# ENSR®

#3838

**ENSR Consulting - Engineering - Remediation**
**(ENSR Purchased Fugro-West GeoEnvironmental in January 1997)**

1420 Harbor Bay Parkway
Alameda, California 94502

Phone : (510) 748-6700
Telefax : (510) 748-6799

97 OCT -9 PM 4:44

# LETTER OF TRANSMITTAL

| | | | |
|---|---|---|---|
| To: | **ALAMEDA COUNTY ENVIRONMENTAL HEALTH SERVICES DEPARTMENT** | Project No. | 8700-752-100 |
| | 1131 Harbor Bay Parkway | Date | October 8, 1997 |
| | Alameda, CA 94502-6577 | | |
| Attn: | Mr. Barney Chan | | |
| Phone: | 510.567.6765 | Fax No. | 510.337.9335 |

From: Peter B. Hudson, Project Manager

Subject: Letter-Report of Air Monitoring at the Towata Flowers building, 2305 Santa Clara, Alameda CA

**SENT BY:**

☐ Messenger ☐ Overnight Mail ☐ Overnight (by 10 AM) ☒ Regular mail ☐ Hand Delivered

| **WE ARE TRANSMITTING:** | **THESE ARE TRANSMITTED:** |
|---|---|
| ☐ Draft Report | ☐ For Your Review |
| ☒ Final Report | ☒ For Your Information and Use |
| ☐ Proposal | ☐ Per Your Request |
| ☐ Other: | ☐ Other: |

Dear Mr. Chan:

Please find one copy of the letter-report that presents results of air monitoring work associated former Bill Chun Service Station site, completed at the adjacent property, the Towata Flowers, located at 2305 Santa Clara Avenue, in Alameda California. Call me with any questions or comments. Thank you

Peter Hudson

Signature Date

**FOR OFFICE USE ONLY**

Originator Please Initial Appropriate Box Prior to Sending

| | | | | |
|---|---|---|---|---|
| ☐ Create typed transmittal | ☐ Mail to Addressee | ☐ Mail copy, then file original | ☐ Mail copy, return original | ☐ Mail to Addressee and cc, file copy |

ENSR

Consulting • Engineering • Remediation

1420 Harbor Bay Parkway
Suite 160
Alameda, CA 94502

(510) 748-6700
FAX (510) 748-6799
http://www.ensr.com

October 8, 1997
Project No. 8700-752-100

Mr. Wayne Chun
265 Heron Drive
Pittsburg, California 94565

**Subject:** Results of Air Monitoring
Towata Flowers Building
2305 Santa Clara Avenue, Alameda, CA

Dear Mr. Chun:

This letter presents a discussion of the procedures and results of air monitoring conducted by ENSR, at the Towata Flowers building, located at 2305 Santa Clara Avenue, in Alameda, California. ENSR recommended this assessment because free-phase, petroleum hydrocarbon product has been identified on the groundwater at the adjacent former Bill Chun service station site (Figure 1). The purpose of the air monitoring work was to assess whether accumulation and subsequent upward migration of hydrocarbon vapors is occurring beneath the Towata Flowers building. Accumulation of such vapors could potentially pose a risk to human health and safety as an inhalation or explosive hazard.

ENSR conducted the air monitoring activities in accordance with Task 1 of the *Work Plan Addendum, Further Free Product Assessment and Groundwater Assessment* prepared by Fugro West, Inc., dated October 2, 1996 and approved by the Alameda County Environmental Health Department (ACHD) on October 3, 1996. The attached Figure 1 shows the location of the Towata Flowers Building and the locations where ENSR conducted air monitoring.

**Project Background**

In July of 1992, three underground storage tanks (USTs) were removed from the former Bill Chun service station, located at 2101 Santa Clara Avenue. During removal, it was discovered that the 285 gallon gasoline UST had leaked. Concentrations of gasoline-range hydrocarbons were detected in soils at depths of 9.5 to 11 feet below ground surface (bgs). Additionally, free-phase gasoline product has been identified at the former Bill Chun site in monitoring wells MW-7, (located adjacent to the Towata Flowers building), MW-1, MW-2, MW-5, and MW-6 (located on the former Bill Chun property).

The Towata Flowers building is located directly adjacent to and southeast of the former Bill Chun service station. The building is a two-story wood frame with a slab-on-grade foundation. The first floor contains a flower shop and residential units are located on the second floor. The first floor areas includes a front customer shop area, offices, a walk-in flower cooler, a work area, and a rest room. Storage areas are located behind the work area. A narrow yard used for storage extends along the north side of the building. The second floor of the building was not accessed during this assessment. A small greenhouse building occupies the southeast corner of the Towata property separated from the main building by a concrete walkway and landscaped areas. (Figure 1).

## SCOPE OF WORK

The assessment consisted of monitoring air in areas that organic vapors could potentially accumulate or that would provide a pathway for vapors to migrate from beneath the floor into the building interior. In addition to the interior areas, air monitoring was conducted at various outdoor locations in areas with exposed soil. The areas monitored, the equipment used and monitoring procedures are described in the following sections.

### Air Monitoring Locations - Indoor

Areas listed below represent typical monitoring locations within the Towata Flowers building. Approximate monitoring locations are shown on Figure 1.

- Floor/wall edges along the floorboards. These areas included separations between the wall and floor and loose or separated floor molding. Areas monitored included an obvious separation between the floor and the wall in the work area, the molding surrounding the display cooler in the front retail area and behind the counter in the retail area.

- Space between the floor and the underlying sub-grade. An accessible monitoring location was identified in the rear storage area, near interior stairway. In this area, a sheet of plywood had been placed over a hole in the original floorboards. The plywood was temporarily removed providing access to monitor the air in the space beneath the floor.

- Plumbing. These areas were observed in the first floor rest room, the workroom sink and in the vicinity of the heater in the workroom. Monitoring was conducted where the pipes day-lighted above the floor and around the base of the toilet. ENSR observed that the seal around the vertical sink pipes and heater pipes were intact.

- Interior storage rooms and closets. Monitoring was conducted in storage closets located in the offices and the rear storage rooms.

**Air Monitoring Locations - Outdoor**

Areas listed below represent typical monitoring locations outside the Towata Flowers building. Approximate monitoring locations are shown on Figure 1.

- Crawl space beneath the exterior stairs. The crawl space beneath the exterior stairway is enclosed, accessed by a small door. The base of the crawl space is an exposed soil surface. ENSR monitored the air within the crawl space, beneath the stairway and at the contact of the building foundation and soil.

- Side-yard area between the building and the Bill Chun Property The side-yard (walkway) area contained a wooden deck and exposed soil. ENSR monitored the space between the wood deck and the underlying sub-grade through openings in the decking. Exposed soil was monitored by inserting the vapor test equipment probe into the first 6-inches of soil.

- Walkway between building and greenhouse. Soil in the landscaped areas bordering the concrete walkway was monitored by inserting the vapor test equipment probe into the first 6-inches of soil.

- Various areas within the greenhouse. Ambient air was monitored within the green house in addition to areas of the exposed soil surface. Exposed soil beneath the shelving was monitored by inserting the vapor testing equipment probe into the first 6-inches of soil.

**Equipment**

ENSR used a Photo-Vac, Model 580 B portable Organic Vapor Meter (OVM) to monitor for organic vapors. This equipment utilizes a sensitive photo-ionization detector in an operating range of 5 to 2,000 parts per million (ppm) with minimum detectable concentration of 0.1 ppm. The OVM was calibrated by ENSR equipment technicians in accordance with manufacturer's recommendations one day prior to use on the site.

A Gas-Tech, Model GT 201 portable gas monitor (PGM) was used to screen for explosive environments. Measurements were recorded off this instrument in both lower explosive limit (LEL) and in ppm. Calibration of this instrument was performed by equipment rental service, Enviro-Services and Repair of Concord, California, one day prior to shipment to ENSR.

**Monitoring Procedures**

Air monitoring was conducted in the afternoon of July 9, 1997. The weather was fair and sunny with an outside air temperature of approximately 74 degrees Fahrenheit. The assessment was conducted by two ENSR technicians. Prior to air monitoring activities ENSR technicians conducted a reconnaissance of the building and grounds to determine possible monitoring points.

Prior to monitoring at each location, sufficient time was allowed for the display on the OVM and PGM to reach zero. The OVM and PGM were then positioned to sample air for a time period ranging from 2 to 5 minutes. After the OVM probe was extracted, the maximum reading for that time period was recorded.

In enclosed areas, such as the crawl space beneath the stairs and the below the floor and decking boards, care was taken to insure that mixing of outside air was limited or did not occur. In the rear storage area beneath the floor boards, the OVM and PGM probes were inserted, as feasible, underneath the floor boards, away from the opening in the floor.

ENSR monitored for hydrocarbon vapors in the exposed surficial soils at various outdoor locations. A soil probing tool was used to open a 1/4-inch hole, six inches deep into the soil. The OVM probe was then inserted into the hole and air was sampled for a period of 2 to 5 minutes. The maximum concentration detected during the sampling period was recorded.

**Results**

Vapor concentrations recorded at the monitoring locations within the building interior were nondetectable (< 0.1 ppm) with exception of one reading (0.5 ppm), detected beneath the floor boards in the rear storage area. The PGM did not indicate explosive conditions in the enclosed areas monitored within the building (closets and beneath the floor boards).

A maximum reading of 0.4 ppm was recorded in the crawl space underneath the outside stairway. Vapor concentration recorded in the other outside monitoring locations were nondetectable (< 0.1 ppm).

The vapor concentration detected within the first 6 inches of soil in the landscaped and exposed soil areas ranged from 0.5 ppm to 2.1 ppm. The maximum concentration (2.1 ppm) was detected in the flower strips between the building and the greenhouse. The maximum concentrations of 1.1 ppm was detected in the first 6-inches of soil located in the side-yard (walkway) area between the in the Towata Building and the former Bill Chun property.

**Conclusions**

Concentrations of vapors detected (maximum detected at 6-inch depth was 2.1 ppm) in the soils from exterior portions of the Towata Flowers property on July 9, 1997, indicate that hydrocarbon vapors may be present in the near surface soils beneath the building. However, evidence that vapors were migrating upward into the building was not identified.

ENSR assumes that if the vapors detected in the soils originate from petroleum-impacted soil and groundwater on the former Bill Chun site, they likely contain the gasoline constituents benzene, toluene, ethylbenzene and xylenes (BTEX). BTEX are of concern because: a) they pose a threat to human health as carcinogens and neuro-toxins, b) they readily migrate through soil and groundwater in both liquid and gas phase; and c) their vapors are highly flammable and explosive. ENSR has applied the California Code of Regulations, Title 8 (CCR, Title 8), Permissible Exposure Limits (PELs) to determine whether the detected vapors represent a risk to human health. PELs are the maximum permitted, 8-hour time-weighted average concentration of an airborne contaminant. The lowest PEL is that of benzene at 1 ppm. The PEL of toluene, ethylbenzene and xylenes is 100 ppm.

It is ENSR's opinion that the presence of vapors in the soils beneath the building do not present a health and safety concern. The rationale for ENSR's opinion is based on the following:

- Non-detectable to low organic vapor concentrations ranging from 0.1 ppm to 0.5 ppm were measured in the air sampled from spaces beneath the floor boards, decking and in the crawl space under the exterior stairs.

- The vapor concentrations identified in enclosed air spaces (beneath the floor boards, crawl space) are below the PELs (CCR, Title 8) for the BTEX constituents of petroleum hydrocarbons as gasoline.

- The majority of flooring in the building were observed to be in good condition with no cracks or openings leading to subsurface areas.

- No evidence of an explosive environment was detected by the PGM in the enclosed spaces and under the floor.

These results were briefly discussed with Mr. Barney Chan of the ACHD in a meeting on September 24, 1997. In that meeting, Mr. Chan discussed the potential need for additional monitoring in the basement of the Pythion Building, (1510 Oak Street) located adjacent and to the north of the former Bill Chun property (Figure 1). Mr. Chan's concern is that because the Pythion Building has a basement foundation, there is a potential that hydrocarbon vapors may be entering the basement from the former Bill Chun service station site.

**Closing Remarks**

The judgments, conclusions, and recommendations described in this report pertain to the conditions judged to be present or applicable at the time the work was performed. ENSR's opinions were developed in accordance with accepted geologic, hydrogeologic, and engineering practices for this time and for this specific site. The interpretations and conclusions contained in this report represent our professional opinions. Other than this, no warranty is implied or intended.

This report has been prepared solely for the use of Mr. Wayne Chun. Use of this report is provided to Mr. Chun for his exclusive use and shall be subject to terms and conditions of the contract between Mr. Chun and ENSR. Any reliance on this report by third parties shall be at the parties sole risk.

We appreciate the opportunity to provide environmental consulting services you. If there are any questions or comments regarding this letter, or if we can assist you in any other matter, please contact us at (510) 748-6700.

Sincerely,

**ENSR Consulting, Engineering, Remediation**

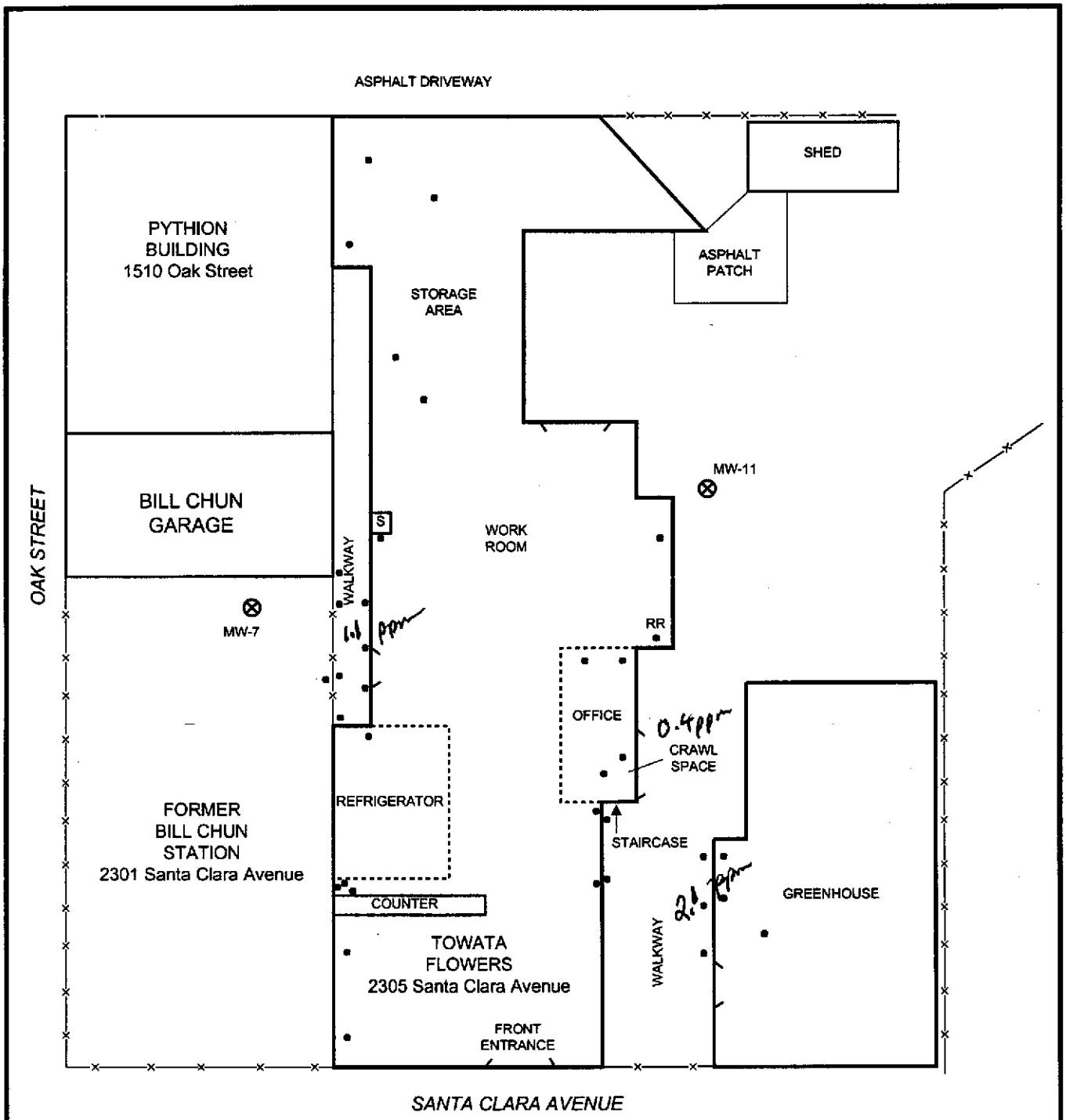
David Weintraub

David Weintraub
Air Quality Specialist

Peter B. Hudson
Project Manager

pbh/PBH

cc: Mr. Barney Chan, Alameda County Health Agency, Department of Environmental health




**LEGEND:**

- ● MONITORING LOCATION
- —×— FENCE
- RR RESTROOM
- S SINK
- / \ DOORWAY

N

NOT TO SCALE

**ENSR.**
ENSR Consulting and Engineering

FIGURE 1
SITE PLAN
Towata Flowers Building
2305 Santa Clara Avenue
Alameda, CA

| | | | | | |
|---|---|---|---|---|---|
| DRAWN: | O. SLIVNYAK | DATE: | 08/12/97 | PROJECT NO. | REV. |
| FILE NO.: | 75230001.dsf | CHECKED: | R. SIMONSEN | 8700-752-300 | 2 |