# V-Site/Building 27 VCA

LANL/DOE Presentation to NMED
LANL Field Unit 3

Roy Michelotti
John McCann

February 14, 1997

6035

# Overview

- Review of V-Site VCA Strategy (D&D Coordination)
- Workplan sampling PRS (little soil contamination anticipated)
- Augmented workplan sampling (soil contamination anticipated)
- Surface water issues
- Want NMED input/concurrence

# SITE HISTORIES

- V-SITE
  - Primary operations were HE casting and assembly.
  - Operated from roughly 1944 to 1960.

- Building 27
  - Primary operation was HE casting.
  - Operated from 1945 to 1954.

## Review of V-Site VCA Strategy

- Two stage cleanup strategy

  - D&D excavation/screening/cleanup phase

  - Verification/bounding phase (generally full suite analyses)

- TA-16-27 & surface PRSs sampled early

- Principal COPCs are RDX, TNT and barium

## General Changes to Approved Workplan Strategy

- Increased laboratory and screening samples
  - Phase II and cleanup samples added
- Heavy equipment may be used instead of augers
- Immunoassay field methods used, as well as spot test, for screening HE
- Verification samples biased using XRF, D-Tech screening

# Workplan Sampling PRSs - Minimal Soil Cleanup Anticipated (anticipated Phase I NFAs)

| PRS | Description | Screening Samples | Laboratory Samples |
|---|---|---|---|
| 16-013 | Storage area | 5 | 2 |
| 16-025(x) | TA-16-100 electroplating bldg. footprint | 8 | 3 |
| 16-029(w) | TA-16-100 sump/drainline | 10 | 3 |
| 16-031(d) | TA-16-28 cooling tower | 5 | 1 |
| 16-034(p) | TA-16-41 basement | 9 | 3 |
| C-16-065 | Drum storage platform | 5 | 1 |
| C-16-068 | TA-16-522 footprint | 4 | 1 |
| C-16-074 | Drum storage | 4 | 1 |

# Augmented Workplan sampling (cleanup likely)

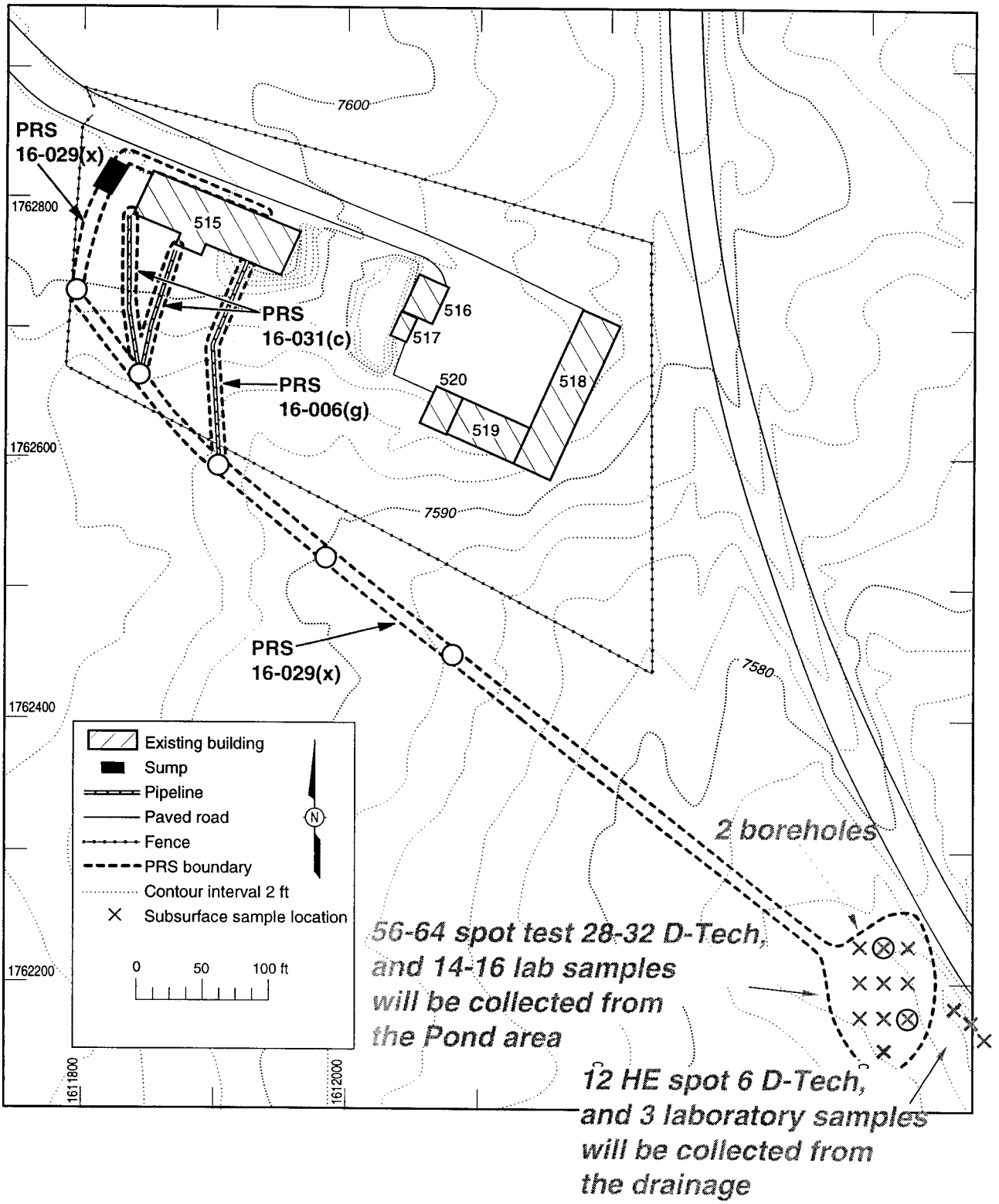
| PRS | Description | Workplan Screening | VCA Screening[a] | Workplan Lab | VCA Lab |
|---|---|---|---|---|---|
| 16-017 | Building foundations and structures | NA | 40/80 | NA | 20 |
| 16-026(q) | TA-16-27 sumps and drainages | 27 | 60-80/ 120-160 | 14 | 30-40 |
| **16-029(x)** & 16-031(c) | TA-16-515 sump | 20 | 120/60 | 7 | 27-31 |
| 16-006(g) | Septic tank TA-16-527 for building TA-16-515 | 1 | 4/8 | 1 | 2 |
| 16-029(h2) | Drainline for TA-16-95, -96, -97, -98 | 10 | 12-14/ 24-28 | 3 | 6-7 |
| 16-005(d) | Septic tank TA-16-177 for building TA-16-27 | 5 | 10/20 | 3 | 3 |
| 16-006(h) | Pump pit TA-16-526 | NA | 0 | NA | 2 |
| 16-029(g2) | Pit TA-16-523 | NA | 0 | NA | 2 |

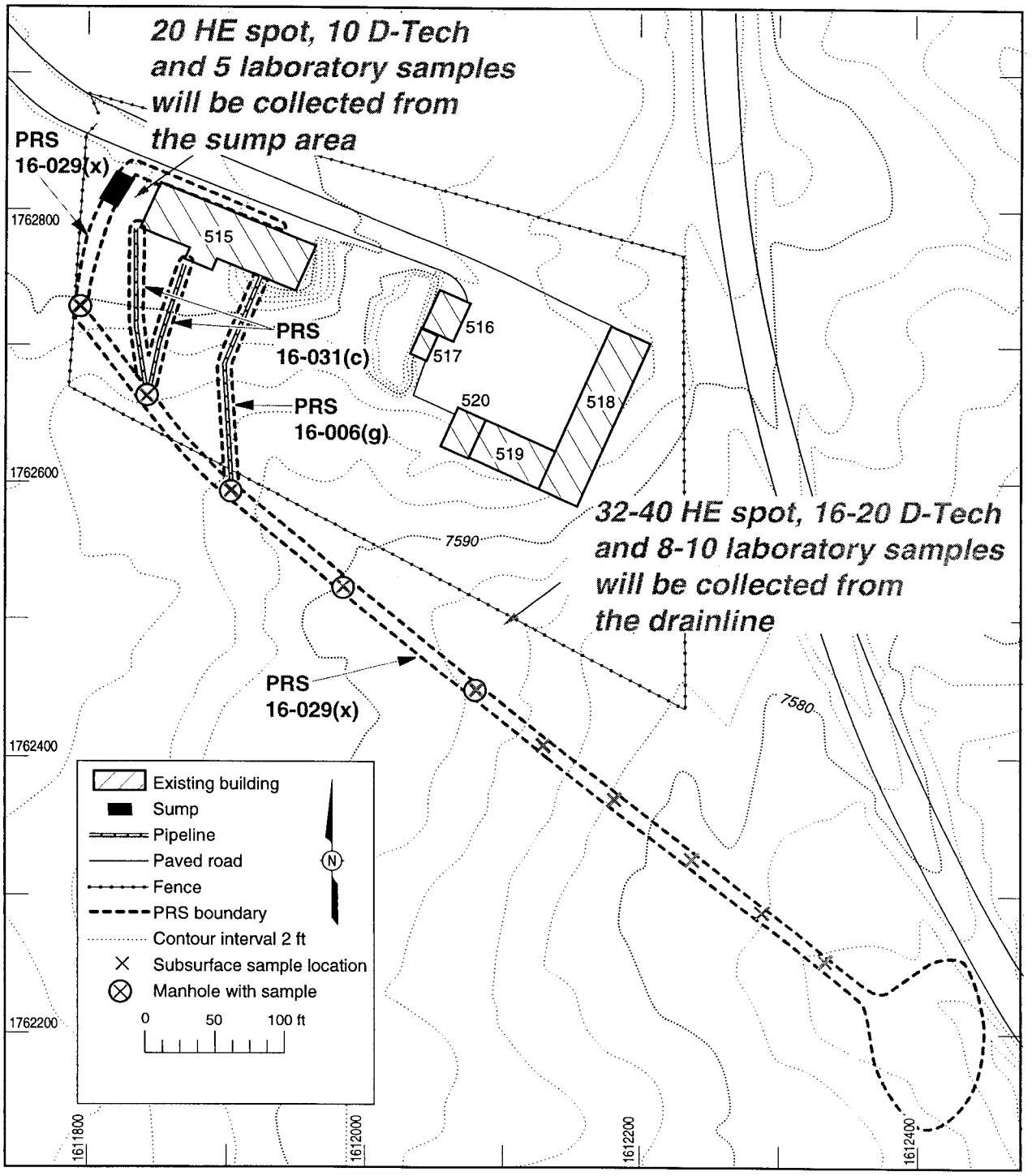
[a] D-Tech/HE Spot test

NA = No sampling in original Work Plan

# PRS 16-029(x) - Sump and Drainline at TA-16-515
# Cleanup Description

- Sample pond drainage area (lateral bounding)
- Drill pond area (stopping rules for volume and waste here)
- D&D excavates sumps, drain line, manholes
- Field Screening - spot test and XRF biased to stains, leaks and joints


PRS
16-029(x)
1762800
515
516
517
520
518
519
PRS
16-031(c)
PRS
16-006(g)
1762600
7600
7590
7580
PRS
16-029(x)
1762400
1762200
1611800
1612000
Existing building
Sump
Pipeline
Paved road
Fence
PRS boundary
Contour interval 2 ft
Subsurface sample location
0
50
100 ft
N
2 boreholes
56-64 spot test 28-32 D-Tech,
and 14-16 lab samples
will be collected from
the Pond area
12 HE spot 6 D-Tech,
and 3 laboratory samples
will be collected from
the drainage


20 HE spot, 10 D-Tech and 5 laboratory samples will be collected from the sump area
PRS 16-029(x)
1762800
515
516
517
520
518
519
PRS 16-031(c)
PRS 16-006(g)
1762600
7590
32-40 HE spot, 16-20 D-Tech and 8-10 laboratory samples will be collected from the drainline
PRS 16-029(x)
7580
1762400
1762200
Existing building
Sump
Pipeline
Paved road
Fence
PRS boundary
Contour interval 2 ft
Subsurface sample location
Manhole with sample
0
50
100 ft
N
1611800
1612000
1612200
1612400

## PRS 16-029(x) Cleanup Description (cont.)

- Remove all soil > one-half PRGs (2 ft intervals), segregate by waste types (stopping rules)
- Take bounding samples (2 ft beneath sump and all cleaned zones)
- Take verification samples - 20 minimum (vs. 7 lab samples in work plan)
  - Locations biased conservatively by field screening
- Receive verification results and examine data
- Remove soil > one-half PRGs, take additional extent, bounding and verification samples (stopping rules)

## PRS 16-029(x) Cleanup Description (cont.)

- Calculate UCLs as appropriate
- PRS is clean
- Fill, grade, and revegetate

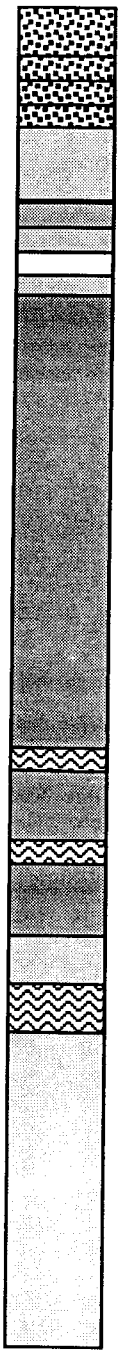
## Surface Water Issues

- BMPs will be instituted per the SWPP
- Sampling of main drainage
- 16-029(x) pond overflow will be included

## Summary

- V-Site interfaces with D&D schedule
- Two-stage sampling meets/exceeds approved workplan
- Conservative cleanup levels
- Cost savings and more effective cleanups associated with D&D interfacing
- NMED input/concurrence desired on strategy for cleanup (surface water issues are being incorporated)
- Need comments on draft plans by February 28, 1997

**Borehole 16-2704**



0.0'

10.0'

20.0'

24.0'-25.0'
2.4ppm RDX,
0.71ppm TNT

29.0'-30.0'
0.79ppm TNT

30.0'

40.0'

50.0'

60.0'

70.0'

80.0'

0.0'-2.5'- intermixed silts and clays with organics(grass, roots, and pine needles), 5YR 4/3(m) reddish brown

2.5'-5.0'-clays and tuff with lithics, saturated, 7.5YR 4/3(m) brown

5.0'-8.5"-clays and tuff with lithics, dacite cobbles, saturated, 7.5YR 4/3(m) brown

8.5'-10.0'-heavly weathered Qbt with dacite cobbles, 5 YR 6/2(d) pinkish gray

10.5'-11.5'-heavly weathered Qbt with dacite cobbles and pumice, 5 YR 6/2(d) pinkish gray
11.0'-11.5'-heavly weathered Qbt with dacite cobbles and pumice,finer texture 5 YR 7/6(d) reddish yellow(d)
11.5'-12.5-no recovery
12.5'-14.5'-heavly weathered Qbt with dacite cobbles and pumice,finer texture 5 YR 7/6(d) reddish yellow(d)
14.5'-15.0'-heavly weathered Qbt with dacite cobbles and pumice,finer texture 5 YR 8/2(d) pinkish white
15.0'-34.75'-slightly welded Qbt, <5% lithics, 10-15% pheno in clustres, 5-10% pumice(2-5mm fragments), 5YR 8/2(d) pinkish white, crushed by drilling

34.75'-35.0'-slightly welded Qbt, <5% lithics, 10-15% pheno in clustres, 5-10% pumice(2-5mm fragments), 5YR 8/2(d) pinkish white, with clay layer
35.0'-42.5'-slightly welded Qbt, <5% lithics, 10-15% pheno in clustres, 5-10% pumice(2-5mm fragments), 5YR 8/2(d) pinkish white, crushed by drilling
41.75'-clay layer
42.5'-45.0"-slightly welded Qbt, <5% lithics, 10-15% pheno in clustres, 5-10% pumice(2-5mm fragments), 10YR 6/2(d) light brownish gray, crushed by drilling

44.0'-clay layer
45.0'-47.5"-slightly welded Qbt, <5% lithics, 10-15% pheno , 5-10% pumice(2-5mm fragments), 10YR 6/2(d) light brownish gray, crushed by drilling

47.5'-51.5"-slightly to non-welded Qbt, <5% lithics, 10-15% pheno , 5-10% pumice(2-5mm fragments), 10YR 6/2(d) light brownish gray, crushed by drilling
51.0'-51.5'-sandy clay layer
51.5'-52.0'-surge bed material, 7.5YR 5/4(m) brown(sandy, clay layer)

52.0'-70.0' mostly soft Qbt

**AGENDA**
**TA-16-260/V-Site tour**
**Friday February 14, 1997**

| Agenda Item | Time | LANL/DOE POCs | Location |
|---|---|---|---|
| Introduction/ Stormwater issues | 11:00-11:10 | Roy Michelotti (665-7444) | ICF Kaiser conference room |
| TA-16-260 presentation | 11:10-12:00 | Roy Michelotti/ Don Hickmott (665-1116) | ICF Kaiser conference room |
| Lunch break | 12:00-12:30 | Not applicable | ICF Kaiser conference room |
| V-Site follow-up briefing | 12:30-1:00 | Roy Michelotti/ John McCann (665-1091) | ICF Kaiser conference room |
| V-Site tour | 1:30-2:30 | Roy Michelotti/John McCann/ Don Hickmott/Karen Paige | TA-16 (meet at cafeteria) |
| TA-16-260 tour | 2:30-3:00 | Don Hickmott | TA-16 |
| Wrap-up | 3:00-3:15 | Roy Michelotti | TA-16 cafeteria |

We will have have lunch brought in.

GEOL - 260 V-SITE RISK ASSESSOR

**LANL/DOE participants:** Roy Michelotti, Donald Hickmott, John McCann, Lynn Kidman, Peter Gram, Linda Fluk, Karen Paige, Joe Mose, ~~Bonnie Koch~~, Steve Veenis, Dave McInroy, Pat Shanley

FUPL ~~FA-5~~ CHEM POC SW ISSUES

**NMED participants** : ~~Terri Davis~~, Barabara Hoditschek, John Kieling, Steve Yanicak, Michael Chacone, Kim Hill, Michael Dale, Ralph Ford-Schmidt

**Directions to Kaiser conference room**: Come up main hill road to town of Los Alamos (502), continue right/straight on Central at Hilltop House, turn right on 15th street (at the Bradbury Museum), roughly two blocks on the left is the parking lot for a large new building (ICF Kaiser building). Conference room on second floor.

We will go to TA-16 from the Kaiser conference room.

Kim H.
FYI. JK.

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**LANL/DOE participants:** Roy Michelotti, Donald Hickmott, John McCann, Lynn Kidman, Joe Mose, Steve Veenis, Dave McInroy

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Please fax finalized list of NMED tour participants to Don Hickmott (665-4632). Please include name, citizenship, phone number, and clearance status for each. If you have any suggested modifications to the agenda, please provide them to Don. Thanks.

| | | |
|---|---|---|
| JOHN KIELING | NMED/HRMB | 827-1558 |
| Michael Chacón | " " | 827-1561 |
| Lynn Kidman | ICF Kaiser | 661-5227 |
| Barbara Hoditschek | NMED/SWQB | 827-0596 |
| Ralph Ford-Schmid | NMED/DOE OB | 827-1536 |
| John McCann | FU-3 | 665-1091 |
| Roy Michelotti | FU3 | 665-7444 |
| Don Hickmott | FU3 | 667-8753 |
| JOE MOSE | DOE/LAAO | 667-5808 |
| KIM HILL | NMED HRMB | 827-1558 |
| Karen Schultz Paige | LANL/CST-7 | 665-3527 |
| PAT SHANLEY | LANL/ESH-19 | 667-0663 |
| Steve Veenis | ESH-18/ER | 665-9735 |
| Steve Yanicak | NMED DOE OB | 672-0448 |