



Permit

DEPARTMENT OF ENERGY  
Environmental Management Los Alamos Field Office (EM-LA)  
Los Alamos, New Mexico 87544

ENTERED

EMLA-2020-1149-02-001



DEC 03 2019

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

Subject: Fiscal Year 2019 Consent Order Deliverable Accomplishments, Revision 1

Dear Mr. Kieling:

Enclosed is a summary of the completion of milestones by the U.S. Department of Energy (DOE) Environmental Management Los Alamos Field Office (EM-LA) for fiscal year (FY) 2019 required under the 2016 Compliance Order on Consent (Consent Order). Also enclosed is a summary of other Consent Order deliverables submitted to the New Mexico Environment Department (NMED) in FY 2019. This letter is a revision to the submittal made to NMED on November 7, 2019, and includes revisions or additions to the documents and dates included in the enclosures.

Enclosure 1 lists FY 2019 milestones in Appendix B of the Consent Order, including their due, submittal, and approval dates. Most of the Appendix B milestones were submitted on or before their due dates. NMED granted an extension to a milestone due date for the "Phase 2 Pilot Amendment Testing Work Plan" (FY 2019 milestone #10). NMED determined the work plan is no longer a milestone for FY 2019 but required EM-LA to submit a supplemental Phase 1 work plan by September 26, 2019. EM-LA submitted the "Supplemental Work Plan for Pilot-Scale Amendments Testing for Chromium in Groundwater beneath Mortandad Canyon" on September 24, 2019. NMED also granted an extension to a milestone due date for the "Field Completion Letter Report for Aggregate Areas Known Cleanup Sites Campaign" (FY 2019 milestone #19). NMED granted a new deliverable date of November 15, 2019, because the scope of the cleanup increased substantially from what was anticipated and most of the cleanup had been completed by September 30, 2019. Submittal of the "Westbay Wells Reconfiguration Completion Report for R-5, R-7, R-8, R-9i, R-19, R-25, and R-31" was due on August 30, 2019 (FY 2019 milestone #14). An extension request was submitted by EM-LA on August 26, 2019, and disapproved by NMED on September 16, 2019. The disapproval was based on EM-LA not showing good cause for all wells and planning issues associated with initiating fieldwork only 3 months before the milestone date. NMED agreed to accept a well reconfiguration completion report for R-5, R-7, R-8, R-9i, and R-19. EM-LA submitted the report on October 16, 2019. Two additional FY 2020 milestones are included in Appendix B for the two remaining wells: "Westbay Well Reconfiguration Completion Report for R-31" (FY 2020 milestone #2 due February 17, 2020) and "Westbay Plugging and Abandonment Completion Report for R-25" (FY 2020 milestone #6 due March 31, 2020).

In addition to Appendix B milestones, DOE EM-LA submitted several other Consent Order deliverables required by NMED. Enclosure 2 contains a list of these deliverables and their submittal dates. Enclosure 3 contains a list of other Consent Order deliverables and dates planned for submittal to NMED in FY 2020.

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If you have any questions, please contact Arturo Duran at (505) 257-7907 (arturo.duran@em.doe.gov).

Sincerely,



Arturo Q. Duran  
Compliance and Permitting Manager  
Environmental Management  
Los Alamos Field Office

Enclosures:

1. Fiscal Year 2019 Milestones in Appendix B of the Compliance Order on Consent
2. Fiscal Year 2019 Other Deliverables to NMED and Submittal Dates
3. Fiscal Year 2020 Other Deliverables Planned to be Submitted to NMED

CC (letter and enclosure[s] emailed):

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**Enclosure 1**  
**Fiscal Year 2019 Milestones in Appendix B of the Compliance Order on Consent**

<b>Milestone # FY2019</b>	<b>Title</b>	<b>Due Date</b>	<b>Submittal Date</b>	<b>Approval Date</b>
1	Letter Report: Well R-69 Field Completion and Groundwater Sample Collection	12/14/2018	11/28/2018	1/15/2019
2	Semiannual Progress Report on the Chromium Plume Control Interim Measure Performance (July 2018 to December 2018)	3/29/2019	3/22/2019	10/3/2019
3	2018 Monitoring Report for Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	4/30/2019	4/29/2019	7/11/2019
4	2019 Monitoring Plan for Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	4/30/2019	4/29/2019	6/4/2019
5	2018 Sandia Wetland Performance Report (January 2018-December 2018)	4/30/2019	4/25/2019	6/3/2019
6	Addendum to the Phase II Investigation Report for Middle Los Alamos Canyon Aggregate Area	4/30/2019	4/22/2019	
7	Supplemental Investigation Report for S-Site Canyon Aggregate Area, Revision 1	4/30/2019	4/25/2019	10/25/2019
8	Letter Report: Well R-70 Completion and Collection of First Groundwater Samples	5/31/2019	5/28/2019	6/4/2019
9	Completion Report for Conversion of CrIN-6 to CrEX-5	6/28/2019	6/26/2019	7/3/2019
10	Phase 2 Pilot Amendment Testing Work Plan	6/28/2019	footnote <sup>a</sup>	
11	Revised Work Plan for Vadose Zone Moisture Monitoring at Material Disposal Area T at Technical Area 21, within the Nuclear Environmental Site	6/28/2019	6/26/2019	
12	Interim Facility-Wide Groundwater Monitoring Plan for the 2020 Monitoring Year, October 2019-September 2020	6/30/2019	5/28/2019	9/11/2019
13	Supplemental Investigation Report for Potrillo/Fence Canyon Aggregate Area, Revision 1	7/31/2019	7/31/2019	
14	Westbay Wells Reconfiguration Completion Report for R-5, R-7, R-8, R-9i, R-19, R-25, and R-31	8/30/2019	footnote <sup>b</sup>	
15	Investigation Report for Royal Demolition Explosive in Deep Groundwater	8/30/2019	8/29/2019	
16	Semiannual Progress Report on Chromium Plume Control Interim Measure Performance, January through June 2019	9/30/2019	9/18/2019	
17	2019 Annual Long-Term Monitoring and Maintenance Report for the Corrective Measures Implementation at Former 260 Outfall Area	9/30/2019	9/30/2019	
18	Technical Area 21 Delta Prime West Investigations Letter Report	9/30/2019	9/26/2019	10/28/2019
19	Field Completion Letter Report for Aggregate Area Known Cleanup Sites Campaign: SWMU 39-002(a), SWMU 46-004(q), SWMU 15-008(b), and SWMU 15-007(c)	9/30/2019	footnote <sup>c</sup>	
20	Chaquehui Canyon Aggregate Area Letter Report	9/30/2019	9/27/2019	

<sup>a</sup> See Enclosure 2 item #73.

<sup>b</sup> See Enclosure 3 item #2 and FY2020 Appendix B Milestones #2 and #6.

<sup>c</sup> See Enclosure 3 item #8.

**Enclosure 2**  
**Fiscal Year 2019 Other Deliverables to NMED and Submittal Dates**

Item Number	Title	Submittal Date
1	Monthly Notification of Groundwater Data Reviewed in October 2018	10/23/2018
2	Notification: Well R-69 NMED Complete	10/25/2018
3	Drilling Work Plan for Chromium Groundwater Project Regional Aquifer Monitoring Well R-70	10/30/2018
4	Fourth Quarterly Report on Pilot-Scale Amendments Testing for Chromium in Groundwater Beneath Mortandad Canyon	10/30/2018
5	Work Plan for Tracer Testing in Support of the Phase 2 Amendments Test for Chromium Plume Center Characterization	10/30/2018
6	Completion Report for Groundwater Injection Well CrIN-6, Revision 1	10/31/2018
7	Response to Draft Comments on the Investigation Report for Delta Prime Site Aggregate Area Sites at Delta Prime East Dated October 11, 2018	11/14/2018
8	Submittal of Request for Approval of Area of Contamination for the Investigation and Remediation of Technical Area 21	11/14/2018
9	Request for Certificate of Completion Without Controls for Area of Concern C-21-001 in the Delta Prime Site Aggregate Area	11/15/2018
10	2018 Annual Progress Report for the Corrective Measures Evaluation for the Deep Groundwater Investigation for Consolidated Unit 16-021(c)-99	11/16/2018
11	Work Plan to Reconfigure Monitoring Well(s) R-19 and R-31	11/19/2018
12	Request for Certificate of Completion Without Controls for Solid Waste Management Unit 01-006(d) in the Upper Los Alamos Aggregate Area	11/19/2018
13	Monthly Notification of Groundwater Data Reviewed in November 2018	11/19/2018
14	Fact Sheets for Regional Well R-69	11/19/2018
15	Work Plans for the Plugging and Abandonment of Wells and Boreholes for Fiscal Year 2019	11/29/2018
16	2018 Annual Periodic Monitoring Report for the General Surveillance Monitoring Group	11/29/2018
17	Completion Report for Regional Aquifer Well R-68, Revision 1	12/7/2018
18	Monthly Notification of Groundwater Data Reviewed in December 2018	12/14/2018
19	Request for Certificates of Completion for Four Solid Waste Management Units in the Lower Mortandad/Cedro Canyons Aggregate Area	12/17/2018
20	Request for Certificates of Completion for Ten Solid Waste Management Units and Ten Areas of Concern in the Threemile Canyon Aggregate Area	12/17/2018
21	Request for Certificates of Completion for Two Areas of Concern in Technical Area 57 Aggregate Area (Fenton Hill)	12/17/2018
22	2018 Biennial Inspection and Maintenance Report on Erosion Controls in Drainages to the 90s Line Pond at TA-16	12/17/2018
23	2018 Biennial Inspection and Maintenance Report on Erosion Controls Associated with SWMU 16-003(o) within Fishladder Canyon	12/17/2018
24	Response to Denial of Request for Certificates of Completion for Two Solid Waste Management Units in the Delta Prime Site Aggregate Area	12/19/2018
25	Investigation Report for Delta Prime Site Aggregate Area Sites at Delta Prime East, Revision 1	12/19/2018

**Enclosure 2**  
**Fiscal Year 2019 Other Deliverables to NMED and Submittal Dates**

Item Number	Title	Submittal Date
26	Replacement Pages for the Interim Facility-Wide Groundwater Monitoring Plan for the 2019 Monitoring Year, October 2018 to September 2019	12/20/2018
27	Monthly Notification of Groundwater Data Reviewed in January 2019	1/24/2019
28	Fifth Quarterly Report on Pilot-Scale Amendments Testing for Chromium in Groundwater Beneath Mortandad Canyon	1/31/2019
29	Request for Certificate of Completion Without Controls for Solid Waste Management Units 21-013(b), 21-018(a), 21-023(c) and Area of Concern 21-013(g)	2/6/2019
30	2019 Annual Periodic Monitoring Report for the TA-21 Monitoring Group, Los Alamos Canyon Watershed	2/25/2019
31	Monthly Notification of Groundwater Data Reviewed in February 2019	2/25/2019
32	Response to Comments on the Biennial Inspection and Maintenance Report on Erosion Controls Associated with Solid Waste Management Unit 16-003(o) Within Fishladder Canyon	3/1/2019
33	Response to Draft NMED Comments on the Supplemental Investigation Report for S-Site Canyon Aggregate Area Dated October 29, 2018	3/1/2019
34	Sediment Management Decision Tree Annual Report for Calendar Year 2017	3/4/2019
35	Sediment Management Decision Tree Annual Report for Calendar Year 2018	3/4/2019
36	Completion Report for Regional Aquifer Well R-69	3/21/2019
37	Land Application of Groundwater Decision Tree Annual Report for 2018	3/22/2019
38	Monthly Notification of Groundwater Data Reviewed in March 2019	3/25/2019
39	Response to Comments for the Letter Report Fieldwork Completion and Status for the Known Cleanup Sites Campaign at Solid Waste Management Units 03-049(a),50-006(d), and 46-004(q)	4/3/2019
40	2018 Annual Periodic Monitoring Report for the MDA AB Monitoring Group, Revision 1	4/8/2019
41	Response to Comments on Biennial Inspection and Maintenance Report on Erosion Controls in Drainages to the 90s Line Pond at Technical Area 16	4/8/2019
42	2018 Annual Periodic Monitoring Report for the TA-16 260 Monitoring Group, Revision 1	4/8/2019
43	Monthly Notification of Groundwater Data Reviewed in April 2019	4/23/2019
44	Sixth Quarterly Report on Pilot-Scale Amendments Testing for Chromium in Groundwater Beneath Mortandad Canyon	4/29/2019
45	Notification: Well R-70 NMED Complete	5/17/2019
46	Sampling and Analysis Plan for Well Reconfigurations at R-5, R-7, R-8, R-9i, R-19, R-25, and R-31, Revision 1 (Westbay)	5/23/2019
47	2019 Annual Periodic Monitoring Report for the Technical Area 54 Monitoring Group	5/24/2019
48	2019 Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group	5/24/2019

**Enclosure 2**  
**Fiscal Year 2019 Other Deliverables to NMED and Submittal Dates**

Item Number	Title	Submittal Date
49	2019 Annual Periodic Monitoring Report for Material Disposal Area C Monitoring Group	5/24/2019
50	Monthly Notification of Groundwater Data Reviewed in May 2019	5/29/2019
51	Response to Draft NMED Comments on Supplemental Investigation Report for Potrillo and Fence Canyons Aggregate Area, Dated May 13, 2019	6/7/2019
52	Fact Sheets for Regional Well R-70	6/12/2019
53	Extension Phase 2 Pilot Amendments Testing Work Plan Milestone (Milestone 10 FY19)	6/13/2019
54	Monthly Notification of Groundwater Data Reviewed in June 2019	6/25/2019
55	Response to NMED Comments on the Annual Periodic Monitoring Report for General Surveillance Monitoring Group, Dated November 2018	7/3/2019
56	Response to NMED Comments on the Completion Report for Regional Aquifer Well R-69 (RDX)	7/12/2019
57	Monthly Notification of Groundwater Data Reviewed in July 2019	7/23/2019
58	Request for Certificate of Completion with Controls for Solid Waste Management Unit 03-055(c)	7/23/2019
59	Extension Request for Submittal of Two Drilling Work Plans for Monitoring Wells R-35c and R-73	8/7/2019
60	Replacement pages for the Interim Facility-Wide Groundwater Monitoring Plan for the 2020 Monitoring Year, October 2019-September 2020	8/19/2019
61	Response to NMED comments on the 2019 Annual Periodic Monitoring Report for the Technical Area 54 Monitoring Group	8/20/2019
62	Request for Extension of Westbay Project Milestone	8/26/2019
63	2019 Annual Periodic Monitoring Report for the TA-16 260 Monitoring Group	8/27/2019
64	2019 Annual Periodic Monitoring Report for the MDA AB Monitoring Group	8/27/2019
65	Monthly Notification of Groundwater Data Reviewed in August 2019	8/27/2019
66	Response to Request for Additional Information Regarding Request for Extension of Westbay Wells Reconfiguration Completion Report	9/11/2019
67	Response to Draft Comments on the Addendum to the Phase II Investigation Report for Middle Los Alamos Canyon Aggregate Area (for Solid Waste Management Unit 02-014)	9/20/2019
68	Request for Extension Known Cleanup Sites Consent Order Milestone	9/20/2019
69	Monthly Notification of Groundwater Data Reviewed in September 2019	9/23/2019
70	Supplemental Work Plan for Pilot-Scale Amendments Testing for Chromium in Groundwater Beneath Mortandad Canyon	9/24/2019
71	Response to NMED Draft Comments on the Supplemental Investigation Report for Canon de Valle Aggregate Area Technical Area 14	9/24/2019

**Enclosure 3**  
**Fiscal Year 2020 Other Deliverables Planned to be Submitted to NMED**

Item Number	Title	Date
1	Response to NMED's 2nd Comment Response on the Annual Periodic Monitoring Report for General Surveillance Monitoring Group, November 2018	10/10/2019
2	Westbay Wells Reconfiguration Completion Report for R-5, R-7, R-8, R-9i, and R-19	10/16/2019
3	Phase II Investigation Work Plan for Delta Prime Site Aggregate Area Sites at Delta Prime East and Delta Prime West	10/23/2019
4	Monthly Notification of Groundwater Data Reviewed in October 2019	10/24/2019
5	Completion Report for Regional Aquifer Well R-69, Revision 1	10/31/2019
6	Updated Fiscal Year 2020 Appendixes A, B, and C to the 2016 Compliance Order on Consent	11/7/2019
7	Fiscal Year 2019 Consent Order Deliverable Accomplishments	11/7/2019
8	Field Completion Letter Report for Aggregate Area Known Cleanup Sites Campaign: Solid Waste Management Units 15-007(c), 15-008(b), 39-002(a), 46-004(q)	11/14/2019
9	Annual Periodic Monitoring Report for the Technical Area 54 Monitoring Group, Pajarito Canyon and Mortandad Canyon Watersheds, Revision 1	11/22/2019
10	Annual Periodic Monitoring Report for the General Surveillance Monitoring Group, Los Alamos/Pueblo Canyons, Mortandad/Sandia Canyons, Water/Cañon de Valle Canyons, White Rock Canyon and Rio Grande, and Pajarito Canyon Watersheds	11/30/2019
11	Annual Progress Report for the Corrective Measures Evaluation for the Deep Groundwater Investigation for Consolidated Unit 16-021(c)-99	11/30/2019
12	Monthly Notification of Groundwater Data Reviewed in November 2019	Nov-2019
13	Response to the Notice of Disapproval for the Work Plans for the Plugging and Abandonment of Wells and Boreholes for Fiscal Year 2019, and Revision 1	12/4/2019
14	Completion Report for Regional Aquifer Well R-70	12/20/2019
15	2019 Biennial Asphalt Monitoring and Removal Report Area of Concern C-00-041, Guaje/Barrancas/Rendija Canyons Aggregate Area	12/31/2019
16	2019 Triennial Ordinance Survey Report, Solid Waste Management Units 00-011(a, d, and e), Guaje/Barrancas/Rendija Canyons Aggregate Area	12/31/2019
17	Monthly Notification of Groundwater Data Reviewed in December 2019	Dec-2019
18	(2018) Annual PMR for the General Surveillance Monitoring Group, Los Alamos/Pueblo Canyons, Mortandad/Sandia Canyons, Water/Cañon de Valle Canyons, White Rock Canyon and Rio Grande, and Pajarito Canyon Watersheds, Revision 1	12/31/2019
19	Report on Pilot-Scale Amendments Testing for Chromium in Groundwater in Groundwater Beneath Mortandad Canyon (formerly 7th Quarterly)	12/31/2019
20	Monthly Notification of Groundwater Data Reviewed in January 2020	Jan-2020
21	Supplemental Investigation Report for Cañon de Valle Aggregate Area, Technical Area 14, Revision 1	1/31/2020



**Enclosure 3**  
**Fiscal Year 2020 Other Deliverables Planned to be Submitted to NMED**

Item Number	Title	Date
22	Annual Periodic Monitoring Report for the Technical Area 21 Monitoring Group, Los Alamos Canyon Watershed	2/28/2020
23	Monthly Notification of Groundwater Data Reviewed in February 2020	Feb-2020
24	Monthly Notification of Groundwater Data Reviewed in March 2020	Mar-2020
25	Addendum to the Phase II Investigation Report for Middle Los Alamos Canyon Aggregate Area, Revision 1	3/31/2020
26	2020 Monitoring Plan for Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	4/30/2020
27	2019 Monitoring Report for Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	4/30/2020
28	2019 Sandia Wetland Performance Report	4/30/2020
29	Monthly Notification of Groundwater Data Reviewed in April 2020	Apr-2020
30	Interim Facility-Wide Groundwater Monitoring Plan for the 2021 Monitoring Year, October 2020–September 2021	5/31/2020
31	Annual Periodic Monitoring Report for the Technical Area 54 Monitoring Group, Pajarito Canyon and Mortandad Canyon Watersheds	5/31/2020
32	Annual Periodic Monitoring Report for the Chromium Investigation Monitoring Group, Mortandad Canyon and Sandia Canyon Watersheds	5/31/2020
33	Annual Periodic Monitoring Report for the Material Disposal Area C Monitoring Group, Mortandad Canyon Watershed	5/31/2020
34	Monthly Notification of Groundwater Data Reviewed in May 2020	May-2020
35	Monthly Notification of Groundwater Data Reviewed in June 2020	Jun-2020
36	Monthly Notification of Groundwater Data Reviewed in July 2020	Jul-2020
37	Monthly Notification of Groundwater Data Reviewed in August 2020	Aug-2020
38	Annual Periodic Monitoring Report for the Technical Area 16 260 Monitoring Group	8/31/2020
39	Annual Long-Term Monitoring and Maintenance Report for the Corrective Measures Implementation at Consolidated Unit 16-021(c)-99	9/30/2020
40	Monthly Notification of Groundwater Data Reviewed in September 2020	Sep-2020