

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



April 9, 2014

Reply to Attn of: RE-14-042

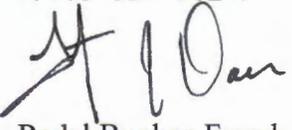
Mr. John E. Kieling, Chief
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505

Subject: WSTF Monthly Environmental Activity Report for March 2014

Enclosed is the WSTF Monthly Environmental Activity Report for March 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 contact Tim Davis at 575-524-5024.


for Radel Bunker-Farrar
Chief, Environmental Office

3 Enclosures

cc:

Mr. Dan Comeau
Hazardous Waste Bureau
New Mexico Environment Department
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Santa Fe, NM 87505

Mr. Baird Swanson (*CD only)
Ground Water Quality Bureau
New Mexico Environment Department
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 March 2014:

- NASA completed two shipments of hazardous waste in March 2014.
- NASA completed 43 of 43 groundwater sampling events and all required groundwater remediation system sampling scheduled for March 2014.
- The Plume Front Treatment System operated on 30 of 31 days in March 2014 at an average flow rate of 851 gallons per minute. The PFTS extracted and treated approximately 94.7 acre-feet of groundwater.
- The Mid-plume Interception and Treatment System operated on 31 of 31 days in March 2014 and treated approximately 2.2 acre-feet of groundwater and approximately 0.02 acre-feet of investigation-derived waste.
- NASA evaluated data from sampling performed at the JP4/5 remote test site and initiated development of the investigation report.
- NASA continued preparations for the investigation and removal of several WSTF septic tanks. A report summarizing the results of sampling performed at SWMU 22 was submitted to NMED.
- NASA continued project planning for the wastewater lagoon investigation, the upcoming 200 Area Phase II investigation fieldwork, and a groundwater dye tracer test.
- NASA submitted several documents to NMED in March 2014, including a request for an extension of time for beginning the lagoon investigation, analytical data for sludge samples collected from SWMU 22, the annual waste report for a permitted treatment unit, and the Soil Background Study Investigation Report.
- During March 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 March 2014.



National Aeronautics and
Space Administration

Monthly Environmental Activity Report

March 2014

Submitted April 14, 2014

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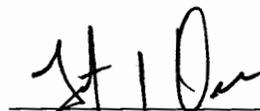
NASA Johnson Space Center White Sands Test Facility

12600 NASA Road Las Cruces, New Mexico 88012

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

March 2014

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.



Radel Bunker-Farrar
Chief, Environmental Office

4/9/14

Date

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- During March 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 March 2014.

1.0 Waste Management Activities

- 1.1 NASA completed a shipment of hazardous waste to Veolia in Burley, Idaho on March 20, 2014. The shipment consisted of one intermediate bulk container with 2,640 pounds (1,200 kg) of hazardous waste.
- 1.2 NASA completed a shipment of hazardous waste to Veolia in Henderson, Colorado on March 20, 2014. The shipment consisted of 14 containers with 1,573 pounds (715 kg) of hazardous waste.

2.0 Environmental Monitoring

- 2.1 In March 2014, NASA performed sampling at all 43 of the groundwater monitoring wells scheduled for sampling in March 2014.
- 2.2 Sampling of groundwater remediation system influent, effluent, and operational extraction wells was performed in accordance with applicable permits and approved plans.

3.0 Corrective Actions

3.1 Plume Front Treatment System

- PFTS Operation – The PFTS operated on 30 of 31 days in March 2014 at an average flow rate of 851 gallons per minute. The system extracted and treated approximately 94.7 acre-feet of groundwater, most of which was injected to the aquifer following treatment. Approximately 25,000 gallons of groundwater were discharged to the on-site Modu-tanks during routine PFTS startup operations. Approximately 1.13 acre-feet were discharged to grade at the PFI wells during backwashing and startup activities.
- PFTS Shutdowns, Repairs, and Modifications – There were two planned shutdowns of the PFTS in March 2014. On March 6, 2014 the system was shut down to replace the variable frequency drive (VFD) units on both air strippers. The system was restarted on March 7, 2014. The system was shut down on March 11, 2014 to fine tune the air stripper VFDs. The system was restarted later that day. There were also two unplanned PFTS shutdowns in March 2014. On March 15, 2014 the PFTS shut down automatically because of an electrical power outage. The system was restarted on March 17, 2014. On March 18, 2014 the PFTS shut down automatically when a severe dust storm clogged the air filters at the air stripper intake. Following the storm, the filters were replaced and the system was restarted within four hours.

3.2 Mid-plume Interception and Treatment System

- MPITS Operation – The MPITS operated on 31 of 31 days in March 2014 and treated approximately 2.2 acre-feet of groundwater and approximately 0.02 acre-feet of IDW. All treated groundwater was discharged to the infiltration basin.
- MPITS Shutdowns, Repairs, and Modifications – There was one unplanned shutdown of the MPITS on March 15, 2014 because of an electrical power outage. The system was restarted on March 16, 2014. On March 20, 2014 the MPITS was shut down for approximately one hour to upgrade system software. The MPE wellheads are being modified to facilitate sampling required for the upcoming groundwater dye tracer test.

3.3 JP4 and JP5 Investigation

- NASA completed evaluation of the analytical data from samples collected during the investigation and has initiated development of the final investigation report.

3.4 200 Area Investigation

- NASA continued project planning activities for upcoming Phase II investigation fieldwork.

3.5 600 Area Investigation

- NASA continued extracting perched groundwater from monitoring well 600-G-138 in March 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 294 gallons of perched groundwater was removed from 600-G-138 in March 2014.

3.6 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 was to start the investigation by April 30, 2014 or notify NMED by April 1, 2014. On March 31, 2014 NASA submitted a letter requesting a revised project start date of July 31, 2014. The extension is required to complete the Sanitary Sewer Pipeline Project which will connect WSTF to the City of Las Cruces sewage treatment facilities.
- NASA completed surveying the lagoons to establish sample collection locations in preparation for lagoon wastewater and sludge sampling after discharge to the lagoons is terminated.

3.7 Septic Tank Investigation and Removal

- NASA submitted a report to NMED on March 4, 2014 that summarized the analytical data from samples collected at the SWMU 22 septic tank. The report also discussed evidence that indicated the SWMU 22 septic tank had been leaking, and introduced the possibility that the tank had no leach field. Proposed deviations to the SWMU 22 soil investigation were presented to address these issues.
- NASA resampled the sewage sludge in the SWMU 22 septic tank for cyanide on March 17, 2014. It was determined during this sampling event that the tank does have an effluent pipe. Exploratory fieldwork is planned to determine if this effluent line drains to a leach field.

3.8 Groundwater Dye Tracer Test

- NASA continued planning for a groundwater dye tracer test, which will be conducted in the WSTF 200/600 Areas and in the Mid-plume Constriction Area (MPCA). NASA's May 10, 2012 *Work Plan for Tracer Testing in the 200/600 Areas and Mid-plume Constriction Area*, approved by the NMED Hazardous Waste Bureau on July 20, 2012, provides specific information regarding the planned test. Though originally scheduled for as early as August 2012, the dye tracer test was postponed to allow sufficient time for the completion of work at the Mid-plume Interception and Treatment System. Consistent operational conditions have been achieved in the MPCA and MPE wellheads are being modified to allow for the collection of dye tracer samples. The dye tracer test was recently expanded to include additional sampling locations in the 200 and 600 Areas and the MPCA. NASA anticipates that fieldwork will begin in June 2014.

3.9 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 March 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. NASA met with BLM and CLC on February 13, 2014 to discuss the transfer agreement documents. Based on this meeting, NASA drafted a letter per BLM request to explain NASA's right-of-way and the City's requirement to maintain, access, and operate the HLS and the Holman Road 6-inch force main sewer line.
- 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 in progress. 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 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. Installation 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 in progress. A final low pressure air leak test and acceptance procedure with NASA will be performed prior to activating the system.
- Line E (from the 100 Area to the 200 Area) is substantially complete. Grouting, application of sealant coating, and setting of rings is in progress. A final low pressure air leak test and acceptance procedure with NASA will be performed prior to activating the system.
- 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, and completion of several manholes is also complete. 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 in progress.
- 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

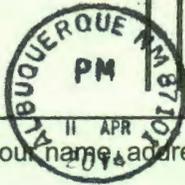
6.1 Documents submitted in March 2014

- NASA submitted the *Fee Assessment for Periodic Monitoring Report – 2013 Comprehensive Report* on March 4, 2014.
- NASA submitted the *Summary of SWMU 22 Sewage Sludge Analytical Results and Proposed SWMU 22 Soil Investigation Methodology Deviations* on March 4, 2014.
- NASA submitted the *2013 Annual Waste Summary Report for Waste Placed into the Permitted Treatment Unit at the NASA White Sands Test Facility (WSTF)* on March 5, 2014.
- NASA submitted the *Soil Background Study Investigation Report* on March 27, 2014.
- NASA submitted the *Request for Additional Extension of Time for Implementation of Lagoon Investigation Work Plan* on March 31, 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 *Periodic Monitoring Report (PMR) – 2013 Comprehensive Report* on January 30, 2014. NASA received NMED's February 11, 2014 fee assessment for review of the report and submitted the \$2,000 review fee on March 4, 2014.
- NASA submitted the *Well Completion Reports for the Conversion of Westbay Wells WW-2 and JP-3* on December 16, 2013. NASA received NMED's January 14, 2014 fee assessment for review of the reports and submitted the \$1,000 review fee on February 21, 2014. NMED is reviewing the reports and has provided initial feedback to NASA.
- NASA submitted the *Request for Revised Westbay Well Conversion Schedule* on February 24, 2014. NMED approved the request on March 7, 2014.

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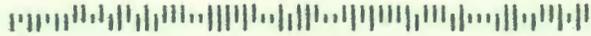
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GROUND WATER QUALITY BUREAU
NEW MEXICO ENVIRONMENTAL
DEPARTMENT
5500 SAN ANTONIO DRIVE NE
ALBUQUERQUE, NM. 87109

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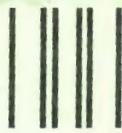
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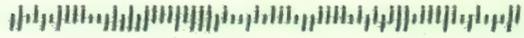
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MR. DAN COMEAU
 HAZARDOUS WASTE BUREAU
 NEW MEXICO ENVIRONMENTAL
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 2905 RODEO PARK DRIVE EAST, BUILDING 1
 SANTA FE, NM. 87505

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