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MEMORANDUM

TO: James Buckley <via telefax: (415) 421-8615>
Citizens Housing Corporation

FROM: Grover Buhr/Michael McGuire

DATE: 28 December 2001

PROJECT: Phase 1 and 2 Environmental Site Assessment
1173 28th Street
Oakland, California
Project 3259.01

SUBJECT: Summary of Findings

We have completed the data gathering for the Phase 1 and 2 Environmental Site Assessment for the above-referenced property. The data gathering included the following activities:

1. Researched and collect documentation regarding the historical use of the property;
2. Obtained a listing of facilities in government environmental databases for the site and vicinity;
3. Visited the site to observe conditions;
4. Advanced four soil borings and collected soil and groundwater samples;
5. Analyzed the samples for selected chemical parameters.

This memo summarizes our findings to date.

The site currently consists of an asphalt-paved parking area, a truck ramp, the floor slabs of previous buildings and an empty industrial building. These features are shown on the attached Figure 1. The existing building was partially gutted by fire in 1992. The northwest part of this building is currently used for storage of testing equipment and materials, presumably by Testing Engineers, located across 28th Street to the north. The rest of this building contains materials and debris left from the fire. The compressor room contains the refrigeration plant for the cold storage and meat packing rooms in the rest of the building. Assorted hazardous materials and suspected hazardous materials are present in several parts of the building, particularly in the compressor room. These materials were listed in our memo to you dated 4 December 2001, and should be profiled and appropriately disposed. Ports in the sidewalk suggesting the presence of underground storage tanks were observed in three locations: on Adeline Street adjacent to the

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existing building; on Magnolia Street adjacent to the concrete-floor-slab area; and on Magnolia Street in front of the property adjacent to the site on the south. These ports have since been confirmed to be associated with existing tanks.

Our historical research yielded the following information. Prior to the 1920's, the entire property was residential and/or vacant. In the 1920's through 1935, the northwest part of the site was occupied by the Ambassador Laundry Company. We found no information regarding whether dry cleaning was performed at this facility. From as early as 1930 through the 1950's, the area currently occupied by the truck ramp and asphalt-paved area, and continuing through to Adeline Street, contained an aluminum foundry. This facility had areas of earthen, wood and concrete floors. By 1947, the area of the laundry was occupied by the Holly Meat Packing Company, which in the 1950's was acquired by the John Morrel Sausage and Meat Packing Company. In the early 1960s, the whole site was developed and shown as the Morrel Company, including development of the truck ramp and asphalt-paved parking lot on the site of the former aluminum foundry. The facility was bought in the 1960s by the current owners and operated as the Coast Sausage factory until destroyed by fire in 1992.

On 6 December 2001, we advanced four soil borings at the site to collect samples of soil and groundwater. The locations are shown in Figure 2. Soil and groundwater were sampled for:

- lead - a common contaminant of artificial fill in the San Francisco Bay Area;
- other metals and cyanide associated with foundries;
- volatile organic compounds (VOCs) – including chlorofluorocarbons (CFCs) (refrigerants) and chlorinated solvents;
- glycols (heat exchange liquids), such as noted in drums in the compressor room;
- ammonia (a refrigerant).

In soil samples, lead was found at 110 milligrams per kilogram (mg/kg) at one foot below ground surface (bgs) in boring B-2. Lead was found in other samples in this and the other borings at concentrations well below regulatory or waste-disposal concerns. The result in boring B-2 indicates that shallow soil in the vicinity of this boring may require disposal as a California hazardous waste if disposed off site. No other metals or ammonia were found in soil at levels of regulatory or waste-disposal concern. In addition, no other parameters tested were detected in soil samples.

Groundwater was encountered in the borings from 5 to 7 feet bgs, with an apparent gradient to the west-northwest. In groundwater samples, metals and ammonia were detected at

how determine gradient?

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concentrations below regulatory concern. No CFCs were detected. The hydrocarbon compounds toluene and xylenes and five species of chlorinated organic compounds were detected in groundwater. These compounds and their concentrations are shown on Figure 3. The highest concentrations of contaminants were in B-2, where cis-1,2-dicholoroethylene (cis-1,2-DCE) and trichloroethylene (TCE) were detected at 990 micrograms per liter (ug/l) and 47 ug/l, respectively. Cis-1,2-DCE was also detected in groundwater from boring B-3, at a much lower concentration of 0.92 ug/l.

Also detected in B-3 were toluene and xylenes, at 0.77 and 1.0 ug/l, respectively. Toluene and xylenes were also detected at low concentrations in B-4 and B-1 (toluene only). The presence of these compounds indicates contamination by petroleum hydrocarbons at low levels, which may be the result of leakage from the tank under the sidewalk along Magnolia Street or some other source.

Three different chlorinated compounds were detected in groundwater from boring B-1: 1,1-dichloroethane (1,1-DCA) at 3.1 ug/l, 1,1-dichloroethylene (1,1-DCE) at 17 ug/l, and 1,1-trichloroethane (1,1-TCA) at 19 ug/l.

Comparing the contaminant concentrations with Regional Water Quality Control Board (RWQCB) Risk Based Screening Levels (RBSL's) for threatened-drinking-water and non-drinking-water groundwater shows *cis-1,2-DCE in B-2 to exceed both levels, TCE in B-2 to exceed the threatened-drinking-water RBSL* but not the non-drinking-water RBSL and *1,1-DCE in B-1 to exceed both levels*. The remaining detections of contaminants do not exceed either RBSL. The exceedance of the non-drinking-water RBSL for the two contaminants in the groundwater from the two borings indicates that additional work will be needed to address the contamination prior to development. Such activities may include identifying the source (or sources) of contamination, performing a risk assessment to evaluate possible exposure to site residents, and possibly mitigation of the source (or sources) and/or installation of a vapor barrier to prevent the migration of volatile contaminants to living spaces.

Of most concern are the concentrations of cis-1,2-DCE and TCE in B-2. These levels suggest a potential source of the contamination at or near that location. That the source has not been identified is shown by the lack of the contaminants in the soil samples from that boring. Both cis-1,2-DCE and TCE are common solvents. However, cis-1,2-DCE has also been used as a refrigerant, suggesting the former refrigeration plant or associated piping leading to the cold rooms as a possible contaminant source. It is also possible that the source of the cis-1,2-DCE/TCE is a source off site to the south or east.

The particular chemical suites found in the groundwater samples indicate more than one source of contamination. Comparing the cis-1,2-DCE/TCE suite in B-2 with the cis-1,2-DCE in B-3 suggests a source near B-2 and migration of the contamination toward B-3. However, comparing

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the cis-1,2-DCE/TCE suite in B-2 with the 1,1-DCA/1,1-DCE/1,1-TCA suite in B-1 indicates a chemistry caused by different sources. The source for the suite found in B-1 may be previous on-site operations at the aluminum foundry, aluminum foundry operations off site to the east, or past or current activities at the industrial facility (currently automobile work) that borders the site to the south.

On 26 December 2001, our subcontractor, CSS Environmental Services, broke open the two sidewalk ports on Adeline Street and Magnolia Street adjacent to the site to confirm if they were associated with underground tanks. The ports were indeed fill ports for tanks that remain under the sidewalks. Both tanks contained liquid, with approximately 16 inches of liquid in the tank on Magnolia Street and 36 inches of liquid in the tank on Adeline Street. In both, the liquid was primarily water with some petroleum product floating on the top. Samples of the liquid were collected and are currently being analyzed for volatile organic compounds and petroleum hydrocarbons. These tanks may have previously been fuel oil tanks.

In summary, the primary environmental concerns identified include:

1. The presence of waste hazardous materials on site.

2. The presence of two underground storage tanks under the sidewalks adjacent to the site.

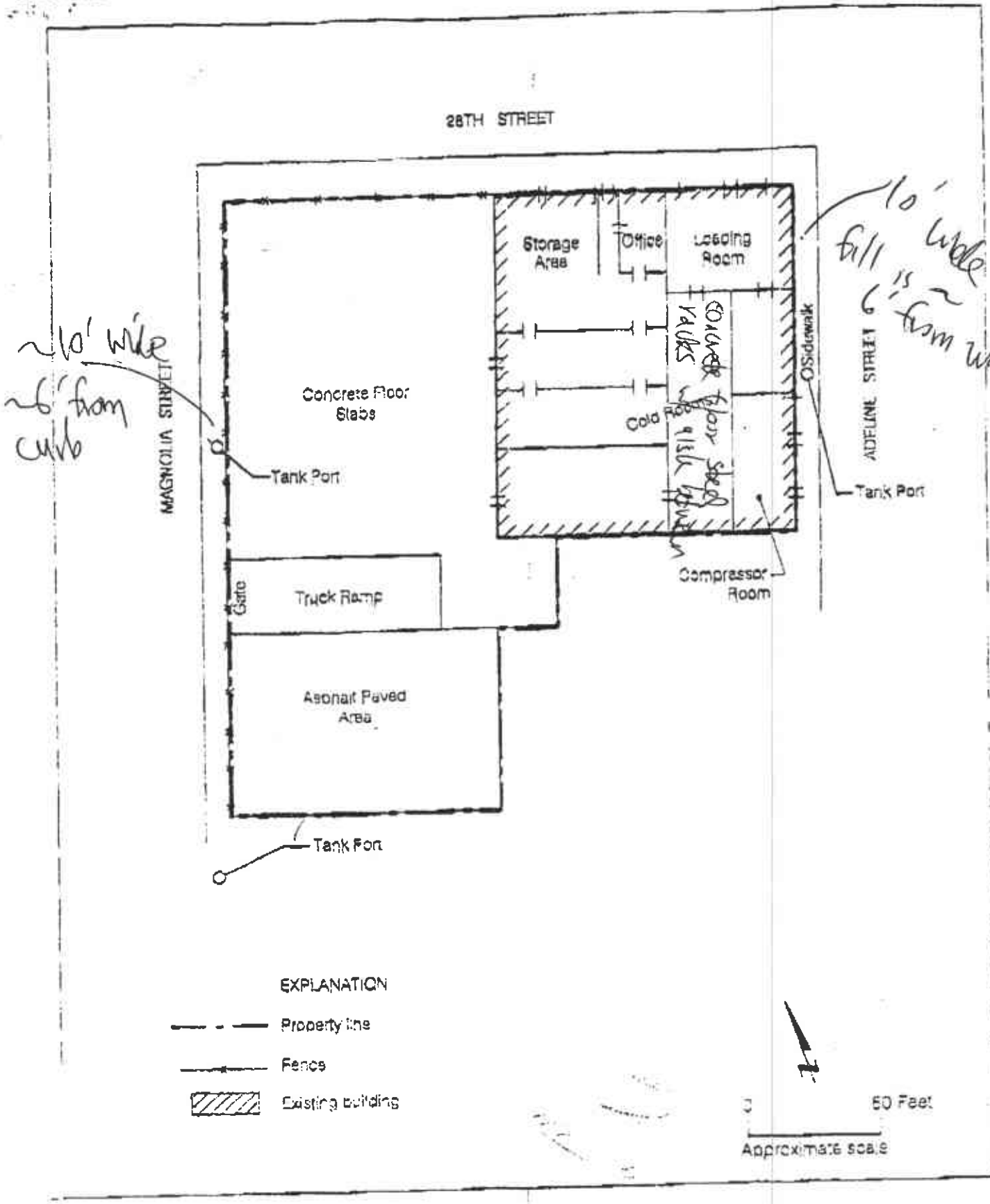
3. The presence of chlorinated volatile organic compound contamination in groundwater. This contamination may indicate: 1) a risk to future residents of the site; and 2) possible off-site migration of the contaminant plume to other properties causing the site owner be responsible for off-site clean up.

We recommend the following environmental activities be performed.

1. Waste hazardous materials on site need to be profiled, removed and disposed properly. The types and amounts of these materials, and the estimated costs for disposal, have previously been communicated to you.

2. The tanks remaining under the sidewalks need to be removed and disposed, under the authority of the Oakland Fire Department.

3. Additional soil and groundwater sampling. This will be needed to evaluate whether the contaminant sources are on site or off site, to evaluate if the contamination is migrating off the site to other properties, and to support a risk assessment regarding exposure to future tenants of the site. We propose seven additional soil borings in the locations shown in Figure 3. We estimate the costs for this investigation will be $15,500, as detailed below:



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SITE PLAN

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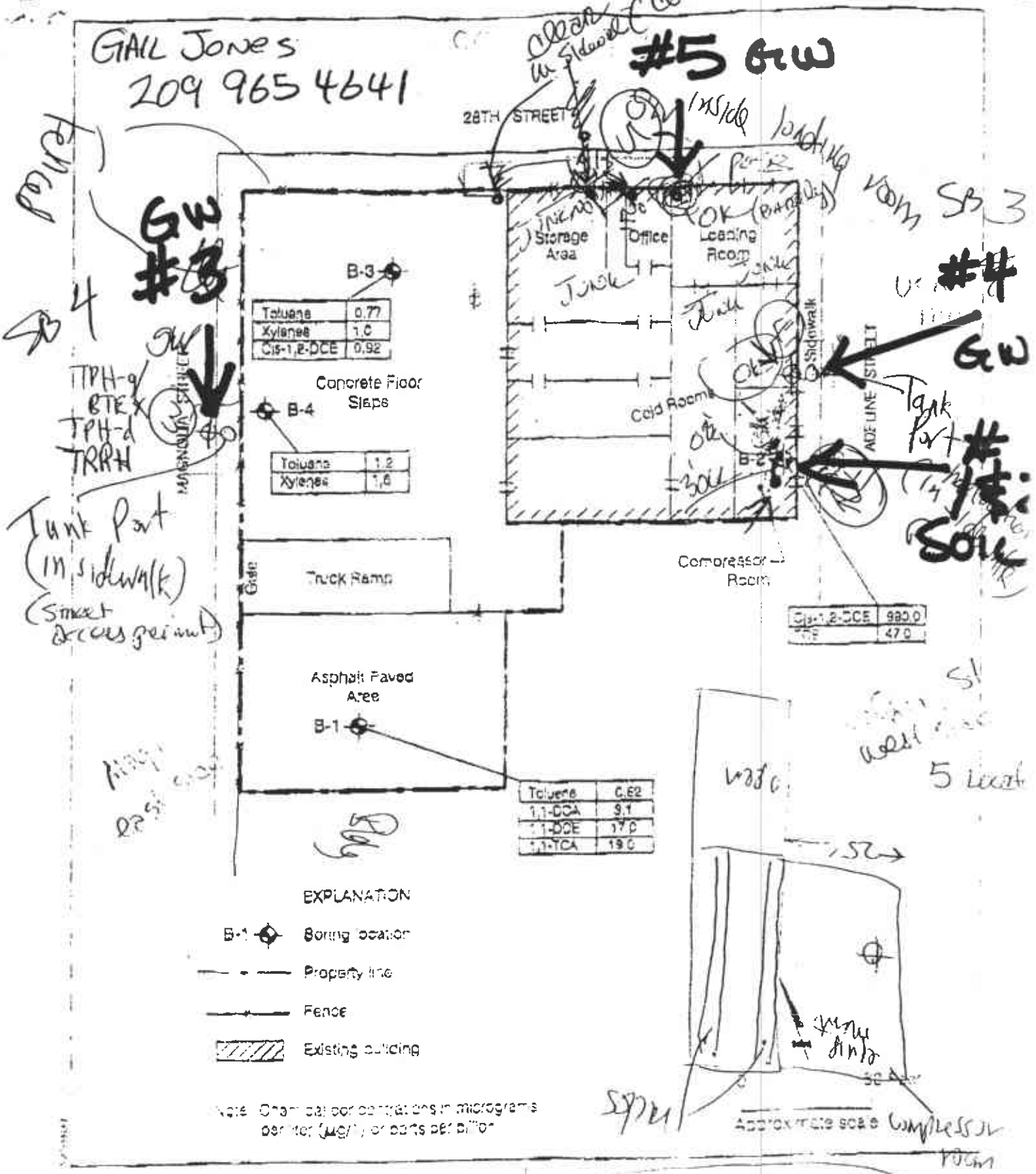

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BORING LOCATIONS AND GROUNDWATER ANALYTICAL RESULTS

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