

National Aeronautics and
Space Administration

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



June 12, 2014

Reply to Attn of: RE-14-068

Mr. John E. Kieling, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Subject: WSTF Monthly Environmental Activity Report for May 2014

Enclosed is the WSTF Monthly Environmental Activity Report for May 2014. 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 known violations.

If you have any questions or comments concerning this submittal, please Tim Davis at 575-524-5024.

A handwritten signature in blue ink, appearing to read "Radel Bunker-Farrar".

Radel Bunker-Farrar
Chief, Environmental Office

3 Enclosures

cc:

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

Mr. Baird Swanson (*CD only)
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5500 San Antonio Drive NE
Albuquerque, NM 87109

Executive Summary

The following summarizes important information associated with NASA White Sands Test Facility (WSTF) environmental program activities in May 2014:

- NASA completed two shipments of hazardous waste, a shipment of transformers to be recycled, a shipment of used oil, and a shipment of used oil filters in May 2014.
- NASA completed 38 of 38 groundwater sampling events and all required groundwater remediation system sampling scheduled for May 2014.
- The Plume Front Treatment System operated on 31 of 31 days in May 2014 at an average flow rate of 811 gallons per minute. The PFTS extracted and treated approximately 98.6 acre-feet of groundwater.
- The Mid-plume Interception and Treatment System operated on 29 of 31 days in May 2014 and treated approximately 1.19 acre-feet of groundwater and approximately 0.04 acre-feet of investigation-derived waste.
- NASA completed and submitted the JP4/JP5 remote test site investigation report.
- NASA continued preparations for the investigation and removal of several WSTF septic tanks. Analytical data from cyanide resampling performed at SWMU 22 was submitted to NMED for review.
- NASA initiated fieldwork for the 200/600 Area and MPCA groundwater dye tracer test.
- NASA continued final project planning for the upcoming 200 Area Phase II investigation fieldwork, which is expected to begin in early June 2014.
- NASA began development of a Historical Information Summary for SWMUs 1, 3, and 15.
- NASA submitted several documents to NMED in May 2014, including the JP4/JP5 investigation report, SWMU 22 cyanide results, GMP update for 2014, and an updated contingency plan.
- During May 2014, NASA continued a project to upgrade the sanitary sewer at WSTF and connect to the City of Las Cruces sewer system.
- There were no reportable non-compliance issues in May 2014.



National Aeronautics and
Space Administration

Monthly Environmental Activity Report

May 2014

Submitted June 12, 2014

NM8800019434

NASA Johnson Space Center White Sands Test Facility

12600 NASA Road Las Cruces, New Mexico 88012

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

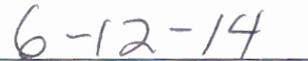
May 2014

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Radel Bunker-Farrar

Chief, Environmental Office



Date

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- There were no reportable non-compliance issues in May 2014.

1.0 Waste Management Activities

- 1.1 NASA completed a shipment of used oil to Mesa Environmental in Belen, New Mexico on May 12, 2014. The shipment consisted of 24 containers with 8,383 pounds (3,802 kg) of used oil.
- 1.2 NASA completed a shipment of used oil filters to Mesa Environmental in Belen, New Mexico on May 12, 2014. The shipment consisted of three containers with 100 pounds (45 kg) of used oil filters.
- 1.3 NASA completed a shipment of non-PCB transformers to Veolia in Henderson, Colorado on May 12, 2014. The shipment consisted of 31 transformers with a total weight of 62,100 pounds (28,169 kg). The transformers contained approximately 2,657 gallons (10,058 L) of oil with a weight of approximately 17,271 pounds (7,834 kg). The oil and approximately 44,829 pounds (20,334 kg) of scrap metal will be recycled.
- 1.4 NASA completed a shipment of hazardous waste to Veolia's USE facility in Grand View, Idaho on May 22, 2014. The shipment consisted of one intermediate bulk container with 2,280 pounds (1,034 kg) of hazardous waste and one other container with 476 pounds (216 kg) of hazardous waste.
- 1.5 NASA completed a shipment of hazardous waste to Veolia in Henderson, Colorado on May 22, 2014. The shipment consisted of 31 containers with 8,884 pounds (4,038 kg) of hazardous waste.

2.0 Environmental Monitoring

- 2.1 NASA performed sampling at all 38 of the groundwater monitoring wells scheduled for sampling in May 2014.
- 2.2 Sampling of groundwater remediation system influent, effluent, and operational extraction wells was performed in accordance with applicable permits and approved plans.
- 2.3 NASA anticipates initiating two field projects in June 2014 that will require the use of significant resources to perform. There is the potential that insufficient field personnel will be available to complete all of the scheduled groundwater sampling in June and July 2014. NASA will closely monitor groundwater sampling, evaluate the impact of delayed sampling on the groundwater assessment program, and reschedule the sampling of less critical monitoring wells to ensure all project objectives can be accomplished without negative effects on groundwater monitoring.

3.0 Corrective Actions

- 3.1 Plume Front Treatment System
 - PFTS Operation – The PFTS operated on 31 of 31 days in May 2014 at an average flow rate of 811 gallons per minute. The system extracted and treated approximately 98.6 acre-feet of groundwater, most of which was injected to the aquifer following treatment. Approximately 315,700 gallons of groundwater were discharged to the on-site Modu-tanks during a test to characterize system performance with new UV lamps. Approximately 1.19 acre-feet were discharged to grade at the PFI wells during injection well backwashing and system startup activities.
 - PFTS Shutdowns, Repairs, and Modifications – There were three unplanned shutdowns of the PFTS in May 2014. On May 7, 2014 the system shut down automatically because of an unexpected electrical power outage. The system was restarted later that day. On May 14, 2014 the system shut down automatically because of an alarm indicating a low level in an extraction well. Troubleshooting was performed, but the root cause could not be determined. The system was restarted later that day. On May 22, 2014 the system automatically shut down because of an electrical power disruption. It was restarted later that day. There were two planned shutdowns on May 28 and 29, 2014 associated with the UV lamp characterization test.

3.2 Mid-plume Interception and Treatment System

- MPITS Operation – The MPITS operated on 29 of 31 days in May 2014 and treated approximately 1.19 acre-feet of groundwater and approximately 0.04 acre-feet of IDW. All treated groundwater was discharged to the infiltration basin.
- MPITS Shutdowns, Repairs, and Modifications – There were three unplanned shutdowns of the MPITS in May 2014. On May 7, 2014 the system shut down automatically because of an unexpected electrical power outage. The system was restarted later that day. On May 16, 2014 the system shut down automatically when maintenance fault on the leak detection system did not automatically reset as programmed. Troubleshooting was performed to resolve the issue and the system was restarted on May 19, 2014. On May 22, 2014 the system automatically shut down because of an electrical power disruption. It was restarted later that day.

3.3 JP4 and JP5 Investigation

- NASA completed and submitted the final investigation report to NMED on May 1, 2014. NASA received NMED's May 14, 2014 invoice for review of the report and began processing the payment.

3.4 100/600 Area Burn Pit and Container Storage Area Investigation

- NASA continued the required research for the Historical Information Summary for the 100 Area Burn Pit (SWMU 1), the 100 Area Container Storage Area (SWMU 3), and the 600 Area Burn Pit (SWMU 15). The Investigation Work Plan and HIS for these SWMUs are due to NMED by June 30, 2014.

3.5 200 Area Investigation

- NASA continued project planning and related procurement activities for upcoming Phase II investigation fieldwork, which will begin in early June 2014.

3.6 600 Area Investigation

- NASA continued extracting perched groundwater from monitoring well 600-G-138 in May 2014 in accordance with NMED's March 1, 2013 *Approval Time Extension for Implementation of the Perched Groundwater Extraction Pilot Test at the 600 Area*. Approximately 197 gallons of perched groundwater were removed from 600-G-138 in May 2014.
- NASA received NMED's May 1, 2014 invoice for review of the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report* and submitted the \$2,000 review fee on May 16, 2014.

3.7 Wastewater Lagoon Investigation and Closure

- NASA continues to plan for the investigation and closure of the WSTF wastewater lagoons in accordance with the NMED-approved *Wastewater Lagoon Areas Closure Investigation Work Plan*. NASA is to start the investigation by July 31, 2014 or notify NMED by July 1, 2014. This additional extension is required to complete the Sanitary Sewer Pipeline Project which will connect WSTF to the City of Las Cruces sewage treatment facilities.

3.8 Septic Tank Investigation and Removal

- NASA submitted a letter report summarizing the results of SWMU 22 cyanide resampling to NMED on May 5, 2014.

3.9 Groundwater Dye Tracer Test

- NASA initiated background sampling required as part of a groundwater dye tracer test being conducted in the WSTF 200/600 Areas and in the Mid-plume Constriction Area (MPCA). NASA anticipates that groundwater tracer dyes will be introduced in accordance with the NMED-approved *Work Plan for Tracer Testing in the 200/600 Areas and Mid-plume Constriction Area* in late June 2014.

3.10 Soil Background Study

- The recently submitted final investigation report for the soil background study remains under NMED review.

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 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(1)(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 Miscellaneous

5.1 Sanitary Sewer Upgrade

During May 2014, NASA continued the project to upgrade the sanitary sewer system at WSTF and connect to the City of Las Cruces (CLC) sewer system. The sewer upgrade includes a combination of both gravity and force main in addition to four lift stations. NASA will continue to keep NMED informed about the status of the sewer project, and its potential impacts on other WSTF projects. Construction progress to date includes the following:

- NASA continues to negotiate the Transfer Agreement with the City of Las Cruces. The Service Agreement was signed and approved by the City of Las Cruces on October 29, 2013. The Transfer Agreement addresses NASA's transfer of ownership of Line A and the Holman Lift Station (HLS) to the City.
- Construction of Line A along Holman Road is substantially complete. A final hydrostatic leak test and acceptance procedure with NASA and the City of Las Cruces was completed.
- Construction continues on the HLS. The lift station pumps have been installed. Connection of piping and electrical power is complete. Installation of controls and instrumentation is in progress. Water service inside the HLS is complete. Grouting and sealant coating of the wet well is complete.
- Line B (from Holman Road to the WSTF 100 Area) is substantially complete. Manholes have been installed. Grouting and sealant coating of the inside of the manholes is complete and setting and pouring of the manhole rings is also complete. A final low pressure air leak test and cleaning of the line were completed.
- Line C (the force main from the Second TDRSS Ground Terminal (STGT) to the WSTF 400 Area) is substantially complete. A boring under the STGT access road, and installation of pipe casing under the road, is complete. Validation, testing, and checkout of Lift Station #1 is in progress. A final hydrostatic leak test of the line was completed.

- Line D (the force main from the 400 Area to the 200 Area) is substantially complete. A final hydrostatic leak test was completed.
- Line E (from the 800 Area to the 300 Area) is complete. Installation of connecting manholes, grouting, application of sealant coating, and setting of rings is complete. A final low pressure air leak test and acceptance procedure with NASA is complete.
- Line E (from the 100 Area to the 200 Area) is substantially complete. Grouting, application of sealant coating, and setting of rings is complete. A final low pressure air leak test and acceptance procedure with NASA is complete.
- Line F (400 Area) is substantially complete. A final low pressure air leak test was completed.
- Lines G and H (from several buildings in the 100 Area to Line B) are substantially complete, including the completion of the remaining manholes. Grouting and sealant coating of the inside of the manholes is complete. A final low pressure air leak test of the line was completed.
- Line I (from Lift Station #3 to Line E) is substantially complete. Lift Station #3 has been installed, and backfilling and installation of control panels is complete. A final hydrostatic leak test was completed. Backfilling and compaction around the lift station is complete.
- Line J (from the Hypervelocity facility to Lift Station #3) is substantially complete. A final low pressure air leak test was completed.
- Line K (from Lift Station #3 to the 800 Area) is substantially complete. A final low pressure air leak test was completed.
- Line L (from various 400 Area buildings toward Lift Station #2) is substantially complete. A boring under Road L, and installation of pipe casing under the road, is complete. Installation of the 8-inch gravity line in the pipe casing is complete. Installation of connecting manholes, grouting, application of sealant coating, and setting of rings is complete. Lift Station #2 has been installed, and backfilling and installation of control panels is complete. A final low pressure air leak test of the line was completed. Application of the sealant coating is also complete.

6.0 Documents Submitted

6.1 Documents submitted in May 2014

- NASA submitted the *NASA White Sands Test Facility (WSTF) Solid Waste Management Unit 14: 600 Area JP4/JP5 Remote Testing Site Investigation Report* on May 1, 2014. NASA received NMED's May 14, 2014 fee assessment for review of the report and began processing the payment.
- NASA submitted the *NASA WSTF SWMU 22 Sewage Sludge Cyanide Analytical Results* on May 5, 2014.
- NASA submitted the *NASA WSTF Groundwater Monitoring Plan Update for 2014* on May 15, 2014.
- NASA submitted the *NASA White Sands Test Facility (WSTF) Contingency Plan (Permit Attachment 3) Annual Update Submission Hazardous Waste Permit No. NM8800019434* on May 29, 2014.

6.2 Status of documents submitted in previous months

- NASA submitted the *IWP for Evaluating Anomalous Detections of NDMA in Monitoring Wells JER-1 and JER-2* on November 7, 2013. NASA received NMED's November 21, 2013 fee

assessment for review of the plan and submitted the \$10,000 review fee on December 19, 2013. NMED review is pending.

- NASA submitted the *Summary of SWMU 22 Sewage Sludge Analytical Results and Proposed SWMU 22 Soil Investigation Methodology Deviations* on March 4, 2014. NMED approved the submittal on May 6, 2014.
- NASA submitted the *Soil Background Study Investigation Report* on March 27, 2014. NASA received NMED's April 17, 2014 fee assessment for review of the report and submitted the \$2,000 review fee on May 7, 2014.
- NASA submitted the *Request for Additional Extension of Time for Implementation of Lagoon Investigation Work Plan* on March 31, 2014.
- NASA submitted the *600 Area Perched Groundwater Extraction Pilot Test Interim Status Report* on April 17, 2014. NASA received NMED's May 1, 2014 fee assessment for review of the report and submitted the \$2,000 review fee on May 16, 2014. NMED review is pending.