



TA 16



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Date: May 26, 2006
Refer to: ER2006-0435

Ms. Darlene Goering
NMED – Hazardous Waste Bureau
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

SUBJECT: RESPONSE TO INFORMAL REQUESTS FOR SUPPLEMENTAL INFORMATION ON THE TA-16-260 OUTFALL [CONSOLIDATED UNIT 16-021(c)-99] CORRECTIVE MEASURE STUDY

Dear Ms. Goering:

During recent discussions concerning the TA-16-260 outfall (Consolidated Unit 16-021(c) – 99) Corrective Measures Study (CMS), you have requested several items concerning the CMS. During a high performing team meeting (11/21/05) and in a tour of TA-16 (12/2/05) you requested: 1) information concerning the extent of the contaminated surge bed located within the pond at the TA-16-260 outfall; and 2) a description of a strategy to better define the extent of that contaminated surge bed that could be implemented during the spring and summer of 2006. This topic was further discussed in the HPT meeting on 2/27/06, when you requested further refinements to cross-sections associated with his area. This information is provided below and in the attached figures.

TA-16-260 Pond Surge Bed

During drilling operations in 1997, a highly-contaminated surge bed located at a depth of 17.5 ft was found in borehole # 2700 (see Figure 1) in the TA-16-260 outfall area. Due to the high levels of high explosives (HE) present in this borehole, it is necessary to either remove the contaminated material, or immobilize it through grouting (see "Corrective Measures Study Report for SWMU 16-021(c)-99, Revision 1", LA-UR-05-4381). This highly-contaminated surge bed was not detected in any of the other boreholes located in the TA-16-260 outfall area including boreholes 6370 and 2735, which are located inside the outfall area within 50 ft. of borehole 2700 (see Figure 1). Surge beds with low levels of contamination were detected in nearby boreholes. LANL geologists have re-examined the drilling logs of the boreholes in the TA-16-260 outfall area and the core from select boreholes to better understand the subsurface geology in the TA-16-260 pond area. Cross-sections through this area are shown in Figures 2a , 2b, and 2c. As has been noted in previous reports (e.g. 'RFI Report for PRS 16-021(c)', LA-UR-98-4101; 'Phase III RFI Report for SWMU 16-021(c)-99', LA-UR-03-5248), many of the subsurface units in the TA-16-260 outfall area are discontinuous, particularly the surge beds (Figures 2 a, b, c). Existing boreholes located within 100 ft of contaminated borehole 2700 suggest that the highly-contaminated surge bed does not extend to the south, north or east (although low-

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level HE contaminated beds are located in these directions). However, no boreholes are located to the west of the highly contaminated borehole and the density of boreholes to the east could be increased. Based on discussion during the tour of 12/2/05 and in the HPT meeting on 2/27/06, LANL proposes to drill 3 shallow (~ 30 ft depth) boreholes to the northwest, southwest and east of borehole 2700 (see locations identified in Figure 1). These boreholes would be carefully logged geologically with special emphasis on the identification of surge beds. They would also be logged geophysically using downhole video and gamma logging, because surge beds are frequently zones of poor recovery. Finally, they would be field screened using HE spot test and D-tech RDX kits on 5 ft intervals in the upper 15 ft and 2 ft intervals in the lower 10 ft. as well as in any intervals containing surge beds. Laboratory samples for metals, HE, volatile organic compounds, semivolatile organic compounds and uranium would be collected and submitted from at least two intervals per borehole – the deepest interval and the interval showing the highest HE based on field screening, as well as any surge bed materials. If no HE is detected during field screening, the laboratory samples would be collected from the deepest interval and the interval at the extrapolated depth of the surge bed in borehole 2700. All sampling protocols, operating procedures, and waste management would be identical to methods approved by NMED for the TA-16 Ponds Investigation Work Plan (LA-UR-05-1694) and its Notice of Disapproval and response (LA-UR 05-5178), since the drilling would be done in concert with the fieldwork outlined in that plan. We anticipate completing this drilling during the summer of 2006. A letter report documenting the results of this drilling would be submitted to NMED within 30 days of receipt of validated data.

If you have any questions, please contact Don Hickmott at (505) 667-8753 (dhickmott@lanl.gov) or Woody Woodworth at (505) 665-5820 (lwoodworth@doeal.gov).

Sincerely,



David McInroy, Deputy Program Director
Environmental Remediation & Surveillance
Los Alamos National Laboratory

DH/jk

Enclosures: Figure 1: TA-16-260 Outfall Borehole Location Map (LA-UR-06-3669)
Figure 2a: E-W Cross Section TA-16-260 Outfall Area (LA-UR-03-3669)
Figure 2b: NW-SE Cross Section B-B' TA-16-260 (LA-UR-03-3669)
Figure 2c: N-S Cross Section C-C' TA-16-260 (LA-UR-03-3669)

Cy:(w/enc)

D. Gregory, DOE LASO, MS A316
L. King, EPA Region 6
D. Hickmott, EES-6, MS D462
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G. Lopez Escobedo, ENV-ERS, MS M992
B. Rich, ADTS, MS A104
D. Pepe, NMED-OB
IM-9, MS A150

TA-16-260 outfall borehole location map

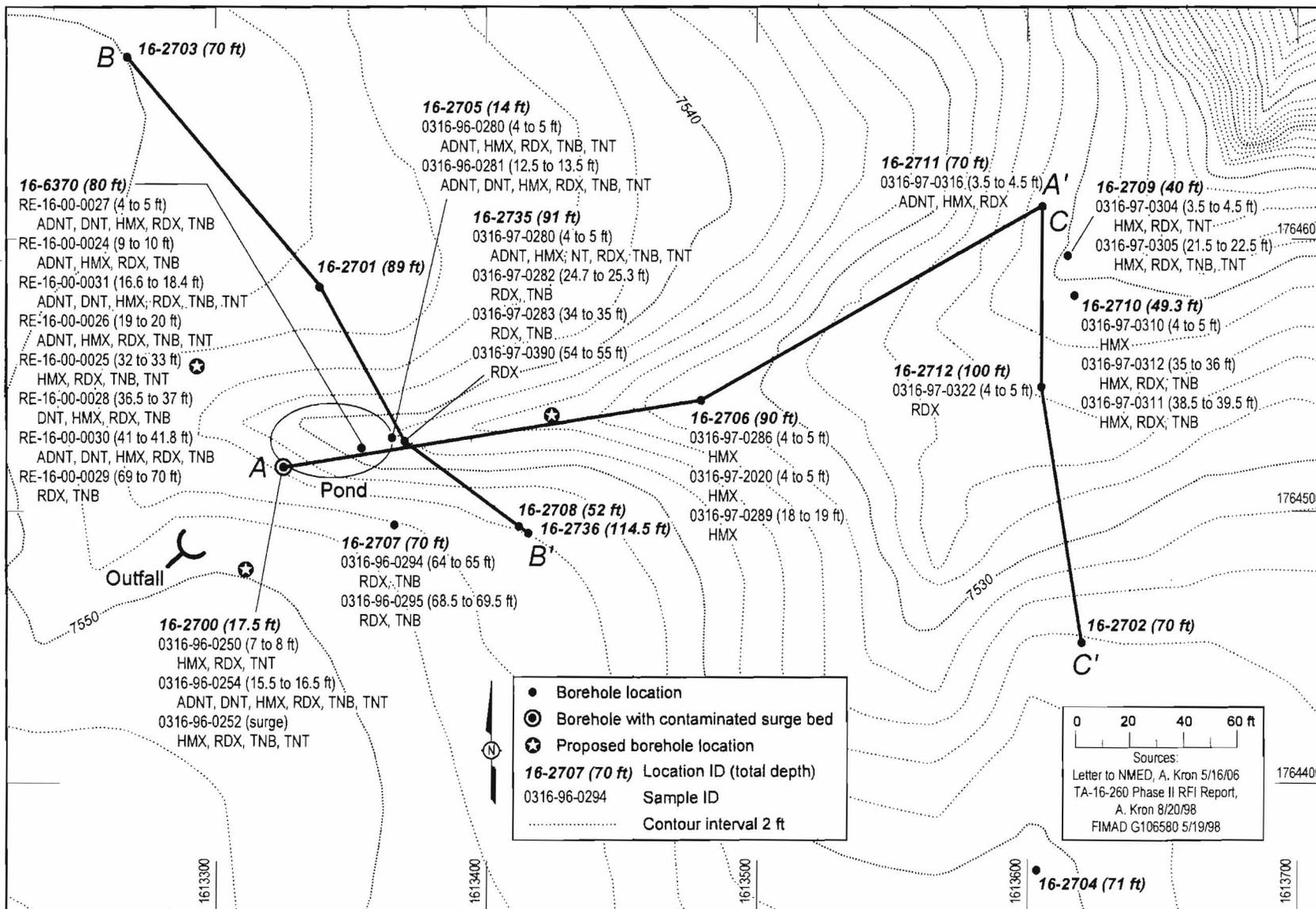


Figure 2a - E-W Cross section TA-16-260 outfall area

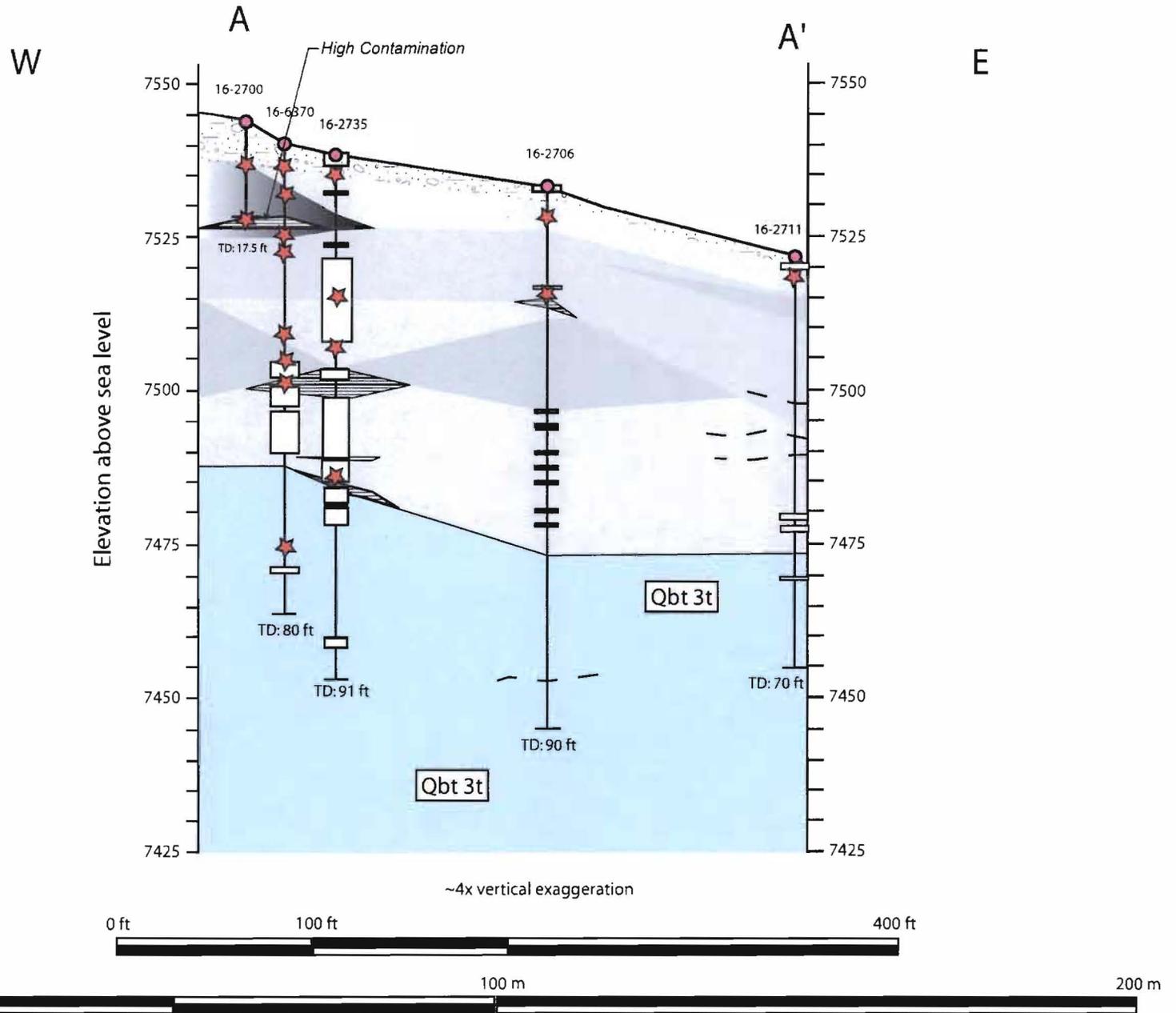
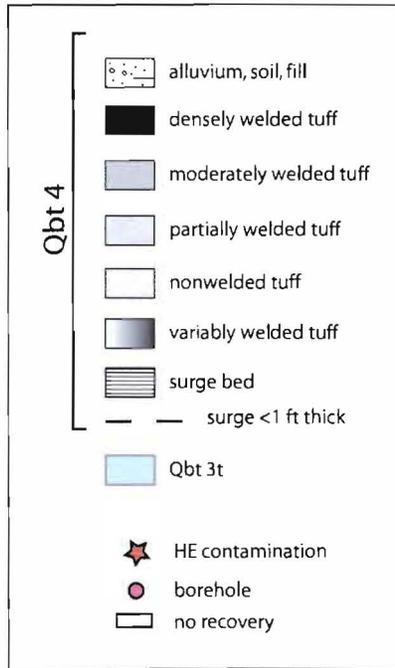


Figure 2b. - NW-SE cross section B-B' TA-16-260

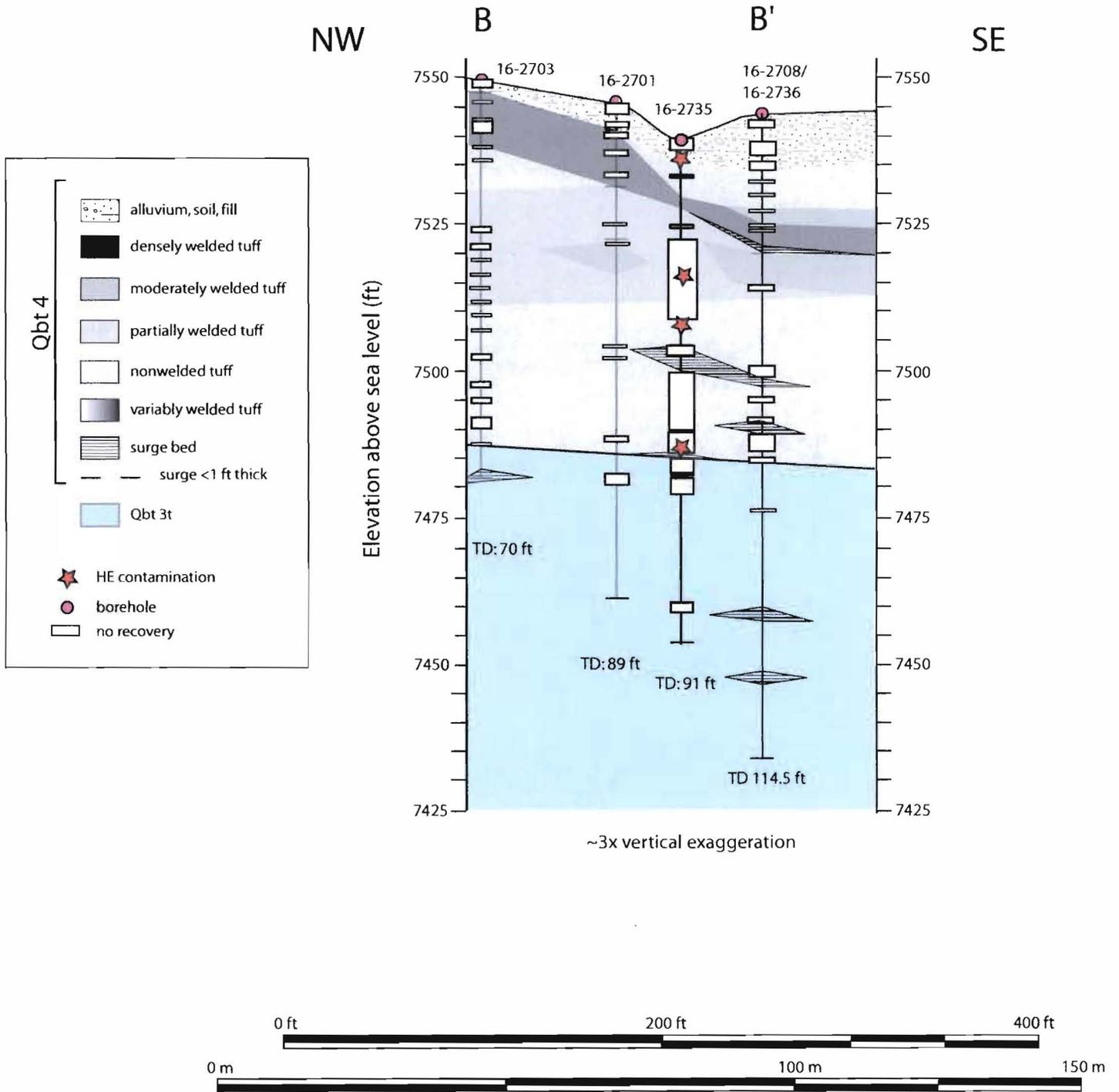


Figure 2c - N-S cross section C-C' TA-16-260

