Chevron

July 10, 1996

Chevron U.S.A. Products Company
~~2410 Camino Ramon~~
~~San Ramon, CA 94583~~
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Ms. Juliet Shin
Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Former Chevron Service Station #9-0100**
2428 Central Avenue, Alameda, California

Dear Ms. Shin:

Enclosed is a Work Plan prepared by our consultant Gettler-Ryan Inc. to evaluate the extent of petroleum hydrocarbon constituents in the groundwater at the above referenced site. This Work Plan is prepared in accordance with a letter from your office requesting lateral delineation of the petroleum hydrocarbons in the groundwater at the site and to also determine if the hydrocarbon plume has stabilized. A risk evaluation will then be made of the site after additional site specific data is generated from this latest investigation.

To delineate the extent of the petroleum hydrocarbons in the groundwater, Chevron proposes to install three groundwater monitoring wells, two downgradient and one crossgradient of the site. The two downgradient wells will be installed east of the site across Central Avenue, and the crossgradient well will be installed northerly across Park Street. Soil and water samples will be analyzed for TPPH-g and BTEX constituents. Additional soil and water analysis will be made to incorporate the parameters needed for the proposed risk evaluation scenario.

If you have any questions or comments, call me at (510) 842-9136.

Sincerely,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc. Ms. Bette Owen, Chevron

Mr. Robert Stahl
Stahl-Woolridge Investment Properties
2428 Central Avenue, Alameda, CA 94501

ENVIRONMENTAL PROTECTION
96 JUL 15 AM 8:58

cc: Mr. Carl A. Pendelton
Vice President
Bank of America
Assets Group #1415, Suite 740
50 California Street
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Mr. Kent W. Peters
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GETTLER-RYAN INC.

WORK PLAN FOR LIMITED SUBSURFACE INVESTIGATION

at

Former Chevron Service Station #9-0100
2428 Central Avenue
Alameda, California

Report No. 5178.02-1

Prepared for:

Mr. Phil Briggs
Chevron USA Products Company
P.O. Box 5004
San Ramon, California 94583

Prepared by:

Gettler-Ryan Inc.
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Todd A. Del Frate
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Stephen J. Carter
Senior Geologist
R.G. 5577

June 25, 1996

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at
Former Chevron Service Station #9-0100
2428 Central Avenue
Alameda, California

Report No. 5178.02-1

INTRODUCTION

At the request of Chevron USA Products Company (Chevron), Gettler-Ryan Inc. (G-R) has prepared this Work Plan to further evaluate subsurface conditions at the subject site. The proposed work includes: obtaining the necessary permits and preparing a site safety plan; collecting soil and groundwater samples; submitting selected soil and groundwater samples for chemical analysis; and preparing a report presenting the results and observations associated with the investigation.

The scope of work described in this report is intended to comply with the State of California Water Resources Control Board's *Leaking Underground Fuel Tanks (LUFT) Manual* and *California Underground Storage Tank Regulations, 1994*, and the Regional Water Quality Control Board (RWQCB) *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*.

SITE DESCRIPTION

The subject site is a former Chevron Service Station located on the southern corner of the intersection of Central and Park Avenue in the City of Alameda, California. A multi-story hotel and office building currently occupy the site. Properties to the north and east are developed for commercial uses. A residential neighborhood is situated to the west (Figure 1).

PREVIOUS WORK

According to the data provided by Chevron, a service station operated at the site from 1947 until January, 1970. The station building was demolished and four underground

storage tanks (UST) with associated product piping were removed. Data on soil conditions at the time of UST removal is not available.

In June, 1993, two soil borings (EB-1 and EB-2) were drilled near the former pump island and the former UST excavation, respectively. Soil samples collected from borings EB-1 at 5 feet below ground surface (bgs) and EB-2 at 5 and 10 feet bgs did not contain detectable concentrations of Total Petroleum Hydrocarbons as gasoline (TPHg), Total Petroleum Hydrocarbons as diesel (TPHd), or Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX). The soil sample collected from boring EB-1 at 10 feet bgs contained 211 parts per million (ppm) of TPHd, and 7.94 ppm benzene. The grab groundwater sample collected from boring EB-1 contained concentrations of TPHd (27,870 parts per billion or ppb) and benzene (1,782 ppb). The grab groundwater sample collected from boring EB-2 did not contain detectable concentrations of TPHg, TPHd, or BTEX. Groundwater was encountered at approximately 10 feet bgs in borings EB-1 and EB-2.

Groundwater monitoring wells MW-1 through MW-3 were installed by Weiss Associates in April, 1994. Soil samples collected from borings MW-1 through MW-3 at 5 feet bgs and MW-3 at 10 feet bgs did not contain detectable concentrations of TPHg, TPHd, or BTEX. The soil sample collected from boring MW-1 at 10 feet bgs contained detectable concentrations of TPHg (1,300 ppm), and TPHd (150 ppm). The soil sample collected from boring MW-2 at 10 feet bgs contained detectable concentrations of TPHg (3,000 ppm), TPHd (340 ppm), and benzene (8 ppm). The groundwater samples collected from MW-1 contained detectable concentrations of TPHg (7,400 ppb), TPHd (840 ppb), and benzene (120 ppb). The groundwater sample collected from MW-2 contained detectable concentrations of TPHg (6,400 ppb), and TPHd (920 ppb). TPHg, TPHd, or BTEX were not detected in the groundwater sample from MW-3. Groundwater was encountered at approximately 7 feet bgs. After review of the chromatogram for the TPHd analyses, the laboratory concluded that the chromatogram pattern is indicative of weathered gasoline, not diesel. Based on all available records, it appears Chevron never distributed diesel at this site.

According to the latest G-R Quarterly Monitoring Data submitted to Chevron, dated April 12, 1996, wells MW-1 and MW-2 contained detectable concentrations of TPHg and benzene. The groundwater sample collected from well MW-1 contained concentrations of TPHg at 5,600 ppb and benzene at 250 ppb. The groundwater sample collected from well MW-2 contained concentrations of TPHg at 1,300 ppb and benzene at 42 ppb. The groundwater sample collected from MW-3 did not contain detectable concentrations of TPHg or BTEX. Groundwater was measured between 5.36 to 5.69 bgs.

PROPOSED SCOPE OF WORK

To further evaluate subsurface conditions downgradient and crossgradient of the site, G-R proposes to advance 3 borings to a depth of approximately 20 feet bgs and construct the borings as groundwater monitoring wells MW-4 through MW-6, as shown on Figure 2.

To perform this scope of work, G-R proposes the following specific tasks:

Task 1. Pre-Field Activities.

Obtain the necessary encroachment permits from the City of Alameda, obtain a soil boring permit from the County of Alameda, Zone 7, prepare a site-specific safety plan, and notify Underground Service Alert (USA) a minimum of 48 hours prior to planned activities.

Task 2. Well Installation.

Advance three off-site soil borings at the locations shown on Figure 2. We anticipate the borings will be located in the sidewalk. Drilling and well construction activities will be performed by Bay Area Exploration, Inc. (C57 522125). A G-R geologist will observe the drilling and prepare a log of each boring. The borings will be advanced using 8-inch diameter hollow-stem augers driven by a truck-mounted drill rig.

The wells will be installed to a maximum anticipated depth of 20 feet bgs, and will be constructed of two-inch-diameter polyvinyl chloride (PVC) well casing and 0.02-inch machine-slotted PVC well screen, as shown in Figure 3. Based on data obtained from previous depth-to-groundwater measurements, G-R anticipates the screen interval will extend from approximately 5 to 20 feet bgs.

Soil samples will be collected from each boring at five-foot intervals, as a minimum. Although the actual number of samples submitted for chemical analysis will depend on depth to groundwater and field screening data, we anticipate one unsaturated soil sample from each boring will be submitted for chemical analysis as described in Task 5. Sample handling procedures are described in Appendix A.

Soil from each sampled interval will be screened in the field for the presence of volatile organic compounds using a photoionization detector (PID). These data will be collected for reconnaissance purposes only, and will not be used as verification of the presence or absence of petroleum hydrocarbons. Field screening procedures are described in Appendix A.

Drill cuttings will be stockpiled on-site in properly labelled drums pending receipt of chemical analytical data for disposal. Four soil samples from the drill cuttings will be collected as described in Appendix A. These samples will be submitted to the laboratory for compositing into one sample, and then analyzed as described in Task 5. Steam cleaning rinsate waste water will be stored on-site in properly labelled drums and removed after well development and sampling.

Task 3. Wellhead survey.

Following installation, the elevations of the top of the well casing will be surveyed to MSL by a California licensed surveyor.

Task 4. Well development and sampling

Develop the newly installed groundwater monitoring wells after they have been able to stand a minimum of 72 hours. Groundwater samples will be collected upon completion of well development. Groundwater removed from the wells during development and sampling and steam cleaning rinsate water will be transported by Intergrated Wastestream Management to McKittrick Waste Management. Groundwater samples will be analyzed as described in Task 5. Development and sampling procedures are described in Appendix A.

Task 5. Laboratory Analyses.

Submit selected soil samples for chemical analyses by a California state-certified Hazardous Material Testing Laboratory. The drill cuttings composite sample, selected soil samples from the three soil borings, and groundwater samples will be analyzed for TPHg by Environmental Protection Agency (EPA) Method 8015, and for BTEX and MTBE by EPA Method 8020.

Task 6. Report Preparation.

Following receipt and analysis of all data, a report will be prepared which summarizes the procedures and the results associated with this investigation. This report will be submitted to Chevron for their use and distribution.

PROJECT STAFF

Mr. Stephen J. Carter, a Registered Geologist in the State of California (No. 5577), will provide technical oversight and review of the work. Mr. Greg Gurss, Senior Project Manager, will supervise implementation of field and office operations. G-R employs a staff of geologists, engineers, and technicians who will assist with the project.

SCHEDULE

Implementation of the proposed scope of work will commence upon receipt of regulatory approval and the required encroachment permit, and drilling permit.

FIGURES

Source: Street Atlas USA, Delorme (1995).

N

0 0.25

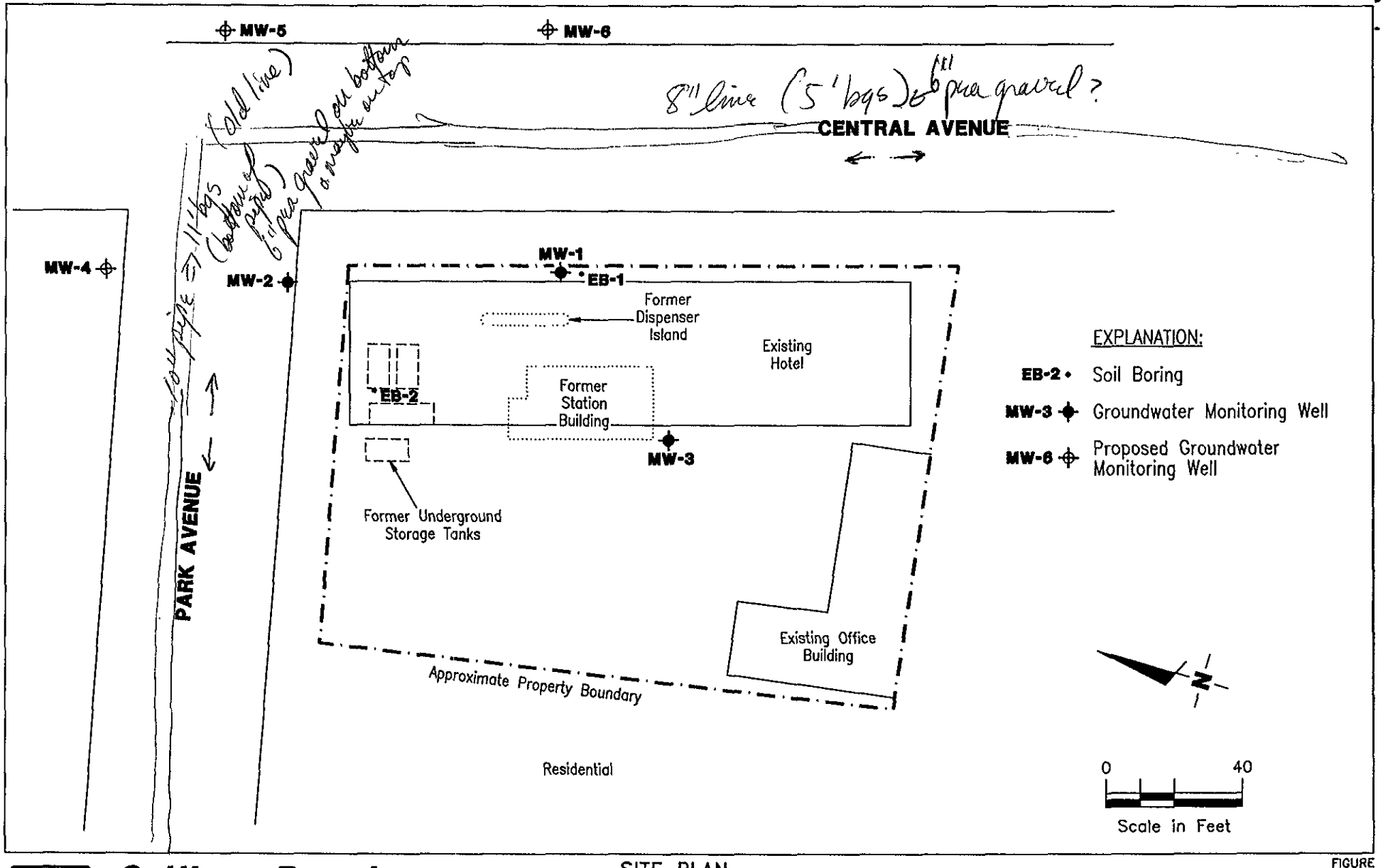
Scale in Miles

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

VICINITY MAP
Former Chevron Service Station No. 9-0100
2428 Central Avenue
Alameda, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5178		6/96	



Gettler - Ryan Inc.
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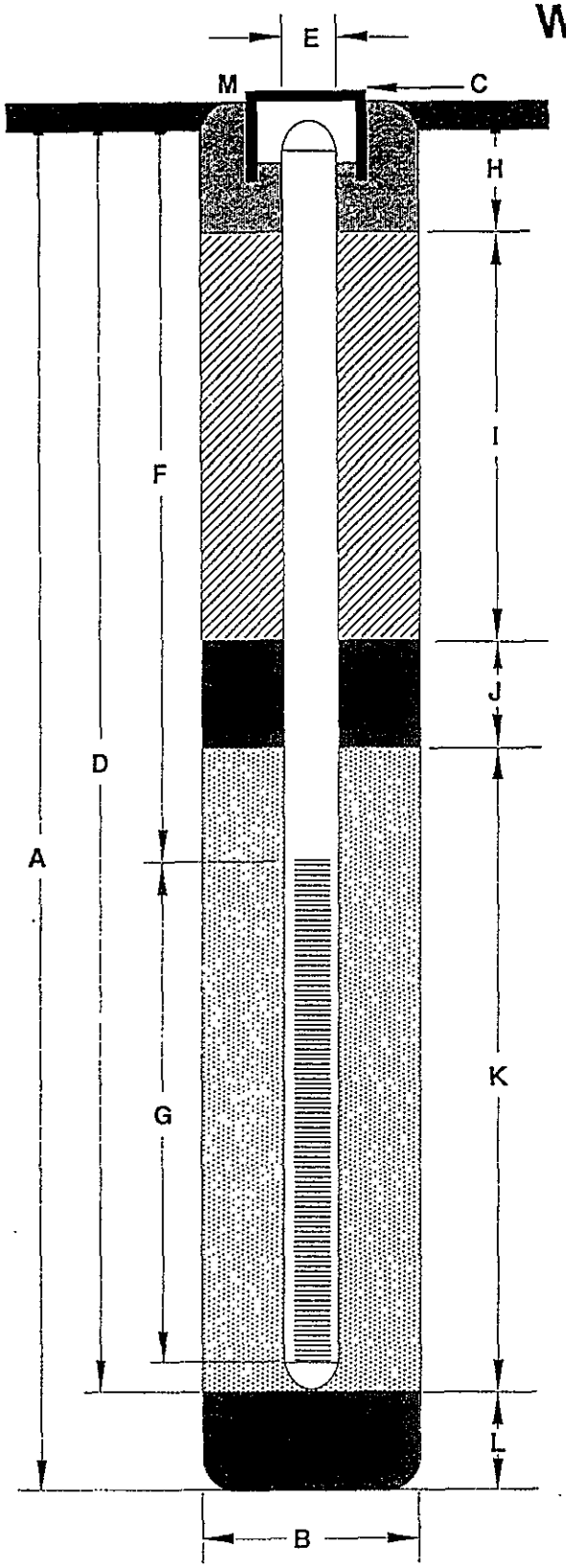
Dublin, CA 94568

SITE PLAN
Former Chevron Service Station No. 9-0100
2428 Central Avenue
Alameda, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
5178		6/96	

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 20 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow-stem Auger

C Top of Box Elevation _____ ft.
☐ Referenced to Mean Seal Level
☐ Referenced to Project Datum

D Casing Length 20 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 5 ft.

G Perforated Length 15 ft.
Perforated Interval from 5 to 20 ft.
Perforation Type Machine-slotted
Perforation Size 0.02 in.

H Surface Seal from 0 to 0.5 ft.
Seal Material concrete

I Backfill from 0.5 to 1.0 ft.
Backfill Material neat cement

J Seal from 1.0 to 3.0 ft.
Seal Material bentonite

K Gravel Pack from 3.0 to 20 ft.
Pack Material #3 Lonestar

L Bottom Seal none ft.
Seal Material _____

M Water resistant vault box, locking waterproof well cap and lock

Note: Depths measured from initial ground surface.

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

Figure 3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
5178		6/25/96		

APPENDIX A

Well Development and Sampling

The purpose of well development is to improve hydraulic communication between the well and the surrounding aquifer. Prior to development, each well is monitored for the presence of floating product and the depth-to-water is recorded. Wells are then developed by alternately surging the well with a vented surge block, then purging the well with a pump or bailer to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized. After the wells have been developed, groundwater samples are collected. Well development and sampling is performed by Gettler-Ryan Inc. of Dublin, California.

Storing and Sampling of Drill Cuttings

Drill cuttings are stockpiled on plastic sheeting or stored in drums depending on site conditions and regulatory requirements. Stockpile samples are collected and analyzed on the basis of one composite sample per 100 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and them driving the stainless steel or brass sample tube into the stockpiled material with a hand, mallet, or drive sampler. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.