



Alameda County
Environmental Health

Transmittal

To: Ms. Donna Drogos
Alameda County Environmental Health

Re: Preliminary Data Submittal
B & C Mini Mart (aka Valley Gas)
2008 First Street
Livermore, CA

From: Bill Fowler
Phone: Bus (650) 386-3828
Fax (650) 386-3815
Date: September 11, 2003
Proj. No.: BNC104

Remarks: Urgent Please review Reply ASAP Please Comment

Ms. Drogos,

Attached is a preliminary data submittal documenting the fieldwork performed for the referenced project. The documents attached include:

1. A draft map showing the locations of the installed CMTs.
2. Summary Boring Logs and Well Construction diagrams documenting the stratigraphy of each borehole and the installed multi-level monitoring wells (CMT-1 through CMT-4). Detailed boring logs will be provided with our final report. In accordance with our discussions in the field, and your direction, the borings were drilled to final depths of 147', 147', 187' and 137', respectively, as compared to the proposed 120-foot-depths. The borings were drilled (and wells installed deeper) to ensure that potential contaminant flow paths from the source area to water supply well CWS #8 would be intercepted and monitored.
3. Well Development and Sampling Records documenting the piezometric head, development, field parameters and sampling of all the new CMT wells. Seven (rather than just five) monitoring ports were completed at each boring (see the well completion diagrams). For your information, we discovered that the LDPE tubing provided by Solinst for inertial sampling was inadequate. Stronger-walled LDPE can be used for ports down to about 50+ feet below the ground surface (bgs) at this site. HDPE is suitable for about 50 to 100+ feet, and, deeper than that, Teflon tubing is needed to minimize friction.
4. We have just started to receive the analytical chemistry data from the initial sampling event. We will compile the data as it is received and a complete set of data for the CMT's should be available in approximately one to two weeks. It will be provided once we have done an initial QA/QC and data compilation.

Transmittal to Donna Dragos

September 11, 2003

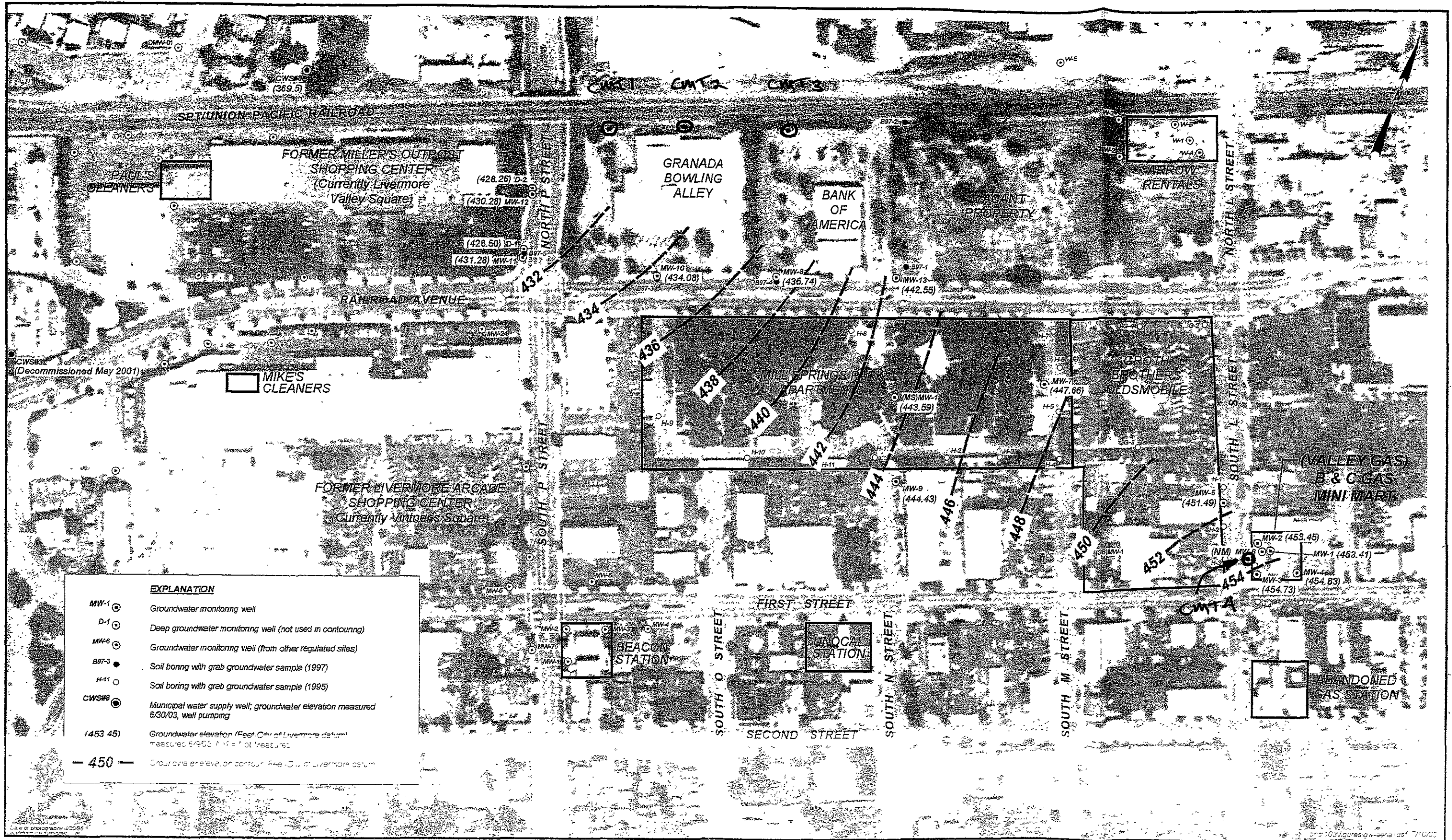
Page 2

5. Geophysical logs performed for borings MW-2, MW-3 and MW-4 at the Valley Gas Station (B & C Mini Mart). MW-1 could not be surveyed due to the bend in the casing near the ground surface (i.e., the geophysical tools could not be inserted down the pipe).

Please feel free to call me if you have any questions regarding this data submittal. We will be working over the next several weeks to analyze the data from our investigation and finalize our submittal for this project. Thank you for your assistance.

Cordially,

Bill

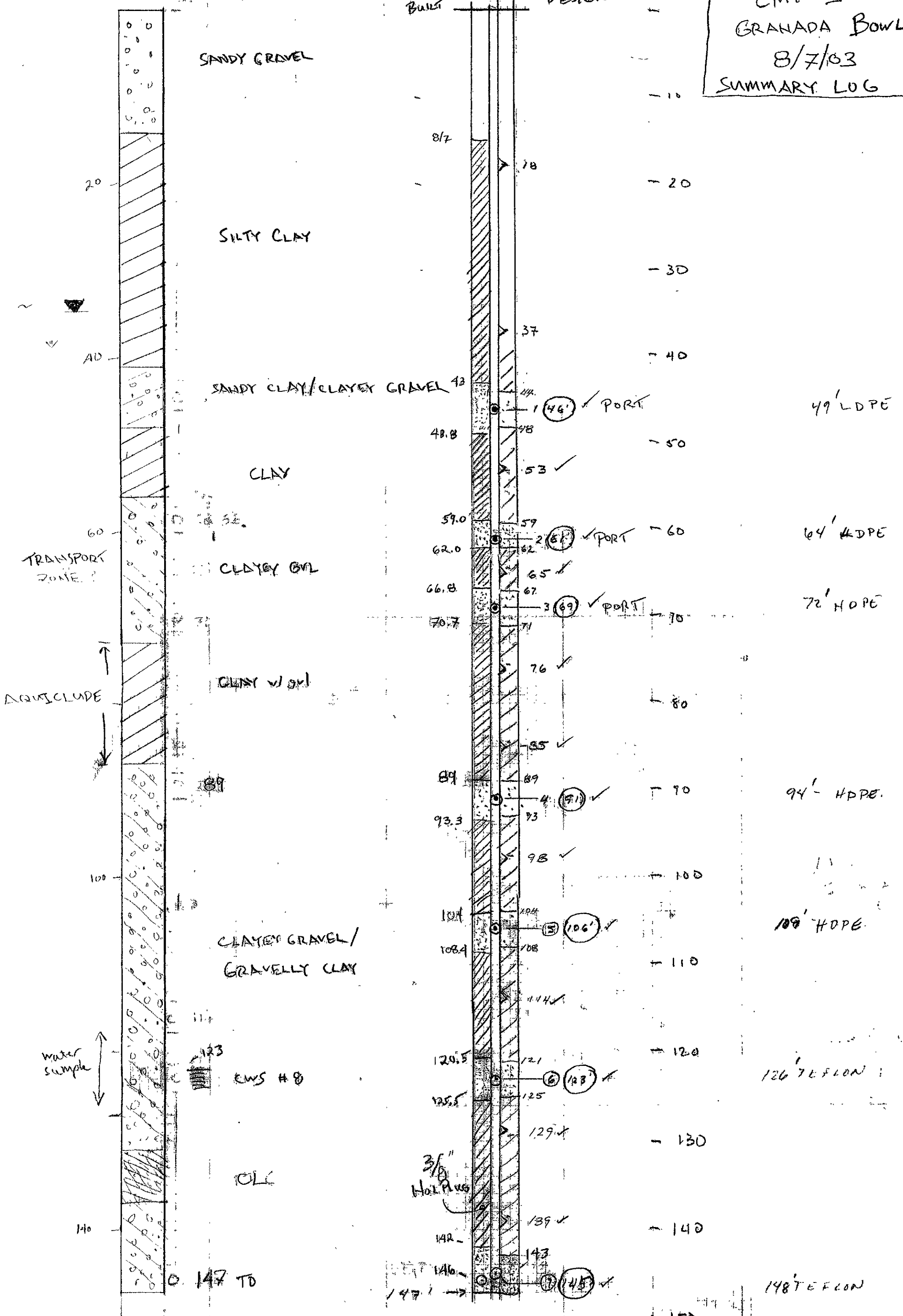


EXPLANATION	
MW-1	Groundwater monitoring well
D-1	Deep groundwater monitoring well (not used in contouring)
MW-6	Groundwater monitoring well (from other regulated sites)
B97-3	Soil boring with grab groundwater sample (1997)
H-11	Soil boring with grab groundwater sample (1995)
CWS#6	Municipal water supply well; groundwater elevation measured 6/30/03, well pumping
(453.45)	Groundwater elevation (Feet City of Livermore datum) measured 6/30/03, N/A = not measured
- 450 -	Groundwater elevation contour (Feet City of Livermore datum)

LITHOLOGY

AS - WELL CONST
BUILT DESIGN

CMT-1
GRANADA BOWL
8/7/03
SUMMARY LOG



BNC 104
WLF 8/7/03

143' - LDPE
275' - HDPE
274' - TEFLON

2/16

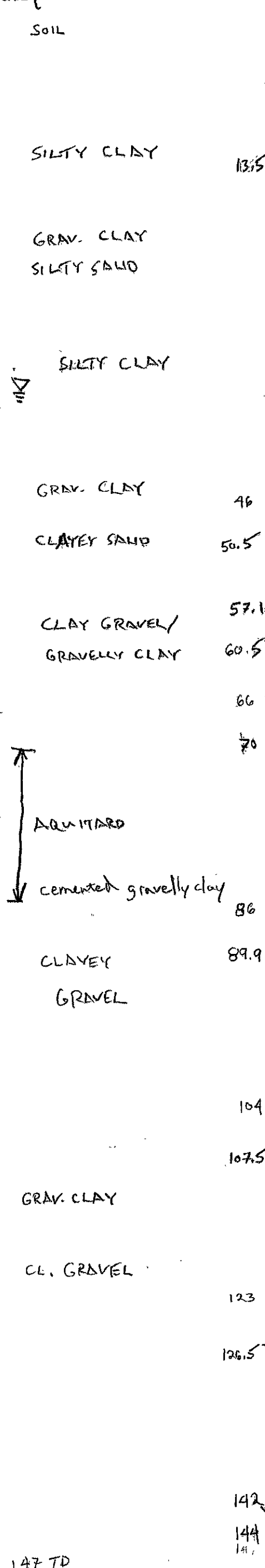
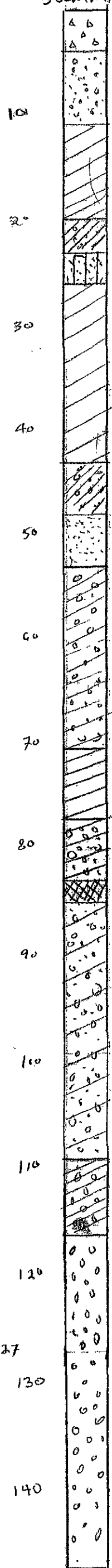
CMT-2
GRANADA BOWL
8/11/03 WLF

WELL CONSTRUCTION

STRATIGRAPHIC SUMMARY

AS
BUILT

Design



SUMMARY LOG
+
WELL CONSTRUCTION

TUBING SUMMARY-

185' LDPE
328' HDPE
147' Teflon

52' LDPE

62' LDPE

71' LDPE

91' HDPE

109 - HDPE

128' HDPE

147' Teflon

46.6
51



AQUITARD



cemented gravelly clay

147 TD

144

141

147

CMT-3
 B of A
 BNC 104
 WLF 8/13/03

↑
 SHALLOW
 WBZ



AQUITARD

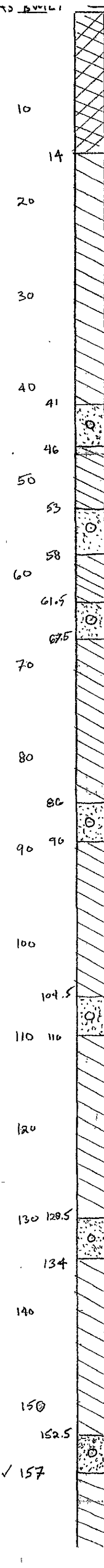


↑
 TOP OF
 CWS #8
 SCREENS

FILL/SOIL
 SANDY GRAVEL
 GRAVELLY CLAY
 CLAYEY GRAVEL
 CLY SAND
 SILTY CLAY
 CLAYEY GRAVEL
 CL GVL
 GRAY. CLAY
 FAT CLAY
 CLAY W/GVL
 GVL CLAY
 CLAYEY GRAVEL
 FAY CLAY
 TO 187



AS BUILT
 10
 14
 20
 30
 40
 41
 46
 50
 53
 58
 60
 61.5
 67.5
 70
 80
 86
 90
 100
 104.5
 110
 110
 120
 125
 130
 128.5
 134
 134
 138
 140
 150
 152.5
 157
 160
 TO 187



DESIGN
 GROUT
 15
 27
 40
 42
 46
 50
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 60
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 70
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 86
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 105
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 112
 125
 129
 134
 138
 150
 153
 157
 TO TD

SUMMARY LOG
 +
 WELL CONSTRUCTION

Tubing summary:
 105' LDPE
 170' HDPE
 193' TFFLOW

47' LDPE

58' LDPE

68' HDPE

11' HDPE

111' HDPE

135' TFFLOW

152' TFFLOW

CMT-4
VALLEY GAS
8/14 WLF

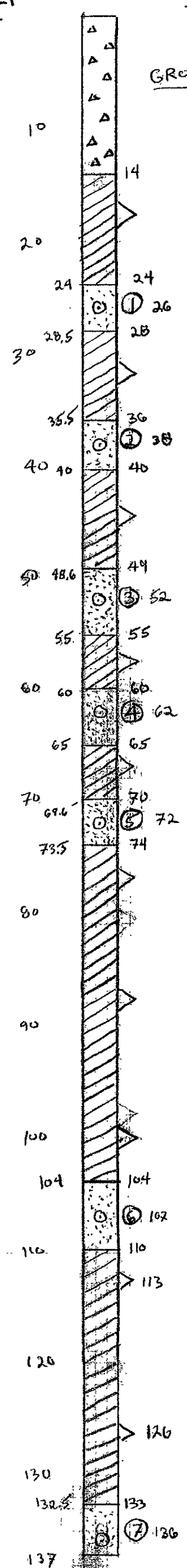
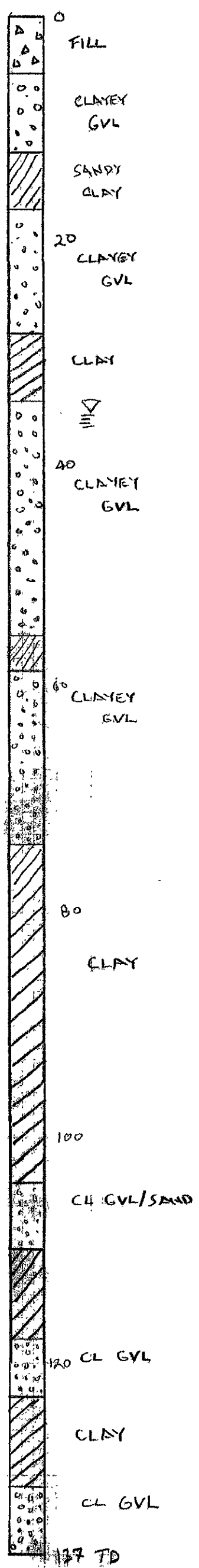
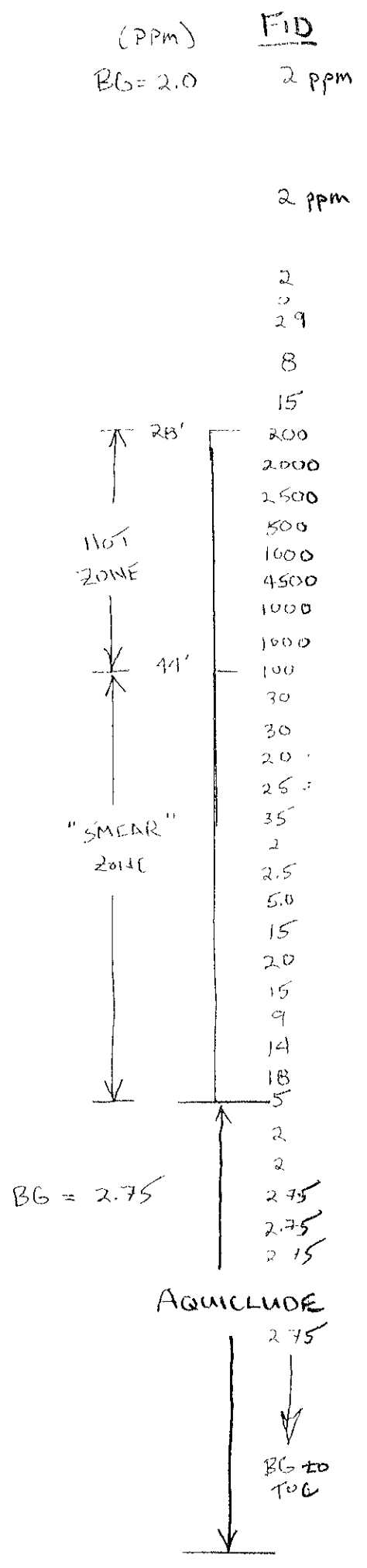
WELL CONSTRUCTION

LITHOLOGY

AS-BUILT

DESIGN

SUMMARY LOG
WELL CONSTRUCTION



PORT

29' LDPE

41' LDPE

55' LDPE

65' LDPE

75' TEFLON

110' TEFLON

139' TEFLON

TUBING SUMMARY:
190' LDPE
324' TEFLON

WATER LEVEL DATA SHEET

Conor Pacific

Project: B&C Gas Mini Mart
 Project No.: BNC104
 Date(s): 8/11/03
 Name: C. Miller
 Weather: SUNNY. Sounder #: SOUNST

Well	Date	Time	DTFP (TOC)	DTW (TOC)	Total Depth	Meas By	Comments
CMT1-Z1	8/11/03	1052	/	41.81	NM	CM	
CMT1-Z2		1053		42.75			
CMT1-Z3		1054		43.34			
CMT1-Z4		1055		42.76			
CMT1-Z5		1056		42.79			
CMT1-Z6		1057		42.94			
CMT1-Z7		1058		45.38			
CMT2-Z1							
CMT2-Z2							
CMT2-Z3							
CMT2-Z4							
CMT2-Z5							
CMT2-Z6							
CMT2-Z7							
CMT3-Z1							
CMT3-Z2							
CMT3-Z3							
CMT3-Z4							
CMT3-Z5							
CMT3-Z6							
CMT3-Z7							

WATER LEVEL DATA SHEET

Conor Pacific

Project: B&C Gas Mini Mart
 Project No.: BNC104
 Date(s): 8/12/03
 Name: C. Minin
 Weather: Sunny
 Sounder #: SOLINST

Well	Date	Time	DTFP (TOC)	DTW (TOC)	Total Depth	Meas. By	Comments
CMT1-Z1	8/12/03	1105	/	42.18	45.6	cm	
CMT1-Z2	↓	1107		43.69	60.6	↓	
CMT1-Z3	↓	1113		43.48	68.6	↓	
CMT1-Z4	↓	1115		43.22	90.7	↓	
CMT1-Z5	↓	1118		42.73	105.7	↓	
CMT1-Z6	↓	1119		42.88	122.0	↓	
CMT1-Z7	↓	1123		45.51	143.0	↓	
CMT2-Z1	8/12/03	1129	/	34.48	48.89	cm	
CMT2-Z2	↓	1133		40.80	58.94	↓	
CMT2-Z3	↓	1145		NM	67.94	↓	OBSTRUCTION AT 21.45'
CMT2-Z4	↓	1148		43.04	87.96	↓	
CMT2-Z5	↓	1149		43.01	106.02	↓	
CMT2-Z6	↓	1150		43.10	124.03	↓	
CMT2-Z7	↓	1153		43.49	143.33	↓	
CMT3-Z1							* ALL TD'S MEASURED AT 1353.
CMT3-Z2							
CMT3-Z3							
CMT3-Z4							
CMT3-Z5							
CMT3-Z6							
CMT3-Z7							
CMT4-Z1							
CMT4-Z2							
CMT4-Z3							
CMT4-Z4							
CMT4-Z5							
CMT4-Z6							
CMT4-Z7							

WATER LEVEL DATA SHEET

Conor Pacific

Project: B&C Gas Mini Mart

Project No.: BNC104

Date(s): 8/13/03

Name: C. Mun

Weather: SUNNY

Sounder #: SOLINST MODEL 102

7
?

Well	Date	Time	DTBW (Feet)	DTSW (FOC)	Total Depth	Meas By	Comments
CMT1-Z1	8/13/03	1113		42.61	NM	CM	
CMT1-Z2		1114		43.63			
✓ CMT1-Z3		1115		43.54			
✓ CMT1-Z4		1117		42.77			
✓ CMT1-Z5		1118		42.76			
✓ CMT1-Z6		1119		43.33			
CMT1-Z7		1120		45.55			
CMT2-Z1	8/13/03	1124		34.94	NM	CM	
CMT2-Z2		1125		42.97			
CMT2-Z3		1126		43.34			
CMT2-Z4		1127		43.06			
CMT2-Z5		1128		43.06			
CMT2-Z6		1129		43.17			
CMT2-Z7		1130		43.54			
CMT3-Z1	8/13/03					CM	
CMT3-Z2							
CMT3-Z3							
CMT3-Z4							
CMT3-Z5							
CMT3-Z6							
CMT3-Z7							

WATER LEVEL DATA SHEET

Conor Pacific

Project: B&C Gas Mini Mart							
Project No.: BNC104							
Date(s): 8/10/03							
Name: <i>[Signature]</i>							
Weather: <i>Sunny, warm</i>				Sounder #: 17974			
Well	Date	Time	DTP (TOC)	DTW (TOC)	Total Depth	Meas. By	Comments
CMT1-Z1							
CMT1-Z2							
CMT1-Z3							
CMT1-Z4							
CMT1-Z5							
CMT1-Z6							
CMT1-Z7							
CMT2-Z1	8/10/03	1202	<i>FND</i>	36.12	NM	<i>WP</i>	<i>Used 17974 TD 48.9</i>
CMT2-Z2		1213		43.20			58.95
CMT2-Z3		1215		43.55			68.0
CMT2-Z4		1216		43.25			68.0
CMT2-Z5		1217		43.23			1106.0
CMT2-Z6		1219		43.31			124.0
CMT2-Z7		1220		43.92			143.3
CMT3-Z1							
CMT3-Z2							
CMT3-Z3							<i>Used standard slope indicator</i>
CMT3-Z4							<i>water level indicator.</i>
CMT3-Z5							
CMT3-Z6							<i>TDs</i>
CMT3-Z7							
CMT4-Z1							<i>TDs listed are from well</i>
CMT4-Z2							<i>completion details.</i>
CMT4-Z3							
CMT4-Z4							
CMT4-Z5							
CMT4-Z6							
CMT4-Z7							

WATER LEVEL DATA SHEET

Conor Pacific

Project: B&C Gas Mini Mart
 Project No.: BNC104
 Date(s): 8/19/03
 Name: C. Minin
 Weather: SUNNY
 Sounder #: SOLINST

Well	Date	Time	BTD (TOC)	DTW (TOC)	Total Depth	Meas By	Comments	
CMT1-Z1	8/19/03	1706	/	43.06	NM	Cm		
CMT1-Z2	↓	1707		43.97	↓	↓		
CMT1-Z3	↓	1708		43.85	↓	↓		
CMT1-Z4	↓	1709		43.07	↓	↓		
CMT1-Z5	↓	1710		43.05	↓	↓		
CMT1-Z6	↓	1711		43.74	↓	↓		
CMT1-Z7	↓	1712		45.93	↓	↓		
CMT2-Z1	8/19/03	901	/	43.33	NM	Cm		
CMT2-Z2	↓	902		43.14	↓	↓		
CMT2-Z3	↓	903		43.67	↓	↓		
CMT2-Z4	↓	904		43.42	↓	↓		
CMT2-Z5	↓	914		43.71	↓	↓		
CMT2-Z6	↓	915		43.52	↓	↓		
CMT2-Z7	↓	916		44.11	↓	Cm		
CMT3-Z1	8/19/03	1323	/	41.51	NM	Cm		
CMT3-Z2	↓	1324		42.49	↓	↓		
CMT3-Z3	↓	1325		43.68	↓	↓		
CMT3-Z4	↓	1327		45.78	↓	↓		
CMT3-Z5	↓	1328		46.25	↓	↓		
CMT3-Z6	↓	1330		45.86	↓	↓		
CMT3-Z7	↓	1331		46.37	↓	↓		
CMT4-Z1	/							
CMT4-Z2								
CMT4-Z3								
CMT4-Z4								
CMT4-Z5								
CMT4-Z6								
CMT4-Z7								

WATER LEVEL DATA SHEET

Conor Pacific

Well	Date	Time	DTP (TOC)	DTW (TOC)	Total Depth	Mens By	Comments
Project: B&C Gas Mini Mart							
Project No.: BNC104							
Date(s): 8/18/03, 8/21/03							
Name: <i>Conor</i>							
Weather: <i>SUNNY</i>				Sounder #: <i>SOUNST</i>			
CMT1-Z1	8/18/03	1107	/	43.03	NM	<i>W</i>	
CMT1-Z2	↓	1113		44.05	↓	↓	
CMT1-Z3	↓	1116		43.81	↓	↓	
CMT1-Z4	↓	1117		42.93	↓	↓	
CMT1-Z5	↓	1118		43.04	↓	↓	
CMT1-Z6	↓	1119		43.29	↓	↓	
CMT1-Z7	↓	1120		45.90	↓	↓	
CMT2-Z1							
CMT2-Z2							
CMT2-Z3							
CMT2-Z4							
CMT2-Z5							
CMT2-Z6							
CMT2-Z7							
CMT3-Z1	8/18/03	1255	/	40.42	NM	<i>W</i>	
CMT3-Z2	↓	1256		42.46	↓	↓	
CMT3-Z3	↓	1257		43.45	↓	↓	
CMT3-Z4	↓	1259		45.64	↓	↓	
CMT3-Z5	↓	1301		45.55	↓	↓	
CMT3-Z6	↓	1302		45.75	↓	↓	
CMT3-Z7	↓	1308		46.28	↓	↓	
CMT4-Z1	8/21/03 1139.0	1139	/	24.83	25.6	<i>W</i>	
CMT4-Z2	↓	1145		33.10	37.7	↓	
CMT4-Z3	↓	1146		33.57	51.7	↓	
CMT4-Z4	↓	1148		33.82	61.7	↓	
CMT4-Z5	↓	1150		33.80	71.8	↓	
CMT4-Z6	↓	1153		39.95	106.7	↓	
CMT4-Z7	↓	1159		41.54	121.8	↓	



LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT1-21
 PROJECT NO: BN C104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>45.6</u>	Volume in Casing (gal): <u>137</u>
Depth to Water (ft): <u>42.18</u>	Calculated Purge (volumes/gal): <u>274</u>
Height of Water Column (ft): <u>3.42</u>	Actual Pre-Sampling Purge (gal): <u>270</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 44' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other INERTIAL LIFT
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1905</u>	<u>270</u>							<u>WELL DRY</u>

Purge Date: 8/12/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 44' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>2144</u>							<u>NOT SAMPLED</u>

Sheen: _____ Odor: _____ Sample Date: 8/12/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40m/ft. 2 CASING VOLUME PURGE. PURGED 270ML. WELL DRY AT 1905. WELL ALLOWED TO RECHARGE OVERNIGHT. DTW WAS 43.14. 8/13/03 DTW WAS 42.61, AT 1113. WELL ALLOWED TO RECHARGE OVERNIGHT. 8/18/03 DTW WAS 43.03. NOT ENOUGH WATER TO SAMPLE. NO SAMPLE COLLECTED.

SIGNATURE: Cheryl Min DATE: 8/18/03



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT 1-22
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 60.6 Volume in Casing (gal): 677 679
 Depth to Water (ft): 0 43.69 43.63 Calculated Purge (volumes / gal): 1358
 Height of Water Column (ft): 16.91 16.97 Actual Pre-Sampling Purge (gal): 1050

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 59' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L)	Observation
<u>1155</u>	<u>700</u>	<u>23.1</u>	<u>1400</u>	<u>7.80</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>1.78</u>	
<u>1202</u>	<u>1050</u>	<u>24.1</u>	<u>1460</u>	<u>7.98</u>	<u>↓</u>	<u>↓</u>	<u>2.04</u>	<u>WELL DRY</u>

Purge Date: 8/13/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 59' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1151</u>	<u>13.53</u>				<u>BROWN</u>		<u>WELL DRY</u>

Sheen: _____ Odor: _____ Sample Date: 8/18/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40 ml/ft. 2 CASING VOLUME PURGE. 8/13/03 AT 1202 WELL DRY. PURGED 1050 ml. DTW WAS 56.7' AT 1208. WELL ALLOWED TO RECHARGE FOR 10 MIN. DTW WAS 56.3' AT 1213. DTW WAS 52.1' AT 1350. 8/18/03 DTW WAS 44.05. DTW WAS 47.77 AT 1221. COLLECTED 6X VOA'S. NO FIELD MEASURE - CALIBRATION ON 8/13/03 AT 1055 DO: 1.72, PH: 7.02, 10.04; TEMP: 21.8

MENTS TAKEN:

SIGNATURE: [Signature] DATE: 8/18/03



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT1-23
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater X Surface Water _____ Leachate _____ Treatment System _____ Other _____
 CASING DIAMETER (OD-inches): 3/4 _____ 1 _____ 2 _____ 4 _____ 4.5 _____ 6 _____ 8 _____ Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>69.0</u>	Volume in Casing (gal): <u>1027</u>
Depth to Water (ft): <u>43.34</u>	Calculated Purge (volumes / gal): <u>2054</u>
Height of Water Column (ft): <u>25.66</u>	Actual Pre-Sampling Purge (gal): <u>2100</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____
 PVC Hand Pump _____ Peristaltic Pump 68' Centrifugal Pump _____ Bladder Pump _____
 Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated HDPE, 1/4" Other INERTIAL LIFT
 Purge Water Containment: DROPPED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- _____ FB- _____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	<u>DO</u> (mg/L) other	Observation
<u>1706</u>	<u>1050</u>	<u>25.0</u>	<u>1000</u>	<u>7.61</u>	<u>BROWN</u>	<u>HIGH</u>	<u>5.30</u>	
<u>1712</u>	<u>1575</u>	<u>24.4</u>	<u>1040</u>	<u>7.63</u>	<u>↓</u>	<u>↓</u>	<u>3.66</u>	
<u>1719</u>	<u>2100</u>	<u>24.2</u>	<u>1020</u>	<u>7.62</u>	<u>↓</u>	<u>↓</u>	<u>3.85</u>	

Purge Date: 8/11/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____
 PVC Hand Pump _____ Peristaltic Pump 68' Centrifugal Pump _____ Bladder Pump _____
 Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated HDPE, 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1723</u>	<u>22.9</u>	<u>980</u>	<u>7.55</u>	<u>4.03</u>	<u>Brown</u>	<u>7999</u>	
Sheen: <u>NONE</u>	Odor: <u>NONE</u>	Sample Date: <u>8/11/03</u>					

Field Measurement Devices: Horiba H4 Omega _____ QuickCheck _____ D.O. Test Kit _____

REMARKS: 40ML / 4. 2 CASING VOLUME PURGE.

SIGNATURE: Chuck Min DATE: 8/11/03



LOCATION: B-N-C GAS MINE MARI SAMPLE ID: CMT 1-24
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINE MARI REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 90.7 Volume in Casing (gal): 1900
 Depth to Water (ft): 43.22 Calculated Purge (volumes / gal): 3800
 Height of Water Column (ft): 47.48 Actual Pre-Sampling Purge (gal): 3850

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump 89'
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HT in Other
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L) ^{DO}	Observation
<u>1623</u>	<u>1950</u>	<u>25.2</u>	<u>1030</u>	<u>7.46</u>	<u>LT. BROWN</u>	<u>MODERATE</u>	<u>3.60</u>	
<u>1630</u>	<u>2950</u>	<u>25.4</u>	<u>1030</u>	<u>7.48</u>	<u>↓</u>	<u>↓</u>	<u>3.52</u>	
<u>1640</u>	<u>3850</u>	<u>25.3</u>	<u>1020</u>	<u>7.48</u>	<u>↓</u>	<u>↓</u>	<u>3.69</u>	

Purge Date: 8/12/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump 89'
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated Other

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1647</u>	<u>26.1</u>	<u>1010</u>	<u>7.47</u>	<u>3.49</u>	<u>LT. BROWN</u>	<u>3.47</u>	

Sheen: NONE Odor: NONE Sample Date: 8/12/03

Field Measurement Devices: Horiba 44 Omega QuickCheck D.O. Test Kit

REMARKS: 40ML/FT. 2 CASING VOLUME PURGE.

SIGNATURE: _____

Amal Min

DATE: 8/12/03



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MARKET SAMPLE ID: CMT1-Z5
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MARKET REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>105.7</u>	Volume in Casing (gal): <u>2519</u>
Depth to Water (ft): <u>42.73</u>	Calculated Purge (volumes / gal.): <u>5038</u>
Height of Water Column (ft): <u>62.97</u>	Actual Pre-Sampling Purge (gal): <u>5100</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 90' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HDPE, 1/4" Other INERTIAL LIFT
 Purge Water Containment: DROWNED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	<u>DO (mg/L)</u>	Observation
<u>1618</u>	<u>2550</u>	<u>23.9</u>	<u>1010</u>	<u>7.52</u>	<u>BROWN</u>	<u>MUD</u>	<u>4.44</u>	
<u>1635</u>	<u>3850</u>	<u>23.2</u>	<u>1020</u>	<u>7.51</u>	<u>↓</u>	<u>↓</u>	<u>4.72</u>	
<u>1659</u>	<u>5100</u>	<u>23.0</u>	<u>1000</u>	<u>7.55</u>	<u>↓</u>	<u>↓</u>	<u>5.37</u>	

Purge Date: 8/12/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 90' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HDPE, 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1700</u>	<u>23.4</u>	<u>980</u>	<u>7.58</u>	<u>5.54</u>	<u>BROWN</u>	<u>> 999</u>	

Sheen: NONE Odor: NONE Sample Date: 8/12/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/ft. 2 CASING VOLUME PURGE.

SIGNATURE: Chuck Min DATE: 8/12/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MUMM WARE SAMPLE ID: CMT 1-27
 PROJECT NO: BNSC104 SAMPLED BY: C. Meier
 CLIENT: B-N-C GAS MUMM WARE REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft):	<u>143.0</u>	Volume in Casing (gal):	<u>3899</u>
Depth to Water (ft):	<u>45.55</u>	Calculated Purge (volumes / gal):	<u>7798</u>
Height of Water Column (ft):	<u>97.45</u>	Actual Pre-Sampling Purge (gal):	<u>7800</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 14130 Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT
 Purge Water Containment: DRUMMED (FEP)
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L) Other	Observation
<u>1257</u>	<u>3900</u>	<u>24.0</u>	<u>1020</u>	<u>7.92</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>1.98</u>	
<u>1307</u>	<u>5850</u>	<u>23.5</u>	<u>980</u>	<u>7.93</u>	<u>↓</u>	<u>↓</u>	<u>1.49</u>	
<u>1321</u>	<u>7800</u>	<u>23.2</u>	<u>990</u>	<u>7.93</u>	<u>↓</u>	<u>↓</u>	<u>2.01</u>	

Purge Date: 8/13/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 130' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT (FEP)

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1331</u>	<u>26.3</u>	<u>950</u>	<u>7.91</u>	<u>1.84</u>	<u>BROWN</u>	<u>>999</u>	
Sheen: <u>NONE</u>		Odor: <u>NONE</u>		Sample Date: <u>8/13/03</u>			

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/ft. 2 CASING VOLUME PURGE

SIGNATURE: Charles Meier

DATE: 8/13/03



LOCATION: B+C Gas Mini Mart
 PROJECT NO: BNC104
 CLIENT: B+C Gas Mini Mart
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

SAMPLE ID: CMT 2-21
 SAMPLED BY: R.PARK
 REGULATORY AGENCY: ACEHS

Well Total Depth (ft): 40.9 Volume in Casing (gal): 10512
 Depth to Water (ft): 36.12 Calculated Purge (volumes gal): 1023
 Height of Water Column (ft): 12.78 Actual Pre-Sampling Purge (gal): 800

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other metal lift
 Purge Water Containment: drummed
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1254	550	23.8	981	8.53	lt brown	very high		
1257	800							well dry

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 48' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1243					Brown	VERY HIGH	WELL DRY

Sheen: NONE Odor: NONE Sample Date: 8/19/03

Field Measurement Devices: Horiba H3 Omega QuickCheck D.O. Test Kit
 REMARKS: 40m lift. Calculated 2 casing volume purge. Evaluated well at 800ml 1257. DTW: 47.10' at end of purge. Allowed to recharge. At 1045, DTW: 44.1'. Allowed to recharge overnight. 8/19/03 DTW WAS 43.33' AT 1242. COLLECTED 6XNOA. WELL DRY AT END OF SAMPLE COLLECTION. NO FIELD MEASUREMENTS TAKEN. 8/19/03 c.m.u.n
Calibrated H3 #1240, 8/18/03: pH: 7.00, 10.04, EC: 0.2000, TW: 0; DO: 0.00, T: 23.8°C

SIGNATURE: [Signature] DATE: 8/19/03



LOCATION: BIG Gas Mini Mart

SAMPLE ID: CMT 2-22

PROJECT NO: BNC104

SAMPLED BY: [Signature]

CLIENT: BIG Gas Mini Mart

REGULATORY AGENCY: ACEHS

SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other

CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT

GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>50.9</u>	Volume in Casing (gal): <u>1250</u>
Depth to Water (ft): <u>48.20</u> ^{43.20}	Calculated Purge (volumes / gal): <u>1250</u>
Height of Water Column (ft): <u>15.70</u>	Actual Pre-Sampling Purge (gal): <u>1300</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE Other metal filter
 Purge Water Containment: drum mud
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1320</u>	<u>630</u>	<u>26.6</u>	<u>940</u>	<u>8.39</u>	<u>light brown</u>	<u>very high</u>		
<u>1330</u>	<u>950</u>	<u>23.9</u>	<u>1270</u>	<u>8.27</u>	<u>↓</u>	<u>↓</u>		
<u>1334</u>	<u>1300</u>	<u>23.2</u>	<u>1330</u>	<u>8.21</u>	<u>↓</u>	<u>↓</u>		

Purge Date: 2/10/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE Other metal filter

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1350</u>	<u>22.7</u>	<u>1390</u>	<u>7.87</u>	<u>0.45</u>	<u>light brown</u>	<u>>999</u>	

Sheen: none Odor: none Sample Date: 2/10/03

Field Measurement Devices: Horiba H3 Omega QuickCheck D.O. Test Kit

REMARKS: 10ml / ft, 2 casing volume purge.

SIGNATURE: [Signature] DATE: 2/10/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B&C Gas Mini Mart

SAMPLE ID: CMT 2-34

PROJECT NO: BNC004

SAMPLED BY: R. PARK

CLIENT: B&C Gas Mini Mart

REGULATORY AGENCY: ACEHS

SAMPLE TYPE: Groundwater ✓ Surface Water _____ Leachate _____ Treatment System _____ Other _____

CASING DIAMETER (OD-inches): 3/4 _____ 1 _____ 2 _____ 4 _____ 4.5 _____ 6 _____ 8 _____ Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>88.0</u>	Volume in Casing (gal): <u>1790</u>
Depth to Water (ft): <u>43.25</u>	Calculated Purge (volumes / gal): <u>3580</u>
Height of Water Column (ft): <u>44.75</u>	Actual Pre-Sampling Purge (gal): <u>3000</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____

PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____

Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated 1/4" HDPE Other metal / f

Purge Water Containment: drummed

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- _____ FB- _____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1519</u>	<u>1800</u>	<u>23.4</u>	<u>1300</u>	<u>8.21</u>	<u>light brown</u>	<u>very high</u>		
<u>1527</u>	<u>2700</u>	<u>23.4</u>	<u>1380</u>	<u>8.02</u>	<u>↓</u>	<u>↓</u>		
<u>1534</u>	<u>3600</u>	<u>22.6</u>	<u>1400</u>	<u>7.96</u>	<u>↓</u>	<u>↓</u>		

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____

PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____

Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated 1/4" HDPE Other metal / f

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1542</u>	<u>22.1</u>	<u>1340</u>	<u>7.89</u>	<u>2.05</u>	<u>light brown</u>	<u>>999</u>	

Sheen: none Odor: none Sample Date: 8/18/03

Field Measurement Devices: Horiba H3 Omega _____ QuickCheck _____ D.O. Test Kit _____

REMARKS: 40ml / A. 2 casing volume purge.

SIGNATURE: [Signature]

DATE: 8/18/03



LOCATION: B³ Gas Mini Mart
 PROJECT NO: BNC104
 CLIENT: B³ Gas Mini Mart
 SAMPLE TYPE: Groundwater Surface Water
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

SAMPLE ID: CMT 2-25
 SAMPLED BY: R. PANK
 REGULATORY AGENCY: ALCEAS
 Leachate Treatment System Other

Well Total Depth (ft): 106.0 Volume in Casing (gal): 2511
 Depth to Water (ft): 43.23 Calculated Purge (volumes / gal.): 5022
 Height of Water Column (ft): 62.77 Actual Pre-Sampling Purge (gal): 5040

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated 1.5" HDPE Other metal lift
 Purge Water Containment: drum
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1642</u>	<u>2520</u>	<u>23.2</u>	<u>892</u>	<u>7.61</u>	<u>lt. brown</u>	<u>high</u>		
<u>1652</u>	<u>3700</u>	<u>23.3</u>	<u>863</u>	<u>7.58</u>	<u>↓</u>	<u>↓</u>		
<u>1703</u>	<u>5040</u>	<u>23.1</u>	<u>895</u>	<u>7.56</u>	<u>↓</u>	<u>↓</u>		

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated 1.5" HDPE Other metal lift

Time (2400 Hr)	Temp. (°C)	Electrical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1711</u>	<u>22.9</u>	<u>879</u>	<u>7.62</u>	<u>3.79</u>	<u>lt. brown</u>	<u>>999</u>	

Sheen: none Odor: none Sample Date: 8/18/03

Field Measurement Devices: Horiba H3 Omega QuickCheck D.O. Test Kit
 REMARKS: 40ml / #. 20 casing volume purge. DTW: ~45' at end of sampling

SIGNATURE: [Signature] DATE: 8/18/03



LOCATION: B&C Gas Mini Mart
 PROJECT NO: BNC104
 CLIENT: B&C Gas Mini Mart
 SAMPLE TYPE: Groundwater Surface Water _____ Leachate _____ Treatment System _____ Other _____
 CASING DIAMETER (OD-inches): 3/4 _____ 1 _____ 2 _____ 4 _____ 4.5 _____ 6 _____ 8 _____ Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

SAMPLE ID: CMT 2-26
 SAMPLED BY: [Signature]
 REGULATORY AGENCY: ACEHS

Well Total Depth (ft): 124.0 Volume in Casing (gal): 3220
 Depth to Water (ft): 43.31 Calculated Purge (volumes / gal.): 1455
 Height of Water Column (ft): 80.69 Actual Pre-Sampling Purge (gal): 6460

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____
 PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____
 Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated 1/4" HDPE Other metal
 Purge Water Containment: Crummed
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- _____ FB- _____ Other _____

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
1802	3230	21.6	820	7.67	lt. brown	high		
1811	4850	20.8	904	7.56	↓	↓		
1820	6460	20.6	912	7.57	↓	↓		

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer _____ Teflon Bailer _____ PVC Bailer _____ Disp. Bailer _____
 PVC Hand Pump _____ Peristaltic Pump _____ Centrifugal Pump _____ Bladder Pump _____
 Pneumatic Displacement Pump _____ Electric Submersible Pump _____ Dedicated 1/4" HDPE Other metal

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1830	21.0	945	7.60	4.26	lt. brown	>999	

Sheen: none Odor: none Sample Date: 8/18/03

Field Measurement Devices: Horiba H3 Omega _____ QuickCheck _____ D.O. Test Kit _____
 REMARKS: 40ml / H, 2 casing volume purge, DTW: 45' at end of sampling.
Note: tubing length = ~75'. Can fall into well.

SIGNATURE: [Signature] DATE: 8/18/03



LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT2-27
 PROJECT NO: RNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 144.0 143.3 Volume in Casing (gal): 3968
 Depth to Water (ft): 44.11 Calculated Purge (volumes / gal): 7936
 Height of Water Column (ft): 99.19 Actual Pre-Sampling Purge (gal): 8000

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DRAINAGE (FEP)
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	^{0.0} Other (mg/L)	Observation
<u>1124</u>	<u>4800</u>	<u>30.7</u>	<u>950</u>	<u>7.78</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>6.97</u>	
<u>1154</u>	<u>6000</u>	<u>28.9</u>	<u>970</u>	<u>7.74</u>	<u>↓</u>	<u>↓</u>	<u>6.10</u>	
<u>1215</u>	<u>8000</u>	<u>29.9</u>	<u>980</u>	<u>7.70</u>	<u>↓</u>	<u>↓</u>	<u>5.84</u>	

Purge Date: 8/19/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP
 (FEP)

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1217</u>	<u>26.9</u>	<u>910</u>	<u>7.75</u>	<u>5.40</u>	<u>BROWN</u>	<u>7999</u>	
Sheen: <u>NONE</u>		Odor: <u>NONE</u>				Sample Date: <u>8/19/03</u>	

Field Measurement Devices: Horiba M4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/ft. 2 CASING VOLUME PURGE.

CALIBRATION ON 8/19/03 AT 850, DO: 2.00; PH: 7.02, 10.04; TEMP: 21.9; COND: 0206; TURB: 0;

SIGNATURE: Chuck Min DATE: 8/19/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-21
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>44.0</u>	Volume in Casing (gal): <u>144</u>
Depth to Water (ft): <u>40.42</u>	Calculated Purge (volumes / gal): <u>200</u>
Height of Water Column (ft): <u>3.58</u>	Actual Pre-Sampling Purge (gal): <u>150</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 43 Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DOWNGRADE
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallon)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>1320</u>	<u>150</u>							<u>WELL DRY</u>

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 43 Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1345</u>							<u>WELL DRY</u>

Sheen: _____ Odor: _____ Sample Date: 8/19/03

Field Measurement Devices: Horiba MU Omega QuickCheck D.O. Test Kit
 REMARKS: 40ml / 44. 2 CASING VOLUME PURGE. PURGED 150ML WELL DRY AT 1320. WELL ALLOWED TO RECOVER. DTW WAS 42.53 AT 1323. 8/19/03 AT 1323 DTW WAS 41.51.

SIGNATURE: Charles Min DATE: 8/19/03



LOCATION: B-N-C GAS MINI MARKET SAMPLE ID: CMT 3-22
 PROJECT NO: BN C104 SAMPLED BY: C. Miller
 CLIENT: B-N-C GAS MINI MARKET REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 55.0 Volume in Casing (gal): 502
 Depth to Water (ft): 42.46 Calculated Purge (volumes / gal): 1004
 Height of Water Column (ft): 12.54 Actual Pre-Sampling Purge (gal): 1550

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 54' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated COPE, 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L)	Observation
1355	525	25.0	1080	8.47	Brown	VERY HIGH	3.73	
1357	800	25.8	1710	8.23	↓	↓	3.03	
1400	1050	27.4	1750	7.95	↓	↓	2.84	
1404	1300	27.2	1630	7.79	↓	↓	3.14	
1407	1550	27.2	1540	7.78	↓	↓	3.55	

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 54' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated COPE, 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1411	26.2	1400	7.63	3.92	BROWN	> 999	

Sheen: NONE Odor: NONE Sample Date: 8/18/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit
 REMARKS: 40ml/ft. 2 casing volume purge. Extra purge volume taken to reach stabilization.

Calibration AT 1345 on 8/18/03. DO: AUTO, PH: 6.99, 9.98; TEMP: 27°C; COND: 9,200; TURB: 0;

SIGNATURE: Chuck Miller DATE: 8/18/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-23
 PROJECT NO: BNCL04 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>65.0</u>	Volume in Casing (gal): <u>863</u>
Depth to Water (ft): <u>43.45</u>	Calculated Purge (volumes / gal): <u>1726</u>
Height of Water Column (ft): <u>21.55</u>	Actual Pre-Sampling Purge (gal): <u>2750</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 64' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HOPE, 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	^{DG} Turbidity (mg/L) _{Other}	Observation
<u>1437</u>	<u>900</u>	<u>24.5</u>	<u>900</u>	<u>8.77</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>3.51</u>	
<u>1514</u>	<u>1350</u>	<u>27.9</u>	<u>1190</u>	<u>8.34</u>	<u>↓</u>	<u>↓</u>	<u>2.76</u>	<u>①</u>
<u>1517</u>	<u>1800</u>	<u>25.4</u>	<u>1270</u>	<u>7.97</u>	<u>↓</u>	<u>↓</u>	<u>2.48</u>	
<u>1521</u>	<u>2250</u>	<u>25.3</u>	<u>1180</u>	<u>7.83</u>	<u>↓</u>	<u>↓</u>	<u>2.61</u>	

Purge Date: 8/10/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 64' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HOPE, 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1524</u>	<u>25.5</u>	<u>1140</u>	<u>7.72</u>	<u>2.79</u>	<u>BROWN</u>	<u>7999</u>	

Sheen: NONE Odor: NONE Sample Date: 8/10/03

Field Measurement Devices: Horiba M4 Omega QuickCheck D.O. Test Kit
 REMARKS: 4m lift 2 casing volume purple. ① STOPPED TO ORDER MORE TUBING BY PHONE.

SIGNATURE: Chuch Min DATE: 8/10/03



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-24
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACENS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 88.0 Volume in Casing (gal): 1695
 Depth to Water (ft): 45.64 Calculated Purge (volumes / gal): 4238 3390
 Height of Water Column (ft): 42.36 Actual Pre-Sampling Purge (gal): 4250

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 87' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HDPE 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DILUTED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (<u>gal</u>)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	<u>DO (mg/L)</u>	Other	Observation
<u>1632</u>	<u>1700</u>	<u>24.6</u>	<u>1190</u>	<u>8.40</u>	<u>BROWN</u>	<u>HIGH</u>	<u>1.90</u>		
<u>1643</u>	<u>2550</u>	<u>25.8</u>	<u>1170</u>	<u>8.02</u>	<u>↓</u>	<u>↓</u>	<u>1.81</u>		
<u>1650</u>	<u>3400</u>	<u>24.9</u>	<u>1170</u>	<u>7.85</u>	<u>↓</u>	<u>↓</u>	<u>2.65</u>		
<u>1655</u>	<u>4250</u>	<u>24.2</u>	<u>1140</u>	<u>7.83</u>	<u>↓</u>	<u>↓</u>	<u>2.50</u>		

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 87' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HDPE 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1700</u>	<u>24.3</u>	<u>1020</u>	<u>7.77</u>	<u>2.56</u>	<u>BROWN</u>	<u>7999</u>	

Seen: NONE Odor: NONE Sample Date: 8/18/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/gal, 2 CASING VOLUME PURGE.

SIGNATURE: _____

Chris Min

DATE: 8/18/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-ZS
 PROJECT NO: BNC104 SAMPLED BY: C. Muir
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>108.0</u>	Volume in Casing (gal): <u>2499</u>
Depth to Water (ft): <u>45.55</u>	Calculated Purge (volumes): <u>4998</u>
Height of Water Column (ft): <u>62.45</u>	Actual Pre-Sampling Purge (gal): <u>5000</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HOPE 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DECONTAMINATED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	<u>DO</u> (mg/L) Other	Observation
<u>1900</u>	<u>2500</u>	<u>24.5</u>	<u>1020</u>	<u>8.35</u>	<u>BROWN</u>	<u>HIGH</u>	<u>3.69</u>	
<u>1025</u>	<u>3750</u>	<u>21.4</u>	<u>1030</u>	<u>8.10</u>	<u>↓</u>	<u>↓</u>	<u>3.33</u>	<u>①</u>
<u>1036</u>	<u>5000</u>	<u>21.2</u>	<u>1050</u>	<u>8.07</u>	<u>↓</u>	<u>↓</u>	<u>3.95</u>	

Purge Date: 8/18/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated HOPE 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>2039</u>	<u>20.4</u>	<u>1080</u>	<u>8.01</u>	<u>2.66</u>	<u>BROWN</u>	<u>7999</u>	
Sheen: <u>NONE</u>			Odor: <u>NONE</u>			Sample Date: <u>8/18/03</u>	

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/ft. 2 CASING VOLUME PURGE. USED HOPE TUBING TO ~ 65' DEPTH. WATER LEVEL WAS BELOW TUBING DEPTH RE WENT TO 80' DEPTH TO A 80' DEPTH. HAD TO SWITCH TO TEFLON TUBING. HOPE TOO TIGHT, TEFLON TUBING GOT AIRT ON IT. HAD TO REPLACE.

SIGNATURE: Chuck Muir DATE: 8/18/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-36
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEUS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft):	<u>132.0</u>	Volume in Casing (gal):	<u>3446</u>
Depth to Water (ft):	<u>45.86</u>	Calculated Purge (volumes / gal):	<u>6892</u>
Height of Water Column (ft):	<u>86.14</u>	Actual Pre-Sampling Purge (gal):	<u>6900</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON, 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: PLUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L) Other	Observation
<u>1445</u>	<u>3500</u>	<u>27.7</u>	<u>1140</u>	<u>8.33</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>2.97</u>	
<u>1507</u>	<u>5250</u>	<u>25.5</u>	<u>1110</u>	<u>8.21</u>	<u>↓</u>	<u>↓</u>	<u>2.30</u>	
<u>1522</u>	<u>6900</u>	<u>26.0</u>	<u>1070</u>	<u>8.11</u>	<u>↓</u>	<u>↓</u>	<u>2.99</u>	

Purge Date: 8/19/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON, 1/4" Other INERTIAL LIFT PUMP
 (TEP)

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1527</u>	<u>27.7</u>	<u>1040</u>	<u>8.05</u>	<u>2.90</u>	<u>BROWN</u>	<u>> 999</u>	

Sheen: NONE Odor: NONE Sample Date: 8/19/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/gal. 2 CASING VOLUME PURGE.

SIGNATURE: Cheryl Min

DATE: 8/19/03

Conor Pacific



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT3-27
 PROJECT NO: BNC104 SAMPLED BY: C. Muir
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>155.0</u>	Volume in Casing (gal): <u>4346</u> <u>424</u>
Depth to Water (ft): <u>w 46.57</u> <u>49.00</u>	Calculated Purge (volumes / gal): <u>0.8692</u> <u>8482</u>
Height of Water Column (ft): <u>108.63</u> <u>106.00</u>	Actual Pre-Sampling Purge (gal): <u>8500</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL
 Purge Water Containment: PLUMBED (FEF) LIFT PUMP
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	<u>0.00</u> Other (mg/L)	Observation
<u>922</u>	<u>4250</u>	<u>22.6</u>	<u>960</u>	<u>8.31</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>4.66</u>	
<u>1016</u>	<u>6400</u>	<u>24.0</u>	<u>960</u>	<u>8.14</u>	<u>↓</u>	<u>↓</u>	<u>3.76</u>	
<u>1053</u>	<u>8500</u>	<u>24.8</u>	<u>960</u>	<u>8.09</u>	<u>↓</u>	<u>↓</u>	<u>4.80</u>	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL
 (FEF) LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1056</u>	<u>25.5</u>	<u>930</u>	<u>8.01</u>	<u>2.80</u>	<u>BROWN</u>	<u>7.999</u>	

Sheen: NONE Odor: NONE Sample Date: 8/21/03

Field Measurement Devices: Horiba 114 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml / Ft. 2 CASING VOLUME PURGE.

CALIBRATION W 8/21/03 AT 736 DO 3000; PH: 7.01, 10.03; TEMP: 12.0C; COND: 0.2060; TURBID:

SIGNATURE: Cheryl Muir

DATE: 8/21/03



LOCATION: B-N-C GAS MINI MART

SAMPLE ID: CMT 4-Z1

PROJECT NO: BNC104

SAMPLED BY: C. Muir

CLIENT: B-N-C GAS MINI MART

REGULATORY AGENCY: ACEHS

SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other

CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT

GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>25.9</u>	Volume in Casing (gal): <u>42.80</u>
Depth to Water (ft): <u>24.83</u>	Calculated Purge (volumes / gal): <u>85.60</u>
Height of Water Column (ft): <u>1.07</u>	Actual Pre-Sampling Purge (gal): <u>nt</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer

PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump

Pneumatic Displacement Pump Electric Submersible Pump Dedicated LOVE Other INERTIAL

Purge Water Containment: NONE

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (umhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	Other	Observation
<u>WELL DRY.</u>								
<u>8/21/03 cm.</u>								
Purge Date: <u>8/21/03</u>								

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer

PVC Hand Pump Peristaltic Pump Centrifugal Pump Bladder Pump

Pneumatic Displacement Pump Electric Submersible Pump Dedicated LOVE Other

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (umhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1139</u>							<u>WELL DRY</u>
Sheen: _____ Odor: _____ Sample Date: _____							

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit

REMARKS: MEASURED WATER LEVEL. WELL DRY. NO SAMPLE COLLECTED.

SIGNATURE: check Muir DATE: 8/21/03



LOCATION: B-N-C GAS MINI MART

SAMPLE ID: CMT4-23

PROJECT NO: BNC104

SAMPLED BY: C. Min

CLIENT: B-N-C GAS MINI MART

REGULATORY AGENCY: ACEHS

SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other

CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT

GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): <u>51.7</u>	Volume in Casing (gal): <u>726</u>
Depth to Water (ft): <u>33.57</u>	Calculated Purge (volumes / gal): <u>1452</u>
Height of Water Column (ft): <u>18.13</u>	Actual Pre-Sampling Purge (gal): <u>1475</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer

PVC Hand Pump Peristaltic Pump 50' Centrifugal Pump Bladder Pump

Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT PUMP

Purge Water Containment: DRUMMED

Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L) Other	Observation
<u>1940</u>	<u>750</u>	<u>21.6</u>	<u>900</u>	<u>8.51</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>3.75</u>	
<u>1945</u>	<u>1125</u>	<u>21.8</u>	<u>1100</u>	<u>8.39</u>	<u>↓</u>	<u>↓</u>	<u>3.16</u>	
<u>1949</u>	<u>1475</u>	<u>21.7</u>	<u>1210</u>	<u>8.32</u>	<u>↓</u>	<u>↓</u>	<u>3.13</u>	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer

PVC Hand Pump Peristaltic Pump 50' Centrifugal Pump Bladder Pump

Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1953</u>	<u>20.2</u>	<u>1250</u>	<u>8.28</u>	<u>3.19</u>	<u>BROWN</u>	<u>87999</u>	

Sheen: NONE Odor: SLIGHT Sample Date: 8/21/03

Field Measurement Devices: Horiba HY Omega QuickCheck D.O. Test Kit

REMARKS: 40ml/gal. 2 CASING VOLUME PURGE

SIGNATURE: Chuck Min DATE: 8/21/03



WATER SAMPLE FIELD DATA

LOCATION: B-N-C GAS MINI MART
 PROJECT NO: BRCL04
 CLIENT: B-N-C GAS MINI MART
 SAMPLE TYPE: Groundwater Surface Water
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

SAMPLE ID: CMT4-24
 SAMPLED BY: C. Munn
 REGULATORY AGENCY: ACEHS
 Leachate Treatment System Other

Well Total Depth (ft):	<u>61.7</u>	Volume in Casing (gal):	<u>1116</u>
Depth to Water (ft):	<u>33.82</u>	Calculated Purge (volumes / gal):	<u>2232</u>
Height of Water Column (ft):	<u>27.88</u>	Actual Pre-Sampling Purge (gal):	<u>2250</u>

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 60' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DILUTED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	^{DO} Other	Observation
<u>1906</u>	<u>1150</u>	<u>21.5</u>	<u>1150</u>	<u>8.16</u>	<u>BROWN</u>	<u>VERY MURK</u>	<u>2.36</u>	
<u>1911</u>	<u>1725</u>	<u>21.9</u>	<u>1180</u>	<u>8.05</u>	<u>↓</u>	<u>↓</u>	<u>2.10</u>	
<u>1918</u>	<u>2250</u>	<u>22.1</u>	<u>1170</u>	<u>8.00</u>	<u>↓</u>	<u>↓</u>	<u>3.41</u>	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 60' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated LDPE, 1/4" Other INERTIAL LIFT

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1922</u>	<u>21.5</u>	<u>1210</u>	<u>7.94</u>	<u>2.31</u>	<u>BROWN</u>	<u>7999</u>	

Sheen: NONE Odor: SLIGHT Sample Date: 8/21/03

Field Measurement Devices: Horiba MU Omega QuickCheck D.O. Test Kit

REMARKS: 4cm Ht. 2 CASING VOLUME PURGE

SIGNATURE: [Signature] DATE: 8/21/03



LOCATION: BNC GAS MINI MART
 PROJECT NO: BNC104
 CLIENT: BNC GAS MINI MART

SAMPLE ID: CMT4-25
 SAMPLED BY: C. Munn
 REGULATORY AGENCY: ACEAHS

SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 71.8 Volume in Casing (gal): 1521
 Depth to Water (ft): 33.80 Calculated Purge (volumes/gal): 3042
 Height of Water Column (ft): 38.00 Actual Pre-Sampling Purge (gal): 3825

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 70' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON, 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DRAINAGE
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	(WS/L) Other	Observation
1812	1550	21.2	900	8.22	BROWN	High	2.78	
1816	2325	21.3	980	8.04	↓	↓	1.73	
1819	3050	21.2	1030	7.88	↓	↓	1.75	
1826	3825	21.6	1050	7.88	↓	↓	1.85	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 70' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON, 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1830	21.4	1050	7.80	2.44	BROWN	7999	

Sheen: NONE Odor: NONE Sample Date: 8/21/03

Field Measurement Devices: Horiba H4 Omega QuickCheck D.O. Test Kit 2
 REMARKS: 1/2 CASING WORK TO STABILIZE PH. 2 CASING VOLUME PURGE EXTRA

SIGNATURE: [Signature] DATE: 8/21/03
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LOCATION: B-N-C GAS MINI MART SAMPLE ID: CMT4-26
 PROJECT NO: BNC104 SAMPLED BY: C. Min
 CLIENT: B-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): CM 37.7 106.7 Volume in Casing (gal): 2671
 Depth to Water (ft): CM 33.10 39.95 Calculated Purge (volumes / gal): 5342
 Height of Water Column (ft): 66.75 Actual Pre-Sampling Purge (gal): 5350

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80 Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (µmhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DP (mg/L) Other	Observation
1719	2700	23.1	920	8.16	Brown	High	2.78	
1728	4050	22.2	1020	8.09	↓	↓	2.94	
1741	5350	21.7	1030	8.01	↓	↓	2.89	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80 Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (µmhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
1745	22.4	<u>CM 1030</u>	<u>7.92</u>	2.85	BROWN	>999	
Sheen: <u>NONE</u>		Odor: <u>NONE</u>		Sample Date: <u>8/21/03</u>			

Field Measurement Devices: Horiba H14 Omega QuickCheck D.O. Test Kit

REMARKS: 40ml / ft. 2 CASING VOLUME PURGE. TUBING TYPE: 0.250X CM 0.40 MAX I.D. (TEFLON).

SIGNATURE: Cheryl Min DATE: 8/21/03



LOCATION: R-N-C GAS MINI MART SAMPLE ID: CMT4-Z7
 PROJECT NO: ANSC104 SAMPLED BY: C. Min
 CLIENT: R-N-C GAS MINI MART REGULATORY AGENCY: ACEHS
 SAMPLE TYPE: Groundwater Surface Water Leachate Treatment System Other
 CASING DIAMETER (OD-inches): 3/4 1 2 4 4.5 6 8 Other CMT
 GALLONS PER LINEAR FOOT: (0.02) (0.04) (0.17) (0.66) (0.83) (1.5) (2.6)

Well Total Depth (ft): 136.0 Volume in Casing (gal): 3779
 Depth to Water (ft): 41.54 Calculated Purge (volumes / gal): 7558
 Height of Water Column (ft): 94.46 Actual Pre-Sampling Purge (gal): 7600

PURGE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP
 Purge Water Containment: DRUMMED
 Field QC Samples Collected at this Well (Equipment or Field Blank): EB- FB- Other

Time (2400 Hr)	Volume (gallons)	Temp. (°C)	Elec. Conductivity (umhos/cm)	pH (std. units)	Color (visual)	Turbidity (visual)	DO (mg/L) Other	Observation
<u>1406</u>	<u>3800</u>	<u>22.0</u>	<u>950</u>	<u>7.95</u>	<u>BROWN</u>	<u>VERY HIGH</u>	<u>2.20</u>	
<u>1416</u>	<u>5700</u>	<u>21.4</u>	<u>960</u>	<u>7.83</u>	<u>↓</u>	<u>↓</u>	<u>1.64</u>	
<u>1425</u>	<u>7600</u>	<u>21.6</u>	<u>940</u>	<u>7.74</u>	<u>↓</u>	<u>↓</u>	<u>2.03</u>	

Purge Date: 8/21/03

SAMPLE:

Device (Depth of Intake from TOC): S.S. Bailer Teflon Bailer PVC Bailer Disp. Bailer
 PVC Hand Pump Peristaltic Pump 80' Centrifugal Pump Bladder Pump
 Pneumatic Displacement Pump Electric Submersible Pump Dedicated TEFLON 1/4" Other INERTIAL LIFT PUMP

Time (2400 Hr)	Temp. (°C)	Electical Conductivity (umhos/cm)	pH (std. units)	Dissolved Oxygen (mg/l)	Color (visual)	Turbidity (NTU)	Other
<u>1433</u>	<u>22.5</u>	<u>920</u>	<u>7.68</u>	<u>2.49</u>	<u>BROWN</u>	<u>>999</u>	
Sheen: <u>NONE</u>		Odor: <u>NONE</u>		Sample Date: <u>8/21/03</u>			

Field Measurement Devices: Horiba HY Omega QuickCheck D.O. Test Kit
 REMARKS: 40ml / ft. 2 CASING VOLUME PURGE. TUBING TYPE: 0.250 X 0.040 NAT PVD (TEFLON).

SIGNATURE: Charles Min DATE: 8/21/03

Well Name: MW-2 AUGUST 18, 2003

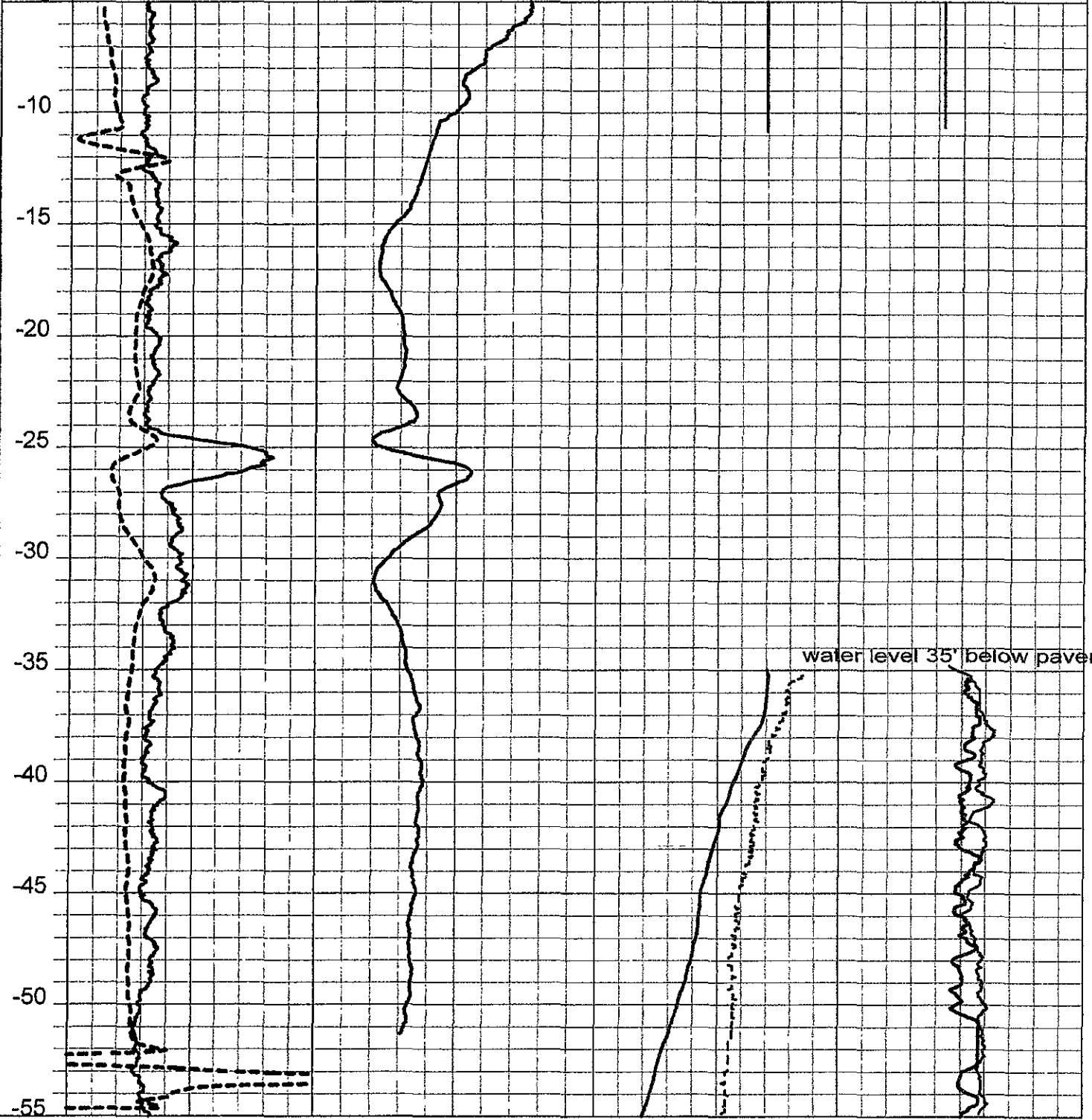
Location: VALLEY GAS STATION, LIVERMORE, CA

Reference: PAVEMENT

GEOPHYSICAL LOGS



Feet	NGAM		RI		TEMP		DELT		
0	(API)	150	10	(O M)	100	19.5 (DEGC)	20.5	-1 (DEGC)	.1
	CDTV					COND		DELC	
-5	(MS M)	100				.9 (MSCM)	1	-1 (MSCM)	.1



Well Name: MW-3 AUGUST 18, 2003

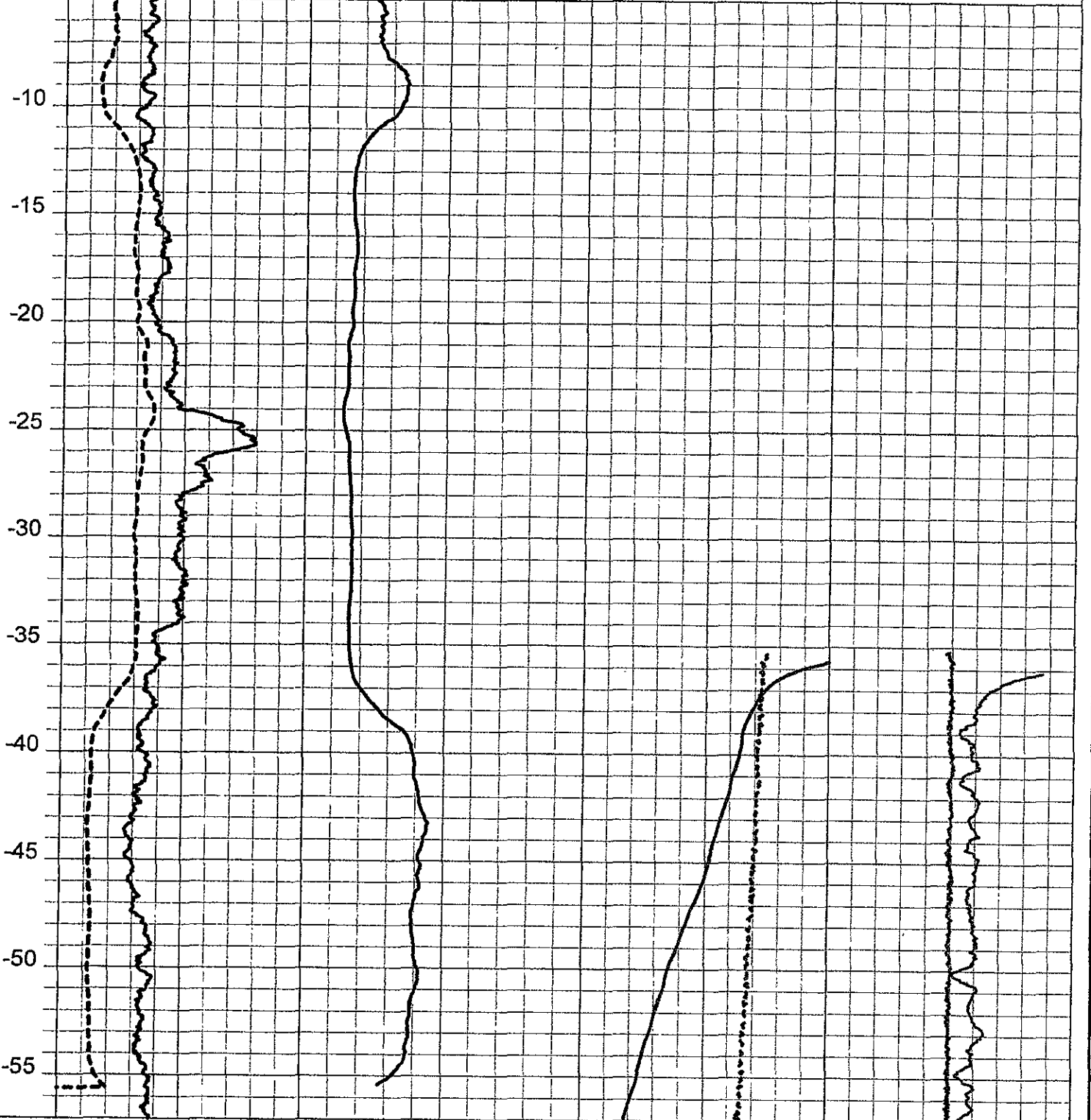
Location: VALLEY GAS, LIVERMORE, CA

Reference: PAVEMENT

GEOPHYSICAL LOGS



Feet	CDTV		RI	TEMP			DELT		
	(MS M)	200		(DEGC)	20.2	(DEGC)	.1		
0	NGAM		(O M)	100					
-5	(API)	150			.8 (MSCM)	.95	-1	(MS/CM)	.1



Well Name: MW-4 AUGUST 18, 2003

Location: VALLEY GAS LIVERMORE CA

Reference: PAVEMENT

GEOPHYSICAL LOGS



Feet	CDTV		RI		TEMP		DELT	
	(MS M)	200	(O M)	100	(DEGC)	20.5	(DEGC)	.1
	0		0		19		-1	
	NGAM				COND		DELC	
	0	150			.9	(MSCM)	1	-1 (MSCM) .1

