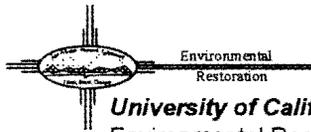


# Los Alamos National Laboratory

ENVIRONMENTAL RESTORATION



Environmental Restoration  
**University of California**  
Environmental Restoration, MS M992  
Los Alamos, New Mexico 87545  
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**U. S. Department of Energy**  
Los Alamos Area Office, MS A316  
Los Alamos, New Mexico 87544  
505-665-7203  
FAX 505-665-4504

*Date:* **February 16, 1996**  
*Refer to:* **EM/ER:96-065**

Ms. Barbara Driscoll  
NM Federal Facilities Section  
Multimedia Planning and Permitting Division  
U.S. Environmental Protection Agency  
Region 6, 6PD-N  
1445 Ross Avenue, Suite 1200  
Dallas, TX 75202-2733

**SUBJECT: RESPONSE TO THE NOTICE OF DEFICIENCY (NOD) FOR  
OPERABLE UNIT (OU) 1079**

Dear Barbara:

Enclosed is the Los Alamos National Laboratory's response to the Environmental Protection Agency's (EPA's) NOD concerning potential release sites 10-001(a-d) of the OU 1079 Resource Conservation and Recovery Act Facility Investigation Report. A certification form signed by the appropriate officials is also enclosed. The NOD was received at the Los Alamos Area Office on January 16, 1996. The enclosed response repeats each comment from the NOD for convenience in reviewing.

Please contact Garry Allen at (505) 667-3394 or Bonnie Koch at (505) 665-7202, if you have any questions about this response to the NOD.

Sincerely,

Handwritten signature of Jorg Jansen in black ink.

Jorg Jansen, Program Manager  
Environmental Restoration

Sincerely,

Handwritten signature of Theodore J. Taylor in black ink.

Theodore J. Taylor, Program Manager  
Los Alamos Area Office

JJ/TT/bp

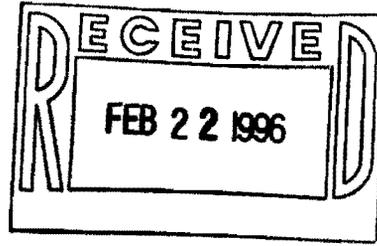
Enclosures: Response to NOD  
Certification



3394

Cy w/enc.):

G. Allen, CST-18, MS E525  
B. Garcia, NMED-HRMB  
D. Griswold, ERD, AL, MS A906  
J. Harry, EM/ER, MS M992  
B. Hoditschek, NMED-HRMB  
N. Naraine, EM-453, DOE-HQ  
R. Kern, NMED-HRMB  
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T. Taylor, LAAO, MS A316 (2 copies)  
N. Weber, Bureau Chief, NMED-AIP, MS J993  
J. White, ESH-19, MS K498  
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Cy (w/o enc.):

T. Baca, EM, MS J591  
T. Glatzmaier, DDEES/ER, MS M992  
D. McInroy, EM/ER, MS M992  
G. Rael, ERD, AL, MS A906  
W. Spurgeon, EM-453, DOE-HQ  
J. Vozella, LAAO, MS A316

## CERTIFICATION

I certify under penalty of law that these documents 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 knowing violation.

Document Title: Response To The Notice Of Deficiency For Operable Unit 1079

Name:  Date: 2-15-96  
Jorg Jansen, Program Manager  
Environmental Restoration Project  
Los Alamos National Laboratory

or

Tom Baca, Program Director  
Environmental Management  
Los Alamos National Laboratory

Name:  Date: 2/15/96  
Joseph Vozella,  
Acting Assistant Area Manager of  
Environment Projects  
Environment, Safety, and Health Branch  
DOE-Los Alamos Area Office

or

Theodore J. Taylor  
Program Manager  
Environment Restoration Program  
DOE-Los Alamos Area Office

**DEFICIENCY 1**

The grid size (500 foot intervals) used for sampling in Phase I may be appropriate for determining if there is gross contamination over a very large area but does not specifically address the firing pads for SWMUs 10-001(a-d). EPA contends that an insufficient number of samples were collected to plausibly conclude that there is no human health risk at the site. LANL should sample the area around the firing pads using a statistically based or grid-based sampling plan for Phase II which will support a risk assessment.

**RESPONSE**

Los Alamos National Laboratory (LANL) has sampled the area surrounding and including the firing pads using a statistically based and grid-based sampling plan, which was approved by the Environmental Protection Agency (EPA). This sampling plan is described in Subsection 5.1.1.6 of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan for Operable Unit 1079 (LANL 1992, 0783). The statistical basis for the grid size (500-ft intervals) is explained in Appendix B of the work plan. Process knowledge and Phase I results support the use of the approved sampling plan.

LANL has identified EPA's question concerning the adequacy of an approved Phase I sampling plan as a programmatic issue. Whether an approved Phase I plan presents a biased sampling approach or a grid-based sampling approach, LANL is of the impression that a site can be recommended for no further action (NFA) if Phase I results show all levels of contaminants below screening action levels (SALs).

**DEFICIENCY 2**

Figure 1-3 somewhat alludes to the location of SWMUs 10-001(a-d); although, SWMU 10-001(a) is mislabeled. LANL should provide a figure which clearly delineates in detail the location of each SWMU. In addition, the location of the SWMUs should also be labeled on each of the sampling figures.

**RESPONSE**

The figures have been revised in response to EPA's noted deficiency and are included with this NOD response as Figs. 1-3, 4-1, and 4-2. Fig. 1-3 now indicates more clearly the location of each solid waste management unit (SWMU), and SWMU 10-001(a) is correctly labeled. Also, Figs. 4-1 and 4-2 now show the locations of the SWMUs.

**DEFICIENCY 3**

The calculation of the upper tolerance limits should be revised to reflect 95 percent coverage of the 95 percent confidence interval.

**RESPONSE**

LANL has identified the differences resulting from using the new background upper tolerance limits (UTLs) (which are based on 95 percent coverage of the 95 percent confidence interval) in the screening assessment for SWMUs 10-001(a-d). Two inorganic chemicals that were detected at levels below the UTLs used in the RFI report (which were based on 99 percent coverage of the 95 percent confidence interval) have concentrations greater than their new UTLs. These are calcium and lead. However, the results for these two inorganics are not statistically greater than the range of background results.

In addition, the maximum lead result of 28.3 mg/kg is well below the SAL of 400 mg/kg. Calcium has no SAL, but it is an essential nutrient for human health. Calcium was detected at a maximum concentration of 33 900 mg/kg. The recommended daily allowance for calcium is 800 mg per day for people of ages 1 to 10, and toxic concentrations are much higher (National Research Council 1989, 1251). The average soil intake for people of ages 1 to 10 is 200 mg per day. A person ingesting site soil of the highest calcium concentration at the average intake rate would ingest 6.78 mg of calcium per day, which is well below the recommended daily allowance. Therefore, neither lead nor calcium are retained as chemicals of potential concern (COPCs) using the new UTLs, and the conclusions and recommendations presented in the RFI report remain the same.

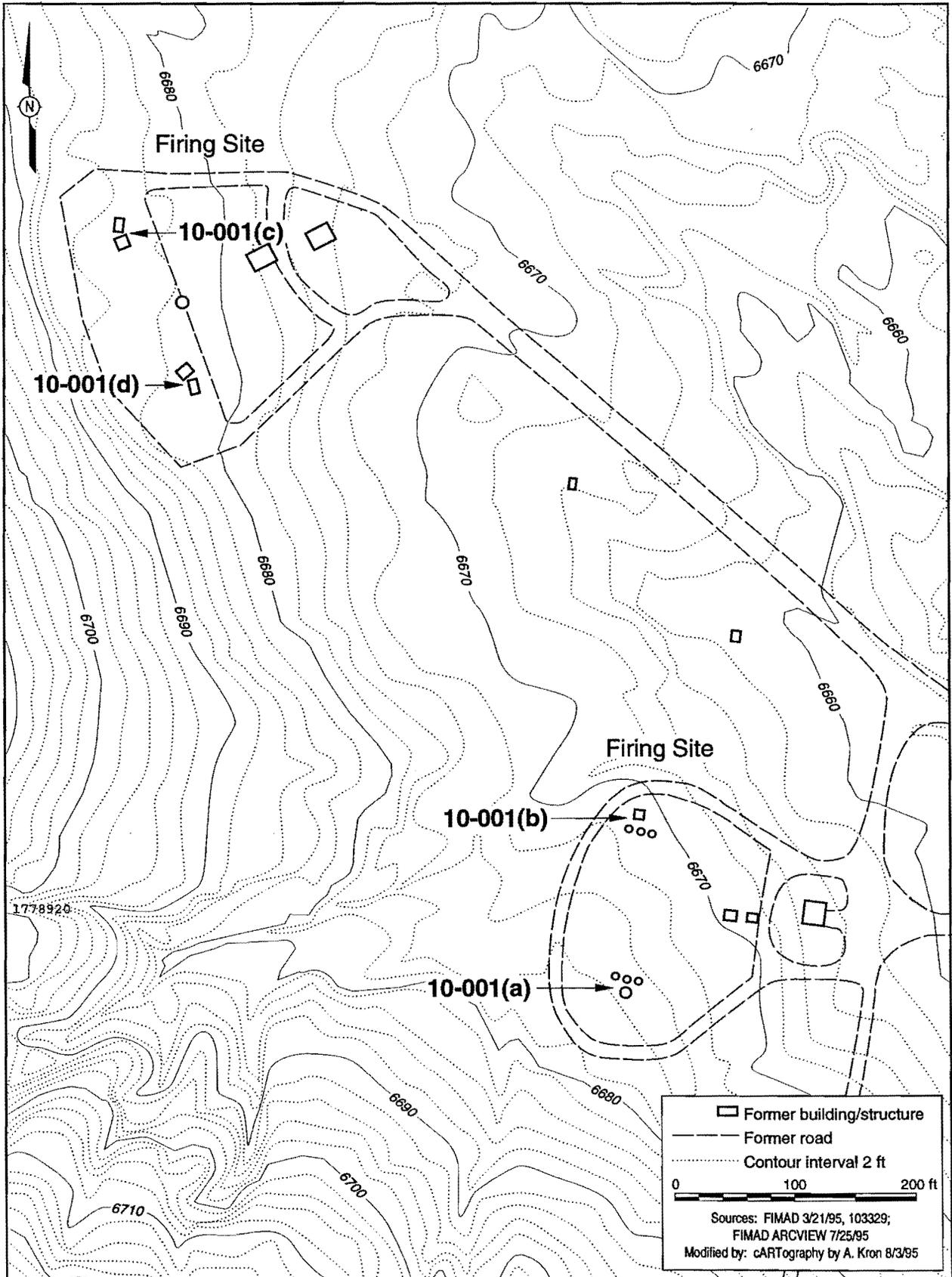


Fig. 1-3. Locations of firing sites and former buildings at SWMUs 10-001(a-d).

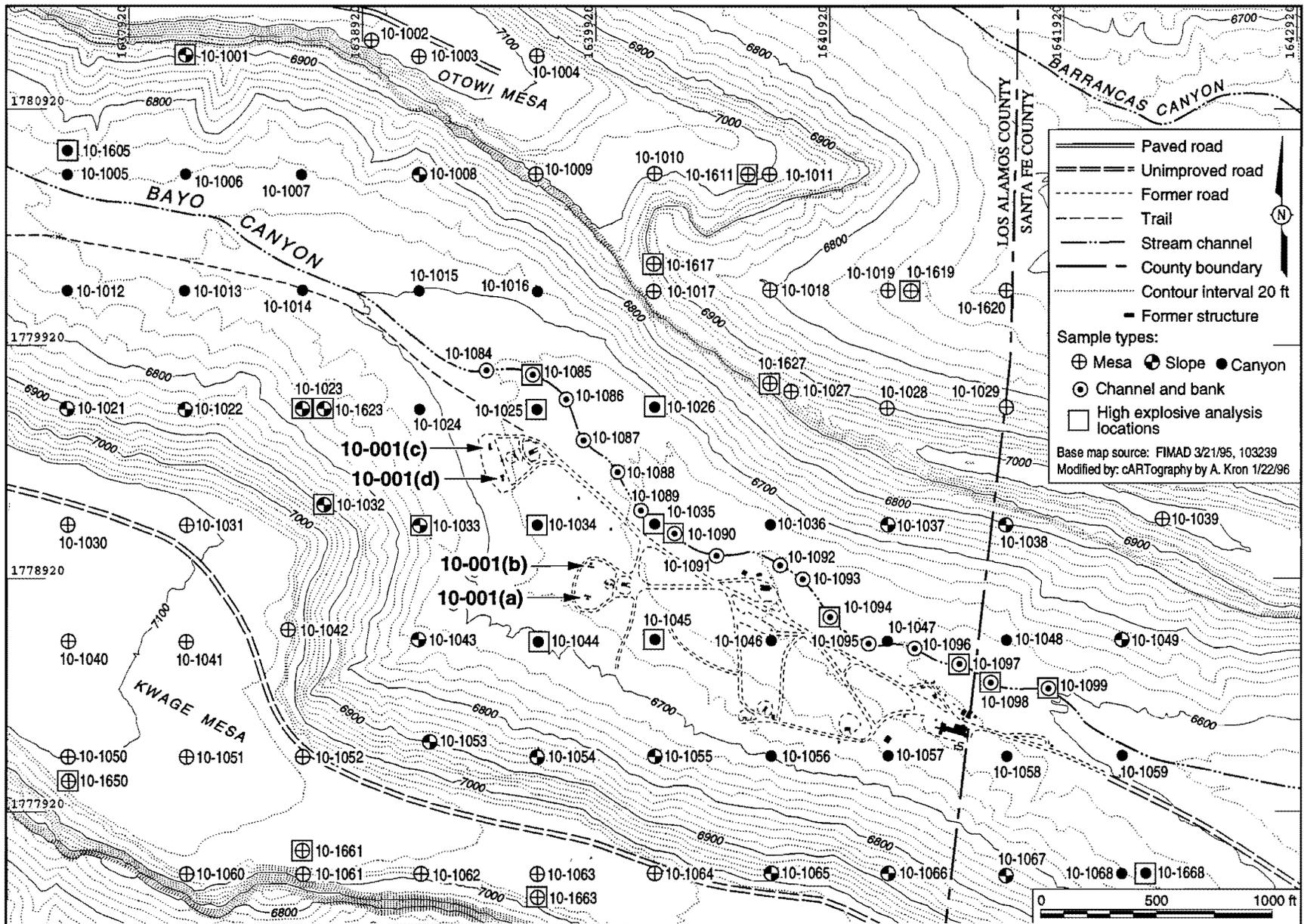


Fig. 4-1. TA-10 surface sampling locations by location group.

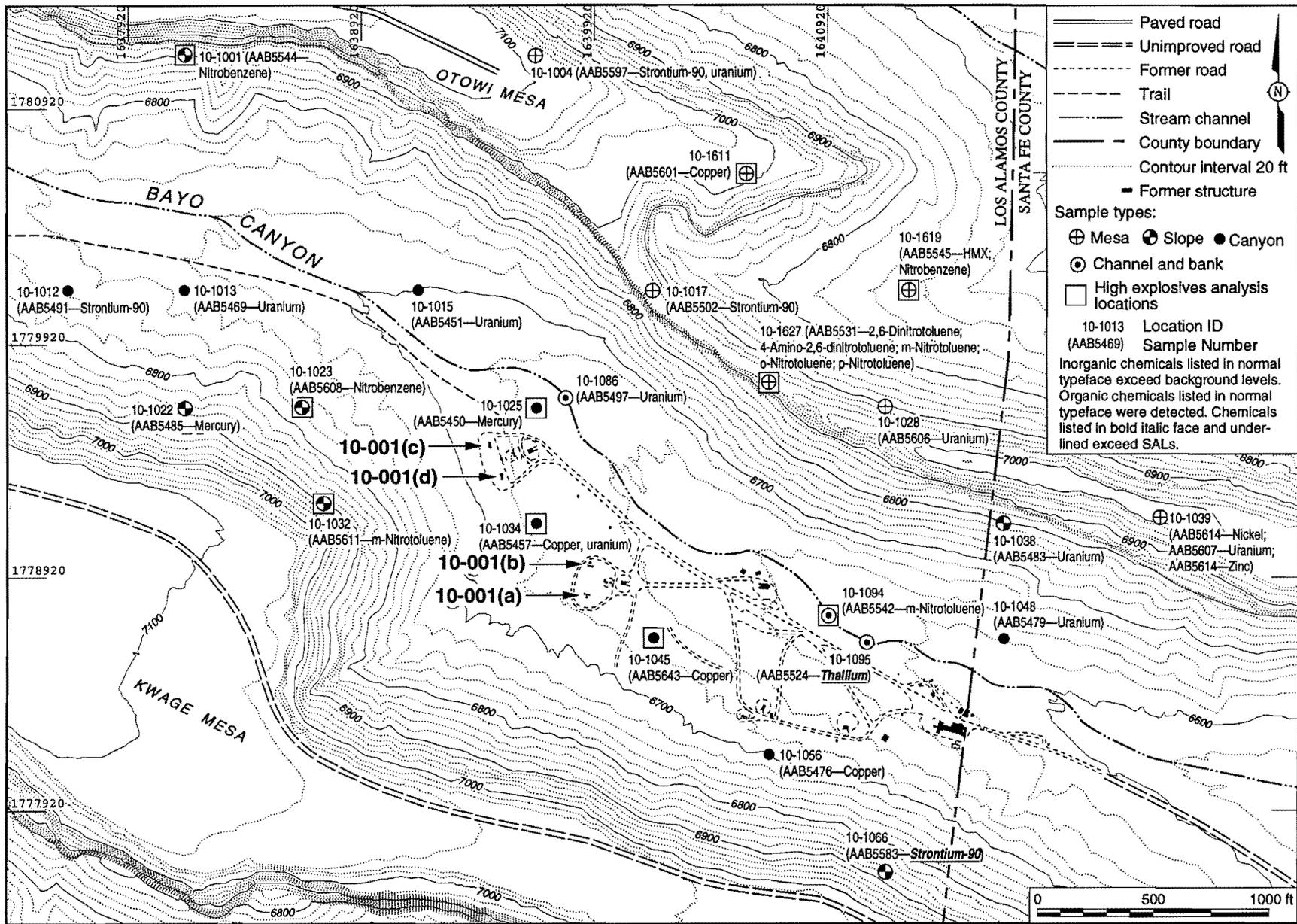


Fig. 4-2. Locations of detected organic chemicals, inorganic chemicals and radionuclides that exceed background levels, and all chemicals that exceed SALs at SWMUs 10-001(a-d).

**REFERENCES**

National Research Council, 1989. "Recommended Dietary Allowances," 10th Edition, National Academy Press, Washington, DC. **(National Research Council 1989, 1251)**

LANL (Los Alamos National Laboratory), May 1992. "RFI Work Plan for Operable Unit 1079," Los Alamos National Laboratory Report LA-UR-92-850, Los Alamos, New Mexico. **(LANL 1992, 0783)**