



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**



2016 Compliance Order on Consent Progress Update for FY 2019

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August 23, 2019



ENVIRONMENTAL MANAGEMENT
SAFETY ♦ PERFORMANCE ♦ CLEANUP ♦ CLOSURE



- **Legacy Cleanup Campaign Overview**
- **Consent Order Campaigns**
- **FY 2019 Consent Order Progress**
- **Observations**





- ❑ **EM-LA Lifecycle Cost Estimate (LCE) is based on a campaign approach and determined by funding**
 - **LCE is integrated with the 2016 Consent Order**
- ❑ **Multiple cleanup campaigns underway simultaneously**
- ❑ **Safe, efficient and transparent execution**





Consent Order Campaigns

Item #	Campaign Title	SWMUs/AOCs	Estimated Completion	Estimated Cost (M)
1	Chromium Interim Measure	1	2020 – 2022	\$38.9 - \$50.6
2	Historical Properties Completion	84	2019 – 2020	\$5.3 - \$6.4
3	Royal Demolition Explosives (RDX) Characterization	2	2022 – 2024	\$1.6 - \$2.1
4	Supplemental Investigations Reports	222	2019 – 2019	\$0 - \$1.0
5	TA-21 D&D and Cleanup	41	2020 – 2022	\$45.8 - \$54.9
6	RDX Remedy	0	2024 – 2025	\$22.3 - \$26.8
7	Known Cleanup Sites	20	2027 - 2028	\$34.8 - \$41.8
8	Material Disposal Area (MDAs) A & T Remedy	30	2028 – 2031	\$92.1 - \$124.3
9	Chromium Final Remedy	0	2026 – 2028	\$100.3 - \$130.0
10	Southern External Boundary	60	2025 – 2026	\$10.0 - \$12.0
11	MDA C Remedy	1	2024 – 2026	\$34.6 - \$48.7
12	Sandia Canyon Watershed	49	2024 – 2025	\$6.3 - \$7.6
13	Pajarito Watershed	167	2028 – 2030	\$20.7 - \$24.9
14	Upper Water Watershed	253	2030 – 2031	\$33.5 - \$40.2
15	MDA AB Remedy	12	2027 – 2030	\$41.8 - \$50.2
16	MDA H Remedy	1	2029 – 2030	\$15.3 - \$18.3
17	MDA G & L Remedy / D&D	12	2035 – 2040	\$237.9 - \$356.9

Highlighted rows indicate campaigns currently underway





Chromium Interim Measure & Characterization Campaign

Milestone #	Milestone	Description	Due Date
5	Sandia Canyon Wetland Performance Report for Period Jan 2018 - Dec 2018	Report on results of monitoring necessary to document efficacy of wetland stabilization efforts.	4/30/2019 (Met)
2, 16	Semiannual Performance Monitoring Progress Reports of the Chromium Plume Control Interim Measure (July 2018 to December 2018) and (January 2019 to June 2019)	These progress reports will include summaries of the data collected from performance monitoring wells, operational activities, and analysis of performance of the IM with respect to the plume control objective. Modeling may be included as necessary to support the analysis. The reports may also include recommendations for the subsequent operating year.	3/29/2019 (Met) & 9/30/2019
9	Completion Report for Conversion of CrIN-6 to CrEX-5 and Integration into Chromium IM System	This report will include information associated with conversion of CrIN-6 to an extraction well (CrEX-5) in accordance with an NMED-approved work plan. The report will also include as-built information for CrEX-5.	6/28/2019 (Met)
8	Letter Report Documenting Completion of R-70 and Collection of First Samples	R-70 will be located down gradient of CrIN-6 and will monitor performance of IM activities, specifically associated with the northeastern portion of the plume.	5/31/2019 (Met)
10	Phase 2 Pilot Amendment Testing Work Plan	The work plan will provide the description of the test design and data collection needs to meet the work plan objectives.	6/28/2019 (Met)

Southern External Boundary Campaign

Milestone #	Milestone	Description	Due Date
20	Chaquehui Canyon Aggregate Area Letter Report	Letter report that summarizes the fieldwork implementation and status of site investigations in Chaquehui Canyon Aggregate Area.	9/30/2019





Historical Properties Completion Campaign

Milestone #	Milestone	Description	Due Date
6	Addendum to the Middle Los Alamos Canyon Aggregate Area Phase II Investigation Report for SWMU 02-014	Addendum to the Phase II Investigation Report that documents investigation activities at SWMU 02-014. This SWMU consists of three former electrical transformer stations that served buildings in Technical Area 2.	4/30/2019 (Met)

Royal Demolition Explosives (RDX) Characterization Campaign

Milestone #	Milestone	Description	Due Date
1	R-69 Field Completion	Letter report documenting field completion of the well and first samples completed. This is a campaign level milestone because data from R-69 is necessary to address important conceptual model questions for the Investigation Report for Deep Groundwater.	Met
15	Investigation Report for Deep Groundwater	Investigation report that culminates results of investigation activities associated with deep groundwater and includes a groundwater risk assessment. Follows completion and multiple rounds of data collection at R-69.	8/30/2019
17	Annual Long-Term Monitoring Report of Results following Surface RDX Corrective Measures Implementation Completion	Executes the reporting required in the Remedy Completion Report for Corrective Measures Implementation at Consolidated Unit 16-021(c)-99 for long-term monitoring and inspections.	9/30/2019





Supplemental Investigation Reports Campaign

Milestone #	Milestone	Description	Due Date
7	Supplemental Investigation Report (SIR) for S-Site Canyon Aggregate Area, Revision 1	Resolve NMED comments, incorporate changes, and submit Revision 1 to the SIR	4/30/2019 (Met)
13	Supplemental Investigation Report (SIR) for Potrillo/Fence Canyons Aggregate Area, Revision 1	Resolve NMED comments, incorporate changes, and submit Revision 1 to the SIR	7/31/2019 (Met)

TA-21 D&D and Cleanup Campaign

Milestone #	Milestone	Description	Due Date
18	TA-21 Delta Prime (DP) West Investigations Letter Report	Letter report that summarizes the initiation of investigation activities after the removal of waste lines at DP West.	9/30/2019

Known Cleanup Sites (Above SSLs) Campaign

Milestone #	Milestone	Description	Due Date
19	Field Completion Letter Report for Aggregate Area Known Cleanup Sites; SWMU 39-002(a), SWMU 46-004(q), SWMU 15-008(b), and SWMU 15-007(c)	Letter report documenting field completion of cleanups of remaining four sites currently known to exceed soil screening levels. Sites to be addressed are; SWMU 39-002(a), SWMU 46-004(q), SWMU 15-008(b), and SWMU 15-007(c).	9/30/2019





Material Disposal Areas A and T Remedy Campaign

Milestone #	Milestone	Description	Due Date
11	Submit Revised Work Plan for Vadose Zone Moisture Monitoring at MDA T within the NES	The revised work plan will include proposed drilling, characterization activities, and installation and instrumentation of a vadose zone moisture monitoring system at MDA T within the NES.	6/28/2019 (Met)

Multi-Campaign Milestones

Milestone #	Milestone	Description	Due Date
12	Annual Update to the Interim Facility-Wide Groundwater Monitoring Plan (IFGMP) for MY2020 (October 2019-September 2020)	Annual update to the groundwater monitoring program baseline document with adjustments to sampling, monitoring groups, analytes, and frequencies based on previous results.	6/30/2019 (Met)
14	Westbay Wells Reconfiguration Completion Report for R-5, R-7, R-8, R-9i, R-19, R-25, and R-31	This report will include a summary of field activities and as-built information associated with reconfiguration of R-5, R-7, R-8, R-9i, R-19, and R-31, and plugging and abandonment of R-25 which requires removal of the Westbay system.	8/30/2019
3	Annual Monitoring Report for the Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	Annual report of last year's results that addresses the performance of stormwater controls installed in the LA/Pueblo watershed.	4/30/2019 (Met)
4	Annual Monitoring Plan for the Los Alamos/Pueblo Watershed Sediment Transport Mitigation Project	Annual plan for the upcoming year that addresses the performance of stormwater controls installed in the LA/Pueblo watershed.	4/30/2019 (Met)





- **The 2016 Consent Order focuses on fieldwork**
- **The flexibility built into the Consent Order has enabled us to make significant cleanup progress**
- **Public participation is key to learn more about the community's cleanup priorities**
 - **We're addressing this need through our enhanced stakeholder engagement program**

