

GRIBI Associates

Geological and Environmental Consulting Services

FACSIMILE TRANSMITTAL

Date: MARCH 20, 2000

To: EVA CHU
ALAMEDA COUNTY
ENVIRONMENTAL HEALTH

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Number of pages, including this transmittal page:

8

Eva,

Attached please find the workplan for the Corwood Car Wash site. As we discussed, Roger is hoping to obtain written County approval for this workplan as soon as possible to help with the sale of the car wash, which is due to close at the end of March.

Thanks for your help!

Jim

GRIBI Associates

Geological and Environmental Consulting Services

March 20, 2000

Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Attention: Ms. Eva Chu

Subject: Workplan to Conduct Site Closure Activities
Corwood Car UST Site
6973 Village Parkway, Dublin, California
GA Project No.: 106-02-03

Ladies and Gentlemen:

Pursuant to our recent telephone conversations with Ms. Eva Chu of your office, this workplan proposes: (1) Installing one groundwater monitoring well downgradient (south-southeast) from the former east fuel dispenser; (2) Conducting quarterly groundwater monitoring of the newly-installed well for approximately two quarters; (3) Drilling and sampling two soil borings downgradient from previous borings IB-1 and IB-2; (4) Conducting soil vapor sampling beneath the Corwood Car Wash cashier's kiosk; and (5) Conducting a Risk-Based Corrective Action (RBCA) assessment for the project site. The goal of these activities will be to move towards regulatory closure of this UST site.

BACKGROUND

General Site Background

Corwood Car Wash previously operated two unleaded gasoline USTs, located in a common excavation cavity on the northwest side of the site (see Figure 1 and Figure 2). The UST system was apparently installed in about 1968, and it is our understanding that diesel fuel was also stored in the USTs at some time in the distant past. In March 1991, the UST system was completely retrofitted with state-of-the-art leak prevention and monitoring devices, including interior tank linings, overfill/overspill protection, and a sophisticated leak detection monitoring system.

Previous investigations at the site included: (1) The drilling and sampling of several borings in the early 1990s immediately adjacent to project site USTs; (2) The installation of three groundwater monitoring wells, MW-1, MW-2, and MW-3, at the site in 1993; and (3) Monitoring of the three project site wells in June 1993 and in October 1995. Results of these investigations indicated some residual diesel-range hydrocarbons in subsurface soils immediately surrounding the project site USTs, but only low concentrations of diesel-range hydrocarbons in groundwater in downgradient (south-southeast) well MW-2, with no significant concentrations of Benzene. Note that soil and groundwater samples from these investigations were not analyzed for MTBE. Based on results of these previous investigations, regulatory site closure was granted for this site in 1996. The three groundwater monitoring wells were

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subsequently decommissioned by pressure grouting.

On January 31, 2000, both USTs were removed from the site in accordance with Alameda County Department of Environmental Health requirements. In addition, approximately 3,800 gallons of hydrocarbon-impacted groundwater was pumped from the excavation cavity for offsite disposal. Also, approximately 350 tons of hydrocarbon-impacted soil, primarily backfill material, was excavated and removed from the site. After backfilling with clean imported pea gravel, the UST excavation cavity and piping and dispenser excavations were re-surfaced with concrete to match existing surface grade.

Results from soil and groundwater samples collected from the UST removal cavity, together with previous results from soil and groundwater investigations conducted at the site, seemed to suggest that although some releases, primarily diesel, occurred from the USTs, these releases remained in the back fill sands for the most part and did not migrate appreciably into native silts and clays surrounding the USTs. Two grab water samples collected from the open UST cavity contained relatively high levels of both diesel- and gasoline-range hydrocarbons, with detections of both Benzene and MTBE. However, given that these samples were collected from an open pit while excavation activities were occurring, we do not believe that these results are representative of true groundwater conditions beneath the site.

Soil samples collected adjacent to removed fuel dispensers indicated no significant releases adjacent to the former west dispenser, and moderate levels of diesel-range hydrocarbons, with no significant level of gasoline-range hydrocarbons, adjacent to the former east fuel dispenser. Given that diesel was only stored in the USTs in the distant past, as well as the apparent aged quality of the gasoline-range hydrocarbons in the east dispenser soil samples, it appears that releases associated with the project site USTs and fuel dispensers occurred in the distant past, prior to UST system upgrades, which included installing secondary containment beneath each dispenser.

On March 3, 2000, Gribi Associates drilled and sampled two soil borings, IB-1 and IB-2, at the site using direct-push coring equipment. Both soil and grab groundwater samples from IB-1, located in an expected downgradient (south-southeast) direction from the former east dispenser island, contained detectable levels of both gasoline- and diesel-range hydrocarbons. In addition, the grab groundwater sample from IB-2, located in an expected downgradient (south-southeast) direction from the former fuel USTs, contained detectable levels of both gasoline- and diesel-range hydrocarbons. However, the laboratory chromatograms for these samples seem to show that the gasoline-range hydrocarbon results in these samples are primarily due to interference from diesel-range hydrocarbons. Thus, soil and groundwater impacts relative the former Corwood Car Wash UST system appear to be primarily related to past diesel releases. Given that diesel was only stored in the USTs in the distant past (probably in the early to mid-1970s), it appears that the majority of releases associated with the USTs occurred in the distant past, prior to UST system upgrades which included installing interior fiberglass linings in both of the USTs.

The only exception to this appeared to be the detection of a low level (0.53 ppm) of MTBE in the IB-2 grab groundwater sample. This MTBE detection was significantly lower than MTBE levels of 5.4 ppm and 1.7 ppm encountered in grab groundwater samples collected from the former UST excavation cavity during tank removal activities. These results seem to suggest minimal

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downgradient migration of MTBE.

Site Closure Strategy

Based on currently-available data, on our understanding of the regional environmental setting, and on the expected future use of the project site for commercial uses only, we believe that regulatory closure of this site will be possible without costly remediation, but rather with some form of monitoring. The primary constituent of concern identified at the site appears to be diesel-range hydrocarbons, with low levels of Benzene and MTBE. While the concentrations of TPH-D and Benzene were elevated in the grab groundwater sample from east boring IB-1, we believe that these results are artificially high due to the nature of grab ground water sampling from a Geoprobe boring, where obviously hydrocarbon-impacted soils were first encountered in the boring above one foot in depth.

In order to move toward regulatory site closure, we recommend corrective action measures to include: (1) Installing one groundwater monitoring well downgradient (south-southeast) from the former east fuel dispenser; (2) Conducting quarterly groundwater monitoring of the newly-installed well for approximately two quarters; (3) Drilling and sampling two soil borings downgradient from previous borings IB-1 and IB-2; (4) Conducting soil vapor sampling in soils beneath the Corwood Car Wash cashier's kiosk; and (5) Conducting a Risk-Based Corrective Action (RBCA) assessment for the project site.

After conducting the above investigative tasks, we believe that closure of the site as a low-risk soil and groundwater case will be warranted, provided:

- There is no free product present in the project site well.
- The hydrocarbon plume is stable.
- No ongoing hydrocarbon sources are present at the site.
- Results of RBCA assessment activities indicate no significant risk posed by residual hydrocarbons.
- The site is used for commercial purposes only.

WORKPLAN ELEMENTS

Based on the project approach summarized above, we propose to conduct the following workplan elements. All tasks will be conducted in accordance with local, State, and Federal guidelines and statutes.

Task 1 Install One Groundwater Monitoring Well. In order to verify grab groundwater analytical results from boring IB-1, ~~one groundwater monitoring well will be installed~~ at the site. The well will be located in an expected downgradient (south-southeast) direction from the former east fuel dispenser, as shown on Figure 2.

The well will be installed by a California-licensed drilling contractor using hollow stem auger equipment in accordance with Alameda County Zone 7 Water Agency permit

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requirements as follows: (1) Two-inch diameter Schedule 40 threaded PVC 0.020-inch slotted well casing will be placed from approximately 20 feet to five feet in depth (exact screen depths will be determined in the field based on occurrence of first groundwater); (2) Filter sand will be placed around the casing to a depth of approximately four feet below grade; (3) A one-foot bentonite seal will be placed above the filter sand to approximately three feet below grade; and (4) The remaining annulus will be grouted using a cement/sand slurry (bentonite less than 5 percent) to approximate grade. The top of the well will be enclosed in a traffic-rated locking box set in concrete slightly above grade.

The well boring will be logged and sampled by a qualified scientist. At least two soil samples from the well boring will be analyzed for TPH-G/BTEX/MTBE and TPH-D by a California-certified analytical laboratory. Positive MTBE results will be confirmed using USEPA Method 8260.

Task 2 Conduct Quarterly Groundwater Monitoring. The newly-installed well will be monitored quarterly for two quarters. Wells will be purged and sampled in accordance with acceptable groundwater sampling protocols. Groundwater samples will be analyzed for TPH-G/BTEX/MTBE and TPH-D by a California-certified analytical laboratory. Positive MTBE results will be confirmed using USEPA Method 8260.

Task 3 Drill and Sample Two Soil Borings. Two soil borings will be drilled and sampled using direct-push coring equipment. These borings will be located on the south side of the site adjacent to the south property line (see Figure 2). The two borings will be drilled to approximately 15 feet in depth, and approximately one soil sample and one grab groundwater sample will be collected from each boring using standard direct-push sampling methods. Soil and grab groundwater samples, which will be preserved in accordance with standard sample handling protocols, will be analyzed for TPH-G/BTEX/MTBE and TPH-D. Positive MTBE results will be confirmed using USEPA Method 8260.

Task 4 Conduct Soil Vapor Sampling. A single soil vapor sample will be collected inside the Corwood Car Wash cashier's kiosk at the approximate location shown on Figure 2. The vapor sample will be collecting using the following method.

- A small hole will be cut in the concrete slab, exposing the underlying subgrade. Base rock will be removed, exposing native soils.
- An AMS Gas Vapor Probe (or equivalent) will be driven approximately three feet into subsurface soils, and retracted to allow for vapor sampling.
- The vapor probe will be purged to remove residual ambient air, and a vapor sample will be collected using a six-liter, laboratory clean certified Summa Canister™. A flow controller will be used so that the Summa Canister will fill slowly to insure a representative soil vapor sample.

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- The vapor probe will be extracted, and the concrete slab will be patched to meet pre-existing conditions.

The vapor sample will be transported to Air Toxics, Ltd., a California-certified analytical laboratory, under formal chain-of-custody. The sample will be analyzed for BTEX using EPA Method TO-14, which provides for a Benzene detection level of 0.300 $\mu\text{g}/\text{m}^3$.

Task 5 Conduct Risk Assessment. A detailed risk assessment will be conducted for project site in accordance with ASTM standards, incorporating all available soil and groundwater data. Based on our experience in the project site area, we expect that the only potentially complete exposure pathways requiring risk assessment calculations for commercial receptors will include: (1) Indoor air exposure; (2) Outdoor air exposure; and (3) Soil exposure (construction worker).

Task 6 Prepare Report of Findings. Following completion of these activities, a report will be prepared for submittal to Alameda County Department of Environmental Health. This report will include: (1) Description and results of well installation and monitoring activities; (2) Description and results of the soil boring investigation; (3) Description and results of soil vapor sampling activities; and (4) The RBCA assessment for the project site. If investigative results warrant, then this report will request regulatory site closure.

PROJECT SCHEDULE

Prior to implementing additional investigative activities, Mr. Roger Woodward of R. L. Woodward Industries, Inc. must apply for reinstatement of his claim to the State UST Cleanup Fund. Hence, Mr. Woodward proposes to begin the proposed workplan activities within 60 to 90 days.

We appreciate the opportunity to present this workplan for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,



James E. Gribi
Registered Geologist
California No. 5843

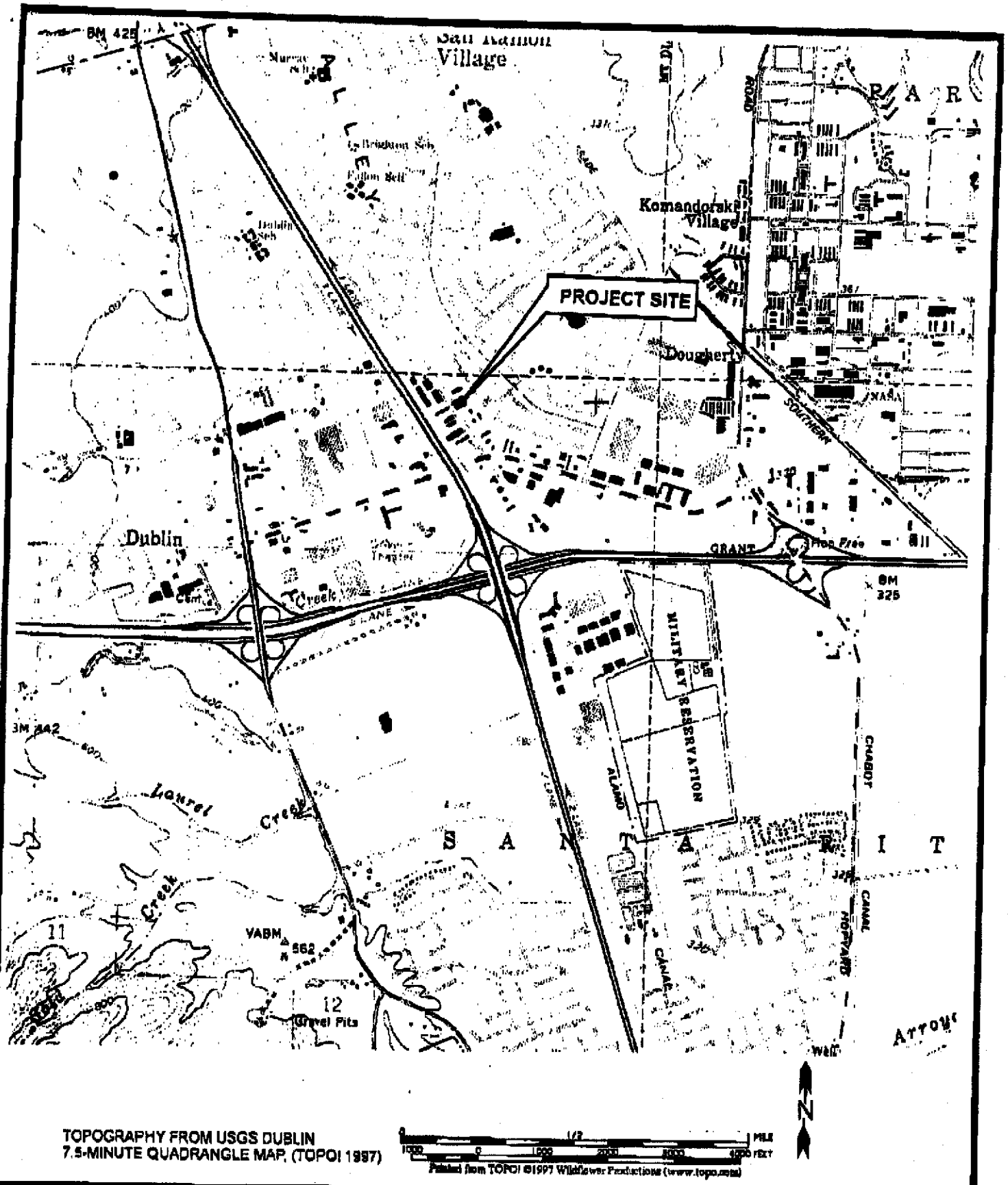


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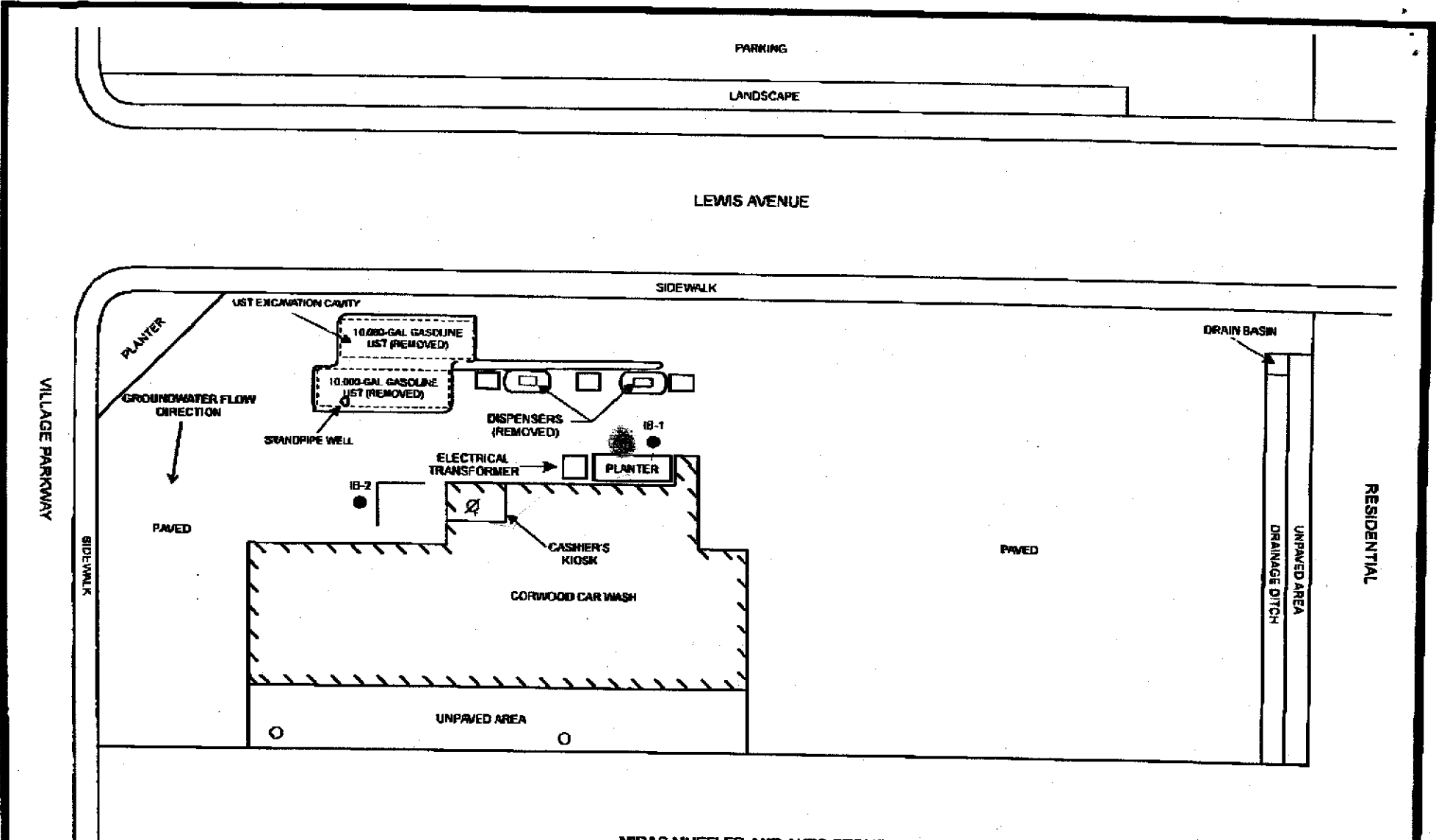
c Roger Woodward, R. L. Woodward Industries, Inc.

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GRIBI Associates



DESIGNED BY:	CHECKED BY:	SITE VICINITY MAP	DATE: 02/28/00	FIGURE: 1
DRAWN BY: JG	SCALE: 1:24,000		GRIBI Associates	
PROJECT NO: 106-02-01		CORWOOD CAR WASH 6973 VILLAGE PARKWAY		



MIDAS MUFFLER AND AUTO REPAIR

- ⊙ - PROPOSED SOIL VAPOR SAMPLE LOCATION
- - PROPOSED INVESTIGATIVE BORING LOCATION
- ⊕ - PROPOSED MONITORING WELL LOCATION
- - INVESTIGATIVE BORING LOCATION



DESIGNED BY:	CHECKED BY:
DRAWN BY: JEG	SCALE:
PROJECT NO: 106-02-02	

SITE PLAN

CORWOOD CAR WASH
6973 VILLAGE PARKWAY

DATE: 03/20/00	FIGURE 2
GRIPI Associates	