

APPENDIX C
FUTURE CAMPAIGNS

Appendix C – Campaigns

The following sections list and describe the campaigns expected to be performed at LANL. The campaigns listed below will complete the work scope under the Consent Order.

A. Chromium Interim Measures and Characterization Campaign – in progress

This campaign includes installation and operation of wells and associated equipment necessary to meet three primary objectives: 1) provide interim measures to prevent migration of the plume beyond the Laboratory boundary; 2) perform scientific studies and aquifer testing to obtain data necessary to conduct a corrective measures evaluation; and 3) conduct a corrective measures evaluation. This is an approximately 2-3 year campaign (remaining). (SWMUs/AOCs: 0)

B. Historical Properties Completion Campaign – in progress

This campaign involves additional investigation and remediation as necessary for: 1) sites located in the historical location of the Laboratory and 2) former Laboratory properties that were transferred and are private properties or that require access through private property. This is an approximately 15 month campaign (remaining). (SWMUs/AOCs: 80)

- Rendija Canyon Aggregate Area¹ munitions controls and asphalt removal (SWMUs/AOCs: 4)
- Pueblo Canyon Aggregate Area Phase II cleanup and Phase III IR (SWMUs/AOCs: 6)
- Upper Los Alamos Canyon Aggregate Area 12 cleanups and Phase II IR (SWMUs/AOCs: 22)
- Middle Los Alamos Canyon Aggregate Area PCB cleanup at AOC 02-011(a), ECORisk studies, and Phase II IR (SWMUs/AOCs: 39)
- SWMUs and AOCs in TA-0 and TA-1 (SWMUs/AOCs: 9)

C. Royal Demolition Explosives (RDX) Interim Measures and Remedy Campaign – in progress

This campaign includes: 1) interim measures to prevent further migration of RDX; 2) characterization of the intermediate/regional groundwater through well installation, tracer studies and source control necessary to conduct a corrective measures evaluation; and 3) selection and implementation of a remedy. This is an approximately 2-3 year campaign (remaining). (SWMUs/AOCs: 2)

¹ For purposes of Appendix C, “aggregate area” means an area within a single watershed or canyon made up of one or more SWMUs or AOCs and the media affected or potentially affected by releases from those SWMUs or AOCs, and for which investigation or remediation, in part or in entirety, is conducted for the area as a whole in order to address area-wide contamination, ecological risk assessment, and other factors.

D. Administrative Site Completion Campaign (Supplemental Investigation Reports) – in progress

This campaign includes preparation and submission of ten supplemental investigation reports and, where appropriate, submission of requests for Certificates of Completion. Previous investigations were conducted for ten aggregate areas and the results were reported in Investigation Reports (IR). Following submittal of these IRs, NMED updated its position on defining nature and extent of contamination. Therefore, the data for aggregate areas, where IRs have already been submitted, will be reassessed to determine if that data documents the nature and extent of contamination for SWMUs and AOCs in each of the ten aggregate areas and whether each SWMU or AOC poses an unacceptable risk to human health and the environment. This is an approximately 15 month campaign (remaining). These aggregate areas include the following:

- S-Site Aggregate Area. (Submitted) (SWMUs/AOCs: 60)
- Potrillo and Fence Canyons Aggregate Areas. (Submitted) (SWMUs/AOCs: 14)
- Threemile Canyon Aggregate Area. (Submitted) (SWMUs/AOCs: 20)
- TA-49 Inside the Nuclear Environmental Site Boundary. (SWMUs/AOCs: 10)
- TA-49 Outside the Nuclear Environmental Site Boundary. (SWMUs/AOCs: 3)
- Cañon de Valle TA-14. (SWMUs/AOCs: 21)
- North Ancho Canyon Aggregate Area. (SWMUs/AOCs: 3)
- Lower Sandia Canyon Aggregate Area. (SWMUs/AOCs: 16)
- Upper Cañada del Buey Aggregate Area (SWMUs/AOCs: 48)
- Mortandad Canyon Aggregate Area (Submitted) (SWMUs/AOCs: 22)

E. TA-21 D&D and Cleanup Campaign – in progress

This campaign includes the removal and remediation of buried waste lines and contaminated soils to be performed as part of the DP Site Aggregate Area investigation. Demolition of facilities and slabs are not part of the Consent Order and will be executed under DOE requirements; the facilities to be demolished include the DP West slabs and the Radiological Liquid Waste Treatment Facility, TA-21-257, enabling access to the SWMUs and AOCs. (SWMUs/AOCs: 52)

F. Los Alamos/Pueblo Canyons Campaign – in progress

This campaign includes continued sediment monitoring of stormwater controls structures installed in both Los Alamos and Pueblo Canyons to address long-term performance of the structures and address the movement of primarily radionuclides but also Contaminants subject to the Consent Order. This is an approximately 15 month campaign. (SWMUs/AOCs: 1)

G. Known Cleanup Sites (Above SSLs) Campaign

This campaign includes soil removal from twenty sites that previous investigations identified have hazardous contaminants at concentration that exceed the target risk levels of 10^{-5} lifetime excess cancer risk for carcinogenic Contaminants and a hazard index (HI) of 1 for non-carcinogenic Contaminants. This is an approximately 15 month campaign. (SWMUs/AOCs: 20)

- H. Material Disposal Areas A and T Remedy Campaign (MDAs –A & -T Remedy)
This campaign includes completion of additional characterization of the pit and trench wastes at MDA-A and performance of moisture monitoring at MDA-T including installation of instrumentation of boreholes, application of water to bermed area, and monitoring of boreholes for moisture to conduct corrective measures evaluations for both MDA-A and MDA-T. These CMEs will result in NMED's statements of basis and selections of a remedy, and then the campaign will implement the remedies. This is an approximately 5 year campaign – excluding implementation (which might be another 2-3 years). (SWMUs/AOCs: 26 SWMUs (plus 1 for MDA-A and 3 for MDA-T))
- I. Chromium Final Remedy Campaign
Building on the Chromium IM and Characterization Campaign, following NMED's statements of basis and selection of a remedy, this campaign includes implementation of the remedy. This is potentially a 4-5 year campaign. (SWMUs/AOCs: 0)
- J. Southern External Boundary Campaign
This campaign includes, as appropriate, initial investigations, remediation of media above soil screening levels, risk assessments, and certificates of completion for three aggregate areas. Aggregate Areas have generally been investigated from north to south across the Laboratory. These three areas are in the border area between the Laboratory, Bandelier, and White Rock populated areas. This is an approximately 2-1/2 year campaign. This campaign shall be conducted in the following areas (SWMUs/AOCs: 59):
- Chaquehui Canyon Aggregate Area Initial Investigation
 - South Ancho Canyon Aggregate Area initial Investigation
 - Lower Water Canyon Aggregate Area Initial Investigation
- K. Material Disposal Area C Remedy Campaign (MDA-C Remedy)
This campaign includes implementation of a remedy resulting from NMED's statement of basis and selection of a remedy derived from a corrective measure evaluation previously submitted. This campaign will include development of a corrective measures implementation plan, implementation of the remedy, and development of the corrective measures report. This is an approximately 4 year campaign. (SWMUs/AOCs: 1)
- L. Sandia Canyon Watershed Campaign
This campaign includes completion of several investigations that are already in progress in the central portion of the Laboratory for certain Aggregate Areas. This is an approximately 2-year campaign, and it includes the following (SWMUs/AOCs: 50):
- Upper and Lower Sandia Canyon Aggregate Areas Phase II Investigations
 - Mortandad Canyon Aggregate Area Phase II Investigation
 - Upper Cañada del Buey Aggregate Area Phase II Investigation
- M. Pajarito Watershed Campaign
This campaign includes initial investigations in some Aggregate Areas for which investigation has not yet occurred as well as completion of those investigations that are

already in progress for other Aggregate Areas in the central portion of the Laboratory. For these areas, this campaign includes remediation, as appropriate, for media above soil screening levels. This is an approximately 2-1/2 year campaign that includes the following (SWMUs/AOCs: 172):

- Upper Pajarito Canyon Aggregate Area Phase II Investigation
- Twomile Canyon Aggregate Area Initial Investigation
- Starmer Canyon Aggregate Area Phase II Investigation
- Threemile Canyon Aggregate Area Phase II/III Investigation and known site cleanups
- Lower Pajarito Canyon Aggregate Area Initial Investigation

N. Upper Water Watershed Campaign

This campaign includes initial investigations in some Aggregate Areas for which investigation has not yet occurred as well as completion of those investigations that are already in progress for other Aggregate Areas. For these areas, this campaign includes remediation, as appropriate, for media above soil screening levels. This is an approximately 2-1/2 year campaign that includes the following (SWMUs/AOCs: 279):

- Cañon de Valle TA-15 Initial Investigation and IR
- Cañon de Valle TA-16 Initial Investigation and IR
- Cañon de Valle TA-14 Phase II Investigation and IR
- Upper Water Canyon Aggregate Area Initial Investigation

O. Material Disposal Area AB Remedy Campaign (MDA-AB Remedy)

This campaign includes additional characterization of the shaft areas inside and outside of the Nuclear Environmental Site (NES) boundary and completion of the corrective measures evaluation. Following NMED's statement of basis and selection of a remedy, this campaign includes development of a corrective measures implementation plan, implementation of the remedy, and development of the corrective measures report. This is an approximately 4 year campaign. (SWMUs/AOCs: 13)

P. Material Disposal Areas H Remedy Campaign (MDA-H Remedy)

Following NMED's statement of basis and selection of a remedy, this campaign includes development of a corrective measures implementation plan, implementation of the remedy, and development of the corrective measures report. This is an approximately 4 year campaign. (SWMUs/AOCs: 1)

Q. Material Disposal Areas G and L Remedy Campaign (MDAs-G & -L Remedy)

Following NMED's statements of basis and selection of a remedy for MDA-L and MDA-G, this campaign includes development of a corrective measures implementation plans, implementation of the remedies, and development of the corrective measures reports. This campaign will also perform soil vapor extraction (SVE) of volatile organic compounds as an interim measure while an asphalt cover still exists above MDA-L. This interim measure will address a subsurface vapor plume that is relatively shallow and has

not yet progressed towards the basalt layer above the water table. This is an approximately 5 year campaign. (SWMUs/AOCs: 12)

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