GeoStrategies Inc.

SAMPLING PLAN

RMC Lonestar
6527 Calaveras Road
Sunol, California

Report No. 7004-1

September 27, 1990

GeoStrategies Inc.
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HAYWARD, CALIFORNIA 94545
(415) 352-4800

September 27, 1990

RMC Lonestar
P.O. Box 5252
Pleasanton, CA 94566

Re: SAMPLING PLAN
6527 Calaveras Road
Sunol, California

Attn: Mr. Harry W. Reppert

Dear Mr. Reppert:

This Sampling Plan has been prepared by GeoStrategies Inc. (GSI) for the above referenced location (Plate 1). This plan proposes sample collection locations within the diesel spill excavation on the RMC Lonestar (RMC) facility adjacent to the diesel tank building (Plate 2).

BACKGROUND

On August 21, 1990, approximately 2,700 gallons of diesel fuel were spilled near the diesel tank building. The spilled fuel flowed off a concrete pad adjacent to the fuel tank building, and ponded on soils in two areas: one pond to the east and one southeast of the diesel tank building.

Immediately upon discovery, RMC personnel applied roadbase material to the area of the spill in an attempt to absorb the diesel. GeoStrategies Inc. (GSI) was retained to characterize the diesel spillage and began emergency response cleanup and spill characterization on August 22, 1990. Preliminary excavation continued until August 29, 1990.

Excavation activities were directed by a GSI geologist. The areal extent of the excavation is shown on Plate 2. A cross-sectional representation of the excavation is shown on Plate 3. Soils were removed from the excavation and screened based on suspected diesel saturation, soil odor and discoloration. Observed and potentially contaminated soils in the area of the spill were excavated and relocated to an inactive area on the facility and placed on Visquine plastic. Stockpiled soils were also covered with plastic following daily completion of excavation activities. RMC notified the Bay Area Air Quality Management District (BAAQMD) of the excavation activities and the existence of the stockpile under Regulation 8, Rule 40.

On September 7, 1990, preliminary soil samples (RMCX-1 through RMCX-6) were collected from six localities within the excavation. These locations were suspected clean areas in proximity to stained areas of suspected diesel contamination. Soil samples were collected from the excavation wall below the area of staining and from the bottom of the excavation. Each soil sample was analyzed for Total Petroleum Hydrocarbons calculated as Diesel (TPH-Diesel) according to EPA Method 8015 (Modified). Chemical analyses were performed by National Environmental Testing, Inc. (NET), a State-certified analytical laboratory in Santa Rosa.

TPH-Diesel was detected in each of the six samples, with concentrations ranging from 790 to 17,000 parts per million (ppm). These data have been compiled in Table 1. Soil chemical data indicate that additional excavation is necessary in the areas of known or suspected staining.

On September 14, 1990, GSI installed two ground-water monitoring wells (Wells RMC-2 and RMC-3). A third well (RMC-4) was installed September 25, 1990. Soil samples were collected for chemical analyses during the installation of these wells. Chemical analytical results for these samples are not available at this time.

TECHNICAL RATIONALE

Concentrations of TPH-Diesel detected in the six areas of suspected staining indicate that additional excavation in these areas is necessary. Soils will be resampled in the six areas following additional excavation. Soil samples will also be collected from areas of the excavation not visibly stained to document the removal of diesel from soils within the extent of the current excavation limits.

Stained soils beneath the tank building and adjacent concrete pad (observed stained thicknesses are less than one foot below these structures) do not need to be excavated at this time. The presence of the physical structures and the low permeability and compacted nature of the underlying soils should minimize surface water infiltration and percolation through the contaminated soil and reduce the potential for vertical migration of diesel in the soils beyond its current extent. Remediation of diesel in soils below the tank building and concrete pad will be addressed at a future date, when the buildings are removed.

SCOPE OF WORK

To complete excavation activities and provide appropriate chemical analytical documentation to support the removal of diesel contaminated soils, the following tasks are proposed:

TASK 1: (Unsampled Areas) Screen soils from unsampled areas of the excavation which lack obvious evidence of contamination (odor, discoloration, etc.). Screening of the soils will be accomplished by one of the following methods: thin-layer chromotography, portable gas chromatography or mobile chemical analytical laboratory. Soil screening results will be used to provide a gross indication of diesel concentrations in the soils, and as indicators for further excavation, if necessary. Final soil samples will be collected and analyzed for TPH-Diesel in previously unsampled areas according to EPA Method 8015 (Modified) by a State-certified analytical laboratory.

TASK 2: (Resample Areas) Previously sampled areas around samples RMCX-1 and RMCX-3 through RMCX-6 will be excavated and screened further, then resampled. Resampled areas will be analyzed for TPH-Diesel according to EPA Method 8015 (Modified).

TASK 3: (Background Samples) Two soil samples will be collected from outside the delineated spill area and analyzed for TPH-Diesel (EPA Method 8015-Modified) as background samples.

TASK 4: A letter report presenting the results of the soil sampling will be presented to the Alameda County Health Agency (ACHA) three weeks after receipt of all analytical results from the NET laboratory.

Final soil samples will be collected using a hand-driven soil sampling device fitted with a clean brass sample tube. Upon removal from the sampling device, the sample tube will be immediately covered on both ends with aluminum foil and sealed with plastic end caps. The soil samples will be labeled, entered on a Chain-of-Custody form, placed in a cooler with blue ice, and transported to National Environmental Testing, Inc. (NET), a State-certified environmental laboratory in Santa Rosa, California. Proposed sampling locations, including resampling locations, are presented on Plate 2.

SCHEDULE

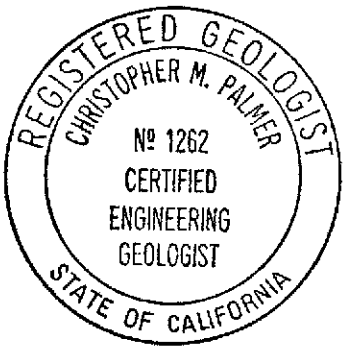
The proposed soil sampling plan will be initiated following approval by the ACHA.

If you have any questions, please call.

GeoStrategies Inc. by,

Stephen J. Carter
Geologist

Jeffrey L. Peterson
Senior Hydrogeologist
R.E.A. 1021



Christopher M. Palmer
C.E.G. 1262, R.E.A. 285

SJC/JLP/kjj

Plate 1. Vicinity Map
Plate 2. Site Plan
Plate 3. Cross Sections

TABLE 1

SOIL ANALYSIS DATA

SAMPLE NO.	SAMPLE DATE	ANALYSIS DATE	TPH-D (PPM)	DEPTH (2) (FT)
RMCX-1	07-Sep-90	12-Sep-90	3,000	11
RMCX-2	07-Sep-90	12-Sep-90	790	8
RMCX-3	07-Sep-90	12-Sep-90	4,500	30
RMCX-4	07-Sep-90	12-Sep-90	8,100	27
RMCX-5	07-Sep-90	12-Sep-90	3,500	24
RMCX-6	07-Sep-90	12-Sep-90	17,000	15

TPH-D = Total Petroleum Hydrocarbons as Diesel
PPM = Parts Per Million

Note: 1. for chemical parameter detection limits, refer to I.T. Laboratory reports
2. Depths are relative to the original road surface

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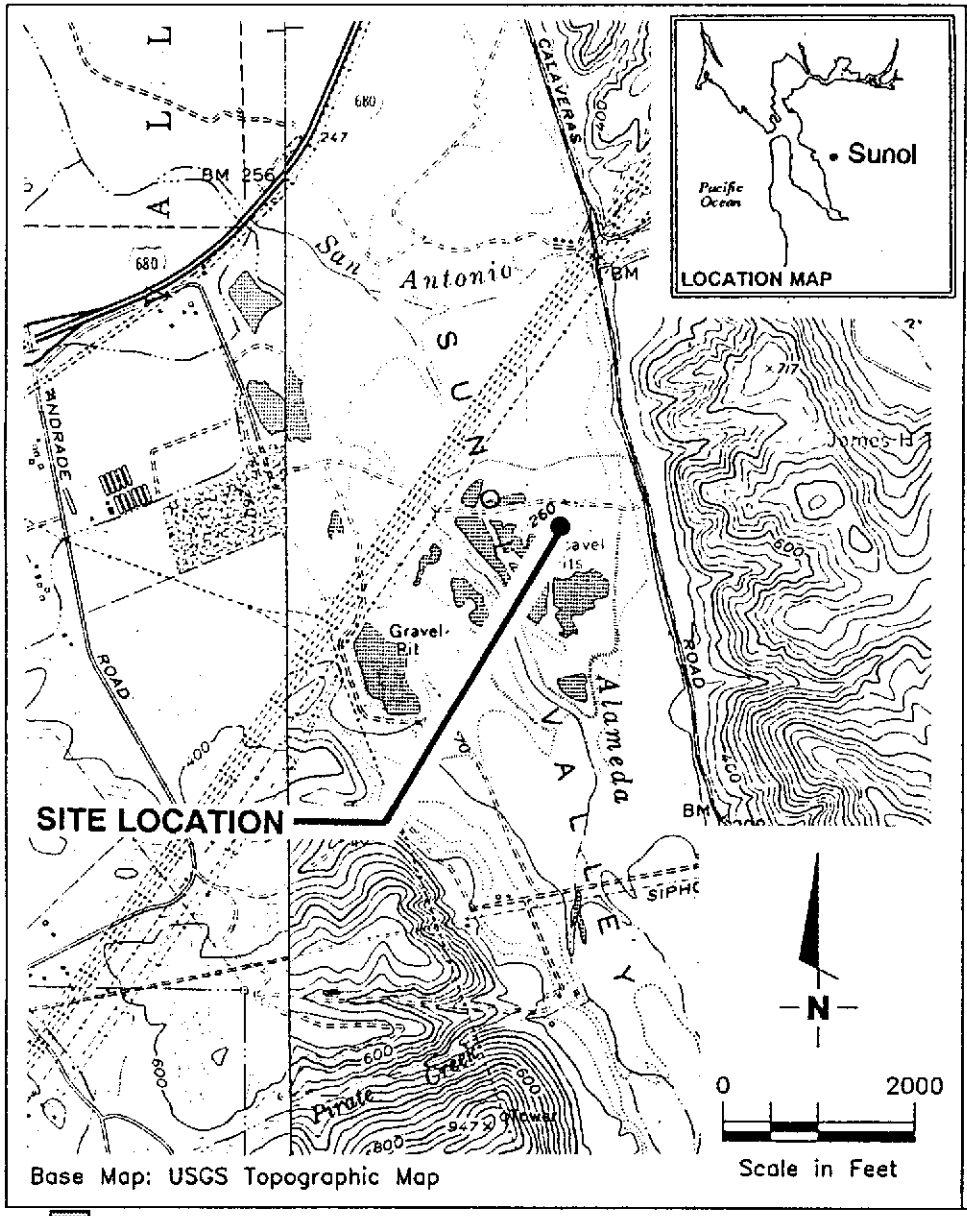
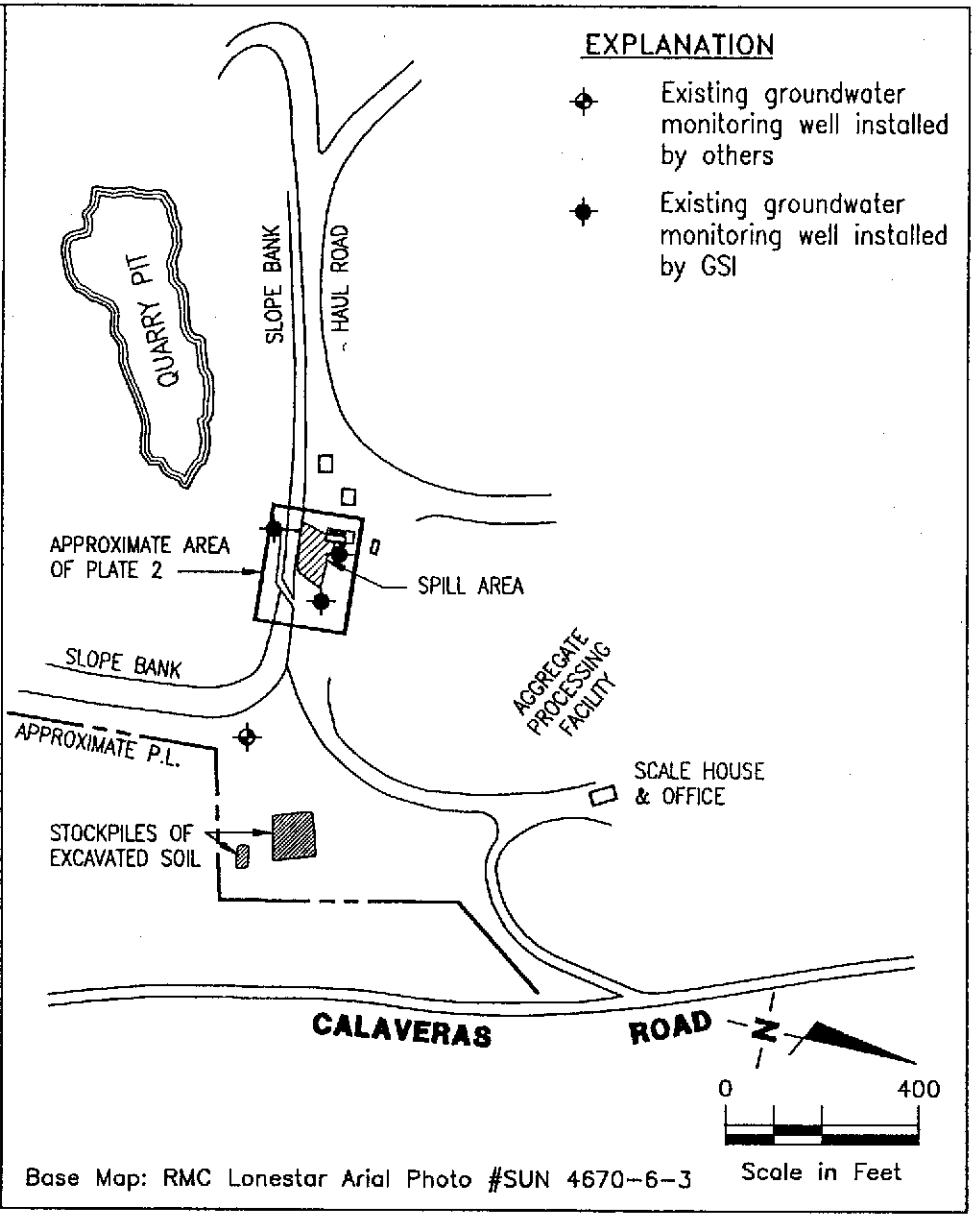


Base Map: USGS Topographic Map



Base Map: RMC Lonestar Arial Photo #SUN 4670-6-3

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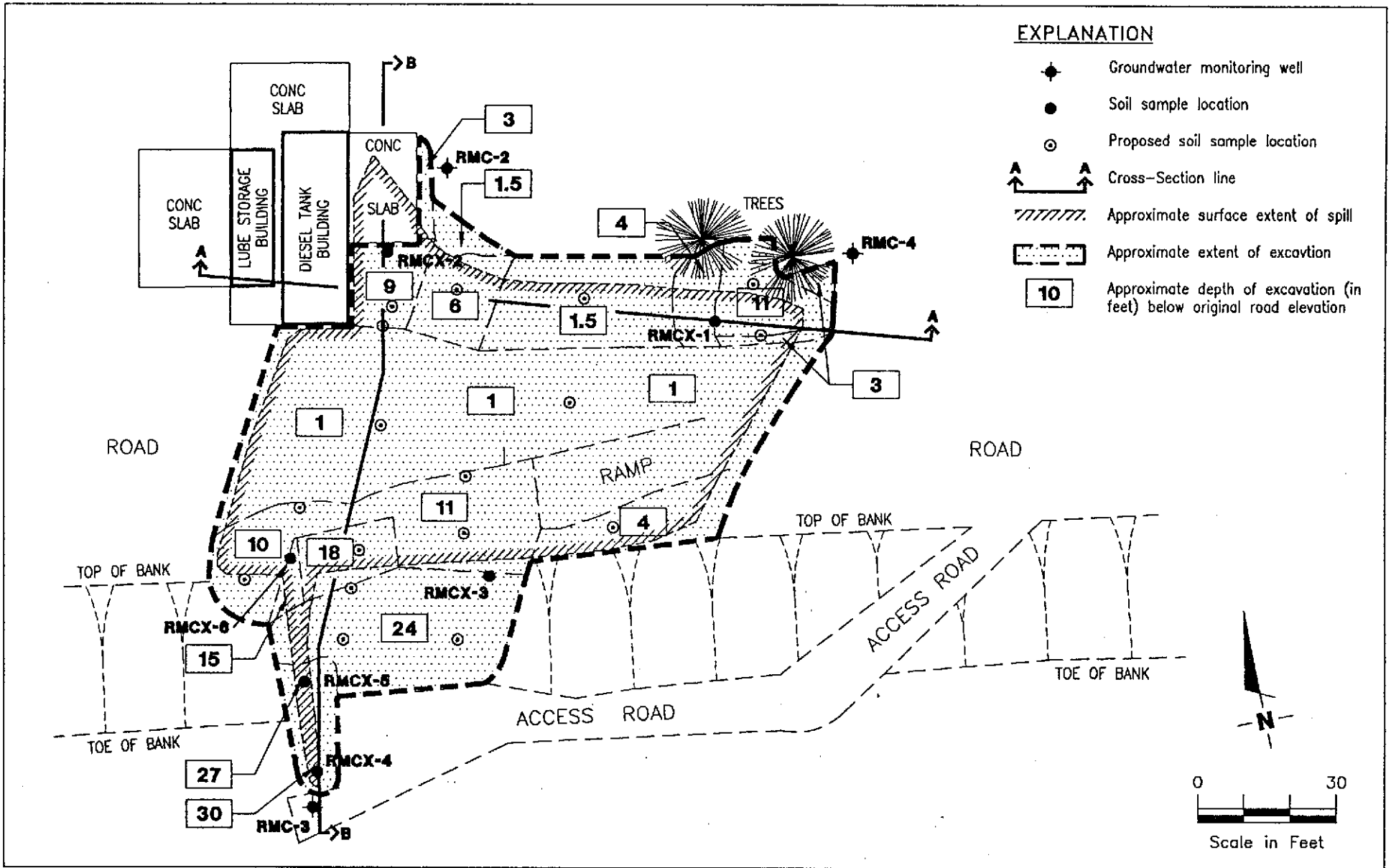
VICINITY AND SITE LOCATION MAPS
RMC Lonestar
6527 Calaveras Road
Sunol, California

PLATE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
7004	RG/CEG	9/90	



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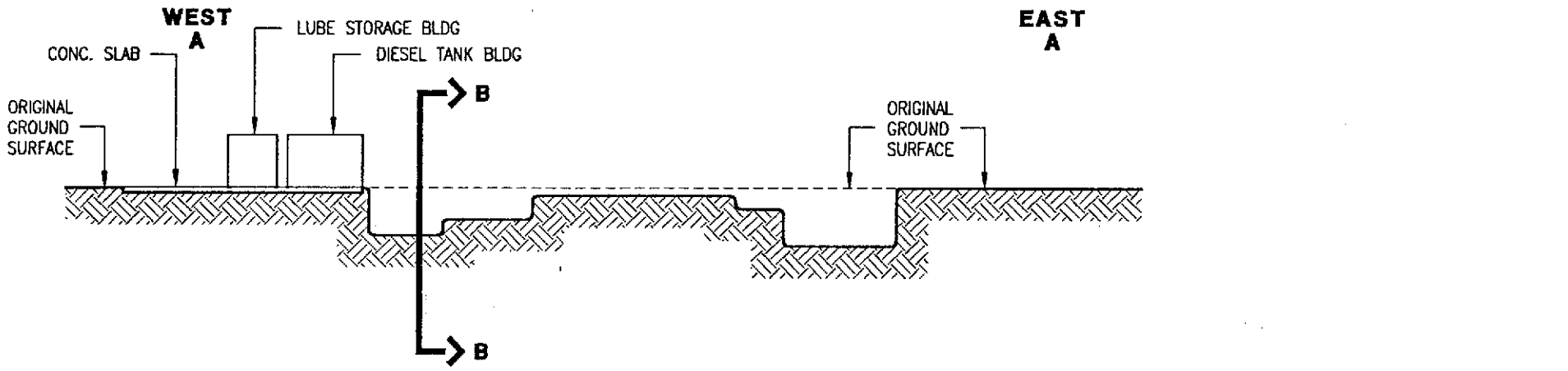
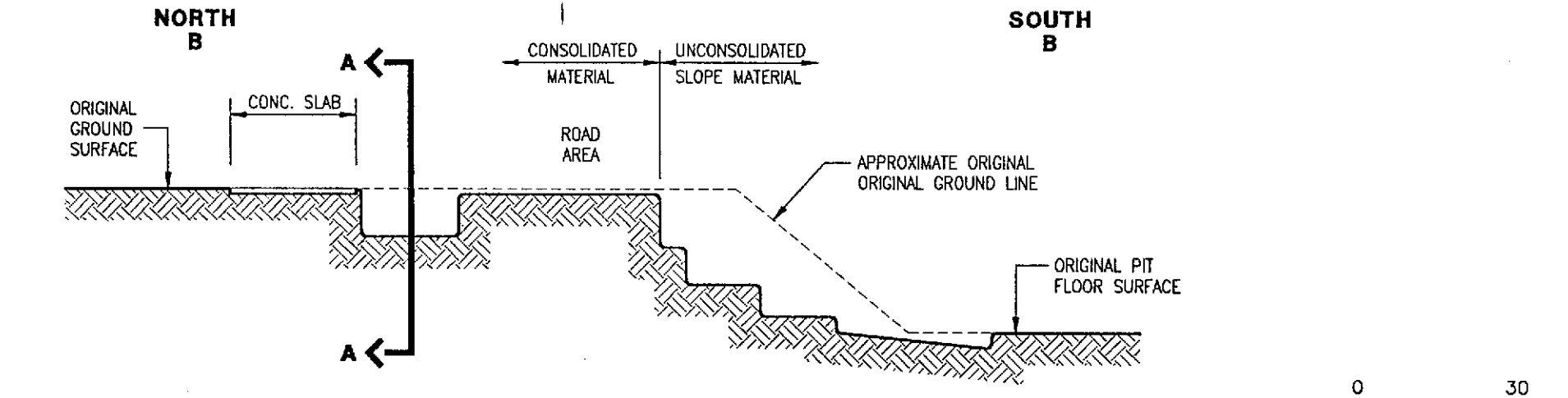
SITE PLAN
RMC Lonestar
6527 Calaveras Road
Sunol, California

PLATE
2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE
7004	CEG 12/92	9/90	



CROSS-SECTION A-A



CROSS-SECTION B-B

GeoStrategies Inc.

CROSS-SECTIONS
RMC Lonestar
6527 Calaveras Road
Sunol, California

PLATE
3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE
7004	CWP CEG 1202	9/90	