

National Aeronautics and  
Space Administration  
  
Lyndon B. Johnson Space Center  
**White Sands Test Facility**  
P.O. Box 20  
Las Cruces, NM 88004-0020



May 9, 2023

Reply to Attn of: RE-23-089

Mr. Dave Cobrain, Acting Bureau Chief  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505

Subject: NASA White Sands Test Facility (WSTF) Monthly Environmental Activity Report  
for April 2023

Enclosed is the NASA White Sands Test Facility (WSTF) Monthly Environmental Activity Report for April 2023. This reporting format includes an Executive Summary that provides important events/observations as Enclosure 1, a paper copy of the report as Enclosure 2, and a CD-ROM with the report in PDF as Enclosure 3.

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

If you have any questions or comments concerning this submittal, please contact Amanda Skarsgard of my staff at 575-571-9668.

TIMOTHY  
DAVIS

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Timothy J. Davis  
Chief, Environmental Office

3 Enclosures

cc:

Mr. Gabriel Acevedo  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505

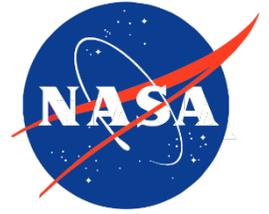
## Executive Summary

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The following summarizes important information associated with NASA White Sands Test Facility (WSTF) environmental program activities in April 2023:

- NASA completed shipments of hazardous and medical waste and wastewater sludge in April 2023.
- NASA sampled 41 of 41 groundwater monitoring wells scheduled for April 2023 and scheduled 34 groundwater monitoring wells for sampling in May 2023.
- Both groundwater remediation systems are currently shut down to accommodate ongoing well repair work at the Plume Front Treatment System.
- NASA addressed NMED's comments on the 200/600 Area vapor intrusion report and provided a revised report for NMED review.
- NASA continued extraction of perched groundwater at monitoring well 600-G-138 and submitted the interim status report for project year 10.
- NASA continued addressing NMED comments in their disapprovals of all four wastewater lagoon investigation reports.
- NASA continued addressing NMED comments in the approval with modifications of the accelerated corrective measures work plan for SWMU 16.
- NASA continued project planning for several additional monitoring well projects.
- NASA prepared and submitted a work plan for Phase 2 of the Targeted Mobile Remediation Process (TMRP).
- NASA submitted 13 documents to the NMED Hazardous Waste Bureau in April 2023.
- There were no reportable non-compliance issues in April 2023.

National Aeronautics and Space Administration



Monthly Environmental Activity Report  
April 2023

Report Deadline: May 15, 2023

NASA Johnson Space Center White Sands Test Facility  
Monthly Environmental Activity Report

April 2023

NM8800019434

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

**TIMOTHY DAVIS** Digitally signed by TIMOTHY DAVIS  
Date: 2023.05.09 08:14:05 -06'00'

Timothy J. Davis  
Chief, Environmental Office

See Electronic Signature

Date

National Aeronautics and Space Administration

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[www.nasa.gov](http://www.nasa.gov)

**Executive Summary**

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The following summarizes important information associated with NASA White Sands Test Facility (WSTF) environmental program activities in April 2023:

- NASA completed shipments of hazardous and medical waste and wastewater sludge in April 2023.
- NASA sampled 41 of 41 groundwater monitoring wells scheduled for April 2023 and scheduled 34 groundwater monitoring wells for sampling in May 2023.
- Both groundwater remediation systems are currently shut down to accommodate ongoing well repair work at the Plume Front Treatment System.
- NASA addressed NMED's comments on the 200/600 Area vapor intrusion report and provided a revised report for NMED review.
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- There were no reportable non-compliance issues in April 2023.

## 1.0 Waste Management Activities

1.1 NASA completed the following waste shipments in April 2023.

Date	Shipped To	Type of Waste	No. of Containers	Amount of Waste	Disposition
4/17/23	Stericycle, Albuquerque, NM	Medical	1	3.7 ft <sup>3</sup>	Autoclave
4/19/23	Veolia, Henderson, CO	Hazardous	13	221 kg	Incineration
4/19/23	US Ecology, Beatty, NV	Hazardous	8	1142 kg	Macroencapsulation, Solidification, or Off-site Management
4/20/23	Corralitos Landfill, Las Cruces, NM	Non-Hazardous (Wastewater Sludge)	1	40 yd <sup>3</sup>	Landfill
4/27/23	Corralitos Landfill, Las Cruces, NM	Non-Hazardous (Wastewater Sludge)	1	40 yd <sup>3</sup>	Landfill

## 2.0 Environmental Monitoring

2.1 NASA performed sampling at 41 of 41 groundwater monitoring wells or zones scheduled for sampling in April 2023 in accordance with the approved Groundwater Monitoring Plan (GMP). This includes sampling of NASA 3, which was postponed in February 2023 because of a sampling system failure. NASA replaced the sampling system and performed required sampling. Previous deviations from the planned sampling schedule are described below and have been reported to NMED in previous monthly reports:

- Wells 600A-001-GW and 600A-002-GW (scheduled for sampling in November 2022) were not sampled because of equipment failure. NASA obtained replacement sampling equipment in December 2022 for use in January 2023. Upon further evaluation, NASA determined that previous development of these wells using on-site equipment after colloidal borescope tests may have been inadequate. NASA is working to acquire the services of an off-site subcontractor to perform additional development at these wells prior to sampling. NASA will continue providing updates on well development progress in future monthly reports.
- NASA could not sample well PL-7-480 in August 2022, because the Westbay zone did not produce water. NASA believes the water level at this location has dropped below this sample port and will monitor the water level during future planned sampling events.
- Wells BLM-1-435 (scheduled for sampling in April 2021) and PL-3-453 (scheduled for sampling in December 2020) have not been sampled, because the water levels are not sufficient for sampling. NMED approved NASA's recommendation to plug and abandon these wells. NASA is planning the abandonment and replacement of wells BLM-1-435 and PL-3-453.

- 2.2 NASA performed other regulatory groundwater sampling requirements as scheduled and as allowed by operational status. NASA did not sample wells PFE-1, PFE-2, PFE-3, and MPE-8 because they were not operational due to equipment failure. NASA was unable to sample groundwater remediation system influent and effluent, and wells PFE-4A, PFE-5, and PFE-7 because the PFTS was not operational during April 2023. NASA continues efforts to resolve these equipment issues and will provide updates in future reports.
- 2.3 NASA developed the May 2023 groundwater sampling schedule and plans to sample 34 groundwater monitoring wells or zones based on GMP requirements.

### 3.0 Corrective Actions/Investigations

#### 3.1 Mid-plume Interception and Treatment System Operations

Days Operated	Average Flow Rate (gpm)	Volume Extracted and Treated (acre-feet)	Volume of Groundwater Discharged to Infiltration Basin (acre-feet)	Volume of IDW Treated and Discharged to the Infiltration Basin (gallons)
0 of 30	0	0.0	0.0	0.0

Shutdown Date	Restart Date	Shutdown Status	Discussion
3/23/23		Planned	NASA shut the system down to accommodate well repair and rehabilitation activities at the PFTS. This work will extend into May 2023.

#### 3.2 Plume Front Treatment System Operations

Days Operated	Average Flow Rate (gpm)	Volume Extracted/ Treated (acre-feet)	Volume Injected (acre-feet)	Volume Discharged to Grade (acre-feet)	Volume Discharged to Modu-Tank (acre-feet)
0 of 30	0	0.0	0.0	0.0	0.0

Shutdown Date	Restart Date	Shutdown Status	Discussion
3/27/23		Planned	NASA shut the system down to perform well repair and rehabilitation activities at PFE-1, PFE-2, PFE-3, PFE-7, PFI-2, and PFI-4. This work will extend into May 2023.

#### 3.3 200 Area Investigation

- NASA addressed NMED’s three multipart comments in their September 20, 2022 disapproval of the *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report* (January 30, 2020) and provided a revised report for NMED review on April 27, 2023.

- NMED is reviewing the 2023 WSTF Soil Vapor Risk Based Concentration Memorandum (January 26, 2023).

#### 3.4 400 Area

- NMED is reviewing the *Response to Disapproval of 400 Area Supplemental Groundwater and Soil Vapor Monitoring Plan* (July 14, 2021), the *NASA WSTF 400 Area Closure Investigation Report – NMED Third Disapproval Response* (July 27, 2021), and the *Response to Disapproval of 300 Area Supplemental Abbreviated Drilling Work Plan* (July 14, 2021).

#### 3.5 600 Area Perched Groundwater Extraction Pilot Test and Investigation

- In April 2023, NASA extracted approximately 98 gallons of perched groundwater from monitoring well 600-G-138 in accordance with NMED’s March 1, 2013, *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Groundwater elevation measurements indicate there is approximately 3.18 feet of perched groundwater within this well. This perched groundwater thickness has been relatively consistent since the inception of extraction activities in 2013. Extracted groundwater was containerized for treatment at the Mid-plume Interception and Treatment System (MPITS) and discharged in accordance with DP-1255.
- NASA completed and submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 10* on April 19, 2023.
- NMED is reviewing the *600 Area Perched Groundwater Investigation Report* (June 29, 2022).

#### 3.6 SWMUs 2, 8, and 34 and AOC 51 (Wastewater Lagoons)

- NASA is addressing NMED comments in their disapprovals of the *NASA White Sands Test Facility (WSTF) 200 Area Wastewater Lagoons Closure (SWMU 8) Investigation Report* (November 25, 2019) on June 6, 2022, the *NASA White Sands Test Facility (WSTF) 600 Area Wastewater Lagoons Closure (SWMU 34) Investigation Report* (November 26, 2019) on June 16, 2022, the *NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report* (August 3, 2020) on July 5, 2022, and the *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* (October 13, 2020) on July 25, 2022.
- NASA continued reviewing chemical analytical data in preparation for revising the disapproved investigation reports.

#### 3.7 SWMU 10 (200 Area Hazardous Waste Transmission Lines [HWTL])

- NMED is reviewing the *Response to Second Disapproval of NASA WSTF 200 Area HWTL (SWMU 10) Investigation Report and Risk Assessment Report* (March 4, 2022).

#### 3.8 SWMU 16 (600 Area BLM Off-site Soil Pile)

- NMED approved the *Accelerated Corrective Measures Work Plan for the NASA WSTF SWMU 16 (600 Area BLM Off-Site Soil Pile)* (September 28, 2021) with modifications on February 10, 2023. NASA is addressing NMED’s two comments and revising the work plan for submittal to NMED no later than May 31, 2023.

#### 3.9 SWMUs 21-27 (Septic Tanks)

- NMED approved the revised *NASA White Sands Test Facility (WSTF) Septic Tanks (SWMUs 21-27) Investigation Report* (May 18, 2021) on March 16, 2023. NASA is addressing two comments and revising the report for submittal to NMED no later than June 16, 2023.

3.10 SWMUs 29-31 (Small Arms Firing Ranges)

- NMED approved the *Small Arms Firing Ranges (SWMUs 29-31) Remedy Completion Report and Risk Assessment Report* (August 3, 2020). No additional work is planned at these units pending a complete evaluation of their suitability for corrective action complete status determination.

3.11 SWMU 33 (Test Stand 302 Cooling Water Pond)

- NMED is reviewing the *Response to Disapproval of NASA WSTF 300 Area Test Stand 302 Cooling Water Pond (SWMU 33) Investigation Work Plan (IWP) and Historical Information Summary (HIS)* (September 14, 2022).

3.12 SWMU 47 (500 Area Fuel Storage)

- NMED approved the revised *500 Area Fuel Storage (SWMU 47) Investigation Work Plan* (June 29, 2021) with modifications on March 1, 2023. NASA is addressing NMED's three comments and revising the work plan for submittal to NMED no later than May 31, 2023.

3.13 SWMU 49 (700 Area Landfill)

- NMED approved the *700 Area Landfill Closure (SWMU 49) Phase I Investigation Report* (April 29, 2022) on February 10, 2023 and directed NASA to provide a Phase II work plan no later than October 31, 2023.

3.14 SWMU 54 (500 Area Former Oxidizer Burner)

- NMED is reviewing the *500 Area Former Oxidizer Burner (FOB) Investigation Work Plan (IWP) and Historical Information Summary (HIS)* (August 25, 2022).

3.15 Groundwater Monitoring Well Abandonment, Installation, and Reconfiguration

- NMED is reviewing the *NASA WSTF Westbay Well Reconfiguration Work Plan for Wells PL-7, PL-8, PL-10, ST-5, and WW-3* (April 29, 2021).
- NMED is reviewing the *Abandonment Report for PFE-4 and PFE-6* (March 9, 2023), the *Abandonment Report for NASA Well BLM-28* (March 14, 2023), the *Reconfiguration Report for NASA Well BW-4* (March 21, 2023), the *Reconfiguration Report for NASA Wells 200-SG-2 and 200-SG-3* (March 21, 2023), and the *Abandonment Report for NASA Wells 400-C-118, 400-KV-142, 400-LV-125, BLM-2-482, and NASA 8* (March 30, 2023).
- Following the abandonment of well NASA 9 in January 2023, NASA continued planning the installation of the replacement well and related abandonment and replacement report, which is due to NMED no later than September 29, 2023.
- Following the abandonment of the borehole at former well BLM-30 in January 2023, NASA continued planning the installation of the replacement well and related abandonment and replacement report.
- NASA continued planning for well installation activities in accordance with NMED's May 2022 approvals of the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600B-001-GW* (BLM-28 replacement; August 31, 2021) and the *Work Plan for Drilling and Installation of Monitoring Well 600C-001-GW at the NASA White Sands Test Facility (WSTF)* (deeper well adjacent to BLM-10-517; August 31, 2021).
- NASA continued planning well installation and abandonment work in accordance with NMED's October 31, 2022 approval of the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600C-002-GW and Abandonment of PL-6* (February 1, 2022).

### 3.16 Targeted Mobile Remediation Process (TMRP)

- NASA prepared and submitted the *Targeted Mobile Remediation Process Pilot Test Work Plan, Phase 2* on April 25, 2023.
- NASA continued developing the report for the investigation performed in accordance with the NMED-approved *Well ST-1-541 Contaminated Groundwater Release Abbreviated Investigation Work Plan* (June 3, 2021). The investigation report is due to NMED no later than May 31, 2023.

### 3.17 Groundwater Data Representativeness Evaluation

- NASA prepared and submitted the *Groundwater Data Representativeness Phase 2: Water FLUTE Well Evaluation Abbreviated Investigation Report* on April 27, 2023.

### 3.18 Dye Tracer Test Investigation

- NMED is reviewing the *Abbreviated Drilling Work Plan in Response to the NMED Approval with Modification of the Report on Tracer Testing in the WSTF 200/600 Areas and Mid-plume Constriction Area* (December 20, 2022).

### 3.19 Site-wide Geophysics Investigation

- NMED is reviewing the *Site-wide Geophysical Survey Investigation Report* (November 8, 2022).

### 3.20 PFAS Monitoring

- In the 2022 update of the Groundwater Monitoring Plan, NASA informed NMED of an ongoing preliminary assessment of PFAS being conducted by NASA Headquarters. The NASA Headquarters contractor for the preliminary assessment performed groundwater sampling at WSTF in April 2022 and provided the samples to their laboratory. Analytical data and the associated assessment report are currently being reviewed within NASA. Based on the results of the preliminary assessment, NASA proposed the installation of additional monitoring wells as described in the *Proposed Monitor Wells for PFAS Assessment* (April 13, 2023).

## 4.0 Non-compliance Issues

The NASA Hazardous Waste Permit requires that other non-compliance conditions be reported to NMED. There were no instances of other non-compliance conditions during this reporting period that require notification under the Permit. The criteria for non-compliance reporting in this report (as defined by 40 CFR 270.30 (l)(10) and EPA interpretations at RCRA Faxbacks 13142 and 13686) would be any non-compliance with permit conditions that is not classified as minor recordkeeping, reporting, and similar oversights that were corrected once discovered. Additionally, there were no issues meeting the previously defined criteria (minor items immediately corrected) that were part of a repeating pattern of non-compliance.

## 5.0 Documents Submitted

### 5.1 Documents submitted to the Hazardous Waste Bureau in April 2023

- *Request for Third Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Monitoring Well BLM-43*, April 12, 2023

- *Request for Extension of Time for Submittal of the Completion Report for Installation of Monitoring Well 600C-001-GW*, April 12, 2023
- *Request for Extension of Time for Submittal of the Completion Report for Installation of Monitoring Well 600B-001-GW*, April 12, 2023
- *Proposed Monitor Wells for PFAS Assessment*, April 13, 2023
- *NASA WSTF Periodic Monitoring Report – First Quarter 2023*, April 18, 2023
- *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report – Project Year 10*, April 19, 2023
- *Request for Second Extension of Time for NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report Response to Disapproval*, April 20, 2023
- *Request for Second Extension of Time for NASA White Sands Test Facility (WSTF) Second Tracking and Data Relay Satellite Ground Terminal (STGT) Wastewater Lagoons Closure (Area of Concern [AOC] 51) Investigation Report Response to Disapproval*, April 20, 2023
- *Targeted Mobile Remediation Process Pilot Test Work Plan, Phase 2*, April 25, 2023
- *Response to Second Disapproval 200 and 600 Area Vapor Intrusion Assessment Report*, April 27, 2023
- *NASA WSTF Work Plan for Drilling and Installation of Monitoring Wells 600C-003-GW and 600C-004-GW*, April 27, 2023
- *NASA WSTF Groundwater Monitoring Plan Update for 2023*, April 27, 2023
- *Groundwater Data Representativeness Phase 2: Water FLUTE Well Evaluation Abbreviated Investigation Report*, April 27, 2023

5.2 Pertinent documents submitted to other NMED bureaus in April 2023

- *NASA White Sands Test Facility - FF First Quarter 2023 Disinfectant Residual Monitoring Report* to the Drinking Water Bureau, April 3, 2023
- *Response to Request for Further Documentation – NASA JSC White Sands Test Facility- FF, NM3590607, NASA – Well J2 Project Re-disinfection* to the Drinking Water Bureau, April 4, 2023
- *Quarterly Opacity/Emissions Evaluation for Firing Range Generator and Boilers* to the Air Quality Bureau, April 3, 2023

5.3 Status of documents previously submitted to the NMED Hazardous Waste Bureau for which additional correspondence was recorded in April 2023

- NASA submitted the *NMED Disapproval Response for 200 Area and 600 Area Vapor Intrusion Assessment Report* on January 30, 2020. NMED disapproved the report on September 20, 2022 and directed NASA to address three multipart comments and submit a revised report no later than April 28, 2023. NASA submitted the *Response to Second Disapproval 200 and 600 Area Vapor Intrusion Assessment Report* on April 27, 2023.
- NASA submitted the *Abbreviated Investigation Work Plan for Groundwater Data Representativeness, Phase 2: FLUTE Well Evaluation* on November 2, 2021. NASA received NMED's December 1, 2021 fee assessment and invoice for review of the plan and provided the \$7,000 fee for review of the plan on December 14, 2021. NMED approved the plan on August

8, 2022. NASA submitted the *Groundwater Data Representativeness Phase 2: Water FLUTE Well Evaluation Abbreviated Investigation Report* on April 27, 2023.

- NASA submitted the *NASA WSTF 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report* on August 3, 2020. NASA received NMED's September 22, 2020 fee assessment for review of the report on October 13, 2020 and provided the \$18,000 review fee to NMED on November 30, 2020. NMED disapproved the report on July 5, 2022 and directed NASA to address 20 comments and submit a revised report no later than January 31, 2023. NASA submitted the *Request for Extension of Time for NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report Response to Disapproval* on January 18, 2023. NASA requested that the due date for response to NMED disapproval be extended from January 31, 2023 to May 30, 2023. NMED approved the request on February 10, 2023. NASA submitted the *Request for Second Extension of Time for NASA White Sands Test Facility (WSTF) 100 Area Wastewater Lagoons Closure (SWMU 2) Investigation Report Response to Disapproval* on April 20, 2023.
- NASA submitted the *Response to Approval with Modifications for NASA WSTF STGT Wastewater Lagoons Liner Management Plan Addendum* on December 5, 2019. NASA submitted the *NASA White Sands Test Facility (WSTF) STGT Wastewater Lagoons Closure (AOC 51) Investigation Report* on October 13, 2020. NASA received NMED's December 18, 2020 fee assessment for review of the report on January 27, 2021 and provided the \$18,000 review fee to NMED on February 18, 2021. NMED disapproved the report on July 25, 2022 and directed NASA to address 16 comments and submit a revised report no later than February 28, 2023. NASA submitted the *Request for Extension of Time for NASA White Sands Test Facility (WSTF) Second Tracking and Data Relay Satellite Ground Terminal (STGT) Wastewater Lagoons Closure (Area of Concern [AOC] 51) Investigation Report Response to Disapproval* on January 18, 2023. NASA requested that the due date for response to NMED disapproval be extended from February 28, 2023 to May 30, 2023. NMED approved the request on February 10, 2023. NASA submitted the *Request for Second Extension of Time for NASA White Sands Test Facility (WSTF) Second Tracking and Data Relay Satellite Ground Terminal (STGT) Wastewater Lagoons Closure (Area of Concern [AOC] 51) Investigation Report Response to Disapproval* on April 20, 2023.
- NASA submitted the *NASA WSTF Drilling Work Plan for Abandonment of Well BLM-30 and Drilling of New Monitoring Well BLM-43* on August 29, 2019. NASA received NMED's September 20, 2019 fee assessment for review of the work plan on September 23, 2019 and provided the \$1,000 review fee to NMED on October 31, 2019. NMED approved the work plan with modifications on November 5, 2020 and directed NASA to address three comments and submit a revised plan no later than January 29, 2021. NASA submitted the *Response to Approval with Modifications Work Plan for Abandonment of NASA WSTF Well BLM-30 and Replacement with Monitoring Well BLM-43* on February 3, 2021. Some of NASA's off-site service providers are experiencing heavy workloads related to easing COVID-19 work restrictions, resulting in delays in NASA's ongoing fieldwork. To accommodate these schedule impacts, NASA submitted the *Request for Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Well BLM-43* on September 28, 2021. NMED approved the request on October 27, 2021, extending the due date for submittal of the well completion report to November 30, 2022. In order to align the schedule for installation of well BLM-43 with two recently approved additional groundwater monitoring wells, NASA submitted the *Request for Second Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Monitoring Well BLM-43* on April 26, 2022. NMED approved the request on June 6, 2022, extending the due date for submittal of the well completion report to April 28, 2023.

NASA submitted the *Request for Third Extension of Time for Submittal of the Completion Report for Monitoring Well BLM-30 Abandonment and Installation of Replacement Monitoring Well BLM-43* on April 12, 2023.

- NASA submitted the *NASA White Sands Test Facility Monitoring Well ST-1-541 Contaminated Groundwater Release Abbreviated Investigation Work Plan* on June 3, 2021. NASA received NMED's July 15, 2021 assessment and invoice for review of the plan and provided the \$5,000 review fee on August 17, 2021. NMED approved the work plan on April 25, 2022 and directed NASA to perform the investigation and submit an investigation work plan no later than November 28, 2022. NASA submitted the *Request for Extension of Time for Submittal of Monitoring Well ST-1-541 Contaminated Groundwater Release Abbreviated Investigation Report* on November 9, 2022. NMED approved the request on December 30, 2022, extending the due date for submittal of the investigation report to March 31, 2023. NASA requested a second extension of time on March 7, 2023, requesting that the due date be extended from March 31, 2023 to May 31, 2023. NMED indicated via email that this request would be approved. NMED approved the request on April 24, 2023.
- NASA submitted the *NASA WSTF Work Plan for Drilling and Installation of Monitoring Well 600B-001-GW* on August 31, 2021. NASA received NMED's October 14, 2021 fee assessment and invoice for review of the plan and provided the \$2,000 review on October 28, 2021. NMED approved the work plan with modifications on April 25, 2022 and directed NASA to submit a well completion report no later than April 28, 2023. NASA submitted the *Request for Extension of Time for Submittal of the Completion Report for Installation of Monitoring Well 600B-001-GW* on April 12, 2023.
- NASA submitted the *Work Plan for Drilling and Installation of Monitoring Well 600C-001-GW at the NASA White Sands Test Facility (WSTF)* on August 31, 2021. NASA received NMED's October 14, 2021 fee assessment and invoice for review of the plan and provided the \$2,000 review on October 28, 2021. NMED approved the work plan with modifications on April 25, 2022 and directed NASA to submit a well completion report no later than April 28, 2023. NASA submitted the *Request for Extension of Time for Submittal of the Completion Report for Installation of Monitoring Well 600C-001-GW* on April 12, 2023.