

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



November 13, 2013

Reply to Attn of: RE-13-128

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

Subject: WSTF Monthly Environmental Activity Report for October 2013

Enclosed is the WSTF Monthly Environmental Activity Report for October 2013. 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 me at 575-524-5733.

A handwritten signature in black 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)
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 October 2013:

- NASA was required to reschedule several activities and deliverables because of the Federal Government shutdown and resulting WSTF site closure.
- NASA completed two shipments of hazardous waste to two Veolia facilities in October 2013.
- NASA completed 24 of 32 groundwater sampling events and all required groundwater remediation system sampling scheduled for October 2013.
- The Plume Front Treatment System operated on 11 of 31 days in October 2013 at an average flow rate of 1,028 gallons per minute. During October 2013, the PFTS extracted and treated approximately 42 acre-feet of groundwater.
- The Mid-plume Interception and Treatment System operated on 12 of 31 days in October 2013 and treated approximately 1.5 acre-feet of groundwater.
- NASA initiated fieldwork associated with the approved soil background study.
- NASA initiated a GPS survey of existing septic tank locations in preparation for the upcoming septic tank investigation. NASA also continued preliminary planning for the wastewater lagoon investigation and a groundwater tracer test.
- NASA submitted several documents to NMED in October 2013, including requests for several time extensions because of the Federal Government shutdown and the 200 Area Investigation – Phase II Investigation Work Plan.
- During October 2013, 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 October 2013.



National Aeronautics and
Space Administration

Monthly Environmental Activity Report

October 2013

Submitted November 14, 2013

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

October 2013

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Radel Bunker-Farrar

Chief, Environmental Office



Date

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- The Plume Front Treatment System operated on 11 of 31 days in October 2013 at an average flow rate of 1,028 gallons per minute. During October 2013, the PFTS extracted and treated approximately 42 acre-feet of groundwater.
- The Mid-plume Interception and Treatment System operated on 12 of 31 days in October 2013 and treated approximately 1.5 acre-feet of groundwater.
- NASA initiated fieldwork associated with the approved soil background study.
- NASA initiated a GPS survey of existing septic tank locations in preparation for the upcoming septic tank investigation. NASA also continued preliminary planning for the wastewater lagoon investigation and a groundwater tracer test.
- NASA submitted several documents to NMED in October 2013, including requests for several time extensions because of the Federal Government shutdown and the 200 Area Investigation – Phase II Investigation Work Plan.
- During October 2013, 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 October 2013.

1.0 Waste Management Activities

- 1.1 NASA completed a shipment of hazardous waste to Veolia in Henderson, Colorado on October 22, 2013. The shipment consisted of 19 containers with 812 lbs (369 kg) of hazardous waste.
- 1.2 NASA completed a shipment of hazardous waste to Veolia in Burley, Idaho on October 22, 2013. The shipment consisted of one container with 389 lbs (176 kg) of hazardous waste.
- 1.3 NASA continued development of a permit modification request to remove all permit conditions and/or requirements that meet the definition of 40 CFR 270.42- Appendix I, Section A(8): “Changes to remove permit conditions that are no longer applicable (i.e., because the standards upon which they are based are no longer applicable to the facility).” Examples of permit conditions include all references to the ETU and SWMU 13- 400 Area Aspirator discharge pipe. NASA expects to submit this permit modification request after receiving NMED approval of the Certification of Closure Report for the Evaporation Tank Unit.

2.0 Environmental Monitoring

- 2.1 In October 2013 NASA performed sampling at 24 of 32 scheduled groundwater monitoring wells. Eight groundwater monitoring wells were not sampled because of the Federal Government shutdown and resulting WSTF site closure. These wells were rescheduled for November 2013.
- 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 11 of 31 days in October 2013 at an average flow rate of 1,028 gallons per minute. The system extracted and treated approximately 42 acre-feet of groundwater, most of which was injected to the aquifer following treatment. Approximately 25,500 gallons of groundwater were discharged to the on-site Modu-tanks during routine PFTS startup operations. Approximately 1.46 acre-feet were discharged to grade at the PFI wells during backwashing and startup activities.
- PFTS Shutdowns, Repairs, and Modifications – As of October 1, 2013 the system remained offline because of the Federal Government shutdown and resulting WSTF site closure. The system was restarted on October 21, 2013. There were four additional system shutdowns in October 2013. On October 22, 2013 the system shut down automatically because of an engineering calibration error. The error was corrected and the system was restarted on October 23, 2013. On October 30, 2013 the system shut down automatically twice due to ground faults on one of the air strippers. Following the second shutdown, the cause of the fault was determined and repairs were performed. The system was restarted later that day. On October 31, 2013 the system shut down automatically while operators attempted to manually optimize operation of the UV reactor. The system was restarted within two hours.

3.2 Mid-plume Interception and Treatment System

- MPITS Operation – The MPITS operated on 12 of 31 days in October 2013 and treated approximately 1.5 acre-feet of groundwater, all of which was discharged to the infiltration basin. IDW was processed in October 2013 as required.
- MPITS Shutdowns, Repairs, and Modifications – Between October 2 and 20, 2013 the system was not operational because of the Federal Government shutdown and resulting WSTF site

closure. The system was restarted on October 21, 2013 and operated for the remainder of the month.

3.3 JP4 and JP5 Investigation

- NASA completed and submitted the *NASA White Sands Test Facility (WSTF) 600 Area JP4 and JP5 Investigation Work Plan and Historical Information Summary* on August 26, 2013. The abbreviated work plan is under NMED review. NASA expects to initiate final project planning and field work as quickly as possible following NMED approval of the work plan.

3.4 200 Area Investigation

- NASA completed and submitted the *200 Area Investigation – Phase II Investigation Work Plan* in accordance with NMED’s September 18, 2013 *Notice of Approval with Direction 200 Area Investigation – Phase I Status Report*.

3.5 600 Area Investigation

- NASA continued extracting perched groundwater from monitoring well 600-G-138 in October 2013 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 29 gallons of perched groundwater was removed from 600-G-138 in October 2013.

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*. As indicated in NMED’s August 7, 2013 *Approval Second Time Extension for Implementation of Closure Activities in Accordance with the Approved Wastewater Lagoon Areas Closure Investigation Work Plan (100, 200, 600 Area and STGT)*, NASA is to start the investigation by December 31, 2013 or notify NMED by December 1, 2013 if additional time is required to complete installation of the WSTF sewer system.

3.7 Septic Tank Investigation and Abandonment

- NASA submitted the *WSTF Septic Tanks (SWMU 21 – 27) Investigation Work Plan and WSTF Septic Tanks Historical Information Summary* to the NMED HWB on June 28, 2013. NASA received NMED’s July 16, 2013 fee assessment for review of the reports and submitted the \$15,000 review fee on August 9, 2013. NMED review of the IWP and HIS is pending.
- NASA initiated a GPS survey of the septic tanks as part of the scheduled pre-investigation activities.

3.8 Groundwater Tracer Testing

- NASA continued planning for a groundwater 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 tracer test has been postponed until 2013 in order to allow sufficient time for the completion of work at the Mid-plume Interception and Treatment System. When steady-state operating conditions have been achieved in the MPCA, the groundwater tracer test can be performed as indicated in the May 10, 2012 work plan. NASA anticipates that field work associated with the tracer test will begin following an evaluation of Mid-plume extraction and exploration wells, currently scheduled for completion in late December 2013.

3.9 Soil Background Study

- The sample collection activities scheduled to begin in early October 2013 were postponed until later in the month as a result of the Federal Government shutdown and resulting WSTF site closure. 72 soil samples were collected from 24 sample pits in two of the five planned background areas. Fieldwork is expected to continue in November 2013.

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(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 Miscellaneous

5.1 Sanitary Sewer Upgrade

During October 2013 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. The delays with completing the sewer construction have not affected work on the ETU Closure project, though closure and investigation of the site wastewater lagoons will be impacted. 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 Service and Transfer agreements 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 to the City.
- Construction of Line A along Holman Road is substantially complete. A final hydrostatic leak test will be performed prior to activating the system.
- Construction continues on the Holman Road lift station. The lift station pumps have been installed. Connection of piping and electrical power is in progress. Installation of controls and instrumentation is in progress. 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 in progress, as is setting and pouring of manhole rings and covers.
- 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.
- Line D (the force main from the 400 Area to the 200 Area) is substantially complete.
- Line E (from the 800 Area to the 300 Area) is substantially complete. A pavement cut across Apollo Road, and installation of piping under the road, is pending.
- Line E (from the 100 Area to the 200 Area) is substantially complete. Manholes have been installed. A boring under STGT Road, and installation of pipe casing under the road, is complete. Grouting and sealant coating of the inside of the manholes is in progress.

- Line F (400 Area) is substantially complete.
- Lines G and H (from several buildings in the 100 Area to Line B) are substantially complete, but completion of several manholes is pending. Grouting and sealant coating of the inside of the manholes is in progress.
- 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 in progress.
- Line J (from the Hypervelocity facility to Lift Station #3) is substantially complete.
- Line K (from Lift Station #3 to the 800 Area) is substantially complete.
- 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. Lift Station #2 has been installed, but backfilling and installation of control panels are pending.

6.0 Documents Submitted

6.1 Documents submitted in October 2013

- NASA submitted the *Request for Extensions Due to the Government Shutdown and Subsequent Site Closure* on October 18, 2013.
- NASA submitted the *Request for Extension of Time for Westbay Conversion Due to Government Shutdown and Subsequent Site Closure* on October 30, 2013.
- NASA submitted the *200 Area Investigation – Phase II Investigation Work Plan* on October 30, 2013.

6.2 Status of documents submitted in previous months

- NASA submitted the *Well Completion Reports for BLM-40 and BLM-41 Cluster Monitoring Wells* on June 25, 2013. NASA received NMED's July 12, 2013 fee assessment for review of the reports and submitted the \$1,000 review fee on August 27, 2013. NMED approved the reports on September 24, 2013.
- NASA submitted the *NASA WSTF Septic Tanks (SWMU 21-27) Investigation Work Plan & WSTF Septic Tanks Historical Information Summary* on June 27, 2013. Copies of these documents were also submitted to the NMED Groundwater Quality Bureau and NMED Liquid Waste Program. NASA received NMED's July 16, 2013 fee assessment for review of the reports and submitted the \$15,000 review fee on August 9, 2013. The NMED LWP has indicated their intent to approve the removal plan for the non-SWMU tanks. NMED HWB review is pending.
- NASA submitted the *Permit Modification Request for NASA White Sands Test Facility (WSTF) Hazardous Waste Permit No. NM8800019434* on July 8, 2013. This document proposed to update and clarify permit language related to two routine operations at the Fuel Treatment Unit.
- NASA submitted the *Detailed Well Evaluations: 100-D-176, 600-C-173, BLM-3-182, and NASA 2* on July 30, 2013. NASA received NMED's August 20, 2013 fee assessment for review of the report and submitted the \$2,000 review fee on September 11, 2013. NMED approved the evaluation report on September 27, 2013.
- NASA submitted the *NASA WSTF Remediation System Monitoring Plan Annual Update* on July 31, 2013. NASA received NMED's August 20, 2013 fee assessment for review of the updated plan and submitted the \$2,500 review fee on September 11, 2013. NMED approved the updated plan on September 27, 2013.

NASA White Sands Test Facility

- NASA submitted the *Transmittal of the National Aeronautics and Space Administration (NASA) White Sands Test Facility (WSTF) Certification of Closure Report for the Evaporation Treatment Unit (ETU)* on August 1, 2013.
- NASA submitted the *NASA White Sands Test Facility (WSTF) 600 Area JP4 and JP5 Investigation Work Plan and Historical Information Summary* on August 26, 2013. NASA received NMED's September 4, 2013 fee assessment for review of the plan and submitted the \$10,000 review fee on September 16, 2013. NMED review is pending.