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www.secor.com

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
916-861-0400 TEL  
916-861-0430 FAX

L1018

December 31, 2003

RECEIVED

JAN 16 2004

DEPT. OF ENVIRONMENTAL CONSERVATION

Mr. Robert Weimer  
Alaska Department of Environmental Conservation  
555 Cordova Street  
Anchorage, Alaska 99501

RE: **Well Installation Report**  
Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska  
SECOR Project No.: 77CH.91252.00.0270  
ADEC File # L1018

Dear Mr. Weimer:

SECOR International Incorporated (SECOR), on behalf of Chevron Environmental Management Company (Chevron), has prepared this letter to present recent monitoring well installation activities at the above referenced site (Figure 1). The wells were installed based on analytical data collected during a recent baseline assessment at the site. The work was performed in accordance with SECOR's *Work Plan for Well Installation*, dated August 15, 2003.

### Site Description

Chevron Service Station 9-1252 is currently an active Chevron branded service station located at 11836 Old Glenn Highway in Eagle River, Alaska (Figure 2). Current station facilities include three 100,000-gallon single-walled fiberglass underground storage tanks (USTs), four dispenser islands and associated product and vent lines. The area surrounding the site consists of mixed residential and commercial land uses. A summary of previous investigations at the site is included as Attachment 1.

### Site Assessment Activities

From September 2 to September 4, 2003, a SECOR representative supervised Discovery Drilling of Anchorage, Alaska, as they advanced the soil borings for monitoring wells MW-1 through MW-4 to approximately 23 to 45 feet below ground surface (bgs) at the general locations shown on Figure 2. Following drilling, the borings were converted to groundwater monitoring wells. Field and laboratory procedures are included in Attachment 2. Boring logs are presented as Attachment 3. Laboratory analytical reports are presented as Attachment 4.

### Subsurface Conditions

The stratigraphy encountered during drilling consisted of gravely, silty and clayey sands, with silt and gravel. The stratigraphy encountered in the borings was generally consistent with the soils previously encountered. Groundwater was observed at approximately 18 to 37 feet bgs.

### Soil Sampling Activities

One depth discrete soil sample was collected for analysis from each boring near the capillary fringe which was approximately 16 to 36 feet. Diesel range organics (DRO) were detected at a concentration of 5.7 milligrams per kilogram (mg/kg) in well MW-4. Gasoline range organics (GRO)

Mr. Robert Weimer  
 December 31, 2003  
 Page 2

were detected in MW-1 at a concentration of 0.8 mg/kg. Toluene was detected in MW-1 at a concentration of 0.070 mg/kg. Total xylenes were detected in MW-1 at a concentration of 0.054 mg/kg. Benzene, ethyl-benzene and Methyl tertiary-butyl-ether (MtBE) constituents were reported below laboratory reporting limits in soil samples submitted for chemical analysis. A summary of soil analytical data is presented in Table 1.

The newly installed monitoring wells will be sampled during the second semi-annual monitoring and sampling event of 2003.

Should you have any questions or comments regarding this report, please feel free to contact Brian Silva at (916) 861-0400, extension 240.

Sincerely,  
**SECOR International Incorporated**

Brian A. Silva  
 Project Manager

Roger K. Hoffmore  
 Portfolio Manager

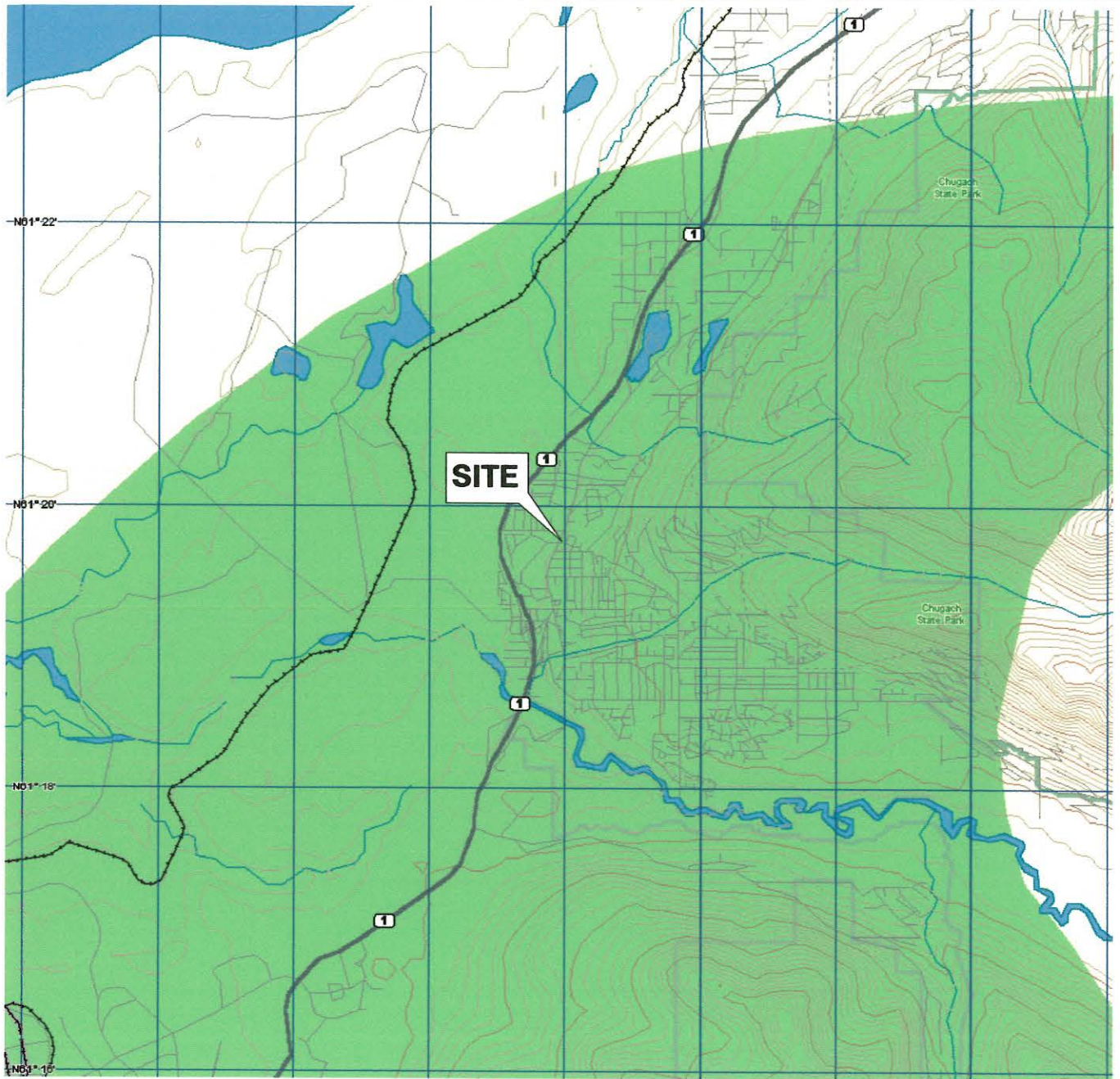
Enclosures:

- |              |  |
|--------------|--|
| Figure 1     | Site Location Map  |
| Figure 2     | Site Plan  |
| Table 1      | Soil Analytical Data   |
| Attachment 1 | Summary of Previous Investigations                           |
| Attachment 2 | Field and Laboratory Procedures                              |
| Attachment 3 | Boring Logs  |
| Attachment 4 | Laboratory Analytical Results and Chain-of-Custody Documents |

cc: Robert J. Cochran, Chevron Environmental Management Company, San Ramon, CA

**FIGURES**





REFERENCE: DELORME TOPO QUAD  
ALASKA REGION 7

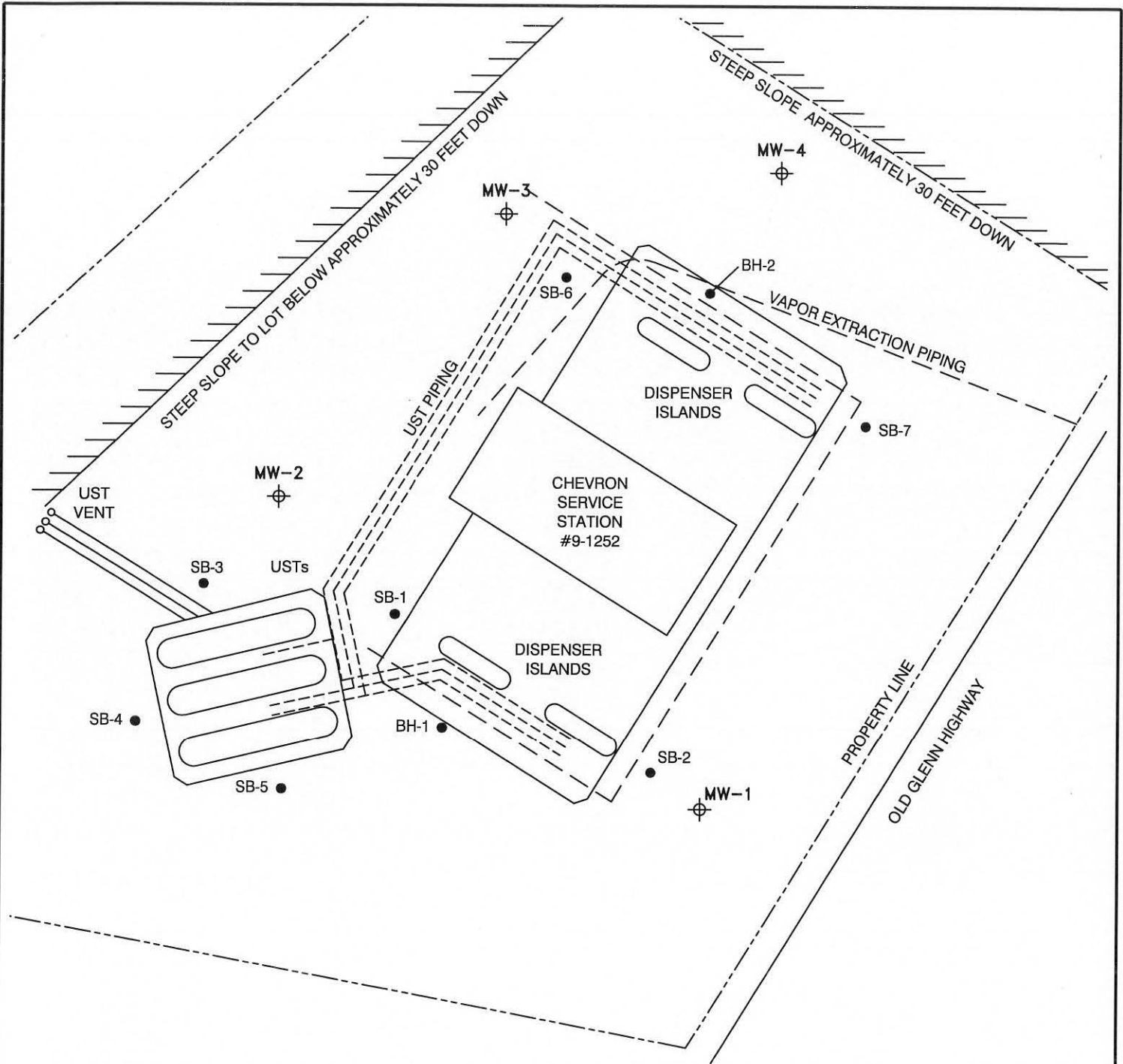


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JOB NO.	77CH.91252.00.0220

**FIGURE 1**  
CHEVRON SERVICE STATION #9-1252  
11836 OLD GLENN HIGHWAY  
EAGLE RIVER, ALASKA  
**SITE LOCATION MAP**



**LEGEND:**

- BH-1 SOIL BORING
- ⊕ MW-1 APPROXIMATE LOCATION OF NEW GROUNDWATER MONITORING WELL

REFERENCE: THIS FIGURE IS BASED ON A "SITE PLAN" PROVIDED BY FLUOR DANIEL GTI, DATED SEPTEMBER 1998, AND IS INTENDED FOR ILLUSTRATION ONLY.



DRAWN	PR
APPR	BJ
REV. DATE	29DEC2003 DWR
JOB NO.	77CH.91252.03.0220

**FIGURE 2**  
CHEVRON SERVICE STATION #9-1252  
11836 OLD GLENN HIGHWAY  
EAGLE RIVER, ALASKA  
**SITE PLAN**

**TABLES**

**Table 1  
Soil Analytical Data**

Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska

Sample Location	Date	Depth (ft bgs)	DRO (mg/kg)	GRO (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl Benzene (mg/kg)	Total Xylenes (mg/kg)	MtBE (mg/kg)
MW-1	9/2/03	16	<4.0	<b>0.8</b>	<0.031	<b>0.070</b>	<0.031	<b>0.054</b>	<0.031
MW-2	9/2/03	31	<4.0	<0.2	<0.025	<0.025	<0.025	<0.025	<0.025
MW-3	9/4/03	35.5	<4.0	<0.3	<0.027	<0.027	<0.027	<0.027	<0.027
MW-4	9/3/03	36	<b>5.7</b>	<0.3	<0.028	<0.028	<0.028	<0.028	<0.028

**Definitions:**

DRO = Diesel range organics  
 GRO = Gasoline range organics  
 MtBE = Methyl tertiary butyl ether  
 mg/kg = Milligrams per kilogram  
 ft bgs = Feet below ground surface

**ATTACHMENT 1**  
**SUMMARY OF PREVIOUS INVESTIGATIONS**

Well Installation Report  
Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska  
SECOR Project No.: 77CH.91252.00.0270  
December 31, 2003



## SUMMARY OF PREVIOUS INVESTIGATIONS

Chevron 9-1252, 11836 Old Glenn Highway, Eagle River, Alaska

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Between August 29 and September 2, 1995, Groundwater Technology Incorporated (GTI) supervised the removal of three gasoline USTs, product lines and dispenser islands from the subject site. No detections of petroleum hydrocarbons were reported in soil samples collected beneath the USTs. Soil samples collected beneath the dispenser islands contained benzene and gasoline range organics (GRO) at concentrations above Alaska Department of Environmental Conservation soil cleanup levels. Maximum concentrations were reported as 0.72 and 1,100 milligrams per kilogram (mg/kg) benzene and GRO, respectively. Tables and figures summarizing the findings are located in GTI's report entitled *Underground Storage Tank Removal Assessment* dated November 3, 1995. Soil vapor extraction lines were installed in the vicinity of areas impacted with petroleum hydrocarbons. A high density polyethylene (HDPE) vapor extraction line was installed at approximately 2-1/2 feet below ground surface (bgs) along the area of the UST excavation.

On August 17, 1998, Fluor Daniel GTI (FDGTI) supervised the advancement of two soil borings (BH-1 and BH-2) at the subject site. Two soil samples were collected from each boring at depths ranging from approximately 15 to 40 feet bgs near the southwestern and northwestern dispenser islands. No detections of petroleum hydrocarbons were reported in submitted soil samples. Tables and figures summarizing the findings are located in FDGTI's report entitled *Release Investigation Report*, dated September 21, 1998.

Between February 28 and March 4, 2003, SECOR supervised the advancement of seven soil borings to a maximum depth of 30 feet bgs. Three to four soil samples and a grab groundwater sample were collected from each boring and submitted for analysis. GRO was reported in five samples at concentrations ranging from 0.78 mg/kg (SB-1 at 30 feet bgs) to 150 mg/kg (SB-1 at 20 feet bgs). Diesel range organics (DRO) were reported in seven samples at concentrations ranging from 5.6 mg/kg (SB-2 at 25 feet bgs) to 2,300 mg/kg (SB-2 at 20 feet bgs). Benzene was reported in two samples at concentrations of 0.002 mg/kg (SB-1 at 20 feet bgs) and 0.30 mg/kg (SB-2 at 20 feet bgs). Toluene was reported in three samples at concentrations of 0.001 mg/kg (SB-1 at 20 feet bgs and SB-7 at 17 feet bgs) and 0.003 mg/kg (SB-1 at 15 feet bgs). Ethylbenzene was reported in two samples at concentrations of 0.003 mg/kg (SB-2 at 15-1/2 feet bgs) and 0.15 mg/kg (SB-1 at 20 feet bgs). Ethylbenzene was reported in three samples at concentrations ranging from 0.005 mg/kg (SB-1 at 15 feet bgs and SB-2 at 15-1/2 feet bgs) and 0.21 mg/kg (SB-1 at 20 feet bgs). Total xylenes were reported in three samples at concentrations of 0.005 mg/kg (SB-1 at 15 feet bgs and SB-2 at 15 1/2 feet bgs) to 0.21 mg/kg (SB-1 at 20 feet bgs). Methyl tertiary butyl ether (MtBE) was not detected in any of the soil samples submitted.

**ATTACHMENT 2**  
**FIELD AND LABORATORY PROCEDURES**

Well Installation Report  
Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska  
SECOR Project No.: 77CH.91252.00.0270  
December 31, 2003

## **FIELD AND LABORATORY PROCEDURES**

Chevron 9-1252, 11836 Old Glenn Highway, Eagle River, Alaska

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### **Site Safety Plan**

Prior to fieldwork, a Site Health and Safety Plan (SHSP) was prepared. The SHSP was prepared as required by the Occupational Health and Safety Administration (OSHA) Standard "Hazardous Waste Operations and Emergency Response" guidelines (29 CFR 1910.120) and the Alaska Department of Labor's General Safety Code, Section 01.0102 (8 AAC 61.010). The project manager, field staff and contractors reviewed the SHSP prior to beginning field operations.

### **Groundwater Monitoring Well Drilling**

The soil borings for the monitoring wells were advanced using 8-inch hollow-stem auger drilling equipment to approximately 23 to 45 feet below ground surface (bgs). Soil samples were collected using a modified split spoon sampler. The sampler was driven ahead of the auger flights a maximum of 18 inches using a 340-pound hammer with a 30-inch drop. Soil samples for chemical analysis were collected in accordance with ADEC guidelines and shipped to an Alaska certified laboratory accompanied by chain-of-custody documentation. Down-hole drilling equipment was pressure-washed prior to and following the completion of the soil borings. Down-hole sampling equipment was washed in an Alconox™, or similar solution between samples.

### **Organic Vapor Monitoring Procedures**

Soil samples collected at approximate 5-foot depth intervals during drilling were analyzed in the field for ionizable organic compounds using a photo-ionization detector (PID) with a 10.2 eV lamp. The test procedure involved measuring approximately 30 grams from an undisturbed soil sample and placing this sub-sample in a sealed container (either zip-lock bag or Mason jar). The container was warmed for no less than ten minutes in the sun, then the head-space within was tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument was calibrated prior to drilling using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 55, which relates the photo-ionization potential of benzene to that of isobutylene at 100 ppm. The results of the field screening were noted on boring logs. PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate hydrocarbon levels with the confidence of laboratory analyses.

### **Groundwater Monitoring Well Installation**

The borings were converted to monitoring wells by installing a 2-inch diameter, flush-threaded, Schedule 40 PVC casing with 0.010 inch factory-slotted screen in each boring. Approximately 8 feet of screen was placed in the bottom of the boring. Graded sand, appropriate to the screen size, was placed in the annular space across the entire screened interval, and does not extend more than 1 foot above the top of the screened interval of the well. A bentonite seal extends from the sand pack to the well box. The well casing will be topped with a locking cap and the wellhead contained in a flush mount, traffic rated, watertight well box.

### **Laboratory Procedures**

Selected soil samples and groundwater samples collected were analyzed for GRO (Gasoline Range Organics) by Alaska method AK 101, DRO (Diesel Range Organics) by Alaska method AK 102, BTEX (Benzene, Toluene, Ethylene, and total Xylenes), and Methyl tertiary Butyl Ether (MtBE) by EPA method 8260.

## **FIELD AND LABORATORY PROCEDURES**

Chevron 9-1252, 11836 Old Glenn Highway, Eagle River, Alaska

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### **Soil Cuttings and Rinsate Water**

Soil cuttings generated during drilling operations were temporarily stored onsite at the Chevron facility location on and covered with Visqueen pending characterization and disposal. Soil cuttings were transported to an appropriate offsite disposal facility. Rinsate and purge water was temporarily stored onsite in 55-gallon drums pending characterization and disposal.

**ATTACHMENT 3**  
**BORING LOGS**

Well Installation Report  
Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska  
SECOR Project No.: 77CH.91252.00.0270  
December 31, 2003



# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>	Date Drilled: <b>9/2/03</b>	Drilling Contractor <b>Discovery Drilling</b>	Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>	Method/Equipment: <b>Hollow Stem Auger CME-75</b>	Well Number: <b>MW-1</b>		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): <b>8</b>	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ <b>18 First Encountered</b> ▼ <b>18.26 Static</b>	Total Depth (ft.): <b>23.3</b>	Drive wt.(lbs.): <b>340</b>	Drop Dist.(in.): <b>30</b>

Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Time
	0			Paved Surface - Cored by drill rig with 2' diameter bit.		
	5			Location was vacuum cleared to 8' bgs with use of pressure washer on 8/27/2003.		
	10		10	Gravelly Sand material observed during utility clearance activities		
	12		12	<b>GRAVELLY SAND (SG):</b> Dark grayish brown (2.5Y 4/2); trace fines; fine to coarse-grained sand; subangular to subrounded; gravels from 0.25'' to 1'' in diameter; abundant broken-up sandstone cobble material; dry to damp; medium dense; no hydrocarbon odor; (35,60,5,0)	0.0	955
	28		28	<b>GRAVELLY SAND (SG):</b> Dark yellowish brown (2.5Y 4/2); non plastic fines; fine to coarse-grained sand; subangular; gravel to 1'' in diameter; subangular; abundant broken up sandstone material; damp to moist; medium dense; no hydrocarbon odor; (40,50,10,0)	0.2	1013
15		16		<b>SILTY SAND (SM):</b> Olive gray (5Y 4/2); non plastic fines; fine to coarse-grained sand; subangular; gravels to 1'' in diameter; subrounded; wet; dense; slight possible product odor; (30,40,30,0)		
20		22		<b>SANDY CLAY (CL):</b> Very dark gray (5Y 3/1); low plasticity fines; fine to coarse-grained sand; subangular; gravels to 1.5'' in diameter; subrounded; broken-up massive near shoe; damp to moist; stiff; no hydrocarbon odor; (30,30,0,40)	1.4	1028
		37				
		38				
				Boring Terminated at 23.25 feet bgs.		

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

## Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-1** (sheet 1 of 1)



# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>	Date Drilled: <b>9/2/03</b>	Drilling Contractor: <b>Discovery Drilling</b>	Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>	Method/Equipment: <b>Hollow Stem Auger CME-75</b>	Well Number: <b>MW-2</b>		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): <b>8</b>	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ <b>36 First Encountered</b> ▼ <b>32.23 Static</b>	Total Depth (ft.): <b>40.0</b>	Drive wt.(lbs.): <b>340</b>	Drop Dist.(in.): <b>30</b>

Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Name	Sample Time
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	0			Paved Surface - Cored by drill rig with 2' diameter bit.			
	5			Location was vacuum cleared to 8' bgs with use of pressure washer on 8/27/2003.			
	10			Gravelly Sand material observed during utility clearance activities.			
	10.5	2		No Recovery in 10' to 11.5' sample.	--		
	11.5	4		<b>GRAVELLY SAND (SG):</b> Dark olive brown (2.5Y 3/3); non plastic fines; fine to coarse-grained sand; subangular to subrounded; gravels to 1'' in diameter; subangular to subrounded; sandstone massive and broken-up rock material near shoe of sampler; dry to damp; medium dense; no hydrocarbon odor; (35,55,10,0)	0.0		1255
13	6		<b>CLAYEY SAND (SC):</b> Dark brown (10YR 3/3) to dark olive gray (5Y 3/2); low plasticity fines; fine to coarse-grained sand; subangular to subrounded; gravel to 0.35'' in diameter; subangular to subrounded; medium dense; damp to moist; no hydrocarbon odor; (15,50,0,35)	0.0		1316	
15	5		<b>GRAVELLY SAND (SG):</b> Dark olive brown (2.5Y 3/3); trace fines; fine to coarse-grained sand; subangular to subrounded; subangular gravels; abundant broken up sandstone material; damp; medium dense; no hydrocarbon odor; (35,60,0,5)	0.0		1335	
16	18		<b>SANDY CLAY (CL):</b> Brown (10YR 4/2); low to medium plastic fines; fine to coarse-grained sand; subangular to subrounded; gravel to 1.5'' in diameter; stiff; moist; no hydrocarbon odor; (15,30,0,55)				
18	15		<b>CLAYEY SAND (SC):</b> Very dark gray (5Y 3/1); low plasticity fines; fine to coarse-grained sand; subangular to subrounded; gravels to 0.75'' in diameter; subrounded; some				

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-2** (sheet 1 of 2)

# SECOR

International Incorporated

Logged By:	Date Drilled:	Drilling Contractor	Project Name:	Method/Equipment:	Well Number:		
S. Coyle	9/2/03	Discovery Drilling	Chevron #9-1252 Old Glenn Hwy Eagle River, AK	Hollow Stem Auger CME-75	MW-2		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): 8	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ 36 First Encountered ▼ 32.23 Static	Total Depth (ft.): 40.0	Drive wt.(lbs.): 340	Drop Dist.(in.): 30
Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Name	Sample Time
	10	X	10	broken-up cobble material; moist with slight signs of saturation; medium dense; no hydrocarbon odor; (30,50,0,20)	0.0	MW-2	1350
	18	X	18				
	16	X	16				
	30	X	10	SILTY SAND (SM): Dark olive brown (2.5Y 3/3); non to low plasticity fines; fine to coarse-grained sand; subangular to subrounded; gravels to 1.25'' in diameter; broken-up cobble material at 30.5'; moist; medium dense; no hydrocarbon odor; (25,65,0,10)	0.0	-31'	1410
35	X	12	SILTY SAND (SM): Very dark gray (5Y 3/1); non to low plastic fines; fine to coarse-grained sand; predominantly coarse-grained; subangular to subrounded; gravels to 0.75'' in diameter; subrounded; medium dense; no hydrocarbon odor; (15,70,0,15)	0.0		1450	
	40			Boring Terminated at 40 feet bgs.			
	45						

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. 77CH.91252.00.0250 Date September 2003

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure MW-2 (sheet 2 of 2)

# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>	Dates Drilled: <b>9/3/03 9/4/03</b>	Drilling Contractor: <b>Discovery Drilling</b>	Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>	Method/Equipment: <b>Hollow Stem Auger CME-75</b>	Well Number: <b>MW-3</b>		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): <b>8</b>	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ <b>33 First Encountered</b> ▼ <b>34.28 Static</b>	Total Depth (ft.): <b>38.0</b>	Drive wt.(lbs.): <b>340</b>	Drop Dist.(in.): <b>30</b>

Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Time
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<p>#10/20 Sand</p> <p>Hydrated Bentonite Chips</p> <p>2" Diameter Schedule 40 PVC</p>	5			Paved Surface - Cored by drill rig with 2' diameter bit.  Location was vacuum cleared to 8' bgs with use of pressure washer on 8/27/2003.  Gravelly Sand material observed during utility clearance activities.		
	10	2	1	Note: Minimal recovery in 10' to 11.5' sample; large cobble in shoe of sampler; small amount of... <b>Gravelly Sand (SG):</b> dark grayish brown (2.5Y 4/2); fine to coarse-grained sand; subangular to subrounded; gravels to 1'' in diameter; rounded; damp; loose; no hydrocarbon odor; (30,70,0,0)	0.0	1050
	15	4	9	<b>CLAYEY SAND (SC):</b> Olive brown (2.5Y 4/3); low plasticity fines; fine to medium-grained sand; trace coarse-grained; subangular to subrounded; gravels 0.25'' to 1.5'' in diameter; subrounded; broken up sandstone cobble and pieces of quartzite near shoe of sampler; medium dense; damp; no hydrocarbon odor; (15,50,0,35)	0.0	1105
	20	7	24	Note: Tough drilling at 17' bgs; possibly encountered a large cobble or boulder <b>SILTY SAND (SM):</b> Dark olive gray (5Y 3/2); non plastic fines; fine to coarse-grained sand; subangular to subrounded; gravels to 1'' in diameter; subrounded; trace black coal in spots; trace areas of strong brown oxide staining in fines; damp to moist; medium dense to very dense; no hydrocarbon odor; (30,40,30,0)	0.0	1145
			<b>SANDY GRAVEL (GS):</b> Dark olive brown (2.5Y 3/3); non to low plastic fines; fine to coarse-grained sand; subangular to subrounded; gravels to 1'' in diameter; subangular to subrounded;			

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-3** (sheet 1 of 2)

# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>	Dates Drilled: <b>9/3/03 9/4/03</b>	Drilling Contractor <b>Discovery Drilling</b>	Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>	Method/Equipment: <b>Hollow Stem Auger CME-75</b>	Well Number: <b>MW-3</b>		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): <b>8</b>	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ <b>33 First Encountered</b> ▼ <b>34.28 Static</b>	Total Depth (ft.): <b>38.0</b>	Drive wt.(lbs.): <b>340</b>	Drop Dist.(in.): <b>30</b>
Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Time	
<p>#10/20 Sand</p> <p>2" Diameter 0.020" Slotted Schdule 40 PVC</p> <p>▼</p>	8	X	8	areas of broken-up cobble material; damp; medium dense; no hydrocarbon odor; (60,30,10,0)	0.0	1200	
	11		11				
	16		16				
	30	X	10	<p><b>SILTY SAND (SM):</b> Dark gray (2.5Y 4/1); non to low plasticity fines; fine to coarse-grained sand; subangular to subrounded; gravels to 1.5" in diameter; subrounded; non to low plastic fines; damp; medium dense; no hydrocarbon odor; (20,60,20,0)</p> <p><b>SANDY GRAVEL (GS):</b> Same as at 25' feet</p>	0.0	1215	
35	X	23	<p><b>SILTY SAND (SM):</b> Dark gray (2.5Y 4/1); non plastic fines; fine to coarse-grained sand; subangular to subrounded; non plastic fines; gravels to 1.25" in diameter; subrounded; moist; very dense; no hydrocarbon odor; (20,55,25,0)</p> <p>Note: Had to use air hammer to get to 39' bgs; driller calls refusal with augers at approximately 38" bgs</p>	0.0	1245		
40			97	Boring Terminated at 39 feet bgs.			
	45						

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-3** (sheet 2 of 2)



# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>	Dates Drilled: <b>9/3/03 9/4/03</b>	Drilling Contractor: <b>Discovery Drilling</b>	Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>	Method/Equipment: <b>Hollow Stem Auger CME-75</b>	Well Number: <b>MW-4</b>		
See "Legend to Logs" for sampling method, classifications and laboratory testing methods		Boring Diam.(in.): <b>8</b>	Surface Elev.(ft.):	Groundwater Depth (ft.): ▽ <b>37 First Encountered</b> ▼ <b>35.13 Static</b>	Total Depth (ft.): <b>44.5</b>	Drive wt.(lbs.): <b>340</b>	Drop Dist.(in.): <b>30</b>

Well Completion Details	Depth, (ft.)	Sample Recovery	Blows/6"	Description	PID Readings (PPM)	Sample Name	Sample Time
-------------------------	--------------	-----------------	----------	-------------	--------------------	-------------	-------------

				Paved Surface - Cored by drill rig with 2' diameter bit.  Location was vacuum cleared to 8' bgs with use of pressure washer on 8/27/2003.  Gravelly Sand material with fines observed during utility clearance activities.			
				#10/20 Sand	SILT (ML): Dark gray (2.5Y 4/1); cemented non plastic fines; brittle; trace sand; dry; stiff; no hydrocarbon odor; (0,5,95,0)	0.0	907
				Hydrated Bentonite Chips	GRAVELLY SILT (ML): Dark gray (2.5Y 4/1); low plasticity fines; trace strong brown oxide staining in spots; gravels 0.25'' to 1.5'' in diameter; subrounded to rounded; stiff; damp; no hydrocarbon odor; (15,5,80,0)	0.0	925
				2'' Diameter Schedule 40 PVC	GRAVELLY SILT (ML): Same as above; more abundant gravels to 1.5'' in diameter; no hydrocarbon odor; (30,5,65,0) SILTY SAND (SM): Olive brown (2.5Y 4/3); non to low plastic fines; fine to medium-grained sand; gravels to 1.5'' in diameter; damp to moist; medium dense; no hydrocarbon odor; (25,40,35,0) Note: 22' - 24' bgs driller reports very tough drilling	0.0	940

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-4** (sheet 1 of 2)

# SECOR

International Incorporated

Logged By: <b>S. Coyle</b>		Dates Drilled: <b>9/3/03 9/4/03</b>		Drilling Contractor <b>Discovery Drilling</b>		Project Name: <b>Chevron #9-1252 Old Glenn Hwy Eagle River, AK</b>		Method/Equipment: <b>Hollow Stem Auger CME-75</b>		Well Number: <b>MW-4</b>					
See "Legend to Logs" for sampling method, classifications and laboratory testing methods				Boring Diam.(in.): <b>8</b>		Surface Elev.(ft.):		Groundwater Depth (ft.): ▽ <b>37 First Encountered</b> ▼ <b>35.13 Static</b>		Total Depth (ft.): <b>44.5</b>		Drive wt.(lbs.): <b>340</b>		Drop Dist.(in.): <b>30</b>	
Well Completion Details		Depth, (ft.)	Sample Recovery	Blows/6"	Description				PID Readings (PPM)	Sample Name	Sample Time				
		17			<b>SILTY SAND (SM):</b> Dark grayish brown (2.5Y 4/2); non to low plastic fines; fine to coarse-grained sand; subangular to subrounded; trace broken-up coal near shoe of sampler; moist; medium dense; no hydrocarbon odor; (25,55,20,0)				0.0		1145				
		28							<b>SILTY SAND (SM):</b> Dark gray (2.5Y 4/1) to olive brown (2.5Y 4/4); non to low plastic fines; fine to coarse-grained sand; subangular to subrounded; trace strong brown oxide staining; gravels to 1" in diameter; subrounded; pockets of black coal; broken-up cobble in shoe of sampler; moist; medium dense to dense; no hydrocarbon odor; (25,60,15,0)				0.0		1210
		50											<b>SILTY SAND (SM):</b> Dark gray (GLE Y1 4/1); non plastic fines well mottled; fine to coarse-grained sand; subangular to subrounded; gravels to 1" in diameter; subrounded to rounded; damp to moist; dense to very dense; no hydrocarbon odor; (15,50,35,0)		
		30		35 100	Note: Sampler returned with minimal recovery; broken-up cobble in shoe of sampler; small amount of sample possibly being carry down material resembling soil at 35' bgs  Note: Driller reports very tough drilling at 40' bgs; air hammer is used to break through to 44.5'						1310				
35		37 100	<b>Boring Terminated at 44.5 feet bgs.</b>												
40		100 for 2"													
		45													

The substrata descriptions above are generalized representations and based upon visual/manual classification of cuttings and/or samples obtained during drilling. Predominant material types shown on the log may contain different materials and the change from one predominant material type to another could be different than indicated. Descriptions on this log apply only at the specific location at the time of drilling and may not be representative of subsurface conditions at other locations or times.

Project No. **77CH.91252.00.0250** Date **September 2003**

Log of Well

#9-1252.GPJ  
LOG OF BOREHOLE

Approved by \_\_\_\_\_

Figure **MW-4** (sheet 2 of 2)



**ATTACHMENT 4**  
**LABORATORY ANALYTICAL RESULTS AND**  
**CHAIN-OF-CUSTODY DOCUMENTS**

Well Installation Report  
Chevron Service Station 9-1252  
11836 Old Glenn Highway  
Eagle River, Alaska  
SECOR Project No.: 77CH.91252.00.0270  
December 31, 2003



91252

ENTERED SEP 25 2003

## ANALYTICAL RESULTS

Prepared for:

ChevronTexaco  
6001 Bollinger Canyon Rd L4310

San Ramon CA 94583  
925-842-8582

Prepared by:

Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17605-2425

## SAMPLE GROUP

The sample group for this submittal is 866063. Samples arrived at the laboratory on Saturday, September 06, 2003. The PO# for this group is 99011184 and the release number is COCHRAN.

<u>Client Description</u>	<u>Lancaster Labs Number</u>
MW-1-16' Grab Soil Sample	4116968
MW-2-31' Grab Soil Sample	4116969
MW-3-35.5' Grab Soil Sample	4116970
MW-4-36' Grab Soil Sample	4116971
Trip Blank Methanol Sample	4116972


1 COPY TO

Secor International, Inc.

Attn: Mr. Brian Silva

Questions? Contact your Client Services Representative  
Teresa L Cunningham at (717) 656-2300.

Respectfully Submitted,

  
Susan M. Croyle  
Sr. Chemist/Coordinator

RECEIVED SEP 24 2003



Lancaster Laboratories, Inc.  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. SW 4116968

Collected: 09/02/2003 10:13 by SC

Account Number: 10869

Submitted: 09/06/2003 11:00

ChevronTexaco

Reported: 09/22/2003 at 14:55

6001 Bollinger Canyon Rd L4310

Discard: 10/23/2003

San Ramon CA 94583

MW-1-16' Grab Soil Sample

Facility# 91252

11836 Old Glenn Highway; Eagle River, AK

OGH16

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method		
				Detection Limit		
01450	Alaska AK101 GRO (soils)	n.a.	0.8	0.3	mg/kg	15
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						
01742	TPH-DRO (AK) in soil	n.a.	N.D.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.031	mg/kg	31.38
05460	Benzene	71-43-2	N.D.	0.031	mg/kg	31.38
05466	Toluene	108-88-3	0.070	0.031	mg/kg	31.38
05474	Ethylbenzene	100-41-4	N.D.	0.031	mg/kg	31.38
06301	Xylene (Total)	1330-20-7	0.054	0.031	mg/kg	31.38

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

State of Alaska Lab Certification No. UST-061

### Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis	Analyst	Dilution Factor
				Date and Time		
01450	Alaska AK101 GRO (soils)	AK101 GRO	1	09/09/2003 18:45	Steven A Skiles	15
01742	TPH-DRO (AK) in soil	Alaska 102/103 Version	1	09/21/2003 21:48	Robert Brown	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	09/09/2003 00:13	Parker D Lindstrom	31.38
04833	Extraction / Fuel TPH (Soils)	Alaska 102/103 Version	1	09/13/2003 06:10	Kenneth A Yingst	1





Lancaster Laboratories Sample No. SW 4116969

Collected: 09/02/2003 14:10 by SC

Account Number: 10869

Submitted: 09/06/2003 11:00  
Reported: 09/22/2003 at 14:55  
Discard: 10/23/2003  
MW-2-31' Grab Soil Sample  
Facility# 91252

ChevronTexaco  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

11836 Old Glenn Highway; Eagle River, AK

OGH31

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method		
01450	Alaska AK101 GRO (soils)	n.a.	N.D.	Detection Limit 0.2	mg/kg	11.5
01742	TPH-DRO (AK) in soil	n.a.	N.D.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.025	mg/kg	25.36
05460	Benzene	71-43-2	N.D.	0.025	mg/kg	25.36
05466	Toluene	108-88-3	N.D.	0.025	mg/kg	25.36
05474	Ethylbenzene	100-41-4	N.D.	0.025	mg/kg	25.36
06301	Xylene (Total)	1330-20-7	N.D.	0.025	mg/kg	25.36

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

State of Alaska Lab Certification No. UST-061

### Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis		Analyst	Dilution Factor
				Date	Time		
01450	Alaska AK101 GRO (soils)	AK101 GRO	1	09/09/2003	19:22	Steven A Skiles	11.5
01742	TPH-DRO (AK) in soil	Alaska 102/103 Version	1	09/21/2003	22:18	Robert Brown	1
		4/8/02					
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	09/09/2003	00:39	Parker D Lindstrom	25.36
04833	Extraction / Fuel TPH (Soils)	Alaska 102/103 Version	1	09/13/2003	06:10	Kenneth A Yingst	1
		4/8/02					



Lancaster Laboratories, Inc.  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. SW 4116970

Collected: 09/04/2003 12:45 by SC

Account Number: 10869

Submitted: 09/06/2003 11:00

ChevronTexaco

Reported: 09/22/2003 at 14:55

6001 Bollinger Canyon Rd L4310

Discard: 10/23/2003

MW-3-35.5' Grab Soil Sample

San Ramon CA 94583

Facility# 91252

11836 Old Glenn Highway; Eagle River, AK

OGH35

CAT No.	Analysis Name	CAS Number	As Received	As Received	Units	Dilution Factor
			Result	Method		
01450	Alaska AK101 GRO (soils)	n.a.	N.D.	Detection Limit 0.3	mg/kg	13.3
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						
01742	TPH-DRO (AK) in soil	n.a.	N.D.	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.027	mg/kg	26.57
05460	Benzene	71-43-2	N.D.	0.027	mg/kg	26.57
05466	Toluene	108-88-3	N.D.	0.027	mg/kg	26.57
05474	Ethylbenzene	100-41-4	N.D.	0.027	mg/kg	26.57
06301	Xylene (Total)	1330-20-7	N.D.	0.027	mg/kg	26.57

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

State of Alaska Lab Certification No. UST-061

### Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01450	Alaska AK101 GRO (soils)	AK101 GRO	1	09/09/2003 20:00	Steven A Skiles	13.3
01742	TPH-DRO (AK) in soil	Alaska 102/103 Version 4/8/02	1	09/21/2003 22:48	Robert Brown	1
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	09/09/2003 01:05	Parker D Lindstrom	26.57
04833	Extraction / Fuel TPH (Soils)	Alaska 102/103 Version 4/8/02	1	09/13/2003 06:10	Kenneth A Yingst	1



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2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2681



Lancaster Laboratories Sample No. SW 4116971

Collected: 09/03/2003 12:50 by SC

Account Number: 10869

Submitted: 09/06/2003 11:00

ChevronTexaco

Reported: 09/22/2003 at 14:55

6001 Bollinger Canyon Rd L4310

Discard: 10/23/2003

MW-4-36' Grab Soil Sample

San Ramon CA 94583

Facility# 91252

11836 Old Glenn Highway; Eagle River, AK

OGH36

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method		
				Detection Limit		
01450	Alaska AK101 GRO (soils)	n.a.	N.D.	0.3	mg/kg	13
Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.						
01742	TPH-DRO (AK) in soil	n.a.	5.7	4.0	mg/kg	1
07360	BTEX+MTBE by 8260B					
02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.028	mg/kg	27.91
05460	Benzene	71-43-2	N.D.	0.028	mg/kg	27.91
05466	Toluene	108-88-3	N.D.	0.028	mg/kg	27.91
05474	Ethylbenzene	100-41-4	N.D.	0.028	mg/kg	27.91
06301	Xylene (Total)	1330-20-7	N.D.	0.028	mg/kg	27.91

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

State of Alaska Lab Certification No. UST-061

### Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01450	Alaska AK101 GRO (soils)	AK101 GRO	1	09/09/2003 20:37	Steven A Skiles	13
01742	TPH-DRO (AK) in soil	Alaska 102/103 Version	1	09/22/2003 00:18	Robert Brown	1
		4/8/02				
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	09/09/2003 01:30	Parker D Lindstrom	27.91
04833	Extraction / Fuel TPH (Soils)	Alaska 102/103 Version	1	09/13/2003 06:10	Kenneth A Yingst	1
		4/8/02				



Lancaster Laboratories, Inc.  
 2425 New Holland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax: 717-656-2681





Lancaster Laboratories Sample No. G5 4116972

Collected: n.a.

Account Number: 10869

Submitted: 09/06/2003 11:00

ChevronTexaco

Reported: 09/22/2003 at 14:56

6001 Bollinger Canyon Rd L4310

Discard: 10/23/2003

San Ramon CA 94583

Trip Blank Methanol Sample

Facility# 91252

11836 Old Glenn Highway; Eagle River, AK

OGHTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received	Units	Dilution Factor
				Method		
01450	Alaska AK101 GRO (soils)	n.a.	N.D.	Detection Limit 0.5	mg/kg	25

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

07360 BTEX+MTBE by 8260B

02016	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.050	mg/kg	50
05460	Benzene	71-43-2	N.D.	0.050	mg/kg	50
05466	Toluene	108-88-3	N.D.	0.050	mg/kg	50
05474	Ethylbenzene	100-41-4	N.D.	0.050	mg/kg	50
06301	Xylene (Total)	1330-20-7	N.D.	0.050	mg/kg	50

The analysis for volatiles was performed on a sample which was preserved in methanol. The reporting limits were adjusted appropriately.

Site-specific MS/MSD samples were not submitted for the project. A LCS/LCSD was performed to demonstrate precision and accuracy at a batch level.

State of Alaska Lab Certification No. UST-061

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01450	Alaska AK101 GRO (soils)	AK101 GRO	1	09/09/2003 15:00	Steven A Skiles	25
07360	BTEX+MTBE by 8260B	SW-846 8260B	1	09/09/2003 01:56	Parker D Lindstrom	50



Lancaster Laboratories, Inc.  
2425 New Holland Pike  
PO Box 12425  
Lancaster, PA 17605-2425  
717-656-2300 Fax: 717-656-2681



## Quality Control Summary

Client Name: ChevronTexaco  
 Reported: 09/22/03 at 02:56 PM

Group Number: 866063

### Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: 03246A33C Alaska AK101 GRO (soils)	Sample number(s): 4116968-4116972 N.D.	0.5	mg/kg	100	99	60-120	0	20
Batch number: 032550013A TPH-DRO (AK) in soil	Sample number(s): 4116968-4116971 N.D.	4.0	mg/kg	87	97	75-125	11	50
Batch number: Q032512AA Methyl Tertiary Butyl Ether	Sample number(s): 4116968-4116972 N.D.	50.	ug/kg	105	106	75-125	1	30
Benzene	N.D.	50.	ug/kg	105	107	83-118	2	30
Toluene	N.D.	50.	ug/kg	112	114	81-116	2	30
Ethylbenzene	N.D.	50.	ug/kg	112	114	82-115	1	30
Xylene (Total)	N.D.	50.	ug/kg	112	114	82-117	2	30

### Sample Matrix Quality Control

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: 032550013A TPH-DRO (AK) in soil	Sample number(s): 4116968-4116971 90	99	60-140	9	50				

### Surrogate Quality Control

Analysis Name: Alaska AK101 GRO (soils)  
 Batch number: 03246A33C  
 Trifluorotoluene-F

4116968	100
4116969	90
4116970	85
4116971	95
4116972	107
Blank	103
LCS	106
LCSD	104

Limits: 60-120

Analysis Name: TPH-DRO (AK) in soil  
 Batch number: 032550013A  
 Orthoterphenyl

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.





## Quality Control Summary

Client Name: ChevronTexaco  
 Reported: 09/22/03 at 02:56 PM

Group Number: 866063

### Surrogate Quality Control

4116968	96
4116969	89
4116970	97
4116971	93
Blank	99
LCS	90
LCSD	97
MS	90
MSD	91

Limits: 50-150

Analysis Name: BTEX+MTBE by 8260B  
 Batch number: Q032512AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4116968	89	92	93	93
4116969	98	101	103	102
4116970	94	97	99	101
4116971	99	104	106	98
4116972	90	92	95	94
Blank	84	88	89	87
LCS	85	91	95	96
LCSD	84	88	96	96

Limits: 70-129                      70-121                      70-130                      70-128

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



Lancaster Laboratories, Inc.  
 2425 New Holland Pike  
 PO Box 12425  
 Lancaster, PA 17605-2425  
 717-656-2300 Fax: 717-656-2681

# Chevron Generic Analysis Request/Chain of Custody



For Lancaster Laboratories use only  
 Acct. #: 10869 Sample #: 4116968-72 SCR#: 1181402

Facility #: <u>9-1252</u> Site Address: <u>11836 Old Glenn Hwy Eagle River, AK</u> Chevron PM: <u>Bob Cochran</u> Lead Consultant: <u>SECAR</u> Consultant/Office: <u>3017 Kilgore Rd. Suite #100 Rancho Cordova, CA</u> Consultant Prj. Mgr.: <u>Brian Silva</u> Consultant Phone #: <u>916-861-0400 #240</u> Fax #: <u>916-861-0436</u> Sampler: <u>Sean Coyle</u> Service Order #: _____ <input type="checkbox"/> Non SAR: _____				<b>Matrix</b> <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air <input checked="" type="checkbox"/> Soil		<b>Analyses Requested</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="10" style="text-align: center;">Preservation Codes</th> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td style="text-align: center;">C</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td style="text-align: center;">I</td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td style="text-align: center;">C</td> </tr> </table>										Preservation Codes										<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	I	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	C	<b>Preservative Codes</b> H = HCl      T = Thiosulfate N = HNO <sub>3</sub> B = NaOH S = H <sub>2</sub> SO <sub>4</sub> O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits	
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Sample Identification			Date Collected	Time Collected	Grab	Composite	Total Number of Containers	BTEX + MTBE 8021	8260	Naphth	8260 full scan	Oxygenates	TPH G	TPH D	Extended Ring	Silica Gel Cleanup	Lead Total	Diss.	Method	VPH/IEPH	NWTPH HClD	quantification	GRO by AK101 DRO by AK102 BTEX, MTBE by 8260																																					
MW-1-16'	9-2-03	1013				3																				<b>Comments / Remarks</b> Bottle ID #'s: MW-1 AK101 034690 8260 034665 MW-2 AK101 034679 8260 034663 MW-3 AK101 034979 8260 034973 MW-4 AK101 034651 8260 034664 Tblank AK101 034652 8260 034664																																		
MW-2-31'	9-2-03	1410				3																																																						
MW-3-35.5'	9-4-03	1245				3																																																						
MW-4-36'	9-3-03	1250				3																																																						
Tblank	-	-				2																																																						
<b>Turnaround Time Requested (TAT) (please circle)</b> 24 hour      4 day      5 day 72 hour      48 hour      5 day <b>STD. TAT</b>							Relinquished by: <u>[Signature]</u> Date: <u>8-20-03</u> Time: <u>1315</u>		Received by: <u>[Signature]</u> Date: <u>8-25-03</u> Time: <u>830</u>																																																			
<b>Data Package Options (please circle if required)</b> QC Summary      Type I - Full Type VI (Raw Data)      Disk / EDD WIP (RWQCB)      Standard Format Disk      _____ Other.							Relinquished by: _____ Date: _____ Time: _____		Received by: _____ Date: _____ Time: _____																																																			
Relinquished by Commercial Carrier: UPS <b>FedEx</b> Other _____							Received by: <u>[Signature]</u> Date: <u>9/6/03</u> Time: <u>1100</u>		Temperature Upon Receipt <u>5.3</u> C°      Custody Seals Intact? <input checked="" type="checkbox"/> Yes      No																																																			