Chevron Environmental Management Company
6001 Bollinger Canyon Rd, K2236
P.O. Box 6012
San Ramon, CA 94583-2324
Tel 925-842-9559
Fax 925-842-8370

Dana Thurman
Project Manager

July 13, 2006
(date)

ChevronTexaco

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Chevron Service Station # 9-4800

Address: 1700 Castro Street, Oakland, CA

I have reviewed the attached report titled Subsurface Investigation Workplan and dated July 13, 2006.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Cambria Environmental Technology, Inc., upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

Dana Thurman
Project Manager

Enclosure: Report

CAMBRIA

July 13, 2006

Mr. Barney Chan
Alameda County Health Care Services Agency (ACHCS)
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Subsurface Investigation Workplan**
Chevron Station 9-4800
1700 Castro Street
Oakland, CA

Dear Mr. Chan:

Cambria Environmental Technology, Inc. (Cambria) is submitting this *Subsurface Investigation Workplan* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. Cambria proposes installing two groundwater monitoring wells to further define the horizontal extent of hydrocarbons down-gradient of the site and completing a Department of Water Resources (DWR) well survey. The site background and the proposed scope of work are described below.

SITE DESCRIPTION AND BACKGROUND

The site is an active Chevron branded service station located on the northeast corner of the intersection on Castro Street and 17th Street, Oakland, California (Figure 1). Currently there are four monitoring wells on-site and one monitoring well off-site. Monitoring wells MW-5 and MW-6 were abandoned in December 1996. Surrounding site use is mixed commercial and residential. Former site facilities consisted of four underground storage tanks (USTs), two dispenser islands, and a station building (Figure 2).

Site Geology: This site is located on a gently sloping plane west of the Piedmont Hills, approximately 2 miles east of San Francisco Bay, 1.5 miles north of Lake Merritt, and one mile northwest of Glen Echo Creek. The soil in the site vicinity consists of Late Pleistocene alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. Lithology encountered on-site consists of interbedded silt, clayey silt, clayey and silty sand, sand, and gravel with clay and sand, (California's Groundwater – Bulletin 118, update 2003).

Cambria Environmental Technology, Inc.

2000 Opportunity Drive
Suite 110
Roseville, CA 95678
Tel (916) 677-3407
Fax (916) 677-3687

Site Hydrology: Historically, depth to groundwater has fluctuated between approximately 23 feet below grade (fbg) and 29 fbg. Groundwater consistently flows in a westerly direction. A rose diagram depicting historical groundwater flow direction is presented on Figure 2.

Previous Investigations

February 1997 Soil Borings: Gettler Ryan Incorporated of Dublin, CA (GR) hand augured 12 soil borings to a maximum depth of 10 fbg, to evaluate the extent of the hydrocarbon impact to soil beneath the site. Groundwater was not encountered during the installation of the soil borings. Total petroleum hydrocarbons as gasoline (TPHg) was detected in five soil boring samples ranging from 1.9 milligram per kilogram (mg/kg) to 890 mg/kg. Total petroleum hydrocarbons as diesel (TPHd) was detected in six boring samples ranging from 1.0 mg/kg to 640 mg/kg. Benzene was detected in 12 soil boring samples ranging in concentrations from 0.011 mg/kg to 3.0 mg/kg. Details of this investigation can be found in GR's *Dispenser Island Sampling and Hand-Augered Borings at Chevron Service Station #9-4800*, dated May 1, 1997.

May 1997 Well Installation: GR supervised the installation of groundwater monitoring wells MW-1 through MW-3. TPHg was not detected in any soil sample. TPHd was detected in two of the three well borings ranging from 1.1 mg/kg to 1.9 mg/kg. Benzene was detected in two well borings ranging from 0.0069 mg/kg to 0.12 mg/kg. Methyl tertiary butyl ether (MTBE) was detected in two of the three well borings ranging from 0.041 mg/kg to 0.58 mg/kg. Details of this investigation can be found in GR's *Well Installation Report*, dated July 31, 1997.

March 1999 Well Installation: GR supervised the installation of monitoring wells MW-4 through MW-6. No TPHg, benzene, toluene, ethylbenzene, xylene (BTEX) or MTBE was detected in soil samples from borings MW-5 or MW-6. The maximum concentrations of benzene (0.0051 mg/kg) and MTBE (0.045 mg/kg) detected in soil were in monitoring well MW-4. Details of this investigation can be found in GR's *Monitoring Well Installation Report*, dated May 25, 1999.

March 2001 Well Installation: Delta Environmental Consultants (Delta) supervised the installation of off-site groundwater monitoring well MW-7. No TPHg, BTEX or MTBE was detected in any of the soil samples collected from the well boring. TPHd was detected in the sample from 15 fbg at a concentration of 1.5 mg/kg. Details of this investigation can be found in Delta's *Monitoring Well Installation Report*, dated May 29, 2001.

April 2004 UST and Product Line Removal and Replacement: In April 2004, Cambria observed the removal of four 10,000 gallon USTs, three dispenser islands, and associated product piping. No leaks,

cracks or holes were observed in the USTs. Monitoring wells MW-5 and MW-6 were properly destroyed to accommodate the station remodel. Details of this work can be found in Cambria's *Underground Storage Tank Removal, Well Destruction, and Over-Excavation Report*, dated October 20, 2004.

PROPOSED SCOPE OF WORK

Cambria proposes to install two additional monitoring wells in order to assess down-gradient hydrocarbon trends and concentrations. Additionally, Cambria proposes to conduct a DWR well survey. Our proposed scope of work is presented below.

Underground Utility Location: Cambria will notify underground service alert (USA) prior to field work to clear boring locations with utility companies. A private utility line locator will be contracted to additionally clear boring locations of utility lines.

Site Health and Safety Plan: Cambria will prepare a site safety plan to inform site workers of known hazards and to provide health and safety guidance. The plan will be kept on site at all times and signed by all site workers.

Permits: Cambria will obtain well installation permits from the Alameda County Water District (ACWD). A minimum of 72-hours notice will be given to the ACHCS prior to field work.

Soil Borings: Cambria proposes advancing two soil borings to approximately 35fbg. After clearing to 8 fbg using air knife vacuum system, each of the borings will be advanced to approximately 35 fbg using hollow stem augers. Soil will be logged and sampled at 5 ft intervals beginning at 5 fbg. Attachment A presents Cambria's Standard Field Procedures for boring and well installation.

Monitoring Well Installation: Each boring will be completed as a 2-inch diameter monitoring well constructed of schedule 40 PVC with 0.010 slotted screen. Monterey #2/16 sand will be used as filter pack. The screened interval will be from approximately 20 to 35 fbg. Screened intervals may be adjusted based on field observations. Cambria's Standard Field Procedure for installing groundwater monitoring wells is presented in Attachment A.

Soil Screening: Soil samples will be screened using a photoionization detector (PID). PID readings, evidence of discoloration, stratigraphic location, the depth to groundwater, and the collection depth of previous samples containing hydrocarbons will be used to select soil samples for laboratory analysis.

Chemical Analysis: *Selected soil samples will be analyzed for:*

- TPHg and TPHd by Northern EPA Method 8015B and
- BTEX, MTBE, tert-butyl alcohol (TBA) di-isopropyl ether (DIPE) tert-amyl methyl ether (TAME) and ethyl tert-butyl ether (ETBE) by EPA Method 8260B.

Well Development and Sampling: The wells will be developed using surge block agitation and evacuation. GR will develop and sample the wells no sooner than 72 hours after installation.

Well Elevation Survey: The well location and top of casing will be surveyed to mean sea level by a California licensed professional.

Soil and Water Disposal/Recycling: Soil and water produced during field activities will be temporarily stored on-site. Soil cuttings will be stockpiled on plastic and covered with plastic or stored in drums. Rinsate and development water will be stored in drums. Following review of laboratory analytical results, the soil and water will be transported to a Chevron approved facility for disposal/recycling.

Geotracker Upload: Once all of the necessary data is received, the data and a current sitemap will be uploaded to the State Water Resources Control Board Geotracker database as required in sections 2729 and 2729.1 of the California Code of Regulations for UST sites.

Reporting: After the analytical results are received, a subsurface investigation report will be prepared containing, at a minimum:

- A summary of the site background and history,
- Descriptions of the drilling and soil sampling methods,
- Boring logs,
- Tabulated soil analytical results,
- A figure illustrating well locations,
- Analytical reports and chain-of-custody forms,
- A discussion of the extent of hydrocarbons in soil and groundwater,
- A discussion of DWR well survey results, and
- Cambria's conclusions and recommendations.

SCHEDULE

Cambria will carry out this scope of work upon receiving written approval from the ACHCS. Cambria will submit a subsurface investigation report approximately six to eight weeks following receipt of analytical results.

CLOSING

Cambria appreciates this opportunity to work with you on this project. Please contact Christene Sunding at (916) 677-3407 (ext. 109) if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

John Bostick
Staff Scientist

David W. Herzog, P.G. #7211
Senior Project Geologist

Figures: Figure 1 – Vicinity Map
Figure 2 - Site Plan

Attachments: A – Standard Field Procedures for Soil Boring and Monitoring Well Installation

cc: Mr. Dana Thurman, Chevron Environmental Management Company, P.O. Box 6012 Room K2236, San Ramon, CA 94583
Cambria File Copy

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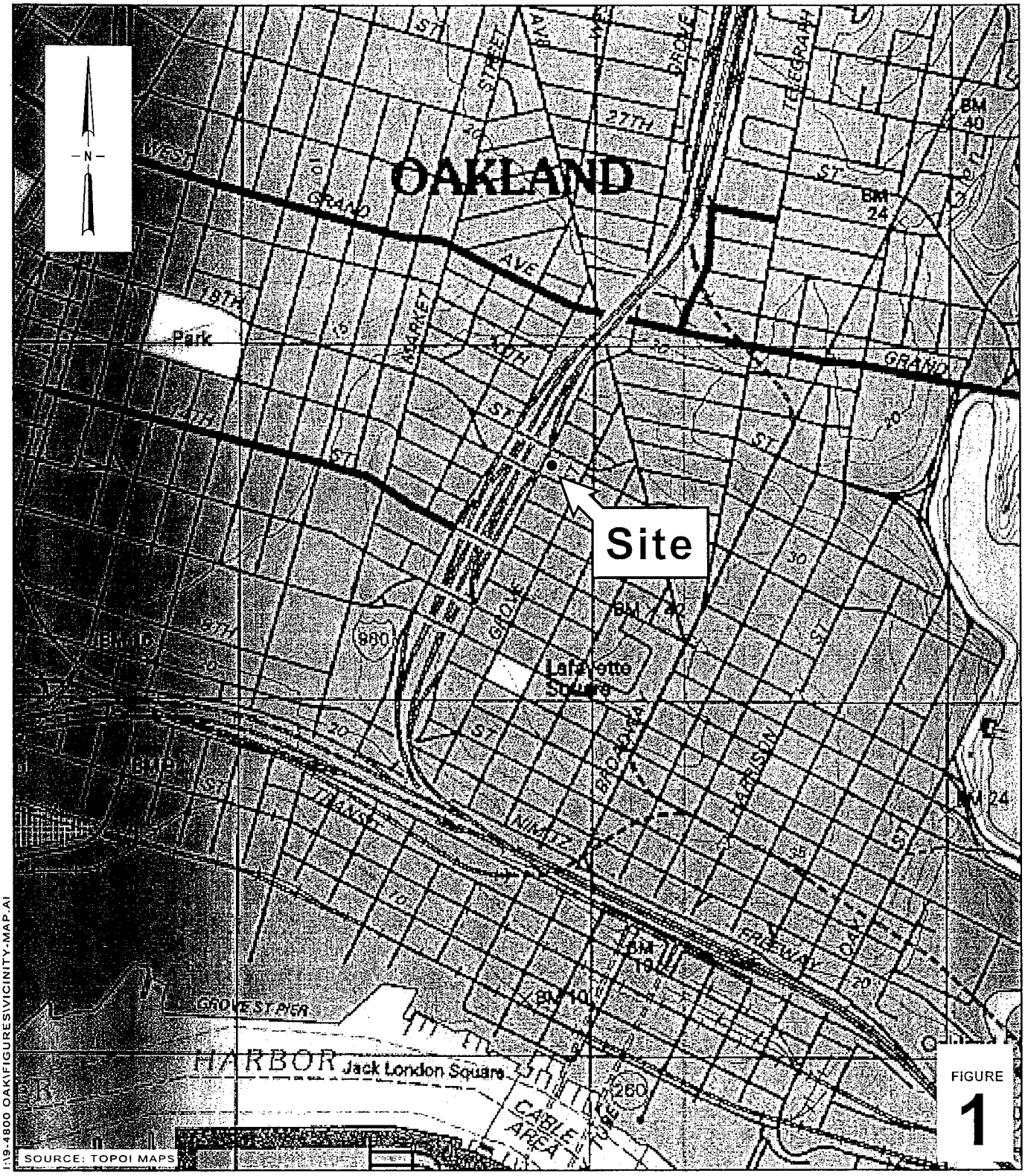
03/16/04



I:\9-4800 OAK\FIGURES\VICINITY-MAP.AI

SOURCE: TOPOI MAPS

FIGURE 1

0 1/8 1/4 1/2 1

SCALE 1" = 1/4 MILE

Chevron Service Station 9-4800

1700 Castro Street

Oakland, California

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Vicinity Map

07/10/06

Site Plan

overpass

HIGHWAY 24

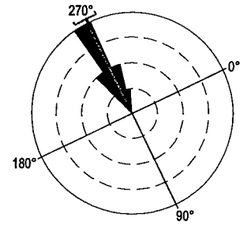
overpass

fence

planter

MW-7

CASTRO STREET



Historical Groundwater Flow Direction 2003-2006

driveway

sidewalk

driveway

MW-4

MW-5

17th STREET

18th STREET

sidewalk

CT-4

CT-5

product lines

former dispenser islands

MW-2

former USTs

MW-1

CT-3

CB-4

CB-5

former kiosk

driveway

B2

CB-6

CB-3

B4

CB-7

UST

CT-2

CB-12

B1

CB-8

B3

CB-2

CT-1

CB-1

MW-3

CB-11

MW-6

sidewalk

CB-9

CB-10

former canopy

wall

trash enclosure

building

planter

N

0 15 30 60

Scale (ft)

FIGURE

2

EXPLANATION

- Proposed monitoring well location
- MW-1 — Monitoring well location
- MW-5 — Destroyed monitoring well location
- SB-1 — Soil boring location
- CB-8 — Soil sample location

R:\9-4800 OAKLAND\FIGURES\EXP-SITEPLAN.DWG

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Chevron Service Station 9-4800

1700 Castro Street

Oakland, California

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ATTACHMENT A

STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 fee below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I,II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.