Detterman, Mark, Env. Health

From: Detterman, Mark, Env. Health
Sent: Tuesday, April 12, 2011 8:55 AM
To: 'PDKing0000@aol.com'
Cc: donaldjaym@comcast.net
Subject: RE: Additional DRAFT Work Plan Figures - CA Linen

Again, Thanks Paul. These should help your discussions with LeRoy as they should help with visualization of the site.

Let me know if I can provide some assistance.

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PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: PDKing0000@aol.com [mailto:PDKing0000@aol.com]
Sent: Tuesday, April 12, 2011 5:56 AM
To: Detterman, Mark, Env. Health
Cc: donaldjaym@comcast.net
Subject: Additional DRAFT Work Plan Figures - CA Linen

Hi Mark,

You will find attached DRAFT pdf copies of the following additional figures that were provided last week to LeRoy Griffin at the Oakland Fire Department Hazmat division as support that he had requested for a westerly to southwesterly groundwater flow direction in the vicinity of the California Linen site. The explanations that were provided to LeRoy associated with each figure are also provided below. These figures, along with the paleochannel figure provided to you in the previous e-mail, will be included in the recently requested work plan for the California Linen site.

o A DRAFT copy of a Site Location Map with hi-lited contours that shows that the ground surface in the vicinity of Linden Street and 41st Street slopes to the southwest (document DRAFT Site Location Map.pdf). Groundwater flow direction generally is similar to the ground surface slope.

o A DRAFT copy of a Site Vicinity Geology Map that shows that the vicinity of Linden Street and 41st Street is located on alluvial fan and fluvial deposits (Qhaf, see the top of the map for the symbol) (document DRAFT Site Vicinity Geology Map.pdf). Alluvial fan deposits typically have lots of small channels that flow in many different directions, but which collectively flow in the downslope direction. Fluvial deposits typically contain sections of buried stream channels. The channels would be oriented in the downslope direction. Immediately to the west (and downslope) from the site are natural levee deposits (Qhl) that trend to the west-southwest (the approximate same direction as the surface slope).

Paul

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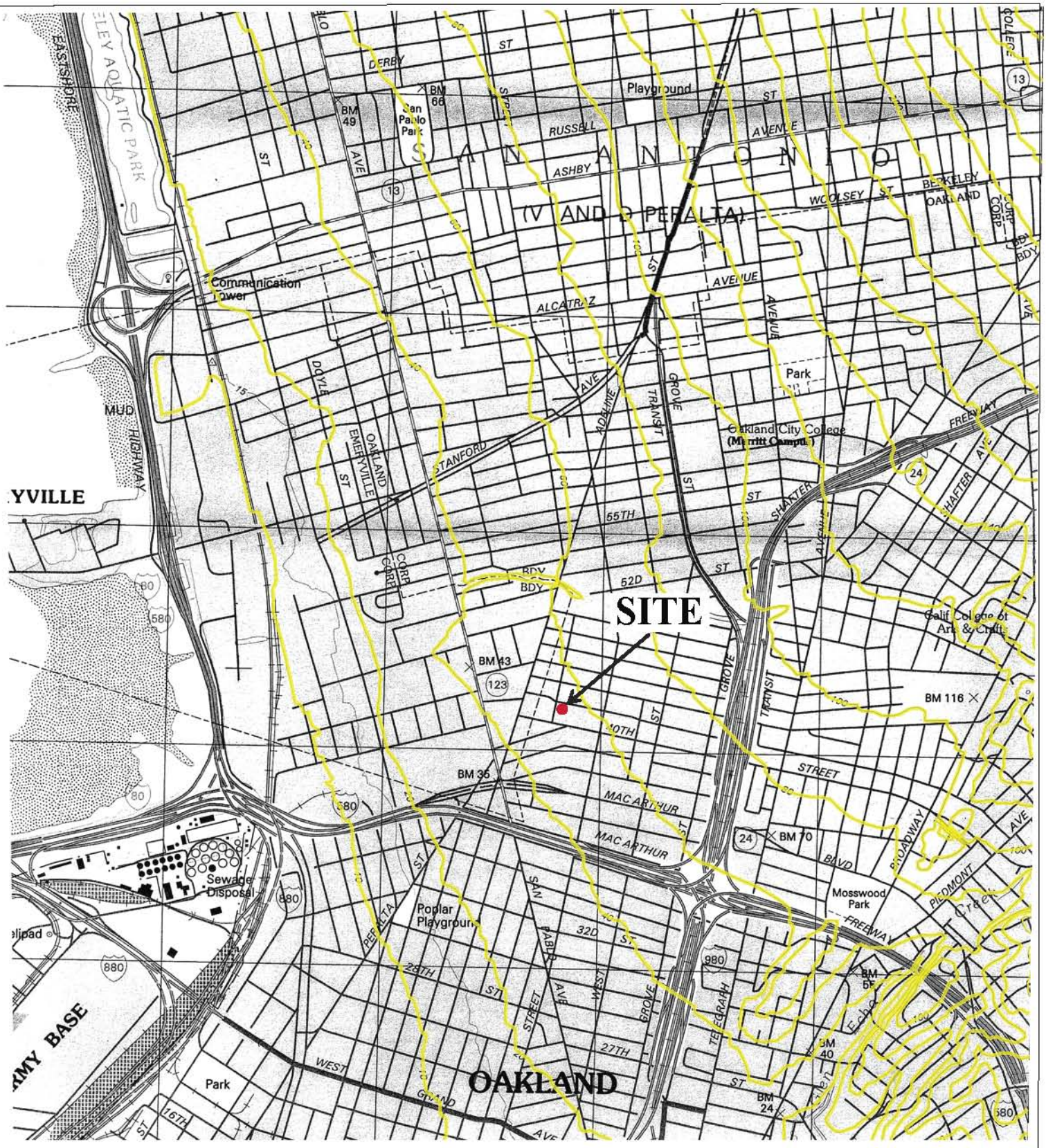

Figure 1
Site Location Map
California Linen Rental Company
989 41st Street
Oakland, California

N

Base Map From:
U.S. Geological Survey Oakland West, California 7.5-minute Quadrangle
Photorevised 1993

P&D Environmental, Inc.
55 Santa Clara Avenue, Suite 240
Oakland, CA 94610

0 1,000 2,000
Approximate Scale in Feet

Surficial Deposits

Qhaf **Alluvial fan and fluvial deposits (Holocene)**--Alluvial fan deposits are brown or tan, medium dense to dense, gravely sand or sandy gravel that generally grades upward to sandy or silty clay. Near the distal fan edges, the fluvial deposits are typically brown, never reddish, medium dense sand that fines upward to sandy or silty clay. The best developed Holocene alluvial fans are on the San Francisco Bay plain. All other alluvial fans and fluvial deposits are confined to narrow valley floors

Qhb **Basin deposits (Holocene)**--Very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm)

Qhl **Natural levee deposits (Holocene)**--Loose, moderately-sorted to well-sorted sandy or clayey silt grading to sandy or silty clay. These deposits are porous and permeable and provide conduits for transport of ground water. Levee deposits border stream channels, usually both banks, and slope away to flatter floodplains and basins. Levee deposits are best developed along San Pablo and Wildcat Creeks on the bay plain in Richmond. Abandoned levee systems have also been mapped

Qpaf **Alluvial fan and fluvial deposits (Pleistocene)**—Brown, dense, gravely and clayey sand or clayey gravel that fines upward to sandy clay. These deposits display various sorting and are located along most stream channels in the county. All Qpaf deposits can be related to modern stream courses. They are distinguished from younger alluvial fans and fluvial deposits by higher topographic position, greater degree of dissection, and stronger soil profile development. They are less permeable than Holocene deposits and locally contain fresh water mollusks and extinct late Pleistocene vertebrate fossils. They are overlain by Holocene deposits on lower parts of the alluvial plain and incised by channels that are partly filled with Holocene alluvium on higher parts of the alluvial plain. Maximum thickness is unknown but at least 50 m

Franciscan complex

Kfn **Sandstone of the Novato Quarry terrane of Blake and others (1984) (Late Cretaceous)**--Distinctly bedded to massive, fine- to coarse-grained, mica-bearing, lithic wacke. Where distinctly bedded, sandstone beds are about 1 m thick, and siltstone interbeds are a few centimeters thick. Sedimentary structures are well preserved. At the type area in Marin County, fossils of Campanian age have been discovered, but none have yet been collected in Alameda County. In north Oakland, the sandstone is associated with a 1-km-diameter body of:

Kfgm **Fine-grained quartz diorite (Late Cretaceous?)**--Although the margins of the intrusive body are pervasively sheared, the diorite was probably originally intruded into the sandstone, judging from the extensive hydrothermal alteration in many parts of the sandstone outcrop area

Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California
By R.W. Graymer, 2000
U.S. Geological Survey
Miscellaneous Field Studies
MF-2342, Version 1.0

Qhaf **Alluvial fan and fluvial deposits (Holocene)**

Qhb **Basin deposits (Holocene)**

Qhl **Natural levee deposits (Holocene)**

Qpaf **Alluvial fan and fluvial deposits (Pleistocene)**

Qhl **Natural levee deposits (Holocene)**

Kfn **Sandstone of the Novato Quarry terrane of Blake and others (1984) (Late Cretaceous)**

Kfgm **Fine-grained quartz diorite (Late Cretaceous (?))**

Figure 3
Site Vicinity Geology Map
California Linen Rental Company
989 41st Street
Oakland, California

Base Map From:
R.W. Graymer, 2000 U.S. Geological Survey
Miscellaneous Field Studies MF-2342, Version 1.0

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0 1 2 3 4 5 6 7 8 9 10 11
Scale In Thousands of Feet

16.5°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1980