-operation baseline”. Future annual sampling may only evidence an accumulation rate.

A picture story of WIPP’s environmental impact could be woven around this sampling regimen. Particulate air samples measured in obscure units like pCi/m^3, or projected hypothetical NESHAP doses in mrem/year, have absolutely no hope of public understanding. A better way NMED might measure and describe WIPP’s radiological impact would be by talking about routinely sweeping the pavement within WIPP’s footprint, and measuring the total accumulation of radioactivity over the years. Samples of dust and dirt accumulated across all paved surfaces of the WIPP plant, totaled across the years, and measured by storm water sediment in WIPP ponds would be better understood by the lay public that NMED serves.

WIPP is currently in the process of modifying its DP-831 permit for Ground and Surface Water Protection under New Mexico Regulation 20.6.2 NMAC. This modification is primarily for new surface impoundments associated with discharge from new salt storage areas associated with the new utility shaft (#5). But one new evaporation pond proposed (SWP4) is for rain water discharge from the area around the new air filtration system, the very area that would receive the maximum deposition from any underground discharge (filtered or not). This will bring the total number of ponds that receive storm water runoff from paved areas to four. Additional storm water runoff
from the facility’s paved areas and roofs is already collected in three synthetically-lined impoundments (Storm Water Ponds 1, 2, and 3). This runoff does not contact the salt stockpiles, and in the words of the DP-831 permit for WIPP ... “may be used by the permittee for dust control, soil compaction, and other construction activities”. It is suggested that annual sediment sampling from all four Storm Water Ponds should be integral to WIPP environmental monitoring programs. NMED should only approve the DP-831 modification contingent upon DOE annual reporting of sediment radiological levels in SWP4 and all other storm-water ponds (1-4). While required lower detection limits may seemingly be arbitrary, DOE has the ability to reach quite low detection limits, well below environmental background levels. NMED should require DOE to report annual evaporation pond sediment levels well below background. NMED should also require that monitoring to be published as part of DOE Annual Site Environmental Reporting (ASER) requirements under DOE O 231.1B.

NMED Response: NMED has declined to include the requested condition. The comment focuses on radiological impacts of contaminants the Ground and Surface Water Protection regulations do not address.

Comment* from Michael Lawler, Pam Gilchrist, Carol Benson, Gregory Corning, Cynthia McNamara, Basia Miller, Jeanne Green, Patricia Sheely, Susan Shuurman, Bernice J. Gutierrez, Scott Kovac, Nicholas Maxwell, Jerry Stein, and Myrriah Gómez:

91. Written Comment: “I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. Those facilities are essential for the new shaft and associated drifts, which are part of the "Forever WIPP" expansion, which I strongly oppose.

Further, I object to including facilities essential for the new shaft, when construction of the shaft has not been permitted by the New Mexico Environment Department (NMED). There is overwhelming public opposition to permitting the new shaft, as well as many technical and legal problems.

I oppose "Forever WIPP." I am part of a growing movement in opposition to WIPP expansion, including the new shaft and associated drifts. I am opposed to the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831.

I request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day discharge volume be deleted from the draft permit.”

NMED Response: See responses to Comments 6 and 30.

*Comments were submitted with slight alterations to the language included in the Response to Comments; however, the intent of the submitted comments is reflected in the comment included.

While our groups are based in New York, the waste from Indian Point, a three reactor site permanently shut as of April 30, this year, is being targeted at another proposed site in New Mexico. We are of the strong opinion that the national project of dumping more of the most hazardous and toxic material in the planet into New Mexico and Texas is effectively turning your region of the US into a massive sacrificial zone. Given the increased risks associated with climate change, including brushfire and extreme drought, adding more and more hot radioactive materials into the environment of our nation’s West and Southwest seems astonishingly reckless and short-sighted.

As part of a broader reconsideration of the wisdom of continuing endless engagement in extractive polluting activities and excess focus on forever enlarging the atomic complex, our groups are in opposition to WIPP expansion, permitting the new Shaft 5 and inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831.

We add our voices to those requesting Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day be excised from the DP-831 draft permit.”

*NMED Response: See response to Comment 6.*

93. **Written Comment:** “This email is to state my opposition to Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. We know that those facilities are essential for the start of WIPP going on forever in New Mexico and I strongly oppose that. This effort turns New Mexico into a dump site. My family and I have lived in New Mexico since the early 1700’s and to see it turn into a dump is beyond my comprehension.

The new shaft has not been permitted by the New Mexico Environment Department and we all know it. WIPP expansion is not wanted. If storage is so safe let it all stay right where it is instead of transporting it to the land of marginalized people. Please help us stop the new shaft and drifts that go with it.

I am opposed to the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831 and I respectfully ask and demand that it as well as its discharge capacity of 1,292,499 gallons per day discharge volume be deleted from the draft permit.

Thank you for the work you do to ensure that my comment will be taken into consideration.”

*NMED Response: See responses to Comments 6 and 30.*
94. **Written Comment:** “I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit, DP-831, for the Waste Isolation Pilot Plant (WIPP). These facilities are essential for the new Shaft 5 and associated drifts whose construction has not yet been permitted by the New Mexico Environment Department (NMED). There is overwhelming public opposition to permitting the new Shaft 5 and the expansion of WIPP, as well as many related technical and legal problems.

I respectfully request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day be deleted from the DP-831 draft permit.

Thank you for your careful consideration of my comments.”

*NMED Response: See responses to Comments 6 and 30.*

---

**Comment from G Robin Seydel:**

95. **Written Comment:** “I am deeply disturbed by the New Mexico Environment Department’s ongoing blatant disregard of environmental justice principles, in this case, specifically related to your scheduling of the hearing of the Groundwater Discharge Permit for WIPP.

Scheduling the oral testimony on one of the two holiest days of the year for Jewish people shows your complete insensitivity with regards to public participation. It is a travesty of environmental justice that will keep many, in the Jewish community, from participating orally to express their views. Once again NMED has shown that it doesn’t really consider community comments, and only pays lip service to public participation in these important decisions, often allowing the DOE to move forward on build out of underground aspects of WIPP before a full permitting process, both modification and renewal has been completed.

The NMED owes the Jewish community of New Mexico a public apology for disabling their full participation in this permitting process.

That said, I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. Those facilities are essential for the new shaft and associated drifts, which are part of the "Forever WIPP" expansion, which I strongly oppose.

Further, I object to including facilities essential for the new shaft, when construction of the shaft has not been permitted by the New Mexico Environment Department (NMED). There is overwhelming public opposition to permitting the new shaft, as well as many technical and legal problems.

I oppose "Forever WIPP." I am part of a growing movement in opposition to WIPP expansion, including the new shaft and associated drifts. I am opposed to the inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831.

I request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day discharge volume be deleted from the draft permit. Thank you for your careful consideration of my comments.”
NMED Response: 20.1.4 NMAC does not identify any religious holidays in which to avoid when scheduling a public hearing; therefore, NMED did not take that into account during the scheduling process.

Additionally, see responses to Comments 6, 30, and 31.

Comment from John E. Wilks, III on behalf of Veterans For Peace:

96. Written Comment: “Veterans For Peace, Chapter #63 (Albuquerque) vehemently opposes the inclusion of Salt Cell 5 and Salt Storage Pond 5 on the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. Those facilities are not essential for the new Shaft 5 and associated drifts, which are part of the “Forever WIPP” expansion which the Chapter strongly opposes.

Under the original negotiations to establish the WIPP in New Mexico, the U. S. Government agreed to operate the WIPP for only 25 years. The term of that operational agreement ends June 11, 2024. No waste should be accepted into the WIPP after June 11, 2024! The current permit application by DOE is a veiled attempt to incrementally expand the WIPP beyond the volume in the Land Withdrawal Act in which the Congress authorized the WIPP. DOE proposes to spend millions of dollars for improvements and upgrades at the WIPP as if it fully intends to not cease accepting waste shipments in June 2024.

New Mexico has no obligation to extend the size, scope, or operational life of the WIPP. NMED must not allow U.S. DOE, NNSA, DOD, or DHS to bully, bribe, or coerce the state of New Mexico into any extension of time for the WIPP to accept waste shipments or to accept shipments of waste that are not properly characterized, such as “down blended plutonium.”

We strongly request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons of 1,292,499 gallons per day be deleted from the DP-831 Draft permit.”

NMED Response: See responses to Comments 6 and 30.

Comment from Tom Clements on behalf of Savannah River Site Watch:

97. Written Comment: “I am writing on behalf of Savannah River Site Watch (SRS Watch), a public-interest non-profit organization located in Columbia, South Carolina. My organization is concerned about the licensing status of the WIPP facility as a large volume of surplus weapons plutonium processed at the Savannah River Site could be destined for WIPP.

Additionally, if expansion of fabrication of plutonium pits for nuclear weapons were to go forward at Los Alamos National Lab and the Savannah River Site, additional plutonium waste from pit production would go to WIPP. As there has been no environmental review of such TRU from pit production being disposed of in WIPP, my organization and others have brought a lawsuit against the Department of Energy and the National Nuclear Security Administration for violation of the
National Environmental Policy Act. We have demanded that DOE/NNSA prepare a Programmatic Environmental Impact Statement that, among other things, would analyze disposal of pit waste in WIPP. This matter must be considered in the current WIPP expansion and permit modifications being considered by the New Mexico Environment Department. DOE/NEPA will file an initial response to our lawsuit by September 27, 2021.

See more on our PEIS lawsuit here: https://www.scelp.org/cases/plutonium-pits.

I oppose the inclusion of Salt Cell 5 and Salt Storage Pond 5 in the groundwater discharge permit for the Waste Isolation Pilot Plant (WIPP), DP-831. Those facilities are essential for the new Shaft 5 and associated drifts, which are part of the possibly illegal expansion of WIPP - as it could violate the legal cap on amount of waste placed in WIPP, per the Land Withdrawal Act - which I strongly oppose.

Further, I object to including facilities essential for the new Shaft 5, when construction of the shaft has not been permitted by the New Mexico Environment Department. There is overwhelming public opposition to permitting the new Shaft 5, as well as many technical and legal problems.

I request that Salt Cell 5 and Salt Storage Pond 5 and its discharge capacity of 1,292,499 gallons per day be deleted from the DP-831 draft permit.”

NMED Response: See responses to Comments 6, 30, and 39.

Comment from Laura Watchempino:

98. Written Comment: “I oppose the proposed modification of Discharge Permit DP-831 to construct Salt Cell 5 and Salt Storage Pond 5 at the Waste Isolation Pilot Plant (WIPP). The salt cell and salt storage pond are associated with a proposed new Shaft 5 and associated drifts, which have not been permitted. The need for Shaft 5, purportedly for improved ventilation of the pilot plant, with an associated salt cell and storage pond has not been demonstrated. It is therefore both premature and unnecessary to approve a modification for the construction of Salt Cell 5 and Salt Storage Pond 5 until Shaft 5 has been permitted.

However, I just learned that both the salt cell and storage pond have indeed been constructed, and that additional expenses could now be incurred due to the time lapse between construction and utilization.”

NMED Response: See responses to Comments 6 and 30. The Permittee has begun initial construction of Salt Cell 5 and Salt Storage Pond 5; it is not within the authority of NMED GWQB to stop or prevent this activity.

99. Written Comment: “WIPP is currently scheduled to end its disposal operations in 2024. DOE’s plans to expand WIPP to take other kinds of nuclear waste and to extend operations to 2080 requires a new environmental evaluation with opportunities for public involvement and consultations with state government to develop other national repositories for high level nuclear waste. Nuclear Waste Policy Act of 1982 and 2019 amendments
DOE has thus far failed to designate other permanent repositories for its ever-growing volume of extremely dangerous high level nuclear waste. Congress has long recognized that WIPP was never meant to be the only site for the disposal of nuclear weapons waste. The need for Shaft 5, purportedly for improved ventilation of the pilot plant, with an associated salt cell and storage pond has not been demonstrated.

Initially, DOE agreed to limit both the volume and type of nuclear waste sent to the Waste Isolation Pilot Project. July 1, 1981 Consultation and Cooperation Agreement with the State of New Mexico, revisited and amended in November 1984, August 1987, and June 1988

NMED must look to the history of New Mexico’s negotiations with DOE on behalf of its residents, as well as the public welfare, when evaluating the hundreds of thousands of irradiated nuclear waste shipments that will be traversing New Mexico highways and rail lines en route to WIPP if disposal operations are expanded. Additional shipments of high level nuclear waste between the Savannah River Site and Los Alamos National Lab will be required just to make this lethal waste suitable for transport and safe disposal at WIPP.

Negligent operation and maintenance of the WIPP facility since the 2014 explosion that shut the facility down for 3 years continues to pose a problem for federal and state regulators and worker safety. The administrative record for the facility reveals that key monitoring equipment, including pressure gages and flow meters, have been out of service for at least 2 ½ years. In another instance, a control panel alarm did not light up and was not repaired making it difficult to respond to the alert. DP-831 Monitoring Report 6-24 to 6-30-19 This information shows that a lax safety culture continues to plague WIPP, another factor that requires critical assessment and analysis by the regulators before decisions are made to expand the mission and duration of WIPP. along with public notice and opportunities for hearing before those decisions are made."

NMED Response: See responses to Comments 30 and 39. The control panel is for the domestic potable water system and indicates when water pressure is low. The control panel is not part of the wastewater system and, therefore, is not included in the groundwater Discharge Permit. The raw water meter became nonoperational at the beginning of August 2020. On November 2, 2021, the Permittee informed NMED that the meter had been repaired and was operational once again.

100. Written Comment: “I object to the construction of the salt cell and salt storage pond without public notice prior to the issuance of a permit modification for DP-831 approving the cell and storage pond construction. Furthermore, the construction of a new Shaft 5 should have been noticed as an essential condition precedent to the construction and permitting of the salt cell that will store the salt excavated from Shaft 5 and the salt storage pond that will collect storm water runoff from the salt cell.

In combination, these three construction projects will enable WIPP to double in size. In reality, shaft construction has not been permitted by the New Mexico Environment Department (NMED) and there is overwhelming public opposition to permitting a new Shaft 5, as well as other technical and legal issues requiring resolution before WIPP is allowed to expand into a de facto permanent repository for the nation’s nuclear waste.

NMED’s piecemeal approach to permitting segments of DOE’s expansion plans obscures the true nature of each permitting decision, making it difficult for the public to meaningfully respond. Broad public participation and informed consent from both the citizens of New Mexico and their
elected representatives is called for - a process that requires active consultation with New Mexico and the U.S. Congress.”

NMED Response: On January 22, 2019, NMED public noticed the receipt of the renewal/modification application from WIPP. On March 8, 2020 and on October 1, 2020, NMED public noticed a draft discharge permit proposed for approval for DP-831. NMED has fulfilled all regulatory requirements for public notice pursuant to 20.6.2 NMAC.

Additionally, see response to Comment 30. NMED commences permitting actions when an application is received and is regulatorily required to evaluate each application individually.

101. Written Comment: “I oppose the permanent expansion of WIPP, including a new Shaft 5 and associated drifts. I oppose any expansion of WIPP that will impose an obligation on the state of New Mexico to host a permanent repository for the nation’s nuclear waste. Other alternatives should be explored before New Mexico consents to imposing such grave risks to the health and welfare of its citizens on a continuing basis - essentially forever. Any future expansion of WIPP must be thoroughly vetted by Congress and the state of New Mexico, with broad public participation and consent.”

NMED Response: NMED does not have a response to this comment.

102. Written Comment: “I oppose the premature inclusion of Salt Cell 5 and Salt Storage Pond 5 in DP-831 until the excavation of Shaft 5 has been publicly noticed for review and comment. Since these two surface facilities have already been constructed, they must now be dismantled. A great disservice has already been perpetrated upon New Mexico and its citizens. It must now be corrected.

In addition, the Environment Department’s public notification process was defective and does not meet the basic regulatory requirements, as Concerned Citizens for Nuclear Safety will argue.”

NMED Response: See response to Comment 30. NMED has fulfilled all regulatory requirements for public notice pursuant to 20.6.2 NMAC.

103. Written Comment: “I further support CCNS’ recommendation to require WIPP to establish an information repository for its groundwater discharge permit on its website, as it has done for other key WIPP documents.”

NMED Response: See response to Comment 13.
GROUND WATER QUALITY BUREAU
DISCHARGE PERMIT
Issued under 20.6.2 NMAC

Facility Name: Waste Isolation Pilot Plant (WIPP)
Discharge Permit Number: DP-831
Facility Location:
Highway 128, 26 miles southeast of Carlsbad
Sections 20, 21, 28, and 29, Township 22S, Range 31E

County: Eddy

Permittee: U.S. Department of Energy
Mailing Address:
Reinhard Knerr, Manager
U.S. Department of Energy, Carlsbad Field Office
P.O. Box 3090
Carlsbad, NM 88221

Facility Contact: Mike Proctor, Facility Operator
Telephone Number/Email:
(575) 234-8143/mike.proctor@wipp.ws

Permitting Action: Renewal and Modification

Permit Issuance Date: January 28, 2022
Permit Expiration Date: January 27, 2027

NMED Permit Contact: Avery Young
Telephone Number/Email:
(505) 699-8564/ avery.young@state.nm.us

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Justin Ball
Date: 2022.01.21
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JUSTIN D. BALL
Acting Chief, Ground Water Quality Bureau
New Mexico Environment Department
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Discharge Permit Summary
Groundwater Discharge Permit Guidance for Synthetically Lined Lagoons – Liner Material and Site Preparation, Revision 0.0, May 2007
New Mexico Environment Department Ground Water Quality Bureau Monitoring Well Construction and Abandonment Guidelines, Revision 1.1, March 2011
I. INTRODUCTION

The New Mexico Environment Department (NMED) issues this groundwater Discharge Permit Renewal and Modification (Discharge Permit or DP-831) to the U.S. Department of Energy (DOE or Permittee) pursuant to the New Mexico Water Quality Act (WQA), NMSA 1978 §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (WQCC) Ground and Surface Water Protection Regulations, 20.6.2 NMAC.

NMED’s purpose in issuing this Discharge Permit, and in imposing the requirements and conditions specified herein, is to control the discharge of water contaminants from the Waste Isolation Pilot Plant (WIPP or Facility) in order to protect groundwater and those segments of surface water gaining from groundwater inflow for present and potential future use as domestic and agricultural water supply and other uses, and to protect public health. It is NMED’s determination in issuing this Discharge Permit that the Permittee has met the requirements of Subsection C of 20.6.2.3109 NMAC. The Permittee is responsible for complying with the terms and conditions of this Discharge Permit pursuant to Section 20.6.2.3104 NMAC; failure may result in an NMED enforcement action(s) (20.6.2.1220 NMAC).

Described below are the activities that produce the discharge, the location of the discharge, and the quantity, quality and flow characteristics:

The Permittee discharges domestic wastewater to a synthetically lined impoundment system for treatment and disposal by evaporation at a rate of up to 23,000 gallons per day (gpd). The system consists of seven synthetically lined impoundments (Facultative Lagoon System) comprised of Settling Lagoons 1 and 2, Polishing Lagoons 1 and 2, and Effluent Lagoons A, B, and C.

The Permittee may discharge non-domestic wastewater at the Facility in the following ways:

- **Effluent Lagoons B and C of the Facultative Lagoon System** receive industrial wastewater at a volume of up to 27,000 gpd from the following sources: wastewater from compressed air systems, brine, purge waters from sampling and developing Facility monitoring wells, and other miscellaneous industrial non-hazardous, non-radioactive wastewaters. The Permittee is authorized to discharge these industrial wastewaters to the Facultative Lagoon System for evaporative disposal.

- **Evaporation Pond H-19** receives industrial wastewater at a volume of up to 50,000 gpd from the following sources: brine, purge waters from sampling and developing Facility monitoring wells, condensate from the Exhaust Shaft fan ductwork on the surface, and water collected from the Waste Shaft Sump, Exhaust Shaft Interception Wells, and other observation boreholes in the underground. The Permittee is authorized to discharge these industrial wastewaters to Evaporation Pond H-19 for evaporative disposal.
• The to-be-constructed Salt Reduction System will produce and discharge brine at a volume of up to 2,210 gpd. The Salt Reduction System, which is located within the Safety Significant Confinement Ventilation System (SSCVS), will discharge brine to two double synthetically lined impoundments, each with a leak detection system (Brine Retention Ponds East and West, collectively Brine Ponds). The Facility will use one brine retention pond while the other brine retention pond is closed for evaporation and removal of precipitated salt in order to maintain at least two feet of freeboard. The Permittee will transfer any remaining brine in the closed Brine Pond to Brine Salt Storage Pond 4 for evaporative disposal.

• The Permittee will mine salt and other subsurface materials during construction of the Facility. The Permittee will store this mined salt, as well as already mined salt on the surface in four stockpiles (Salt Cells 1, 2, 3, and 5). Salt Storage Ponds 2 and 3 are two double synthetically lined impoundments, each with leak detection, that collect stormwater runoff that contacts Salt Cells 2 and 3. The total storage capacity of Salt Storage Ponds 2 and 3 is 21,737,254 gallons. Salt Storage Pond 5, a double synthetically lined stormwater impoundment with a leak detection system, will collect stormwater runoff in contact with Salt Cell 5. The storage capacity of Salt Storage Pond 5 will be 6,355,404 gallons. Salt Cell 1 no longer receives salt and is capped with synthetic material and an earthen cover. Salt Storage Pond 1, a synthetically lined impoundment, collects stormwater runoff in contact with this stockpile in synthetically lined diversion ditches directed to Salt Storage Pond 1. The storage capacity of Salt Storage Pond 1 is 3,301,634 gallons. With proper operation and maintenance, the storage capacity of each salt storage pond is sufficient to contain a 24-hour, 100-year (5.84-inch rainfall) storm event.

• Brine Salt Storage Pond 4, a double synthetically lined storm water impoundment with a leak detection system, collects stormwater runoff from the SSCVS area. The storage capacity of Brine Salt Storage Pond 4 is 8,668,722 gallons. With proper operation and maintenance, the capacity of the Brine Salt Storage Pond 4 is sufficient to contain a 24-hour, 100-year (5.84-inch rainfall) storm event.

• Storm Water Ponds 1, 2, and 3, three synthetically lined impoundments, collect additional stormwater runoff from the Facility’s paved areas and roofs. This runoff is not in contact with the salt stockpiles or other waste materials at the Facility and the Permittee may use the impounded water for dust control, soil compaction, and other construction activities.

The Permittee stores salt and other subsurface materials mined during construction of the Facility, as well as currently mined salt, on the surface in four stockpiles (Salt Cells 1, 2, 3, and 5). The Permittee closed Salt Cell 1 with a 60-mil HDPE synthetic liner cover and two feet of native soil, as well as a 60-mil HDPE synthetically lined drainage system for stormwater runoff collection. Salt Cells 2 and 3 were constructed with six inches of prepared subgrade, a 60-mil HDPE liner, a
200-mil Geonet drainage layer, an eight-ounce geotextile fabric, and the fabric is then covered with two feet of screened native soil. Each salt cell is sloped toward the center, which contains a collection trench and pipe for conveyance of water to Salt Storage Ponds 2 and 3. Salt Cell 5 will be constructed with a 60-mil HDPE liner on the bottom with a protective layer of native soil on top to protect the liner. The Permittee will install a HDPE pipe to collect and transmit by gravity the leachate and stormwater runoff water from Salt Cell 5 to Salt Storage Pond 5.

The Permittee constructed the Site and Preliminary Design Validation (SPDV) material pile as the Permittee excavated the shafts when construction first began at the WIPP site. The Permittee closed the SPDV material pile in the year 2000 with a geosynthetic liner cover installed on 6 inches of bedding material and covered with a minimum of three feet of earthen material.

The Permit Modification consists of the addition of one new salt storage cell and four new impoundments: Salt Cell 5, Salt Storage Pond 5, Brine Salt Storage Pond 4, Brine Retention Pond East, and Brine Retention Pond West. Salt Cell 5 adds a new salt storage location, which will receive overburden and salt from the construction of Shaft 5 and its associated underground connecting drifts. Salt Storage Pond 5 will receive both the leachate and stormwater in contact with mined salt located in Salt Cell 5.

The Facility is located near the Jal Highway (NM-128), 26 miles southeast of Carlsbad, in Sections 20, 21, 28, and 29, Township 22S, Range 31E, Eddy County.

The WIPP Facility is a mined geologic repository for the disposal of transuranic (TRU) waste. The underground repository is located 2,150 feet below land surface in the bedded salt of the Salado Formation. The WIPP first accepted waste in March 1999. In addition to this groundwater Discharge Permit, the NMED Hazardous Waste Bureau under the New Mexico Hazardous Waste Act and New Mexico’s Hazardous Waste Regulations regulates the WIPP.

The WIPP Facility is geologically situated in the southeast portion of New Mexico within the Delaware Basin, which is part of the larger Permian Basin. The geologic formations below the Facility that are pertinent to this Discharge Permit, from deepest to shallowest, include: the Salado Formation (851 to 2,150 below ground surface [bgs]), the Rustler Formation (546 to 851 bgs), the Dewey Lake Formation (54 to 564 bgs), and, in the northeastern portion of the Facility, the Santa Rosa Formation (34 to 54 bgs). The Salado Formation consists predominately of polyhalite, with some halite, carbonates, anhydrites, and clay seams. The Rustler Formation consists of carbonates, anhydrites, and halites. The Dewey Lake Formation consists almost entirely of mudstone, claystone, siltstone, and interbedded sandstone, and is frequently referred to as the Dewey Lake Redbeds Formation. Geologists use the terms upper, middle, and lower Dewey Lake to describe the stratigraphic position in the formation and characteristics that related to the occurrence of saturated conditions. The upper Dewey Lake consists of a thick, generally unsaturated section. The middle Dewey Lake occurs above a sulfate cementation change, which results in saturated conditions and a natural water table in limited areas. The
lower Dewey Lake is below the sulfate cementation change and has low permeability. The Santa Rosa Formation consists of gray and red sandstone with lenses of shale and conglomerate.

The vadose zone consists, from shallowest to deepest, of Quaternary dune sand (0 to 7.5 bgs), Mescalero caliche (7.5 to 17 bgs), and the Gatuña Formation (17 to 34 bgs). Recharge rates through the native soils are extremely low and there is little recharge through the vadose zone to the Santa Rosa Formation.

A discharge at this Facility is most likely to affect groundwater at a depth of approximately 34 to 160 feet. Natural groundwater is located in the middle portion of the Dewey Lake Formation at a depth of approximately 160 feet and has an average total dissolved solids concentration of approximately 3,400 milligrams per liter. The WIPP discovered a perched water zone in the lower Santa Rosa and upper Dewey Lake Formations in 1995 and determined that the probable sources of this shallow groundwater were the unlined impoundments constructed to capture stormwater runoff at the Facility and runoff from the above-ground salt piles. This shallow groundwater is contaminated with total dissolved solids, sulfate (SO\(_4\)), and chloride. After the discovery of the anthropogenically created shallow groundwater (referred to as shallow groundwater), the Permittee lined all impoundments at the Facility and installed a network of monitoring wells. The shallow groundwater has a flow direction of north to south. Natural, non-anthropogenic, groundwater occurs in the Dewey Lake Formation (referred to as natural groundwater in the Dewey Lake Formation) south of the WIPP facility at a depth of 160 feet. The Dewey Lake Formation has a relatively low hydraulic conductivity.

The first laterally continuous water-bearing zone below the Facility is within an approximately 30-foot-thick section of the Culebra Member of the Rustler Formation. Water in the Culebra Member is usually present in fractures and is confined by overlying anhydrite and underlying clay and anhydrite beds. A network of monitoring wells monitors the Culebra Member.


The Permittee shall manage the discharge in accordance with all conditions and requirements of this Discharge Permit.

NMED reserves the right to require a discharge permit modification in the event NMED determines that the Permittee is violating or may violate the requirements of 20.6.2 NMAC or are violating or may violate the standards of Section 20.6.2.3103 NMAC. NMED reserves this right pursuant to Section 20.6.2.3109 NMAC. An NMED requirement to modify the Discharge
Permit may result from a determination by NMED that structural controls and/or management practices approved under this Discharge Permit need to be more stringent to protect groundwater quality. NMED reserves the right to require the Permittee to implement abatement of water pollution and remediate groundwater quality.

NMED’s issuance of this Discharge Permit does not relieve the Permittee of the responsibility to comply with the WQA, WQCC Regulations, and any other applicable federal, state and/or local laws and regulations, such as zoning requirements and nuisance ordinances.

This Discharge Permit may use the following acronyms and abbreviations.

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<td>NMAC</td>
<td>New Mexico Administrative Code</td>
<td>WWTF</td>
<td>Wastewater Treatment Facility</td>
</tr>
<tr>
<td>mL</td>
<td>milliliters</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

II. FINDINGS

In issuing this Discharge Permit, NMED finds the following.

1. The Permittee is discharging effluent or leachate from the Facility so that such effluent or leachate may move into groundwater of the State of New Mexico that has an existing concentration of 10,000 mg/L or less of TDS, within the meaning of Subsection A of 20.6.2.3101 NMAC, without exceeding standards of 20.6.2.3103 NMAC for any water contaminant.
2. The Permittee is allowed to discharge effluent or leachate from the Facility directly or indirectly into groundwater pursuant to this Discharge Permit and Section 20.6.2.3104 NMAC.

3. The discharge from the Facility is not subject to any of the exemptions of Section 20.6.2.3105 NMAC including Subsection 20.6.2.3105.A which allows an exemption from obtaining a discharge permit if the discharge is composed of effluent or leachate which conforms to all the standards in Subsection A, B, and C of Section 20.6.2.3103 NMAC and has a total nitrogen concentration of 10 mg/L or less.

III. AUTHORIZATION TO DISCHARGE

The Permittee is responsible for ensuring that discharges authorized by this Discharge Permit are consistent with the terms and conditions herein pursuant to 20.6.2.3104 NMAC.

This Discharge Permit authorizes the Permittee to discharge up to 23,000 gpd of domestic wastewater to a synthetically lined facultative lagoon system for disposal by evaporation. The Facultative Lagoon System is authorized to accept up to 27,000 gpd of non-hazardous, non-radioactive industrial wastewater from compressed air systems at the Facility, brine, purge waters from sampling and developing Facility wells, and miscellaneous industrial non-hazardous, non-radioactive wastewater for disposal by evaporation. This Discharge Permit authorizes the Permittee to discharge up to 50,000 gpd of brine, purge waters, condensate from the Exhaust Shaft fan ductwork on the surface, and water collected from the Waste Shaft Sump, Exhaust Shaft Interception Wells, and other observation boreholes in the underground into Evaporation Pond H-19. This Discharge Permit also authorizes the Permittee to discharge up to 2,210 gpd of brine from a 3,000-gallon holding tank to Brine Retention Ponds East and West for disposal by evaporation. In order to maintain at least two feet of freeboard, the Permittee is authorized to transfer the remaining brine in the Brine Ponds to Brine Salt Storage Pond 4.

This Discharge Permit authorizes the Permittee to stockpile mined salt in four salt cells: Salt Pile 1 is closed with a cover; Salt Cells 2, 3 and 5 have authorized footprints of 6.2 acres, 5.2 acres, and 5.1 acres, respectively. The Permittee is authorized to collect stormwater runoff from these salt cells in three double synthetically lined impoundments with leak detection systems (Salt Storage Pond 2, Salt Storage Pond 3, and Salt Storage Pond 5) and one synthetically lined impoundment with a drainage system (Salt Storage Pond 1) for disposal by evaporation. This Discharge Permit authorizes the Permittee to collect stormwater runoff from the Facility’s paved areas and roofs in Storm Water Ponds 1, 2, and 3, as well as Brine Salt Storage Pond 4. This runoff is not in contact with the salt stockpiles at the Facility, and runoff from Storm Water Ponds 1, 2, and 3 may be used for dust control, soil compaction, and other construction activities.
This Discharge Permit sets forth requirements for the discharge and disposal of domestic and non-domestic wastewater. Conditions in the Operational Plan, the Monitoring and Reporting, and the Closure Plan sections are categorized as follows:

- **Part A. Generally Applicable to All Discharges;**
- **Part B. Applicable to the Facultative Lagoon System;**
- **Part C. Applicable to the Evaporation Pond H-19, Brine Retention Pond East, Brine Retention Pond West, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3;**
- **Part D. Applicable to the Impoundments Containing Stormwater Runoff in Contact with Salt Stockpiles (Salt Storage Ponds 1, 2, 3, and 5) and to Salt Stockpiles (Salt Cells 1, 2, 3, and 5);** and
- **Part E. Applicable to Groundwater Monitoring.**

[20.6.2.3104 NMAC, Subsection C of 20.6.2.3106 NMAC, Subsection C of 20.6.2.3109 NMAC]

**IV. CONDITIONS**

NMED issues this Discharge Permit for the discharge of water contaminants subject to the following conditions.

**OPERATIONAL PLAN**

**Part A. Generally Applicable to All Discharges**

<table>
<thead>
<tr>
<th>#</th>
<th>Operating Conditions Applicable to All Discharges</th>
</tr>
</thead>
</table>
| 1. | The Permittee shall implement the following operational plan to ensure compliance with Title 20, Chapter 6, Parts 2 and 4 NMAC.  
[Subsection C of 20.6.2.3109 NMAC] |
| 2. | The Permittee shall operate the Facility in a manner such that it does not violate the standards and requirements of Sections 20.6.2.3101 and 20.6.2.3103 NMAC.  
[20.6.2.3101 NMAC, 20.6.2.3103 NMAC, Subsection C of 20.6.2.3109 NMAC] |
| 3. | The Permittee shall maintain the impoundment liners as to avoid conditions that could affect the liner or the structural integrity of the impoundments. Characterization of such conditions may include the following:  
- erosion damage;  
- animal burrows or other damage;  
- the presence of vegetation including aquatic plants, weeds, woody shrubs or trees growing within five feet of the top inside edge of a sub-grade impoundment, within |
### Operating Conditions Applicable to All Discharges

<table>
<thead>
<tr>
<th>#</th>
<th>Operating Conditions Applicable to All Discharges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>five feet of the toe of the outside berm of an above-grade impoundment, or within the impoundment itself;</td>
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<td></td>
<td>• the presence of large debris or large quantities of debris in the impoundment;</td>
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<tr>
<td></td>
<td>• evidence of seepage; or</td>
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<td></td>
<td>• evidence of berm subsidence.</td>
</tr>
</tbody>
</table>

The Permittee shall routinely control vegetation growing around the impoundments by mechanical removal that is protective of the impoundment liner.

The Permittee shall visually inspect the impoundments and surrounding berms on a monthly basis to ensure proper maintenance. In the event that inspection reveals any evidence of damage that threatens the structural integrity of an impoundment berm or liner, or that may result in an unauthorized discharge, the Permittee shall implement the Contingency Plan set forth in this Discharge Permit.

The Permittee shall create and maintain a log of all impoundment inspections that describes the findings and repairs, the date of the inspection, and the name of the person responsible for the inspection. The Permittee shall make the log available to NMED upon request.

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

4. The Permittee shall preserve a minimum of one foot of freeboard between the liquid level in all the impoundments and the elevation of the top of the impoundment liner, except Brine Salt Storage Pond 4, Salt Storage Pond 5, and Brine Retention Ponds East and West shall maintain two feet of freeboard.

In the event that the Permittee determines that the specified freeboard cannot be preserved in the impoundments, the Permittee shall implement the Contingency Plan set forth in this Discharge Permit.

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

### Part B. Applicable to the Facultative Lagoon System

<table>
<thead>
<tr>
<th>#</th>
<th>Facultative Lagoon System - Operational Actions with Implementation Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Within three years following the effective date of this Discharge Permit <em>(by January 28, 2025)</em>, the Permittee shall measure the thickness of the settled solids in two impoundments (Settling Lagoon 1 and Settling Lagoon 2) that are part of the Facultative</td>
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<tr>
<td>#</td>
<td>Facultative Lagoon System - Operational Actions with Implementation Deadlines</td>
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<tr>
<td></td>
<td>Lagoon System. The Permittee shall report the results of the solids thickness</td>
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<td></td>
<td>measurements to NMED in the subsequent required periodic monitoring report.</td>
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<td></td>
<td>The Permittee shall measure the thickness of settled solids in each impoundment in</td>
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<td>accordance with the following procedure.</td>
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<tr>
<td></td>
<td>a) The division of the total surface area of the treatment impoundment into nine</td>
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<td>equal sub-areas.</td>
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<td></td>
<td>b) One measurement (to the nearest half foot) using a settled solids measurement</td>
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<td>device (core sampler) per sub-area.</td>
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<td></td>
<td>c) Calculation of the average of the nine measurements.</td>
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<td>In the event that the measured settled solids exceed one-third of the maximum</td>
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<td>liquid depth in the impoundment, the Permittee shall implement the Contingency</td>
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<td></td>
<td>Plan set forth in this Discharge Permit.</td>
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<tr>
<td></td>
<td>[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Facultative Lagoon System - Operating Conditions</th>
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<tbody>
<tr>
<td>6.</td>
<td>The Permittee shall maintain fences around the</td>
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<td>Facultative Lagoon System to restrict access by</td>
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<td>wildlife, livestock, or unauthorized persons.</td>
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<td></td>
<td>The fences shall consist of a minimum of six-foot</td>
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<td>chain link or field fencing and locking gates.</td>
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<td></td>
<td>The Permittee shall maintain the fences to serve</td>
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<td>the stated purpose throughout the term of this</td>
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<td></td>
<td>Discharge Permit.</td>
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<tr>
<td></td>
<td>[Subsections B and C of 20.6.2.3109 NMAC, NMSA</td>
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<tr>
<td></td>
<td>1978, § 74-6-5.D]</td>
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<tr>
<td>7.</td>
<td>The Permittee shall maintain signs indicating</td>
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<td>that the wastewater at the Facility is not</td>
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<td>potable. The Permittee shall post signs at the</td>
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<td>Facultative Lagoon System’s entrance and other</td>
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<td>areas where there is potential for public</td>
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<td>contact with wastewater. The signs shall be</td>
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<td>printed in English and Spanish and shall remain</td>
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<td>visible and legible for the term of this</td>
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<td></td>
<td>Discharge Permit.</td>
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<tr>
<td></td>
<td>[Subsections B and C of 20.6.2.3109 NMAC, NMSA</td>
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<tr>
<td></td>
<td>1978, § 74-6-5.D]</td>
</tr>
<tr>
<td>8.</td>
<td>The Permittee shall utilize operators of the</td>
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<td>domestic wastewater collection, treatment and</td>
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<td>disposal systems that are certified by the State</td>
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<td>of New Mexico at the appropriate level pursuant</td>
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<td>to 20.7.4 NMAC. A certified operator or a direct</td>
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<td>supervisee of a certified operator shall perform</td>
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<td></td>
<td>the operations and maintenance of all or any</td>
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<td></td>
<td>part of the wastewater system.</td>
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</tbody>
</table>
### Facultative Lagoon System - Operating Conditions

The Permittee shall notify the NMED within 24 hours if at any time the Permittee no longer has a certified operator maintaining the system.

[Subsection C of 20.6.2.3109 NMAC, 20.7.4 NMAC]

### Part C. Applicable to the Evaporation Pond H-19, Brine Retention Pond East, Brine Retention Pond West, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3

#### Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Operational Actions with Implementation Deadlines

<table>
<thead>
<tr>
<th>#</th>
<th>Operational Actions with Implementation Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Within 180 days following the effective date of this Discharge Permit (by July 27, 2022), the Permittee shall install fences around Storm Water Ponds 1, 2 and 3 to limit access by wildlife, livestock, or unauthorized persons. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit. Documentation of fence installation shall consist of a narrative statement describing the fences and gates with date-stamped photographs. The Permittee shall submit the documentation to NMED in the subsequent required periodic monitoring report.</td>
</tr>
<tr>
<td>10.</td>
<td>Within two years following the effective date of this Discharge Permit (by January 28, 2024), the Permittee shall measure the thickness of the settled solids in Evaporation Pond H-19. The Permittee shall report the results of the solids thickness measurements to NMED in the subsequent required periodic monitoring report. The Permittee shall measure the thickness of settled solids in accordance with the following process. a) Measure the water level via the staff gauge located in the impoundment. b) Lower a sounding line to the top of the salt deposit and measure the length of the line from the top of the salt deposit to the water level. c) Subtract the depth to the salt deposit from the water level. In the event that the measured settled solids exceed one-third of the maximum liquid depth in the impoundment, the Permittee shall implement the Contingency Plan set forth in this Discharge Permit.</td>
</tr>
</tbody>
</table>

[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D] [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]
<table>
<thead>
<tr>
<th>#</th>
<th>Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Operational Actions with Implementation Deadlines</th>
</tr>
</thead>
</table>
| 11. | Prior to discharging to Brine Retention Pond East, Brine Retention Pond West, or Brine Salt Storage Pond 4, the Permittee shall complete construction of the Ponds in accordance with the final construction plans and specifications the Permittee submitted to NMED as part of the Discharge Permit application received on December 3, 2018. The Permittee shall notify NMED prior to the commencement of construction to allow NMED personnel to be onsite for inspection during construction.  
[Subsections A and C of 20.6.2.1202 NMAC, Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32] |
| 12. | Within 30 days of construction completion of Brine Retention Pond East, Brine Retention Pond West, and Brine Salt Storage Pond 4, the Permittee shall submit record drawings to NMED that bear the seal and signature of a licensed New Mexico professional engineer (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority).  
[Subsections A and C of 20.6.2.1202 NMAC, Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32] |
| 13. | Prior to discharging to Brine Salt Storage Pond 4, the Permittee shall install fences around said impoundment to limit access by wildlife, livestock, or unauthorized persons. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit.  
Documentation of fence installation shall consist of a narrative statement describing the fences and gates with date-stamped photographs. The Permittee shall submit the documentation to NMED in the subsequent required periodic monitoring report.  
[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D] |
| 14. | Prior to discharging to Brine Salt Storage Pond 4, the Permittee shall post signs indicating that the wastewater in the impoundment is not potable. The Permittee shall post signs at the Facility entrance and other areas where there is potential for public contact with wastewater. Posted signs shall be in English and Spanish and shall remain visible and legible during the term of this Discharge Permit.  
Documentation of the sign installation shall consist of a date-stamped photograph. The Permittee shall submit the documentation to NMED in the subsequent required periodic monitoring report.  
[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D] |
<table>
<thead>
<tr>
<th>#</th>
<th>Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Operational Actions with Implementation Deadlines</th>
</tr>
</thead>
</table>
| 15. | Prior to discharging to the proposed Brine Retention Pond East, the Brine Retention Pond West, or the Brine Salt Storage Pond 4, the Permittee shall submit written notification to NMED stating the date the discharge(s) is to commence.  
[Subsection C of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC] |

<table>
<thead>
<tr>
<th>#</th>
<th>Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Operating Conditions</th>
</tr>
</thead>
</table>
| 16. | The Permittee shall construct, maintain and operate the leak detection, collection, and recovery systems (LDCRS) for Brine Salt Storage Pond 4 and Brine Retention Ponds East and West in a manner that will result in less than one foot of hydraulic head on the secondary liners in the impoundments.  
In the event that the Permittee cannot maintain less than one foot of hydraulic head on the secondary liners for Brine Salt Storage Pond 4 and Brine Retention Ponds East and West, the Permittee shall notify NMED within 48 hours of discovery and shall submit a Corrective Action Plan to NMED that evaluates the primary liner leakage rate, proposes options for reducing the leakage if optimal, or otherwise proposes a means to maintain less than one foot of hydraulic head on the secondary liner. The Permittee shall submit the plan to NMED for approval within 60 days after the discovery that the hydraulic head on the secondary liner has surpassed one foot.  
In the event that it becomes necessary to modify a LDCRS for an impoundment, the Permittee shall submit a report describing the proposed revised methodology for NMED approval.  
[20.6.2.3107 NMAC] |
| 17. | The Permittee shall maintain fences around Evaporation Pond H-19 to limit access by wildlife, livestock, or unauthorized persons. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit.  
[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D] |
| 18. | The Permittee shall maintain signs indicating that the wastewater in Evaporation Pond H-19 is not potable. The Permittee shall post signs at the impoundment entrance and other areas where there is potential for public contact with wastewater. The signs shall |
Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Operating Conditions

be printed in English and Spanish and shall remain visible and legible for the term of this Discharge Permit.

[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]

Part D. Applicable to the Impoundments Containing Stormwater Runoff in Contact with Salt Stockpiles (Salt Storage Ponds 1, 2, 3, and 5) and to Salt Stockpiles (Salt Cells 1, 2, 3, and 5)

<table>
<thead>
<tr>
<th>#</th>
<th>Salt Storage Ponds and Salt Stockpiles - Operational Actions with Implementation Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.</td>
<td>Within 90 days following the effective date of this Discharge Permit (by April 28, 2022), the Permittee shall install fences around Salt Storage Ponds 1, 2 and 3 to limit access by wildlife, livestock, or unauthorized persons. The fences shall consist of a minimum of six-foot chain link or field fencing and locking gates. The Permittee shall maintain the fences to serve the stated purpose throughout the term of this Discharge Permit. Documentation of fence installation shall consist of a narrative statement describing the fences and gates and date-stamped photographs. The Permittee shall submit the documentation to NMED in the subsequent required periodic monitoring report.</td>
</tr>
</tbody>
</table>

[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]|
| 20. | Within 120 days following the effective date of this Discharge Permit (by May 28, 2022), the Permittee shall post signs indicating that the wastewater in Salt Storage Ponds 1, 2 and 3 is not potable. The Permittee shall post signs at the Facility entrance and other areas where there is potential for public contact with wastewater. Posted signs shall be in English and Spanish and shall remain visible and legible during the term of this Discharge Permit. Documentation of sign installation shall consist of date-stamped photographs. The Permittee shall submit the documentation to NMED in the subsequent required periodic monitoring report. |

[Subsections B and C of 20.6.2.3109 NMAC, NMSA 1978, § 74-6-5.D]|
| 21. | Within two years following the effective date of this Discharge Permit (by January 28, 2024), the Permittee shall measure the thickness of the settled solids in Salt Storage Pond 1, 2, and 3. The Permittee shall report the results of the solids thickness measurements to NMED in the subsequent required periodic monitoring report. |
### Salt Storage Ponds and Salt Stockpiles - Operational Actions with Implementation Deadlines

The Permittee shall measure the thickness of settled solids in each Salt Storage Pond in accordance with the following procedure.

a) Measure the water level via the staff gauge located in the impoundment.
b) Lower a sounding line to the top of the salt deposit and measure the length of the line from the top of the salt deposit to the water level
c) Subtraction of the depth to the salt deposit from the water level.

In the event that the measured settled solids exceed one-third of the maximum liquid depth in the impoundment, the Permittee shall implement the Contingency Plan set forth in this Discharge Permit.

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

<table>
<thead>
<tr>
<th>#</th>
<th>Salt Storage Ponds and Salt Stockpiles - Operating Conditions</th>
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<tbody>
<tr>
<td>22</td>
<td>Prior to discharging to Salt Storage Pond 5 and prior to utilizing Salt Cell 5, the Permittee shall complete construction in accordance with the final construction plans and specifications the Permittee submitted to NMED as part of the Discharge Permit application received on December 3, 2018. The Permittee shall notify NMED prior to construction to allow NMED personnel to be onsite for inspection during construction.</td>
</tr>
<tr>
<td></td>
<td>[Subsections A and C of 20.6.2.1202 NMAC, Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</td>
</tr>
<tr>
<td>23</td>
<td>Within 30 days of completing construction of Salt Storage Pond 5 and Salt Cell 5, the Permittee shall submit record final drawings to NMED that bear the seal and signature of a licensed New Mexico professional engineer (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority).</td>
</tr>
<tr>
<td></td>
<td>[Subsections A and C of 20.6.2.1202 NMAC, Subsection C of 20.6.2.3109 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</td>
</tr>
<tr>
<td>24</td>
<td>Prior to discharging to Salt Storage Pond 5, the Permittee shall submit written notification to NMED stating the date the discharge is to commence.</td>
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<td></td>
<td>[Subsection C of 20.6.2.3107 NMAC]</td>
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<tr>
<td>25</td>
<td>The Permittee shall maintain and operate the leak detection, collection, and removal systems (LDCRS) for Salt Storage Ponds 2, 3 and 5 in a manner that will result in less than one foot of hydraulic head on the secondary liners in the ponds.</td>
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</tbody>
</table>
## Salt Storage Ponds and Salt Stockpiles - Operating Conditions

In the event that the Permittee cannot maintain less than one foot of hydraulic head on the secondary liners for Salt Storage Ponds 2, 3 and 5, the Permittee shall notify NMED within 48 hours of the discovery and shall submit a Corrective Action Plan to NMED which evaluates the primary liner leakage rate, proposes options for reducing the leakage if optimal, or otherwise proposes a means to maintain less than one foot of hydraulic head on the secondary liner. The Permittee shall submit the plan to NMED for approval within 60 days after the discovery that the hydraulic head on the secondary liner has surpassed one foot.

In the event that it becomes necessary to modify a LDCRS for a pond, the Permittee shall submit a report describing the proposed revised methodology for NMED approval.

[20.6.2.3107 NMAC]

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<tr>
<th>#</th>
<th>Monitoring and Reporting Conditions</th>
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<tbody>
<tr>
<td>26.</td>
<td>The Permittee shall conduct regular inspection of the earthen cover on Salt Cell 1 and the SPDV material pile. The Permittee shall conduct inspections monthly and after storm events of 2 inches or greater in a 24-hour period to evaluate the integrity of the covers, including erosional impact and vegetation success. The Permittee shall report general observations and minor cover repairs to NMED in the subsequent semi-annual report. In the event of significant erosion, such as the formation of gullies, rills, or areas where ponding is occurring, vegetative failure, or impending liner damage, the Permittee shall provide a plan and schedule for repair to NMED for approval within 90 days of discovery.</td>
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</table>

[20.6.2.3107 NMAC]

### MONITORING AND REPORTING

#### Part A. Generally Applicable to Monitoring

<table>
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<tr>
<th>#</th>
<th>Monitoring and Reporting Conditions</th>
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<tbody>
<tr>
<td>27.</td>
<td>The Permittee shall conduct monitoring, reporting, and the other requirements listed below in accordance with the monitoring requirements of this Discharge Permit.</td>
</tr>
</tbody>
</table>

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

| 28. | METHODOLOGY – Unless otherwise specified by this Discharge Permit, or approved in writing by NMED, the Permittee shall use sampling and analytical techniques that conform with the references listed in Subsection B of 20.6.2.3107 NMAC. |

[Subsection B of 20.6.2.3107 NMAC]
<table>
<thead>
<tr>
<th>#</th>
<th>Monitoring and Reporting Conditions</th>
</tr>
</thead>
</table>
| 29.| Semi-annual monitoring: The Permittee shall perform semi-annual monitoring during the following periods and shall submit reports to NMED by the following due dates:  
  • January 1st through June 30th – **due by August 1st**; and  
  • July 1st through December 31st – **due by February 1st**.  
  [Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC] |
| 30.| The Permittee shall submit its “Waste Isolation Pilot Plant Annual Site Environmental Report” to NMED with the next semi-annual monitoring report following its publication.  
  [Subsection A of 20.6.2.3107 NMAC] |

### Part B. Applicable to the Facultative Lagoon System

<table>
<thead>
<tr>
<th>#</th>
<th>Facultative Lagoon System - Monitoring and Reporting Conditions</th>
</tr>
</thead>
</table>
| 31.| The Permittee shall estimate the monthly volume of domestic wastewater discharged to the Facultative Lagoon System by obtaining readings on a monthly basis from a totalizing flow meter that measures total domestic water usage. The Permittee shall submit the monthly meter readings and calculated monthly and average daily water usage volumes to NMED in the semi-annual monitoring reports.  
  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC] |
| 32.| The Permittee shall measure the total monthly volume and record the origin of all industrial wastewater discharged to Effluent Lagoons B and C. The Permittee shall calculate discharge volumes to Effluent Lagoons B and C by a time/volume method or volumetric measurement of the transport container(s). The Permittee shall submit the monthly discharge volumes or other volumetric calculations and waste origins from each month to NMED in the semi-annual monitoring reports.  
  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC] |
| 33.| All flow meters shall be capable of having their accuracy verified under working (i.e., real-time, in-the-field) conditions. The Permittee shall develop a field verification method for each flow meter and shall utilize that method to check the accuracy of each respective meter. The Permittee shall perform field calibrations upon the repair or replacement of a flow measurement device and, at a minimum, once within 90 days of the effective date of this Discharge Permit (**by April 28, 2022**) |
### Facultative Lagoon System - Monitoring and Reporting Conditions

The Permittee shall ensure each flow meter is calibrated to its manufacturer’s recommended specification which shall be no less accurate than plus or minus 10 percent of actual flow, as measured under field conditions. Field calibrations shall be performed by an individual knowledgeable in flow measurement and in the installation/operation of the particular device in use.

The Permittee shall prepare a flow meter calibration report for each flow measurement device calibration event. The flow meter calibration report shall include the following information.

- a) The location and meter identification.
- b) The method of flow meter field calibration employed.
- c) The measured accuracy of each flow meter prior to adjustment indicating the positive or negative offset as a percentage of actual flow as determined by an in-field calibration check.
- d) The measured accuracy of each flow meter following adjustment, if necessary, indicating the positive or negative offset as a percentage of actual flow of the meter.
- e) Any flow meter repairs made during the previous year or during field calibration.
- f) The name of the individual performing the calibration and the date of the calibration.

The Permittee shall maintain flow meter calibration reports at a location accessible for review by NMED during Facility inspections.

[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]

### 34.

The Permittee shall collect a composite wastewater sample on a semi-annual basis (once every six months) from Effluent Lagoon A. The composite sample shall consist of a minimum of six equal aliquots collected at equal distances around the entire perimeter of the evaporative impoundment and thoroughly mixed. The Permittee shall analyze the composite sample for:

- TKN;
- NO$_3$-N;
- TDS;
- Cl; and
- SO$_4$.

The Permittee shall ensure samples are properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit the laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
### Facultative Lagoon System - Monitoring and Reporting Conditions

35. In the event that the Permittee discharges any industrial wastewater to Effluent Lagoon B or C within a monitoring reporting period, the Permittee shall collect a composite wastewater sample from the impoundment(s) that received the industrial wastewater discharge. The composite sample(s) shall consist of a minimum of six equal aliquots collected at equal distances around the entire perimeter of the evaporative impoundment(s) and thoroughly mixed. The Permittee shall analyze the composite sample(s) for:
- TDS;
- Cl; and
- SO₄.

The Permittee shall ensure samples are properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit the laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.

NMED may require comprehensive laboratory analyses of the industrial wastewater discharged to Effluent Lagoons B and C prior to discharge when NMED determines that additional information is needed.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

### Part C. Applicable to the Evaporation Pond H-19, Brine Retention Pond East, Brine Retention Pond West, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3

<table>
<thead>
<tr>
<th>#</th>
<th>Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Monitoring and Reporting Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>36.</td>
<td>The Permittee shall measure the total monthly volume and record the origin of all wastewater discharged to Evaporation Pond H-19. The Permittee shall calculate discharge volumes to Evaporation Pond H-19 by a time/volume method or volumetric measurement of the transport container(s). The Permittee shall submit the monthly discharge volumes or other volumetric calculations and waste origins each month to NMED in the semi-annual monitoring reports.</td>
</tr>
</tbody>
</table>

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

| 37. | The Permittee shall measure the total monthly volume of brine received by Brine Retention Ponds East and West. The Permittee shall calculate discharge volumes to Brine Retention Ponds East and West by a time/volume method or volumetric measurement |

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
# Evaporation Pond H-19, Brine Ponds, Brine Salt Storage Pond 4, and Storm Water Ponds 1, 2, and 3 - Monitoring and Reporting Conditions

of the transport container(s). NMED may require comprehensive laboratory analyses of such wastewater prior to discharge when NMED determines that additional information is needed. The Permittee shall submit the monthly discharge volumes and other volumetric calculations each month to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

38. The Permittee shall measure the total weekly volume of liquid pumped from the leak detection sumps for Brine Salt Storage Pond 4 and Brine Retention Ponds East and West. The Permittee shall calculate the total volume of liquid pumped by a totalizing flow meter. The Permittee shall submit the weekly volumes to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

39. The Permittee shall collect a composite wastewater sample annually after a storm event of two inches or greater in a 24-hour period from Storm Water Ponds 1, 2, and 3. The composite sample shall consist of a minimum of six equal aliquots collected at equal distances around the perimeter of the evaporative impoundments and thoroughly mixed. The Permittee shall analyze the composite sample for:
   - \(\text{SO}_4\);
   - TDS; and
   - Cl.

The Permittee shall ensure samples are properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

40. The Permittee shall collect a composite wastewater sample on a semi-annual basis (once every six months) from Evaporation Pond H-19 and from Brine Salt Storage Pond 4, once it becomes operational. The composite sample shall consist of a minimum of six equal aliquots collected at equal distances around the perimeter of the evaporative impoundment and thoroughly mixed. The Permittee shall analyze the composite sample for:
   - \(\text{SO}_4\);
   - TDS; and
   - Cl.
The Permittee shall ensure samples are properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.

NMED may require comprehensive laboratory analyses of the industrial wastewater discharged to Evaporation Pond H-19 prior to discharge when NMED determines that additional information is needed.

[Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

| 41. | During the first year following the effective date of the Discharge Permit (by January 28, 2023), the Permittee shall collect a grab sample (except as noted for pH) of wastewater from Evaporation Pond H-19 and analyze the sample for the following inorganic contaminants (dissolved fraction, except as noted):

- aluminum (CAS 7429-90-5)
- antimony (CAS 7440-36-0)
- arsenic (CAS 7440-38-2)
- barium (CAS 7440-39-3)
- beryllium (CAS 7440-41-7)
- boron (CAS 7440-42-8)
- cadmium (CAS 7440-43-9)
- chromium (CAS 7440-47-3)
- cobalt (CAS 7440-48-4)
- copper (CAS 7440-50-8)
- cyanide CAS 57-12-5
- fluoride (CAS 16984-48-8)
- iron (CAS 7439-89-6)
- lead (CAS 7439-92-1)
- manganese (CAS 7439-96-5)
- molybdenum (CAS 7439-98-7)
- total mercury (nonfiltered) (CAS 7439-97-6)
- pH (instantaneous)
- nickel (CAS 7440-02-0)
- radioactivity: combined radium-226 & radium-228 (CAS 15262-20-1)
- selenium (CAS 7782-49-2)
- silver (CAS 7440-224)
- sulfate (CAS 14808-79-8)
- thallium (CAS 7440-28-0)
- uranium (CAS 7440-61-1)
- zinc (CAS 7440-66-6)

The Permittee shall ensure the samples are properly collected, prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall analyze the sample using analytical methods with reporting limits less than the corresponding numerical groundwater standards identified in 20.6.2.3103 NMAC.
### Monitoring and Reporting Conditions

The Permittee shall submit a summary of measured concentrations compared with the corresponding groundwater standards, a copy of the laboratory report, including the laboratory analytical results, QA/QC summary report and the Chain of Custody, to NMED in the next monitoring report.

[Subsection A of 20.6.2.3107 NMAC, Subsections C and H of 20.6.2.3109 NMAC]

| 42. | 

During the first year following the effective date of the Discharge Permit (**by January 28, 2023**), the Permittee shall collect a grab sample of wastewater from Evaporation Pond H-19 and analyze the non-filtered sample for the following organic contaminants:

- atrazine (CAS 1912-24-9)
- benzene (CAS 71-43-2)
- benzo-a-pyrene (CAS 50-32-8)
- carbon tetrachloride (CAS 56-23-5)
- chloroform (CAS 67-66-3)
- 1,2-dichlorobenzene (CAS 95-50-1)
- 1,4-dichlorobenzene (CAS 106-46-7)
- 1,1-dichloroethane (CAS 75-34-3)
- 1,2-dichloroethane (EDC, CAS 107-06-2)
- 1,1-dichloroethene (1,1-DCE, CAS 75-35-4)
- cis-1,2-dichloroethene (CAS 156-59-2)
- trans-1,2-dichloroethene (CAS 156-60-5)
- 1,2-dichloropropane (PDC, CAS 78-87-5)
- ethylbenzene (CAS 100-41-4)
- ethylene dibromide (EDB, CAS 106-93-4)
- methylene chloride (CAS 75-09-2)
- PAHs: total naphthalene (CAS 91-20-3) plus monomethylnaphthalenes
- Phenols (CAS 108-95-2)
- polychlorinated biphenyls (PCBs, CAS 1336-36-3)
- pentachlorophenol (CAS 87-86-5)
- toluene (CAS 108-88-3)
- styrene (CAS 100-42-5)
- 1,1,2,2-tetrachloroethane (CAS 79-34-5)
- tetrachloroethene (PCE, CAS 127-18-4)
- 1,2,4-trichlorobenzene (CAS 120-82-1)
- 1,1,1-trichloroethane (1,1,1-TCA, CAS 71-55-6)
- 1,1,2-trichloroethane (CAS 79-00-5)
- trichloroethene (TCE, CAS 79-01-6)
- vinyl chloride (CAS 75-01-4)
- total xylenes (CAS 1330-20-7)

The Permittee shall ensure the sample is properly collected, prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall analyze samples using analytical methods with reporting limits less than the corresponding numerical groundwater standards identified in 20.6.2.3103 NMAC.
<table>
<thead>
<tr>
<th>#</th>
<th>Monitoring and Reporting Conditions</th>
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</thead>
<tbody>
<tr>
<td>43.</td>
<td>The Permittee shall measure the water depth in Storm Water Ponds 1, 2, and 3 and Brine Salt Storage Pond 4 monthly to the nearest tenth of a foot (0.1 ft). The Permittee shall calculate and submit the approximate monthly volume of water to NMED in the semi-annual monitoring reports. [Subsection A of 20.6.2.3107 NMAC and Subsection H of 20.6.2.3109 NMAC]</td>
</tr>
<tr>
<td>44.</td>
<td>The Permittee shall collect at least one sample quarterly rotating between Brine Retention Pond East and Brine Retention Pond West of the liquid present and analyze the sample for every constituent listed in Subsection A of 20.6.2.3103 NMAC. The Permittee shall submit the laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports. After four consecutive quarterly sampling events, the Permittee may request a reduction in the sampling frequency and/or analyte list set forth in this Discharge Permit. [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]</td>
</tr>
<tr>
<td>45.</td>
<td>The Permittee shall submit all analytical laboratory data from Brine Retention Ponds East and West submitted to the NMED Hazardous Waste Bureau to the Ground Water Quality Bureau. [Subsection A of 20.6.2.3107 NMAC]</td>
</tr>
<tr>
<td>46.</td>
<td>The Permittee shall submit a copy of all records of solids (salt) removal from the Brine Retention Basins East and West and the associated disposal documentation to NMED in the subsequent semi-annual monitoring report. [Subsection A of 20.6.2.3107 NMAC]</td>
</tr>
</tbody>
</table>
Part D. Applicable to the Impoundments Containing Stormwater Runoff in Contact with Salt Stockpiles (Salt Storage Ponds 1, 2, 3, and 5) and to Salt Stockpiles (Salt Cells 1, 2, 3, and 5)

<table>
<thead>
<tr>
<th>#</th>
<th>Salt Storage Ponds and Salt Stockpiles - Monitoring and Reporting Conditions</th>
</tr>
</thead>
</table>
| 47 | The Permittee shall collect a composite wastewater sample annually after a storm event of 2 inches or greater in a 24-hour period from Salt Storage Ponds 1, 2, 3, and 5. The composite sample shall consist of a minimum of six equal aliquots collected at equal distances around the perimeter of the evaporative impoundments and thoroughly mixed. The Permittee shall analyze the composite sample for:
  - SO₄;
  - TDS; and
  - Cl.

  The Permittee shall ensure the samples are properly prepared, preserved, transported and analyzed in accordance with the methods authorized in this Discharge Permit. The Permittee shall submit the laboratory analytical results, including the QA/QC summary and Chain of Custody, to NMED in the semi-annual monitoring reports.

  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

| 48 | The Permittee shall measure the water depth monthly to the nearest tenth of a foot (0.1 ft) in the Salt Storage Ponds 1, 2, 3, and 5. The Permittee shall calculate and submit the approximate volume of water to NMED in the semi-annual monitoring reports.

  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

| 49 | The Permittee shall measure the total volume of liquid pumped from the leak detection sumps for Salt Storage Ponds 2 and 3 during every pumping event. The Permittee shall calculate the total volume of liquid pumped by a volumetric measurement of the container(s) filled. The Permittee shall submit the volumetric calculations for each pumping event to NMED in the semi-annual monitoring reports.

  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]

| 50 | The Permittee shall measure the weekly volume of liquid pumped from the leak detection sump for Salt Storage Pond 5. The Permittee shall calculate the total volume of liquid pumped by a totalizing flow meter. The Permittee shall submit the weekly volumes to NMED in the semi-annual monitoring reports.

  [Subsection A of 20.6.2.3107 NMAC, Subsection H of 20.6.2.3109 NMAC]
Part E. Groundwater Monitoring and Reporting

<table>
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<tr>
<th>#</th>
<th>Groundwater Monitoring Actions with Implementation Deadlines</th>
</tr>
</thead>
</table>
| 51. | Within 60 days following the effective date of this Discharge Permit *(by March 29, 2022)*, the Permittee shall install the following new monitoring wells in accordance with the Monitoring Well Proposal submitted to NMED on February 18, 2020 and approved by NMED on February 20, 2020.  
  - One monitoring well (PZ-17) located 20 to 50 feet hydrologically downgradient of the Facultative Lagoon System in the natural groundwater of the Dewey Lake Formation and intended to monitor the Facultative Lagoon System.  
  - One monitoring well (PZ-19) located 20 to 50 feet hydrologically downgradient of Evaporation Pond H-19 in the natural groundwater of the Dewey Lake Formation and intended to monitor Evaporation Pond H-19.  
  
  The Permittee shall complete the wells in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Guidelines*, Revision 1.1, March 2011 or alternative methods submitted for approval. The Permittee shall submit construction and lithologic logs to NMED within 120 days of well completion in a cumulative well report.  
  
  [Subsection A of 20.6.2.3107 NMAC] |
| 52. | Prior to discharging to Brine Salt Storage Pond 4, Salt Storage Pond 5, and Brine Retentions Ponds East and West, the Permittee shall install the following new monitoring wells in accordance to the Monitoring Well Proposal submitted to NMED on February 18, 2020 and approved by NMED on February 20, 2020.  
  - One monitoring well (PZ-16) located 20 to 50 feet hydrologically downgradient of Brine Salt Storage Pond 4 in the shallow groundwater and intended to monitor Brine Salt Storage Pond 4.  
  - One monitoring well (PZ-18) located 20 to 50 feet hydrologically downgradient of Salt Storage Pond 5 in the shallow groundwater and intended to monitor Salt Storage Pond 5.  
  
  The Permittee shall complete the wells in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Guidelines*, Revision 1.1, March 2011 or alternative methods submitted for approval. The Permittee shall submit construction and lithologic logs to NMED within 120 days of well completion in a cumulative well report.  
  
  [Subsection A of 20.6.2.3107 NMAC] |
<p>| 53. | Following the installation of the monitoring wells required by this Discharge Permit, the |</p>
<table>
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<tr>
<th>#</th>
<th>Groundwater Monitoring Actions with Implementation Deadlines</th>
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<tbody>
<tr>
<td></td>
<td>The permittee shall sample groundwater in the wells and analyze the samples for temperature, pH, specific conductance (field measured); and for SO$_4$, TDS, and Cl. Groundwater sample collection, preservation, transport and analysis shall be performed according to the following procedure:</td>
</tr>
<tr>
<td>a)</td>
<td>The pump intake shall be placed in the following manner: fully submerged, within the screened interval, and at least two feet above the base of the screen.</td>
</tr>
<tr>
<td>b)</td>
<td>The drawdown will be minimized such that it will maintain depression of the water level, but not exceed one liter per minute.</td>
</tr>
<tr>
<td>c)</td>
<td>Allow field-measured temperature, pH, and specific conductance to stabilize prior to sample collection. The system is considered stable when pH is within ± 0.5 pH units, temperature, and specific conductance are within ± 10% of the last three consecutive readings.</td>
</tr>
<tr>
<td>d)</td>
<td>Obtain samples from the well for analysis.</td>
</tr>
<tr>
<td>e)</td>
<td>Properly prepare, preserve and transport samples.</td>
</tr>
<tr>
<td>f)</td>
<td>Analyze samples in accordance with the methods authorized in this Discharge Permit.</td>
</tr>
<tr>
<td></td>
<td>The Permittee shall submit a well completion report to NMED within 120 days of well completion in a cumulative well report. A well completion report shall include; the Office of the State Engineer permit, depth-to-most-shallow groundwater measurements, groundwater laboratory analytical results, including the QA/QC summary report and Chain of Custody, and a Facility layout map showing the location and number of each well.</td>
</tr>
<tr>
<td>54.</td>
<td>Within 120 days following the effective date of this Discharge Permit (by May 28, 2022), the Permittee shall perform a geographical survey of all newly constructed groundwater monitoring wells approved by NMED for Discharge Permit monitoring purposes in the natural groundwater of the Dewey Lake Formation and in the shallow groundwater. The survey shall be tied or referenced to a U.S. Geological Survey (USGS) or other permanent benchmark. Survey data shall include northing, easting and elevation to the nearest hundredth of a foot and shall be in accordance with the “Minimum Standards for Surveying in New Mexico” (12.8.2 NMAC). The Permittee shall utilize the survey to establish an elevation at the top-of-casing, with a permanent marking indicating the point of elevation. The survey shall bear the seal and signature of a licensed New Mexico professional surveyor (pursuant to the New Mexico Engineering and Surveying Practice Act and the rules promulgated under that authority).</td>
</tr>
<tr>
<td>#</td>
<td>Groundwater Monitoring Actions with Implementation Deadlines</td>
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<td>Depth-to-most-shallow groundwater shall be measured to the nearest hundredth of a foot in all surveyed wells and referenced to mean sea level, and the data shall be used to develop a groundwater elevation contour map showing the location of all monitoring wells and the direction and gradient of groundwater flow at the Facility. The Permittee shall submit the data and groundwater elevation contour map to NMED within 120 days of the installation of the monitoring wells in a cumulative well report.</td>
</tr>
<tr>
<td></td>
<td>[Subsection A of 20.6.2.3107 NMAC, NMSA 1978, §§ 61-23-1 through 61-23-32]</td>
</tr>
<tr>
<td>55.</td>
<td>The Permittee shall perform aquifer testing to determine the local hydraulic properties of the aquifer near the monitoring wells required by this Discharge Permit and that contain groundwater within 60 days of the complete installation of each new monitoring well. The purpose of the aquifer testing shall be to quantify the movement of groundwaters in the vicinity of each well or piezometer. The Permittee shall perform aquifer testing in wells in both the shallow groundwater and in the natural groundwater in the Dewey Lake Formation where groundwater is present. Aquifer testing shall estimate hydraulic conductivity, transmissivity, and storage coefficient and shall be performed utilizing procedures previously utilized at the Facility so as to produce comparable results.</td>
</tr>
<tr>
<td></td>
<td>The Permittee shall submit the measured hydraulic properties for each monitoring well to NMED within 120 days of the installation of the monitoring wells in a cumulative well report.</td>
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<tr>
<th>#</th>
<th>Groundwater Monitoring Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>56.</td>
<td>The Permittee shall measure the depth to groundwater to the nearest hundredth of a foot (0.01 ft) quarterly in the following piezometers/monitoring wells:</td>
</tr>
<tr>
<td></td>
<td>• PZ-1, PZ-2, PZ-3, PZ-4, PZ-5, PZ-6, PZ-7, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, and PZ-19</td>
</tr>
<tr>
<td></td>
<td>• C-2505, C-2506, C-2507, C-2811, and WQSP-6A</td>
</tr>
<tr>
<td></td>
<td>The Permittee shall submit depth-to-groundwater measurements to NMED in the semi-annual monitoring reports.</td>
</tr>
<tr>
<td></td>
<td>[Subsection A of 20.6.2.3107 NMAC]</td>
</tr>
<tr>
<td>#</td>
<td>Groundwater Monitoring Conditions</td>
</tr>
<tr>
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</tr>
<tr>
<td>57.</td>
<td>Within the first year of the permit term, the Permittee shall perform sampling in the following groundwater piezometers/monitoring wells and analyze the samples for temperature, pH, specific conductance (field measured); Uranium and combined Radium-226 and Radium-228:</td>
</tr>
<tr>
<td></td>
<td>• PZ-1, PZ-5, PZ-6, PZ-7, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, and PZ-19</td>
</tr>
<tr>
<td></td>
<td>• C-2507, C-2811, and WQSP-6A</td>
</tr>
<tr>
<td></td>
<td>Monitoring wells WQSP-6A, PZ-17, and PZ-19 are intended to monitor the natural groundwater of the Dewey Lake Formation, which occurs in the subsurface at the southern end of the Facility. All other monitoring wells are intended to monitor the shallow groundwater.</td>
</tr>
<tr>
<td></td>
<td>The Permittee shall perform groundwater sample collection, preservation, transport and analysis according to the following low-flow sampling procedure:</td>
</tr>
<tr>
<td></td>
<td>a) The pump intake shall be placed in the following manner: fully submerged, within the screened interval, and at least two feet above the base of the screen.</td>
</tr>
<tr>
<td></td>
<td>b) The drawdown will be minimized such that it will maintain depression of the water level, but not exceed one liter per minute.</td>
</tr>
<tr>
<td></td>
<td>c) Allow field-measured temperature, pH, and specific conductance to stabilize prior to sample collection. The system is considered stable when pH is within ± 0.5 pH units, temperature, and specific conductance are within ± 10% of the last three consecutive readings.</td>
</tr>
<tr>
<td></td>
<td>d) Obtain samples from the well for analysis.</td>
</tr>
<tr>
<td></td>
<td>e) Properly prepare, preserve and transport samples.</td>
</tr>
<tr>
<td></td>
<td>f) Analyze samples in accordance with the methods authorized in this Discharge Permit.</td>
</tr>
<tr>
<td></td>
<td>The Permittee shall submit analytical results, including the laboratory QA/QC summary report and Chain of Custody, and a Facility layout map showing the location and number of each well to NMED in the next semi-annual monitoring report following sampling.</td>
</tr>
<tr>
<td></td>
<td>[Subsection A of 20.6.2.3107 NMAC]</td>
</tr>
<tr>
<td>58.</td>
<td>The Permittee shall perform semi-annual groundwater sampling in the following groundwater piezometers/monitoring wells and analyze the samples for temperature, pH, specific conductance (field measured); and for SO$_4$, TDS, and Cl:</td>
</tr>
<tr>
<td></td>
<td>• PZ-1, PZ-5, PZ-6, PZ-7, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, PZ-14, PZ-15, PZ-16, PZ-17, PZ-18, and PZ-19</td>
</tr>
</tbody>
</table>
### Groundwater Monitoring Conditions

<table>
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<tr>
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<th>Groundwater Monitoring Conditions</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>C-2507, C-2811, and WQSP-6A</td>
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</tbody>
</table>

Monitoring wells WQSP-6A, PZ-17, and PZ-19 are intended to monitor the natural groundwater of the Dewey Lake Formation, which occurs in the subsurface at the southern end of the Facility. All other monitoring wells are intended to monitor the shallow groundwater.

The Permittee shall perform groundwater sample collection, preservation, transport and analysis according to the following low-flow sampling procedure:

- a) The pump intake shall be placed in the following manner: fully submerged, within the screened interval, and at least two feet above the base of the screen.
- b) The drawdown will be minimized such that it will maintain depression of the water level, but not exceed one liter per minute.
- c) Allow field-measured temperature, pH, and specific conductance to stabilize prior to sample collection. The system is considered stable when pH is within ± 0.5 pH units, temperature, and specific conductance are within ± 10% of the last three consecutive readings.
- d) Obtain samples from the well for analysis.
- e) Properly prepare, preserve and transport samples.
- f) Analyze samples in accordance with the methods authorized in this Discharge Permit.

The Permittee shall submit analytical results, including the laboratory QA/QC summary report and Chain of Custody, and a Facility layout map showing the location and number of each well to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC]

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59. The Permittee shall perform semi-annual groundwater sampling in the following monitoring wells and analyze the samples for TKN and NO₃-N.

- PZ-17, located south of the Facultative Lagoon System and intended to be located hydrologically downgradient of the Facultative Lagoon System in the natural groundwater of the Dewey Lake Formation.

The Permittee shall perform groundwater sample collection, preservation, transport and analysis according to the following low-flow sampling procedure:

- a) The pump intake shall be placed in the following manner: fully submerged, within the screened interval, and at least two feet above the base of the screen.
- b) The drawdown will be minimized such that it will maintain depression of the water
Groundwater Monitoring Conditions

- Level, but not exceed one liter per minute.
- Allow field-measured temperature, pH, and specific conductance to stabilize prior to sample collection. The system is considered stable when pH is within ± 0.5 pH units, temperature, and specific conductance are within ± 10% of the last three consecutive readings.
- Obtain samples from the well for analysis.
- Properly prepare, preserve and transport samples.
- Analyze samples in accordance with the methods authorized in this Discharge Permit.

The Permittee shall submit analytical results, including the laboratory QA/QC summary report and Chain of Custody, and a Facility layout map showing the location and number of each well to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC]

60. The Permittee shall develop a groundwater elevation, i.e., potentiometric surface, contour map for the shallow groundwater and for the natural groundwater in the Dewey Lake Formation on a semi-annual basis. The Permittee shall use the top of casing elevation data from the monitoring well surveys and quarterly depth-to-groundwater measurements, referenced to mean sea level, obtained during the groundwater sampling required by this Discharge Permit.

The groundwater elevation contour maps shall depict the groundwater flow direction based on the groundwater elevation contours. The Permittee shall estimate groundwater elevations between monitoring well locations using common interpolation methods. The Permittee shall use a contour interval appropriate to the data, but the interval shall, in no case, be greater than two feet. Groundwater elevation contour maps shall depict the groundwater flow direction, using arrows, based on the orientation of the groundwater elevation contours, and the location and identification of each monitoring well and contaminant source, e.g., surface impoundment.

The Permittee shall submit groundwater elevation contour maps to NMED in the semi-annual monitoring reports.

[Subsection A of 20.6.2.3107 NMAC]

61. The Permittee shall submit a single table in a paper and electronic format (i.e., EXCEL spreadsheet) of water level measurements and water quality data with only those constituents analyzed and water levels measured during a single event shown in columns to NMED in the semi-annual monitoring reports. The table shall include the following tabulated field measurements: temperature, pH, and electrical conductivity corrected to
**Groundwater Monitoring Conditions**

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<th>Groundwater Monitoring Conditions</th>
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<tr>
<td>25 degrees Celsius. The monitoring sites shall be shown in rows on the table, and the second column shall contain the date of the sampling event. Values exceeding standards shall be bolded. Any constituent not analyzed for at a particular site shall be shown as “NA”, any site not sampled shall be shown as “NS” with an associated reason, and any site not measured for water levels shall be shown as “NM” with an associated reason.</td>
<td></td>
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</tbody>
</table>

[Subsection A of 20.6.2.3107 NMAC]

62. The Permittee shall submit a single table that includes all available groundwater data to date annually to NMED in the semi-annual monitoring reports due February 1st. For each monitoring well, the name of the well shall be entered in the far-left column in a row by itself. Sampling events, beginning with the earliest event first, shall be entered in subsequent rows with the sampling date in the second column and the corresponding analytical data in columns further to the right. Each new sampling event shall be added as an additional row to the existing spreadsheet with the corresponding date of the sampling event noted in the second column next to the monitoring well name.

[Subsection A of 20.6.2.3107 NMAC]

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**ADDITIONAL STUDIES REQUIRED**

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<th>Terms and Conditions</th>
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<tr>
<td>63. The Permittee’s groundwater monitoring data and reports document that the shallow groundwater beneath the site is contaminated with TDS, chloride, and sulfate above the standards of 20.6.2.3103 NMAC. This data indicates that the contaminated groundwater is primarily anthropogenic, having resulted from leaking impoundments at the Facility, and has spread laterally since the installation of impoundment liners.</td>
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</table>

Within six months following the effective date of this Discharge Permit (by July 28, 2022), the Permittee shall submit for NMED approval a site investigation workplan and implementation schedule. The purpose of the site investigation shall be to evaluate the efficacy of existing source controls, to determine the current lateral and vertical extent of the shallow contaminated groundwater, and to identify any potential impacts to the downgradient and naturally occurring groundwater in the Dewey Lake Formation. The site investigation may build upon the previous investigations completed by Daniel B. Stephens and Associates in 2003 and 2008. The Permittee shall implement the site investigation upon NMED approval of the workplan and shall submit a completion report...
# Terms and Conditions

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<td>no later than two years following the effective date of this Discharge Permit (by January 28, 2024).</td>
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<td></td>
<td>NMED may require the Permittee to take corrective actions pursuant to 20.6.2.1203 NMAC or to abate water pollution consistent with the requirements and provisions of Section 20.6.2.4101, Section 20.6.2.4103, Subsections C and E of 20.6.2.4106, Section 20.6.2.4107, Section 20.6.2.4108 and Section 20.6.2.4112 NMAC.</td>
</tr>
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<td>[20.6.2.3107 NMAC, 20.6.2.4103 NMAC]</td>
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**CONTINGENCY PLAN**

<table>
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<th>Terms and Conditions</th>
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<tr>
<td>64.</td>
<td>In the event that groundwater monitoring indicates that a groundwater quality standard identified in Section 20.6.2.3103 NMAC is newly exceeded in a monitoring well with no previous exceedances at the date of issuance of this Discharge Permit, the Permittee shall collect a confirmatory sample from the monitoring well within 15 days of receipt of the initial sampling results to confirm the initial sampling results.</td>
</tr>
<tr>
<td></td>
<td>Within 90 days of confirmation of groundwater contamination, the Permittee shall submit to NMED a Corrective Action Plan (CAP) that proposes, at a minimum, source control measures and an implementation schedule. The Permittee shall implement the CAP as approved by NMED.</td>
</tr>
<tr>
<td></td>
<td>Once invoked (whether during the term of this Discharge Permit, or after the term of this Discharge Permit and prior to the completion of the Discharge Permit closure plan requirements), this condition shall apply until the Permittee has fulfilled the requirements of this condition and groundwater monitoring confirms for a minimum of eight (8) consecutive quarterly samples that the standards of Section 20.6.2.3103 NMAC are not exceeded in groundwater.</td>
</tr>
<tr>
<td></td>
<td>If the groundwater standard continues to be violated 180 days after the confirmation of groundwater contamination, NMED may require the Permittee to abate water pollution consistent with the requirements and provisions of Section 20.6.2.4101, Section 20.6.2.4103, Subsections C and E of 20.6.2.4106, Section 20.6.2.4107, Section 20.6.2.4108 and Section 20.6.2.4112 NMAC.</td>
</tr>
<tr>
<td></td>
<td>[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]</td>
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<td>Terms and Conditions</td>
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</table>
| 65.| In the event that information available to NMED indicates that a groundwater monitoring well or piezometer is not constructed in a manner consistent with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Guidelines*, Revision 1.1, March 2011; contains insufficient water to effectively monitor groundwater quality; or is not completed in a manner that is protective of groundwater quality, the Permittee shall install a replacement well(s) within 120 days following notification from NMED. The Permittee shall survey the replacement monitoring well(s)/piezometer(s) within 150 days following notification from NMED. The Permittee shall install replacement wells at locations approved by NMED and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The Permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map to NMED within 60 days following well completion. The Permittee shall properly plug and abandon the monitoring well requiring replacement upon completion of the replacement monitoring well. The Permittee shall complete the well plugging and abandonment and shall document the abandonment procedures in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011, and all applicable local, state, and federal regulations. The Permittee shall submit well abandonment documentation to NMED within 60 days of completion of well plugging activities.  

[Subsection A of 20.6.2.3107 NMAC]                                                                                                                                                                                                                                                                  |
| 66.| In the event that groundwater flow information obtained pursuant to this Discharge Permit indicates that a monitoring well/piezometer is not appropriately located, e.g., hydrologically downgradient of the discharge location it is intended to monitor, the Permittee shall install a replacement well within 180 days following notification from NMED. The Permittee shall survey the replacement monitoring well within 30 days following well installation. The Permittee shall install replacement wells at locations approved by NMED prior to installation and completed in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Conditions*, Revision 1.1, March 2011. The Permittee shall submit construction and lithologic logs, survey data and a groundwater elevation contour map within 120 days following well completion in a cumulative well report. |
# Terms and Conditions

[Subsection A of 20.6.2.3107 NMAC]

67. In the event that the site investigation required by this Discharge Permit or an inspection reveals significant damage has occurred or is likely to affect the structural integrity of an impoundment liner or its ability to contain contaminants, the Permittee shall propose to repair or the replacement of the impoundment liner by submitting a Corrective Action Plan (CAP) to NMED for approval. The Permittee shall ensure the CAP to NMED within 30 days after discovery of the damage or following notification from NMED that significant liner damage is evident. The Permittee shall ensure the CAP includes a schedule for completion of corrective actions and the Permittee shall initiate implementation of the CAP following approval by NMED.

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

68. In the event that the required freeboard cannot be preserved in an impoundment, the Permittee shall take actions authorized by this Discharge Permit and all applicable local, state, and federal regulations to restore the required freeboard.

In the event that the required freeboard cannot be restored within a period of 72 hours following discovery, the Permittee shall propose actions to be immediately implemented to restore of the required freeboard by submitting a short-term Corrective Action Plan (CAP) to NMED for approval. Examples of short-term corrective actions include the pumping and hauling of excess wastewater from the impoundment or reducing the volume of wastewater discharged to the impoundment. The Permittee shall ensure the CAP includes a schedule for completion of corrective actions and is submitted within 15 days following the date when exceedance was discovered. The Permittee shall implement the CAP following approval by NMED.

In the event that the short-term corrective actions failed to restore the required freeboard, the Permittee shall propose permanent corrective actions in a long-term CAP submitted to NMED within 90 days following failure of the short-term CAP. Examples include the installation of an additional storage impoundment or a significant/permanent reduction in the volume of wastewater discharged to the impoundment. The Permittee shall ensure the CAP includes a schedule for completion of corrective actions and that implementation of the CAP is initiated following NMED approval.

[Subsection A of 20.6.2.3107 NMAC]

69. In the event the average solids accumulation exceeds one-third of the maximum liquid depth in an impoundment, the Permittee shall submit a plan for NMED’s approval for
## Terms and Conditions

The removal and disposal of the solids. The Permittee shall ensure that the solids removal and disposal plan is submitted to NMED within 120 days of the determination of excess solids. The Permittee shall ensure that the solids removal and disposal plan includes the following information:

a) A method for removal of the solids to a depth of less than six inches throughout the treatment impoundment in a manner that is protective of the impoundment liner.
b) A description of how the Permittee will contain, transport, and dispose of the solids in accordance with all local, state, and federal regulations, including 40 CFR Part 503.
c) A schedule for completion of the solids removal and disposal project.

The Permittee shall initiate implementation of the plan following approval by NMED.

[Subsection A of 20.6.2.3107 NMAC, Subsection C of 20.6.2.3109 NMAC]

### 70. In the event that a release (commonly known as a “spill”) occurs that is not authorized under this Discharge Permit, the Permittee shall take measures to mitigate damage from the unauthorized discharge and initiate the notifications and corrective actions required in Section 20.6.2.1203 NMAC and summarized below.

Within **24 hours** following discovery of the unauthorized discharge, the Permittee shall verbally notify NMED and provide the following information.

a) The name, address, and telephone number of the person or persons in charge of the Facility, as well as of the owner and/or operator of the Facility.
b) The name and address of the Facility.
c) The date, time, location, and duration of the unauthorized discharge.
d) The source and cause of unauthorized discharge.
e) A description of the unauthorized discharge, including its estimated chemical composition.
f) The estimated volume of the unauthorized discharge.
g) Any actions taken to mitigate immediate damage from the unauthorized discharge.

Within **one week** following discovery of the unauthorized discharge, the Permittee shall submit written notification to NMED with the information listed above and any pertinent updates.

Within **15 days** following discovery of the unauthorized discharge, the Permittee shall submit a corrective action report/plan to NMED describing any corrective actions taken and/or to be taken relative to the unauthorized discharge that includes the following information.

a) A description of proposed actions to mitigate damage from the unauthorized discharge.
# Terms and Conditions

b) A description of proposed actions to prevent future unauthorized discharges of this nature.
c) A schedule for completion of proposed actions.

In the event that the unauthorized discharge causes or may with reasonable probability cause water pollution in excess of the standards and requirements of Section 20.6.2.4103 NMAC, and the water pollution will not be abated within 180 days after notice is required to be given pursuant to Paragraph (1) of Subsection A of 20.6.2.1203 NMAC, the Permittee may be required to abate water pollution pursuant to Sections 20.6.2.4000 through 20.6.2.4115 NMAC.

The Permittee shall not construe anything in this condition as relieving them of the obligation to comply with all requirements of Section 20.6.2.1203 NMAC.

[20.6.2.1203 NMAC]

71. In the event that NMED or the Permittee identifies any failures of the discharge plan, i.e., the application, or this Discharge Permit not specifically noted herein, NMED may require the Permittee to submit a Corrective Action Plan and a schedule for completion of corrective actions to address the failure(s). Additionally, NMED may require a discharge permit modification to achieve compliance with 20.6.2 NMAC.

[Subsection A of 20.6.2.3107 NMAC, Subsection E of 20.6.2.3109 NMAC]

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**CLOSURE PLAN**

**Part A. Generally Applicable to All Discharges**

<table>
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<tr>
<th>#</th>
<th>Terms and Conditions</th>
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<tbody>
<tr>
<td>72.</td>
<td>The Permittee shall close the Facility covered under this Discharge Permit, either wholly or in part, in accordance with the closure plan in the March 10, 2005 Discharge Permit application. Where that closure plan references the closure plans in the WIPP Hazardous Waste Facility Permit and the WIPP Land Management Plan, the Permittee shall use the most up-to-date version of the plans.</td>
</tr>
</tbody>
</table>

[Subsection A of 20.6.2.3107 NMAC] |

| 73. | For the purpose of post-closure monitoring, after the Permittee completes closure of all authorized units, the Permittee shall continue groundwater monitoring until the monitoring data confirms for a minimum of eight (8) consecutive quarterly groundwater |
# Terms and Conditions

sampling events that the standards of Section 20.6.2.3103 NMAC are not exceeded. Total dissolved solids and chloride shall meet pre-discharge conditions.

If during post-closure monitoring results show that groundwater exceeds a standard in Section 20.6.2.3103 NMAC, the Permittee shall implement the contingency plan required by this Discharge Permit.

Following notification from NMED that post-closure monitoring may cease, the Permittee shall plug and abandon all monitoring wells and piezometers in accordance with the attachment titled *Ground Water Discharge Permit Monitoring Well Construction and Abandonment Guidelines*, Revision 1.1, March 2011.

[Subsection A of 20.6.2.3107 NMAC]

### Part B. Applicable to the Facultative Lagoon System

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<th>Terms and Conditions</th>
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<tbody>
<tr>
<td>74.</td>
<td>The Permittee shall perform the following closure measures in the event the Permittee proposes to permanently close the Facultative Lagoon System</td>
</tr>
</tbody>
</table>

Within **60 days** of ceasing to discharge to the Facultative Lagoon System impoundments, the Permittee shall plug the line leading to the impoundments so that a discharge can no longer occur.

Within **60 days** of ceasing to discharge to the Facultative Lagoon System impoundments, the Permittee shall evaporate or remove wastewater from the impoundments and any other wastewater system components and shall dispose of it in accordance with all local, state, and federal regulations.

Within **90 days** of ceasing to discharge to the Facultative Lagoon System impoundments, the Permittee shall submit a sludge removal and disposal plan to NMED for approval. The Permittee shall implement the plan within 30 days following approval by NMED. The sludge removal and disposal plan shall include the following:

a) The estimated volume and dry weight of sludge planned for removal and disposal, including measurements and calculations.

b) Analytical results for samples of the sludge taken from the impoundment for TKN, NO₃-N, percent total solids, hazardous constituents, and any other parameters tested (reported in mg/kg, dry weight basis).

c) The method(s) of sludge removal from the impoundments.
### Terms and Conditions

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<tr>
<td>d)</td>
<td>The method(s) of disposal for all of the sludge removed from the impoundments. The method(s) shall comply with all local, state and federal regulations, including 40 CFR Part 503. Note: A proposal that includes the surface disposal of sludge may be subject to Ground Water Discharge Permitting requirements pursuant to 20.6.2.3104 NMAC that are separate from the requirements of this Discharge Permit.</td>
</tr>
<tr>
<td>e)</td>
<td>A schedule for completion of sludge removal and disposal not to exceed two years from the date discharge to the impoundments ceased.</td>
</tr>
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</table>

Within one year following completion of the sludge removal and disposal, the Permittee shall complete the following closure measures:

| a) | Remove all lines leading to and from the Facultative Lagoon System impoundments, or permanently plug and abandon them in place. |
| b) | Remove or demolish any other wastewater system components and re-grade area with suitable fill to blend with surface topography, promote positive drainage and prevent ponding. |
| c) | Perforate or remove the impoundment liners. |
| d) | Fill the impoundments with suitable fill. |
| e) | Re-grade the impoundment site to blend with surface topography, promote positive drainage and prevent ponding. |

[Subsection A of 20.6.2.3107 NMAC, 40 CFR Part 503]

### Part C. Applicable to the Evaporation Pond H-19, Brine Retention Pond East, Brine Retention Pond West, Storm Water Ponds 1, 2, and 3, and Brine Salt Storage Pond 4

<table>
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<th>Terms and Conditions</th>
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<tr>
<td>75</td>
<td>Upon cessation of operation, the Permittee shall close Evaporation Pond H-19 and Storm Water Ponds 1, 2, and 3. The Permittee shall evaporate or remove the remaining liquids in Storm Water Ponds and shall evaporate the remaining liquids in Evaporation Pond H-19. The Permittee shall sample all sludge to determine if it contains hazardous constituents and then manage and/or dispose of it in accordance with applicable regulations.</td>
</tr>
</tbody>
</table>

Within one year following completion of the sludge removal and disposal, the Permittee shall complete the following closure measures:

| a) | Remove or plug all piping and other ancillary components |
| b) | Remove or demolish any other components and re-grade area with suitable fill to blend with surface topography, promote positive drainage and prevent ponding. |
| c) | Perforate or remove the impoundment liners. |
### Terms and Conditions

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<tr>
<td>d)</td>
<td>Fill the impoundments with suitable fill.</td>
</tr>
<tr>
<td>e)</td>
<td>Re-grade the impoundment site to blend with surface topography, promote positive drainage and prevent ponding.</td>
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[Subsection A of 20.6.2.3107 NMAC]

**Part D. Applicable to the Impoundments Containing Stormwater Runoff in Contact with Salt Stockpiles (Salt Storage Ponds 1, 2, 3, and 5) and to Salt Stockpiles (Salt Cells 1, 2, 3, and 5)**

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<tr>
<td>76.</td>
<td>Upon cessation of operation, the Permittee shall remove all mined salt from the Facility. The Permittee is permitted to use the mined salt as backfill in shafts and as interior fill material in berms and permanent markers after closure. The Permittee shall ensure removal from the site of all mined salt remaining after backfilling and after construction of surface structures. The Permittee shall submit a plan and schedule for salt removal to NMED for approval within 120 days prior to the Facility closure. The WIPP Land Management Plan reflects the Land Withdrawal Act’s requirements for disposition of the salt. The WIPP’s Hazardous Waste Facility Permit also addresses closure activities that include closure of the salt storage areas in accordance with the provisions of the WIPP Land Management Plan. The Permittee shall ensure that the salt storage area be reclaimed in the manner described in these documents. [Subsection A of 20.6.2.3107 NMAC]</td>
</tr>
</tbody>
</table>

| 77. | Upon cessation of operation, the Permittee shall close Salt Storage Ponds 1, 2, 3, and 5. The Permittee shall evaporate the remaining liquids in each impoundment. The Permittee shall sample all sludge to determine if it contains hazardous constituents and then manage and/or dispose of in accordance with applicable regulations. Within one year following completion of the sludge removal and disposal, the Permittee shall complete the following closure measures:  
a) Remove or plug all piping and other ancillary components.  
b) Remove or demolish any other components and re-grade area with suitable fill to blend with surface topography, promote positive drainage and prevent ponding.  
c) Perforate or remove the impoundment liners.  
d) Fill the impoundments with suitable fill.  
e) Re-grade the impoundment site to blend with surface topography, promote positive drainage and prevent ponding. [Subsection A of 20.6.2.3107 NMAC] |
# RECORD KEEPING - The Permittee shall maintain a written record of:
- Information and data used to complete the application for this Discharge Permit;
- Any releases (commonly known as “spills”) not authorized under this Discharge Permit and reports submitted pursuant to 20.6.2.1203 NMAC;
- The operation, maintenance, and repair of all facilities/equipment used to treat, store or dispose of wastewater;
- Facility record drawings (plans and specifications) showing the actual construction of the Facility and bear the seal and signature of a licensed New Mexico professional engineer;
- Copies of logs, inspection reports, and monitoring reports completed and/or submitted to NMED pursuant to this Discharge Permit;
- The volume of wastewater or other wastes discharged pursuant to this Discharge Permit;
- Groundwater quality and wastewater quality data collected pursuant to this Discharge Permit;
- Copies of construction records (well log) for all sampled groundwater monitoring wells pursuant to this Discharge Permit;
- The maintenance, repair, replacement or calibration of any monitoring equipment or flow measurement devices required by this Discharge Permit; and
- Data and information related to field measurements, sampling, and analysis conducted pursuant to this Discharge Permit, including:
  - the dates, location and times of sampling or field measurements;
  - the name and job title of the individuals who performed each sample collection or field measurement;
  - the sample analysis date of each sample
  - the name and address of the laboratory, and the name of the signatory authority for the laboratory analysis;
  - the analytical technique or method used to analyze each sample or collect each field measurement;
  - the results of each analysis or field measurement, including raw data;
  - the results of any split, spiked, duplicate or repeat sample; and
  - a copy of the laboratory analysis chain-of-custody as well as a description of the quality assurance and quality control procedures used.

The Permittee shall maintain the written record at a location accessible to NMED during a Facility inspection for the lifetime of the Discharge Permit. The Permittee shall make the record available to a NMED representative upon request.

[Subsections A and D of 20.6.2.3107 NMAC]
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| 79.| INSPECTION and ENTRY – The Permittee shall allow NMED to inspect the Facility and its operations that are subject to this Discharge Permit and the WQCC regulations. NMED may upon presentation of proper credentials, enter at reasonable times upon or through any premises in which a water contaminant source is located or in which any maintained records required by this Discharge Permit, regulations of the federal government, or the WQCC are located. The Permittee shall allow NMED to have access to and reproduce for their use any copy of the records, and to perform assessments, sampling or monitoring during an inspection for the purpose of evaluating compliance with this Discharge Permit and the WQCC regulations. No person shall construe anything in this Discharge Permit as limiting in any way the inspection and entry authority of NMED under the WQA, the WQCC Regulations, or any other local, state or federal regulations.  
| 80.| DUTY to PROVIDE INFORMATION - The Permittee shall, upon NMED’s request, allow for NMED’s inspection/duplication of records required by this Discharge Permit and/or furnish to NMED copies of such records.  
[Subsection D of 20.6.2.3107 NMAC] |
| 81.| MODIFICATIONS and/or AMENDMENTS – In the event the Permittee proposes a change to the Facility or the Facility’s discharge that would result in a change in the volume discharged; the location of the discharge; or in the amount or character of water contaminants received, treated or discharged by the Facility, the Permittee shall notify NMED prior to implementing such changes. The Permittee shall obtain NMED’s approval (which may require modification of this Discharge Permit) prior to implementing such changes.  
[Subsection C of 20.6.2.3107 NMAC, Subsections E and G of 20.6.2.3109 NMAC] |
<p>| 82.| PLANS and SPECIFICATIONS – In the event the Permittee proposes to construct a wastewater system or change a process unit of an existing system such that the quantity or quality of the discharge will change substantially from that authorized by this Discharge Permit, the Permittee shall submit construction plans and specifications of the proposed system or process unit for NMED’s approval prior to the commencement of construction. |</p>
<table>
<thead>
<tr>
<th>#</th>
<th>Terms and Conditions</th>
</tr>
</thead>
</table>
| 83. | CIVIL PENALTIES - Any violation of the requirements and conditions of this Discharge Permit, including any failure to allow NMED staff to enter and inspect records or facilities, or any refusal or failure to provide NMED with records or information, may subject the Permittee to a civil enforcement action. Pursuant to WQA 74-6-10(A) and (B), such action may include a compliance order requiring compliance immediately or in a specified time, assessing a civil penalty, modifying or terminating the Discharge Permit, or any combination of the foregoing; or an action in district court seeking injunctive relief, civil penalties, or both. Pursuant to WQA 74-6-10(C) and 74-6-10.1, civil penalties of up to $15,000 per day of noncompliance may be assessed for each violation of the WQA 74-6-5, the WQCC Regulations, or this Discharge Permit, and civil penalties of up to $10,000 per day of noncompliance may be assessed for each violation of any other provision of the WQA, or any regulation, standard, or order adopted pursuant to such other provision. In any action to enforce this Discharge Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Discharge Permit.  
[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10 and 74-6-10.1] |
| 84. | CRIMINAL PENALTIES – No person shall:  
• Make any false material statement, representation, certification or omission of material fact in an application, record, report, plan or other document filed, submitted or required to be maintained under the WQA;  
• Falsify, tamper with or render inaccurate any monitoring device, method or record required to be maintained under the WQA; or  
• Fail to monitor, sample or report as required by a permit issued pursuant to a state or federal law or regulation.  

Any person who knowingly violates or knowingly causes or allows another person to violate the requirements of this condition is guilty of a fourth-degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who is convicted of a second or subsequent violation of the requirements of this condition is guilty of a third-degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition or knowingly causes another person to violate the requirements of this
# Terms and Conditions

condition and thereby causes a substantial adverse environmental impact is guilty of a third-degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15. Any person who knowingly violates the requirements of this condition and knows at the time of the violation that he is creating a substantial danger of death or serious bodily injury to any other person is guilty of a second-degree felony and shall be sentenced in accordance with the provisions of NMSA 1978, § 31-18-15.

[20.6.2.1220 NMAC, NMSA 1978, §§ 74-6-10.2.A through 74-6-10.2.F]

85. **COMPLIANCE with OTHER LAWS** - Nothing in this Discharge Permit shall be construed in any way as relieving the Permittee of the obligation to comply with any other applicable federal, state, and/or local laws, regulations, zoning requirements, nuisance ordinances, permits or orders.

[NMSA 1978, § 74-6-5.L]

86. **RIGHT to APPEAL** - The Permittee may file a petition for review before the WQCC on this Discharge Permit. Such petition shall be in writing to the WQCC within thirty days of the receipt of postal notice of this Discharge Permit and shall include a statement of the issues raised and the relief sought. Unless the Permittee files a timely petition for review, the decision of NMED shall be final and not subject to judicial review.

[20.6.2.3112 NMAC, NMSA 1978, § 74-6-5.O]

87. **TRANSFER of DISCHARGE PERMIT** - Prior to the transfer of any ownership, control, or possession of this Facility or any portion thereof, the Permittee shall:
   - Notify the proposed transferee in writing of the existence of this Discharge Permit;
   - Include a copy of this Discharge Permit with the notice; and
   - Deliver or send by certified mail to NMED a copy of the notification and proof the proposed transferee has received such notification.

The Permittee shall continue responsibility for any discharge from the Facility, until the Permittee transfers both ownership and possession of the Facility to the transferee.

[20.6.2.3111 NMAC]

88. **PERMIT FEES** – The Permittee shall be aware that the payment of permit fees is due at the time of Discharge Permit approval. The Permittee may pay the permit fees in a single payment or they may pay the fee in equal installments on a yearly basis over the term of the Discharge Permit. The Permittee shall remit single payments to NMED no later than 30 days following the effective date of the Discharge Permit. The Permittee shall remit
<table>
<thead>
<tr>
<th>#</th>
<th>Terms and Conditions</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>initial installment payments to NMED no later than 30 days following the effective date of the Discharge Permit; with subsequent installment payments remitted to NMED no later than the anniversary of the effective date of the Discharge Permit.</td>
</tr>
<tr>
<td></td>
<td>Permit fees are associated with issuance of this Discharge Permit. No person shall construe anything in this Discharge Permit as relieving the Permittee of the obligation to pay all permit fees assessed by NMED. A Permittee that ceases discharging or does not commence discharging from the Facility during the term of the Discharge Permit shall pay all permit fees assessed by NMED. NMED shall suspend or terminate an approved Discharge Permit if the Permittee fails to remit an installment payment by its due date.</td>
</tr>
<tr>
<td></td>
<td>[Subsection F of 20.6.2.3114 NMAC, NMSA 1978, § 74-6-5.K]</td>
</tr>
</tbody>
</table>
New Mexico Environment Department Ground Water Quality Bureau  
Discharge Permit Summary

Facility Information

Facility Name: Waste Isolation Pilot Plant (WIPP)  
Discharge Permit Number: DP-831  
Legally Responsible Party: Reinhard Knerr, Manager  
U.S. Department of Energy, Carlsbad Field Office  
P.O. Box 3090  
Carlsbad, NM 88221  
(575) 234-7300

Treatment, Disposal and Site Information

Primary Waste Type: Domestic and Industrial  
Facility Type: Federal Agency - U.S. Department of Energy

Evaporative Impoundment Locations

Domestic Wastewater

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settling Impoundment</td>
<td>Settling Lagoon 1</td>
<td>Primary treatment; 60-mil high-density polyethylene (HDPE) synthetically lined; permitted one foot of freeboard; capacity of 963,214 gallons.</td>
</tr>
<tr>
<td>Settling Impoundment</td>
<td>Settling Lagoon 2</td>
<td>Primary treatment; 60-mil HDPE synthetically lined; permitted one foot of freeboard; capacity of 963,214 gallons.</td>
</tr>
<tr>
<td>Polishing Impoundment</td>
<td>Polishing Lagoon 1</td>
<td>Passive secondary treatment; 60-mil HDPE synthetically lined; permitted one foot of freeboard; capacity of 414,901 gallons.</td>
</tr>
<tr>
<td>Polishing Impoundment</td>
<td>Polishing Lagoon 2</td>
<td>Passive secondary treatment; 60-mil HDPE synthetically lined; permitted one foot of freeboard; capacity of 141,901 gallons.</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Effluent Lagoon A</td>
<td>Effluent storage; 60-mil HDPE synthetically lined; disposal by evaporation; permitted one foot of freeboard; capacity of 566,610 gallons.</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Effluent Lagoon B</td>
<td>Effluent storage; 60-mil HDPE synthetically lined; disposal by evaporation; permitted discharges are domestic waste, brine, purge waters, and miscellaneous industrial non-hazardous wastewater; permitted one foot of freeboard; capacity of 846,257 gallons.</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Effluent Lagoon C</td>
<td>Effluent Storage; 60-mil HDPE synthetically lined; disposal by evaporation; permitted discharges are domestic waste, brine, purge waters, and miscellaneous industrial non-hazardous wastewater; permitted one foot of freeboard; capacity of 846,257 gallons.</td>
</tr>
</tbody>
</table>
### Storm Water Control

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storm Water Impoundment</td>
<td>Storm Water Pond 1</td>
<td>Constructed using a 60-mil HDPE synthetic liner; receives clean non-contact storm water from paved areas, roofs, air conditioner condensate, and water from domestic water lines; disposal by evaporation; permitted one foot of freeboard; capacity of 626,076 gallons.</td>
</tr>
<tr>
<td>Storm Water Impoundment</td>
<td>Storm Water Pond 2</td>
<td>Constructed using a 60-mil HDPE synthetic liner; receives clean non-contact storm after from the facilities paved areas, roofs, air conditioner condensate, and draining domestic water lines; disposal by evaporation; permitted one foot of freeboard; capacity of 2,268,330 gallons.</td>
</tr>
<tr>
<td>Storm Water Impoundment</td>
<td>Storm Water Pond 3</td>
<td>Constructed using a 60-mil HDPE synthetic liner; receives clean non-contact storm after from the facilities paved areas, roofs, air conditioner condensate, and draining domestic water lines; disposal by evaporation; permitted one foot of freeboard; capacity of 7,211,967 gallons.</td>
</tr>
</tbody>
</table>

### Non-Domestic Wastewater

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation Impoundment</td>
<td>Evaporation Pond H-19</td>
<td>Constructed using a 36-mil Hypalon synthetic liner; permitted discharges are brine, purge waters, and miscellaneous industrial non-hazardous wastewater; disposal by evaporation; permitted one foot of freeboard; capacity of 346,085 gallons.</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Salt Storage Pond 1</td>
<td>Constructed using a 60-mil HDPE synthetic liner; disposal by evaporation; permitted one foot of freeboard; capacity of 3,301,634 gallons.</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Salt Storage Pond 2/3</td>
<td>Constructed using 60-mil HDPE liner, 200-mil geonet drainage layer, and a second 60-mil HDPE liner with a leak detection system; disposal by evaporation; permitted one foot of freeboard; capacity of 21,737,254 gallons</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Salt Storage Pond 5</td>
<td>To be constructed, 60-mil HDPE liner, 200-mil geonet drainage layer, and a second 60-mil HDPE liner with a leak detection system; disposal by evaporation; permitted one foot of freeboard; capacity of 6,355,404 gallons.</td>
</tr>
<tr>
<td>Type</td>
<td>Designation</td>
<td>Description &amp; Comments</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Evaporation Impoundment</td>
<td>Brine Salt Storage Pond 4</td>
<td>To be constructed, 60-mil HDPE geomembrane double liner with a leak detection system; permitted discharges are clean non-contact stormwater from the facilities paved areas, roofs, air conditioner condensate, draining domestic water lines, and brine from Brine Retention Ponds East and West; Disposal by evaporation; permitted one foot of freeboard; capacity of 8,668,722 gallons.</td>
</tr>
<tr>
<td>Retention Basin</td>
<td>Brine Retention Pond East</td>
<td>To be constructed, 60-mil HDPE geomembrane double liner with a leak detection system and an epoxy coated concrete bottom; disposal by evaporation; permitted two feet of freeboard; capacity of 46,094 gallons.</td>
</tr>
<tr>
<td>Retention Basin</td>
<td>Brine Retention Pond West</td>
<td>To be constructed, 60-mil HDPE geomembrane double liner with a leak detection system and an epoxy coated concrete bottom; disposal by evaporation; permitted two feet of freeboard; capacity of 46,094 gallons.</td>
</tr>
<tr>
<td>Holding tank</td>
<td>Brine Holding Tank</td>
<td>To be constructed, 3,000-gallon fiberglass reinforced plastic holding tank for brine prior to being discharged to either Brine Retention Pond East or West.</td>
</tr>
</tbody>
</table>

### Salt Storage Locations

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salt Pile</td>
<td>Salt Cell 1</td>
<td>Inactive; approximately 18.8 acres; graded to 2% slope covered with sand and 60 mil HDPE liner and with two feet of native soil; seeded; run-off collects in Salt Storage Pond 1.</td>
</tr>
<tr>
<td>Salt Pile</td>
<td>Salt Cell 2</td>
<td>Active; 6.2 acres; run-off area of 326,350 sq. ft.; constructed using of six-inch prepared subgrade, 60-mil HDPE liner, 200-mil drainage layer, eight oz. geotextile fabric covered with two feet of native soil; runoff collects in Salt Storage Ponds 2 and/or 3.</td>
</tr>
<tr>
<td>Salt Pile</td>
<td>Salt Cell 3</td>
<td>Active; 5.2 acres; run-off area of 272,850 sq. ft.; constructed using of six-inch prepared subgrade, 60-mil HDPE liner, 200-mil drainage layer, eight oz. geotextile fabric covered with two feet of native soil; runoff collects in Salt Storage Ponds 2 and/or 3.</td>
</tr>
<tr>
<td>Salt Pile</td>
<td>Salt Cell 5</td>
<td>To be constructed; 5.09 acres; run-off area of 221,841 sq. ft.; 60-mil HDPE geomembrane liner with a protective native soil layer; runoff collects in Salt Storage Pond 5.</td>
</tr>
<tr>
<td>Salt Pile</td>
<td>Site and Preliminary Design Validation Pile</td>
<td>Closed in 2000; covered with a geosynthetic liner, six inches of bedding material, and three feet of soil; Seeded.</td>
</tr>
</tbody>
</table>
## Flow Metering Locations

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Totalizing Flow Meter</td>
<td>Ultrasonic Flow Meter</td>
<td>Located at the facility Pump House – water supply; estimates domestic wastewater discharged to the Facultative Lagoon system.</td>
</tr>
<tr>
<td>Primary Measurement Device</td>
<td></td>
<td>To be installed. Measures brine discharged to Brine Retention Ponds East and West from the New Filter Building.</td>
</tr>
<tr>
<td>Totalizing Flow Meters</td>
<td></td>
<td>To be installed. Four separate meters to measure the brine pumped from the leak detection sumps for Brine Salt Storage Pond 4, Brine Retention Ponds East and West, and Salt Storage Pond 5.</td>
</tr>
</tbody>
</table>

## Ground Water Monitoring Locations

<table>
<thead>
<tr>
<th>Type</th>
<th>Designation</th>
<th>Description &amp; Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitoring Wells</td>
<td>C-2505, C-2506, PZ-2, PZ-3, PZ-4</td>
<td>Quarterly depth to water measurement; all wells drilled in the shallow groundwater.</td>
</tr>
<tr>
<td>Monitoring Wells</td>
<td>C-2507, C-2811, PZ-1, PZ-5, PZ-6, PZ-7, PZ-9, PZ-10, PZ-11, PZ-12, PZ-13, PZ-14, PZ-15, PZ-16, PZ-18</td>
<td>Quarterly depth to water measurement; semi-annual collection of field parameters for temperature, pH, and specific conductance; semi-annual monitoring for SO4, Cl, TDS, Uranium, and combined Radium-226 and Radium-228; all wells drilled in the shallow groundwater.</td>
</tr>
<tr>
<td>Monitoring Well</td>
<td>PZ-17</td>
<td>Quarterly depth to water measurement; semi-annual collection of field parameters for temperature, pH, and specific conductance; semi-annual monitoring for SO4, Cl, TDS, TKN and NO3-N; well drilled in the shallowest, water bearing zone of the Dewey Lake Formation and intended to monitor the Facultative Lagoon System.</td>
</tr>
<tr>
<td>Monitoring Wells</td>
<td>PZ-19 and WQSP-6A</td>
<td>Quarterly depth to water measurement; semi-annual collection of field parameters for temperature, pH, and specific conductance; semi-annual monitoring for SO4, Cl, and TDS; both wells drilled in the shallowest, water bearing zone of the Dewey Lake Formation and PZ-17 is intended to monitor Evaporation Pond H-19.</td>
</tr>
</tbody>
</table>

| Depth-to-Ground Water         | 34 feet     |
| Total Dissolved Solids (TDS)  | 3,400 mg/L  |
Permit Information

Original Permit Issued January 16, 1992
Permit Amended August 28, 1995
Permit Renewal July 3, 1997
Permit Amended June 12, 1998
Permit Amended January 24, 2000
Permit Renewal April 29, 2003
Permit Modification December 22, 2003
Permit Modification December 29, 2006
Permit Renewal and Modification July 23, 2008
Permit Renewal July 29, 2014

Current Action
Application Received December 3, 2018
Public Notice Published October 1, 2020
Permit Hearing September 7 & 8, 2021
Permit Issued (Issuance Date) January 28, 2022
Permitted Discharge Volume Domestic – 23,000 gallons per day
Non-Domestic – 9,586,995 gallons per day

NMED Contact Information

Mailing Address Ground Water Quality Bureau
P.O. Box 5469
Santa Fe, New Mexico 87502-5469

GWQB Telephone Number (505) 827-2900

NMED Lead Staff Avery Young
Lead Staff Telephone Number (505) 699-8564
Lead Staff Email avery.young@state.nm.us
This guidance document represents minimum liner material and site preparation requirements for wastewater treatment, storage and evaporation lagoons. These requirements do not apply to lagoons storing hazardous wastes or high strength waste. The Ground Water Quality Bureau may impose additional requirements (e.g., double-lined lagoons with leak detection) for facilities discharging hazardous or high strength waste to lagoons through the development of specific Discharge Permit conditions for such facilities.

**Liner Material Requirements:**

1. The liner shall be chemically compatible with any material that will contact the liner.
2. The liner material shall be resistant to deterioration by sunlight if any portion of the liner will be exposed.
3. Synthetic liner material shall be of sufficient thickness to have adequate tensile strength and tear and puncture resistance. Under no circumstances shall a synthetic liner material less than 40 mils in thickness be accepted. Any liner material shall be certified by a licensed New Mexico professional engineer and approved by the New Mexico Environment Department (NMED) prior to its installation.

**Lagoon Design and Site Preparation Requirements:**

1. The system shall be certified by a licensed New Mexico professional engineer and approved by NMED prior to installation.
2. Inside slopes shall be a maximum of 3 (horizontal): 1 (vertical), and a minimum of 4 (horizontal); 1 (vertical).
3. Lagoon volume shall be designed to allow for a minimum of 24 inches of freeboard.
4. The liner shall be installed with sufficient liner material to accommodate shrinkage due to temperature changes. Folds in the liner are not acceptable.
5. To a depth of at least six inches below the liner, the sub-grade shall be free of sharp rocks, vegetation and stubble. In addition, liners shall be placed on a sub-grade of sand or fine soil. The surface in contact with the liner shall be smooth to allow for good contact between liner and sub-grade. The surface shall be dry during liner installation.
6. Sub-grade shall be compacted to a minimum of 90% of standard proctor density.
7. The minimum dike width shall be eight feet to allow vehicle traffic for maintenance.
8. The base of the pond shall be as uniform as possible and shall not vary more than three inches from the average finished elevation.
9. Synthetic liners shall be anchored in an anchor trench in the top of the berm. The trench shall be a minimum of 12 inches wide, 12 inches deep and shall be set back at least 24 inches from the inside edge of the berm.
10. If the lagoon is installed over areas of decomposing organic materials or shallow groundwater, a liner vent system shall be installed.
11. Any opening in the liner through which a pipe or other fixture protrudes shall be properly sealed. Liner penetrations shall be detailed in the construction plans and record drawings.
12. A synthetic liner shall not be installed in temperatures below freezing.
13. The liner shall be installed or supervised by an individual that has the necessary training and experience as required by the liner manufacturer.
14. All manufacturer’s installation and field seaming guidelines shall be followed.
15. All synthetic liner seams shall be field tested by the installer and verification of the adequacy of the seams shall be submitted to NMED along with the record drawings.
16. Concrete slabs installed on top of the synthetic liner for operational purposes shall be completed in accordance with manufacturer and installer recommendations to ensure liner integrity.
NEW MEXICO ENVIRONMENT DEPARTMENT  
GROUND WATER QUALITY BUREAU  
MONITORING WELL CONSTRUCTION AND ABANDONMENT GUIDELINES

**Purpose:** These guidelines identify minimum construction and abandonment details for installation of water table monitoring wells under groundwater Discharge Permits issued by the NMED’s Ground Water Quality Bureau (GWQB) and Abatement Plans approved by the GWQB. Proposed locations of monitoring wells required under Discharge Permits and Abatement Plans and requests to use alternate installation and/or construction methods for water table monitoring wells or other types of monitoring wells (e.g., deep monitoring wells for delineation of vertical extent of contaminants) must be submitted to the GWQB for approval prior to drilling and construction.

**General Drilling Specifications:**

1. All well drilling activities must be performed by an individual with a current and valid well driller license issued by the State of New Mexico in accordance with 19.27.4 NMAC. Use of drillers with environmental well drilling experience and expertise is highly recommended.
2. Drilling methods that allow for accurate determinations of water table locations must be employed. All drill bits, drill rods, and down-hole tools must be thoroughly cleaned immediately prior to the start of drilling. The borehole diameter must be drilled a minimum of 4 inches larger than the casing diameter to allow for the emplacement of sand and sealant.
3. After completion, the well should be allowed to stabilize for a minimum of 12 hours before development is initiated.
4. The well must be developed so that formation water flows freely through the screen and is not turbid, and all sediment and drilling disturbances are removed from the well.

**Well Specifications (see attached monitoring well schematic):**

5. Schedule 40 (or heavier) polyvinyl chloride (PVC) pipe, stainless steel pipe, carbon steel pipe, or pipe of an alternate appropriate material that has been approved for use by NMED must be used as casing. The casing must have an inside diameter not less than 2 inches. The casing material selected for use must be compatible with the anticipated chemistry of the groundwater and appropriate for the contaminants of interest at the facility. The casing material and thickness selected for use must have sufficient collapse strength to withstand the pressure exerted by grouts used as annular seals and thermal properties sufficient to withstand the heat generated by the hydration of cement-based grouts. Casing sections may be joined using welded, threaded, or mechanically locking joints; the method selected must provide sufficient joint strength for the specific well installation. The casing must extend from the top of the screen to at least one foot above ground surface. The top of the casing must be fitted with a removable cap, and the exposed casing must be protected by a locking steel well shroud. The shroud must be large enough in diameter to allow easy access for removal of the cap. Alternatively, monitoring wells may be completed below grade. In this case, the casing must extend from the top of the screen to 6 to 12 inches below the ground surface; the monitoring wells must be sealed with locking, expandable well plugs; a flush-mount, watertight well vault that is rated to withstand traffic loads must be emplaced around the wellhead; and the cover must be secured with at least one bolt. The vault cover must indicate that the wellhead of a monitoring well is contained within the vault.
6. A 20-foot section (maximum) of continuous-slot, machine slotted, or other manufactured PVC or stainless steel well screen or well screen of an alternate appropriate material that has been approved for use by NMED must be installed across the water table. Screens created by cutting slots into solid casing with saws or other tools must not be used. The screen material selected for use must be compatible with the anticipated chemistry of the ground water and appropriate for the contaminants of interest at the facility. Screen sections may be joined using welded, threaded, or mechanically...
locking joints; the method selected must provide sufficient joint strength for the specific well installation and must not introduce constituents that may reasonably be considered contaminants of interest at the facility. A cap must be attached to the bottom of the well screen; sumps (i.e., casing attached to the bottom of a well screen) should not be installed. The bottom of the screen must be installed no more than 15 feet below the water table; the top of the well screen must be positioned not less than 5 feet above the water table. The well screen slots must be appropriately sized for the formation materials and should be selected to retain 90 percent of the filter pack. A slot size of 0.010 inches is generally adequate for most installations.

7. Casing and well screen must be centered in the borehole by placing centralizers near the top and bottom of the well screen.

8. A filter pack must be installed around the screen by filling the annular space from the bottom of the screen to 2 feet above the top of the screen with clean silica sand. The filter pack must be properly sized to prevent fine particles in the formation from entering the well; clean medium to coarse silica sand is generally adequate as filter pack material for 0.010-inch slotted well screen. For wells deeper than 30 feet, the sand must be emplaced by a tremmie pipe. The well should be surged or bailed to settle the filter pack and additional sand added, if necessary, before the bentonite seal is emplaced.

9. A bentonite seal must be constructed immediately above the filter pack by emplacing bentonite chips or pellets (3/8-inch in size or smaller) in a manner that prevents bridging of the chips/pellets in the annular space. The bentonite seal must be 3 feet in thickness and hydrated with clean water. Adequate time should be allowed for expansion of the bentonite seal before installation of the annular space seal.

10. The annular space above the bentonite seal must be sealed with cement grout or a bentonite-based sealing material acceptable to the State Engineer pursuant to 19.27.4 NMAC. A tremmie pipe must be used when placing sealing materials at depths greater than 20 feet below the ground surface. Annular space seals must extend from the top of the bentonite seal to the ground surface (for wells completed above grade) or to a level 3 to 6 inches below the top of casing (for wells completed below grade).

11. For monitoring wells finished above grade, a concrete pad (2-foot minimum radius, 4-inch minimum thickness) must be poured around the shroud and wellhead. The concrete and surrounding soil must be sloped to direct rainfall and runoff away from the wellhead. The installation of steel posts around the well shroud and wellhead is recommended for monitoring wells finished above grade to protect the wellhead from damage by vehicles or equipment. For monitoring wells finished below grade, a concrete pad (2-foot minimum radius, 4-inch minimum thickness) must be poured around the well vault and wellhead. The concrete and surrounding soil must be sloped to direct rainfall and runoff away from the well vault.

Abandonment:

12. Approval for abandonment of monitoring wells used for ground water monitoring in accordance with Discharge Permit and Abatement Plan requirements must be obtained from NMED prior to abandonment.

13. Well abandonment must be accomplished by removing the well casing and placing neat cement grout, bentonite-based plugging material, or other sealing material approved by the State Engineer for wells that encounter water pursuant to 19.27.4 NMAC from the bottom of the borehole to the ground surface using a tremmie pipe. If the casing cannot be removed, neat cement grout, bentonite-based plugging material, or other sealing material approved by the State Engineer must be placed in the well using a tremmie pipe from the bottom of the well to the ground surface.

14. After abandonment, written notification describing the well abandonment must be submitted to the NMED. Written notification of well abandonment must consist of a copy of the well plugging record submitted to the State Engineer in accordance with 19.27.4 NMAC, or alternate documentation containing the information to be provided in a well plugging record required by the State Engineer as specified in 19.27.4 NMAC.
**Deviation from Monitoring Well Construction and Abandonment Requirements:** Requests to construct water table monitoring wells or other types of monitoring wells for groundwater monitoring under groundwater Discharge Permits or Abatement Plans in a manner that deviates from the specified requirements must be submitted in writing to the GWQB. Each request must state the rationale for the proposed deviation from these requirements and provide detailed evidence supporting the request. The GWQB will approve or deny requests to deviate from these requirements in writing.

![Monitoring Well Schematic](Image)

*MONITORING WELL SCHEMATIC (Not to Scale)*

- Top of Casing (Survey Point)
- Removable Cap
- Locking Steel Well Shroud
- Ground Surface
- Sloping Concrete Pad (2-foot minimum radius, 4-inch minimum thickness)
- Well Casing
- Cement Grout or Bentonite-based Sealing Material
- Bentonite Seal
- Borehole
- Water Table
- Well Screen
- Filter Pack
- Bottom Cap

Monitoring Well Guidelines
Revision 1.1, March 2011