

16



Associate Director for ESH
Environment, Safety, and Health
P.O. Box 1663, MS K491
Los Alamos, New Mexico 87545
505-667-4218/Fax 505-665-3811

RECEIVED

MAR - 8 2016

**NMED
Hazardous Waste Bureau**

Environmental Management
Los Alamos Field Office, MS A316
3747 West Jemez Road
Los Alamos, New Mexico 87544
(505) 665-5658/FAX (505) 606-2132

Date: **MAR 08 2016**
Refer To: ADESH-16-031
LAUR: 16-21209; 16-21208
Locates Action No.: n/a

John Kieling, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Submittal of Revised Inspection and Maintenance of Erosion Controls Associated with Fishladder Canyon [Solid Waste Management Unit 16-003(o)] and Response to Review of the Inspection and Maintenance Report

Dear Mr. Kieling:

This letter documents storm water management following mitigation activities at Solid Waste Management Unit (SWMU) 16-003(o) within Fishladder Canyon. This letter is required as part of the New Mexico Environment Department's (NMED's) approval with modifications for the Phase II investigation report for the Technical Area 16 (TA-16) 340 Complex, Revision 1, dated February 9, 2009.

Storm water controls designed to control surface erosion and sediment transport by establishing a permanent vegetative cover were installed during Phase II investigation activities conducted in July 2008. The controls included straw wattles, geotextile, and jute matting at the former fishladder location; a silt fence along the access road; and a gabion/rock check dam at the access road crossing.

After NMED's February 9, 2009, approval letter, the U.S. Environmental Protection Agency (EPA) issued Los Alamos National Laboratory's National Pollutant Discharge Elimination System Storm Water Individual Permit (Permit No. NM0030759). The Individual Permit (IP), which became effective on November 1, 2010, regulates storm water discharges from SWMUs and areas of concern; SWMU 16-003(o) is one of the SWMUs included in the IP. The storm water controls installed during the Phase II investigation were incorporated into the Site Discharge Pollution Prevention Plan required by the IP. The wattles and matting installed during Phase II have been retired in place, and the silt fence was removed once the hillside and access road were stabilized.



The gabion/rock check dam at the access road crossing continues to be inspected under the IP. Additional controls designed to reduce flow velocities, erosion potential, and sediment transport have been installed per IP requirements at SWMU 16-003(o) and are shown in Figure 1, which is an IP site monitoring area (SMA) map showing the IP sampler location, IP storm water controls, and SWMUs associated with the SMA. Storm water controls associated with Fishladder Canyon [SWMU 16-003(o)] consist of a small gabion structure (-0002), earthen berm (-0027), straw wattles (-0028 and -0030), and rock check dams/berms (-0024, -0025, and -0026), as shown in Figures 2 through 6. Figure 7 shows the former access road. Other storm water controls in this SMA are associated with SWMU 16-003(n) and are not discussed.

NMED's approval with modifications for the Phase II investigation report requires an annual inspection of storm water controls associated with SWMU 16-003(o). Storm water controls are also inspected under the IP program at least once per year to evaluate whether conditions that affect erosion have changed and when a significant event occurs (such as a wildfire) that could significantly affect runoff. Controls are also inspected after significant rainfall events and in the event that sampling results exceed IP target action levels (TALs). Inspections and associated maintenance activities are documented in the IP annual report, submitted to EPA by March 1 each year.

Controls at SWMU 16-003(o) were inspected six times during 2015, as described below.

1. An inspection was completed on July 9, 2015, for the rain events occurring on June 26 and July 6, 2015, with no findings or maintenance items related to SWMU 16-003(o).
2. A second rain event inspection was completed on July 27, 2015, for rain events occurring on July 12 and July 20, 2015. Inspection findings recommended replacing the straw wattle (-0023) and removing leaf litter from the rock check dam (-0025). On August 11, 2015, a new wattle (-0030) was installed directly upgradient of the existing wattle (-0023), and leaf litter was removed from the rock check dam (-0025). A wattle (-0023) was retired and replaced with a new wattle (-0030), as shown in Figure 1.
3. A third rain event inspection was completed on August 10, 2015, for the rain events occurring on July 29, July 31, August 1, and August 2, 2015. Inspection findings recommended adding additional rock to rock check dam (-0024). On August 25, 2015, additional rock was added to the check dam (-0024).
4. A fourth rain event inspection was completed on August 28, 2015, for the event occurring on August 17, 2015, with no findings or maintenance items.
5. A TAL exceedance inspection was completed on September 24, 2015, with no findings or maintenance items.
6. The IP annual erosion evaluation was completed on October 28, 2015. Inspection findings recommended replacing the straw wattle (-0028); a follow-up inspection was completed on November 4, 2015, and determined the area below wattle (-0028) is stable and well vegetated as shown in Figure 3. Note that the wattle is not visible because of the vegetative cover (grasses). Figure 4 shows the vegetated slope from the intersection with the canyon drainage. Based on the established vegetative cover, lack of erosional features, and best professional judgment, no additional action needs to be completed.

If you have any questions, please contact Steve Veenis at (505) 667-0013 (veenis@lanl.gov) or David Rhodes at (505) 665-5325 (david.rhodes@em.doe.gov).

Sincerely,



Bruce Robinson, Program Director
Environmental Remediation Program
Los Alamos National Laboratory

Sincerely,



David S. Rhodes, Supervisor
Environmental Management
Los Alamos Field Office

BR/DR/SV:sm

Attachment: Two hard copies with electronic files:
(1) Revised Inspection and Maintenance of Erosion Controls Associated with Fishladder Canyon [Solid Waste Management Unit 16-003(o)] (EP2016-0031)
(2) Response to Review of the Inspection and Maintenance Report (EP2016-0030)

Cy: (w/att.)
Laurie King, EPA Region 6, Dallas, TX
Steve Yanicak, NMED-DOE-OB, MS M894
emla.docs@em.doe.gov
David Rhodes, DOE-EM-LA, MS A316
Steve Veenis, ADEM ER Program, MS M992
Jeff Walterscheid, ADEM ER Program, MS M992
Terrill Lemke, ADESH-EPC-CP, MS K490
Public Reading Room (EPRR)
ADESH Records
PRS Database

Cy: (w/o att./date-stamped letter emailed)
lasomailbox@nnsa.doe.gov
Kimberly Davis Lebak, DOE-NA-LA
Peter Maggiore, DOE-NA-LA
David Rhodes, DOE-EM-LA
Bruce Robinson, ADEM ER Program
Randy Erickson, ADEM
Jocelyn Buckley, ADESH-EPC-CP
Mike Saladen, ADESH-EPC-CP
John McCann, ADESH-EPC-DO
Michael Brandt, ADESH
William Mairson, PADOPS
Craig Leasure, PADOPS

REVISED FIGURES

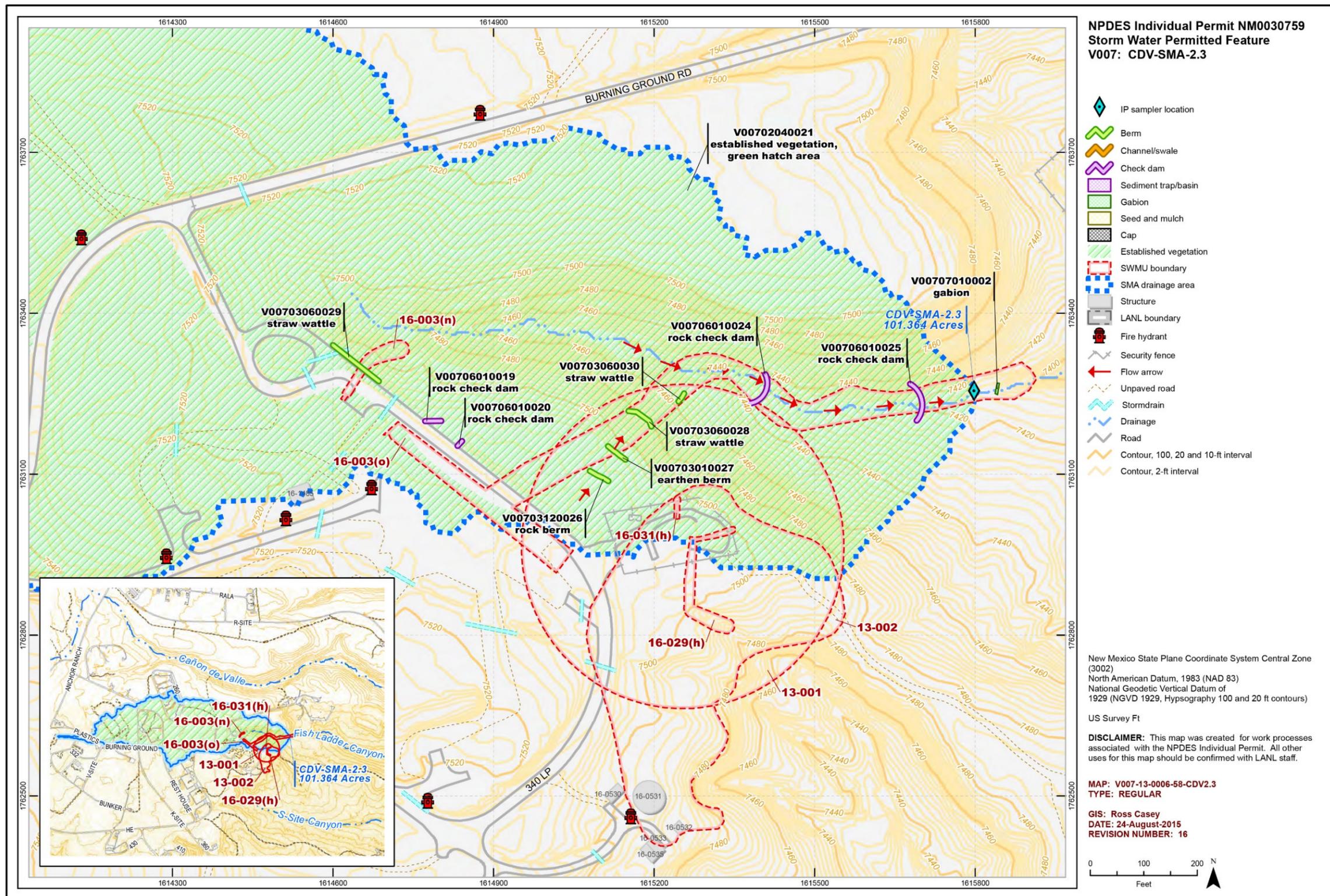


Figure 1 Locations of the IP sampler, IP storm water controls, and SWMUs associated with the IP site monitoring area



Figure 2 Rock berm (V00703120026 - middle of photo) and earth berm (V00703010027- upper third of photo) at the top of drainage into Fishladder Canyon (11/04/2015). Condition of controls – excellent.



Figure 3 View looking upslope at the former fishladder location (11/04/2015). Straw wattle (V007030600028 - located in the upper third of photo) is hidden by established vegetation. Condition of controls – very good.



Figure 4 View upslope of the former fishladder location from the canyon bottom. Note established vegetative cover and lack of erosional features. Controls are not visible in photo.



Figure 5 Rock check dam (V00706010024 – lower third of photo) in bottom of Fishladder Canyon (11/04/2015). Condition of control –excellent.



Figure 6 Rock check dam (V00706010025 – middle of photo) in bottom of Fishladder Canyon (11/04/2015). Condition of control – very good.



Figure 7 Gabion (V00707010002 – middle of photo) at access road crossing in bottom of Fishladder Canyon (11/04/2015). Condition of control – good.



Figure 8 View west of former access road in Fishladder Canyon (11/04/2015). Straw wattle (V007030600030 – not visible in photo) is located at the western end of the former access road. Note vegetative cover and downed trees along the former access road. Condition of controls – excellent.

**Response to the Review of the 2015 Inspection and Maintenance Report of Erosion Controls
Associated with Fishladder Canyon [Solid Waste Management Unit 16-003(o)],
EPA ID# NM0890010515 HWB-LANL-15-062
Dated January 13, 2016**

INTRODUCTION

To facilitate review of this response, the New Mexico Environment Department's (NMED's) comments are included verbatim. Los Alamos National Laboratory's (LANL's or the Laboratory's) responses follow each NMED comment.

NMED Comment

1. *The Permittees follow-up inspection on November 4, 2015, "determined the area below straw wattle-0028 is stable and well vegetated. No additional action needs to be completed" is not supported by the documentation and figures provided, for example the straw wattle described is not visible in the photograph and the Permittees did not provide additional photos of the area demonstrating vegetative health. Provide additional photographs of the area below the wattle demonstrating vegetative health, as well as a summary of the criteria used to determine slope stability in the area.*

LANL Response

1. The annual erosion evaluation under the Individual Permit was completed on October 28, 2015. Inspection findings recommended replacing the straw wattle (V007030600028); a follow-up inspection was completed on November 4, 2015, and determined the area below wattle -0028 is stable and well vegetated, as shown in Figure 3. Note that the wattle is not visible because of the vegetative cover (grasses). Figure 4 shows the vegetated slope from the intersection with the canyon drainage. Based on the established vegetative cover, lack of erosional features, and best professional judgment, no additional action needs to be completed.

Note: Figure 3 text has been updated (see response number 3), and an additional figure, Figure 4, has been added for further clarification. Figure numbering has been updated.

NMED Comment

2. *Previous reports have included text describing the conditions of the erosional controls, and their relative location within the image (e.g., middle of photo) for each figure. This information is critical to the expedited review of the report, but was unfortunately, excluded from this Report. Please include this text in future revisions of this report.*

LANL Response

2. Text was added describing condition of controls and relative location of controls within each figure.

NMED Comment

3. *The text for Figure 3 describes the view of looking upslope of the straw wattle-0028 as being in the middle of the photo, but it is not observable in the photo. Please describe this image to clarify the previous location of the straw wattle-0028 or explain that the straw wattle is no longer visible due to damages originally observed during the October 28, 2015, inspection.*

LANL Response

3. Figure 3 shows a view looking upslope at the former fishladder location on November 4, 2015. Straw wattle V007030600028, located in the upper third of photograph, is hidden by established vegetation.