TRANSMITTAL

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To: Lynn Hornecker **Date:** December 27, 2001

From: David Kelly and Holly Orndorff

Subject: Preliminary Data from UST 117 Time Critical Removal Action (Pump Tests)

Attached are summary tables, field forms, modeling results, and analytical results generated from pump tests conducted as part of the Time Critical Removal Action (TCRA) at the 1,2-dichloroethane (1,2-DCA) source area at Underground Storage Tank (UST) 117. The TCRA was conducted in accordance with the *Action Memorandum for the Time-Critical Removal Actions at the National Aeronautics and Space Administration (NASA), Crows Landing Flight Facility, Administration Area Plume, 1,2-dichloroethane (1,2-DCA) and Carbon Tetrachloride Source Areas at Installation Restoration Program (IRP) Site 17, Stanislaus County.* A final field activity report will also be prepared, including some or all of this data, at the conclusion of the on-going field activities associated with long-term groundwater extraction at UST 117.

From July 24, 2001 through September 17, 2001, step and 48-hour drawdown tests were preformed on wells 117-MW-02S, 117-MW-03MS, 117-MW-10S, and 117-MW-10MS at the UST 117 Site to evaluate hydrogeologic parameters. Initially step testing was conducted using a centrifugal-type pump to evaluate potential pumping rates for the 48-hour drawdown tests. The results and associated field forms for step testing at each well are included in Attachments 1 through 4. The results of the step testing indicated that very low flowrates (less than 0.5 gallons per minute) were required to minimize excessive drawdown in all wells.

Drawdown testing using a centrifugal pump was initiated on all of the wells. The centrifugal pump could not maintain a flowrate low enough (less than 0.3 gallons per minute) to complete testing on any of the wells. Drawdown testing was stopped shortly after starting at the shallow wells. Drawdown testing was stopped after 8 hours at the mid-shallow wells. Data was collected using hand-held instruments and pre-programmed data loggers during drawdown testing. The results and associated field forms for testing completed at the mid-shallow wells are included in Attachments 2 and 4.

Additional drawdown testing was completed at each well using a leachate-type pump. The leachate pump can maintain lower pumping rates. The leachate pump uses an internal sump and float system that transfers the water to ground surface when the sump fills. Although the water is transferred to the surface in pulses, the flow of water into the pump is continuous. The continuous flowrate is the average of the total gallons transferred per unit time. The results and associated field forms for testing completed are included in Attachments 1 through 4.

The wells used for drawdown testing are screened in predominately fine-grained material, and constant pumping rates greater than approximately 0.5 gallons per minute generally could not be maintained. Within the 48-hour drawdown tests significant responses could not be measured in the observation wells.

The low pumping rates and inadequate test durations yielded data of questionable use.

Initially, the data were processed using Aqtesolv Version 2.5, and the Neuman and/or Theis method for partially penetrating wells. The saturated thickness of the aquifer was estimated to be 163 feet, which corresponds to the approximate vertical distance from the water table to the top of the Corcoran Clay. Some response to pumping was detectable in observation wells, but reasonable distance-drawdown curves and time-drawdown response curves could not be generated from the data. Therefore, it was determined that the hydrogeologic parameters calculated from the typical analytical method are not fully useful.

Data from the pumping wells was used to roughly estimate hydrogeologic parameters by using the following empirical equation, which is a modified Jacob equation (Driscoll, 1995):

$$s = 264Q/T \log (0.3Tt/r^2S)$$

Where
s = drawdown in the well, in feet
Q = yield of the well, in gpm
T = transmissivity of the well, in gpd/feet
t = time of pumping, in days
r = radius of the well, in feet
S = storage coefficient of the aquifer

By rearranging the terms and making the following simplifying assumptions based on typical values, the specific capacity for an unconfined aquifer is given by:

$$Q/s = T/1500$$

Assumes
t = 1 day, r = 0.5 foot, T = 30,000 gpd/foot, and S = 0.075

Site and well specific values were substituted for the general assumptions presented in Driscoll. These results are included with the results generated from the Aqtesolv model in the summary table in Attachments 1 through 4. The radius of the pumping well was used in the calculation. Also, the amount of volume pumped during each test was divided by the total time pumped to give a more accurate T-value in the logarithm. In the summary tables the simplified Jacob equation for each pumping test is presented in the first column and the result is presented in the corresponding row.

The values that resulted from the Jacob equation are generally more representative of the true characteristics of the saturated material at site 117 than the values arrived at by means of classic pump test analysis. The results are as follows:

- The range of hydraulic conductivity values is 0.039 to 0.719 feet per day.
- The average hydraulic conductivity value is 0.208 feet per day.

These values correspond to typical permeabilities for silt, sandy silts, and clayey sands (Fetter, 1994). These empirically derived values for hydraulic conductivity match the typical values for the predominately fine-grained aquifer material that has been logged in borings at the Facility.

Groundwater samples were collected from the test well pump effluent for laboratory analysis at 15 minutes, 8 hours, 24 hours, and 48 hours from the start of the 48-hour test at each well. Because the leachate pump used for drawdown testing at wells uses air to transfer the discharge water to the surface, additional samples were collected before and after testing at each well using a centrifugal pump to verify pump effluent sample results. Summary tables and the certificates of analysis for the laboratory results are included with the pump test data in Attachments 1 through 4. Groundwater samples were also collected from select observation wells used during the pump test before and after all pump testing activities. Summary tables and the certificates of analysis for the laboratory analysis for these samples are included in Attachment 5.

As part of the Time Critical Removal Action, long-term pumping will be conducted at well 117-MW-02(S). Analytical results from samples collected from this well during the drawdown testing indicated the highest concentrations of 1,2-DCA as well as high concentrations of other compounds. Long-term pumping will be conducted in accordance with Attachment 3 of the *Soil Vapor Extraction Optimization for the Remediation of UST Cluster 1 and Site Verification Activities at Various Sites, NASA Crows Landing Flight Facility, Crows Landing, California, Work Plan.* Long-term pumping will be conducted using the leachate pump used during the drawdown testing. Groundwater samples will be collected from the pump effluent monthly and analyzed for petroleum hydrocarbons and volatile organic compounds in accordance with the Sampling and Analysis Plan. Additional long-term pumping may be conducted at other wells at UST 117.

References

Driscoll, F.G., 1995. *Groundwater and Wells,* Second Edition, U.S. Filter/Johnson Screens, St. Paul, MN.

Fetter, C.W., 1994. *Applied Hydrogeology,* Third Edition, Prentice-Hall Publishing Co. New York

cc: B Hulet
T Barry
H Orndorff
Project File

Attachment 1

117-MW-02(S)

Summary Tables

Results:
The following analysis was obtained by analyzing pumping test data with Aqutesolv for Windows 95/98/NT Version 2.5 - Professional.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter in.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-02S	0-33	0.39	12.65	8.25 / 2	164	0.000442	0.636768	0.0039	NA	9.49E-03	Theis
Screened: 50-75					15			0.0425			
7/24/01 Test 1											
T=1455(Q/s)							5.0855183	0.3390			Jacob Equation
117-MW-02S	0-37	0.18	9.64	8.25 / 2	164	0.000342	0.492192	0.0030	NA	6.13E-03	Theis
Screened: 50-75					15			0.0328			
7/24/01 Test 2											
T=1354(Q/s)							2.866238216	0.1911			Jacob Equation

No observation wells were monitored during this test.

Hydraulic Conductivity values indicate that the aquifer material is sandy silts to clay.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter in.	Saturated Thickness* Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-02S	0	0.12	9.978	8.25 / 2	163	0.000368	0.5301	0.0033	0.08672	15290000	Neuman
Screened: 50-75	2897	0									
9/4-6/01											
T=1277(Q/s)							1.741112	0.116074155			Jacob Equation

Observation Wells	Distance to Pumping Well	Sreened Interval		Borehole/Casing Diameter in.		
117-MW-11MS	78	115-125		10.0 / 2	163	NR
117-MW-05S	126	50-75		8.25 / 2	163	NR
17-MW-04S	113.5	50-75		8.25 / 2	163	NR

Note: NR = No Response. None of the observation wells showed a response to pumping 117-MW-02S, there was only 18 feet of water column above the pump.

UST 117
Data Summary
117-MW-02

Sample ID	Method			117-MW-02			
Aquifer				shallow			
Screen Interval (ft bgs)				49-74			
Description		Aug-01[a]	Sep-01[1]	Sep-01[2]	Sep-01[3]	Sep-01[4]	Sep-01[5]
pH	field	6.93					
conductivity	field	1.15 uS/cm					
dissolved oxygen	field	0.92 mg/L					
TPH-gasoline	M8015V	**0.19** mg/L	**0.18** mg/L	**0.25** mg/L	**0.14** mg/L	**0.13** mg/L	**0.11** mg/L
TPH-jet fuel	M8015V	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L
TPH-diesel	M8015E	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
TPH-motor oil	M8015E	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
benzene	8260	**1.1** µg/L	**0.2J** µg/L	**0.4J** µg/L	<0.5 µg/L	<0.5 µg/L	**1** µg/L
carbon tetrachloride	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
chloroform	8260	**1.1** µg/L	**1.1** µg/L	**2** µg/L	**2.2** µg/L	**1.8** µg/L	**2.5** µg/L
chloromethane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
1,1-dichloroethane	8260	**0.5** µg/L	**0.5J** µg/L	**0.5J** µg/L	**0.4J** µg/L	**0.4J** µg/L	**0.5** µg/L
1,2-dichloroethane	8260	**138** µg/L	**74.8** µg/L	**53.6** µg/L	**35.9** µg/L	**29.6** µg/L	**54.1** µg/L
1,2-dichloropropane	8260	**3.1** µg/L	**2.1** µg/L	**1.5** µg/L	**1.1** µg/L	**1.1** µg/L	**1.5** µg/L
ethylbenzene	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
methylene chloride	8260	**3** µg/L	**0.8** µg/L	**0.6** µg/L	<0.5 µg/L	<0.5 µg/L	**0.6** µg/L
toluene	8260	**0.7** µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	8260	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<2 µg/L
tertbutyl alcohol	8260	**150** µg/L	**110** µg/L	**110** µg/L	**85** µg/L	**65** µg/L	<20 µg/L

Detections are bolded

[a] Detections included sec-butylbenzene (5.8), tert-butylbenzene (5.8), carbon disulfide (21), and isopropyl benzene (5.3)

[1] Sample collected after 15 minutes of pumping.

[2] Sample collected after 8 hours of pumping.

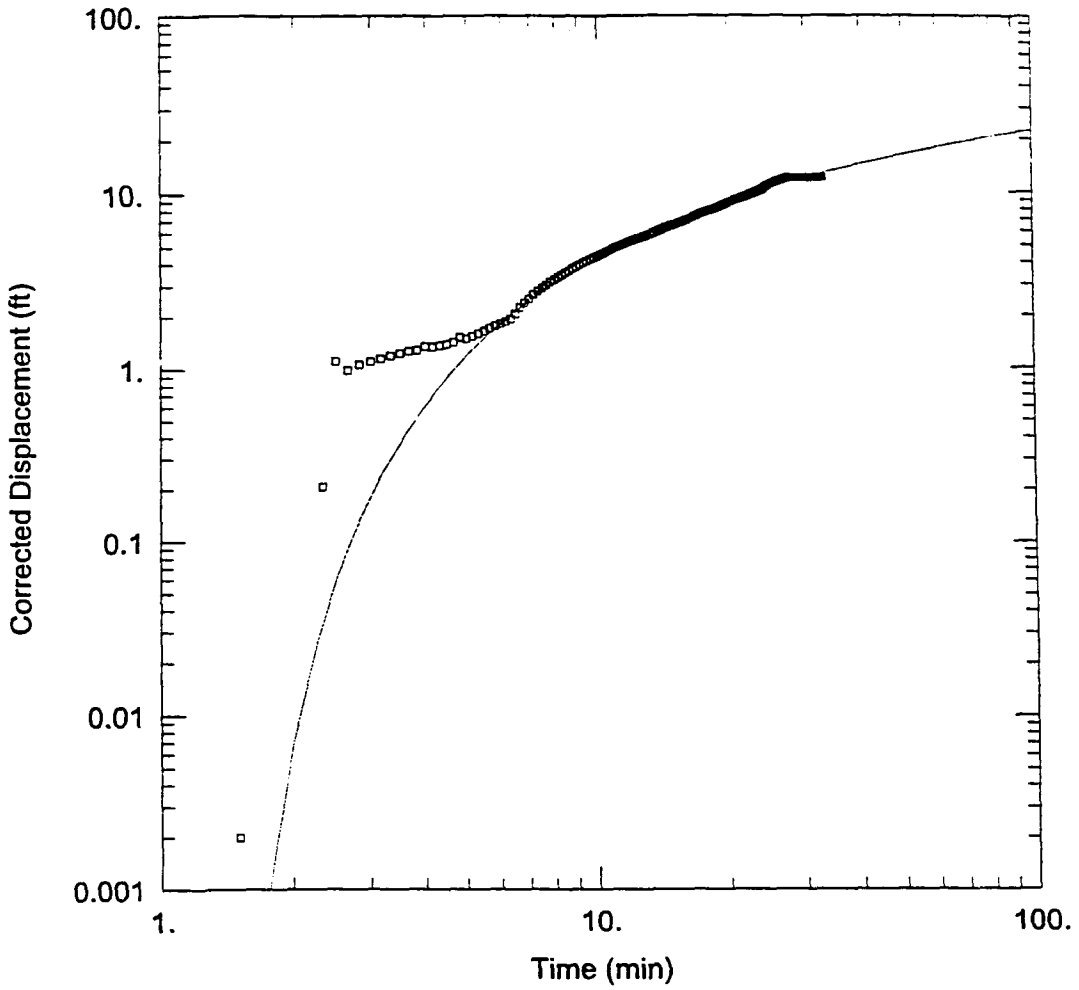
[3] Sample collected after 24 hours of pumping.

[4] Sample collected after 48 hours of pumping.

[5] Sample collected 9/17/01 at start of TCRA pumping.

Note: Some sample results are preliminary and have not been validated. Results are presented for comparison only and may change during validation.

Step Test



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\Step Tests\117-MW-02Sstep1.aqt
Date: 11/12/01 Time: 14:48:19

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crow's Landing, CA
Test Well: 117-MW-02S
Test Date: 7-24-01

AQUIFER DATA

Saturated Thickness: 164. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-02S	0	0

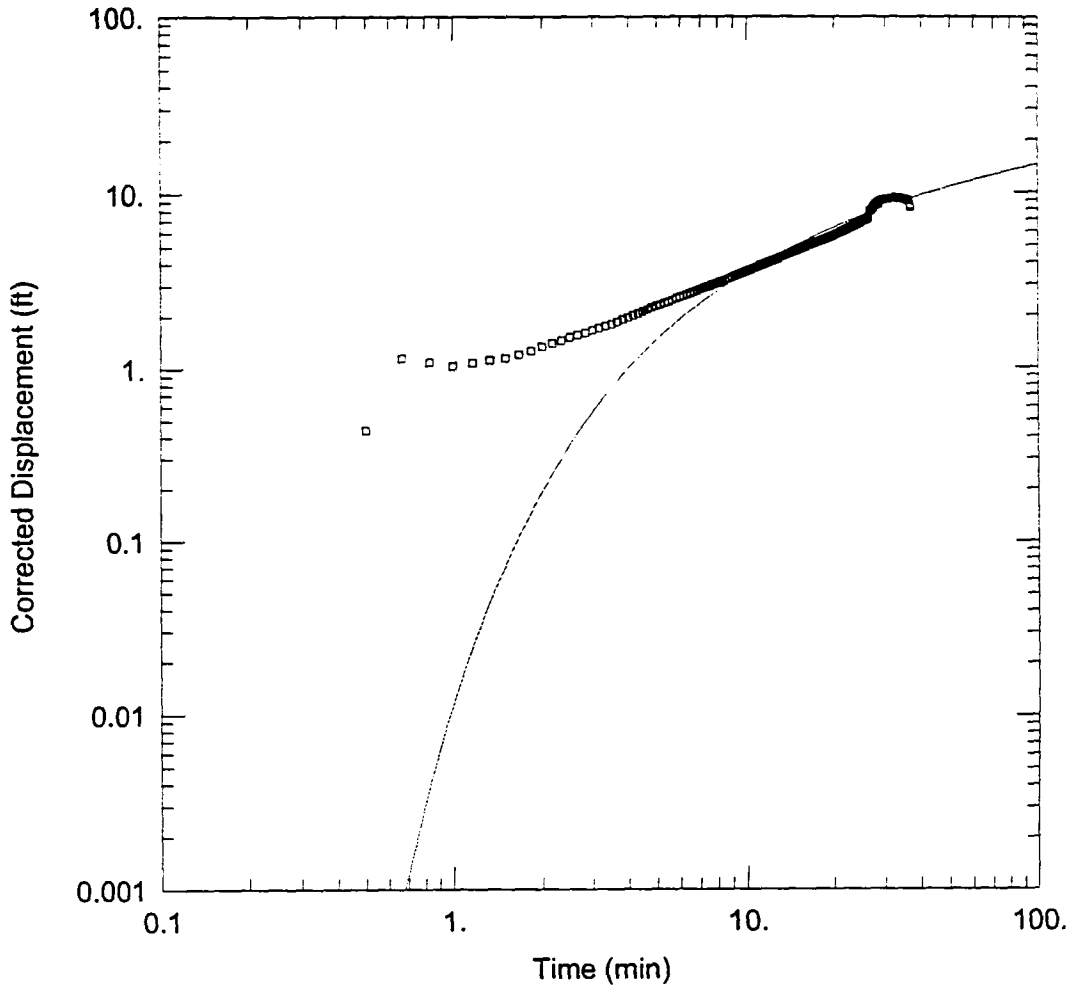
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-02S	1	0

SOLUTION

Aquifer Model: Unconfined Solution Method: Theis

T = 0.0004422 ft^2/min S = 0.009494



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\Step Tests\117-MW-02Sstep2.aqt
Date: 11/12/01 Time: 14:51:22

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crow's Landing, CA
Test Well: 117-MW-02S
Test Date: 7-24-01

AQUIFER DATA

Saturated Thickness: 164. ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-02S	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-02S	1	0

SOLUTION

Aquifer Model: Unconfined Solution Method: Theis

T = 0.0003418 ft^2/min S = 0.006134

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/24/01
Monitoring Well ID: 117- MW-02S
Transducer No.:
Transducer Depth:

Test No.: STEP TEST #1
Pumping Well ID: 117-MW-02S

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0834	START	56.51	0	86.57	0	0	—	—
0844	10	60.95	4.44	—	-	0.39	—	—
0847	13	62.41	5.90	—	-	0.39	—	—
0856	22	66.54	10.03	-	-	0.39	—	—
0904	30	69.16	12.63	-	-	0.39	—	—
0905	31	69.15	12.64	-	-	0.39	—	—
0906	32	69.15	12.64	-	-	0.39	—	—
0907	33	69.15	12.64	99.44	12.87	0.39	—	—
0907	STOP	* PUMP	TRIPPED	WAITING	FOR	RECHARGE		

NO FURTHER MS ENTRIES

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/24/01
Monitoring Well ID: 117-MW-02S
Transducer No.:
Transducer Depth:

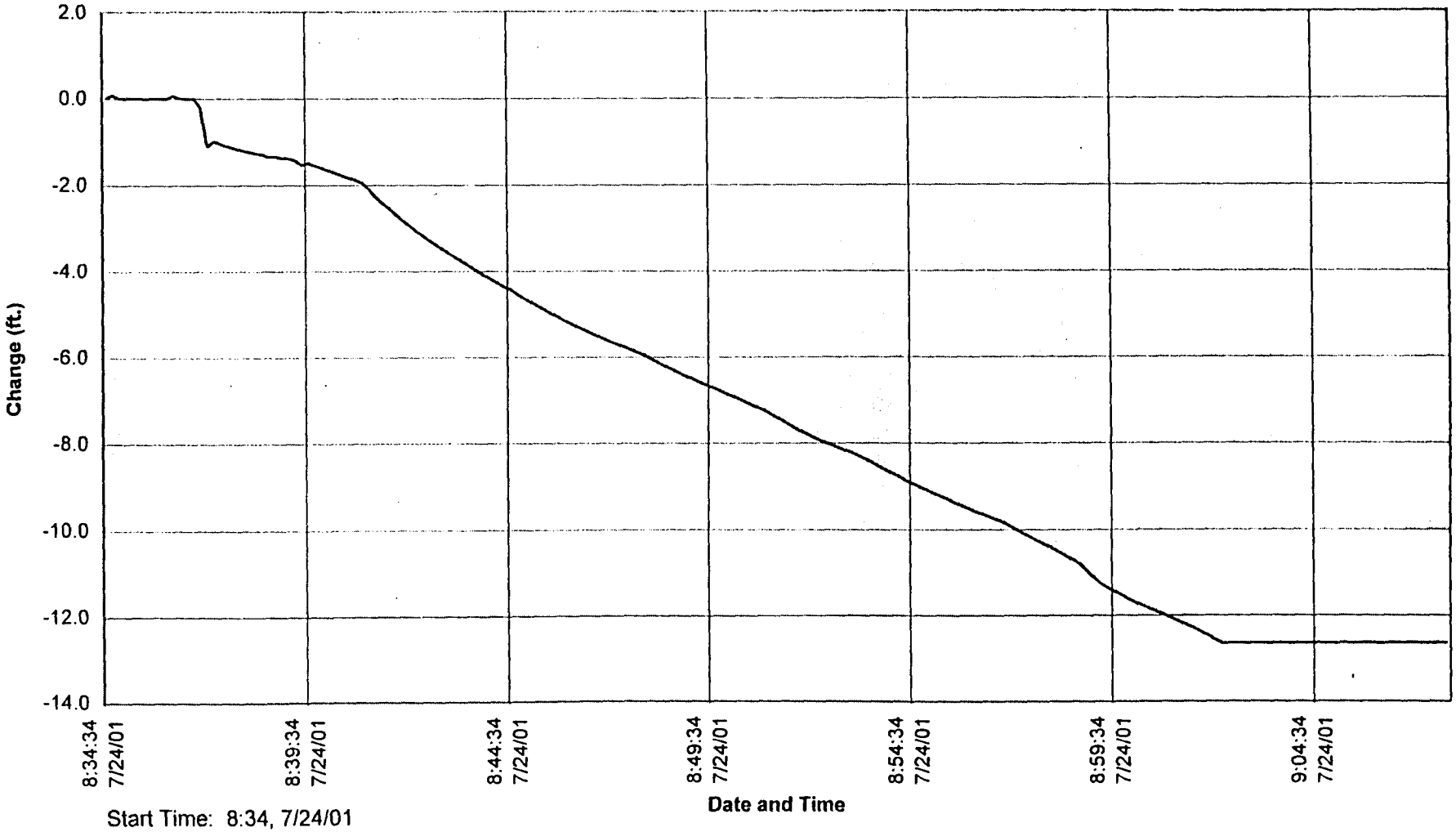
Test No.: STEP TEST #2
Pumping Well ID: 117-MW-02S

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
1315	START	56.79	0	100.15	0	0	—	—
1318	3	58.50	1.71	—	—	0.18	—	—
1321	6	60.16	3.37	—	—	0.18	—	—
1333	18	62.05	5.26	—	—	0.18	—	—
1337	22	63.00	6.21	—	—	0.18	—	—
1340	25	63.73	6.94	—	—	0.18	—	—
1350	35	66.24	9.45	—	—	0.18	—	—
1351	36	66.07	9.28	—	—	0.18	—	—
1352	37	65.26	8.47	106.71	6.56	0.15	—	—
1352	STOP	* PUMP TRIPPED		—	—	—	—	—

NO FURTHER MS ENTRIES

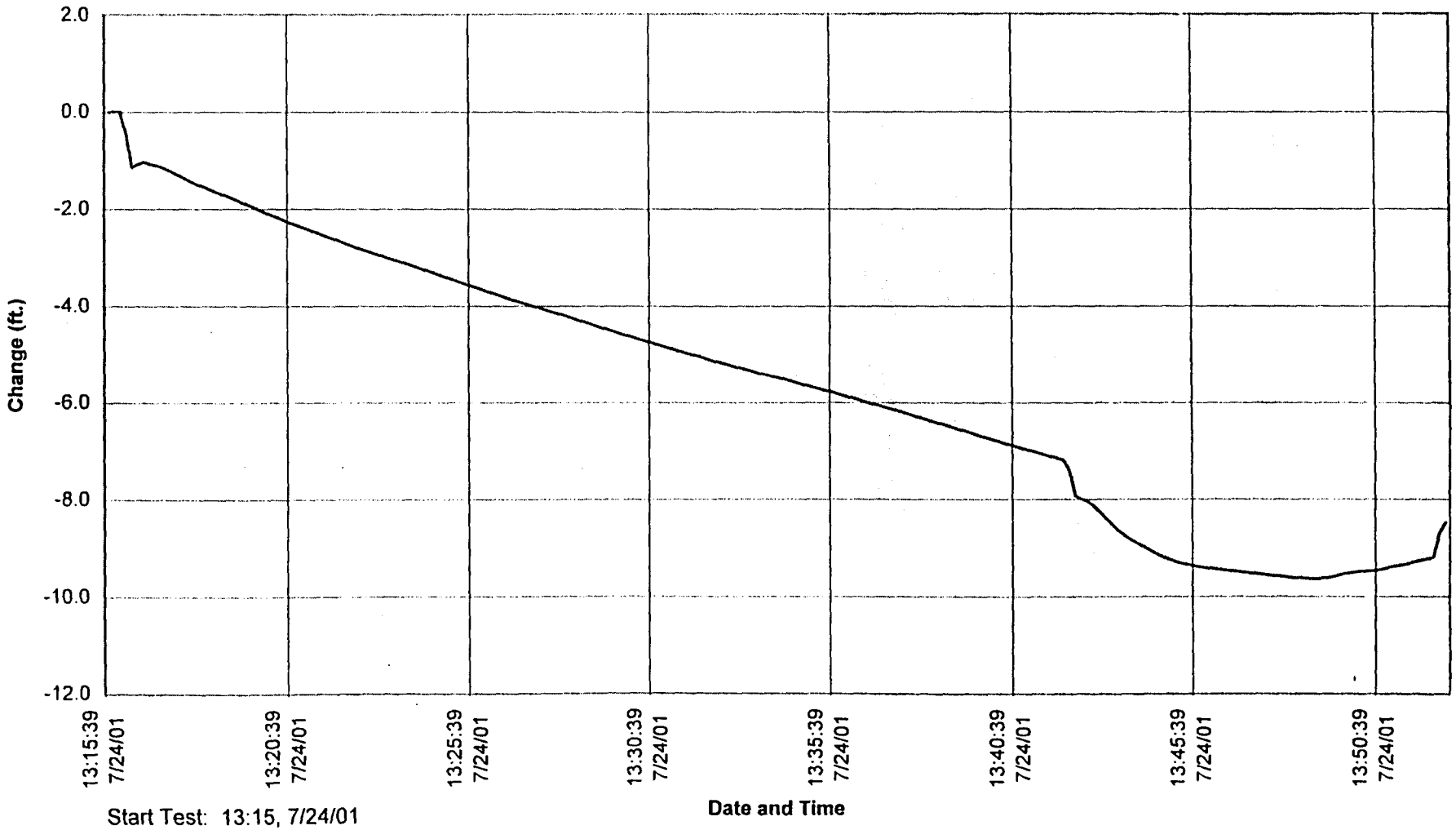
Notes:

Step Test #1, 117-MW-02S



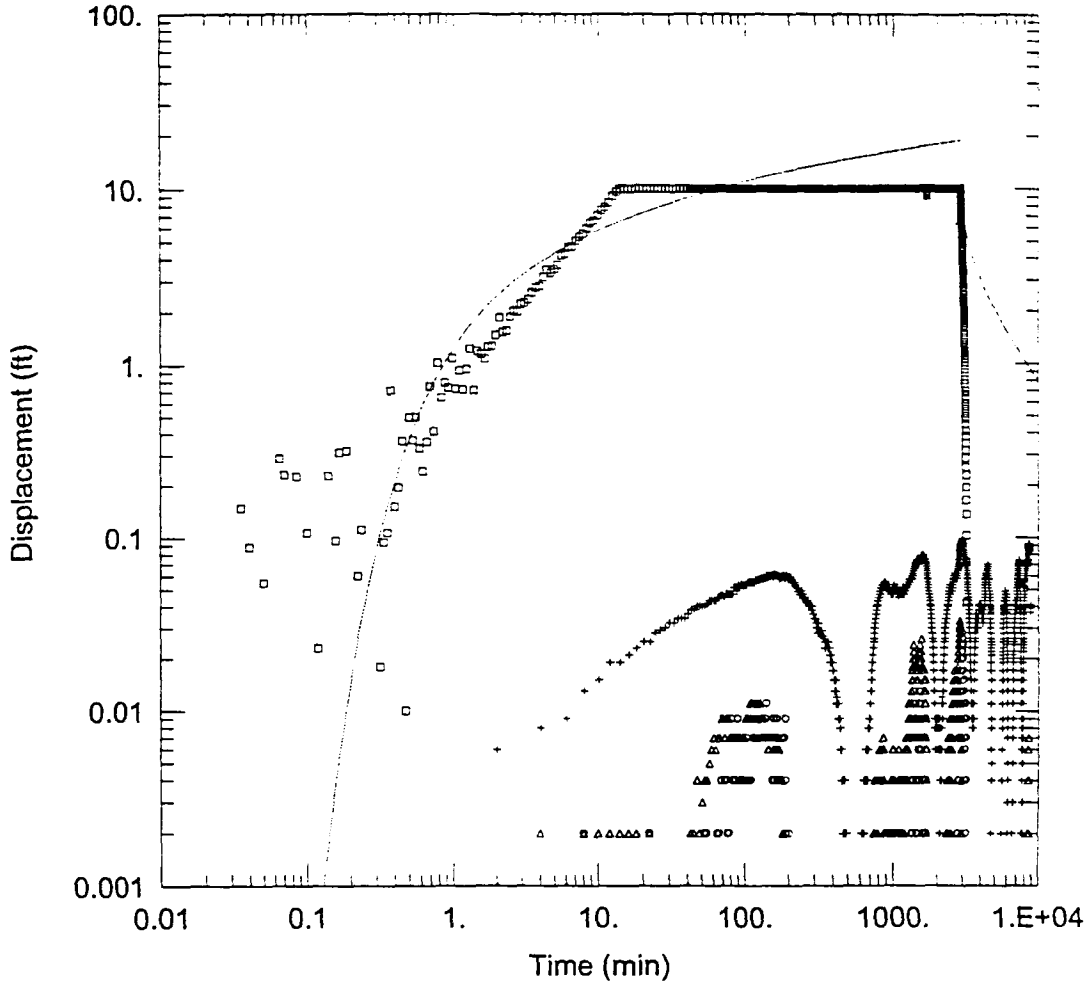
Start Time: 8:34, 7/24/01
End Time: 9:07, 7/24/01

Step Test #2, 117-MW-02S



Start Test: 13:15, 7/24/01
End Test: 13:52, 7/24/01

48-hour Drawdown Test



WELL TEST ANALYSIS

Data Set: C:\...\117-MW-02S_11_04_05.aqt
Date: 10/11/01 Time: 13:31:51

PROJECT INFORMATION

Company: IT Coporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-02S
Test Date: 9/4/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-02S	0	0

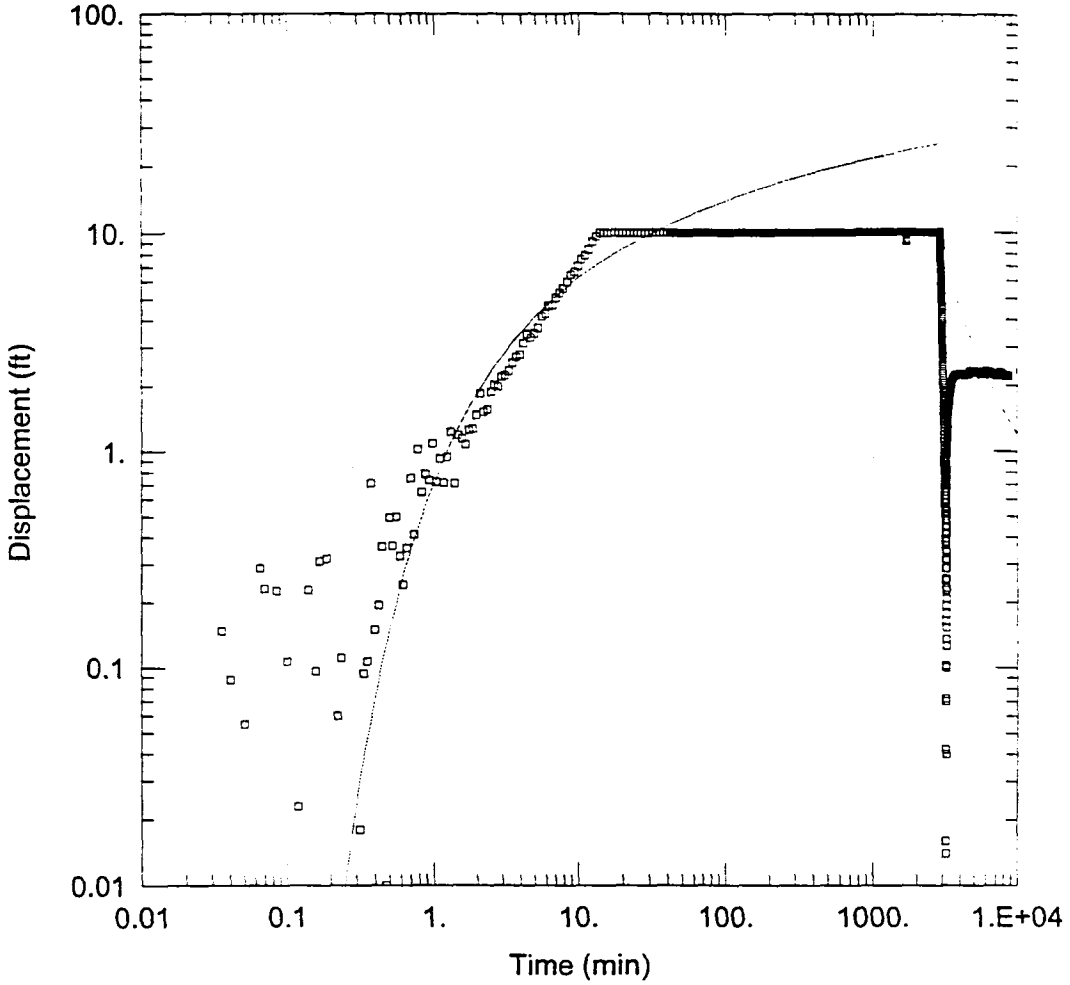
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-02S	1E-005	0
+ 117-MW-11S	0	78
◦ 117-MW-05S	0	126
▵ 17-MW04S	113.5	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.7859 ft^2/day
S = 1.98E+07
Sv = 0.08672
Kz/Kr = 2.657E+13



WELL TEST ANALYSIS

Data Set: C:\...\117-MW-02S.aqt
Date: 10/11/01 Time: 13:32:57

PROJECT INFORMATION

Company: IT Coporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-02S
Test Date: 9/4/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-02S	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-02S	1E-005	0

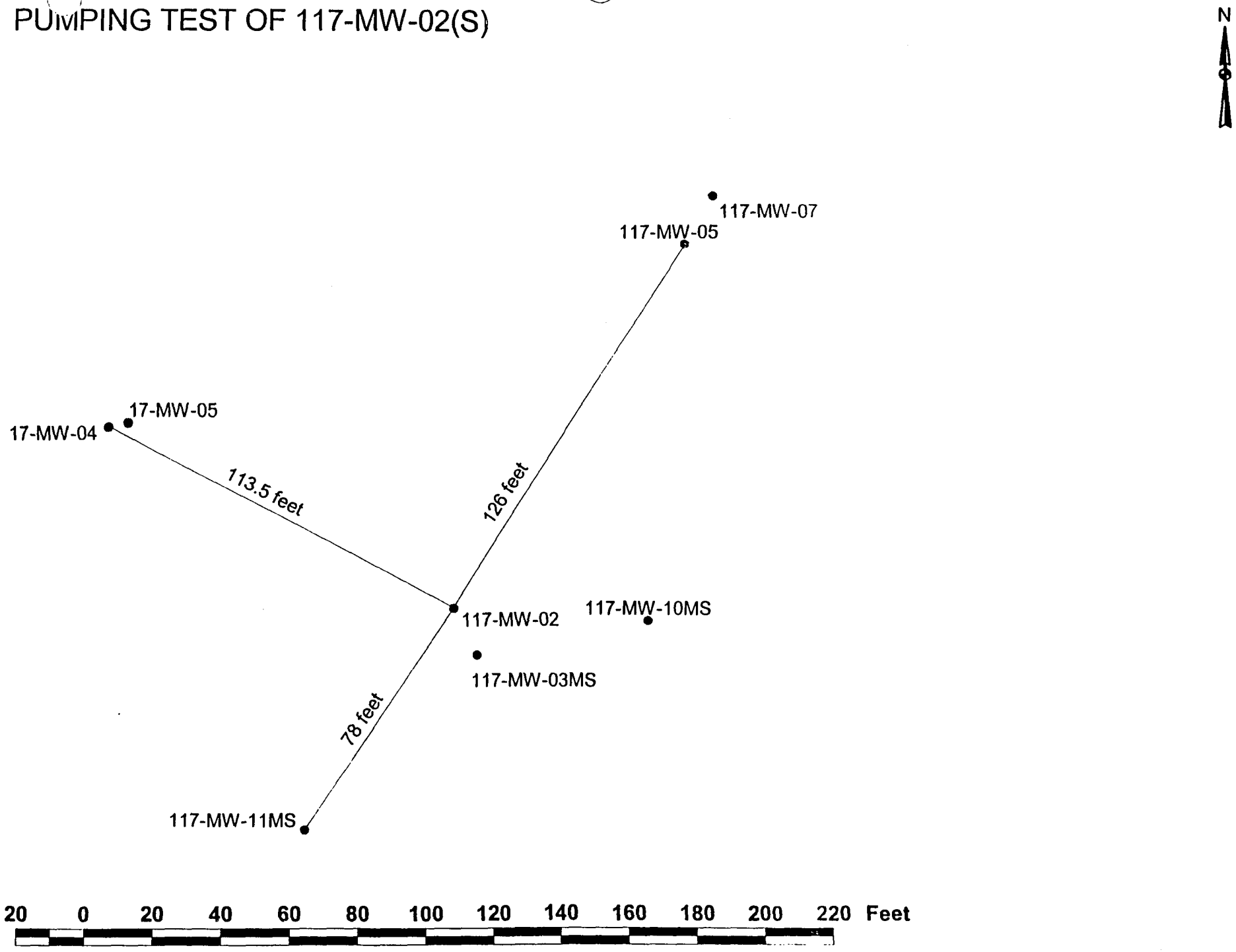
SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.5301 ft^2/day
Sy = 0.08672

S = 1.529E+07
ß = 0.1

PUMPING TEST OF 117-MW-02(S)



CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/4/01
Monitoring Well ID: 117-MW-02 S
Transducer No.:
Transducer Depth:

Test No.: PUMP TEST
Pumping Well ID: 117-MW-02S

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0800	0	57.10	0	1070.62	0	0	—	—
0815	—	57.10	0	—	—	—	START TIME	
0819	4	62.35	5.25	—	—	—	—	—
0830	15	—	—	—	—	—	117-MW-02-15	0830
1330	315	T.O.P.	—	1113.55	43	0.14	—	—
1460	395	T.O.P	—	1122.42	52	0.13	—	—
1630	495	T.O.P	—	1133.66	63	0.13	117-MW-02-8	1630
0930	1455	T.O.P	—	1216.32	146	0.10	[illegible]	0930
1060	1545	T.O.P	—	[illegible]	151	0.10	—	—
[illegible]	1760	T.O.P	—	[illegible]	167	0.10	—	—
0930	2595	T.O.P.	—	1310.86	240	0.09	117-MW-02-48	0930
0930	STOP	# PUMP	SHUT-OFF	—	—	—	—	—

Notes: BEGAN RECOVERY 0830, 9/6

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/4/01
Monitoring Well ID: 117-MW-11S
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-02S

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/4	0900	0	57.03	—	1070.62	0	0	—	—
9/5	[illegible]	1570	57.15	—	[illegible]	151	—	—	—
9/10	1100	3060	57.12	—	1310.86	240	—	—	—

NO FURTHER MI ENTRIES

Notes: RECOVERY BEGAN 08:00 9/6

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/4/01
Monitoring Well ID: 117-MW-05S
Transducer No.:
Transducer Depth:

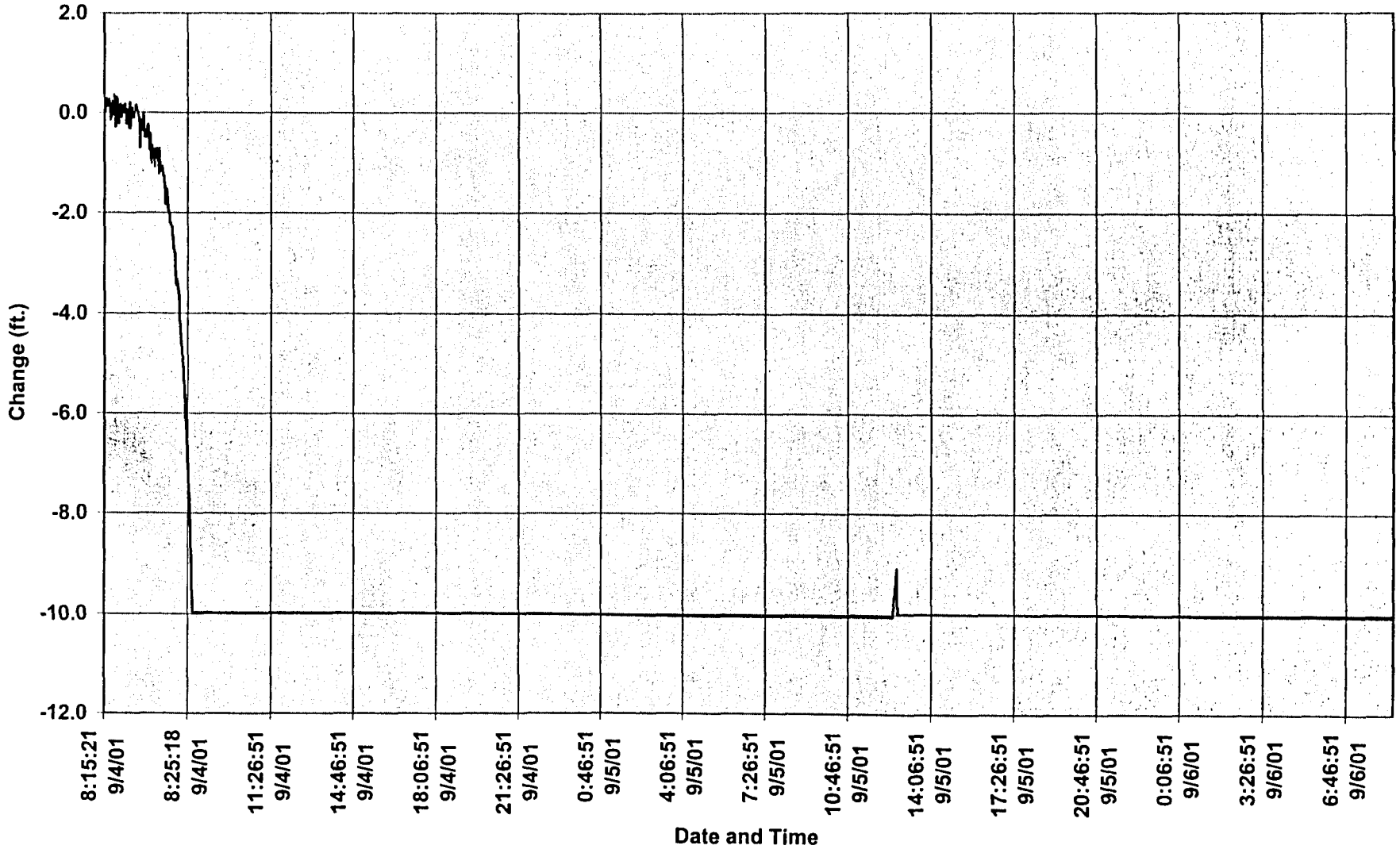
Test No.:
Pumping Well ID: 117-MW-02S

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9	0800	0	53.85	0	1070.62	0	0	—	—
9:5	1010	1570	53.86	—	[illegible]	151	—	—	—
9/10	1100	3060	53.83	—	1310.86	240	—	—	—

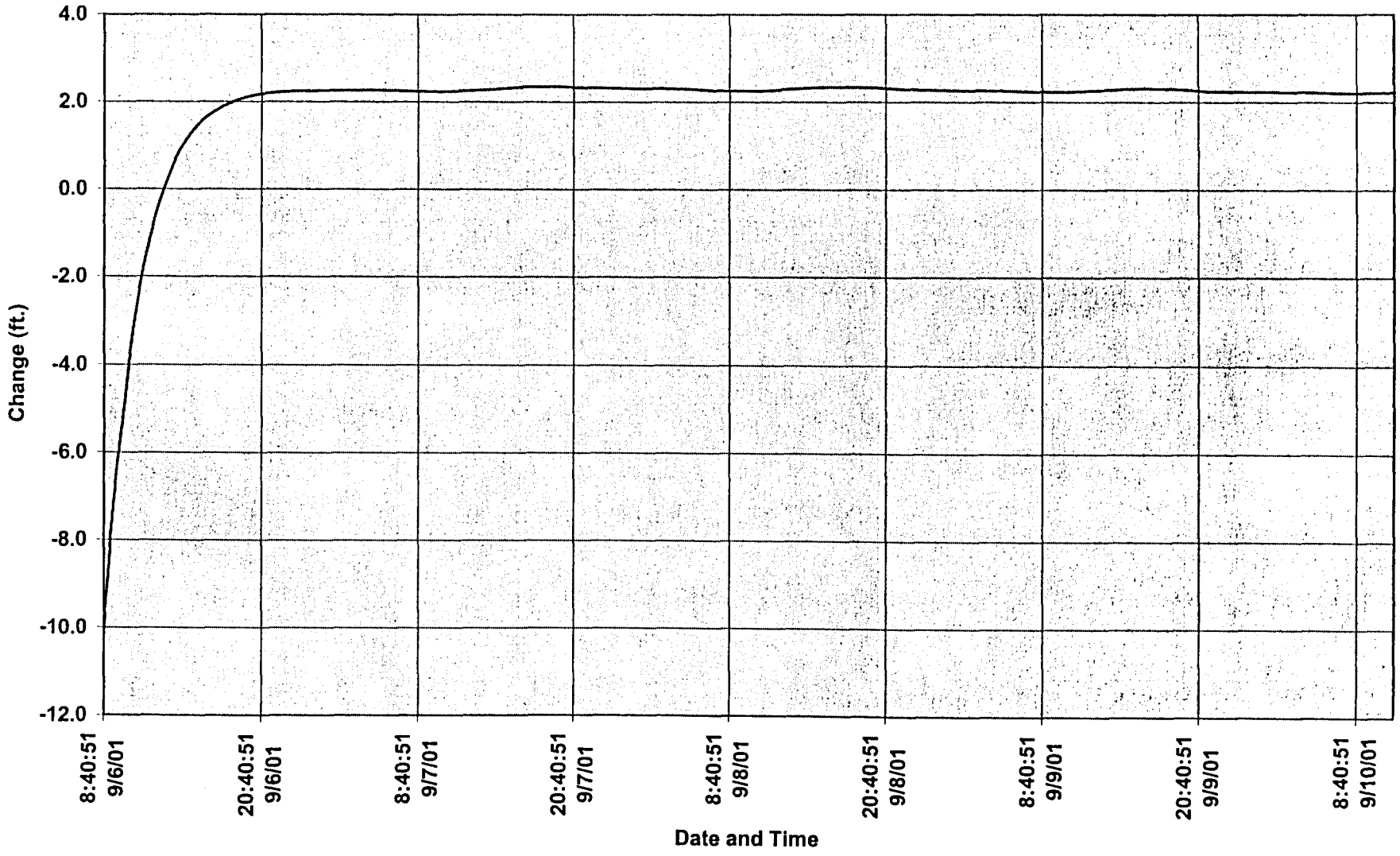
NO FURTHER DATA MS

Notes: RECOVERY BEGAN 0830, 9/6

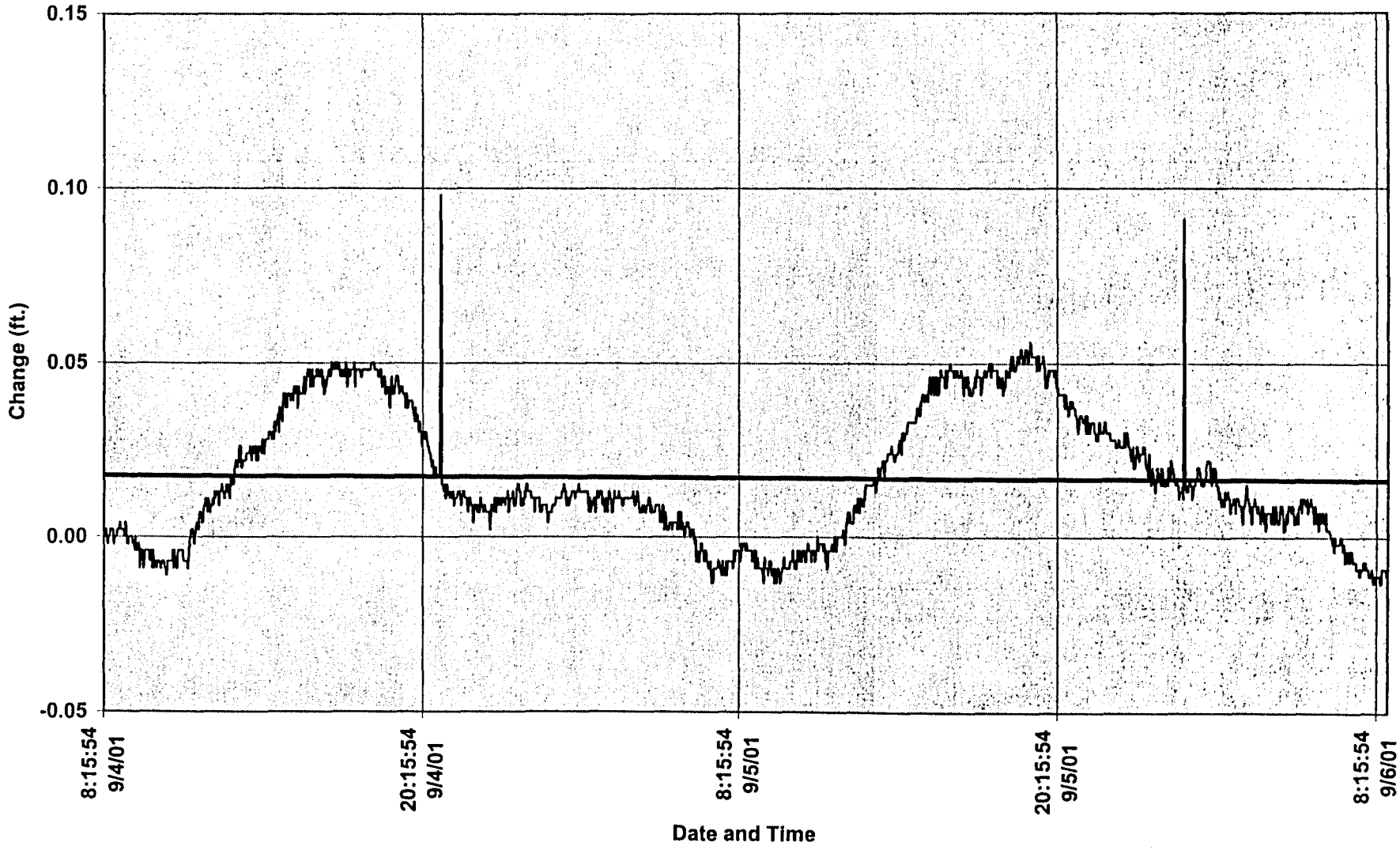
Pump Test for 117-MW-02S

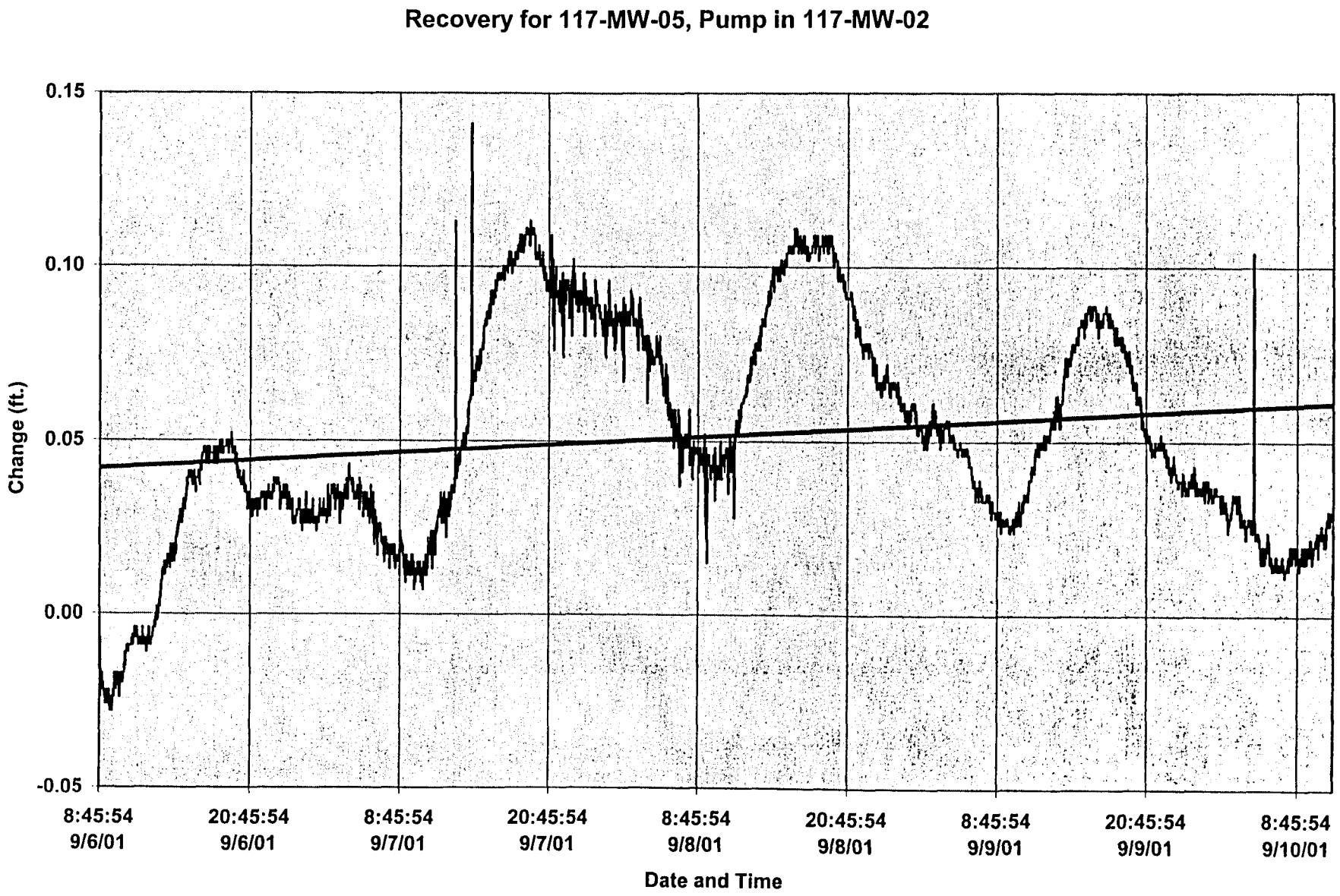


Recovery Test for 117-MW-02S

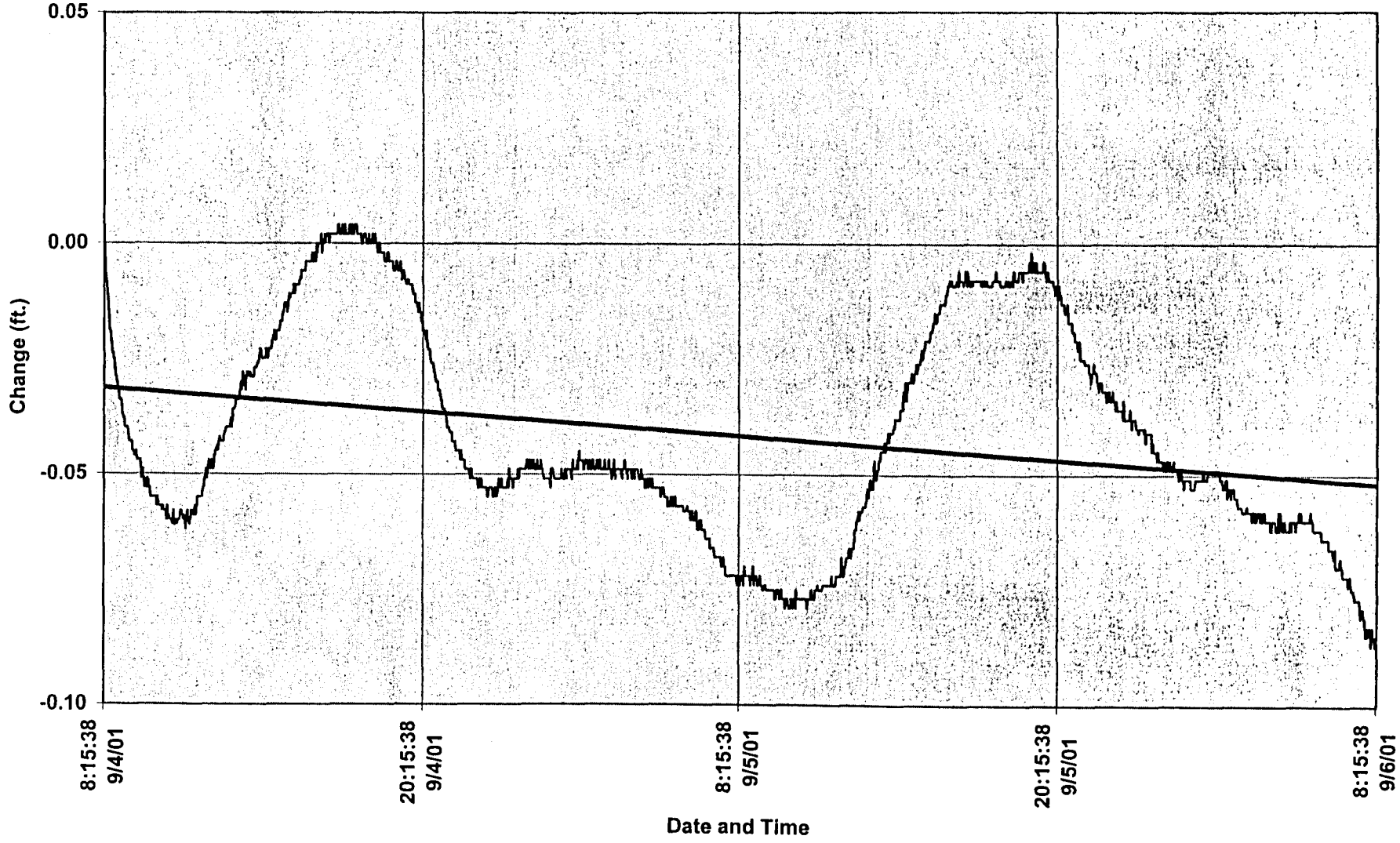


Pump Test for 117-MW-05, Pump in 117-MW-02

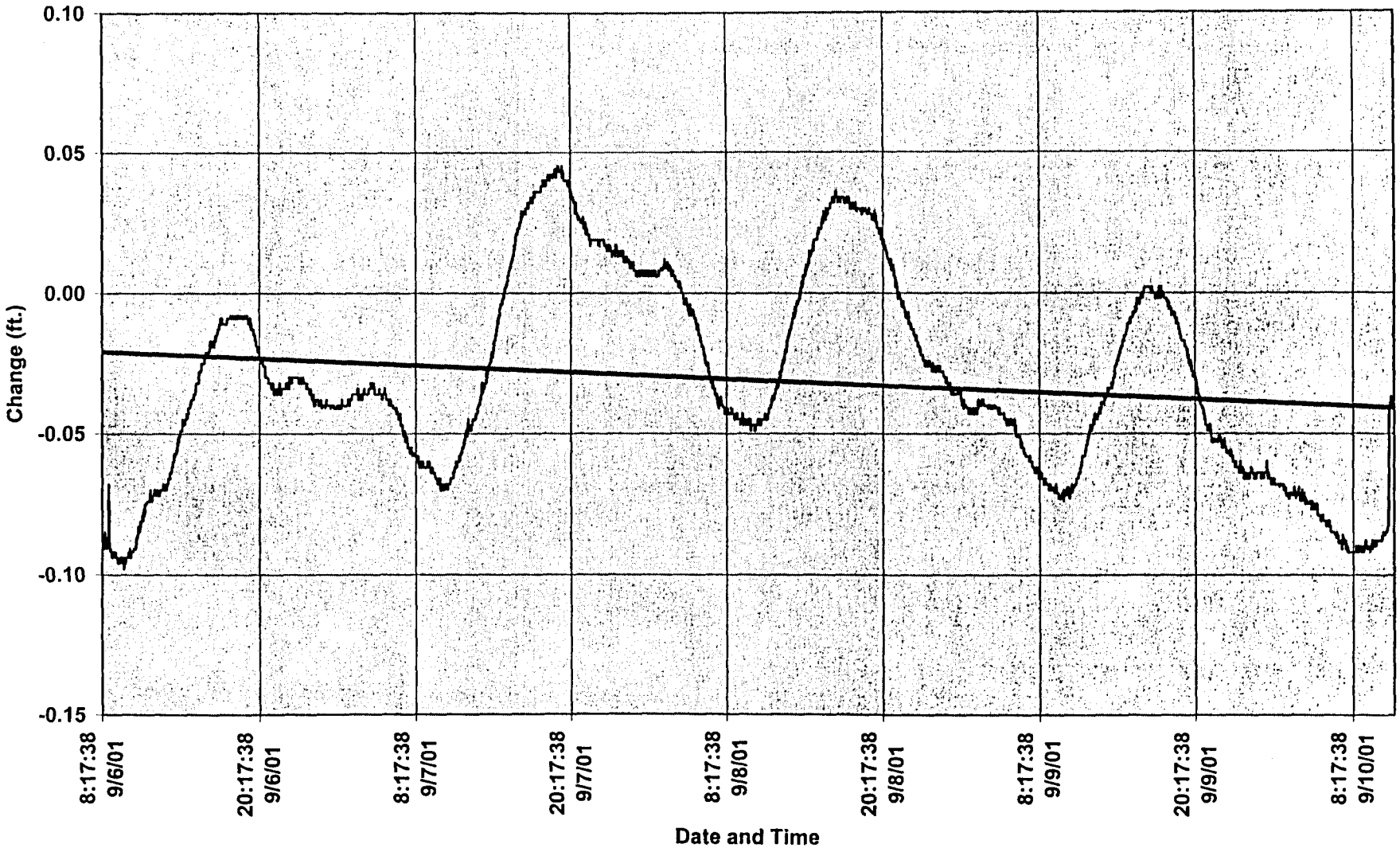



Recovery for 117-MW-05, Pump in 117-MW-02
0.15
0.10
0.05
0.00
-0.05
Change (ft.)
8:45:54 9/6/01
20:45:54 9/6/01
8:45:54 9/7/01
20:45:54 9/7/01
8:45:54 9/8/01
20:45:54 9/8/01
8:45:54 9/9/01
20:45:54 9/9/01
8:45:54 9/10/01
Date and Time

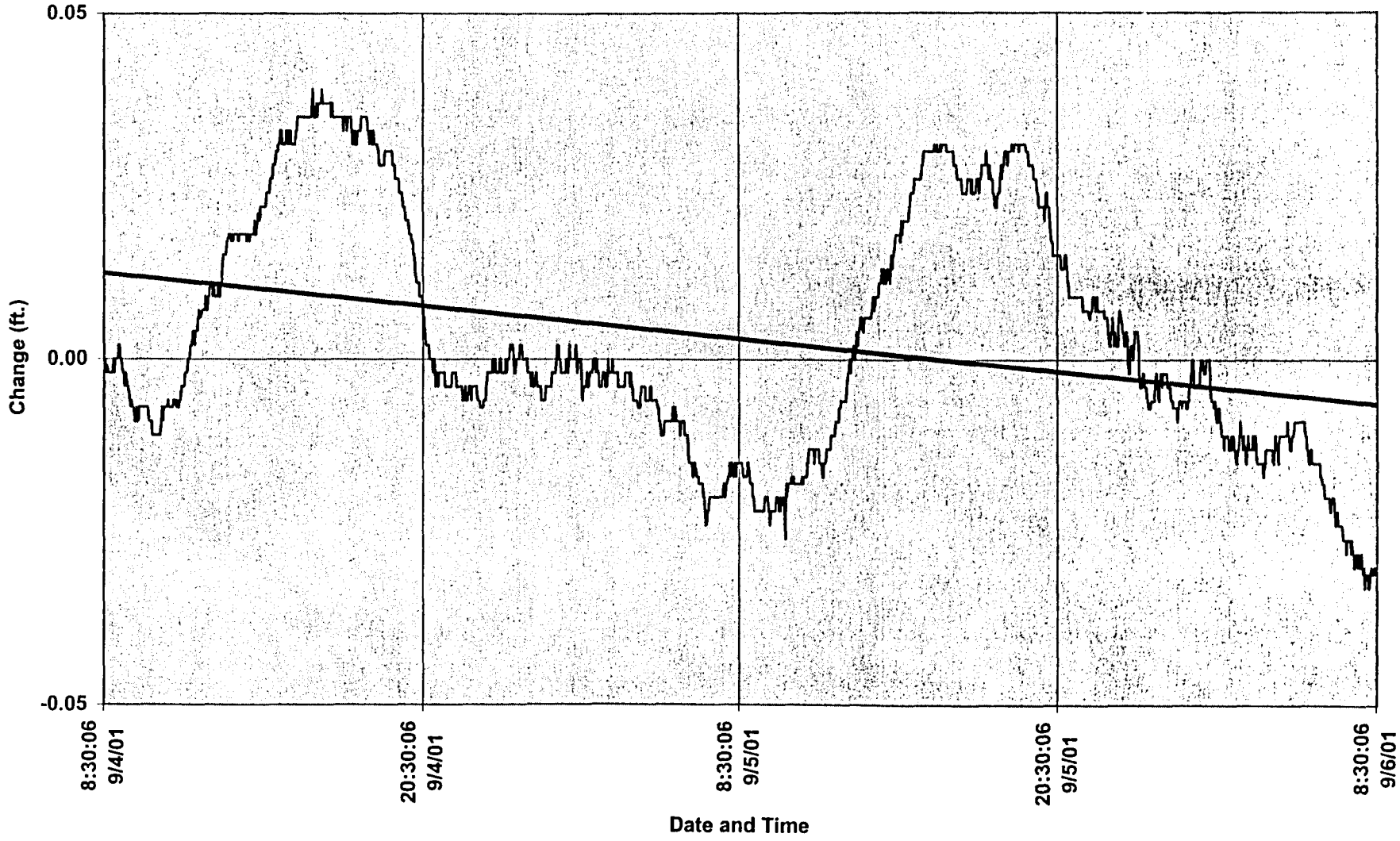
Pump Test for 117-MW-11S, Pump in 117-MW-02S



Recovery Test for 117-MW-11S, Pump in 117-MW-02S



Pump for 17-MW-04S, Pump in 117-MW-02S



Recovery Test for 17-MW-04S, Pump in 117-MW-02S

Certificates of Analysis

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 07, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5316 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL [c]	Analysis Result 17-MW-03 (8/01) 01-05316-1	17-MW-13 (8/01) 01-05316-2	17-MW-15 (8/01) 01-05316-3
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [c]	<0.56	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	64.4	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [c]	<2	3	2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	1.8	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	0.3J	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	230	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02 (8/01) 01-05316-4	117-MW-04 (8/01) 01-05316-5	117-MW-07 (8/01) 01-05316-6
ALKALINITY	310.1	mg-$CaCO_3$/L	20	370	270	160
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	680	612	660
Dilution Factor				20	15	15
CHLORIDE	300.0	mg/L	0.2	130	109	85
NITRATE (NO_3^-) AS N	300.0	mg/L	0.04	<0.8	18.4	13.9
NITRITE (NO_2^-) AS N	300.0	mg/L	0.05	<1	<0.75	<0.75
PHOSPHORUS, ORTHOPHOSPHATE	300.0	mg/L	0.1	<2	<1.5	<1.5
SULFATE	300.0	mg/L	0.5	47	55	175

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/4/01
Monitoring Well ID: 17-MW-04S
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-02S

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/4	0800	0	56.60	0	1070.62	0	0	—	—
9/5	1010	1570	56.64	—	1222.90	151	—	—	—
9/10	1100	3060	56.64	—	1310.86	240	—	—	—

NO FURTHER ENTRIES
MS

Notes: RECOVERY BEGAN 0830, 9/6

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02 (8/01) 01-05316-4	117-MW-04 (8/01) 01-05316-5	117-MW-07 (8/01) 01-05316-6
TTLC 17 METALS						
Dilution Factor				1	1	1
ANTIMONY	6010B	µg/L	10	1.9J	2.9J	<10
ARSENIC	6010B	µg/L	5	<5	<5	<5
BARIUM	6010B	µg/L	10	227	87.1	22.4
BERYLLIUM	6010B	µg/L	2	<2	<2	<2
CADMIUM	6010B	µg/L	2	<2	<2	<2
CHROMIUM	6010B	µg/L	5	17.2	5.9	72.7
COBALT	6010B	µg/L	5	0.87J	<5	0.44J
COPPER	6010B	µg/L	10	<10	<10	4.4J
LEAD	6010B	µg/L	5	1.3J	1.1J	<5
MERCURY	7470A	µg/L	0.5	0.71	0.73	0.47J
MOLYBDENUM	6010B	µg/L	5	8.5	0.76J	4.6J
NICKEL	6010B	µg/L	5	16.6	1.0J	26.4
SELENIUM	6010B	µg/L	10	<10	9.9J	7.4J
SILVER	6010B	µg/L	10	<10	<10	<10
THALLIUM	6010B	µg/L	10	<10	<10	<10
VANADIUM	6010B	µg/L	10	0.75J	2.9J	2.5J
ZINC	6010B	µg/L	10	231	64.1	142
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.19 [a]	0.01J	0.02J
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1	<0.1 [b]
Dilution Factor				1	1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1	0.2
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	1.1	1	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [c]	<0.63	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	5.8	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	5.8	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	21	0.5J	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	12.2
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.1	<0.5	2.7
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02 (8/01) 01-05316-4	117-MW-04 (8/01) 01-05316-5	117-MW-07 (8/01) 01-05316-6
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	138	2.0	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	3.1	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (c)	<0.56	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	5.3	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (c)	3	2	3
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	0.7	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	150	<20	<20

Level C Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-5316

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5316

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-04 (8/01)	01-05316-5
17-MW-15 (8/01)	01-05316-3
17-MW-03 (8/01)	01-05316-1
117-MW-07 (8/01)	01-05316-6
17-MW-13 (8/01)	01-05316-2
CL1-MW-9S (8/01)	01-05316-7
CL1-MW-12MD (8/01)	01-05316-8
117-MW-02 (8/01)	01-05316-4
Trip Blank	01-05316-9

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),
6010B/7470A (TTLC 17 Metals),
300.0 (Chloride Cl^- by IC),
300.0 (Nitrate (NO_3^-) as N by IC),
300.0 (Nitrite by IC),
300.0 (Phosporous, Oethophosphate by IC),
300.0 (Sulfate by IC),
310.1 (Alkalinity),
160.1 (Solids, Total Dissolved (TDS)),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

the IT group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 563114
Page 1 of 2

Project Name/No. 1 Crows Landing 800063
Sample Team Members 2 RC/HM/BM
Profit Center No. 3
Project Manager 4 B Holet
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 8/16/01
Lab Destination 8 APCL
Lab Contact 9 M. Heckman
Project Contact/Phone 12 RCondit 288-2157
Carrier/Waybill No. 13 Golden State

Bill to: 5 IT-Concord
Rich Janica
Report to: 10 IT-Concord
Rose Condit

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Preservative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
117-MW-04(8/01)	Q3 2001	8/15/01 730				All Samples		
17-MW-15(8/01)	Groundwater	835	VOA	5	HCL	8260 + MTBE + TBA + EDB TPH-gas/JF	FOR LAB USE ONLY	
17-MW-03(8/01)	Sampling	840	Liter	2	None	TPH-Dsl/m.o.	RECEIVED IN	
117-MW-07(8/01)		1045	HDPE	500 ml	HNO3	CAM 17 - Dissolved	GOOD CONDITION	
17-MW-13(8/01)		1012	HDPE	500 ml	None	Alkalinity, Anions TDS	TEMP = 4 °C	
CL1-MW-9S(8/01)		1300					FOR LAB USE ONLY	
CL1-MW-12MD(8/01)		1335				5316	4.5°C	
117-MW-02(8/01)		1225						

Special Instructions: 23 Silica Gel Cleanup - TPH-D/MO

Possible Hazard Identification: 24
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: 26
Normal ☒ Rush ☐

QC Level: 27
I. ☐ II. ☐ III. ☒ Project Specific (specify): _____

1. Relinquished by 28 (Signature/Affiliation) [signature]	Date: 8/16/01 Time:	1. Received by 28 (Signature/Affiliation) Golden State	Date: 8/16/01 Time:
2. Relinquished by (Signature/Affiliation) G.S.	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 8/17/01 Time: 10:50
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/01

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 563114
Page 2 of 2

Project Name Crows Landing

Project No. 800063

Samples Shipment Date 8/16/01

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
trip blank		—	VOA	2	HCL	EPA8260 TPH-gas/BF		
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

5316

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 19, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5637 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015637
Collected by: M. Mages
Collected on: 09/04/01

Received: 09/05/01
Extracted: 09/05/01
Tested: 09/05-11/01
Reported: 09/17/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02(S) 8hr 01-05637-1	117-MW-02(S) 15Min 01-05637-2	Trip Blank 01-05637-3
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.25 [a]	0.18 [a]	<0.05
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	0.4J	0.2J	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	2.0	1.1	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	0.5J	0.5J	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	53.6	74.8 [b]	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	1.5	2.1	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02(S) 8hr 01-05637-1	117-MW-02(S) 15Min 01-05637-2	Trip Blank 01-05637-3
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	0.6	0.8	0.7
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	110	110	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02(S) 8hr 01-05637-1	117-MW-02(S) 15Min 01-05637-2
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 (c)	<0.1 (c)
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Not a typical Gasoline or JP-4 pattern.
(b) Analyzed with a dilution factor of 2.
(c) Sample chromatogram contained unknown peak at about C_{17} range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-5637

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5637

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-02(S) 15Min	01-05637-2
117-MW-02(S) 8hr	01-05637-1
Trip Blank	01-05637-3

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562896
Page 1 of ___

Project Name/No. [1] Crows Landing 800063
Sample Team Members [2] M. Magee
Profit Center No. [3]
Project Manager [4] Bob Hulet
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 9/4/01
Lab Destination [8] APCL
Lab Contact [9]
Project Contact/Phone [12] Rose Condit 925 288 2151
Carrier/Waybill No. [13] Fed Ex 8267 8597 9362

Bill to: [5] IT Corp
4005 Port Chicago Hywy
Concord CA 94520
Attn: Rich Iannicca

Report to: [10] (Same)
Rose Condit

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-02(8)15min	Groundwater	9/4/01 0830	40 mil VOA	5X	HCL	VOC's (8260B) TPH-G/JF (8015B)	SAMPLES RECEIVED IN GOOD CONDITION TEMP = 4.2	
↓	↓	↓	Lt Amber	2X	None	TPH-D/mo (8015B)		
117-MW-02(5) 8hr		9/4/01 1630	40 mil VOA	5X	HCL	VOC's (8260B) TPH-G/JF (8015B)		
↓	↓	↓	Lt Amber	2X	None	TPH-D/mo (8015B)		
Trip	water	9/4/01	40 mil VOA	2X	HCL	VOC's (8260B) TPH-G/JF		

FOR LAB USE ONLY

5637

FOR LAB USE ONLY

Special Instructions: [23] Silica Gel Cleanup for Diesel/MO

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) Dave Peet PQCM	Date: 9/4/01 Time: 1700	1. Received by [28] (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 9/5/01 Time: 1100
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 24, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5659 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015659
Collected by: M. Magee
Collected on: 09/05/01

Received: 09/06/01
Extracted: 09/08/01
Tested: 09/07-11/01
Reported: 09/17/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-24hr 01-05659-1	Analysis Result Trip Blank 01-05659-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.14 [a]	<0.05
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	2.2	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	0.4J	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	35.9	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	1.1	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-24hr 01-05659-1	Analysis Result Trip Blank 01-05659-2
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	<0.5	1.5
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	85	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-24hr 01-05659-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Not a typical Gasoline or Jp-4 pattern.
[b] Sample chromatogram contained small unknown isolated peaks at about C_{12}-C_{15} range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-5659

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710

Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5659

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-02S-24hr	01-05659-1
Trip Blank	01-05659-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 545314
Page 1 of 1

Project Name/No. 1 Crows Landing 800063
Sample Team Members 2 M Magee
Profit Center No. 3
Project Manager 4 Bob Hulet
Purchase Order No. 6
Required Report Date 11

Samples Shipment Date 7 9/5/01
Lab Destination 8 APCL
Lab Contact 9
Project Contact/Phone 12 Rose Condit 925 288 2151
Carrier/Waybill No. 13 Fed Ex 8267 8597 9395

Bill to: 5 IT Corp
4005 Port Chicago Hywy
Concord CA 94520
Attn: Rich Iannicca

Report to: 10 (Same)
Rose Condit

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
117-MW-025-24hr	Groundwater	9/5/01 0830	40 mil VOA	5x	HCL	VOC's (8260B) TPH-G/JF (8015B)	SAMPLES RECEIVED IN GOOD CONDITION TEMP 3.7°C	
↓	↓	↓	Lt Amber	2x	ICE	TPH-D/mo (8015B)		
Trip	water	9/5/01	40 mil VOA	2x	HCL	VOC's (8260B) TPH-G/JF (8015B)		
		Last Item						

5659

FOR LAB USE ONLY

FOR LAB USE ONLY

Special Instructions: 23 Silica Gel Cleanup for Diesel/MO

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: 26
Normal ☐ Rush ☐

QC Level: 27
I. ☐ II. ☐ III. ☒ Project Specific (specify): _____

1. Relinquished by 28 (Signature/Affiliation) Dave Peet PQCM	Date: 9/5/01 Time: 0900	1. Received by 28 (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) Marla A. Hed	Date: 9/6/01 Time: 930
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

Yellow: Field copy

*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 24, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5683 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015683
Collected by: M. Magee
Collected on: 09/06/01

Received: 09/07/01
Extracted: 09/11/01
Tested: 09/10-13/01
Reported: 09/17/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-48Hr 01-05683-1	Analysis Result Trip Blank 01-05683-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.13 [a]	0.008J
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.8	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	0.4J	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	29.6	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	1.1	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-48Hr 01-05683-1	Analysis Result Trip Blank 01-05683-2
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	65	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02S-48Hr 01-05683-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Not a typical Gasoline or Jp-4 pattern.
[b] Sample chromatogram contained small unknown isolated peaks in C_{12}-C_{15} range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-5683

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5683

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-02S-48Hr	01-05683-1
Trip Blank	01-05683-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 5683 Client Name/Project: IT@CROWS LANDING

1. Sample Arrival
   Date/Time Received 9/7/01 930 Date/Time Opened 9/7/01 1000 By (name): MJ
   Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☒ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)
   ☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☒ Signed, dated? By: _____
   ☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received _____
   ☒ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☒ #Samples OK? _____
   ☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler
   ☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
   Temp °C 3.6°C
   (Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
   Cooler Custody Seal? ☐ Absent ☒ Intact ☐ Tampered?

4. Sample Preservation
   ☐ pH <2 ☐ pH >12
   If Not, pH = _____ Preserved by:

   This portion can be removed for Recipient's records.
   Date 7/6/01 FedEx Tracking Number 826785979400
   Sender's Name DAVE P.T. Phone 925 937 0416
   Company IT CORPORATION/CRC 5683
   Address 4005 PORT CHICAGO HWY
   Dept./Floor/Suite/Room
   City CONCORD State CA ZIP 94520
   Your Internal Billing Reference 90[illegible]

5. Holding-time Requirements
   ☐ pH 24hr ☐ BACT 6/24hr
   ☐ Cl_2 ASAP ☐ Turbidity 48hr
   ☐ HT Expired? ☐ Client notified?

6. Sample Container Condition
   ☒ Intact? ☐ Broken? ☐ Documented: _____
   Type: ☐ plastic ☒ glass ☐ Tube: brass/SS ☐ Tedlar Bag
   ☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
   ☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
   Labels: ☒ Unique ID? ☒ Date/Time ☐ Preserved?

7. Turn Around Time
   ☒ RUSH TAT: 5 day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix
   ☐ Drinking H_2O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
   ☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?
   ☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name:_____)Date/Time:_____
   Received/Checked by: MJ Date: 7 Sep 2001 Time: 8:19a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [seal.texfiles]smprcl.tex.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 545315
Page 1 of 1

Project Name/No. [1] Crows landing 800063
Sample Team Members [2] M. Magee
Profit Center No. [3]
Project Manager [4] Bob Hulet
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 9/6/01
Lab Destination [8] APCL
Lab Contact [9]
Project Contact/Phone [12] Rose Condit 925 288 2151
Carrier/Waybill No. [13] Fed Ex

Bill to: [5] IT Corp. 4005 Port Chicago Hywy Concord CA 94520 Attn: Rich Iannicca
Report to: [10] (Same) Rose Condit

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-028-48hr	Groundwater	9/6/01 0815	40mil VOA	5 x	HCL	VOCs (8260B) TPH-G/JF (8015B)	SAMPLES	
↓	↓	↓	Lt Amber	2 x	ICE	TPH-D/MO (8015B)	RECEIVED	
Trip	water	9/6/01	40mil VOA	2x	HCL	VOCs (8260B) TPH-G/JF (8015B)	GOOD CONDITION	
							TEMP = 3.6°C	
		Last	Item			5683	FOR LAB USE ONLY	

Special Instructions: [23] Silica Gel Cleanup for Diesel/MO

Possible Hazard Identification: [24] Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: [25] Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26] Normal ☐ Rush ☐

QC Level: [27] I. ☐ II. ☐ III. ☒ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) Dave Peet PQCM	Date: 9/6/01 Time: 1000	1. Received by [28] (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) Marla Heel	Date: 9/7/01 Time: 1040
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

Yellow: Field copy

*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

October 4, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicage Highway
Concord CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5843 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One diskette containing EDD deliverable.
(4) One original and one copy of Standard Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015843
Collected by: M. Swank
Collected on: 09/17/01

Received: 09/18/01
Extracted: 09/19/01
Tested: 09/19-20/01
Reported: 09/28/01

Sample Description: Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02-9/17 01-05843-1	Analysis Result Trip Blank 01-05843-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.11 [a]	<0.05
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
VOLATILE ORGANICS					
Dilution Factor				1 [b]	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	1	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	2.5	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	54.1	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	1.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02-9/17 01-05843-1	Analysis Result Trip Blank 01-05843-2
ETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	μg/L	0.5	<0.5	<0.5
2-HEXANONE	8260B	μg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	μg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	μg/L	0.5	0.6	0.7
4-METHYL-2-PENTANONE (MIBK)	8260B	μg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	μg/L	1	<1	<1
NAPHTHALENE	8260B	μg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
STYRENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5
TOLUENE	8260B	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	μg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	μg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	μg/L	20	<20	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-02-9/17 01-05843-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [c]
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Not a typical gasoline or JP-4 pattern.
[b] Sample also contained about 6 μg/L of diisopropyl ether.
[c] Sample chromatogram contained unknown mixture at C_{16}- C_{18} range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Standard Data Package Deliverables

General Information

Project: Crows Landing

APCL Service ID: 01-5843

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

the group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 566031
Page 1 of ____

Project Name/No. 1 CROWS LANDING 800063
Sample Team Members 2 M. SWANK
Profit Center No. 3 5515001
Project Manager 4 BOB HULET
Purchase Order No. 6 173773
Required Report Date 11 10/1/01

Samples Shipment Date 7 9/17/01
Lab Destination 8 APCL
Lab Contact 9 ~~ROSE CONDIT~~ M. HECKMAN
Project Contact/Phone 12 ROSE CONDIT (925) 288 2151
Carrier/Waybill No. 13 FEDEX 8267 8212 3710

Bill to: 5 IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA 94520
ATTN: RICH IANNICCA

Report to: 10 (SAME)
ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
117-MW-02-9/17	WATER	9/17/01 0915	VOA	5x40mL	HCL	VOC'S+ MTBE (8260B) TPH G/JF (8015B)	SAMPLES RECEIVED IN GOOD CONDITION TEMP = 4.1°C	
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		
TRIP BLANK		NA	VOA	1x40mL	HCL	VOC'S+ MTBE (8260B) TPH G/JF (8015B)		

NO FURTHER ENTRIES
MS

5843

FOR LAB USE ONLY

FOR LAB USE ONLY

Special Instructions: 23 SILICA GEL CLEANUP FOR DIESEL/MO

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: 26
Normal ☑ Rush ☐ 10-DAY TAT

QC Level: 27
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by 28 (Signature/Affiliation) M. SWANK	Date: 9/17/01 Time: 1000	1. Received by 28 (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 9/18/01 Time: 945
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 7/15/01

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5843

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-02-9/17	01-05843-1
Trip Blank	01-05843-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015V (JP-4),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Attachment 2
117-MW-03(MS)

Summary Tables

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter in.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-03MS	0	0.5	33.31	8.25 / 2	164	0.024010	34.5744	0.2108	NA	0.0904	Theis
Screened: 97-107	2	0.25			10			3.4574			
7/24/01	48	0.35									
Step Test	61	0									
T=1435(Q/s)							1.709399054	0.1709			Jacob Equation

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter in.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-03MS	0	0.25	30.62	8.25 / 2	164	0.000535	0.769824	0.0047	NA	0.0005096	Theis
Screened: 97-107	53	0.2			10			0.0770			
7/25-27/2001	561	0									
T=1357(Q/s)							1.004853625	0.1005			Jacob Equation

No observation wells were monitored during this test.

Hydraulic conductivity values for the 117-MW-03MS pump test indicate that the aquifer material is composed of sandy silts to clayey sands.
According to the preliminary cross-section, this well is screened across a sand zone.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter in.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-03MS	2	0.5	41.96	8.25 / 2	163	0.001201	1.73	0.0106	0.02969	0.00219	Neuman
Screened: 97-107	255	0.28			10			0.1730			
8/27-30/2001	1436	0.16									
	3060	0									
	4306	0.1									
	4706	0									
T=1304(Q/s)							0.986502726	0.0987			Jacob Equation

Observation Wells	Distance to Pumping Well	Screened Interval		Borehole/Casing Diameter in.							
117-MW-10MS	52	115-125		10.0 / 2	163	0.004941	7.115	0.0437	0.04777	1.31E-02	Neuman
117-MW-07MS	151	108-118		10.0 / 5	163	0.003198	4.605	0.0283	0.04777	1.66E-03	Neuman
17-MW-05	123	94-104		8.25 / 2	163	NR					
All observation wells					163	0.00325	4.675	0.029	0.04777	6.38E-03	Neuman
All + pumping well					163	0.00223125	3.213	0.0197	0.04777	5.81E-03	Neuman

UST 117
Data Summary
117-MW-03

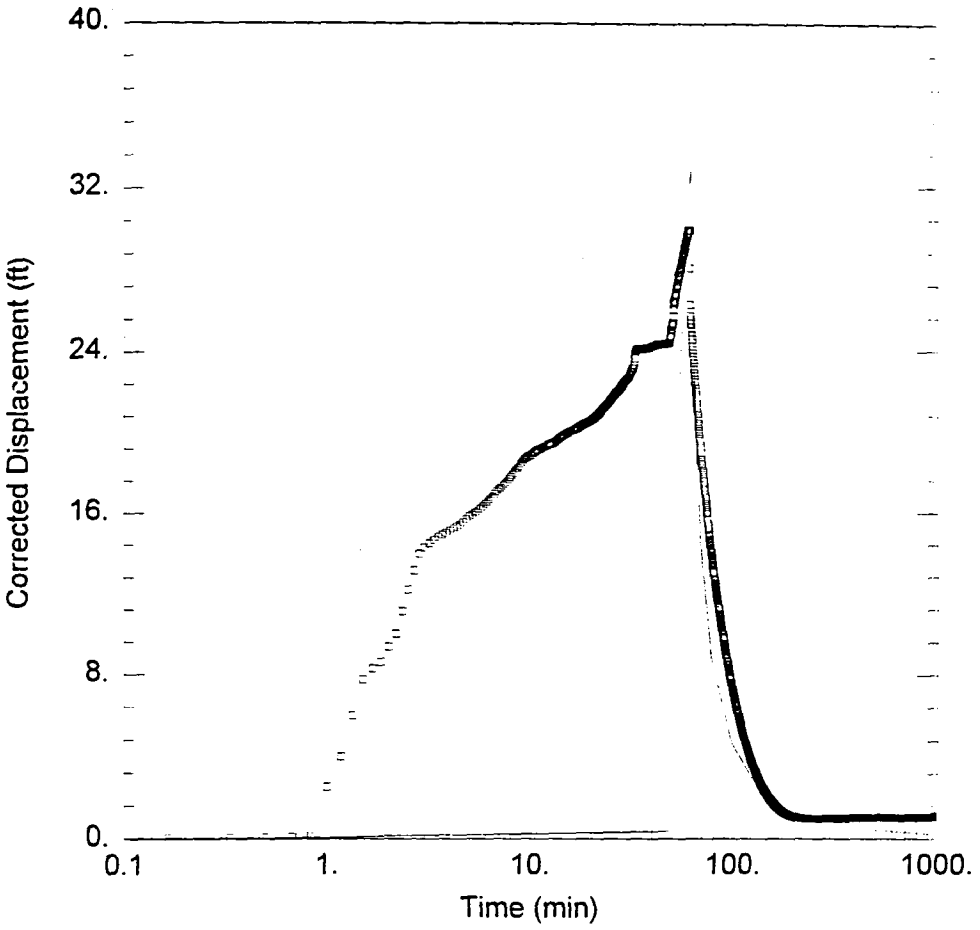
Sample ID	Method				117-MW-03			
Aquifer					mid-shallow			
Screen Interval (ft bgs)					98-108			
Description		Jul-01[1]	Jul-01[2]	Aug-01[1]	Aug-01[2]	Aug-01[3]	Aug-01[4]	Aug-01[5]
pH	field							
conductivity	field							
ORP	field							
dissolved oxygen	field							
TPH-gasoline	M8015V	**0.05** mg/L	**0.06** mg/L	**0.02J** mg/L	**0.05J** mg/L	**0.05J** mg/L	**0.04J** mg/L	**0.05J** mg/L
TPH-jet fuel	M8015V	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L
TPH-diesel	M8015E	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	**0.06J** mg/L	<0.1 mg/L
TPH-motor oil	M8015E	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	**0.07J** mg/L	<0.1 mg/L
benzene	8260	**4.6** µg/L	**10.9** µg/L	**2.6** µg/L	**17.6** µg/L	**13.4** µg/L	**5.9** µg/L	**8.2** µg/L
carbon tetrachloride	8260	**1.6** µg/L	**2.5** µg/L	**4.9** µg/L	**5.2** µg/L	**4.5** µg/L	**5.7** µg/L	**4.3** µg/L
chloroform	8260	**3.7** µg/L	**4.6** µg/L	**5.6** µg/L	**5.4** µg/L	**6.1** µg/L	**4.4** µg/L	**4.9** µg/L
chloromethane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	8260	<0.5 µg/L	**1** µg/L	**0.7** µg/L	**1.5** µg/L	**1.5** µg/L	**0.8** µg/L	<0.5 µg/L
1,2-dichloropropane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	**0.6** µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
ethylbenzene	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	**0.4J** µg/L	<0.5 µg/L	<0.5 µg/L
ethylene dibromide	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
isopropylbenzene	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	**0.9** µg/L	**5.7** µg/L
MEK	8260	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L	<10 µg/L
methylene chloride	8260	<2 µg/L	<2 µg/L	<0.78 µg/L	<0.78 µg/L	<0.78 µg/L	<0.5 µg/L	<2 µg/L
tert-butyl alcohol	8260	<20 µg/L	<20 µg/L	<20 µg/L	<20 µg/L	<20 µg/L	<20 µg/L	<20 µg/L
toluene	8260	**0.8** µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	8260	<1 µg/L	<1 µg/L	<1 µg/L	**0.3J** µg/L	**1** µg/L	**0.5J** µg/L	**0.3J** µg/L

Detections are bolded

[1] Sample collected prior to pump test (15 minute)
[2] Sample collected after pumping well for 8 hours
[3] Sample collected after pumping well for 24 hours
[4] Sample collected after pumping well for 48 hours
[5] Sample collected after pumping well for 72 hours

Note: Some sample results are preliminary and have not been validated. Results are presented for comparison only and may change during validation.

Step Test



STEP TEST

Data Set: C:\...\117-MW-03MS7-24-01.aqt
Date: 12/19/01 Time: 14:43:46

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-03MS
Test Date: 07/24/01

WELL DATA

Pumping Wells			Observation Wells		
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0	117-MW-03MS	1	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 0.02401 ft^2/min
Kz/Kr = 2689.6

S = 0.0904
b = 164. ft

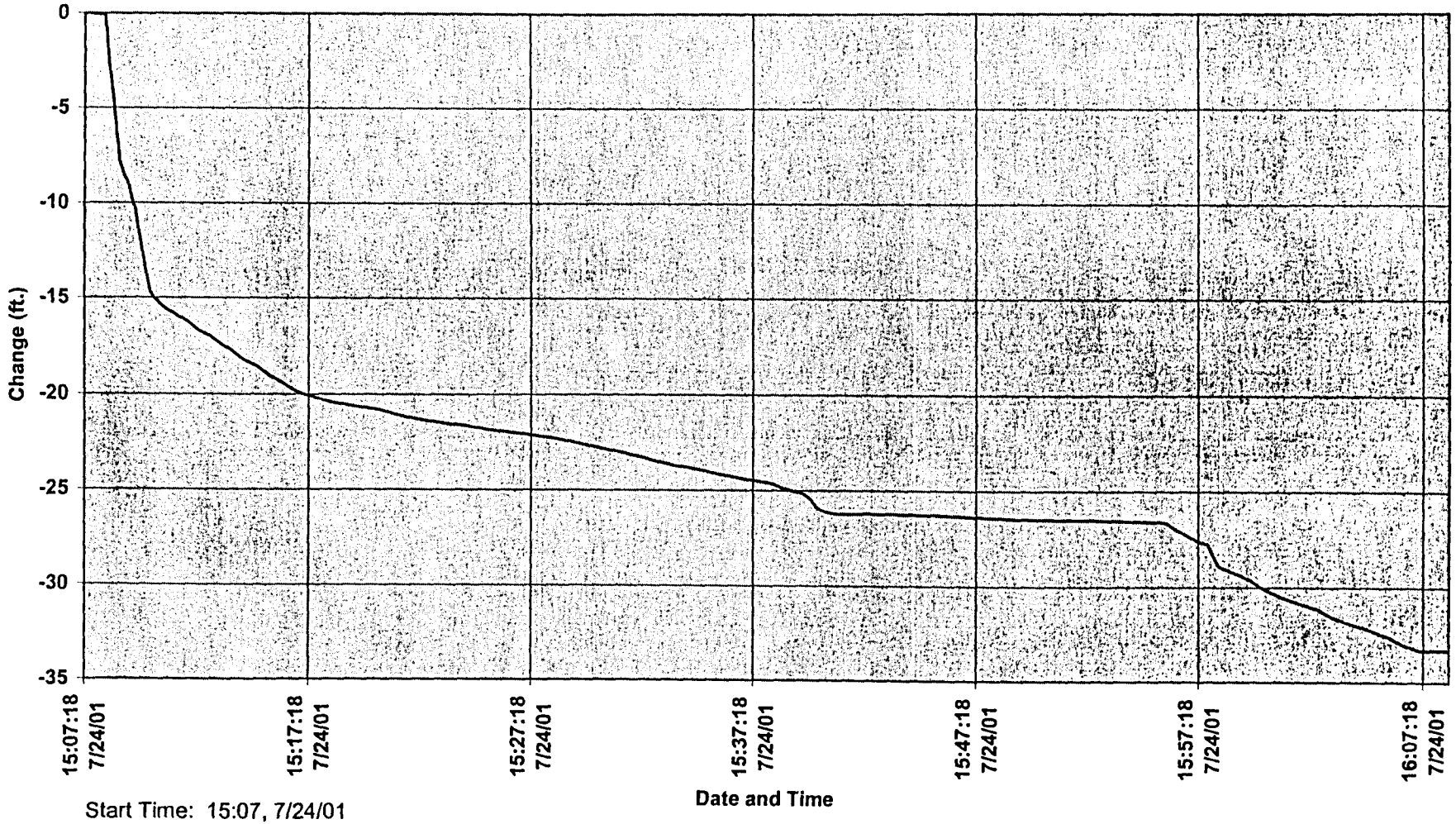
CTO 4 - UST SITE 117
Aquifer Testing

Date: 7/24/01
Monitoring Well ID 117-MW-03MS
Transducer No.:
Transducer Depth:

Test No.: STEPTEST
Pumping Well ID: 117-MW-03MS

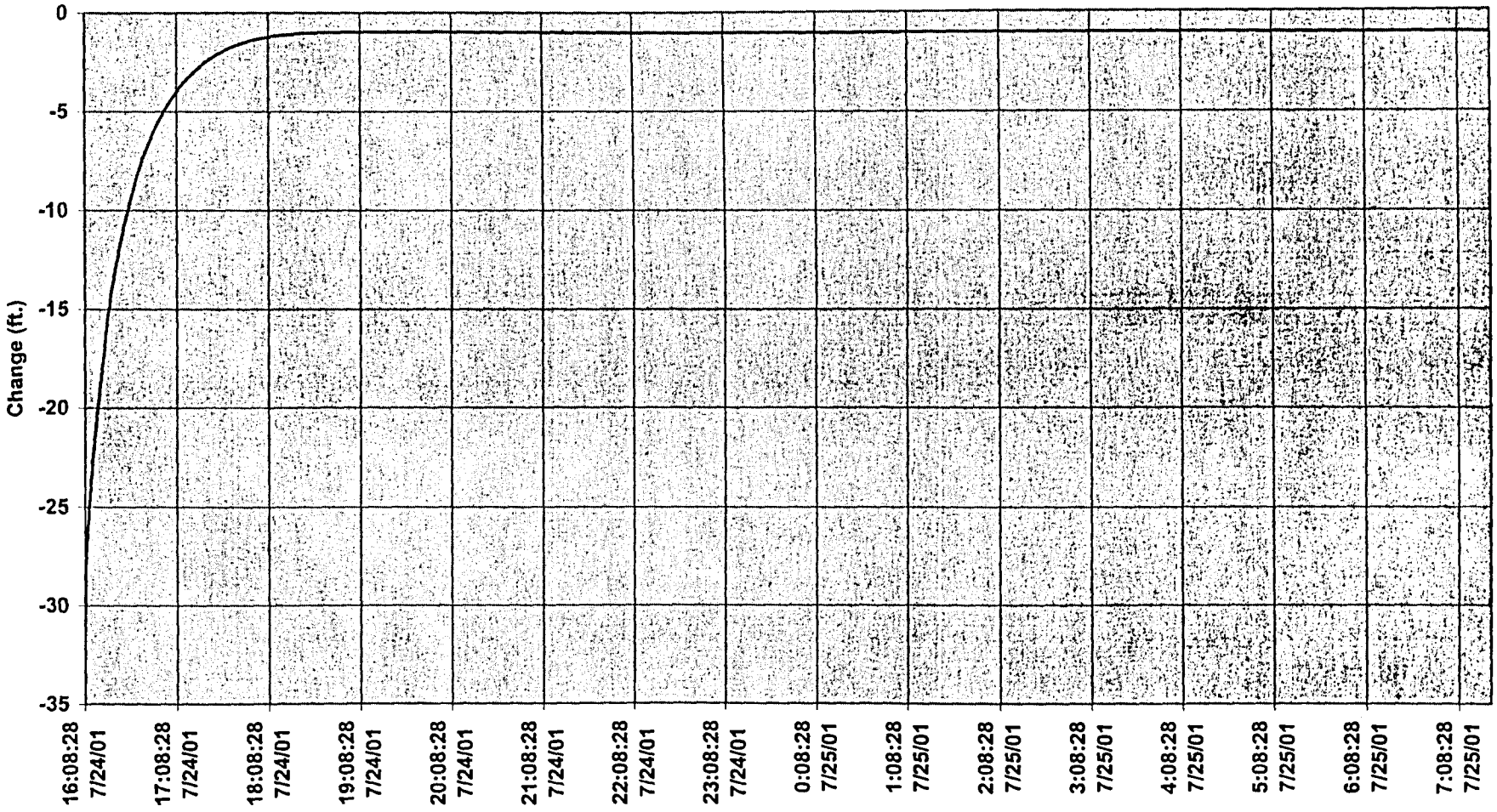
Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7/24/01 14:32		56.60		106.71				
15:07	0							
15:09	2					0.25		
15:39	30.5					0.35		
15:55	48					0.35		
16:08	61			126.77	20.06	~~0~~		

Pump Test 117-MW-03 MS



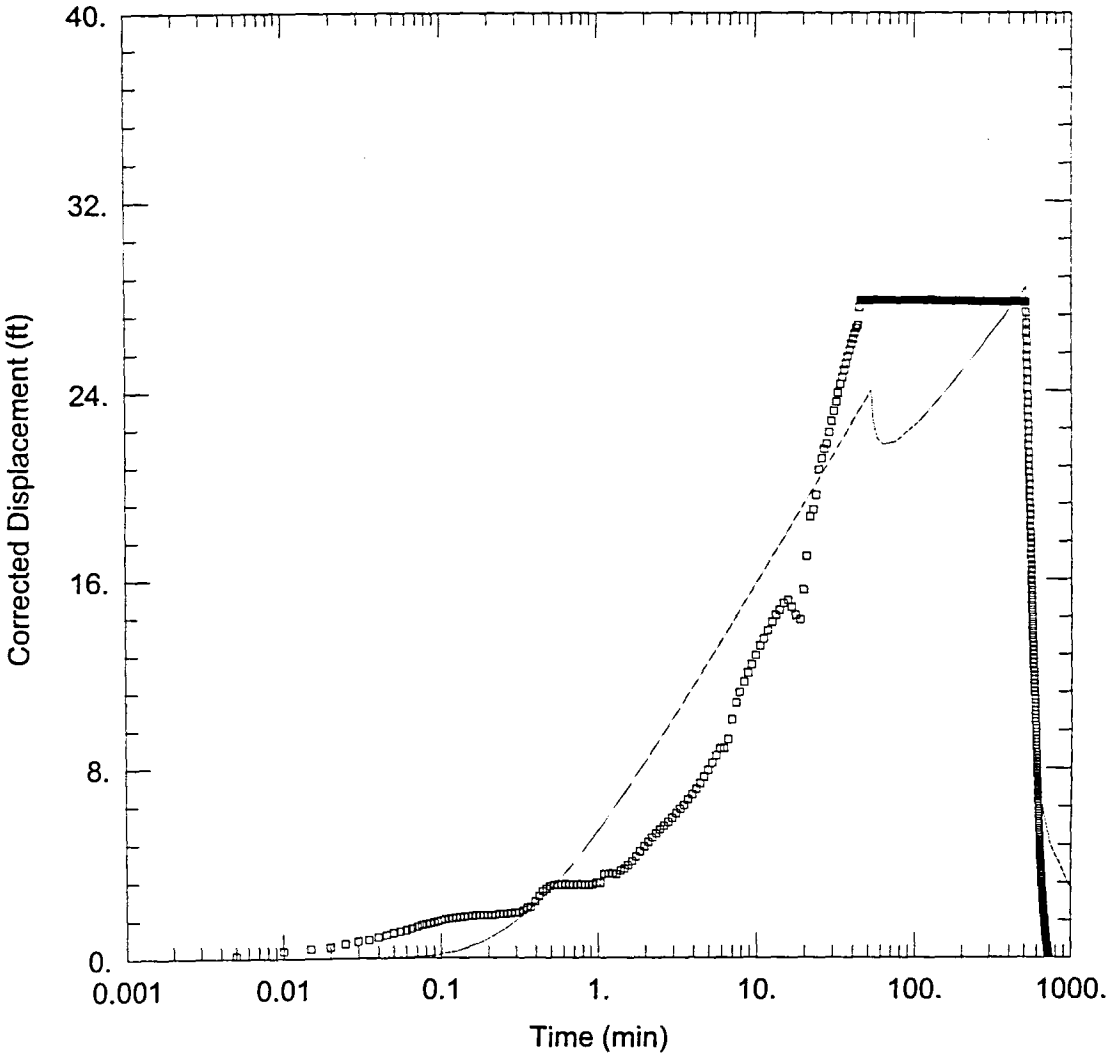
Start Time: 15:07, 7/24/01
End Time: 16:08, 7/24/01

Recovery Test 117-MW-03 MS



Start Time: 16:08, 7/24/01
End Time: 7:29, 7/25/01

8-hour Drawdown Test



8-HR PUMP TEST

Data Set: C:\...\117-MW-03MS7-24-01PUMP.aqt
Date: 12/27/01 Time: 18:19:38

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-03MS
Test Date: 07/24/01

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-03MS	1	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Theis

T = 0.0005346 ft^2/min
K = 2689.6

S = 0.0005096
b = 164. ft

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/25/01
Monitoring Well ID: 117-MW-03MS
Transducer No.:
Transducer Depth: ≈89 ft
PUMP @ 105

Test No.:
Pumping Well ID: 117-MW-03 MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0740	0	56.73	—	126.77	—	—	—	—
0800	—	56.73	—	START TIME			—	—
0815	15	71.62	14.89	—	—		117-MW-03MS-15	0815
0820	20	73.71	17.98	—	—		—	—
1045	165	87.39	30.66	—	—		—	—
1230	270	87.34	30.61	—	—		—	—
1410	370	87.33	30.60	—	—		—	—
1545	465	87.33	30.60	—	—		—	—
1635	515	87.31	30.58	189.62	57.85	0.12	117-MW-03MS8	1630
—	PUMP	SHUT	OFF					

No Filter Used
MS

Notes:

* PUMP SHUT OFF AT 1635, RECOVERY BEGUN

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 17-MW-11 MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-03 MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8:10	--	52.10	--	--	--	--	--	--
9:10	--	52.10	--	--	--	--	--	--
10:15	--	52.1	--	--	--	--	--	--
1:09	--	52.12	--	--	--	--	--	--
3:16	--	52.15	--	--	--	--	--	--
4:15	--	52.15	--	--	--	--	--	--

Every Two Hours

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/26
Monitoring Well ID: 117-MW-5 MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-03 MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9:05	--	56.62	—	--	—	—	--	--
9:15	--	56.58	—	—	—	—	--	—
10:05	—	56.53	—	-	-	-	--	-
11:07	-	56.52	-	-	-		-	--
1:05	--	56.51	-	-	--	-		-
2:09	-	56.50	-	-	-	-	--	--
3:10	-	56.51		-	-			
4:05		56.51		-	-			

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 117-MW-11md
Transducer No.:
Transducer Depth: NA

Test No.:
Pumping Well ID: 117-MW-03ms

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7:45	--	71.96	-	-	-	-	-	-
9:00	-	71.38	-	-	--	-	-	--
10:00	--	71.31	--	-	--	-	--	--
11:07	-	71.75	-	-	-	-	--	-
1:04	-	72.36	-	-		-	-	--
2:07	-	72.50	-	-	-	-	-	-
3:05	--	72.47	-	-	-	-	-	--
4:07	-	72.63	-	-	-	-	-	-

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 117-MW-11MS
Transducer No.:
Transducer Depth: NA

Test No.:
Pumping Well ID: 117-MW-03MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7:45	—	59.55	—	—	—	—	—	—
9:10	—	59.60	—	—	—	—	—	—
10:05	—	59.61	—	—	—	—	—	—
11:05	—	59.69	—	—	—	—	—	—
1:02	—	59.61	—	—	—	—	—	—
2:07	—	59.49	—	—	—	—	—	
3:11	—	59.45	—	—	—	—	—	
4:07	—	59.45	—	—	—	—	—	—

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 117-MW-11S
Transducer No.:
Transducer Depth: NA

Test No.:
Pumping Well ID: 117-MW-03MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7:45	–	56.57	–	–	–	–	–	–
9:10	–	56.55	–	–	–	–	–	–
10:10	–	56.55	–	–	–	–	–	–
11:05	–	56.55	–	–	–	–	–	
1101		56.55						
2:04		56.53						
3:11		56.52						
4:07		56.15						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 117-MW-07MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-03MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8:00	–	55.97	–	–	–	–	–	–
9:30	–	56.01	–	–	–	–	–	–
10:15	–	56.03	–	–	–	–	–	–
11:09	–	56.00	–	–	–	–	–	–
1:06	–	55.92	–	–	–	–	–	–
2:12	–	55.89	–	–		–	–	–
3:07	–	55.89	–	–	–	–	–	–
4:03	–	55.89	–	–	–	–	–	–

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/26 –
Monitoring Well ID: 117-MW-10MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-03MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7:56	-	57.60	-	-	-	-	-	
9:15	-	57.92	-	-	-	-	-	-
10:05	-	57.98	-	-	-	-	-	-
11:00	-	57.95	-	-	-	-	-	-
1:00	-	57.85	-	-	-	-	-	-
2:01	-	57.81	-	-	-	-	-	-
3:01	-	57.79	-	-	-	-	-	
4:01	-	57.77	-	-	-	-	-	

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

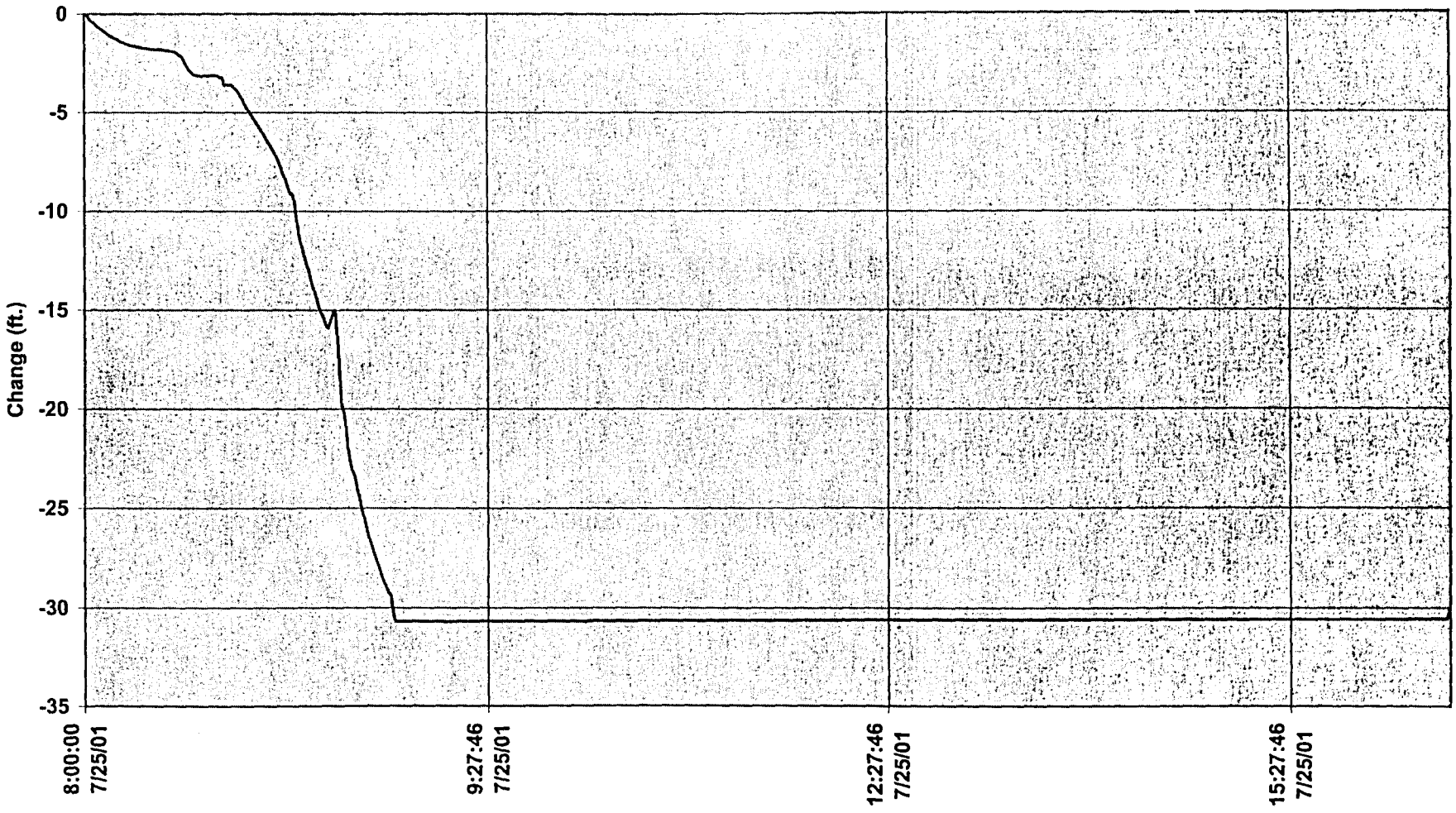
Date:
Monitoring Well ID: 117-MW-10S
Transducer No.:
Transducer Depth: NA

Test No.:
Pumping Well ID: 117-MW-03PS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7:55	-	54.96	-	-	-		-	
9:15	-	55.00	-	-	-	-	-	-
10:27	-	54.97	-	-	-	-	-	-
11:00	-	55.05	-	-	-	-	-	-
1:00	-	55.00	-	-	-	-	-	-
2:00	-	55.00	-	-	-	-	-	-
3:00	-	55.00	-	-	-	-	-	-
4:00	-	55.02	-	-	-	-	-	

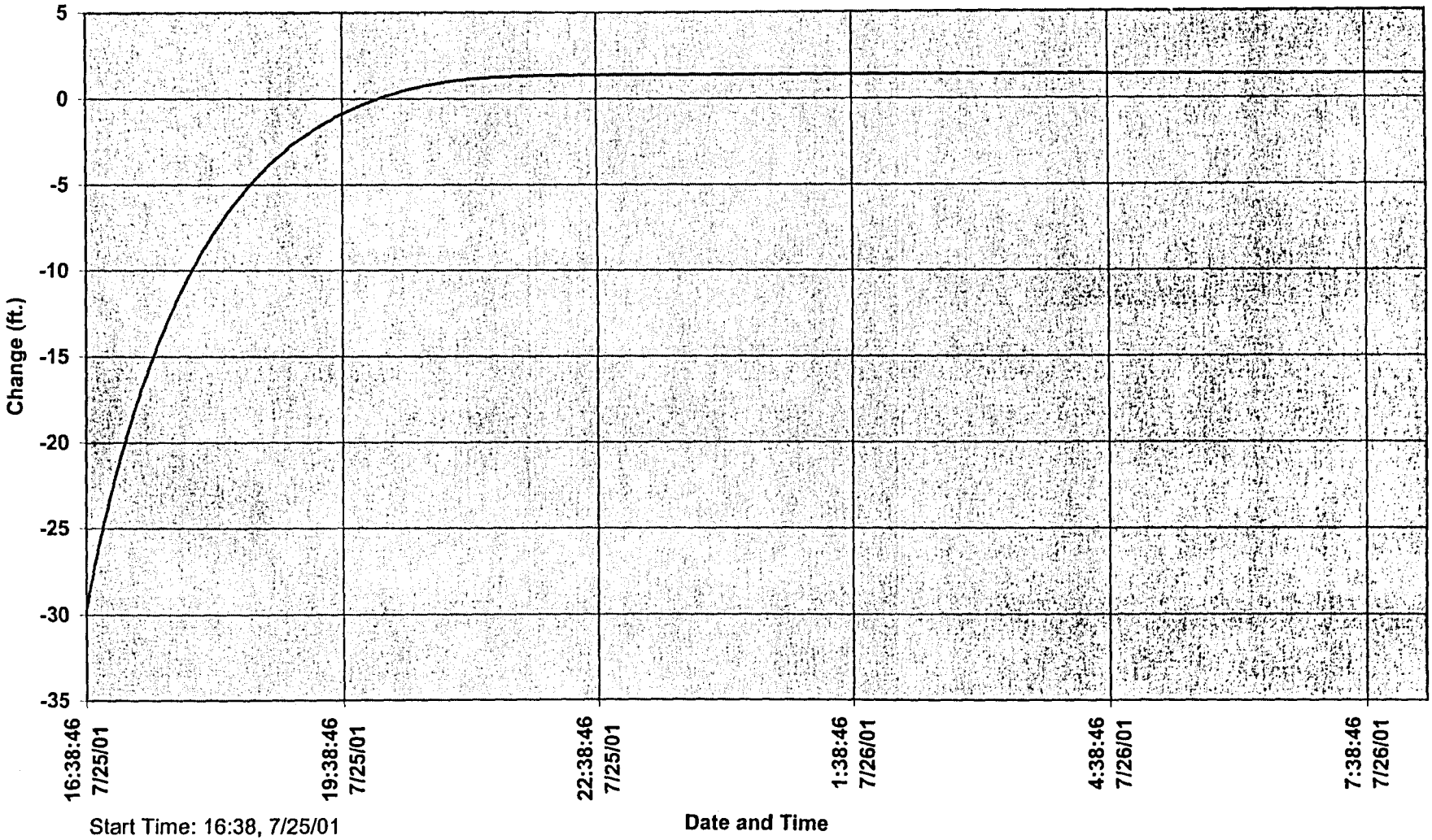
Notes:

Pump Test 117-MW-03 MS



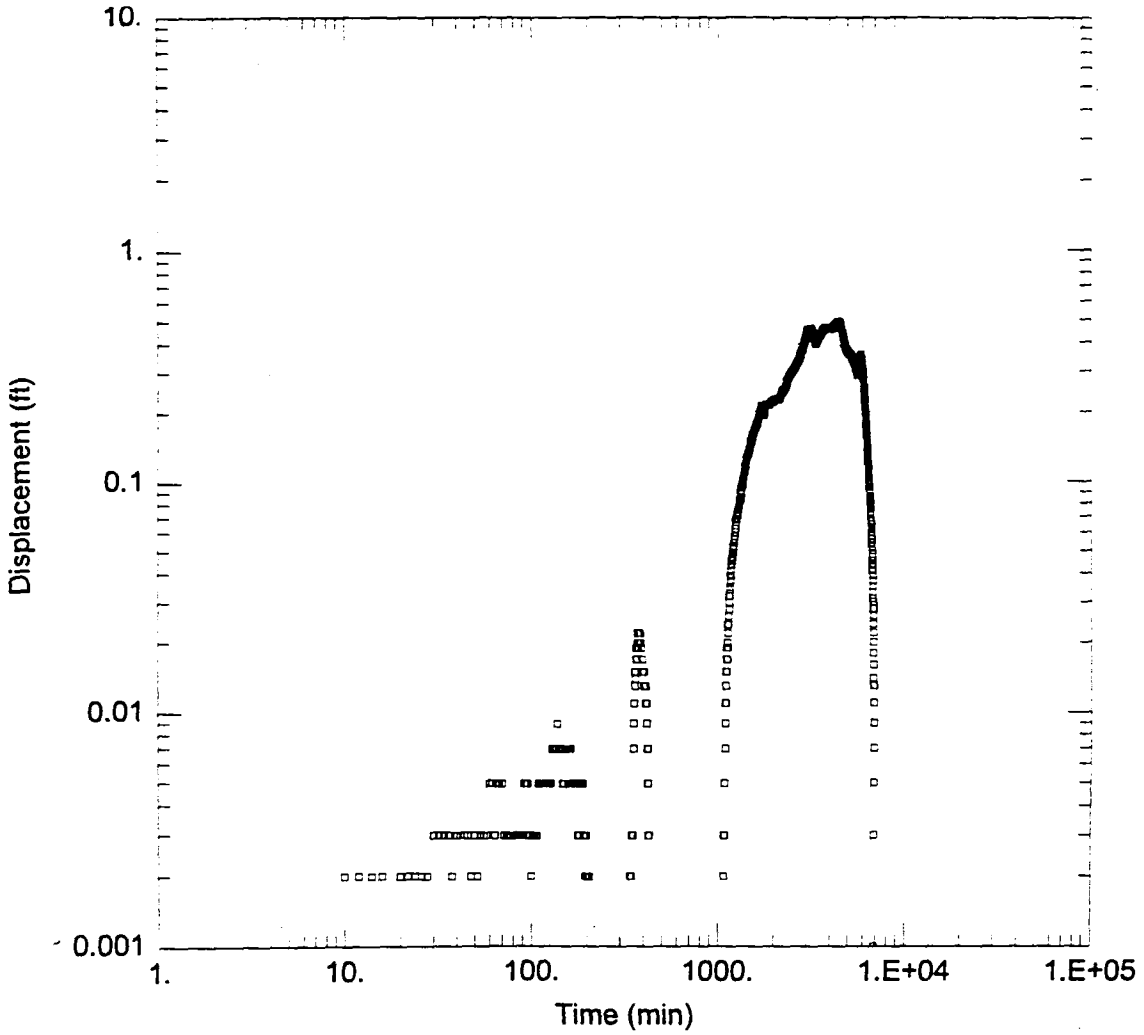
Start Time: 8:00, 7/25/01
End Time: 16:38, 7/25/01

Recovery Test 117-MW-03 MS



Start Time: 16:38, 7/25/01
End Time: 8:19, 7/26/01

48-hour Drawdown Test



Data Set: C:\...\117-MW-03MS_10.aqt
Date: 12/18/01 Time: 13:34:25

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

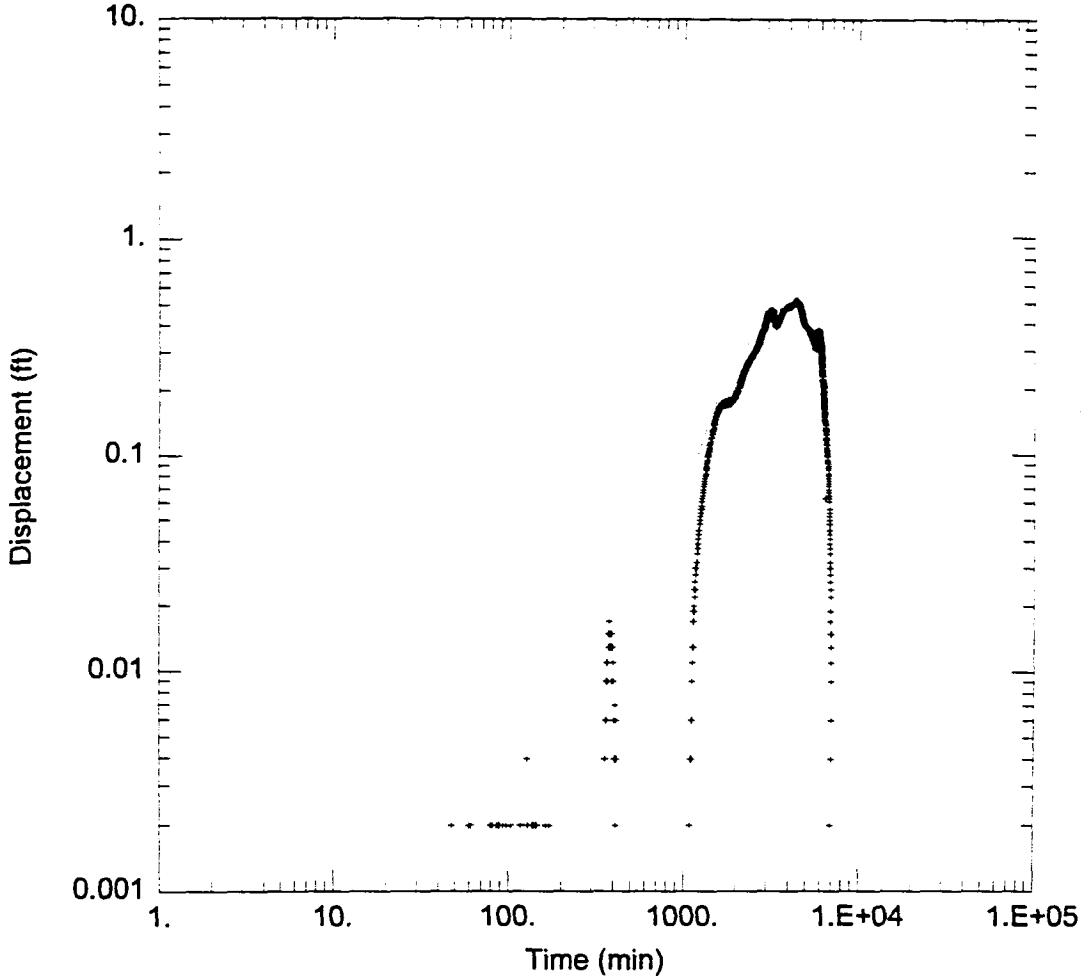
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-10MS	52	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 7.115 ft^2/day
S = 0.0131
Sy = 0.04777
ß = 0.1



Data Set: C:\...\117-MW-03MS_07.aqt
Date: 12/18/01 Time: 13:36:18

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

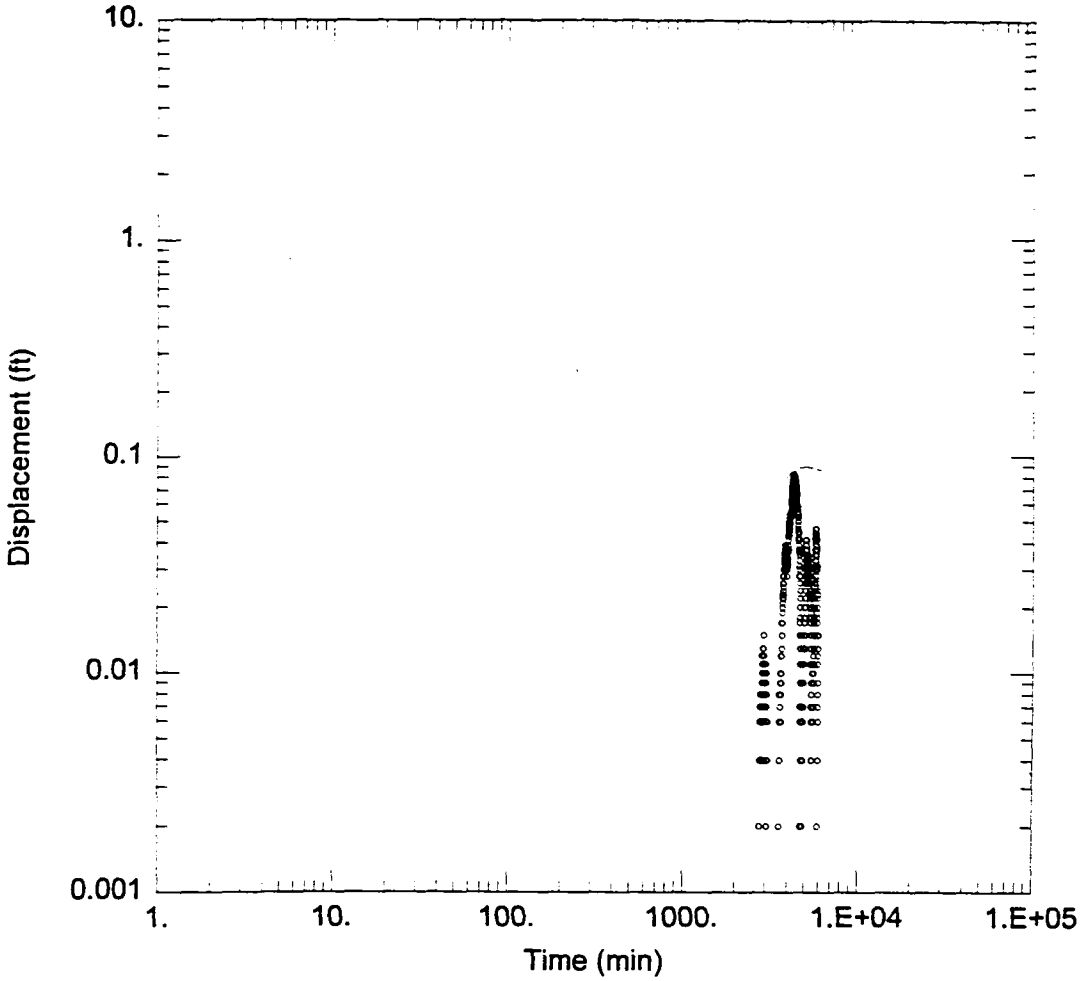
Observation Wells

Well Name	X (ft)	Y (ft)
117-MW-07MS	0	151

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 4.605 ft^2/day
S = 0.001659
Sy = 0.04777
ß = 0.1



Data Set: C:\...\117-MW-03MS_05.aqt
Date: 12/18/01 Time: 13:37:45

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

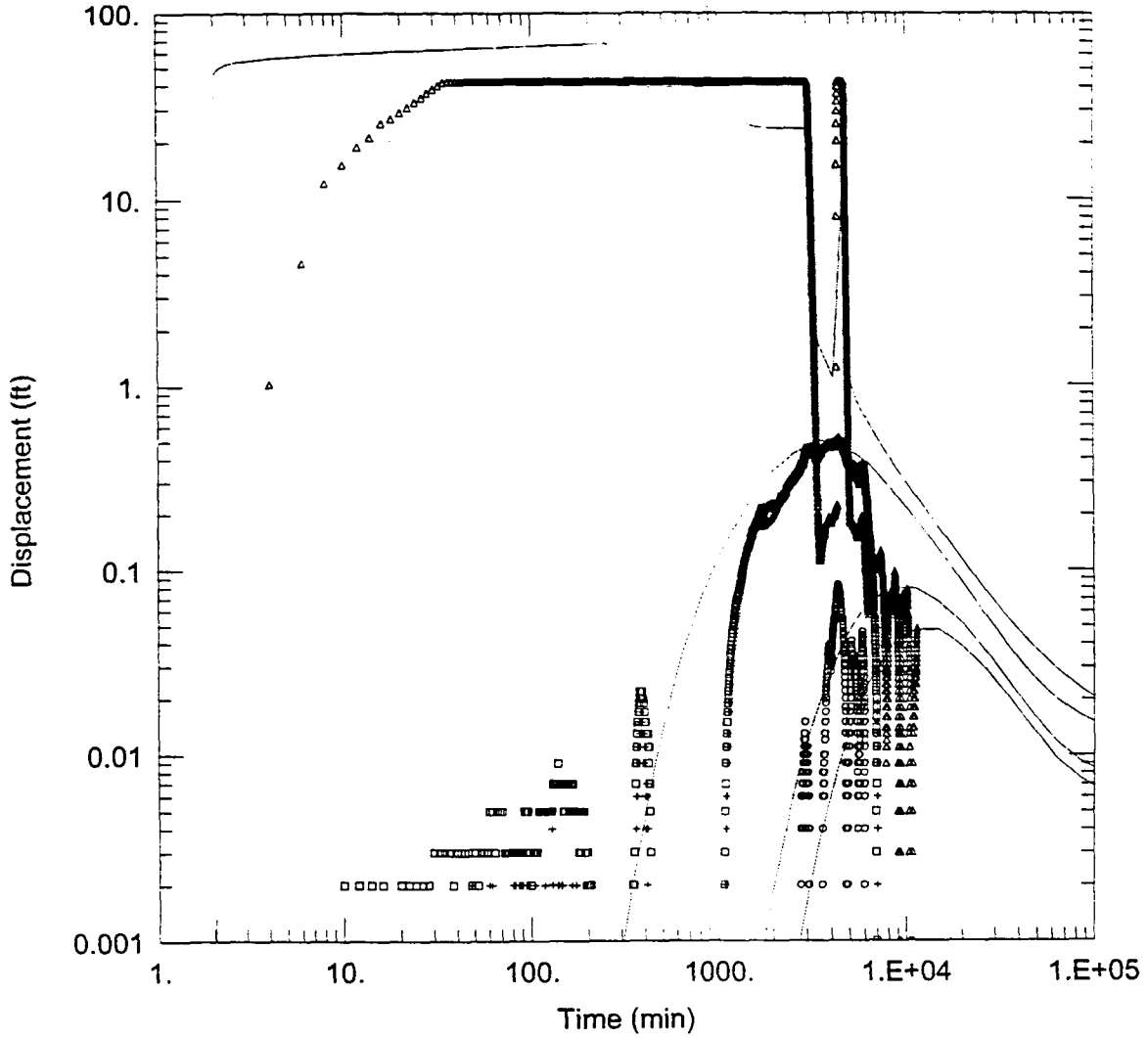
Observation Wells

Well Name	X (ft)	Y (ft)
◦ 17-MW-05	123	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 17.77 ft^2/day
S = 0.01574
Sy = 0.04777
ß = 0.1



PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

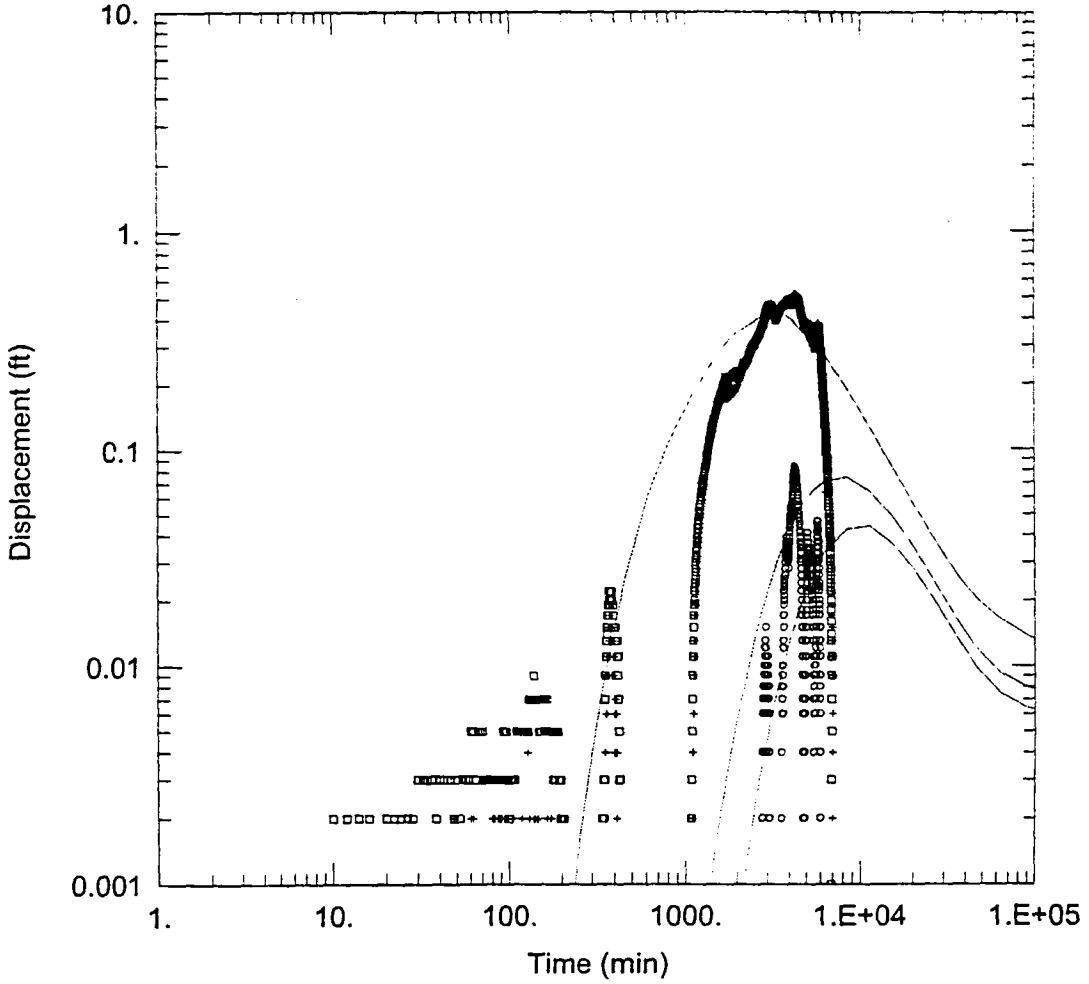
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-10MS	52	0
+ 117-MW-07MS	0	151
○ 17-MW-05	123	0
△ 117-MW-03MS	1E-005	0

SOLUTION

Aquifer Model: Unconfined
T = 3.213 ft^2/day
Sy = 0.04777

Solution Method: Neuman
S = 0.005806
Kz/Kr = 0.9826



WELL TEST ANALYSIS

Data Set: C:\...\117-MW-03MS_10_07_05.aqt
Date: 10/11/01 Time: 12:23:01

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

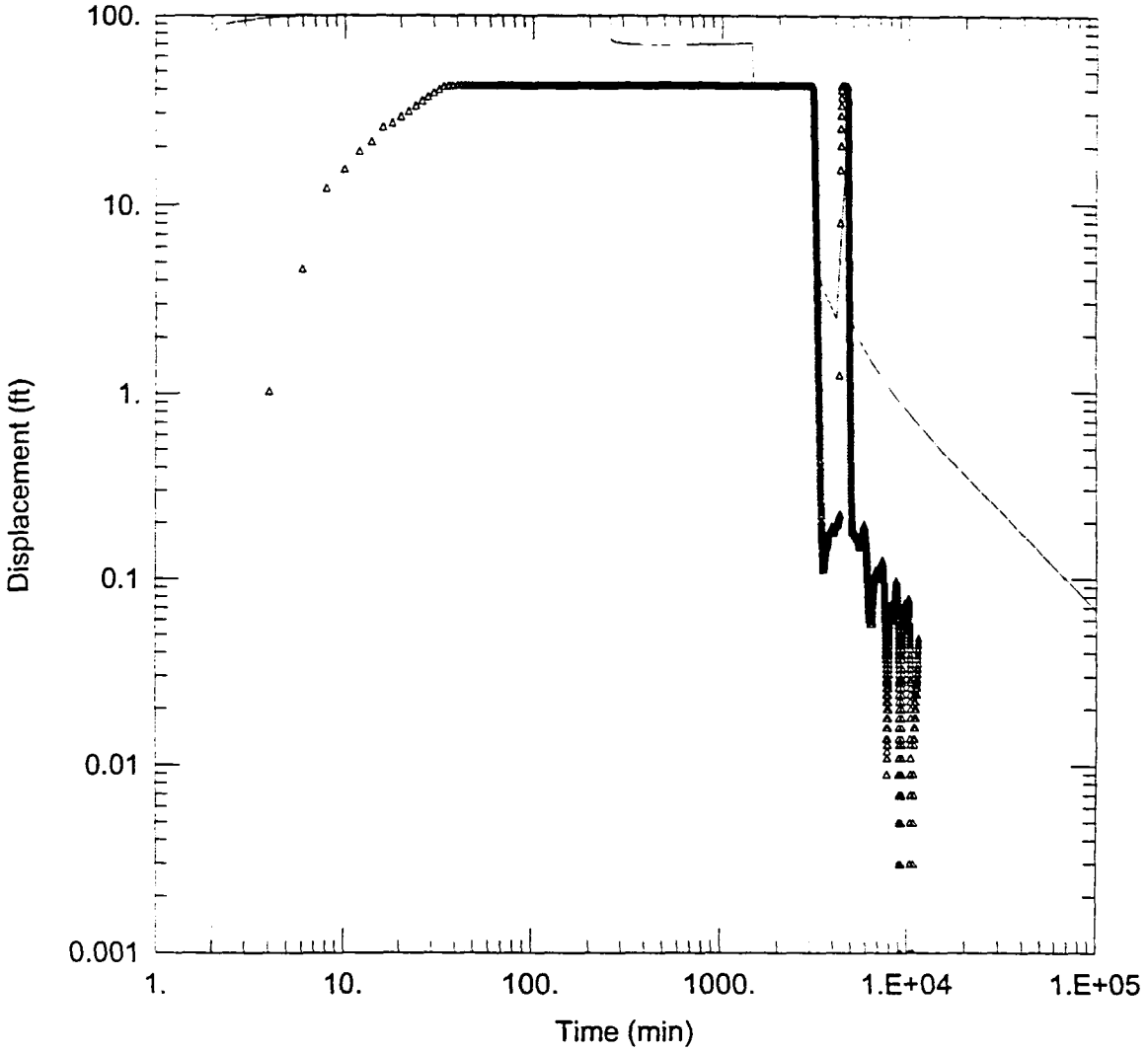
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-10MS	52	0
+ 117-MW-07MS	0	151
◦ 17-MW-05	123	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 4.675 ft^2/day
S = 0.006376
Sy = 0.04777
Kz/Kr = 0.9826



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\PumpingTests\117-MW-03MS_8-27-01\117-MW-03MS_03.aqt
Date: 10/11/01 Time: 12:42:27

PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crows Landing Flight Fac.
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-03MS
Test Date: 8/27/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-03MS	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▵ 117-MW-03MS	1E-005	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 1.73 ft^2/day
Sy = 0.02989

S = 0.00219
ß = 0.1

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/27/01
Monitoring Well ID: 117-MW-03MI
Transducer No.:
Transducer Depth:

Test No.: 117-MW-03MI
Pumping Well ID: 117-MW-03MI

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/27	0800	0	57.13	0	[illegible]	0	0	—	—
	[illegible]	0	57.14	0	[illegible]	0	0	—	—
	0:50	[illegible]	[illegible]	17.99	[illegible]	[illegible]	0.50	—	—
	[illegible]	[illegible]	96.25	33.12	[illegible]	11.46	0.71	117-MW-[illegible]	0900
	1030	76	T.O.P.	—	[illegible]	39.54	0.52	—	—
	1329	255	T.O.P	—	642.34	72.91	0.28	—	—
	1550	396	T.O.P.	—	667.05	97.62	0.25	117-MW-[illegible]	1600
8/28	[illegible]	1436	[illegible]	—	805.32	235.90	0.16	117-MW-[illegible]	0835
8/29	[illegible]	2871	[illegible]	—	[illegible]	401.51	0.14	[illegible]	[illegible]
	[illegible]	2933	[illegible]	—	976.47	407.04	0.14		[illegible]
30	[illegible]	4306	[illegible]	—	[illegible]	419.62	0.10		[illegible]
	[illegible]	4311	[illegible]	—	[illegible]	422.58	0.10		[illegible]
	[illegible]	4696	[illegible]	—	[illegible]	491.96	0.10	117-MW-[illegible]	1500
	1510	4706	PUMP SHUT DOWN		[illegible]	492.38	0.10	—	—

NO FURTHER ENTRIES

Notes: RECOVERY TEST BEGUN AT 15:10, 8/30

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/27/01
Monitoring Well ID: 117-MW-07 MS
Transducer No.:
Transducer Depth:

Test No.: 117-MW-07, 03MS
Pumping Well ID: 117-MW-03MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/27	0830	0	55.60	0	569.42	0	0	—	—
8/29	0900	2970	56.04		972.57	—	—	—	—
					NO FURTHER ENTRIES				

Notes: RECOVERY TEST BEGUN AT 15:10, 8/30

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/27/01
Monitoring Well ID: 117-MW-10 MS
Transducer No.:
Transducer Depth:

Test No.: 117-MW-10 MS, 03 MS
Pumping Well ID: 117-MW-03 MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/27	8:10	0	57.46	0	560.43	0	0	—	—
8/28	0020	2750	57.94	0	975.03	—	—	—	—

Notes: RECOVERY TEST BEGUN AT 15:10, 8/30

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/27/01
Monitoring Well ID: 17-MW-05
Transducer No.:
Transducer Depth:

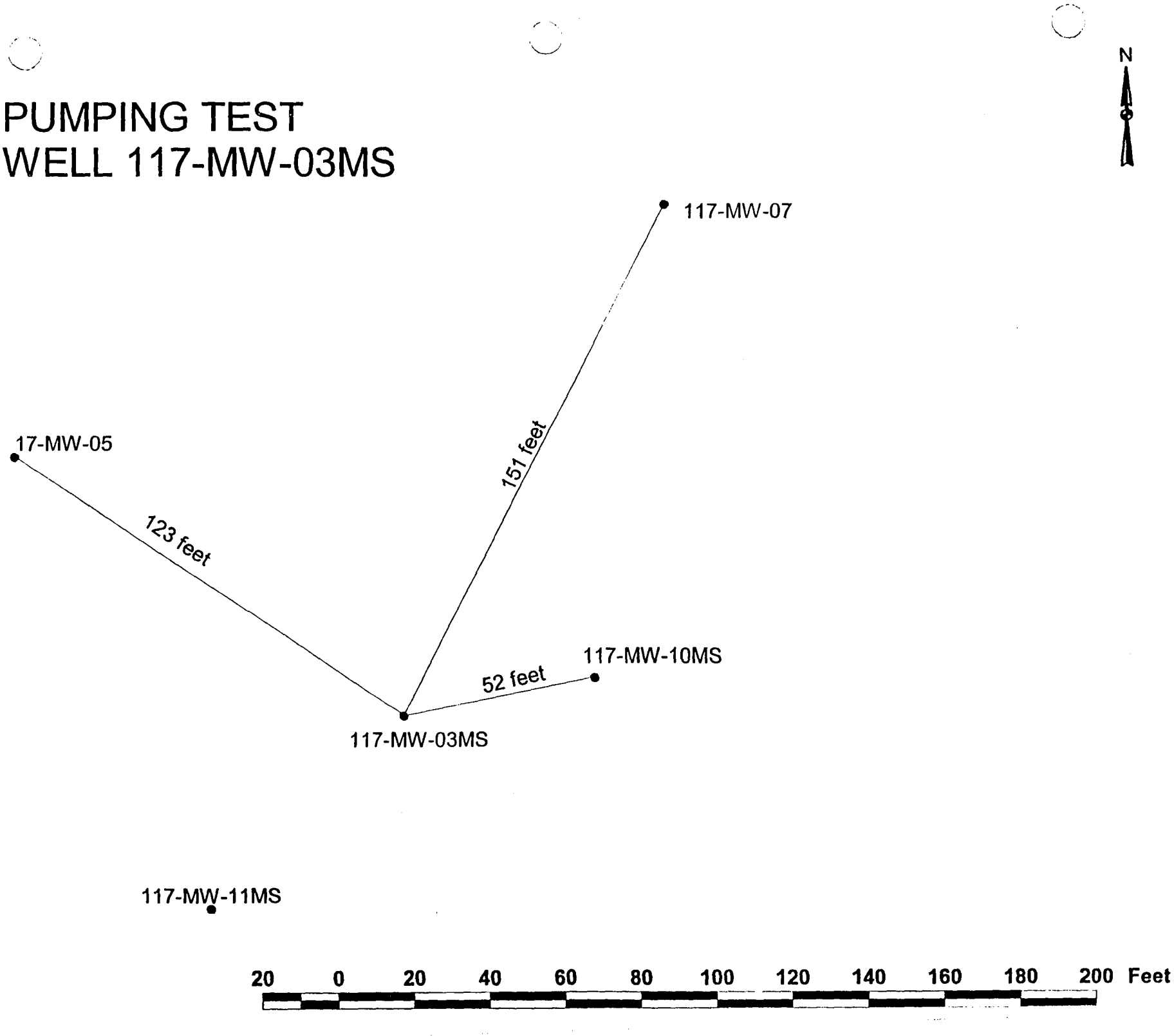
Test No.: 17-MW-05, 03MS
Pumping Well ID: 117-MW-03MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/27	[illegible]	0	56.[illegible]	0	56[illegible]	0	[illegible]	—	—
8/29	0930	2960	56.[illegible]	0.05	976.13	—	—	—	—

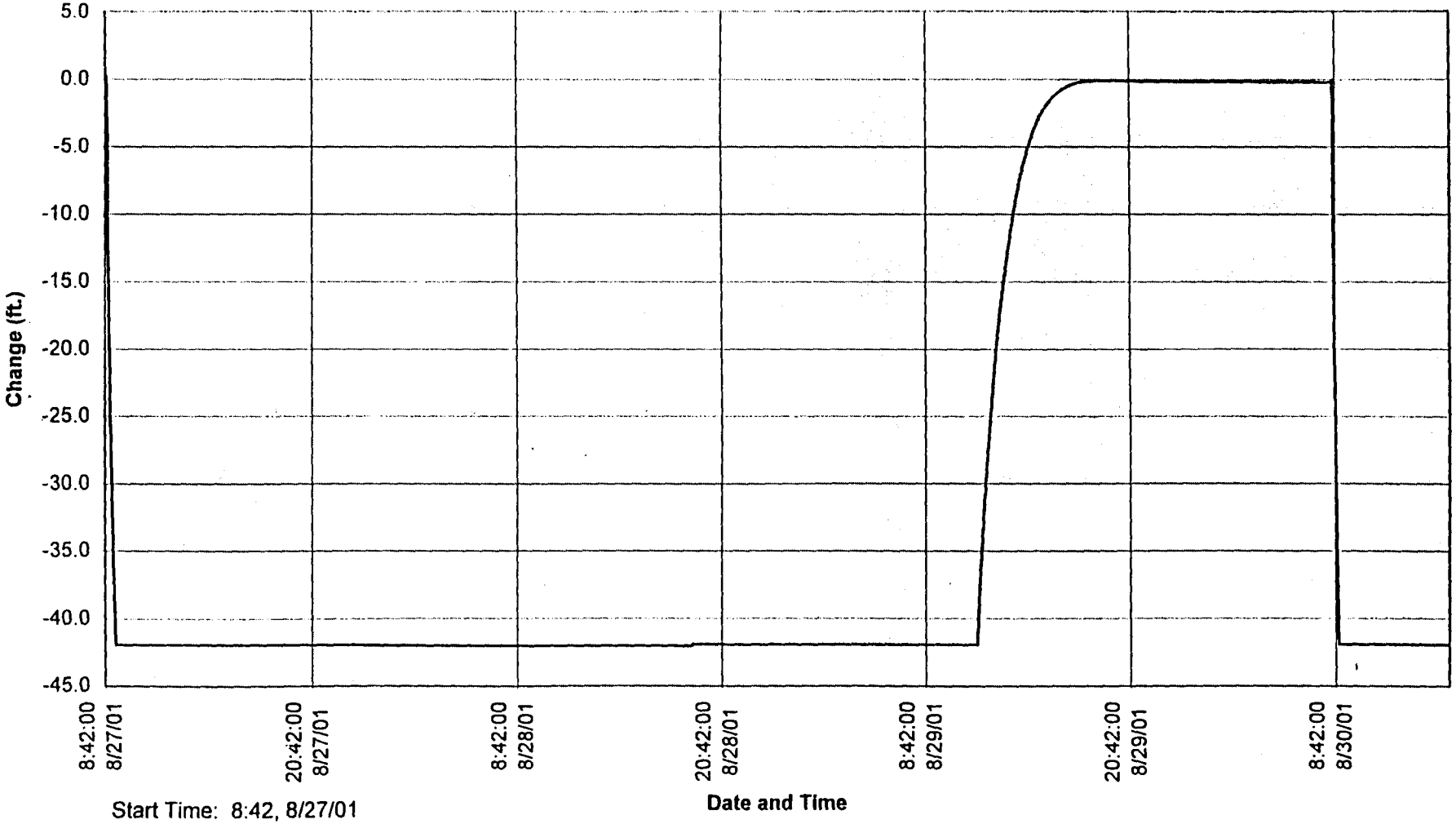
NO FURTHER ENTRIES

Notes: RECOVERY TEST BEGUN AT 15.10, 8/30

PUMPING TEST
WELL 117-MW-03MS

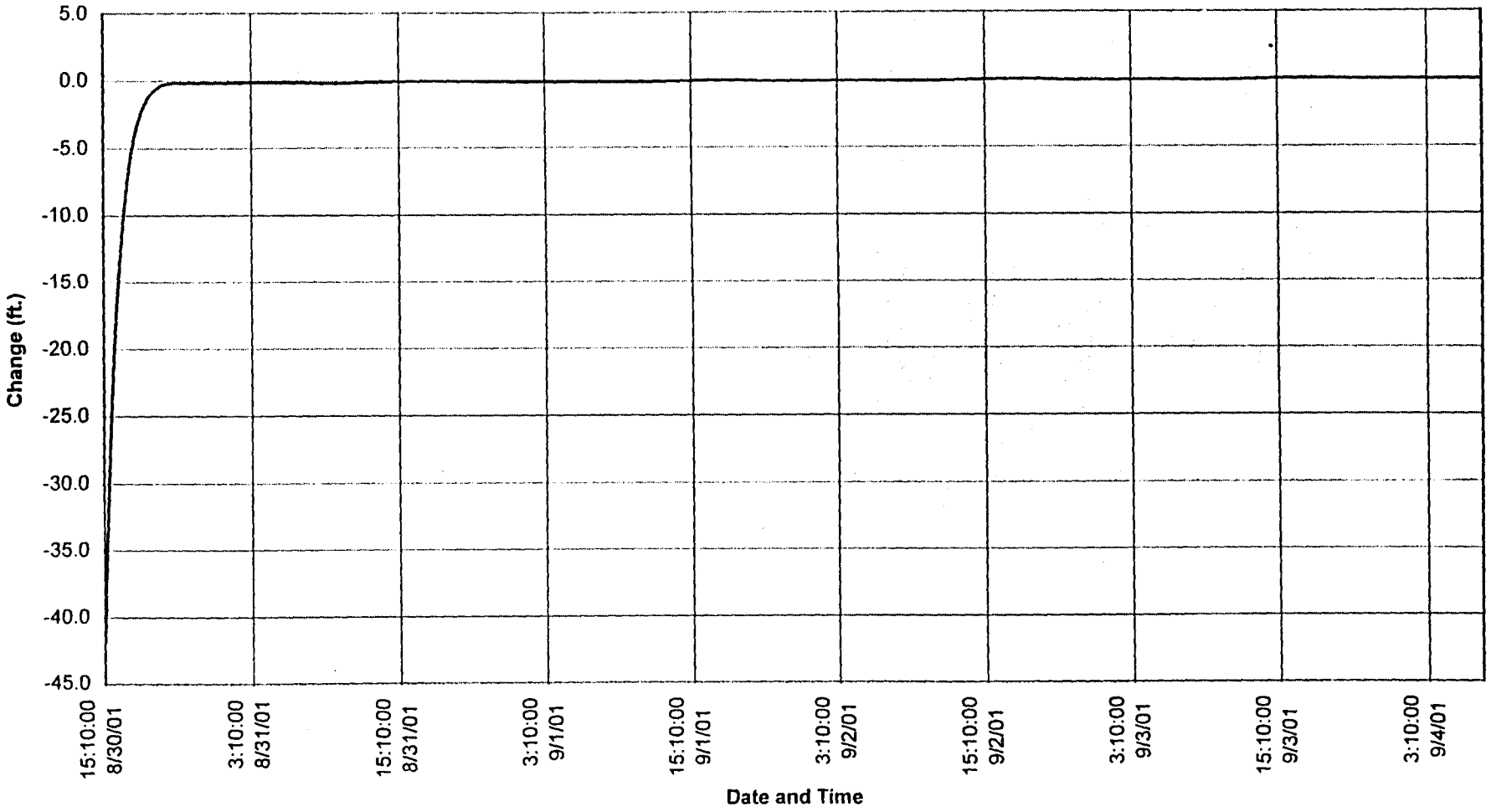


Pump Test Drawdown for 117-MW-03MS, Pump in 117-MW-03MS



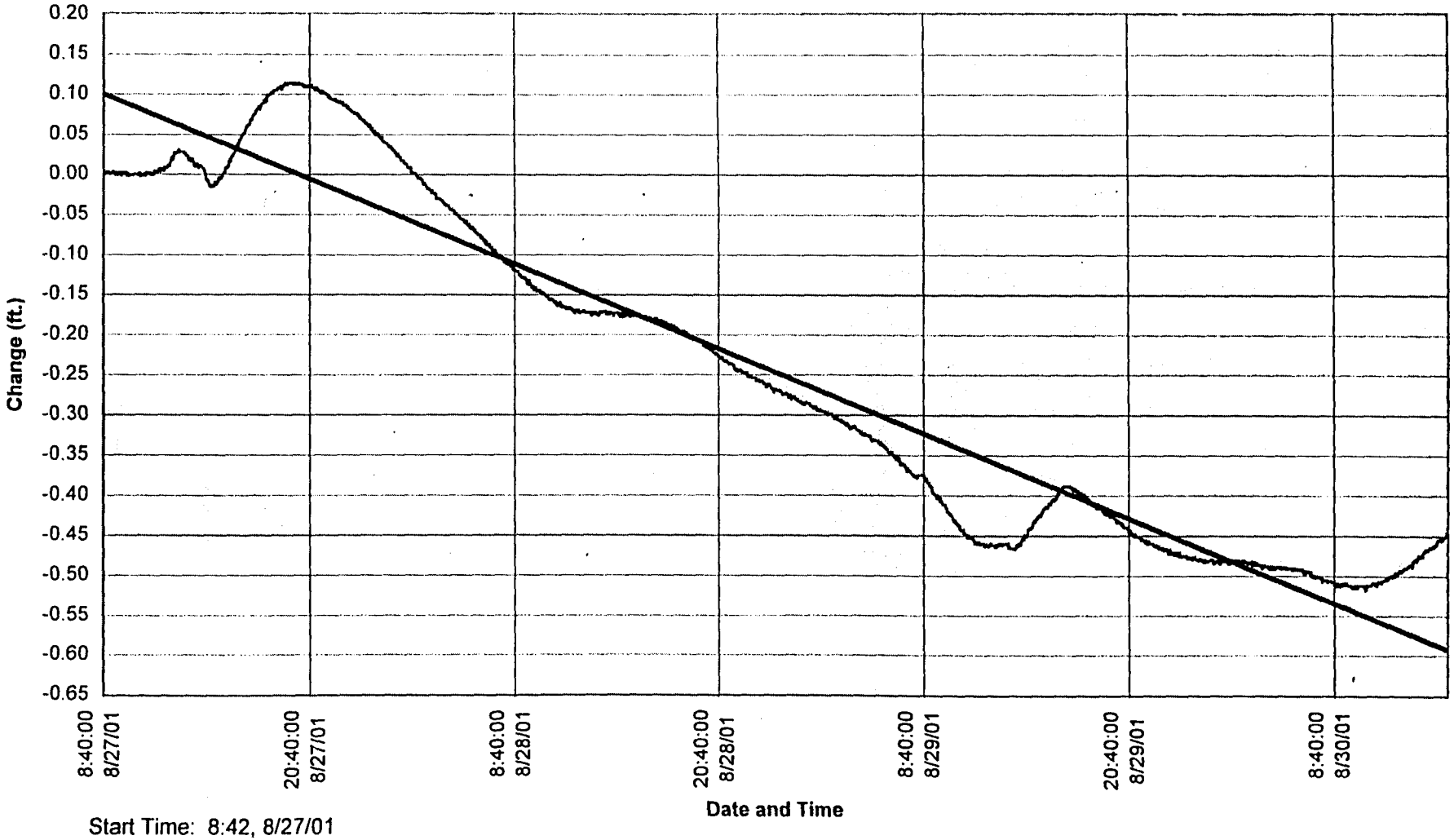
Start Time: 8:42, 8/27/01
End Time: 15:10, 8/30/01

Recovery Test for 117-MW-03MS, Pump in 117-MW-03MS



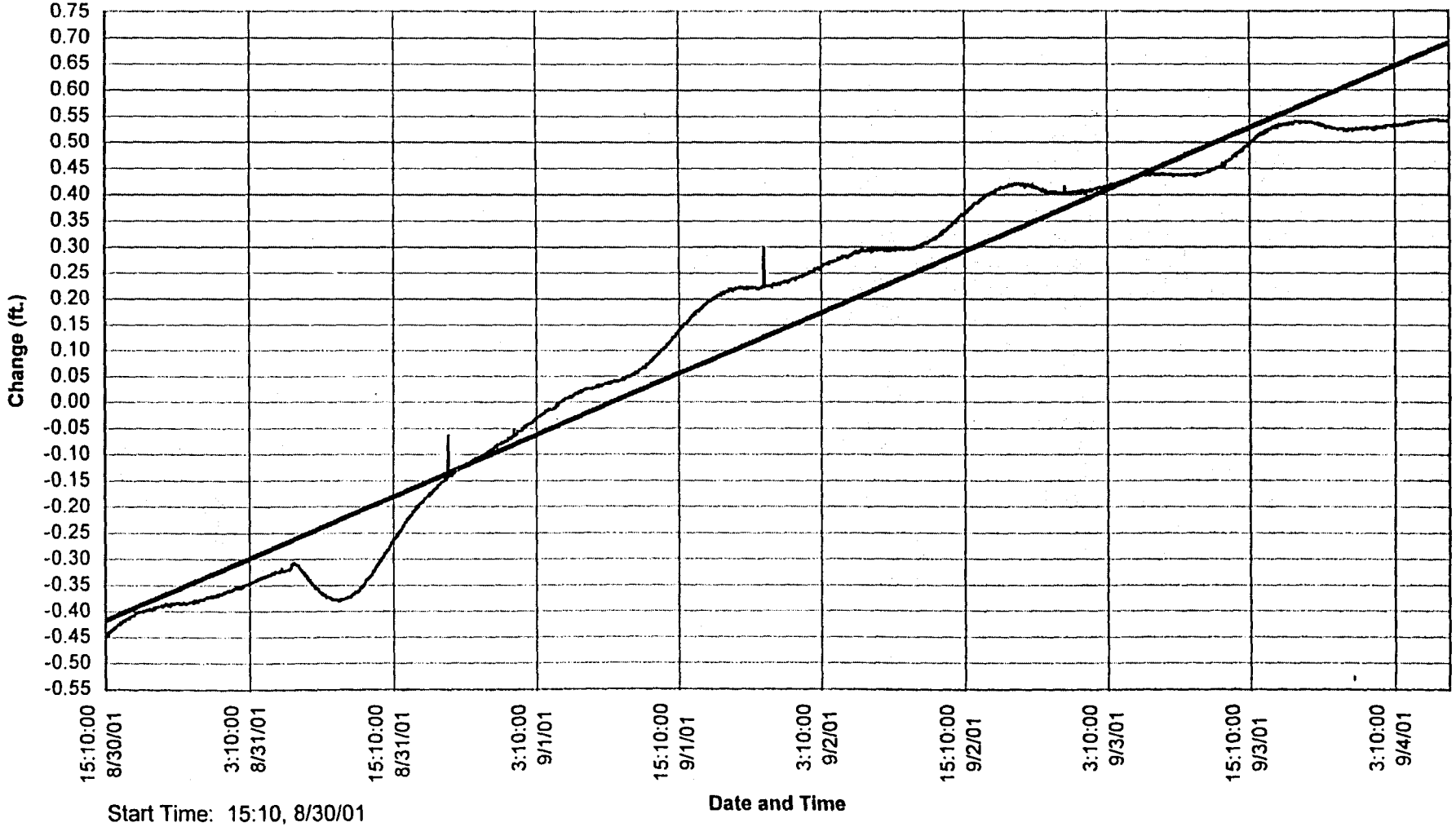
Start Time: 15:10, 8/30/01
End Time: 7:30, 9/4/01

Pump Test for 117-MW-07, Pump in 117-MW-03MS



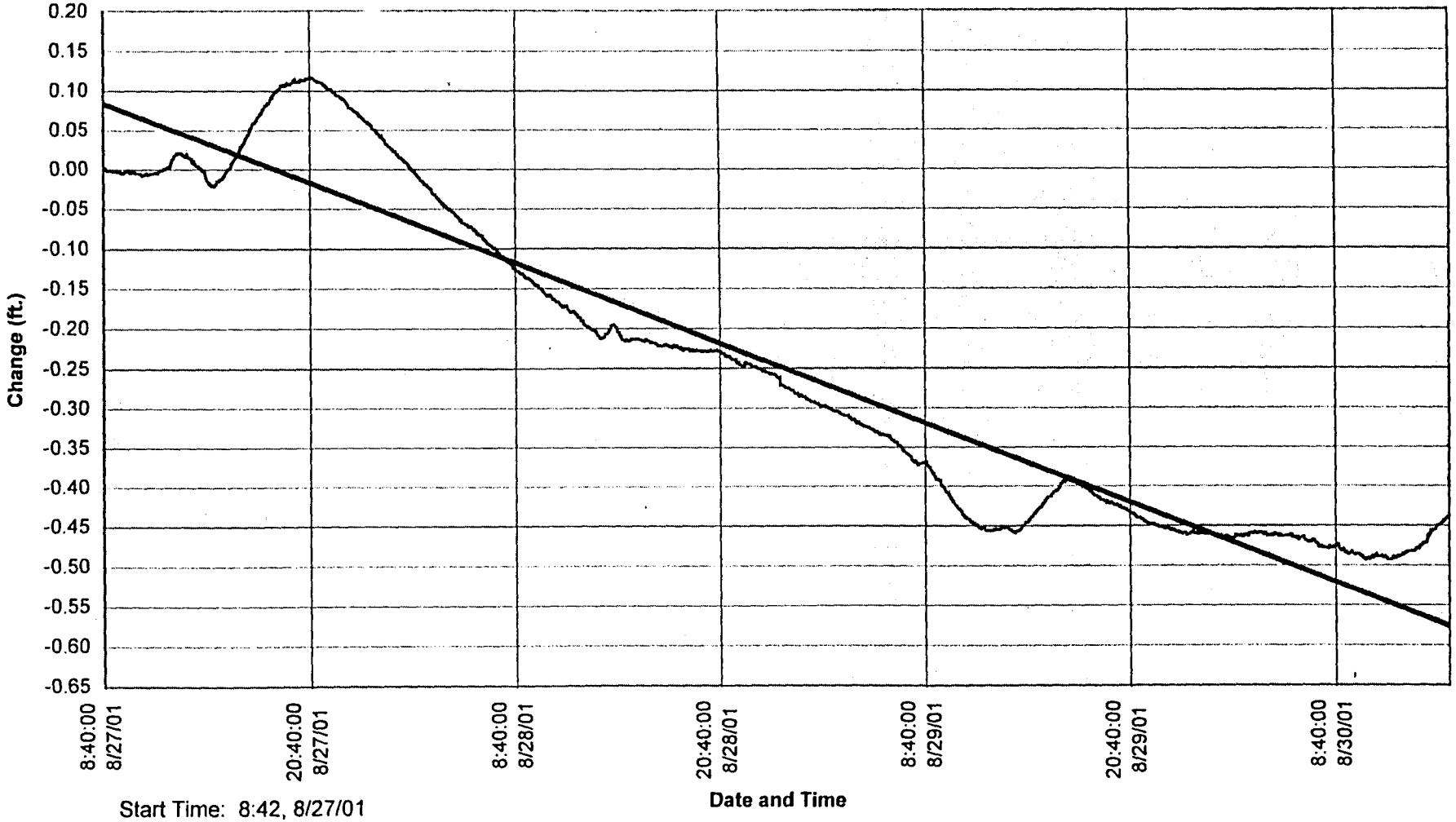
Start Time: 8:42, 8/27/01
End Time: 15:10, 8/30/01

Recovery Test for 117-MW-07, Pump in 117-MW-03MS



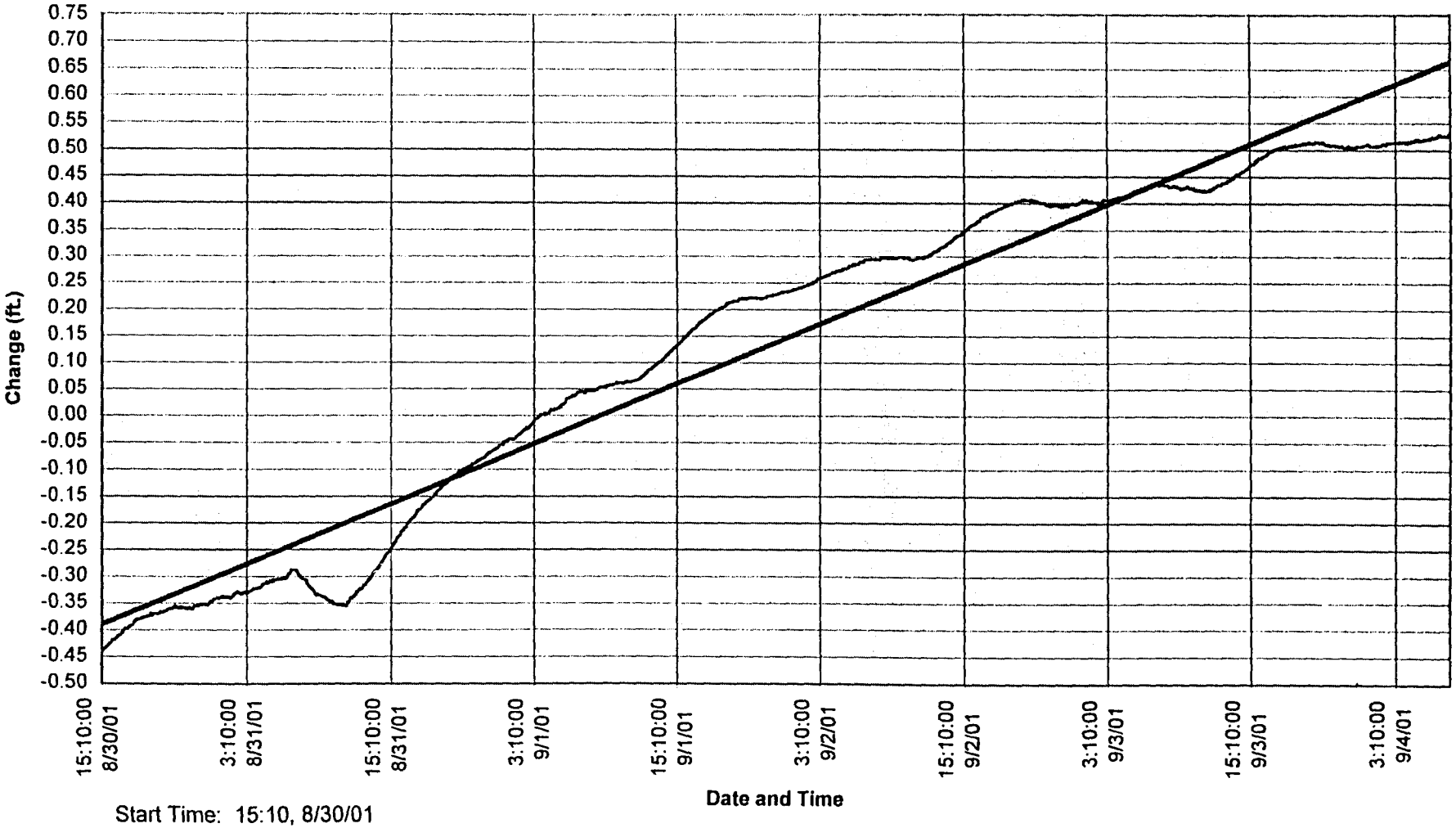
Start Time: 15:10, 8/30/01
End Time: 7:30, 9/4/01

Pump Test for 117-MW-10MS, Pump in 117-MW-03MS



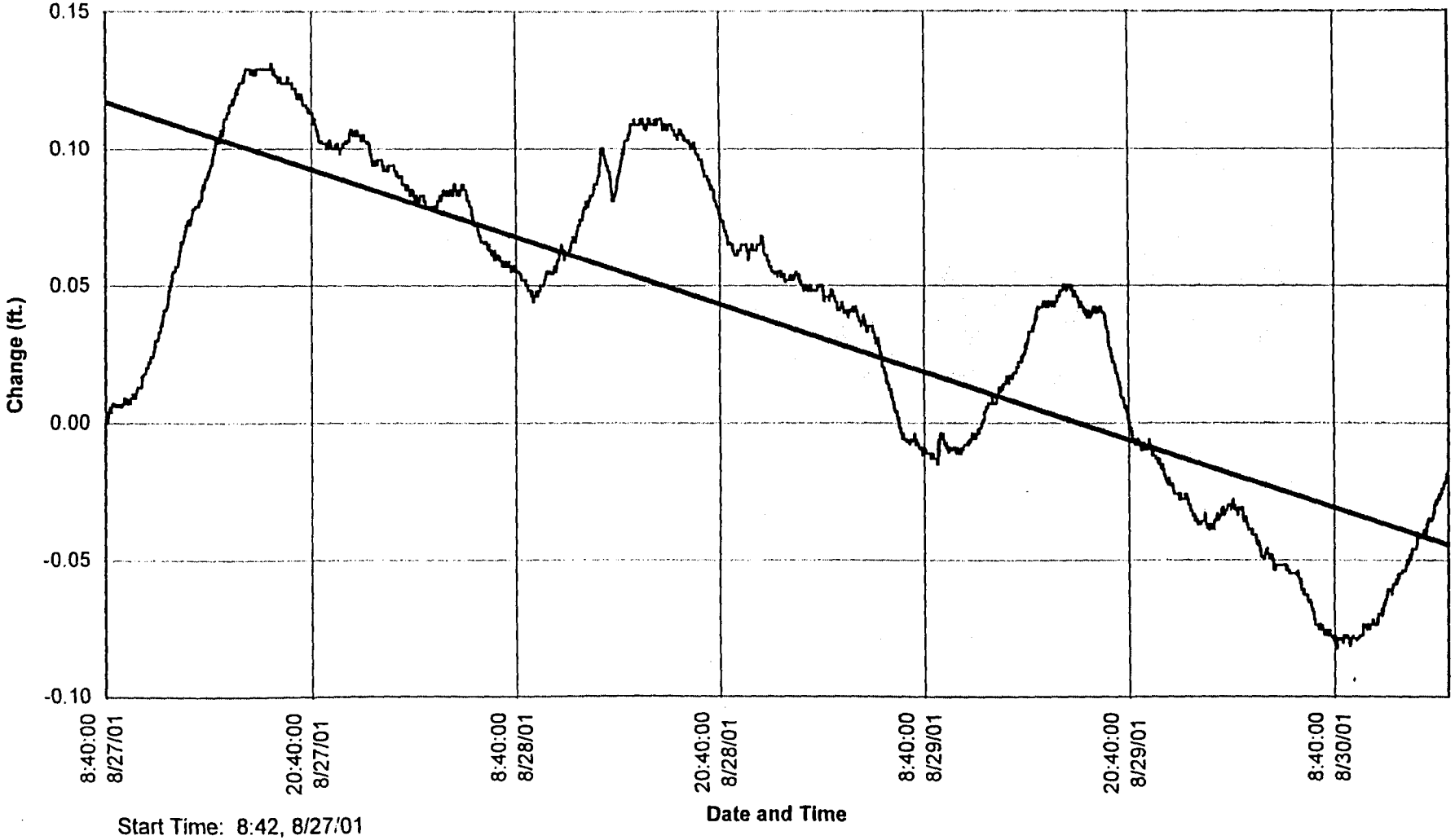
Start Time: 8:42, 8/27/01
End Time 15:10, 8/30/01

Recovery Test for 117-MW-10MS, Pump in 117-MW-03MS



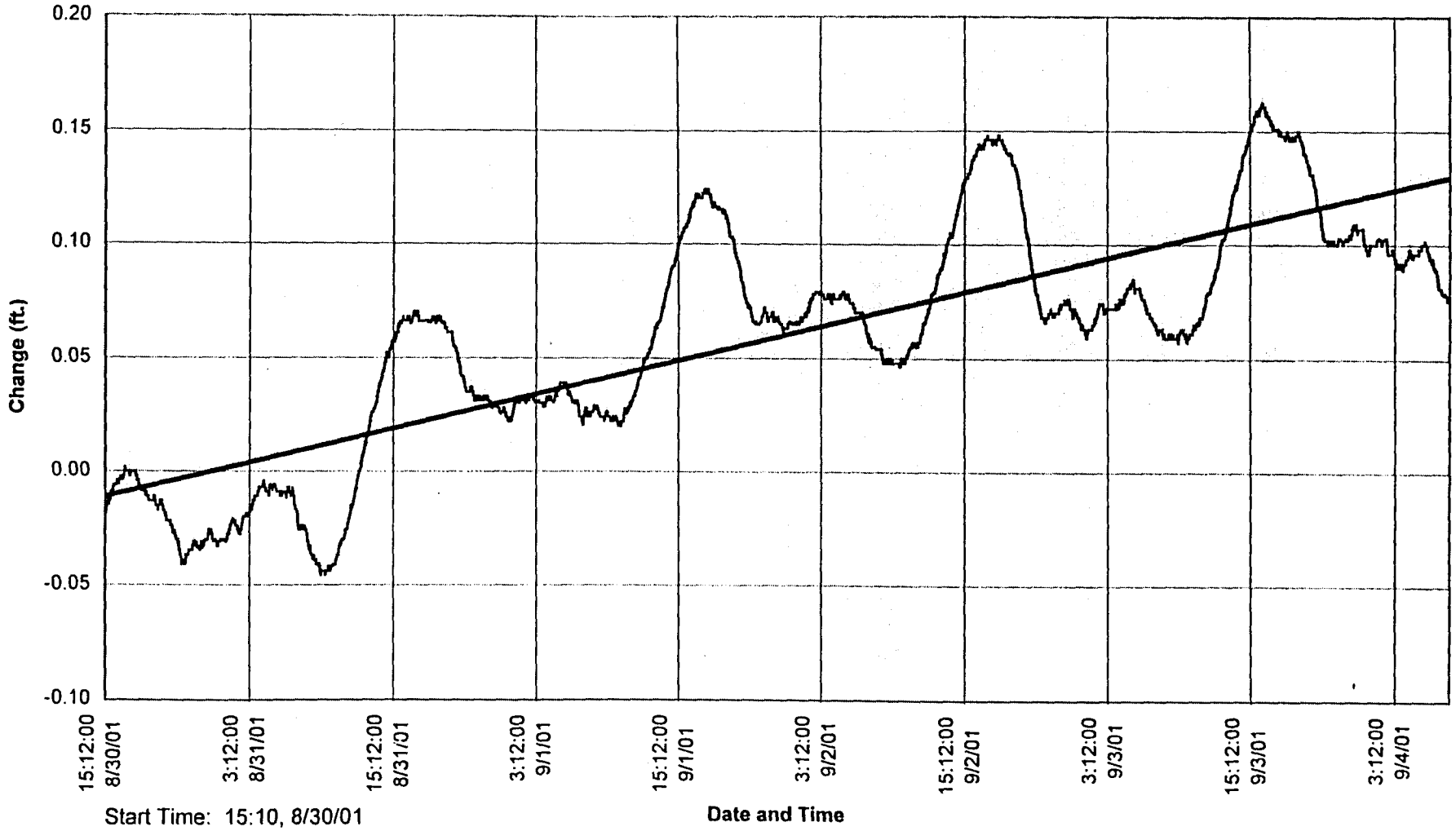
Start Time: 15:10, 8/30/01
End Time: 7:30, 9/4/01

Pump Test for 17-MW-05, 117-MW-03MS



Start Time: 8:42, 8/27/01
End Time: 15:10, 8/30/01

Recovery Test for 17-MW-05, 117-MW-03MS



Start Time: 15:10, 8/30/01
End Time: 7:30, 9/4/01

Certificates of Analysis

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 06, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-4948 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-014948
Collected by: M.Magee
Collected on: 07/25-26/01

Received: 07/27/01
Extracted: 07/30/01
Tested: 07/28-08/02/01
Reported: 08/03/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03MS-15 01-04948-1	117-MW-03MS-8hr 01-04948-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.05 [a]	0.06 [a]
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1 [b]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1 [b]
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	4.6	10.9
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [c]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	51	11
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	5.8
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	1.6	2.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	3.7	4.6
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	1
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03MS-15 01-04948-1	117-MW-03MS-8hr 01-04948-2
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (c)	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	5.4	5.3
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (c)	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	0.8	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-4948

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

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13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-4948

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-03MS-15	01-04948-1
117-MW-03MS-8hr	01-04948-2
Trip Blank	01-04948-4
CL1-EX-01-7/26	01-04948-3

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) M8015V:

Surrogate recovery in CL1-EX-01-7/26 was much higher than the control limit due to matrix interference.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562880
Page 1 of ___

Project Name/No. [1] Crows Landing 800063
Sample Team Members [2] M. Magee
Profit Center No. [3] 5515001
Project Manager [4] Bob Hulet
Purchase Order No. [6] 173773
Required Report Date [11]

Samples Shipment Date [7] 7/26/01
Lab Destination [8] APCL
Lab Contact [9] M Heckman
Project Contact/Phone [12] Rose Condit 925 288 2151
Carrier/Waybill No. [13] Fed Ex 8267 8597 9064

Bill to: [5] IT Corporation
4005 Port Chicago Hywy
Concord CA 94520
Attn: Rich Iannicca

Report to: [10] (Same)
Attn: Rose Condit

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-03MS-5	Groundwater	7/25/01 0815	40 mil VOA	5 x	HCL	VOC's 8260 TPH G/S.F 8015M		
↓		↓	Liter Amber	2 x	ICE	TPH D/M.O. 8015M	SAMPLES RECEIVED IN GOOD CONDITION TEMP = 4.1°C	
117-MW-03MS-8hr		7/25/01 1600	40 mil VOA	5 x	HCL	VOC's 8260 TPH G/S.F. 8015M		
↓		↓	Liter Amber	2 x	ICE	TPH D/M.O. 8015M		
Trip		NA	40 mil VOA	1 x	HCL	VOC's 8260 TPH G/JF 8015 D/MO INJF		
Temp		↓	↓	1 x	ICE			
LLI-EX-01-7/26		7/26/01	40 mL VOA	5 x	HCl	VOC 8260 TPH G/JF 8015M		
↓			1L AMBER	2 x	ICE	TPH D/MO 8015M [redacted]		

FOR LAB USE ONLY

4948

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐ 10 Day TAT

QC Level: [27]
I. ☐ II. ☐ III. ☒ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation)	Date: 7/26/01 Time:	1. Received by [28] (Signature/Affiliation) Marsha [illegible]	Date: 7/27/01 Time: 1930
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

MCA 3/15/91

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 4948 Client Name/Project: IT@CROWS LANDING

1. Sample Arrival

Date/Time Received 7/27/01 930 Date/Time Opened 7/27/01 945 By (name): MK

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☒ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☒ Signed, dated? By: _____
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received _____
☒ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☒ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 4.1°C

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☒ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12

If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DC
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☐ Intact? ☐ Broken? ☐ Docume
Type: ☒ plastic ☒ glass
☒ Quantity OK? ☐ Leaking?
☒ Caps tight? ☐ Air Bubble
Labels: ☒ Unique ID? ☒ Date/Time

7. Turn Around Time

☒ RUSH TAT: 3 day ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____)Date/Time: _____

Received/Checked by: MK Date: 27 Jul 2001 Time: 8:09 a.m.

This portion can be removed for Recipient's records.
Date 7/26/01 FedEx Tracking Number 826785979075
Sender's Name MARK SWANE Phone 209 837-0416
4948
Company IT CORPORATION/CRC
Address 4005 PORT CHICAGO HWY Dept./Floor/Suite/Room
City CONCORD State CA ZIP 94520
Your Internal Billing Reference

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [acal.texfiles]smprcl.tex.

189702

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 12, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5547 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015547
Collected by: M. Swank
Collected on: 08/27-28/01

Received: 08/29/01
Extracted: 08/30/01
Tested: 08/31-09/06/01
Reported: 09/07/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/27-8 01-05547-1	117-MW-03-8/27-15 01-05547-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.05J	0.02J
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [a]	<0.1 [a]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1
VOLATILE ORGANICS					
Dilution Factor				1 [b]	1 [c]
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	17.6	2.6
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	5.2	4.9
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	5.4	5.6
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	1.5	0.7
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/27-8 01-05547-1	117-MW-03-8/27-15 01-05547-2
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	0.6	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	0.6	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.78 (d)	<0.78	<0.78
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	0.3J	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/28-24 01-05547-3	Trip Blank 01-05547-4
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.05J	0.01J
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 (d)	-
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	-
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	9J
BENZENE	8260B	µg/L	0.5	13.4	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	4.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	6.1	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	1.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/28-24 01-05547-3	Analysis Result Trip Blank 01-05547-4
1,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	μg/L	0.5	0.4J	<0.5
HEXACHLOROBUTADIENE	8260B	μg/L	0.5	<0.5	<0.5
2-HEXANONE	8260B	μg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	μg/L	0.5	0.8	<0.5
P-ISOPROPYLTOLUENE	8260B	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	μg/L	0.78 (d)	<0.78	0.98
4-METHYL-2-PENTANONE (MIBK)	8260B	μg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	μg/L	1	<1	<1
NAPHTHALENE	8260B	μg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
STYRENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5
TOLUENE	8260B	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	μg/L	0.5	0.4J	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	μg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	μg/L	1	1	<1
T-BUTYL ALCOHOL	8260B	μg/L	20	<20	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Sample chromatogram contained two unknown isolated peaks at about C_{11} and C_{17} range respectively.
(b) Sample also contained about 5 μg/L of Tetrahydrofuran.
(c) Sample also contained about 11 μg/L of Tetrahydrofuran.
(d) MDL reported.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-5547

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5547

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-03-8/27-15	01-05547-2
117-MW-03-8/27-8	01-05547-1
117-MW-03-8/28-24	01-05547-3
Trip Blank	01-05547-4

2. Analytical Methodology

Samples are analyzed by EPA methods
8260B (Volatile organics),
M8015V (Gasoline),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),
M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) M8015V:
Surrogate recovery in the Matrix Spike was 61%, lower than 75-125% control limit.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562897
Page 1 of 1

Project Name/No. [1] 800063 Crows Landing
Sample Team Members [2] M Swank
Profit Center No. [3] 5515001
Project Manager [4] B Hulet
Purchase Order No. [6] 173773
Required Report Date [11]

Samples Shipment Date [7] 8/28/01
Lab Destination [8] APCL
Lab Contact [9] M. Heckman
Project Contact/Phone [12] Rose Condit 925 888 2151
Carrier/Waybill No. [13] Fed Ex 8267 8597 9318

Bill to: [5] IT Corp
4005 Port Chicago Hyhwy
Concord CA 94520
Attn: Rich Iannicca

Report to: [10] (same)
Rose Condit

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-03-8/27-15	Groundwater	8/27/01 0900	40 mil VOA	5x	HCL	VOC's 8260 TPH G/JF 8015m		
↓	↓	↓	Liter Amber	2x	ICE	TPH-D/mo 8015m	Sample Received in Good Condition	
117-MW-03-8/27-8		8/27/01 1630	40 mil VOA	5x	HCL	VOC's 8260 TPH G/JF 8015m		
↓		↓	Lt Amber	2x	ICE	TPH D/mo 8015m	Temp=4.7°C	
117-MW-03-8/28-24		8/28/01 0830	40 mil VOA	5x	HCL	VOC's 8260 TPH-G/JF 8015m		
↓	↓	↓	Lt Amber	2x	ICE	TPH-D/mo 8015m		
Trip	water	8/28/01 0800	40 mil VOA	2x	HCL	VOC's 8260 TPH-G/JF 8015m		
	Last Item							

FOR LAB USE ONLY

FOR LAB USE ONLY

5547

Special Instructions: [23] Silica Gel clean up for TPH-D/mo

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐ 10 Day TAT

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Dave Pluet PQCM	Date: 8/28/01 Time: 1000	1. Received by [28] (Signature/Affiliation) APCL	Date: 8/29/01 Time: 1000
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

MCA 3/15/01

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: 5547 Client Name/Project: CROWS

1. Sample Arrival

Date/Time Received 8/29/01 1000 Date/Time Opened 8/29/01 1000 By (name): RK

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☑ FedEx ☐ APCL Empl: _____

2. Chain-of-Custody (CoC)

☑ With Samples? ☐ Faxed? ☐ Client has Copy? ☑ Signed, dated? By: _____
☑ Project ID? ☑ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received _____
☑ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☑ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs): _____

3. Shipping Container/Cooler

☑ Cooler Used? # of 1 Cooled by: ☑ Ice ☐ Blue Ice ☐ Dry Ice ☐ None
Temp °C 4.7 _____ _____ _____ _____ _____
(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).
Cooler Custody Seal? ☐ Absent ☑ Intact ☐ Tampered?

4. Sample Preservation

☐ pH <2 ☐ pH >12
If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. Holding-time Requirements

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. Sample Container Condition

☑ Intact? ☐ Broken? ☐ Documented? Number: _____
Type: ☐ plastic ☑ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☑ Quantity OK? ☐ Leaking? ☐ Anomaly?
☑ Caps tight? ☐ Air Bubbles? ☐ Anomaly?
Labels: ☑ Unique ID? ☐ Date/Time ☐ Preserved?

7. Turn Around Time

☑ RUSH TAT 5 ☐ Std (7-10 days) ☐ Not Marked

8. Sample Matrix

☐ Drinking H_2O ☐ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☑ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. Pre-Login Check List Completed & OK?

☑ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____)Date/Time: _____

Received/Checked by: _____ Date: 29 Aug 2001 Time: 8:32 a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.textfiles]smprcl.tex.

016002

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 18, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5574 and your project 800063 Crows Landing . Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015574
Collected by: M. Swank
Collected on: 08/29/01

Received: 08/30/01
Extracted: 09/04/01
Tested: 08/31-09/10/01
Reported: 09/13/01

Sample Description: Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/29-48 01-05574-1
Dilution Factor				1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.04J
Dilution Factor				1
JP-4	M8015V	mg/L	0.05	<0.05
VOLATILE ORGANICS				
Dilution Factor				1 [a]
ACETONE	8260B	µg/L	10	<10
BENZENE	8260B	µg/L	0.5	5.9
BROMOBENZENE	8260B	µg/L	0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	5.7
CHLOROBENZENE	8260B	µg/L	0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	4.4
CHLOROMETHANE	8260B	µg/L	0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	0.8
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5

Applied P & Ch Laboratory
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/29-48 01-05574-1
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	0.9
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	<0.5
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	0.5J
TERT BUTYL ALCOHOL (TBA)	8260B	µg/L	20	<20

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result Trip Blank 01-05574-2
Dilution Factor				1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.01J
Dilution Factor				1
JP-4	M8015V	mg/L	0.05	<0.05
VOLATILE ORGANICS				
Dilution Factor				1
ACETONE	8260B	µg/L	10	<10
BENZENE	8260B	µg/L	0.5	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 (b)	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (b)	<0.56
2-HEXANONE	8260B	µg/L	10	<10

Applied P & Ch Laboratory
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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result Trip Blank 01-05574-2
ISOPROPYLBENZENE (CUMENE)	8260B	μg/L	0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	μg/L	0.5	<0.5
METHYLENE CHLORIDE	8260B	μg/L	2 [b]	3
4-METHYL-2-PENTANONE (MIBK)	8260B	μg/L	10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	μg/L	1	<1
NAPHTHALENE	8260B	μg/L	0.5	<0.5
N-PROPYLBENZENE	8260B	μg/L	0.5	<0.5
STYRENE	8260B	μg/L	0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5
TETRACHLOROETHENE	8260B	μg/L	0.5	<0.5
TOLUENE	8260B	μg/L	0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5
TRICHLOROETHENE	8260B	μg/L	0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	μg/L	0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	μg/L	0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5
VINYL CHLORIDE	8260B	μg/L	0.5	<0.5
XYLENE (TOTAL)	8260B	μg/L	1	<1
TERT BUTYL ALCOHOL (TBA)	8260B	μg/L	20	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/29-48 01-05574-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.06J
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.07J

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Sample also contained about 2 μg/L of Tetrahydrofuran.
[b] MDL reported.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-5574

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5574

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-03-8/29-48	01-05574-1
Trip Blank	01-05574-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260 (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562893
Page 1 of ____

Project Name/No. [1] CROWS LANDING 800063
Sample Team Members [2] M. SWANK
Profit Center No. [3] 5515001
Project Manager [4] BOB HULET
Purchase Order No. [6] 173773
Required Report Date [11] 9/11/01

Samples Shipment Date [7] 8/29/01
Lab Destination [8] APCL
Lab Contact [9] M HECKMAN
Project Contact/Phone [12] ROSE CONDIT 925 288 2151
Carrier/Waybill No. [13] FEDEX 8267 8212 3910

Bill to: [5] IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA
ATTN: RICH IANNICCA

Report to: [10] (SAME)
ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-03-8/29-98	WATER	8/29/01 0830	VOA	5x40mL	HCl	VOC'S (8260B) TPH G/JF (8015B)		
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		
TRIP BLANK	↓	NA	VOA	1x40mL	HCl	VOC'S (8260B) TPH G/JF (8015B)		

NO FURTHER ENTRIES

5574

FOR LAB USE ONLY
Samples Received In Good Condition
Temp = 4.3°C

FOR LAB USE ONLY

Special Instructions: [23] SILICA GEL CLEANUP FOR DIESEL/MO

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☑ Rush ☐ 10-DAY TAT

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) M. SWANK	Date: 8/29/01 Time: 1000	1. Received by [28] (Signature/Affiliation) Paul K	Date: 8/30/01 Time: 1000
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 21, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5607 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015607
Collected by: M. Swank
Collected on: 08/30/01

Received: 08/31/01
Extracted: 09/05/01
Tested: 09/05-08/01
Reported: 09/17/01

Sample Description: Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/30-72 01-05607-1	Trip Blank 01-05607-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.05J	<0.05
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	8.2	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [a]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	4.3	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	4.9	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/30-72 01-05607-1	Analysis Result Trip Blank 01-05607-2
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [a]	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	5.7	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [a]	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	0.3J	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-03-8/30-72 01-05607-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] MDL reported.
[b] Sample chromatogram contained small amount of unknown isolated peaks in Diesel range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-5607

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5607

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-03-8/30-72	01-05607-1
Trip Blank	01-05607-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015E(TPH: Diesel),
M8015E (TPH: Motor Oil),
M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562894
Page 1 of ____

White: To accompany samples
Yellow: Field copy

Project Name/No. [1] CROWS LANDING 800063
Sample Team Members [2] M. SWANK
Profit Center No. [3] 5515001
Project Manager [4] BOB HULET
Purchase Order No. [6] 173773
Required Report Date [11] 9/12/01

Samples Shipment Date [7] 8/30/01
Lab Destination [8] APCL
Lab Contact [9] M. HECKMAN
Project Contact/Phone [12] ROSE CONDIT (925) 288 2151
Carrier/Waybill No. [13] FEDEX 8267 8212 3710

Bill to: [5] IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA
ATTN: RICH IANNICCA

Report to: [10] (SAME)
ATTN: ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-03-8/30-72	WATER	8/30/01 1400	VOA	5x40mL	HCL	VOC's +MTBE (8260B) TPH G/S.F (8015B)	SAMPLES RECEIVED IN GOOD CONDITION TEMP= 3.8°C	
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		
TRIP BLANK		NA	VOA	1x40mL	HCL	VOC's +MTBE (8260B) TPH G/JF (8015B)		

5607

NO FURTHER ENTRIES
MS

FOR LAB USE ONLY

Special Instructions: [23] SILICA GEL CLEANUP FOR DIESEL/MO

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☑ Rush ☐ 10-DAY TAT

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) M. SWANK	Date: 8/30/01 Time: 1500	1. Received by [28] (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 8/31/01 Time: 1130
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

MCA 3/15/91

Applied P & Ch Laboratory
13760 Magnolia Ave., Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Sample Receiving Checklist

APCL ServiceID: **5607** Client Name/Project: IT@CROWS LANDING

1. **Sample Arrival**

Date/Time Received 8/31/01 Date/Time Opened 8/31/01 By (name): MA

Custody Transfer: ☐ Client ☐ Golden State ☐ UPS ☐ US Mail ☒ FedEx ☐ APCL Empl: _____

2. **Chain-of-Custody (CoC)**

☒ With Samples? ☐ Faxed? ☒ Client has Copy? ☒ Signed, dated? By: _____
☒ Project ID? ☒ Analyses Clear? ☐ Hold Samples? #on Hold _____ # Received _____
☒ CoC/Docs Zip-Locked under lid? ☐ Compos.#: _ ☒ #Samples OK? _____
☐ Discrepancies? ☐ Client notified? ☐ Response (attach docs) _____

3. **Shipping Container/Cooler**

☒ Cooler Used? # of 1 Cooled by: ☒ Ice ☐ Blue Ice ☐ Dry Ice ☐ None

Temp °C 3.8°C _____ _____ _____ _____ _____

(Cooler temperature measured from temp blank if present, otherwise measured from the cooler).

Cooler Custody Seal? ☐ Absent ☐ Intact ☐ Tampered?

4. **Sample Preservation**

☐ pH <2 ☐ pH >12

If Not, pH = _____ Preserved by: ☐ Client ☐ APCL ☐ Third Party _____

5. **Holding-time Requirements**

☐ pH 24hr ☐ BACT 6/24hr ☐ Cr^{VI} 24hr ☐ NO_3^- 48hr ☐ BOD 48hr
☐ Cl_2 ASAP ☐ Turbidity 48hr ☐ DO ASAP ☐ Fe(II) ASAP
☐ HT Expired? ☐ Client notified?

6. **Sample Container Condition**

☒ Intact? ☐ Broken? ☐ Documented? Number: _____

Type: ☒ plastic ☒ glass ☐ Tube: brass/SS ☐ Tedlar Bag
☒ Quantity OK? ☐ Leaking? ☐ Anomaly?
☒ Caps tight? ☐ Air Bubbles? ☐ Anomaly?

Labels: ☒ Unique ID? ☒ Date/Time ☐ Preserved?

7. **Turn Around Time**

☒ RUSH TAT: 5 day ☒ Std (7-10 days) ☐ Not Marked

8. **Sample Matrix**

☐ Drinking H_2O ☒ Other Liq ☐ Soil ☐ Wipe ☐ Polymer ☐ Air ☐ Other: _____
☐ Ground H_2O ☐ Sludge ☐ Filter ☐ Oil/Petro ☐ Paint ☐ W. Water ☐ Extract ☐ Unknown

9. **Pre-Login Check List Completed & OK?**

☒ ALL OK? (if not, attach docs) ☐ Client Contact? (Name: _____)Date/Time: _____

Received/Checked by: MA Date: 31 Aug 2001 Time: 8:30a.m.

*HT: Samples must be analyzed for results to reflect total concentrations. Results generated outside required of holding times are considered minimal values and may be used to define waste as hazardous but not as non-hazardous.

DocumentFile: [neal.texfiles]smprcl.tex.

Attachment 3

117-MW-10(S)

Summary Tables

Hydraulic Conductivity values indicate that the aquifer material is sandy silts to clay.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter In.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-10S	0-83	0.109	10.44	10.0 / 2	165	0.000150	0.218	0.0013	0.1749	0.003183	Neuman
Screened: 50-75					25			0.0086			
8/2/01											
Step Test											
T=1294(Q/s)							1.531646075	0.0613			Jacob Equation

No observation wells were monitored during this test.

Hydraulic Conductivity values indicate that the aquifer material is sandy silts to clay.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter In.	Saturated Thickness* Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-10S	5	0.224	10.5	10.0 / 2	165	NA	NA	NA	NA	NA	NA
Screened: 50-75	20	0.1			25						
8/6-13/01	85	0.046									
	277	0.022									
	415	0.007									
	4330	0.004									
	5260	0									
T=913(Q/s)							0.985779143	0.0394			Jacob Equation

Observation Wells	Distance to Pumping Well Feet	Sreened Interval		Borehole/Casing Diameter In.		
117-MW-04S	122.5	49-74		8.25 / 2	165	NR
117-MW-02S	57.5	50-75		8.25 / 2	165	NR
117-MW-05S	110	50-75		8.25 / 2	165	NR
117-MW-11S	118	50-75		10.0 / 2	165	NR

Note: NR = No Response. None of the observation wells showed a response to pumping 117-MW-10MS.

UST 117
Data Summary
117-MW-10(S)

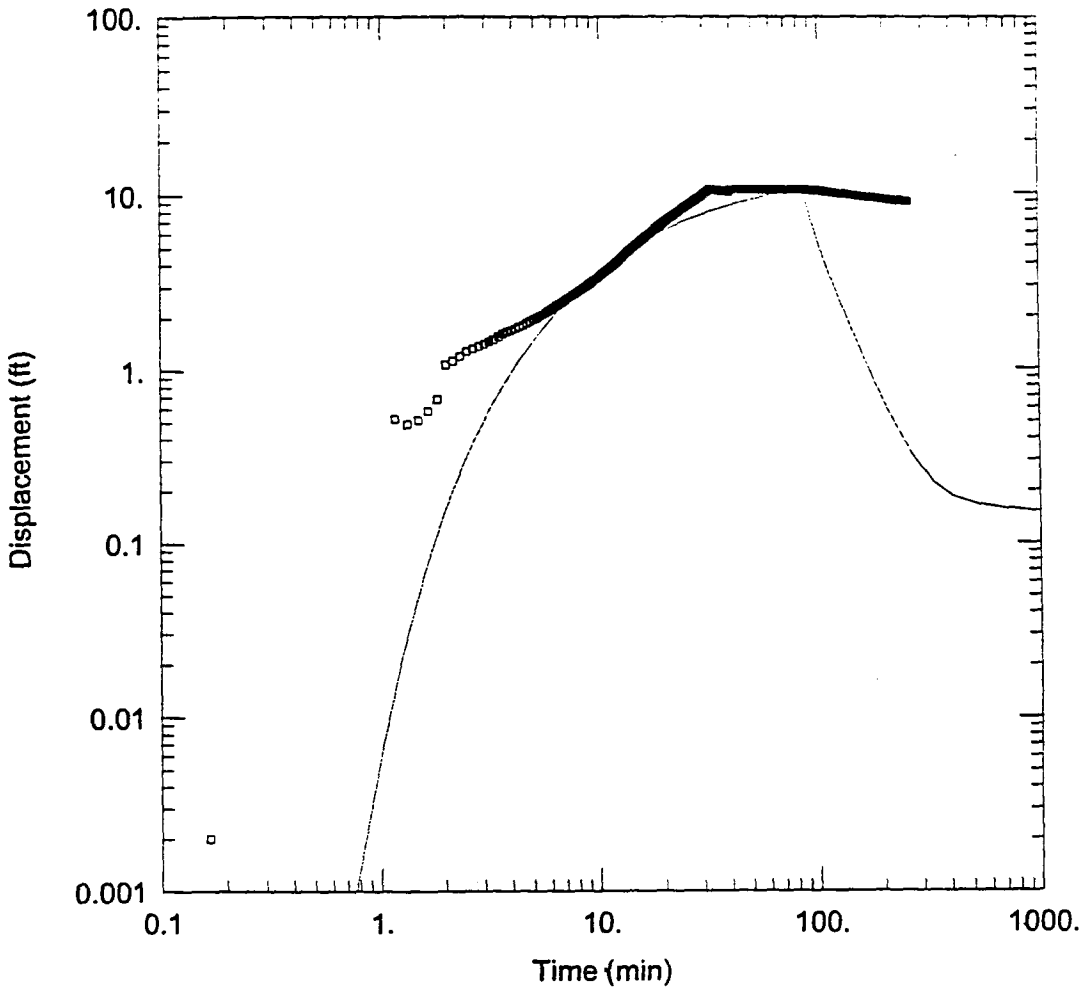
Sample ID	Method	117-MW-10 (S)					
Aquifer		shallow					
Screen Interval (ft bgs)		50 - 75					
Description		Aug-01[1]	Aug-01[2]	Aug-01[3]	Aug-01[4]	Aug-01[5]	Aug-01[6]
pH	field						
conductivity	field						
ORP	field						
dissolved oxygen	field						
TPH-gasoline	M8015V	**0.11** mg/L	**0.11** mg/L	**0.11** mg/L	**0.1** mg/L	**0.11** mg/L	**0.11** mg/L
TPH-jet fuel	M8015V	<0.05 mg/L	<0.5 mg/L	<0.05 mg/L	<0.5 mg/L	<0.5 mg/L	<0.5 mg/L
TPH-diesel	M8015E	**0.2** mg/L	<0.1 mg/L	<10 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
TPH-motor oil	M8015E	**0.1** mg/L	<0.1 mg/L	<10 mg/L	<0.1 mg/L	<0.1 mg/L	**0.05J** mg/L
benzene	8260	**0.4J** µg/L	**0.6** µg/L	**0.9** µg/L	**0.9** µg/L	**0.9** µg/L	<0.5 µg/L
carbon tetrachloride	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
chloroform	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
chloromethane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	8260	**115** µg/L	**100** µg/L	**62.2** µg/L	**84.9** µg/L	**69.1** µg/L	**157** µg/L
1,2-dichloropropane	8260	**0.6** µg/L	**0.5** µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	**0.9** µg/L
ethylbenzene	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
methylene chloride	8260	<2 µg/L	<2 µg/L	<2 µg/L	<2 µg/L	<2 µg/L	**0.4J** µg/L
toluene	8260	<0.5 µg/L	**0.4J** µg/L	**1.7** µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	8260	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L
t-butyl alcohol	8260	**95** µg/L	**86** µg/L	**85** µg/L	**89** µg/L	**76** µg/L	<20 µg/L

Detections are bolded

[1] Sample collected prior to pump test (sample pump [new]).
[2] Sample collected at start of pump test (leachate pump).
[3] Sample collected after 8 hours of pumping (leachate pump).
[4] Sample collected after 24 hours of pumping (leachate pump).
[5] Sample collected after 48 hours of pumping (leachate pump).
[6] Sample collected after aquifer testing (sample pump).

Note: Some sample results are preliminary and have not been validated. Results are presented for comparison only and may change during validation.

Step Test



WELL TEST ANALYSIS

Data Set: C:\...\117-MW-10S_8_2_01.aqt
Date: 12/03/01 Time: 13:30:45

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10S
Test Date: 8-02-01

AQUIFER DATA

Saturated Thickness: 165. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10S	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-10S	1	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.00015 ft^2/min
S = 0.003183
Sy = 0.1749
ß = 0.1

CTO 4 – UST Cluster 1
Aquifer Testing

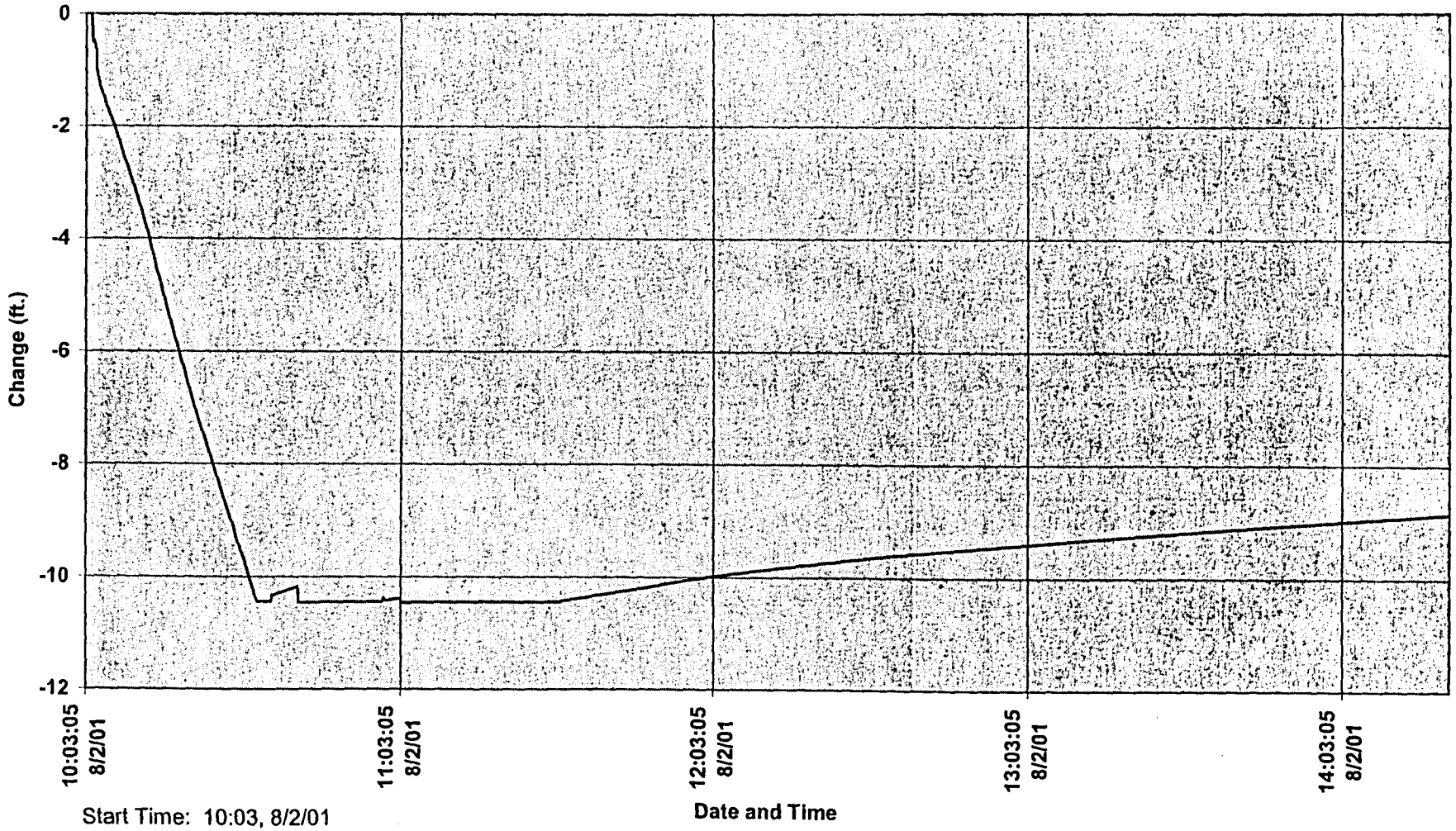
Date: 8/2/01
Monitoring Well ID: 117-MW-10S
Transducer No.:
Transducer Depth:

Test No.: STEP TEST
Pumping Well ID: 117-MW-10S

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0915	0	55.35	0	528.04	0	0	—	—
0920	START	55.35	0	-	—	-	—	-
0930	15	63.42	8.07	-	—	-	—	-
0935	20	65.87	10.52	-	—	-	—	-
0938	STOP	PUMP	TRIPPED / RESTART		—	-	—	—
1038	# ATTEMPTED TO REACH FLOW BUT COULD NOT, END OF TEST							
1038	83	T.O.P.	—	536.59	8.00	—	—	—

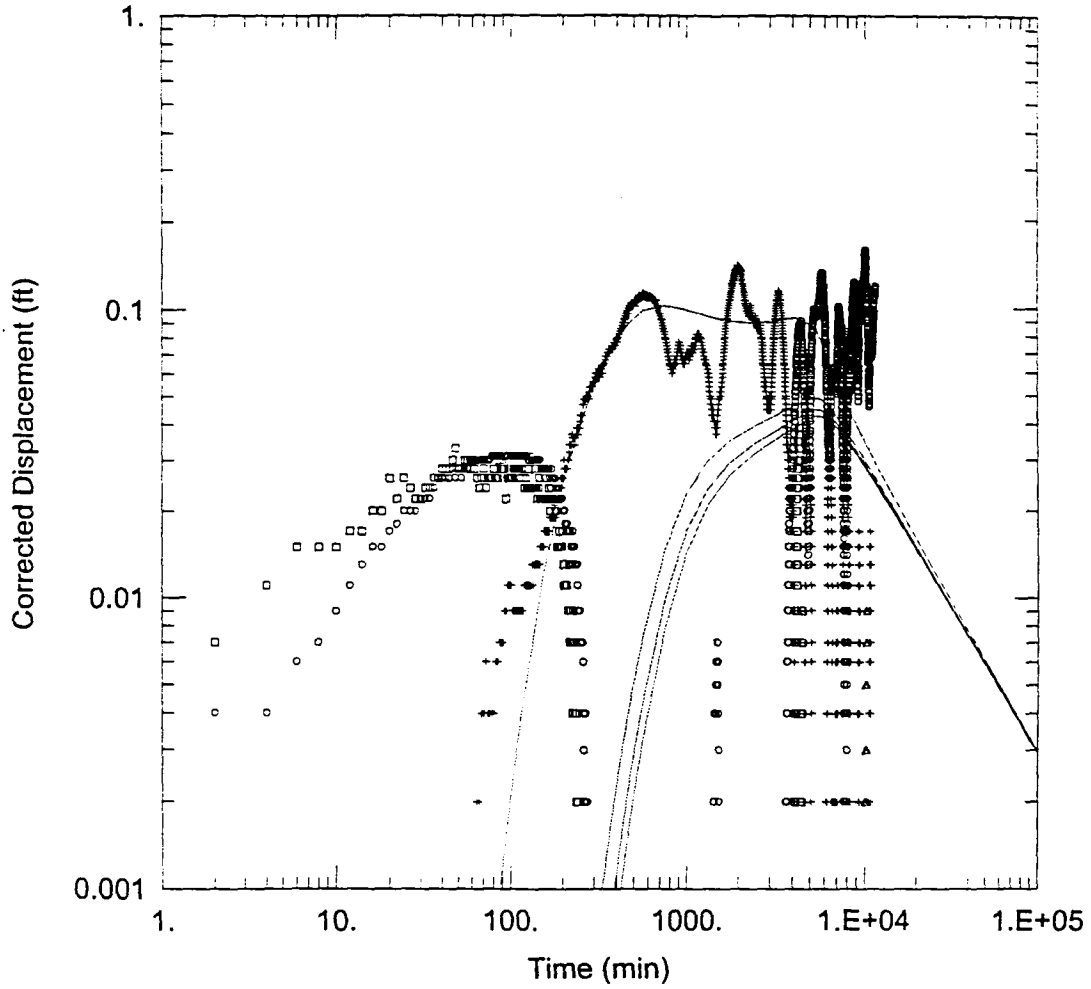
Notes:

Step Test 117-MW-10S



Start Time: 10:03, 8/2/01
End Time: 14:23, 8/2/01

48-hour Drawdown Test



PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crow's Landing
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-10S
Test Date: 8/6/01

AQUIFER DATA

Saturated Thickness: 165. ft

Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10S	6.386E+006	1.972E+006

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-04S	6.386E+006	1.972E+006
+ 117-MW-02S	6.386E+006	1.972E+006
○ 117-MW-11S	6.386E+006	1.972E+006
△ 117-MW-05S	6.386E+006	1.972E+006

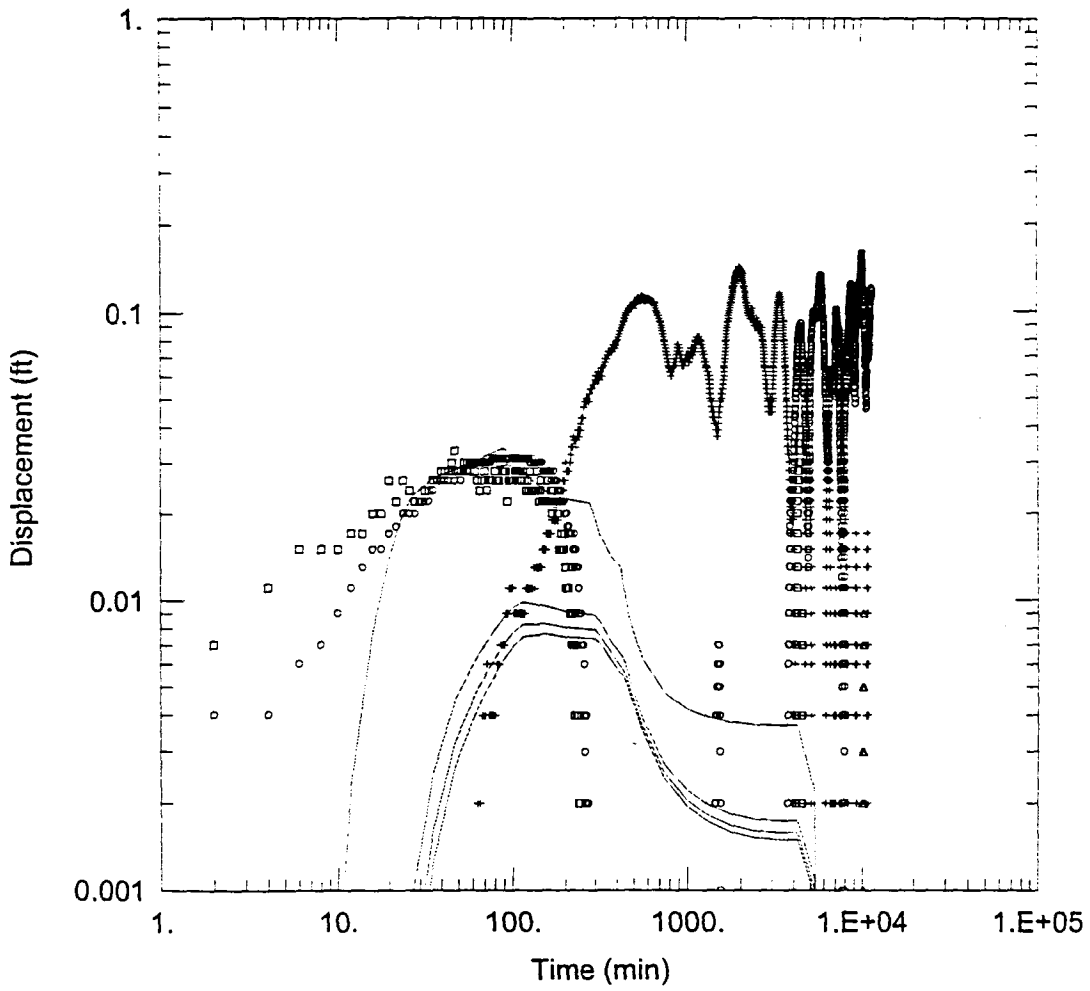
SOLUTION

Aquifer Model: Unconfined

Solution Method: Theis

T = 2.752 ft^2/day

S = 0.0009916



PROJECT INFORMATION

Company: IT Corporation
Client: NASA Crow's Landing
Project: 800063
Test Location: Crows Landing, CA
Test Well: 117-MW-10S
Test Date: 8/6/01

AQUIFER DATA

Saturated Thickness: 165. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10S	6.386E+006	1.972E+006

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-04S	6.386E+006	1.972E+006
· 117-MW-02S	6.386E+006	1.972E+006
◦ 117-MW-11S	6.386E+006	1.972E+006
▵ 117-MW-05S	6.386E+006	1.972E+006

SOLUTION

Aquifer Model: Unconfined
T = 154.5 ft^2/day
Sy = 0.1

Solution Method: Neuman
S = 0.00234
Kz/Kr = 0.1802

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/6/01
Monitoring Well ID: 117-MW-105
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-105

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/6/01	0810	—	55.30	—	537.49	0	0	117-MW-105-15	0830
	0815	5	55.30	0	535.61	1.12	0.224	—	—
	0830	20	63.42	8.12	540.11	2.62	0.100	—	—
	0935	85	65.57	10.57	544.02	6.53	0.046	—	—
	0938	88	WATER TOP PUMP	—	544.02	6.53	0.046	—	—
	1247	277	T.O.P.	—	549.52	12.03	0.022	—	—
	1505	415	T.O.P.	—	550.44	12.95	0.007	117-MW-105-8	1630
8/7/01	0830	1466	T.O.P.	—	55[illegible]	18.64	0.005	117-MW-105-24	0830
8/8/01	[illegible]	2792	T.O.P	—	5[illegible].12	25.63	0.005	117-MW-105-48	0830
8/9/01	[illegible]	4330	T.O.P	—	56[illegible]	31.94	0.004		
8/10/01	0930	10,100	[illegible]	0.90	569.43	POWER SHORT CIRCUIT CAUSED SHUT OFF.			
						SAMPLED WELL BY PURGING W/ GRUNDFOS PUMP AT 1000. FLOW METER CLOGGED (117-MW-105)			1000

No functioning [illegible]

Notes: RECOVERY TEST BEGUN AT 0900, 8/10

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/6/01
Monitoring Well ID: 117-MW-045
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10[illegible]

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/6/01	0510	0	54.65	—	—	1.12	—	—	—
	1700	530	54.53	—	—	12.95	—	—	—
8/7/01	0840	1470	54.61	—	—	18.64	—	—	—
8/8/01	0831	2901	54.65	—	—	25.63	—	—	—
8/9/01	0800	4310	54.70	—	—	31.94	—	—	—

Notes: DATALOGGER PLACED IN WELL. RUN THROUGHOUT THE TEST.
RECOVERY TEST BEGUN AT 0800 8/10

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/6/01
Monitoring Well ID: 117-MW-025
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-101

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/6/01	0810	0	56.67	–	–	1.12	–	–	–
	1700	530	56.60	–	–	12.95	–	–	–
8/7/01	0840	1470	56.64	–	–	18.64	–	–	–
8/8/01	0810	2880	56.69	–	–	25.63	–	–	–
8/9/01	0812	4322	56.75	–	–	31.94	–	–	–

Notes: DATALOGGER PLACED IN WELL, RUN THROUGHOUT TEST
RECOVERY TEST BEGUN AT 0:00 8/10

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 8/6/01
Monitoring Well ID: 117-MW-115
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-105

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0810	0	56.70	–	–	1.12	–	–	–
1700	530	56.70	–	–	12.95	–	–	–
0840	1470	56.75	–	–	18.64	–	–	–
0831	2901	56.80	–	–	25.63	–	–	–
0806	4316	56.86	–	–	31.94	–	–	–

Notes: DATALOGGER PLACED IN WELL, RUN THROUGHOUT TEST
RECOVERY TEST BEGUN AT 0:00, 8/10

CTO 4 – UST Cluster 1
Aquifer Testing

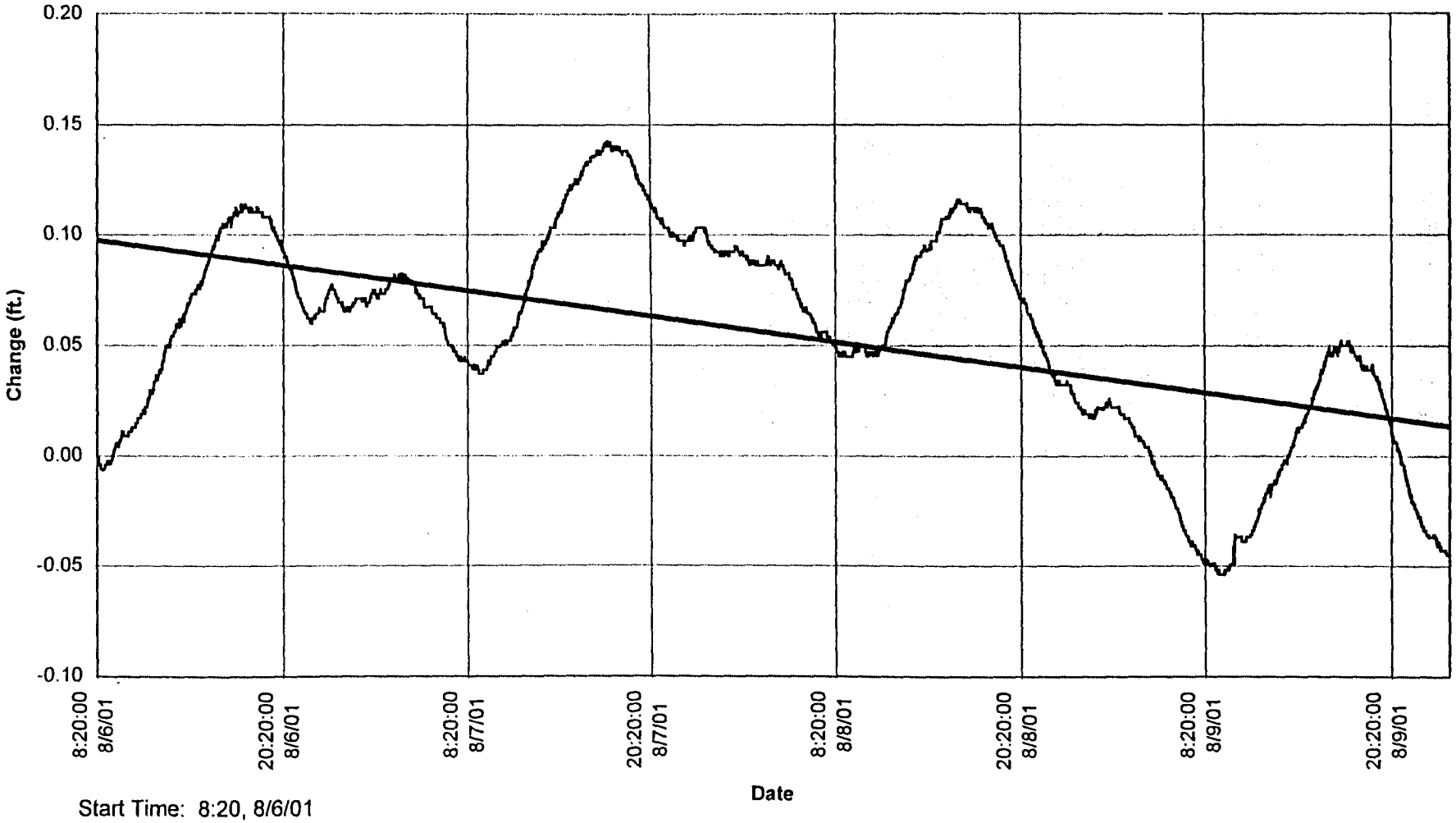
Date: 8/6/01
Monitoring Well ID: 117-MW-05S
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10S

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
8/6/01	0910	0	53.52	–	–	1.12	–	–	–
	1700	536	53.40	–	–	12.95	–	–	–
8/7/01	0942	1472	53.44	–	–	18.64	–	–	–
8/8/01	0821	2891	53.50	–	–	25.63	–	–	–
8/9/01	0816	4326	53.51	–	–	31.94	–	–	–

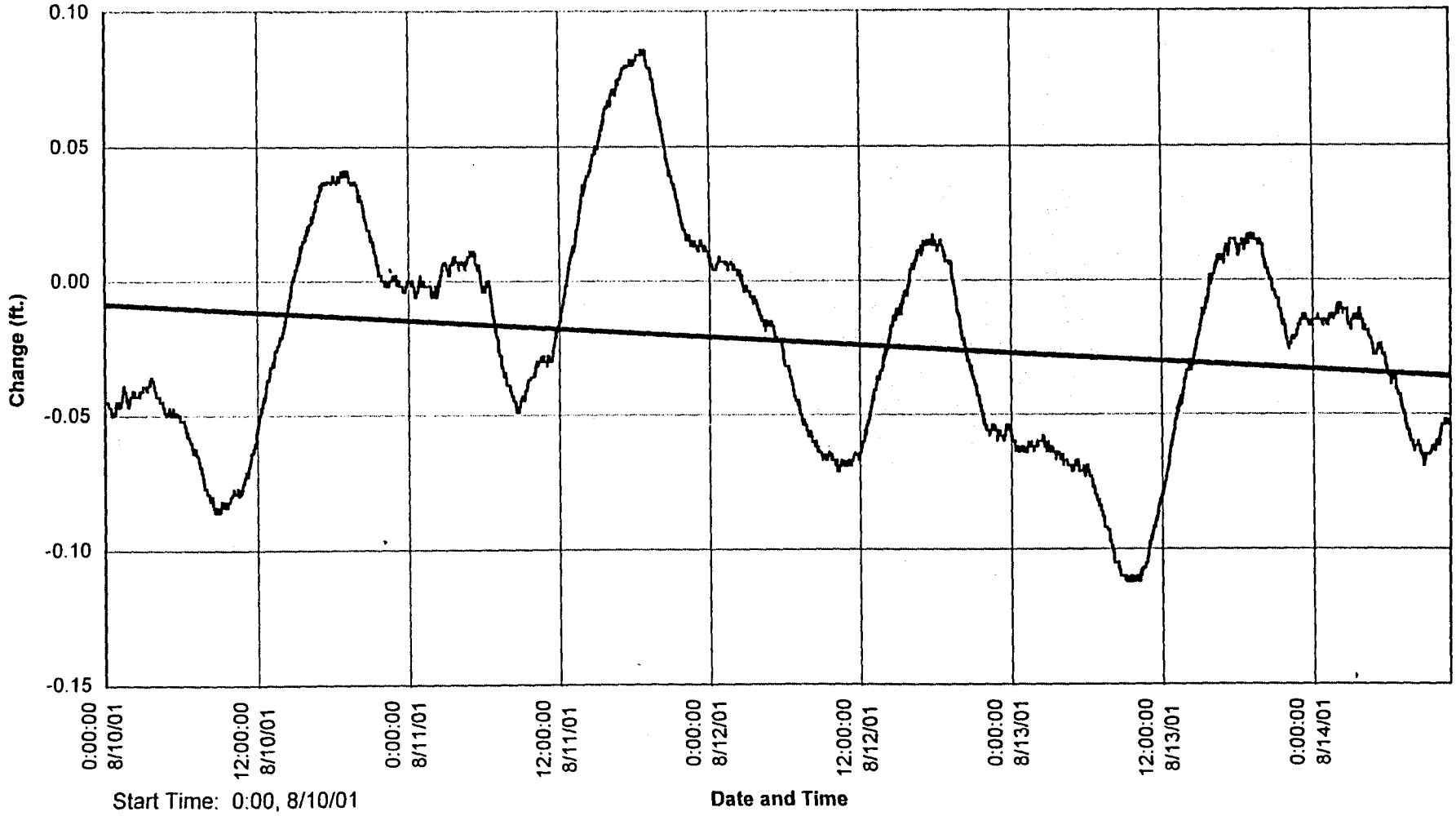
Notes: DATALOGGER PLACED IN WELL, RUN THROUGHOUT TEST
RECOVERY TEST BEGUN AT 0:00, 8/12

Pump Test Drawdown for 117-MW-02S, Pump in 117-MW-10S



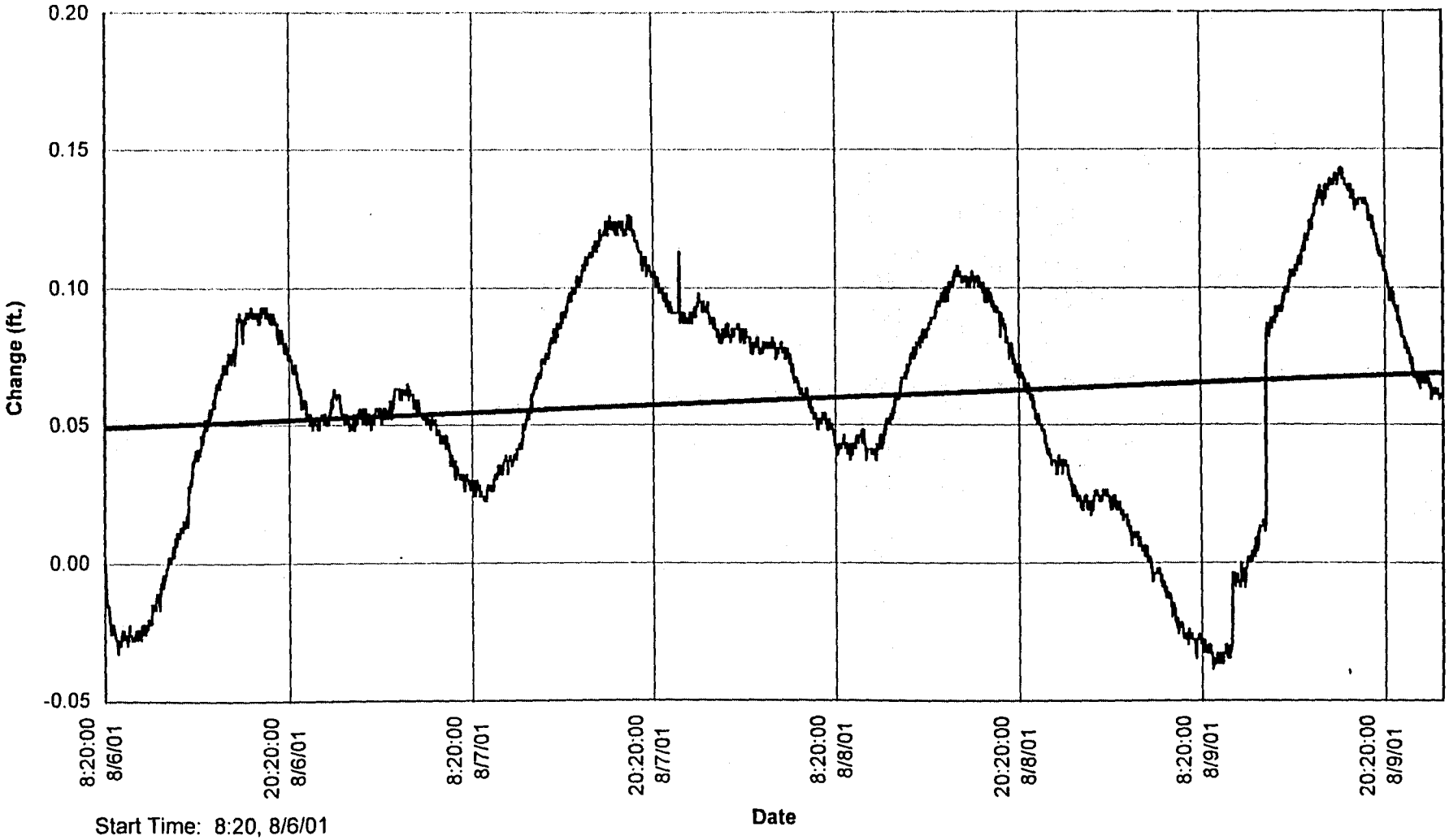
Start Time: 8:20, 8/6/01
End Time:0:00, 8/10/01

Recovery Test for 117-MW-02S, Pump in 117-MW-10S



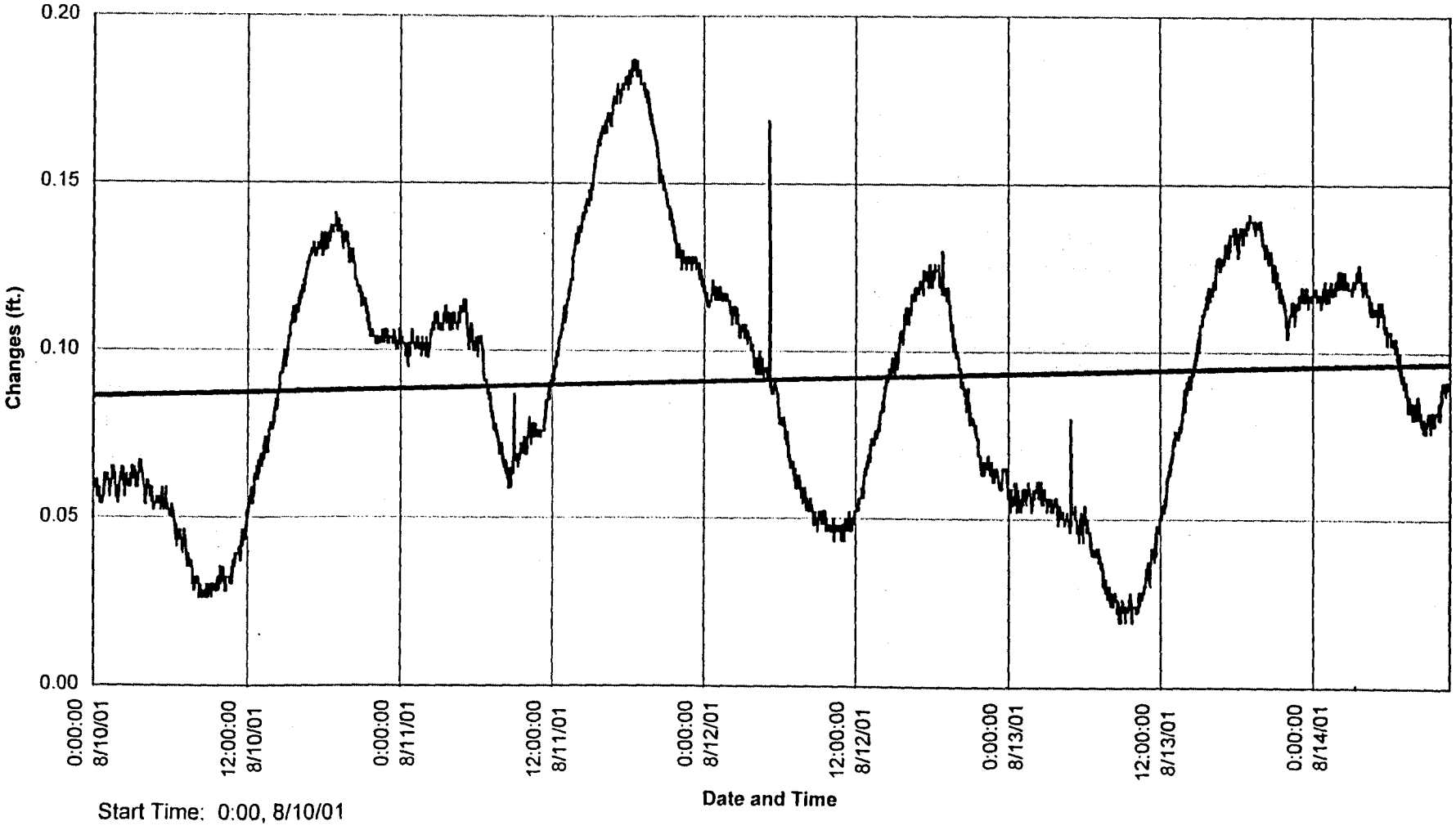
Start Time: 0:00, 8/10/01
End Time: 10:30, 8/14/01

Pump Test Drawdown for 117-MW-04S, Pump in 117-MW-10S



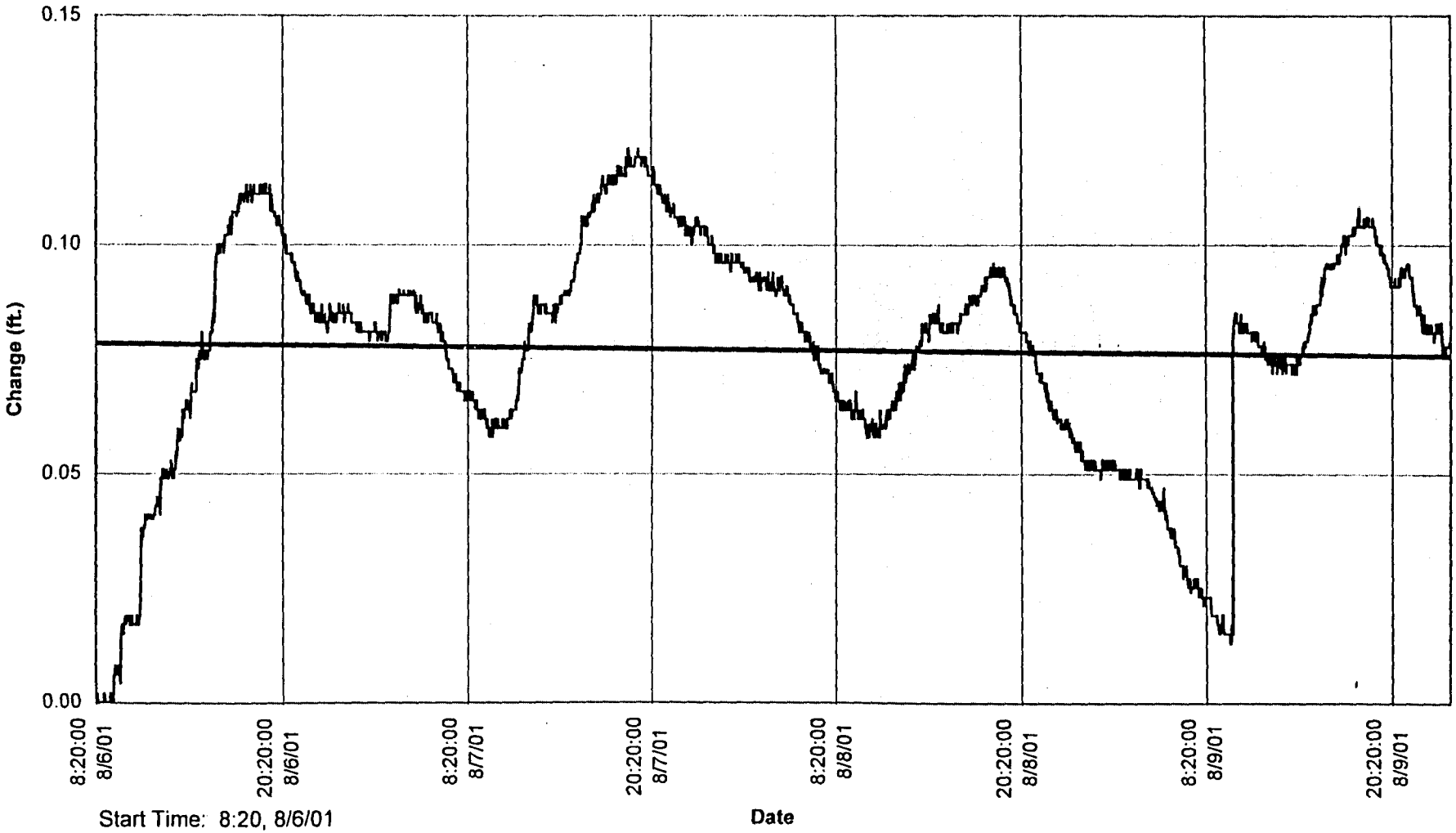
Start Time: 8:20, 8/6/01
End Time: 0:00, 8/10/01

Recovery Test for 117-MW-04S, Pump in 117-MW-10S



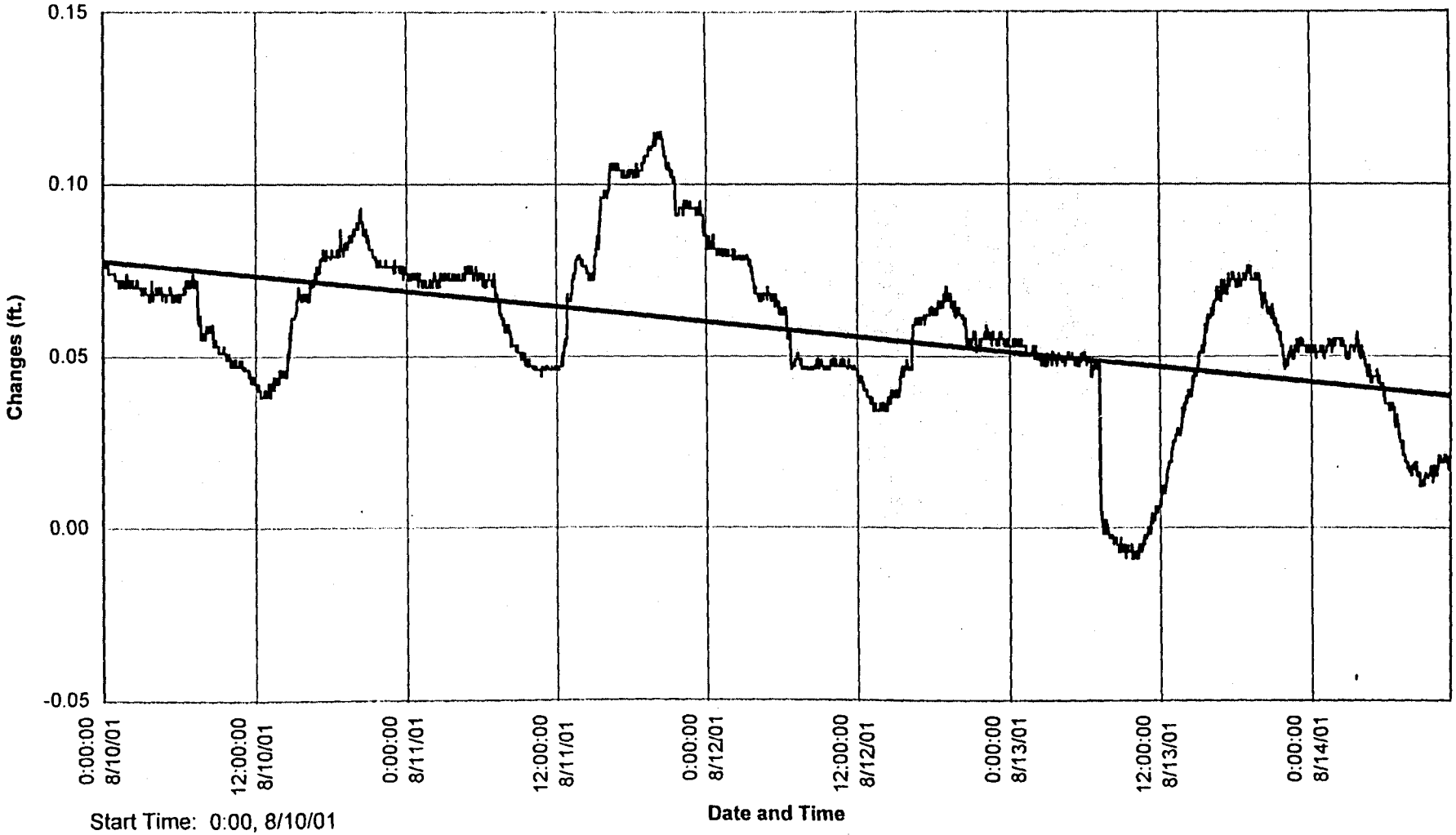
Start Time: 0:00, 8/10/01
End Time: 10:30, 8/14/01

Pump Test Drawdown for 117-MW-05S, Pump in 117-MW-10S



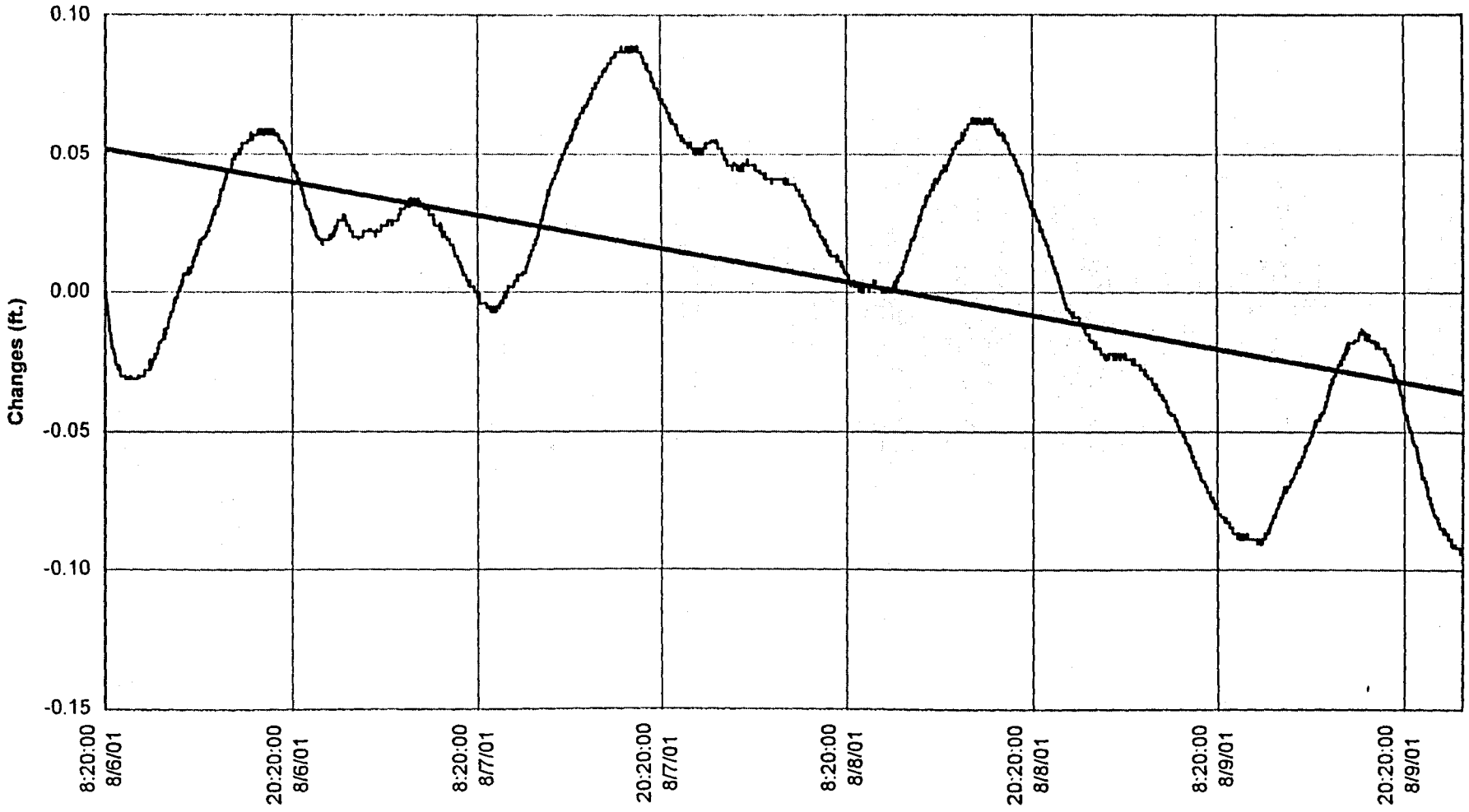
Start Time: 8:20, 8/6/01
End Time: 0:00, 8/10/01

Recovery Test for 117-MW-05S, Pump in 117-MW-10S



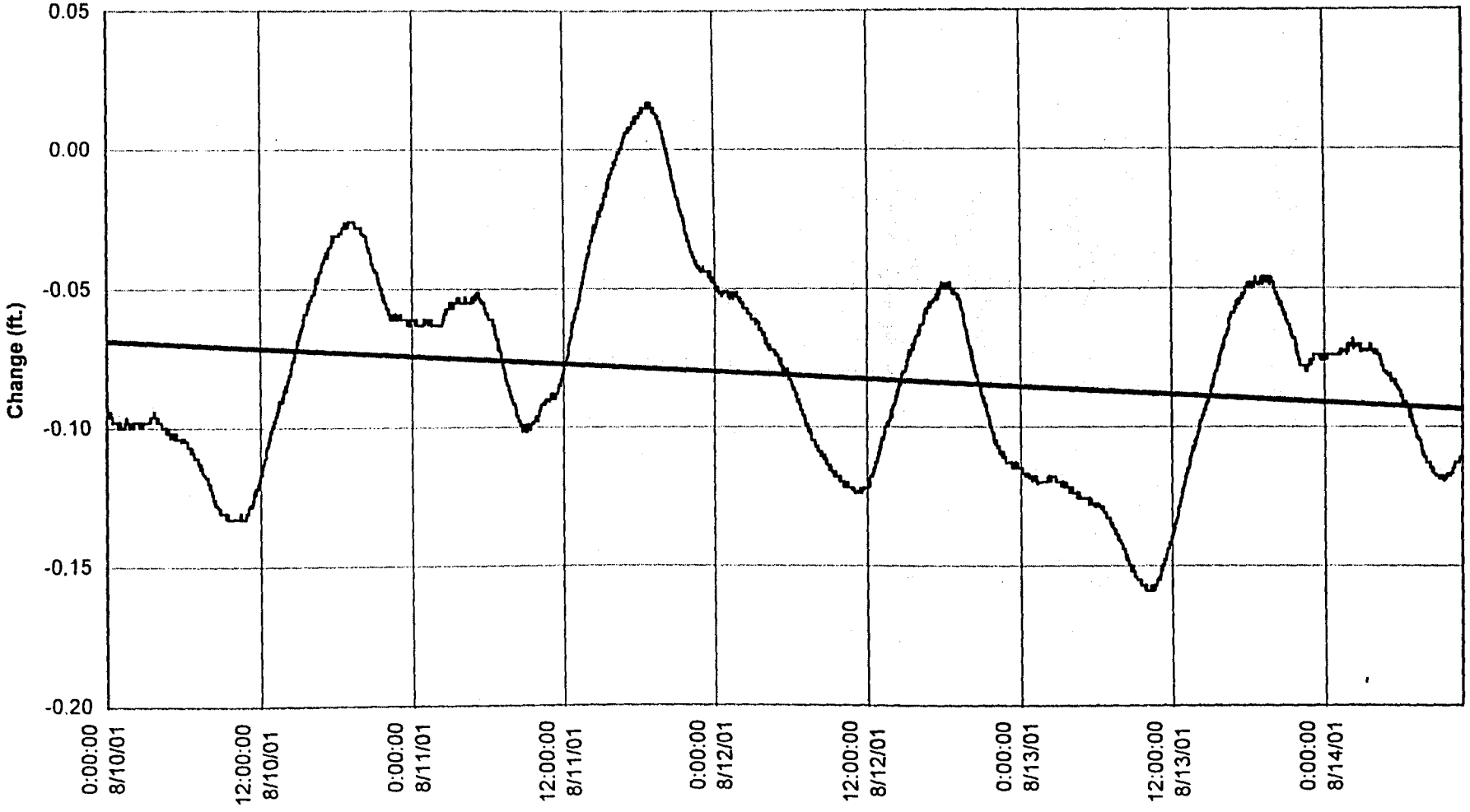
Start Time: 0:00, 8/10/01
End Time: 10:30, 8/14/01

Pump Test Drawdown for 117-MW-11S, Pump in 117-MW-10S



Start Time: 8:20, 8/6/01
End Time: 0:00, 8/10/01

Recovery Test for 117-MW-11S, Pump in 117-MW-10S



Start Time: 0:00, 8/10/01
End Time: 10:30, 8/14/01

Certificates of Analysis

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 14, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5072 and your project Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-2151 Fax: (925)288-0888

Service ID #: 801-015072
Collected by: M.Magee
Collected on: 08/02/01

Received: 08/03/01
Extracted: 08/06/01
Tested: 08/03-06/01
Reported: 08/09/01

Sample Description: Water from Crows Landing
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10SINT 01-05072-1	Analysis Result Trip Blank 01-05072-2 [c]
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.11 [a]	-
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	-
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	-
BENZENE	8260B	µg/L	0.5	0.4J	-
BROMOBENZENE	8260B	µg/L	0.5	<0.5	-
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	-
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	-
BROMOFORM	8260B	µg/L	0.5	<0.5	-
BROMOMETHANE	8260B	µg/L	0.63 [b]	<0.63	-
2-BUTANONE (MEK)	8260B	µg/L	10	9J	-
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	-
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	-
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	-
CARBON DISULFIDE	8260B	µg/L	10	<10	-
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	-
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	-
CHLOROETHANE	8260B	µg/L	0.5	<0.5	-
CHLOROFORM	8260B	µg/L	0.5	<0.5	-
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	-
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	-
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	-
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	-
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	-
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	-
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	-
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	-
1,2-DICHLOROETHANE	8260B	µg/L	0.5	115	-
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	-
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	-
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	-
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	0.6	-
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	-
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	-
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	-
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	-

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10SINT 01-05072-1	Trip Blank 01-05072-2
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	-
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	-
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (b)	<0.56	-
2-HEXANONE	8260B	µg/L	10	<10	-
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	-
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	-
METHYLENE CHLORIDE	8260B	µg/L	2 (b)	<2	-
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	-
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	-
NAPHTHALENE	8260B	µg/L	0.5	1.0	-
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	-
STYRENE	8260B	µg/L	0.5	<0.5	-
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	-
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	-
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	-
TOLUENE	8260B	µg/L	0.5	<0.5	-
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	-
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	-
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	-
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	-
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	-
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	-
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	-
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	-
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	-
XYLENE (TOTAL)	8260B	µg/L	1	<1	-
T-BUTYL ALCOHOL	8260B	µg/L	20	95	-

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10SINT 01-05072-1
Dilution Factor				1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.2
Dilution Factor				1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.1

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Not a Gasoline or JP-4 pattern.
(b) MDL reported.
(c) No Trip Blank was received. However, a vial with sample ID CLI-EX-01-7-26 was received instead.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 CROWS LANDING

APCL Service ID: 01-5072

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5072

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-10SINT	01-05072-1
Trip Blank	01-05072-2

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),
M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562882
Page 1 of 1

Project Name/No.[1] Crows Landing 800063
Sample Team Members[2] M. Magee
Profit Center No.[3] 5515001
Project Manager[4] B Hulet
Purchase Order No.[6] 173773
Required Report Date[11]

Samples Shipment Date[7] 8/2/01
Lab Destination[8] APCL
Lab Contact[9] M. Heckman
Project Contact/Phone[12] Rose Condit 775 788 2151
Carrier/Waybill No.[13] Fed Ex 8267 8547 9112

Bill to:[5] I T Corp
4005 Port Chicago Hwy
Concord CA 94520
Attn: Rich Iannicca
Report to:[10] (Same)
Rose Condit

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Pre-servative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
117-MW-10SINT	Groundwater	8/2/01 1111	40 mil VOA	5 X	HCL	VOC's 8260 TPH G/JF 8015m		
↓	↓	↓	Liter Amber	2 X	ICE	TPH-D/mo 8015m		
Trip	water	8/2/01	40 mil VOA	1 X	HCL	VOC's 8260 TPHG/JF 8015m		
Temp	↓	↓	↓	1 X	ICE	Temp		

FOR LAB USE ONLY

FOR LAB USE ONLY

5072

Special Instructions:[23]

Possible Hazard Identification:[24] Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required:[26] Normal ☐ Rush ☐ 10 Day TAT

QC Level:[27] I. ☐ II. ☐ III. ☒ Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) DAVE Peet	Date: 8/2/01 Time: 1130	1. Received by[28] (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 8/3/01 Time: 1000
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 20, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5158 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015158
Collected by: M. Swank
Collected on: 08/06-08/01

Received: 08/09/01
Extracted: 08/10/01
Tested: 08/10-13/01
Reported: 08/16/01

Sample Description: Ground Water from Crows Landing
Project Description: 800063

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10(S)-8 01-05158-1	117-MW-10(S)-15 01-05158-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.11 [a]	0.11 [a]
Dilution Factor				1	1
JET FUEL, JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				100	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<10 [b]	<0.1 [b]
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<10	<0.1 [b]
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	0.9	0.6
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [c]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	170	28
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	<0.5	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	62.2	100
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10(S)-8 01-05158-1	117-MW-10(S)-15 01-05158-2
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (c)	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (c)	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	1.7	0.4J
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	85	86

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10(S)-24 01-05158-3	117-MW-10(S)-48 01-05158-4	Trip Blank 01-05158-5
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.10 [a]	0.11 [a]	0.009J
Dilution Factor				1	1	1
JET FUEL, JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1 [b]	-
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1 [b]	-
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	μg/L	10	<10	<10	<10
BENZENE	8260B	μg/L	0.5	0.9	0.9	<0.5
BROMOBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	μg/L	0.63 [c]	<0.63	<0.63	<0.63
2-BUTANONE (MEK)	8260B	μg/L	10	34	37	<10
N-BUTYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	μg/L	0.5	5.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	μg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	μg/L	0.5	84.9	69.1	1.8
1,1-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10(S)-24 01-05158-3	117-MW-10(S)-48 01-05158-4	Trip Blank 01-05158-5
1,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	μg/L	0.56 (c)	<0.56	<0.56	<0.56
2-HEXANONE	8260B	μg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	μg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	μg/L	2 (c)	<2	<2	2
4-METHYL-2-PENTANONE (MIBK)	8260B	μg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	μg/L	1	<1	<1	<1
NAPHTHALENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	μg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	μg/L	20	89	76	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Not a standard Gasoline or JP-4 pattern.
(b) Sample chromatogram contained unknown isolated peaks at C_{16} to C_{22} range.
(c) MDL reported.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-5158

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5158

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-10(S)-15	01-05158-2
117-MW-10(S)-8	01-05158-1
117-MW-10(S)-24	01-05158-3
117-MW-10(S)-48	01-05158-4
Trip Blank	01-05158-5

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562883
Page 1 of 2

Project Name/No. [1] CROWS LANDING 800063
Sample Team Members [2] M. SWANK
Profit Center No. [3] 5515001
Project Manager [4] B. HULBT
Purchase Order No. [6] 173773
Required Report Date [11]

Samples Shipment Date [7] 8/8/01
Lab Destination [8] APCL
Lab Contact [9] M. HECKMAN
Project Contact/Phone [12] ROSE CONDIT (925) 288-2151
Carrier/Waybill No. [13] FED EX 8267 8597 9112

Bill to: [5] IT CORP
4005 PORT CHICAGO HWY
CONCORD, CA 94520
ATTN: RICH IANNICCA

Report to: [10] (SAME)
ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-10(S)-15	GROUNDWATER	8/6/01 0830	40mL VOA	x 5	HCl	VOC'S 8260 TPH G/JF 8015M	SAMPLES	
↓	↓	↓	1L AMBER	x 2	ICE	TPH-D/MO 8015M	RECEIVED	
117-MW-10(S)-8	↓	8/6/01 1630	40mL VOA	x 5	HCl	VOC'S 8260 TPH G/JF 8015M	GOOD CONDITION	
↓	↓	↓	1L AMBER	x 2	ICE	TPH-D/MO 8015M	TEMP: 4.1°C	
117-MW-10(S)-24	↓	8/7/01 0830	40mL VOA	x 5	HCl	VOC'S 8260 TPH G/JF 8015M		
↓	↓	↓	1L AMBER	x 2	ICE	TPH-D/MO 8015M		
117-MW-10(S)-48	↓	8/8/01 0830	40mL VOA	x 5	HCl	VOC'S 8260 TPH G/JF 8015M		
↓	↓	↓	1L AMBER	x 2	ICE	TPH-D/MO 8015M		

FOR LAB USE ONLY
FOR LAB USE ONLY
5158

Special Instructions: [23] SILICA GEL CLEANUP FOR TPH DIESEL/MO

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐ 10 DAY TAT

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by [28] (Signature/Affiliation) M. SWANK — Date: ____ Time: ____	1. Received by [28] (Signature/Affiliation) FEDEX — Date: ____ Time: ____
2. Relinquished by (Signature/Affiliation) FEDEX — Date: ____ Time: ____	2. Received by (Signature/Affiliation) [signature] — Date: 8/9/01 Time: 1040
3. Relinquished by (Signature/Affiliation) — Date: ____ Time: ____	3. Received by (Signature/Affiliation) — Date: ____ Time: ____

Comments: [29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No. 562483
Page 2 of 2

Project Name CROWS LANDING Project No. 800063 Samples Shipment Date

ONE CONTAINER PER LINE

Sample 14 Number	Sample 15 Description/Type	Date/Time 16 Collected	Container 17 Type	Sample 18 Volume	Pre-19 servative	Requested Testing 20 Program	Condition on 21 Receipt	Disposal 22 Record No.
TRIP BLANK	WATER	NA	40mL VOA	x 2	HCl	VOCIS 8260 TPH G/JF 8015 M		
TEMP BLANK	↓	↓	↓	x 1	ICE		FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							5158	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY
							FOR LAB USE ONLY	FOR LAB USE ONLY

NO FURTHER ENTRIES
MS

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/91

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710

Tel. (909) 590-1828 Fax (909) 590-1498

August 28,2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway,
Concord CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5251 and your project 800063 Corws Landing. Enclosed please find:

(1) Original Final Report.
(2) Original Chain of Custody.
(3) One Original and one Copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015251
Collected by:
Collected on: 08/13/01

Received: 08/15/01
Extracted: 08/15/01
Tested: 08/15-21/01
Reported: 08/23/01

Sample Description: Water from Crows Landing
Project Description: 800063

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	17-MW-105 01-05251-3
ALKALINITY	310.1	mg-$CaCO_3$/L	20	220	290	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	938	800	-
Dilution Factor				20	20	1
CHLORIDE	300.0	mg/L	0.2	134	90	-
NITRATE (NO_3^-) AS N	300.0	mg/L	0.04	16.7	9.3	-
NITRITE (NO_2^-) AS N	300.0	mg/L	0.05	<1	<1	-
PHOSPHORUS, ORTHOPHOSPHATE	300.0	mg/L	0.1	<2	<2	-
SULFATE	300.0	mg/L	0.5	255	180	-
TTLC 17 METALS						
Dilution Factor				1	1	1
ANTIMONY	6010B	µg/L	10	4.6J	3.7J	-
ARSENIC	6010B	µg/L	5	5.4	4.7J	-
BARIUM	6010B	µg/L	10	46.1	78.5	-
BERYLLIUM	6010B	µg/L	2	<2	<2	-
CADMIUM	6010B	µg/L	2	0.38J	0.34J	-
CHROMIUM	6010B	µg/L	5	43.8	10.6	-
COBALT	6010B	µg/L	5	<5	1.1J	-
COPPER	6010B	µg/L	10	4.3J	7.8J	-
LEAD	6010B	µg/L	5	5.5	5.0J	-
MERCURY	7470A	µg/L	0.5	0.32J	0.23J	-
MOLYBDENUM	6010B	µg/L	5	6.7	9.6	-
NICKEL	6010B	µg/L	5	8.1	11.5	-
SELENIUM	6010B	µg/L	10	5.6J	3.3J	-
SILVER	6010B	µg/L	10	1.4J	1.6J	-
THALLIUM	6010B	µg/L	10	<10	<10	-
VANADIUM	6010B	µg/L	10	2.4J	3.2J	-
ZINC	6010B	µg/L	10	141	133	-
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.02J	0.02J	0.11 [a]
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.1 [b]	<0.1 [c]	<0.1
Dilution Factor				1	1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.06J	0.07J	0.05J

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	17-MW-105 01-05251-3
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	157 (d)
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	0.9
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	17-MW-105 01-05251-3
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	0.4J
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-11 (8/01) 01-05251-4	17-MW-24 (8/01) 01-05251-5	109-MW-01 (8/01) 01-05251-6
ALKALINITY	310.1	mg-$CaCO_3$/L	20	190	350	240
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	760	1,080	836
Dilution Factor				20	20	20
CHLORIDE	300.0	mg/L	0.2	67	119	57
NITRATE (NO_3^-) AS N	300.0	mg/L	0.04	8.4	14	11
NITRITE (NO_2^-) AS N	300.0	mg/L	0.05	<1	<1	<1
PHOSPHORUS, ORTHOPHOSPHATE	300.0	mg/L	0.1	<2	<2	<2
SULFATE	300.0	mg/L	0.5	265	233	261

Level C Data Package Deliverables

General Information

Project : Corws Landing

APCL Service ID: 01-5251

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/800063

For The IT Group

APCL Service No: 01-5251

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
CL2-MW-05 (8/01)	01-05251-8
11-MW-03 (8/01)	01-05251-1
11-MW-04 (8/01)	01-05251-2
109-MW-01 (8/01)	01-05251-6
CL1-MW-05 (8/01)	01-05251-7
17-MW-24 (8/01)	01-05251-5
CL-99-14 (8/01)	01-05251-9
17-MW-11 (8/01)	01-05251-4
Trip Blank #1	01-05251-11
NASA-SW-3	01-05251-10
17-MW-10S	01-05251-3

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
6010/various (TTLC 17 Metals),
300.0 (Chloride Cl^- by IC),
300.0 (Nitrate (NO_3^-) as N by IC),
310.1 (Alkalinity),
160.1 (Solids, Total Dissolved (TDS)),
M8015V/M8015V (JP-4),
ASTM-D2216 (Moisture, percent in soil),
9040B/150.1 (pH),
8270C (Semi-VOC, 64 Compounds),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

AMENDED

01-5251

09/10/2001

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015251
Collected by:
Collected on: 08/13/01

Received: 08/15/01
Extracted: 08/15/01
Tested: 08/15-21/01
Reported: 08/23/01

Sample Description: Water from Crows Landing
Project Description: 800063

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	117-MW-10S 01-05251-3
ALKALINITY	310.1	mg-$CaCO_3$/L	20	220	290	-
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	938	800	-
Dilution Factor				20	20	1
CHLORIDE	300.0	mg/L	0.2	134	90	-
NITRATE (NO_3^-) AS N	300.0	mg/L	0.04	16.7	9.3	-
NITRITE (NO_2^-) AS N	300.0	mg/L	0.05	<1	<1	-
PHOSPHORUS, ORTHOPHOSPHATE	300.0	mg/L	0.1	<2	<2	-
SULFATE	300.0	mg/L	0.5	255	180	-
TTLC 17 METALS						
Dilution Factor				1	1	1
ANTIMONY	6010B	μg/L	10	4.6J	3.7J	-
ARSENIC	6010B	μg/L	5	5.4	4.7J	-
BARIUM	6010B	μg/L	10	46.1	78.5	-
BERYLLIUM	6010B	μg/L	2	<2	<2	-
CADMIUM	6010B	μg/L	2	0.38J	0.34J	-
CHROMIUM	6010B	μg/L	5	43.8	10.6	-
COBALT	6010B	μg/L	5	<5	1.1J	-
COPPER	6010B	μg/L	10	4.3J	7.8J	-
LEAD	6010B	μg/L	5	5.5	5.0J	-
MERCURY	7470A	μg/L	0.5	0.32J	0.23J	-
MOLYBDENUM	6010B	μg/L	5	6.7	9.6	-
NICKEL	6010B	μg/L	5	8.1	11.5	-
SELENIUM	6010B	μg/L	10	5.6J	3.3J	-
SILVER	6010B	μg/L	10	1.4J	1.6J	-
THALLIUM	6010B	μg/L	10	<10	<10	-
VANADIUM	6010B	μg/L	10	2.4J	3.2J	-
ZINC	6010B	μg/L	10	141	133	-
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.02J	0.02J	0.11 [a]
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.1 [b]	<0.1 [c]	<0.1
Dilution Factor				1	1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.06J	0.07J	0.05J

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	117-MW-10S 01-05251-3
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	μg/L	10	<10	<10	<10
BENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	μg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	μg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	μg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CHLOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5	157 (d)
1,1-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	0.9
1,3-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5	<0.5

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13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 11-MW-03 (8/01) 01-05251-1	11-MW-04 (8/01) 01-05251-2	117-MW-10S 01-05251-3
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	0.4J
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-11 (8/01) 01-05251-4	17-MW-24 (8/01) 01-05251-5	109-MW-01 (8/01) 01-05251-6
ALKALINITY	310.1	mg-$CaCO_3$/L	20	190	350	240
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	760	1,080	836
Dilution Factor				20	20	20
CHLORIDE	300.0	mg/L	0.2	67	119	57
NITRATE (NO_3^-) AS N	300.0	mg/L	0.04	8.4	14	11
NITRITE (NO_2^-) AS N	300.0	mg/L	0.05	<1	<1	<1
PHOSPHORUS, ORTHOPHOSPHATE	300.0	mg/L	0.1	<2	<2	<2
SULFATE	300.0	mg/L	0.5	265	233	261

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Organic Analysis Results for Method M8015V

Client Name:	The IT Group	Project No:	800063	Collection Date:	08/13/2001
Project ID:		Service ID:	15251	Collected by:	
		Lab Sample ID:	01-5251-3	Received Date:	08/15/2001
Sample ID:	**117-MW-10S**	Sample Matrix	Water	Moisture %:	–
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC: U
Anal. Method:	M8015V	Prep. Date:	08/15/01	Anal. Date:	08/15/01
Batch No:	01G3935	Prep. No:	–	Anal. Time:	17:58
Data File Name:	5251.003	Sample Amount:	5.0 mL	Dilution Factor:	1
Methanol Vol.	--				
Test Level:	Low	Sparge Size:	5 mL	Heated Purge: (Y/N)	N

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	GASOLINE RANGE ORGANICS	8006-61-9	mg/L	0.05	0.11 [a]	
2	JP-4		mg/L	0.05	<0.05	U

Surrogates			Control Limit, %	Surro. Rec.%
1	4-BROMO-FLUOROBENZENE (FID)	460-00-4	75-125	91
# of out-of-control				0

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

[a]Not a typical Gasoline pattern.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Organic Analysis Results for Method M8015E

Client Name:	The IT Group	Project No:	800063	Collection Date:	08/13/2001
Project ID:		Service ID:	15251	Collected by:	
		Lab Sample ID:	01-5251-3	Received Date:	08/15/2001
Sample ID:	**117-MW-10S**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	3510	Instrument ID:	GC: W
Anal. Method:	M8015E	Prep. Date:	08/15/01	Anal. Date:	08/17/01
Batch No:	01G3938	Prep. No:	1 of 1	Anal. Time:	14:47
Data File Name:	5251.103	Sample Amount:	1000 mL	Dilution Factor:	1
Extract Vol.	1.0 mL				

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	DIESEL RANGE ORGANICS	68334-30-5	mg/L	0.1	<0.1	U
2	MOTOR OIL RANGE ORGANICS	IT15-49-4	mg/L	0.1	0.05	J

Surrogates			Control Limit, %	Surro. Rec.%
1	N-OCTACOSANE	630-02-4	60-140	56
# of out-of-control				1

Not Detected is shown as PQL, with dilution and moisture corrected if applicable.

Qualifier: U - Not Detected or less than MDL
J - Less than RL (PQL, EQL or CRDL), but greater than MDL, or an estimated result (e.g. for TIC)
E - Exceed calibration range
B - A positive value was found in the method blank
D - Diluted

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Organic Analysis Results for Method 8260B

Client Name:	The IT Group	Project No:	800063	Collection Date:	08/13/2001
Project ID:		Service ID:	15251	Collected by:	
		Lab Sample ID:	01-5251-3	Received Date:	08/15/2001
Sample ID:	**117-MW-10S**	Sample Matrix	Water	Moisture %:	-
Sample Type:	Field Sample	Prep. Method:	5030	Instrument ID:	GC/MS: A
Anal. Method:	8260B	Prep. Date:	08/17/01	Anal. Date:	08/17/01
Batch No:	01G3965	Prep. No:	-	Anal. Time:	16:42
Data File Name:	5251-03A	Sample Amount:	25 mL	Dilution Factor:	1
Methanol Vol.	-				
Test Level:	Low	Sparge Size:	25 mL	Heated Purge: (Y/N) N	

#	Component Name	CAS No	Unit	RL	Result	Qualifier
1	ACETONE	67-64-1	µg/L	10	<10	U
2	BENZENE	71-43-2	µg/L	0.5	<0.5	U
3	BROMOBENZENE	108-86-1	µg/L	0.5	<0.5	U
4	BROMOCHLOROMETHANE	74-97-5	µg/L	0.5	<0.5	U
5	BROMODICHLOROMETHANE	75-27-4	µg/L	0.5	<0.5	U
6	BROMOFORM	75-25-2	µg/L	0.5	<0.5	U
7	BROMOMETHANE	74-83-9	µg/L	0.5	<0.5	U
8	2-BUTANONE (MEK)	78-93-3	µg/L	10	<10	U
9	N-BUTYLBENZENE	104-51-8	µg/L	0.5	<0.5	U
10	SEC-BUTYLBENZENE	135-98-8	µg/L	0.5	<0.5	U
11	TERT-BUTYLBENZENE	98-06-6	µg/L	0.5	<0.5	U
12	CARBON DISULFIDE	75-15-0	µg/L	10	<10	U
13	CARBON TETRACHLORIDE	56-23-5	µg/L	0.5	<0.5	U
14	CHLOROBENZENE	108-90-7	µg/L	0.5	<0.5	U
15	DIBROMOCHLOROMETHANE	124-48-1	µg/L	0.5	<0.5	U
16	CHLOROETHANE	75-00-3	µg/L	0.5	<0.5	U
17	CHLOROFORM	67-66-3	µg/L	0.5	<0.5	U
18	CHLOROMETHANE	74-87-3	µg/L	0.5	<0.5	U
19	2-CHLOROTOLUENE	95-49-8	µg/L	0.5	<0.5	U
20	4-CHLOROTOLUENE	106-43-4	µg/L	0.5	<0.5	U
21	1,2-DIBROMO-3-CHLOROPROPANE	96-12-8	µg/L	0.5	<0.5	U
22	1,2-DIBROMOETHANE (EDB)	106-93-4	µg/L	0.5	<0.5	U
23	DIBROMOMETHANE	74-95-3	µg/L	0.5	<0.5	U
24	1,2-DICHLOROBENZENE	95-50-1	µg/L	0.5	<0.5	U
25	1,3-DICHLOROBENZENE	541-73-1	µg/L	0.5	<0.5	U
26	1,4-DICHLOROBENZENE	106-46-7	µg/L	0.5	<0.5	U
27	DICHLORODIFLUOROMETHANE	75-71-8	µg/L	0.5	<0.5	U
28	1,1-DICHLOROETHANE	75-34-3	µg/L	0.5	<0.5	U
29	1,2-DICHLOROETHANE	107-06-2	µg/L	0.5	157 (d)	D
30	1,1-DICHLOROETHENE	75-35-4	µg/L	0.5	<0.5	U
31	CIS-1,2-DICHLOROETHENE	156-59-2	µg/L	0.5	<0.5	U
32	TRANS-1,2-DICHLOROETHENE	156-60-5	µg/L	0.5	<0.5	U
33	1,2-DICHLOROPROPANE	78-87-5	µg/L	0.5	0.9	
34	1,3-DICHLOROPROPANE	142-28-9	µg/L	0.5	<0.5	U
35	2,2-DICHLOROPROPANE	594-20-7	µg/L	0.5	<0.5	U
36	1,1-DICHLOROPROPENE	563-58-6	µg/L	0.5	<0.5	U
37	CIS-1,3-DICHLOROPROPENE	10061-01-5	µg/L	0.5	<0.5	U
38	TRANS-1,3-DICHLOROPROPENE	10061-02-6	µg/L	0.5	<0.5	U
39	ETHYLBENZENE	100-41-4	µg/L	0.5	<0.5	U

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 573603
Page 1 of 2

Project Name/No.[1] Crows Landing 800063
Sample Team Members[2]
Profit Center No.[3]
Project Manager[4] B. Hulet
Purchase Order No.[6]
Required Report Date[11]

Samples Shipment Date[7] 8/14/01
Lab Destination[8] APCL
Lab Contact[9] M Heckman
Project Contact/Phone[12] R Condit 288-2151
Carrier/Waybill No.[13]

Bill to:[5] IT-Concord

Report to:[10] IT-Concord
Rose Condit

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Preservative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
CL2-MW-05 (8/01)	Q3-Groundwater	8/8/01 1300				ALL Samples	SAMPLES	
11-MW-03 (8/01)	Sampling	1055	VOA	3	HCL	EPA 8260/MTBE EDB, TBA	RECEIVED	
11-MW-04 (8/01)		935	VOA	2	HCL	TPH-gas/J.F.	GOOD CONDITION	
109-MW-01 (8/01)		1335	Liter	2	None	TPH-Diesel/M.O.	TEMP=	4.1°C
CL1-MW-05 (8/01)		1212	HDPE	1	HNO3	CAM 17		4.6°C
17-MW-24 (8/01)		1505	HDPE	1	None	Alkalinity, NO2 NO3, SO4, Cl-, TDS		5.2°C
CL-99-14 (8/01)		1510						
17-MW-11 (8/01)		1436						

FOR LAB USE ONLY

Special Instructions:[23] Silica Gel Cleanup on TPH-D/M.O.

Possible Hazard Identification:[24] Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required:[26] Normal ☒ Rush ☐

QC Level:[27] I. ☐ II. ☐ III. ☐ Project Specific (specify): Level IV

1. Relinquished by[28] (Signature/Affiliation) Bryan Condit	Date: 8/14/01 Time:	1. Received by[28] (Signature/Affiliation) Golden Stock	Date: 8/14/01 Time:
2. Relinquished by (Signature/Affiliation) G.S.	Date: Time:	2. Received by (Signature/Affiliation) Mark G. Heck	Date: 8/15/01 Time: 1010
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

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ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 573603
Page 2 of 2

Project Name Crows Landing

Project No. 800063

Samples Shipment Date 8/14/01

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
* ~~CL1-MW-06 (8/01)~~	~~Q3-2001~~		←	~~VOA 9~~	HCL	~~TPH G/JF EPA 8260 + extras~~	~~*Use for NS/MS Extra volume~~	
	Not collected 8/13/01 LC		Liter	4	None	TPH D/M.O.		
			HDPE	2	HNO3	CAM17		
			HDPE	2	None	Alkalinity, Anions TDS		
trip blank #1			VOA	2	HCL	TPH-gas/JF EPA-8260		
NASA-SW-3	Water Supply	8/13/01 1055	VOA	5	HCL	TPH G/JF EPA 8260 + extras		
	well		Liter	2	None	TPH D/MO		
			HDPE	1	HNO3	~~HDPE~~ Metals-CAM17		
			HDPE	1	None	Anions, Alkalinity TDS		
17-MW-10S	pump test	8/13/01 1100	VOA	5	HCL	TPH-GAS/JF EPA 8260		
	last sample		Liter	2	None	TPH-DSL/M.O.		

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

FOR LAB USE ONLY

5251

White: To accompany samples

Yellow: Field copy

*See back of form for special instructions.

Attachment 4

117-MW-10(MS)

Summary Tables

Hydraulic Conductivity values indicate that the aquifer material is sandy silts to clay.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter In.	Saturated Thickness Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-10MS	0	0.25	18.89	10.0 / 2	162	0.001026	1.47744	0.0091	0.1	2.04E-01	Neuman
Screened: 115-125	26	0.35			10			0.1477			
7/26/01	42	0.45									
Step Test	84	0.6									
	119	0.8									
	184	0									
T=1497(Q/s)							7.187501959	0.7188			Jacob Equation

No observation wells were monitored during this test.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter In.	Saturated Thickness* Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-10MS	0	0.6	0	10.0 / 2	165	NA	NA	NA	NA	NA	NA
Screened: 115-125	17	0.49									
7/30/01	80	0.49									
	94	0									

No calculation was evaluated due to no drawdown in the well.

Observation Wells	Distance to Pumping Well Feet	Sreened Interval		Borehole/Casing Diameter In.		
117-MW-10S	1	50-75		10.0 / 2	165	NR
117-MW-07MS	125	108-118		10.0 / 2		NR
117-MW-05S	110	50-75		8.25 / 2		NR
17-MW-05MS	163.5	94-104		8.25 / 2		NR
117-MW-12D	130	238-248		10.0 / 5		NR
117-MW-11S	118	50-75		10.0 / 2		NR
117-MW-11MD	118	185-195		10.0 / 2		NR
117-MW-11MS	118	115-125		10.0 / 2		NR
117-MW-03	51.5	97-107		8.25 / 2		NR

Note: NR = No Response. No drawdown was observed in the observation wells or the pumping well.

Hydraulic Conductivity values indicate that the aquifer material is clayey sands to sandy silts.

Pumping Well	Elapsed Time Min.	Pumping Rates (Q) GPM	Maximum Drawdown (s) Feet	Borehole/Casing Diameter In.	Saturated Thickness* Feet	Transmissivity (ft^2/min)	Transmissivity (ft^2/day)	Hydraulic Conductivity ft/day	Specific Yield	Storativity	Solution Method
117-MW-10MS	0	0.46	35.92	10.0 / 2	163	0.004112	5.92128	0.036327	0.1	0.000004795	Neuman
Screened: 115-125	1059.5	0			10			0.592128			
9/11-13/01	1205.5	0.41									
	2900	0									
T=1469(Q/s)							2.132757344	0.213276			Jacob Equation

Observation Wells	Distance to Pumping Well	Sreened Interval		Borehole/Casing Diameter In.						
117-MW-11MS	118	115-125		10.0 / 2	162	0.1423	204.912	1.3	0.1	0.00009851	Neuman
117-MW-07MS	125	108-118		10.0 / 2	165	0.137	197.28	1.2	0.1	1.05E-04	Neuman
17-MW-05MS	163.5	94-104		8.25 / 2	163	0.137	197.28	1.2	0.1	0.00013	Neuman
All observation wells					163	0.09071	130.6224	0.8	0.1	7.16E-05	Neuman
All + pumping well					163	0.08106	116.7264	0.71611	0.1	6.40E-05	Neuman

UST 117
Data Summary
117-MW-10(MS)

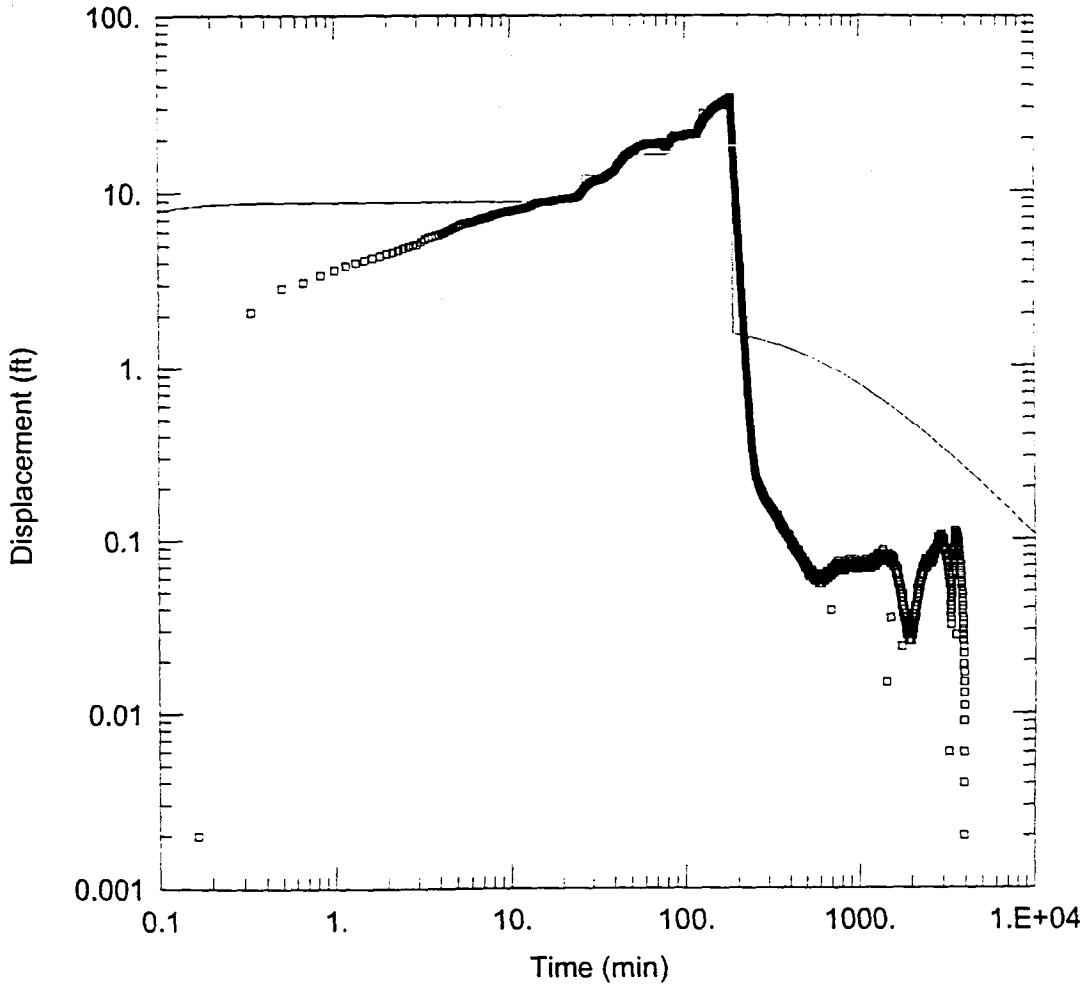
Sample ID	Method				117-MW-10 (MS)			
Aquifer					mid-shallow			
Screen Interval (ft bgs)					115 - 125			
Description		Jul-01[1]	Jul-01[2]	Sep-01[1]	Sep-01[2]	Sep-01[3]	Sep-01[4]	Sep-01[5]
pH	field							7.36
conductivity	field							1.18 uS/cm
ORP	field							
dissolved oxygen	field							0.46 mg/L
TPH-gasoline	M8015V	0.71 mg/L	1.23 mg/L	0.21 mg/L	1.52 mg/L	1.92 mg/L	1.92 mg/L	0.34 mg/L
TPH-jet fuel	M8015V	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L
TPH-diesel	M8015E	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
TPH-motor oil	M8015E	<0.1 mg/L	<0.1 mg/L	0.08J mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
benzene	8260	251 µg/L	500 µg/L	47.3 µg/L	881 µg/L	1030 µg/L	1172 µg/L	83.8 µg/L
carbon tetrachloride	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	4.2 µg/L
chloroform	8260	2.5 µg/L	2.9 µg/L	4.1 µg/L	4.7 µg/L	4.9 µg/L	4.8 µg/L	1.7 µg/L
chloromethane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	8260	8 µg/L	14.9 µg/L	4.5 µg/L	28.2 µg/L	33 µg/L	35.1 µg/L	4.5 µg/L
1,2-dichloropropane	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
ethylbenzene	8260	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
isopropylbenzene	8260	<0.5 µg/L	<0.5 µg/L	2.5 µg/L	1.4 µg/L	1.4 µg/L	1.5 µg/L	9.5 µg/L
p-isopropyltoluene	8260	<0.5 µg/L	<0.5 µg/L	4.6 µg/L	5.8 µg/L	5.8 µg/L	6 µg/L	<0.5 µg/L
methylene chloride	8260	<2 µg/L	<2 µg/L	2.4 µg/L	2.3 µg/L	2.6 µg/L	2.3 µg/L	5.2 µg/L
toluene	8260	0.6 µg/L	0.4 J µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	8260	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L	<1 µg/L
tertbutyl alcohol	8260			76 µg/L	130 µg/L	150 µg/L	170 µg/L	88 µg/L

Detections are bolded

[1] Sample collected at start of pump test
[2] Sample collected after 8 hours of pumping.
[3] Sample collected after 24 hours of pumping.
[4] Sample collected after 48 hours of pumping.
[5] Sample collected after all pump testing completed.

Note: Some sample results are preliminary and have not been validated. Results are presented for comparison only and may change during validation.

Step Test



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\Step Tests\117-MW-10MSstep7_26_01.aqt
Date: 11/16/01 Time: 14:55:21

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 7-26-01

AQUIFER DATA

Saturated Thickness: 162. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-10MS	1	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.001026 ft^2/min
S = 2.445E-05
Sy = 0.1
ß = 0.1

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/26/01
Monitoring Well ID: 117-MW-10 MS
Transducer No.:
Transducer Depth: 92 ft.

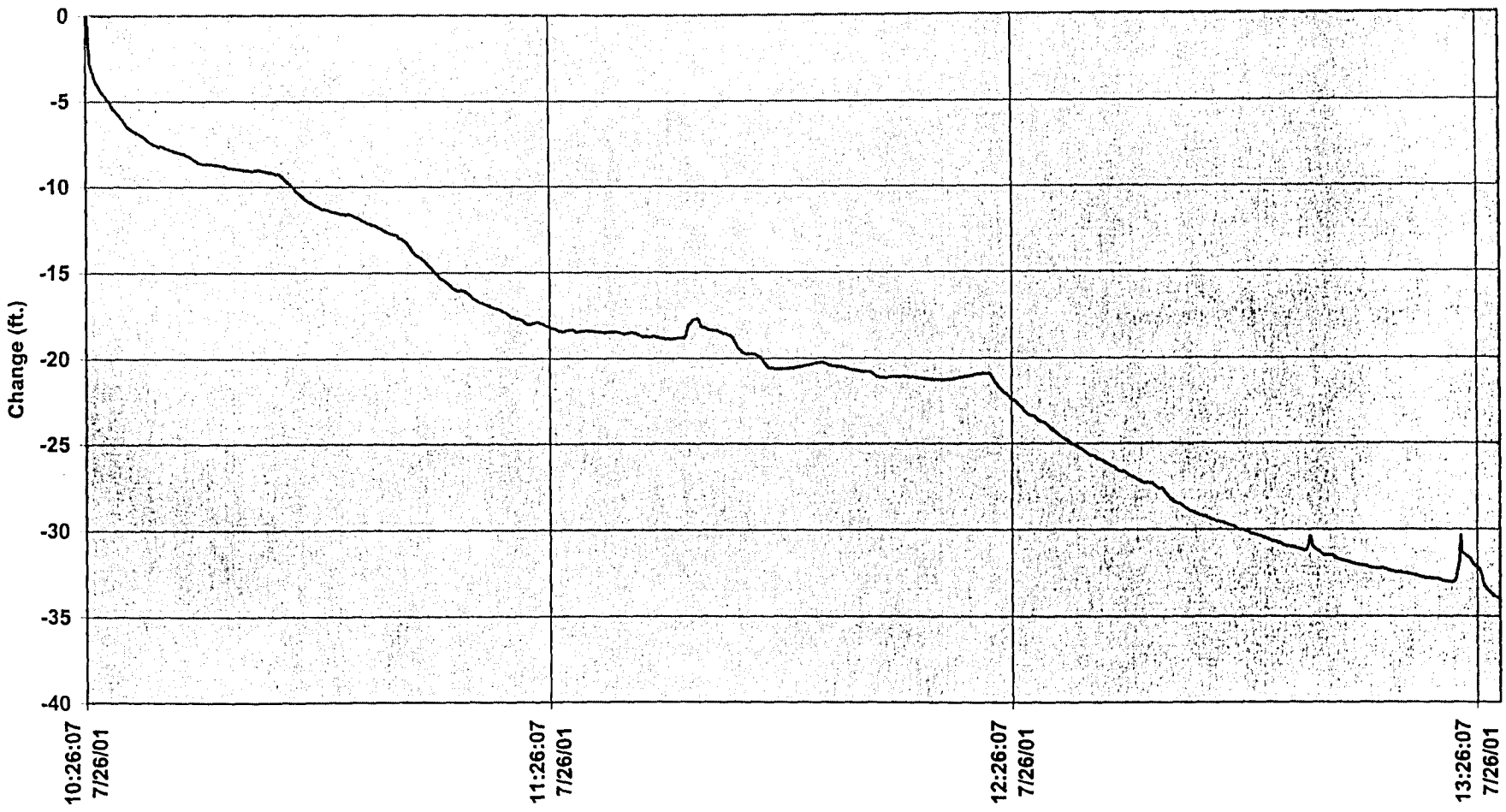
Test No.: STEP TEST
Pumping Well ID: 117-MW-10 MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
	0907	---	57.89	—	184.62	—	—	—	—
START	1026	0	—	—	—	—	0.25	—	—
	1052	26	—	—	—	—	0.35	—	—
	1108	42	—	—	—	—	0.45	—	—
	1150	84	—	—	—	—	0.60	—	—
	1225	119	—	—	—	—	0.80	—	—
STOP	1230	124	—	—	288.06	103.44	0	—	—

NO FURTHER PUMPING

Notes: * RECOVERY BEGAN 7/26/01 at 1330

Step Test 117-MW-10MS



Start Time: 10:26, 7/26/01
End Time: 13:28, 7/26/01

8-hour Drawdown Test

(No response and no pumping test model data generated)

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-10 MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
7/30	0807	0	57.48	0	288.06	0	0	—	—
	0830	START	57.48	0	288.06	0	0.60	—	—
	0847	17	—	—	—	—	0.49	—	—
	0850	20	—	—	—	—	0.49	117-MW-10MS-15	0850
	0950	80	—	—	—	—	0.45	—	—
	1004	PUMP	SHUT OFF/RESTART		—	—	—	—	—
	1120	PUMP	SHUT OFF						

NO FURTHER ENTRIES MS

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-10ms
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10ms

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0807	—	57.48	—					
0952		—						
1052		—						
1150		—						
1250		—						
1352		—						
		—						
		—						
		—						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-10s
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0810		55.13						
0955		55.13						
1050		55.12						
1152		55.11						
1255		55.12						
1350		55.11						
1447		55.13						
1551		55.11						
1645		55.08						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-07MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
~~0807~~		~~57.48~~						
0920		55.48						
1002		55.60						
1052		55.60						
1154		55.60						
1257		55.61						
1353		55.56						
1450		55.55						
1553		55.56						
1647		55.52						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-5s
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10ms

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0838		56.62						
1000		53.38						
1055		53.40						
1156		53.37						
1258		53.39						
1355		53.36						
1452		53.34						
1555		53.31						
1658		53.31						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 17-MW-05MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0823		53.37						
1004		56.63						
1057		56.62						
1158		56.55						
1300		56.60						
1357		56.57						
1455		56.57						
1557		56.53						
1652		56.52						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-12d
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MP

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0837		71.04						
1007		71.10						
1100		71.12						
1200		71.11						
1302		71.12						
1359		71.12						
1457		71.11						
1559		71.12						
1655		71.11						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-11s
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0834		56.68						
1008		56.71						
1102		56.70						
1202		56.70						
1305		56.71						
1402		56.70						
1458		56.68						
1601		56.62						
1657		56.64						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 7/30/01
Monitoring Well ID: 117-MW-11 md
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10 ms

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0832		69.05						
1000		~~56.74~~ 69.17 new						
1104		69.21						
1202		69.24						
1307		69.26						
1404		69.25						
1459		69.28						
1602		69.28						
1700		69.27						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

Date:
Monitoring Well ID: 117-MW-11MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0836		59.04						
1012		59.08						
1106		59.11						
1205		59.08						
1308		59.10						
1406		59.09						
1500		59.07						
1603		59.06						
1650		59.07						

Notes:

CTO 4 – UST Cluster 1
Aquifer Testing

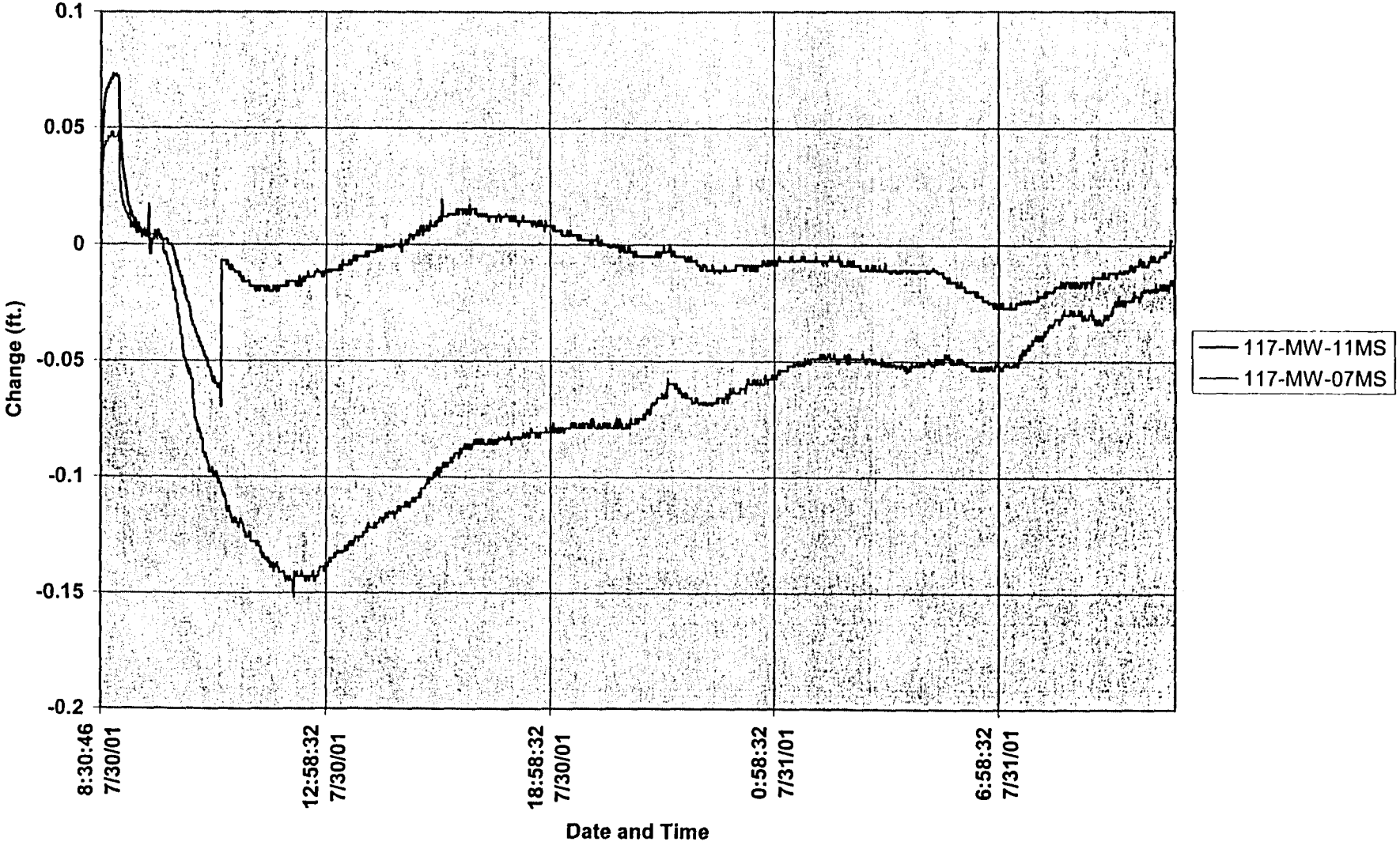
Date: 7/30/01
Monitoring Well ID: 117-MW-03
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10AR

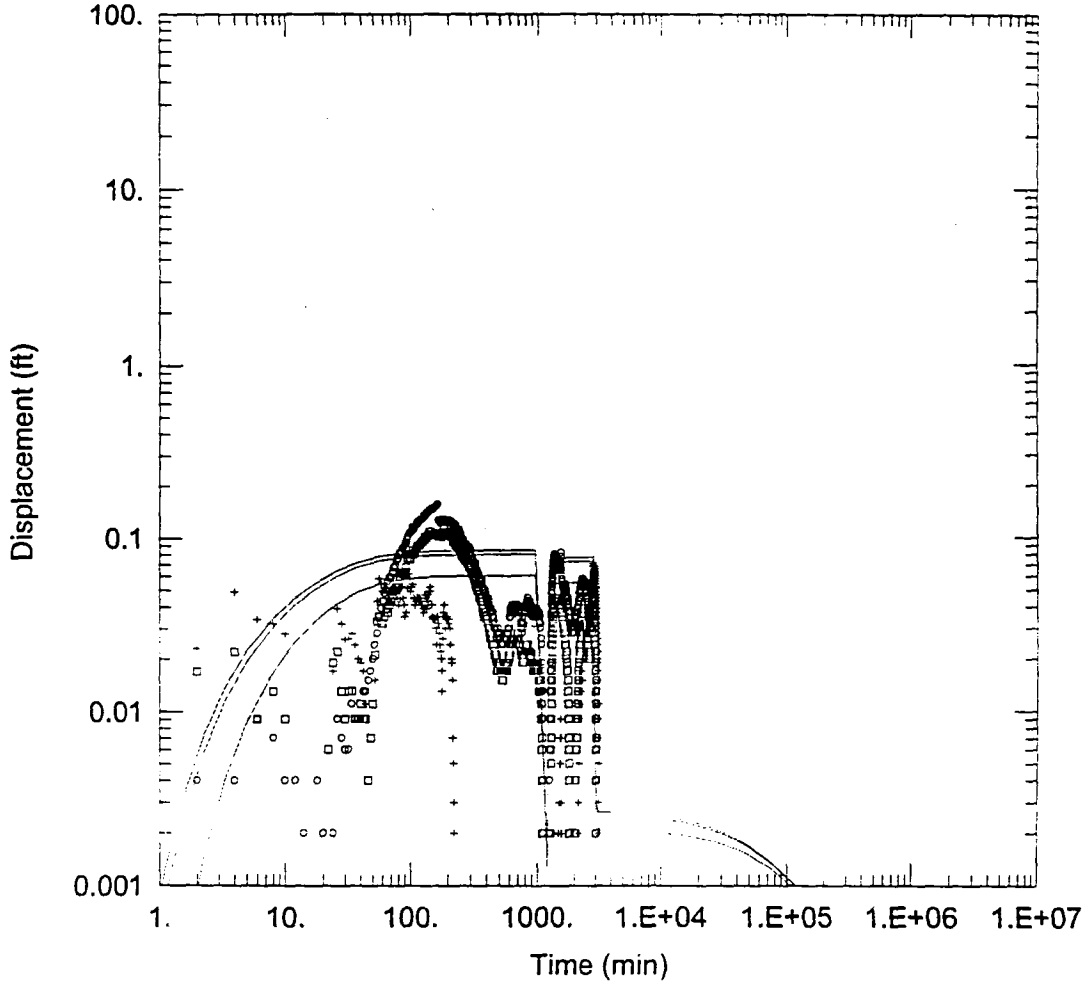
Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
0846		56.84						
1014		56.84						
1109		56.84						
1208		56.82						
1310		56.82						
1410		56.82						
1503		56.72						
1606		56.72						
1702		56.72						

Notes:

117-MW-11 MS, 117-MW-07MS, Pump in 117-MW-10 MS



48-hour Drawdown Test



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\117MW10MS_11_05_07aqt.aqt
Date: 10/09/01 Time: 11:20:40

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

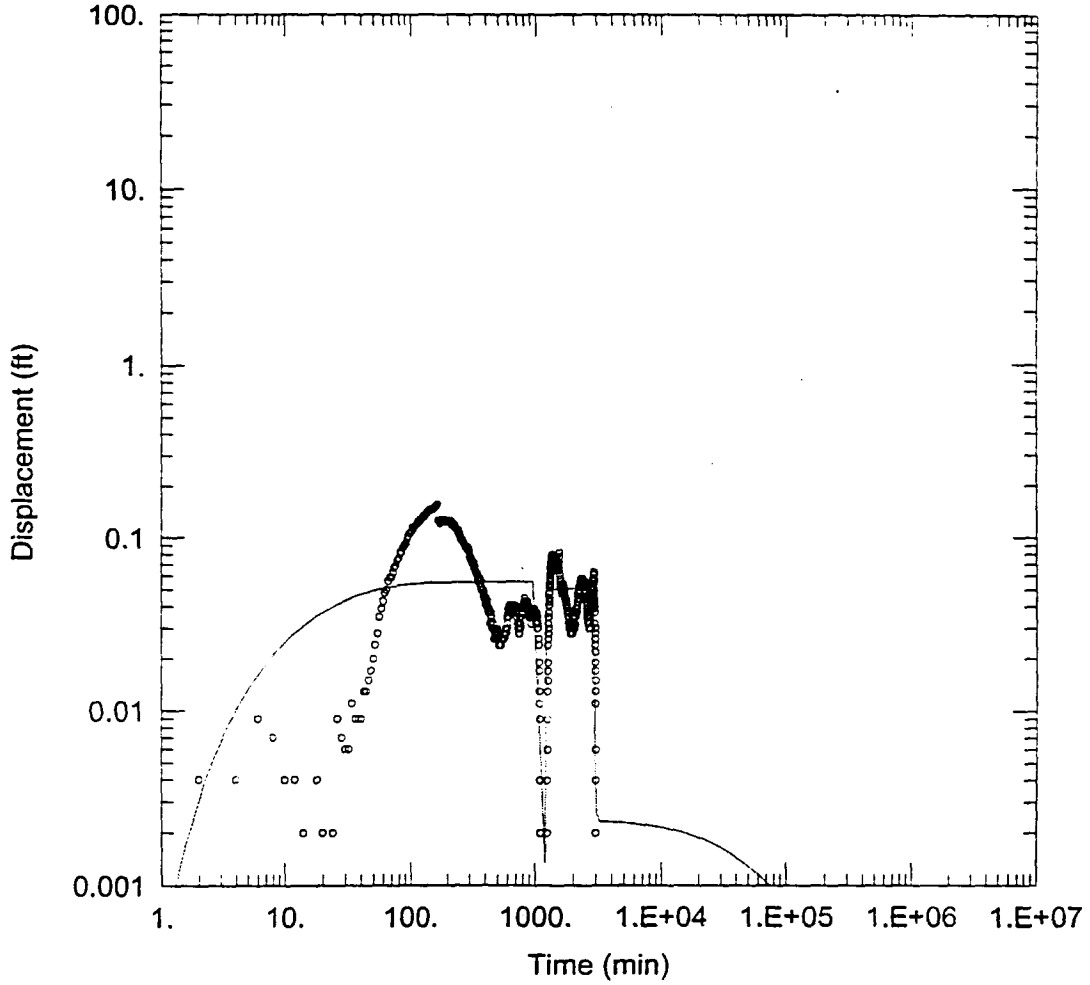
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-11MS	118	0
+ 17-MW-05	163.5	0
◦ 117-MW-07	0	125

SOLUTION

Aquifer Model: Unconfined
T = 0.09071 ft^2/min
Sy = 0.1

Solution Method: Neuman
S = 7.162E-05
Kz/Kr = 0.1908



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\117MW10MS_07aqt.aqt
Date: 10/09/01 Time: 12:17:49

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 165. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

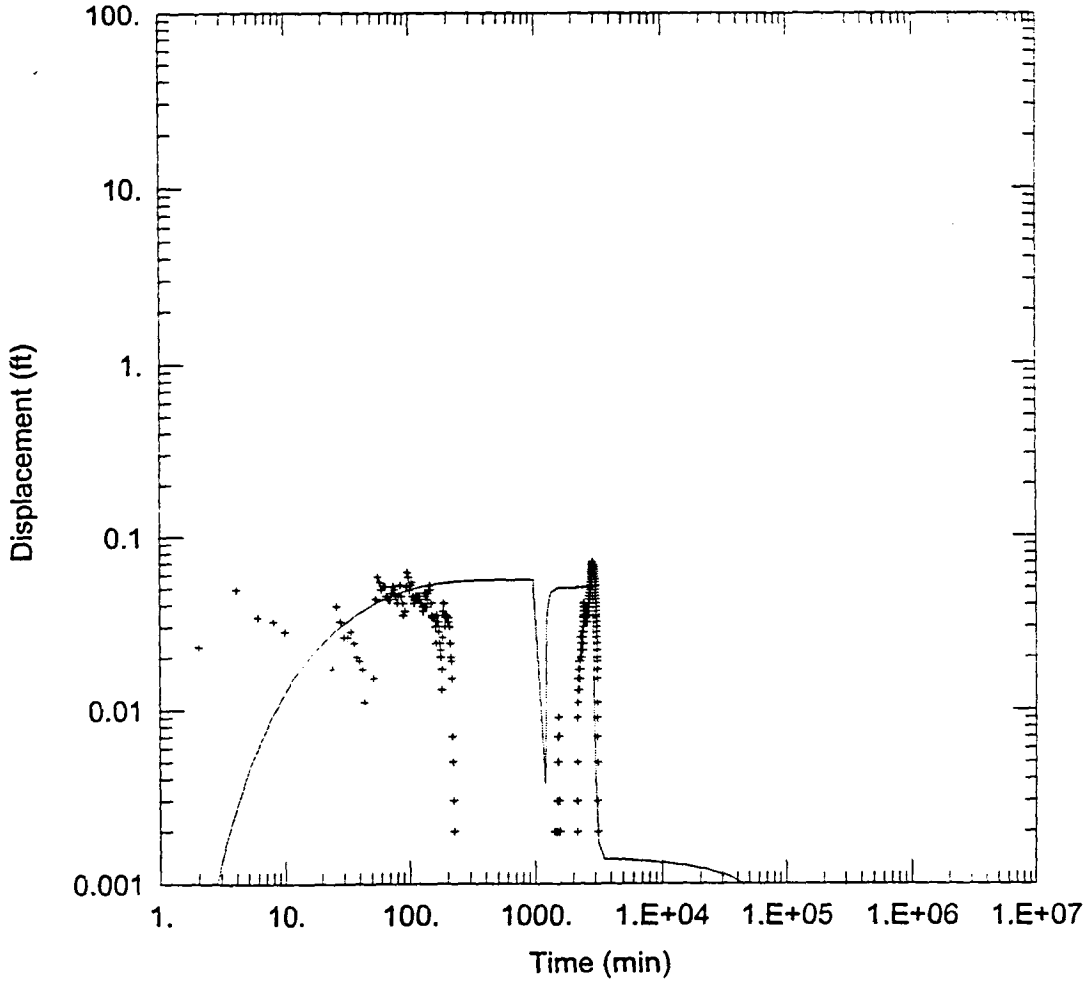
Observation Wells

Well Name	X (ft)	Y (ft)
◦ 117-MW-07	0	125

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.137 ft^2/min
S = 0.0001054
Sy = 0.1
ß = 0.1



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\117MW10MS_05aqt.aqt
Date: 10/09/01 Time: 12:19:43

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

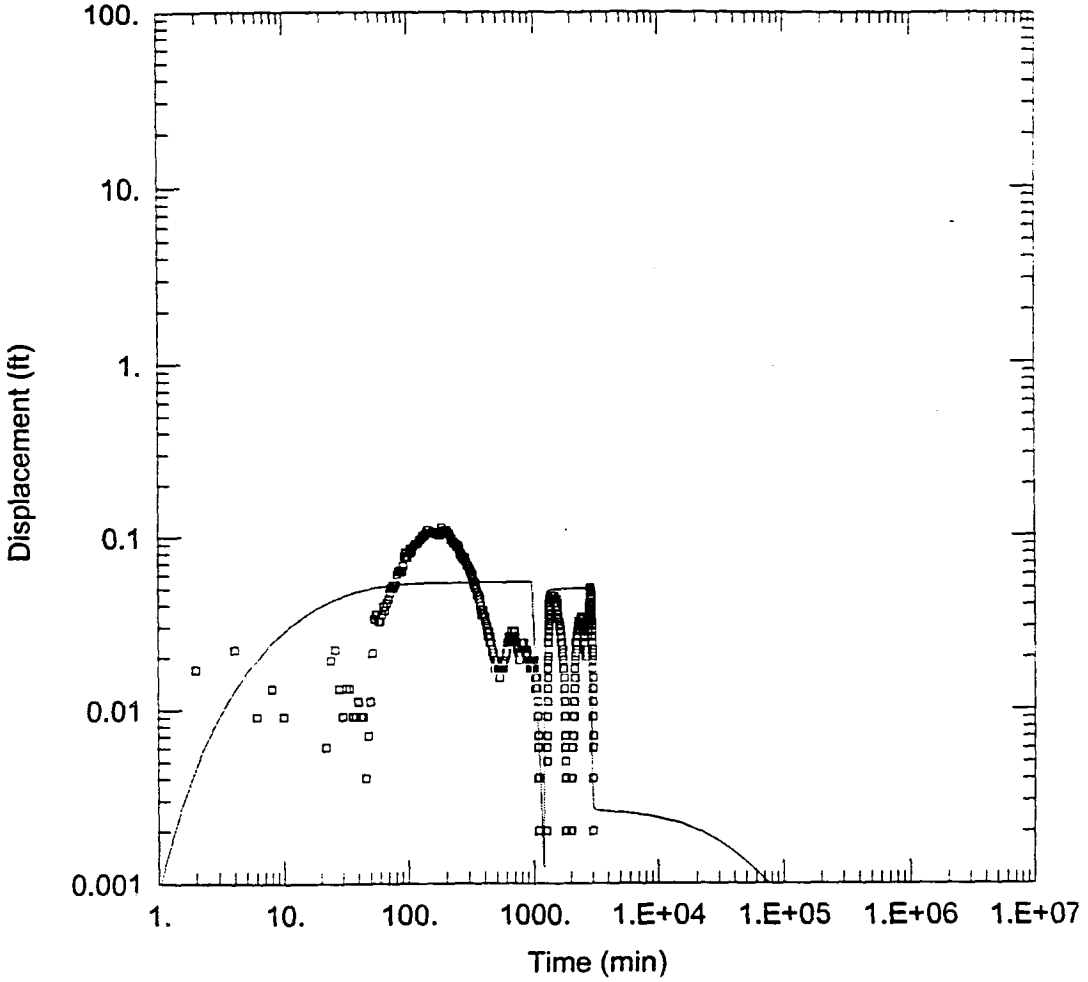
Observation Wells

Well Name	X (ft)	Y (ft)
+ 17-MW-05	163.5	0

SOLUTION

Aquifer Model: Unconfined
T = 0.137 ft^2/min
Sy = 0.1

Solution Method: Neuman
S = 0.00013
ß = 0.1



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\117MW10MS_117MW11MS.aqt
Date: 10/09/01 Time: 12:24:56

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 162. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

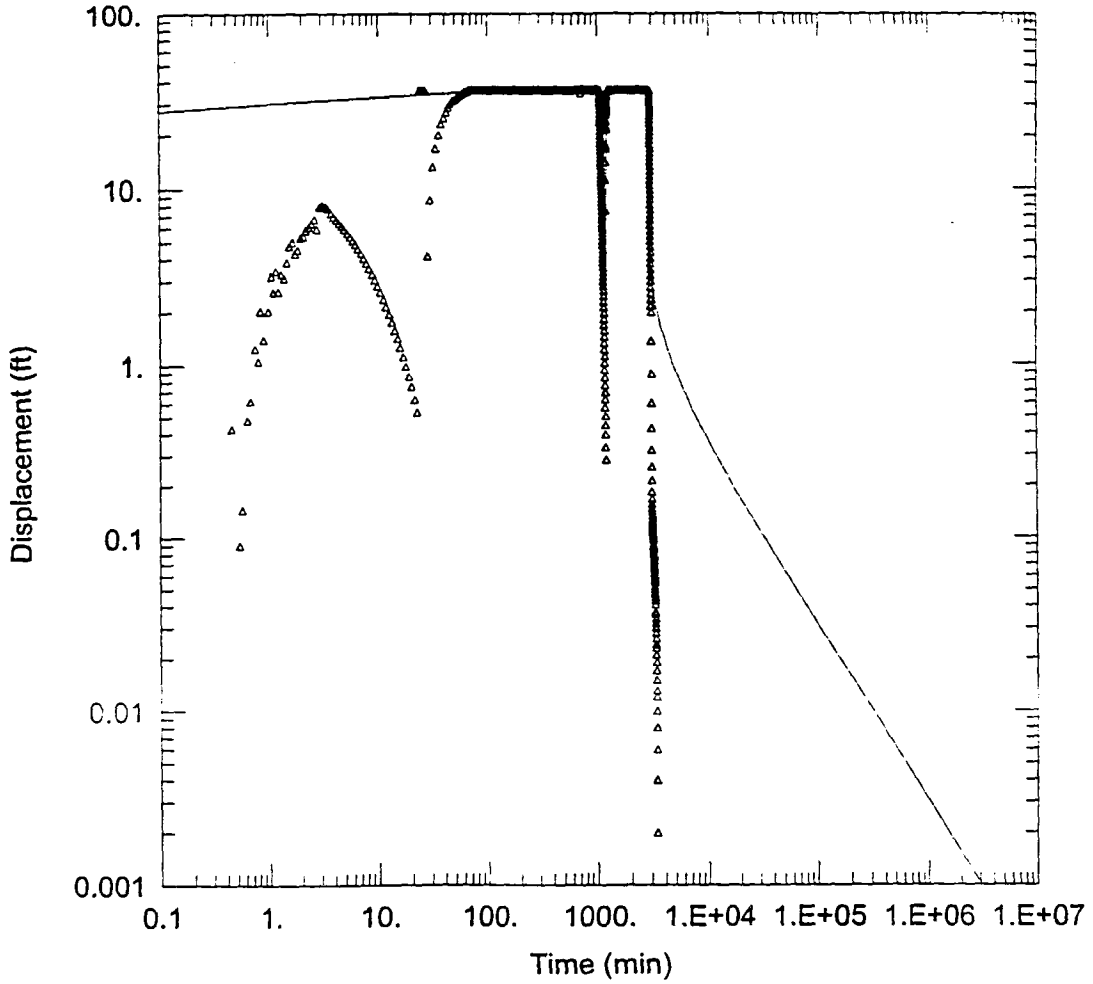
Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-11MS	118	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.1423 ft^2/min
S = 9.851E-05
Sy = 0.1
ß = 0.1



WELL TEST ANALYSIS

Data Set: C:\WINNT\Profiles\horndorff\Crow's Landing\117MW10MS_10aqt.aqt
Date: 10/09/01 Time: 12:27:48

PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

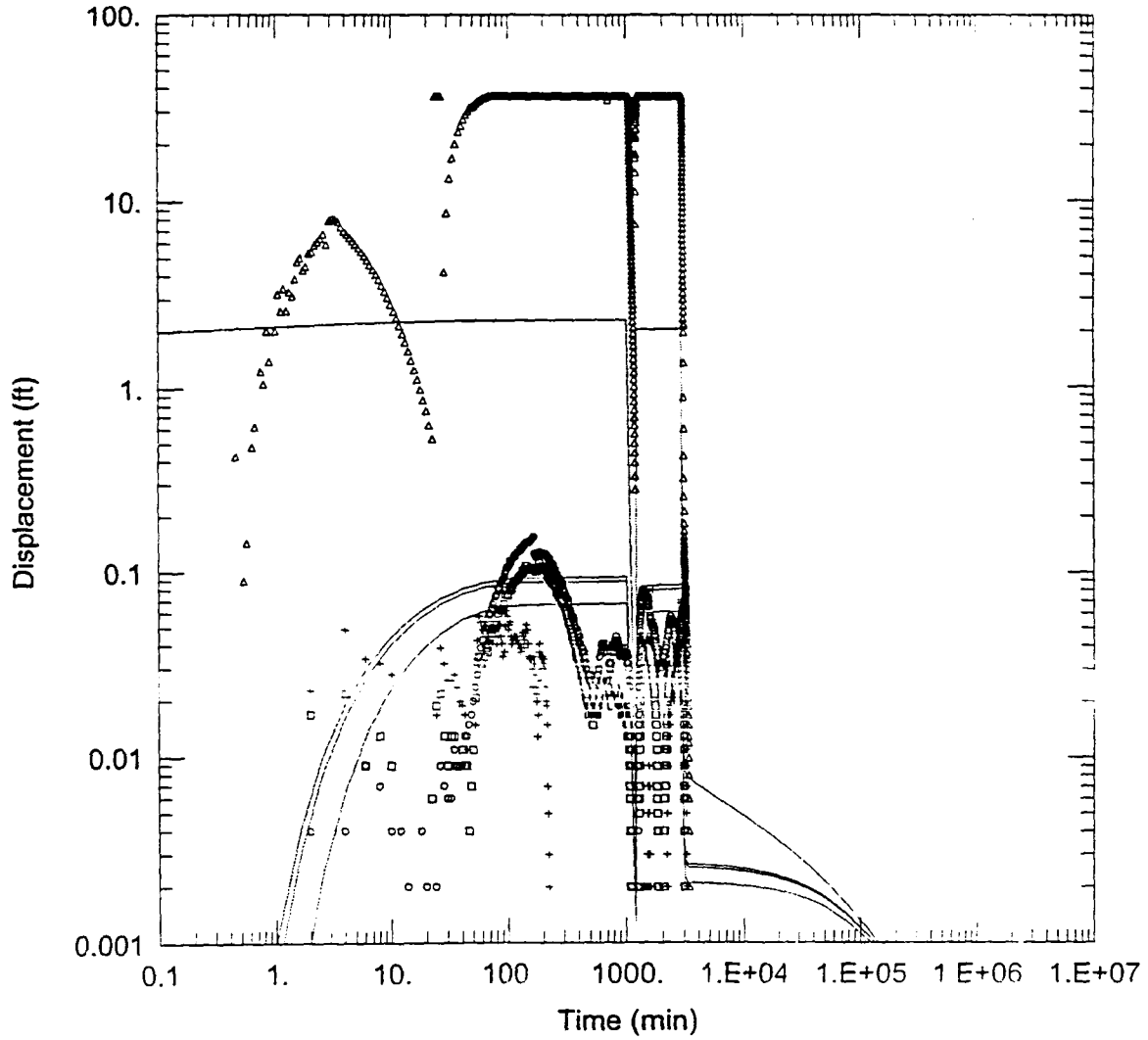
Observation Wells

Well Name	X (ft)	Y (ft)
▵ 117-MW-10MS	1E-006	0

SOLUTION

Aquifer Model: Unconfined
Solution Method: Neuman

T = 0.004112 ft^2/min
S = 4.795E-06
Sy = 0.1
ß = 0.1



PROJECT INFORMATION

Company: IT CORPORATION
Client: NASA CROWS LANDING FLIGHT FAC.
Project: 800063
Test Location: CROWS LANDING, CA
Test Well: 117-MW-10MS
Test Date: 9/11/01

AQUIFER DATA

Saturated Thickness: 163. ft

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
117-MW-10MS	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
▫ 117-MW-11MS	118	0
+ 17-MW-05	163.5	0
▫ 117-MW-07	0	125
▵ 117-MW-10MS	1E-006	0

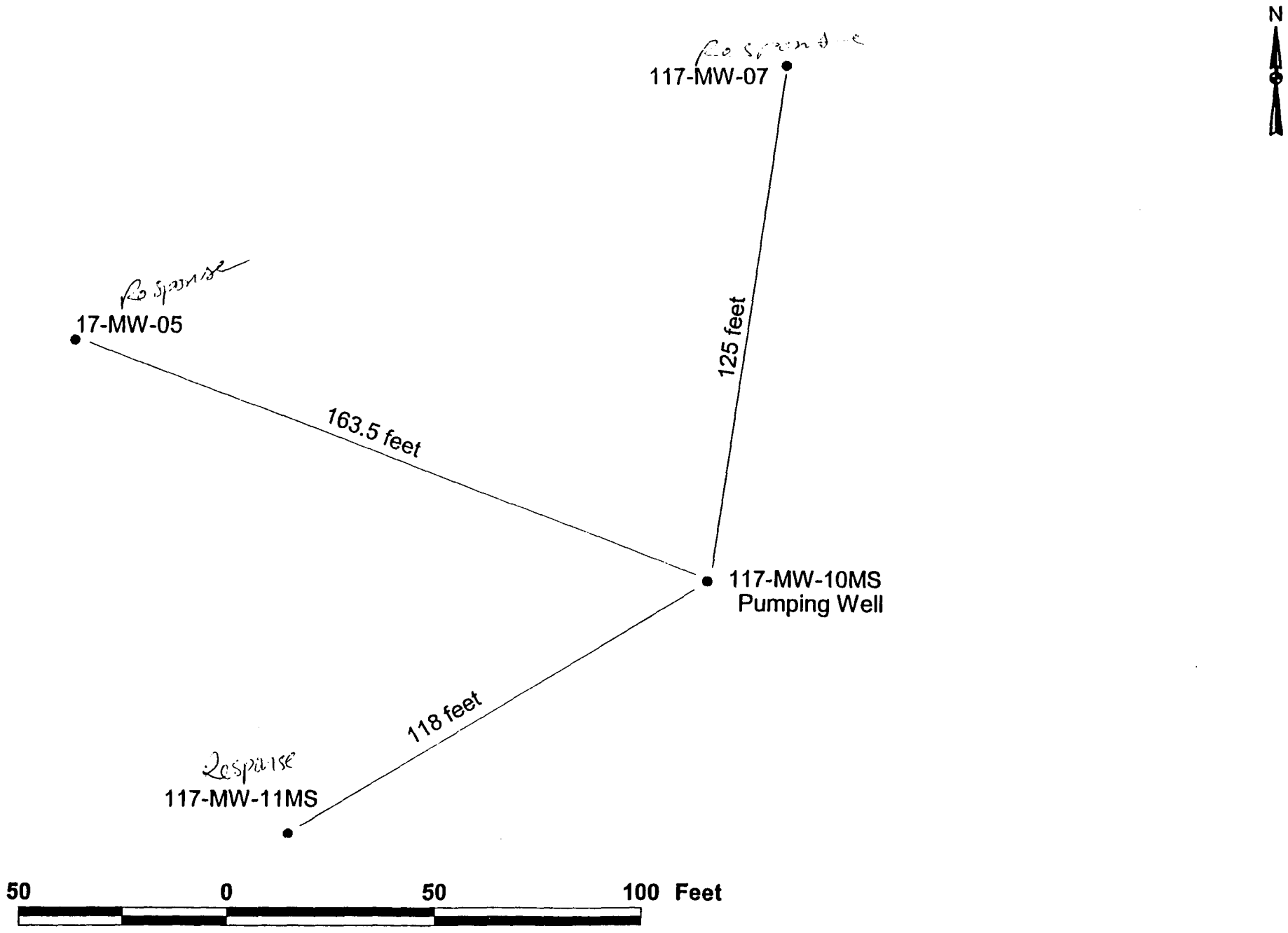
SOLUTION

Aquifer Model: Unconfined
T = 0.08106 ft^2/min
Sy = 0.1

Solution Method: Neuman
S = 6.4E-05
Kz/Kr = 0.1908

117-MW-10 (MS) Pumping Test

All 2" wells



CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/11/01
Monitoring Well ID: 117-MW-10MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/11/01	0805	0	56.67	0	1314.79	0	0	—	—
	0830	25	PUMP	STUCK	—	—	—	—	—
	0900	55	—	—	—	—	—	117-MW-10MS-15	0900
	1630	505	—	—	1547.86	233.07	0.46	117-MW-10MS-8	1630
9/12/01	0810	1451	T.O.P.	—	1932.76	384.90	0.41	117-MW-10MS-24	0830
	1100	1615	T.O.P.	—	1995.54	65.78	0.40	—	—
	1305	1770	T.O.P.	—	2058.89	60.35	0.48	—	—
	1405	1797	T.O.P.	—	2109.83	50.94	0.89	—	—
9/13/01	0805	2895	T.O.P.	—	2597.06	487.23	0.44	117-MW-10MS-48	0825
	0830	2900	PUMP	OFF	2597.06	—	—	—	—

NO FURTHER ENTRIES

Notes: RECOVERY TEST STARTED AT 0830, 9/13/01

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/11/01
Monitoring Well ID:
Transducer No.: 117-MW-11 MS
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10 MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/11/01	0800	0	58.36	—	1314.79	—	—	—	—
9/12/01	0829	1470	58.38	—	1932.76	—	—	—	—
9/13/01	0836	2907	58.40	—	2597.06	—	—	—	—
	*	PUMP	SHUT	OFF	—	—	—	—	—

NO FURTHER MS ENTRIES

Notes: RECOVERY TEST STARTED AT 0830, 9/13/01

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/11/01
Monitoring Well ID: 117-MW-07 MS
Transducer No.:
Transducer Depth:

Test No.:
Pumping Well ID: 117-MW-10 MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/11/01	0811	0	54.76	—	1314.79	—	—	—	—
9/12/01	0842	1471	54.83	—	1932.76	—	—	—	—
9/13/01	0846	2911	54.84	—	2597.06	—	—	—	—
	*	PUMP	SHUT	OFF	—	—	—	—	—

NO FURTHER ENTRIES

Notes: RECOVERY TEST STARTED AT 0830 9/13/01

CTO 4 – UST Cluster 1
Aquifer Testing

Date: 9/11/01
Monitoring Well ID:
Transducer No.: 17-MW-05 MS
Transducer Depth:

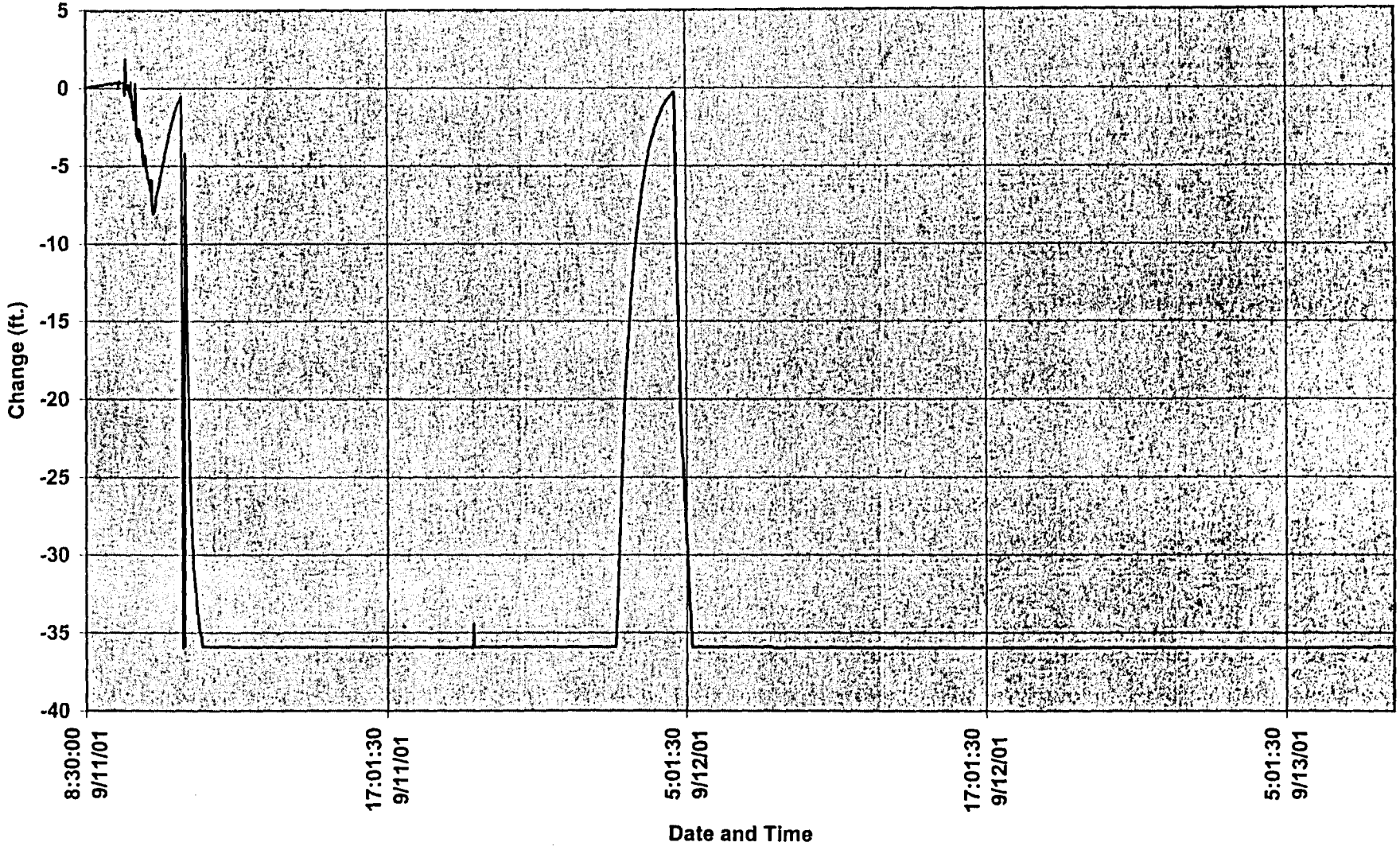
Test No.:
Pumping Well ID: 117-MW-10 MS

	Time	Elapsed Time (minutes)	Depth to Water (feet)	Cumulative Drawdown (feet)	Totalizer Reading (gallons)	Total Gallons Purged	Extraction Rate (gpm)	Groundwater Sample Number	Groundwater Sample Time
9/11/01	0807	0	56.85	0	1314.29	—	—	—	—
9/12/01	0841	1474	56.80	—	1932.76	—	—	—	—
9/13/01	0837	2910	56.87	—	2597.06	—	—	—	—

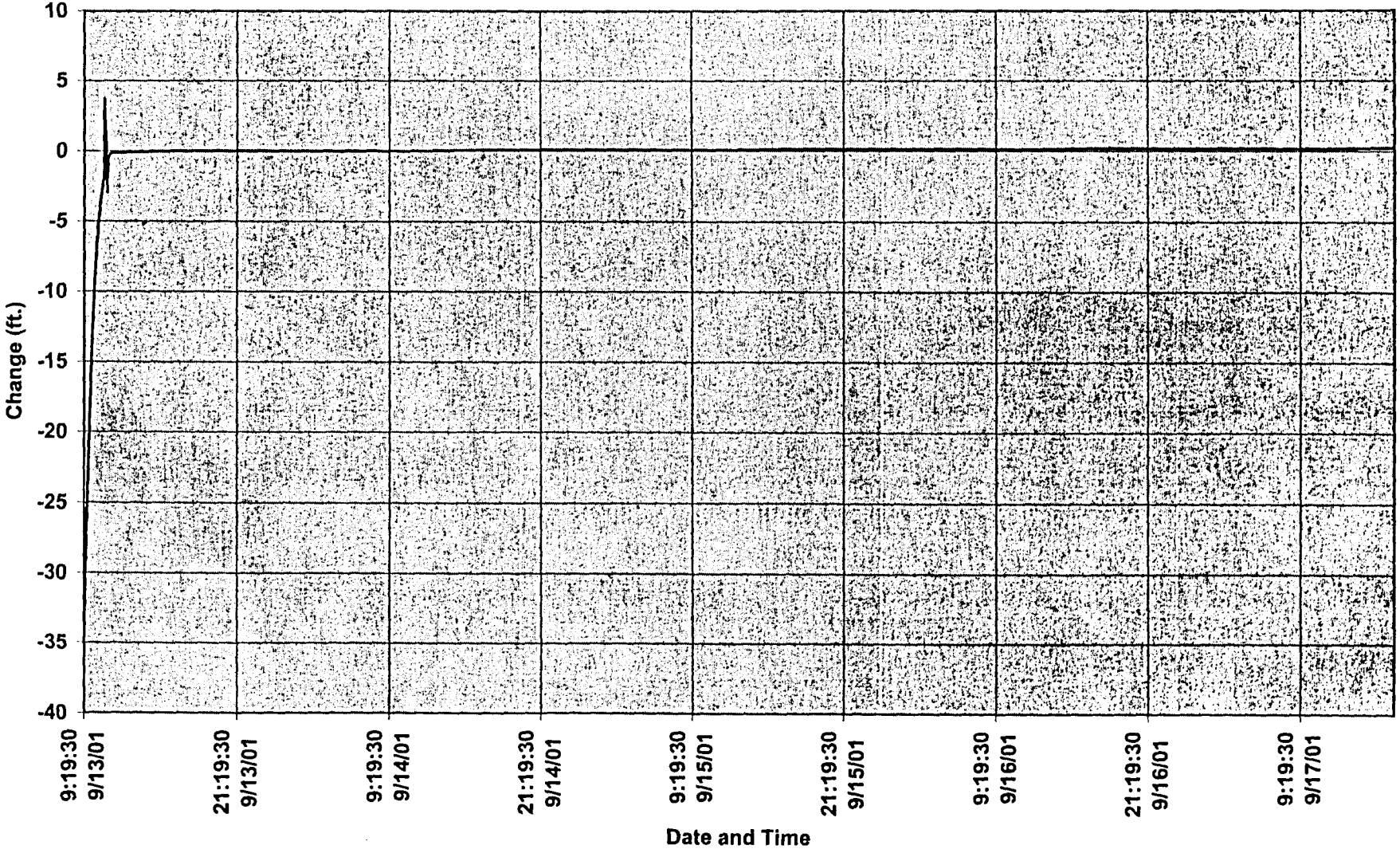
NO FURTHER ENTRIES
MS

Notes: RECOVERY TEST STARTED 0830, 9/13/01

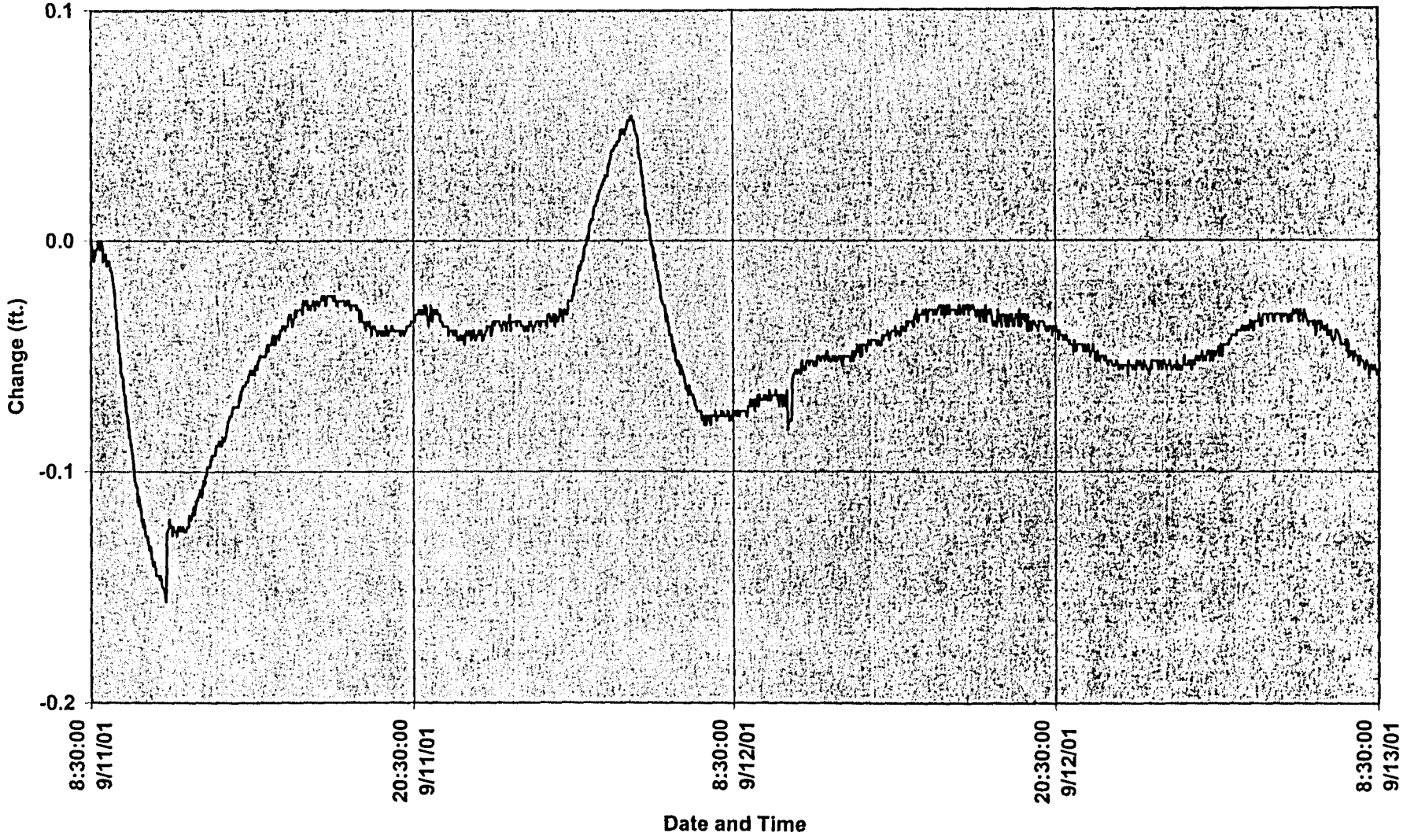
Pump Test 117-MW-10 MS, Pump in 117-MW-10 MS



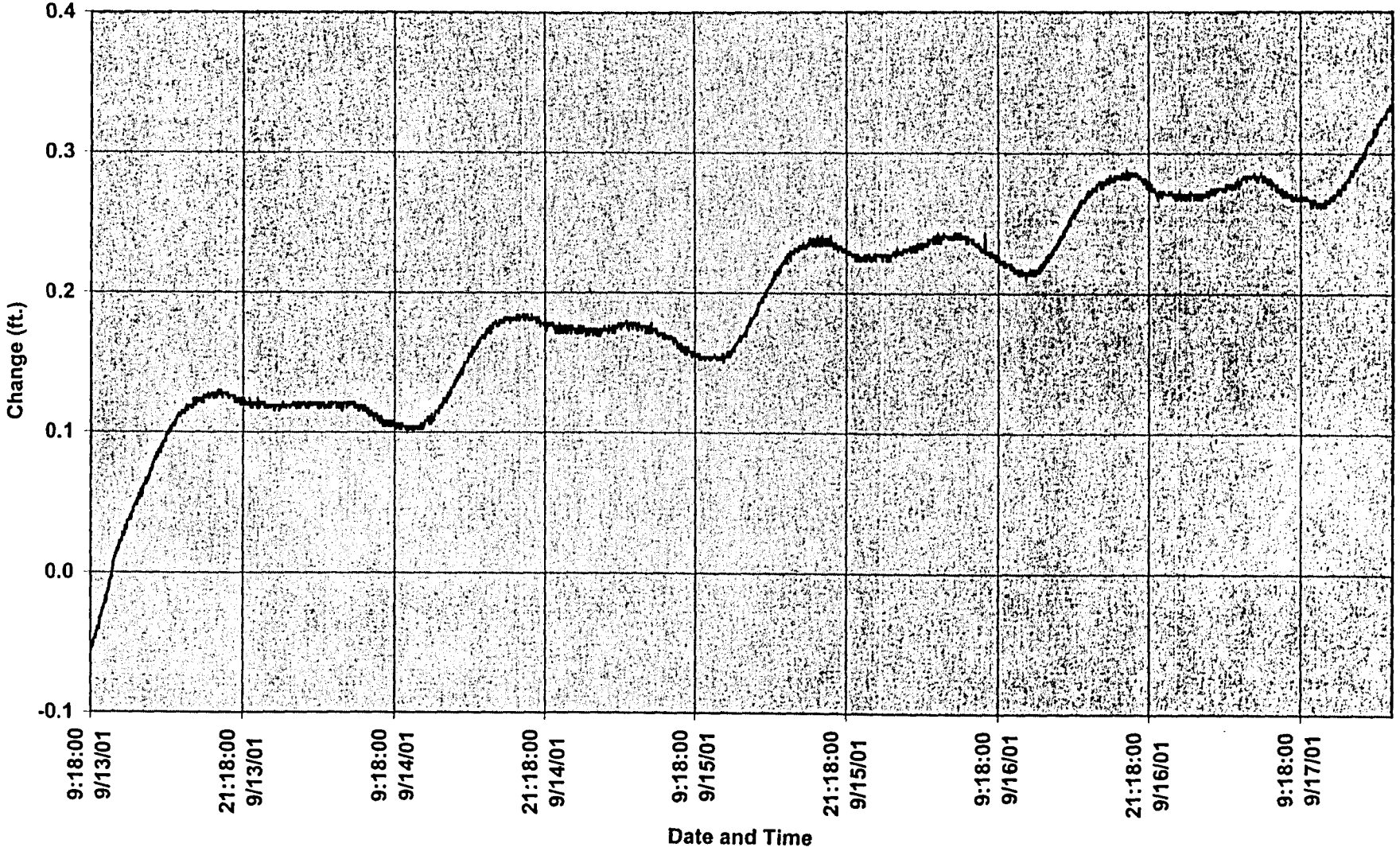
Recovery 117-MW-10 MS, Pump in 117-MW-10 MS



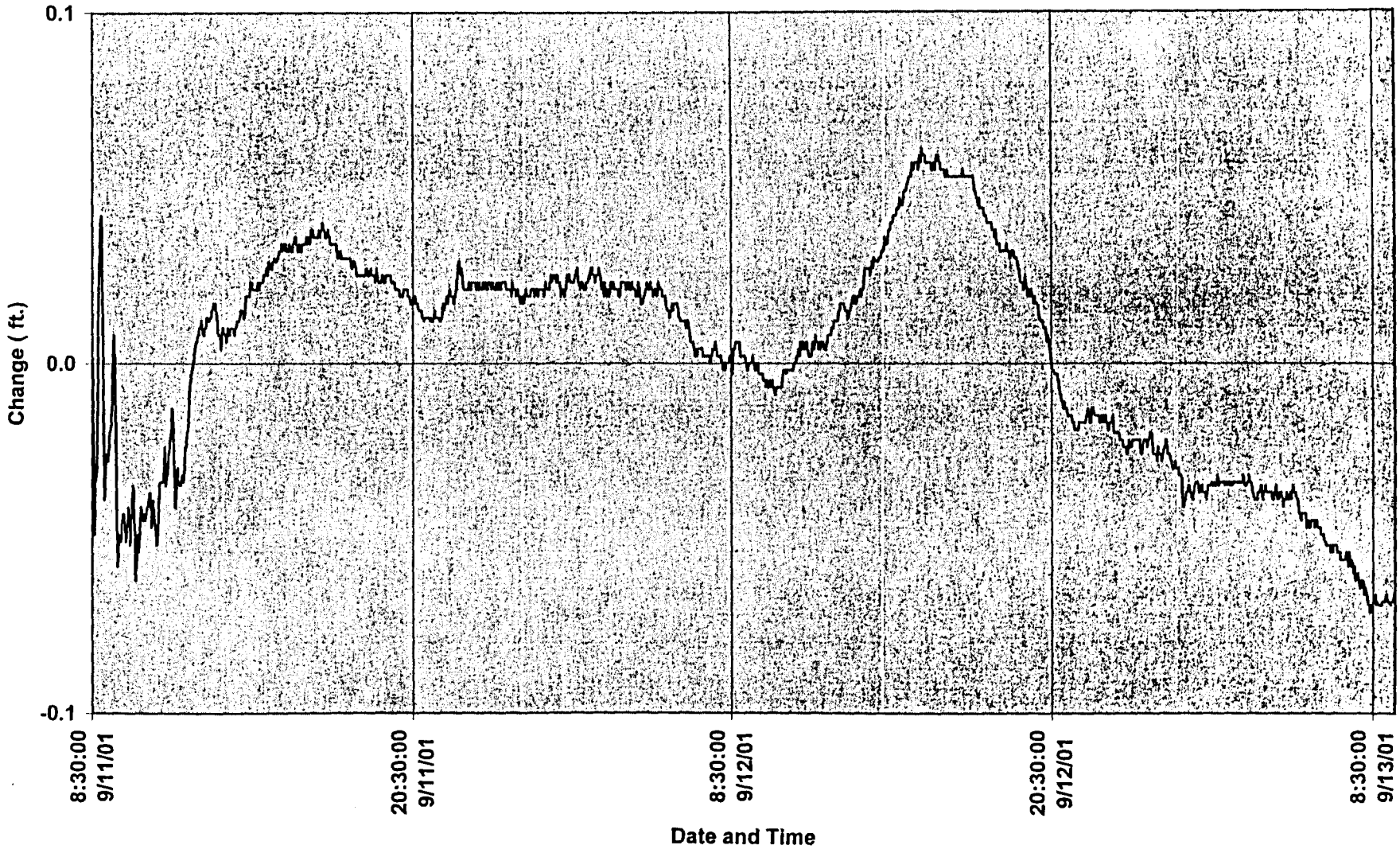
Pump Test 117-MW-07 MS, Pump in 117-MW-10 MS



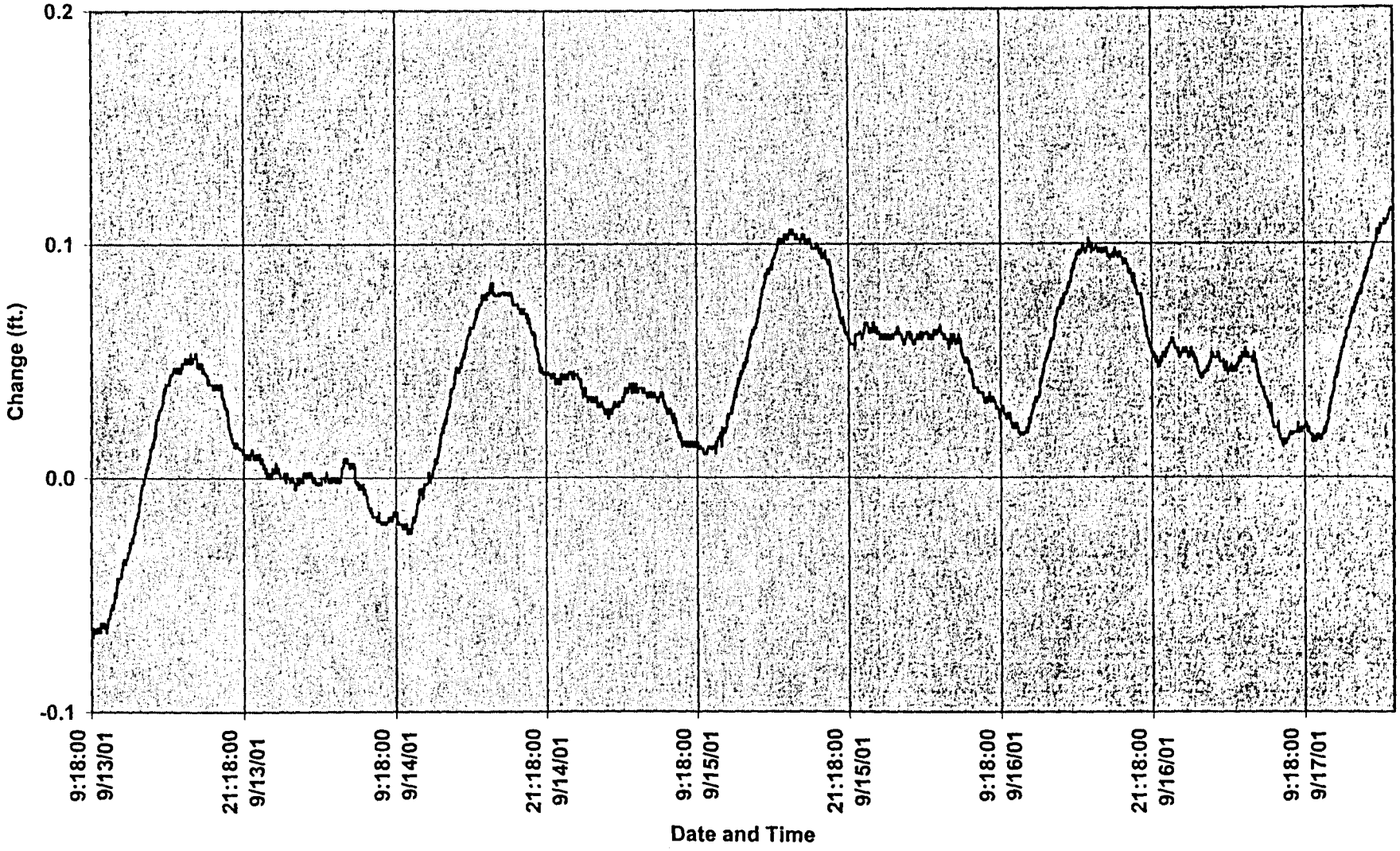
Recovery Test 117-MW-07 MS, Pump in 117-MW-10 MS



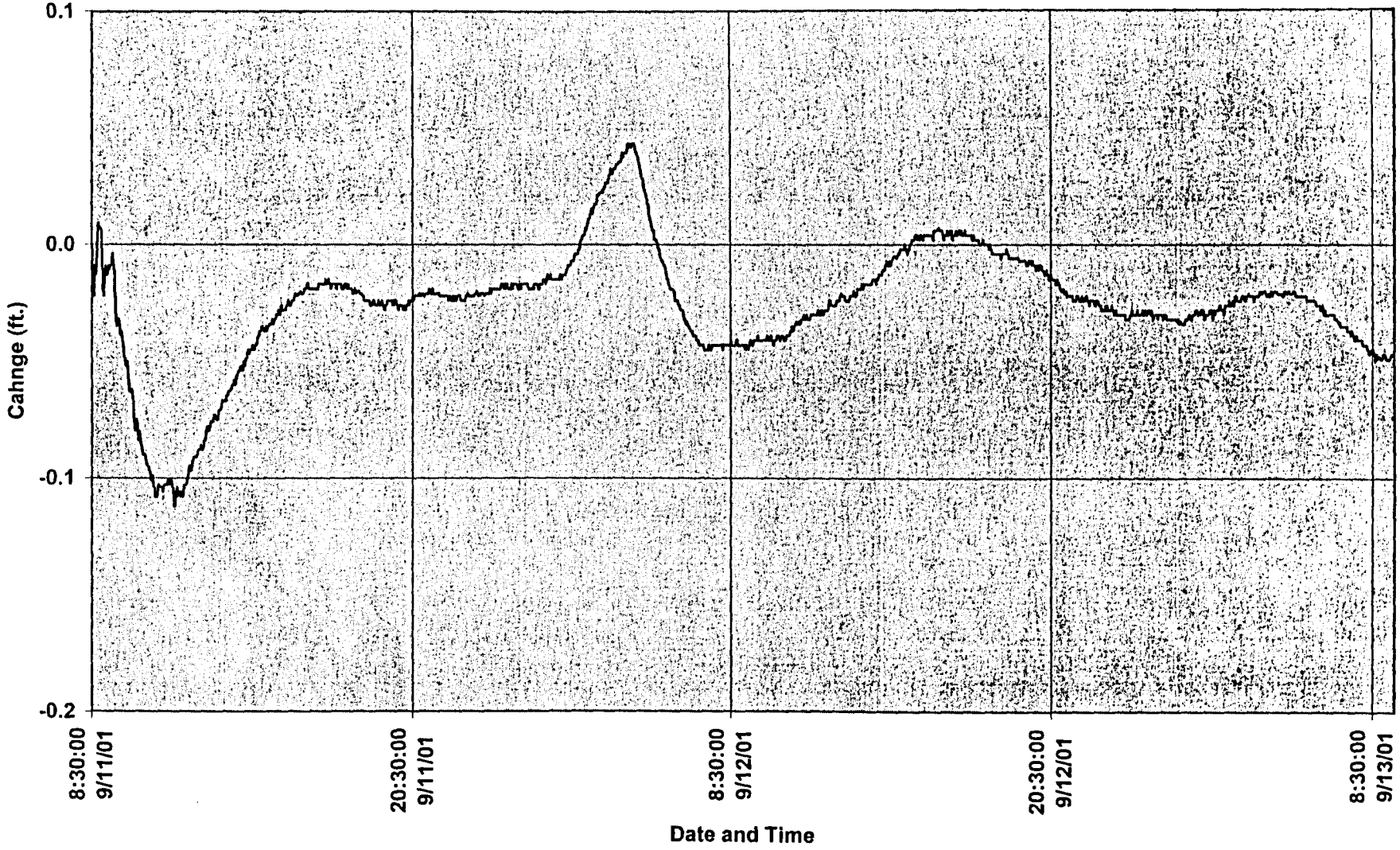
Pump Test 17-MW-05, Pump in 117-MW-10 MS



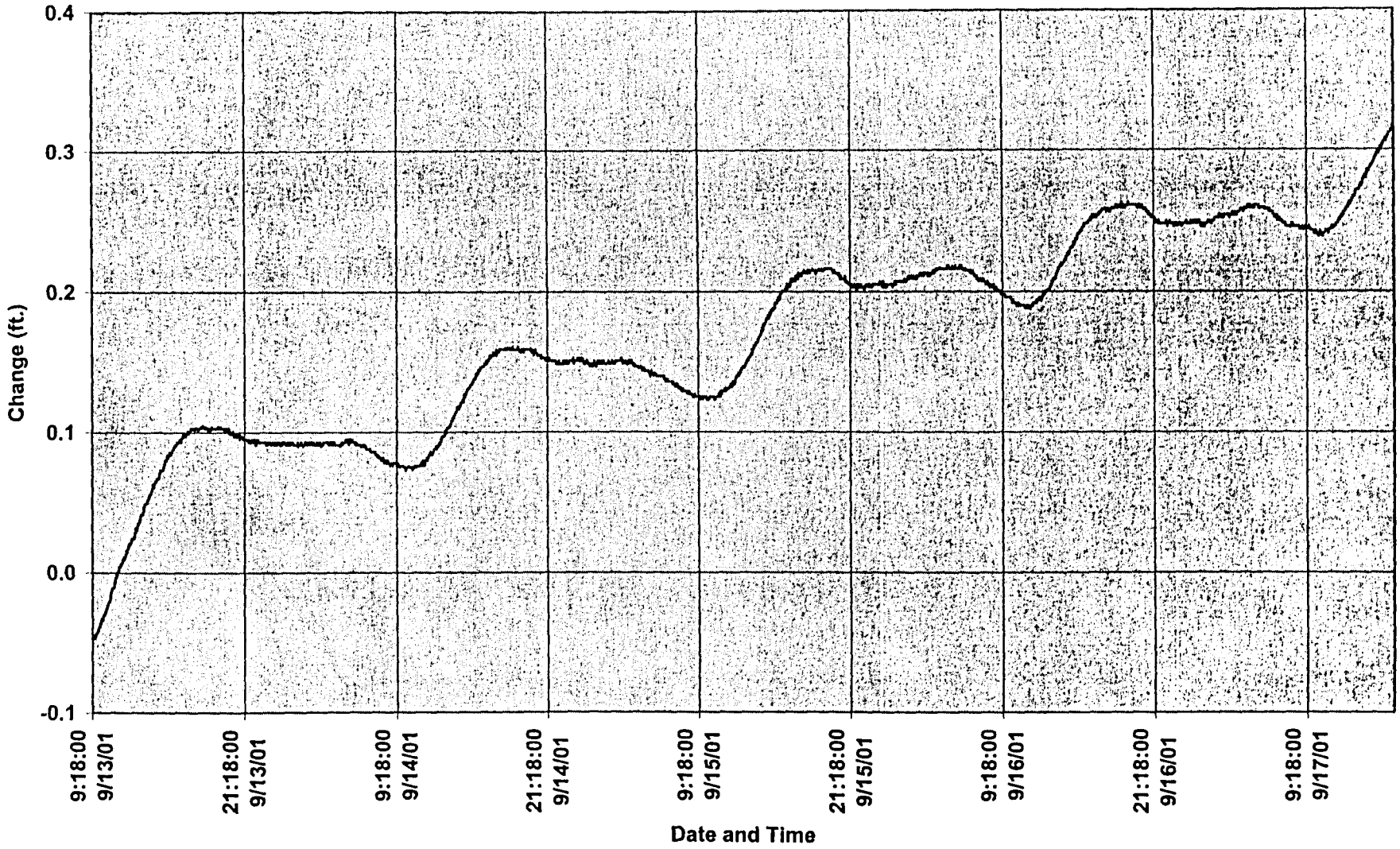
Recovery Test 17-MW-05 MS, Pump in 117-MW-10 MS



Pump Test 117-MW-11 MS, Pump in 117-MW-10 MS



Recovery Test 117-MW-11 MS, Pump in 117-MW-10 MS



Certificates of Analysis

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

August 13, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5024 and your project Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-2151 Fax: (925)288-0888

Service ID #: 801-015024
Collected by: M.Magee
Collected on: 07/30/01

Received: 08/01/01
Extracted: 08/02/01
Tested: 08/02-06/01
Reported: 08/09/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW10MS-15 01-05024-1	117-MW10MS-8HR 01-05024-2	Trip Blank 01-05024-3
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.71 [a]	1.23 [a]	<0.05
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	251 [b]	500 [c]	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [d]	<0.63	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	20	10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	5.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	6.3	6.6	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	2.5	2.9	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	8.0	14.9	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL [d]	Analysis Result 117-MW10MS-15 01-05024-1	117-MW10MS-8HR 01-05024-2	Trip Blank 01-05024-3
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [d]	<0.56	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	5.5	5.6	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [d]	<2	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	0.6	0.4J	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	74	89	<20

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW10MS-15 01-05024-1	117-MW10MS-8HR 01-05024-2
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [e]	<0.1 [e]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [f]	<0.1 [f]

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] Not a typical Gasoline or JP-4 pattern.
[b] Analyzed with a dilution factor of 2.
[c] Analyzed with a dilution factor of 5.
[d] MDL reported.
[e] Sample chromatogram mainly contained an unknown peaks at about C_{11} range.
[f] Sample chromatogram contained some isolated peaks in Motor Oil range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 CROWS LANDING

APCL Service ID: 01-5024

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5024

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW10MS-15	01-05024-1
117-MW10MS-8HR	01-05024-2
Trip Blank	01-05024-3

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),
M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562881
Page 1 of 1

Project Name/No. [1] Crows Landing 800063
Sample Team Members [2] M. Magee
Profit Center No. [3] 5515001
Project Manager [4] Bob Hulet
Purchase Order No. [6] 173773
Required Report Date [11]

Samples Shipment Date [7] 7/31/01
Lab Destination [8] APCL
Lab Contact [9] M Heckman
Project Contact/Phone [12] Rose Condit 925 288 2151
Carrier/Waybill No. [13] Fed Ex 8267 8597 9097

Bill to: [5] IT Corporation
4005 Port Chicago Hywy
Concord CA 94520
Attn: Rich Iannicca

Report to: [10] (Same)
Rose Condit

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Preservative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW10MS-15	Groundwater	7/30/01 0850	40 mil VOA	5x	HCL	VOC's 8260 TPH G/JF 8015m	SAMPLES RECEIVED GOOD CONDITION TEMP = 2.6°C	
↓	↓	↓	Liter Amber	2x	ICE	TPH D/mo 8015m		
117-MW10MS-8hr	↓	7/30/01 1630	40 mil VOA	5x	HCL	VOC's 8260 TPH G/JF 8015m		
↓	↓	↓	Liter Amber	2x	ICE	TPH D/mo 8015m		
Trip	Water	NA	40 mil VOA	1x	HCL	VOC's 8260 TPH G/JF 8015m		
Temp	↓	↓	↓	1x	ICE	Temp		

FOR LAB USE ONLY

FOR LAB USE ONLY

5024

Special Instructions: [23]

Possible Hazard Identification: [24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☐ Rush ☐ 10 Day TAT

QC Level: [27]
I. ☐ II. ☐ III. ☑ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) D Q Peet	Date: 7/31/01 Time: 1000	1. Received by [28] (Signature/Affiliation) FEDEX	Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) Mark A. Fed	Date: 8/1/01 Time: 1005
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

September 27,2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway,
Concord CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-5821 and your project 800063 Crows Landing. Enclosed please find:

(1) Original Final Report.
(2) Original Chain of Custody.
(3) One Original and one Copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-015821
Collected by: M. Swank/ M. Magee
Collected on: 09/10-13/01

Received: 09/15/01
Extracted: 09/17/01
Tested: 09/17-19/01
Reported: 09/21/01

Sample Description: Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10MS-8 01-05821-1	117-MW-10MS-15 01-05821-2	117-MW-10MS-24Hr 01-05821-3
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	1.52 [a]	0.21 [a]	1.92 [a]
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<0.1 [b]	<0.1 [b]
Dilution Factor				1	1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	0.08J	<0.1
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	881 [c]	47.3	1,030 [c]
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	4.7	4.1	4.9
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	1.6 [d]	<1.6	<1.6	<1.6
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	28.2	4.5	33.0
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10MS-8 01-05821-1	117-MW-10MS-15 01-05821-2	117-MW-10MS-24Hr 01-05821-3
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	1.4	2.5	1.4
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	5.8	4.6	5.8
METHYLENE CHLORIDE	8260B	µg/L	0.5	2.3	2.4	2.6
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.51 (d)	<0.51	<0.51	<0.51
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.82 (d)	<0.82	<0.82	<0.82
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	130	76	150

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10MS-48Hr 01-05821-4	CL1-EX-01-9/10 01-05821-5	Trip Blank 01-05821-6
Dilution Factor				1	50	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	1.92 [a]	45 [a]	<0.05
Dilution Factor				1	50	1
JP-4	M8015V	mg/L	0.05	<0.05	<2.5	<0.05
Dilution Factor				1	100	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [b]	<10 [e]	-
Dilution Factor				1	100	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<10	-
VOLATILE ORGANICS						
Dilution Factor				1	100	1
ACETONE	8260B	µg/L	10	<10	80,400	<10
BENZENE	8260B	µg/L	0.5	1,170 [f]	15,100	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<50	<0.5
BROMOMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
2-BUTANONE (MEK)	8260B	µg/L	10	<10	16,000	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<1000	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<50	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
CHLOROFORM	8260B	µg/L	0.5	4.8	<50	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<50	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	1.6 [d]	<1.6	<160	<1.6
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<50	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	35.1	460	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<50	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<50	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<50	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-10MS-48Hr 01-05821-4	CL1-EX-01-9/10 01-05821-5	Trip Blank 01-05821-6
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<50	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<50	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<50	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<50	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	260	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.5	<0.5	<50	<0.5
2-HEXANONE	8260B	µg/L	10	<10	990J	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	1.5	2,120	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	6.0	<50	<0.5
METHYLENE CHLORIDE	8260B	µg/L	0.5	2.3	400	5.5
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	370J	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<100	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<50	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.51 (d)	<0.51	<51	<0.51
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<50	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	290	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<50	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<50	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.82 (d)	<0.82	<82	<0.82
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	80	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<50	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<50	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	86J	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	170	5,100	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Not a typical Gasoline or JP-4 pattern.
(b) Sample chromatogram contained two unknown isolated peaks at about C_{11} and C_{17} range respectively.
(c) Analyzed with a dilution factor of 5.
(d) MDL reported.
(e) Sample chromatogram contained unknown isolated peaks at about C_{11} to C_{13} range.
(f) Analyzed with a dilution factor of 10.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

APCL Applied Physics and Chemistry Laboratory

13760 Magnolia Avenue. Chino, CA 91710 TEL: (909)590-1828 FAX: (909)590-1498

Fax Coversheet

To:	Rose Condit, IT FAX (925) 827-2179
From:	Mark A. Heckman, APCL FAX (909)590-1498
Date:	September 19, 2001
Project:	Crow's Landing
Subject:	Logins

Number of Pages (including this cover sheet): 12

Dear: Ms. Condit,

The following pages are the logins for the samples received yesterday.

If you have any questions please feel free to contact me at (909) 590-1828 x 113.

Sincerely,

Mark A. Heckman
Project Manager

FAXED
SEP 19 2001

Level C Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-5821

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-5821

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
CL1-EX-01-9/10	01-05821-5
Trip Blank	01-05821-6
117-MW-10MS-15	01-05821-2
117-MW-10MS-8	01-05821-1
117-MW-10MS-24Hr	01-05821-3
117-MW-10MS-48Hr	01-05821-4

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

(1) M8015V:

Surrogate recovery in CL1-EX-01-9/10 were much higher than the control limit due to matrix interference.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 545317
Page 1 of 2

Project Name/No.[1] CROWS LANDING 800063
Sample Team Members[2] M. SWANK, M. MAGEE
Profit Center No.[3] 5515001
Project Manager[4] BOB HULET
Purchase Order No.[6] 173773
Required Report Date[11] 9/27/01

Samples Shipment Date[7] 9/13/01
Lab Destination[8] APCL
Lab Contact[9] M. HECKMAN
Project Contact/Phone[12] ROSE CONDIT (925) 288 2151
Carrier/Waybill No.[13] FED EX 8267 8212 3910

Bill to:[5] IT CORPORATION
4005 PORT CHICAGO HWY
CONCORD, CA
ATTN: RICH IANNICCA

Report to:[10] (SAME)
ATTN: ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Pre-servative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
CLI-EX-01-9/10	WATER	9/10/01 0730	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)		
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)	Sample Preservation Ok	
TRIP BLANK	↓	NA	VOA	1x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)	Good Condition	
117-MW-10MS-15	↓	9/11/01 0900	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)	Temp=4.7°C	
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		
117-MW-10MS-8	↓	9/11/01 1630	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)		
↓	↓	9/11/01 1630	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		

FOR LAB USE ONLY

5821

FOR LAB USE ONLY

Special Instructions:[23] SILICA GEL CLEANUP FOR DIESEL/MO

Possible Hazard Identification:[24] Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal:[25] Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required:[26] Normal ☑ Rush ☐ 10-DAY TAT

QC Level:[27] I. ☐ II. ☐ III. ☑ Project Specific (specify):

1. Relinquished by[28] (Signature/Affiliation) M. SWANK	Date: 9/13/01 Time:	1. Received by[28] (Signature/Affiliation) APCL	Date: 9/13/01 Time: 1200
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 545317
Page 1 of 2

Project Name/No. 1: CROWS LANDING 800063
Sample Team Members 2: M. SWANK, M. MAGEE
Profit Center No. 3: 5515001
Project Manager 4: BOB HULET
Purchase Order No. 6: 173773
Required Report Date 11: 9/27/01

Samples Shipment Date 7: 9/13/01
Lab Destination 8: APCL
Lab Contact 9: M. HECKMAN
Project Contact/Phone 12: ROSE CONDIT (925) 288 2151
Carrier/Waybill No. 13: FED EX 8267 8212 3910

Bill to: 5: IT CORPORATION, 4005 PORT CHICAGO HWY, CONCORD, CA, ATTN: RICH IANNICCA
Report to: 10: (SAME), ATTN: ROSE CONDIT

ONE CONTAINER PER LINE

Sample Number 14	Sample Description/Type 15	Date/Time Collected 16	Container Type 17	Sample Volume 18	Pre-servative 19	Requested Testing Program 20	Condition on Receipt 21	Disposal Record No. 22
CLI-EX-01-9/10	WATER	9/10/01 0930	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)		
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)	Sample Temp Good Condition	
TRIP BLANK	↓	NA	VOA	1x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)		
117-MW-10MS-15	↓	9/11/01 0900	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)	Temp=4.7°C	
↓	↓	↓	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		
117-MW-10MS-8	↓	9/11/01 1630	VOA	5x40mL	HCl	VOC's + MTBE (8260B) TPH G/JF (8015B)		
↓	↓	9/11/01 1630	AMBER	2x1L	ICE	TPH DIESEL/MO (8015B)		

FOR LAB USE ONLY

5821

FOR LAB USE ONLY

Special Instructions: 23 SILICA GEL CLEANUP FOR DIESEL/MO

Possible Hazard Identification: 24
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal: 25
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required: 26
Normal ☑ Rush ☐ 10-DAY TAT

QC Level: 27
I. ☐ II. ☐ III. ☑ Project Specific (specify):

1. Relinquished by 28 (Signature/Affiliation) M. SWANK	Date: 9/13/01 Time:	1. Received by 28 (Signature/Affiliation) APCL	Date: 9/15/01 Time: 1200
2. Relinquished by (Signature/Affiliation)	Date: Time:	2. Received by (Signature/Affiliation)	Date: Time:
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: 29

*See back of form for special instructions.

Lab Copy

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 545317
Page 2 of 2

Project Name Crows Landing CTO-04 Project No. 800063 Samples Shipment Date 09/13/01

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
117-MW-10ms 24hr	Water	9/12/1 0830	Voa	x5	HCl	VOC + MTBE 8260 TPH GF/G 8015B		
↓	↓	↓	1L amber	x2	Ice	TPH. D/M.O. 8015B	FOR LAB USE ONLY	
117-MW-10ms 48hr	↓	09/13/1 0825	Voa	x5	HCl	VOC + MTBE 8260 TPH GF/G 8015B		
↓	↓	↓	1L amber	x2	Ice	TPH D/M.O. 8015B	FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	
							FOR LAB USE ONLY	

5821

White: To accompany samples Yellow: Field copy

*See back of form for special instructions.

Attachment 5

Observation Well
Certificates of Analysis

UST 117
Data Summary
117-MW-04

	Method			
Sample ID			**117-MW-04**	
Aquifer			**shallow**	
Screen Interval (ft bgs)			**50-75**	
Description		**May-01**	**Aug-01**	**Sep-01**
pH	**field**	**7.12**	**7.07**	**7.22**
conductivity	**field**	**1.12** uS/cm	**1.08** uS/cm	**1.11** uS/cm
dissolved oxygen	**field**	**1.61** mg/L	**0.53** mg/L	**0.68** mg/L
TPH-gasoline	**M8015V**	<0.05 mg/L	**0.01J** mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
TPH-motor oil	**M8015E**	<0.1 mg/L	<0.1 mg/L	<0.1 mg/L
benzene	**8260**	**1.9** µg/L	**1** µg/L	**1.2** µg/L
carbon tetrachloride	**8260**	<0.5 µg/L	<0.5 µg/L	**4.3** µg/L
chloroform	**8260**	**4.4** µg/L	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	**8260**	<0.5 µg/L	**2** µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 µg/L	<0.5 µg/L	<0.5 µg/L
methylene chloride	**8260**	<2 µg/L	**2** µg/L	<2 µg/L
toluene	**8260**	<1 µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	**8260**	<1 µg/L	<1 µg/L	<1 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
117-MW-05

	Method		
Sample ID		**117-MW-05**	
Aquifer		**shallow**	
Screen Interval (ft bgs)		**50-75**	
Description		**Mar-98**	**Sep-01**
TPH-gasoline	**M8015V**	<0.05 mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**		<0.05 mg/L
TPH-diesel	**M8015E**	NA	**0.1** mg/L
TPH-motor oil	**M8015E**		**0.85** mg/L
benzene	**8260**	<0.5 µg/L	**1.6** µg/L
carbon disulfide	**8260**		**5J** µg/L
carbon tetrachloride	**8260**	<0.5 µg/L	<0.5 µg/L
chloroform	**8260**	<2 µg/L	<0.5 µg/L
1,2-dichloroethane	**8260**	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<2 µg/L	<0.5 µg/L
methylene chloride	**8260**	<2 µg/L	**5.9** µg/L
toluene	**8260**	<2 µg/L	<0.5 µg/L
xylenes	**8260**	<2 µg/L	<1 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
117-MW-07

	Method			
Sample ID			**117-MW-07**	
Aquifer			**mid-shallow**	
Screen Interval (ft bgs)			**108-118**	
Description		**May-01**	**Aug-01**	**Sep-01**
pH	**field**	**7.56**	**7.47**	**7.53**
conductivity	**field**	**1.03** uS/cm	**1.034** uS/cm	**1.04** uS/cm
dissolved oxygen	**field**	**9.19** mg/L	**6.69** mg/L	**5.77** mg/L
TPH-gasoline	**M8015V**	<0.05 mg/L	**0.02J** mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	<0.1 mg/L	<0.1 mg/L	**0.03J** mg/L
TPH-motor oil	**M8015E**	<0.1 mg/L	**0.2** mg/L	<0.1 mg/L
benzene	**8260**	<0.5 J µg/L	<0.5 µg/L	<0.5 µg/L
carbon tetrachloride	**8260**	**17.2 J** µg/L	**12.2** µg/L	**13.5** µg/L
chloroform	**8260**	**3.3 J** µg/L	**2.7** µg/L	**2.7** µg/L
1,2-dichloroethane	**8260**	**2.3 J** µg/L	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 J µg/L	<0.5 µg/L	<0.5 µg/L
methylene chloride	**8260**	<0.78 J µg/L	**3** µg/L	<2 µg/L
toluene	**8260**	**0.3 J** µg/L	<0.5 µg/L	<0.5 µg/L
xylenes	**8260**	<1 J µg/L	<1 µg/L	<1 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
117-MW-11(S)

	Method		
Sample ID		**117-MW-11 (S)**	
Aquifer		**shallow**	
Screen Interval (ft bgs)		**50-75**	
Description		**Jul-01**	**Sep-01**
pH	**field**	**7.34**	
conductivity	**field**	**0.815** uS/cm	
dissolved oxygen	**field**	**1.7** mg/L	
TPH-gasoline	**M8015V**	**0.19** mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	**0.2** mg/L	<0.1 mg/L
TPH-motor oil	**M8015E**	**0.3** mg/L	**0.2** mg/L
benzene	**8260**	**3.2** µg/L	**2.7** µg/L
carbon tetrachloride	**8260**	<0.5 µg/L	<0.5 µg/L
chloroform	**8260**	**1.9** µg/L	**1.9** µg/L
chloromethane	**8260**	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	**8260**	<0.5 µg/L	<0.5 µg/L
1,2-dichloropropane	**8260**	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 µg/L	<0.5 µg/L
methylene chloride	**8260**	<2 µg/L	**2** µg/L
toluene	**8260**	<0.4 µg/L	**1.4** µg/L
xylenes	**8260**	<1 µg/L	**0.6J** µg/L
MTBE	**8260**	**0.8 J** µg/L	**3.2** µg/L
tetrachloroethene	**8260**	**1.4** µg/L	**1.5** µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
117-MW-11(MS)

	Method		
Sample ID		**117-MW-11 (MS)**	
Aquifer		**mid-shallow**	
Screen Interval (ft bgs)		**115-125**	
Description		**Jul-01**	**Sep-01**
pH	**field**	**7.26**	
conductivity	**field**	**1.05** uS/cm	
dissolved oxygen	**field**	**1.38** mg/L	
TPH-gasoline	**M8015V**	**0.55** mg/L	**0.54** mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	<0.1 mg/L	<0.1 mg/L
TPH-motor oil	**M8015E**	**0.1** mg/L	**0.1** mg/L
benzene	**8260**	**176** µg/L	**247** µg/L
tert-butylbenzene	**8260**	<0.5 µg/L	**0.5** µg/L
carbon tetrachloride	**8260**	**3.4** µg/L	**4.7** µg/L
chloroform	**8260**	**9.2** µg/L	**13.2** µg/L
chloromethane	**8260**	<0.5 µg/L	<0.5 µg/L
1,2-dichloroethane	**8260**	**5.5** µg/L	**7.4** µg/L
1,2-dichloropropane	**8260**	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 µg/L	<0.5 µg/L
isopropylbenzene	**8260**	<0.5 µg/L	**1.1** µg/L
methylene chloride	**8260**	<2 µg/L	**5.4** µg/L
toluene	**8260**	<0.5 µg/L	<0.5 µg/L
xylenes	**8260**	<1 µg/L	<1 µg/L
t-buyl alcohol	**8260**		**46** µg/L
bromodichloromethane	**8260**	<0.5 µg/L	<0.5 µg/L
dibromochloromethane	**8260**	<0.5 µg/L	<0.5 µg/L
bromoform	**8260**	<0.5 µg/L	<0.5 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
17-MW-04

	Method		
Sample ID		**17-MW-04**	
Aquifer		**shallow**	
Screen Interval (ft bgs)		**50-75**	
Description		**Jul-01**	**Sep-01**
pH	**field**	**7.25**	**7.4**
conductivity	**field**	**1.2** uS/cm	**1.56** uS/cm
dissolved oxygen	**field**	**4.3** mg/L	**3.14** mg/L
TPH-gasoline	**M8015V**	**0.04J** mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	**0.06J** mg/L	<0.1 mg/L
TPH-motor oil	**M8015E**	**0.1** mg/L	<0.1 mg/L
benzene	**8260**	<0.5 µg/L	<0.5 µg/L
carbon tetrachloride	**8260**	**5.7** µg/L	**11.9** µg/L
chloroform	**8260**	**1.1** µg/L	**1.9** µg/L
1,2-dichloroethane	**8260**	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 µg/L	<0.5 µg/L
toluene	**8260**	<0.5 µg/L	<0.5 µg/L
xylenes	**8260**	<1 µg/L	<1 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

UST 117
Data Summary
17-MW-05

	Method		
Sample ID		**17-MW-05**	
Aquifer		**mid-shallow**	
Screen Interval (ft bgs)		**95-105**	
Description		**Jul-01**	**Sep-01**
pH	**field**	**7.3**	**7.43**
conductivity	**field**	**0.47** uS/cm	**1.06** uS/cm
dissolved oxygen	**field**	**4.01** mg/L	**3.21** mg/L
TPH-gasoline	**M8015V**	**0.06** mg/L	<0.05 mg/L
TPH-jet fuel	**M8015V**	<0.05 mg/L	<0.05 mg/L
TPH-diesel	**M8015E**	**0.05J** mg/L	<0.1 mg/L
TPH-motor oil	**M8015E**	**0.1** mg/L	<0.1 mg/L
benzene	**8260**	<0.5 µg/L	<0.5 µg/L
carbon tetrachloride	**8260**	**18.9** µg/L	**22.4** µg/L
chloroform	**8260**	**5** µg/L	**5.7** µg/L
1,2-dichloroethane	**8260**	<0.5 µg/L	<0.5 µg/L
ethylbenzene	**8260**	<0.5 µg/L	<0.5 µg/L
toluene	**8260**	<0.5 µg/L	<0.5 µg/L
xylenes	**8260**	<1 µg/L	<1 µg/L

Detections are bolded

Note: Some sample results are preliminary and have not been validated.
Results are presented for comparison only and may change during validation.

APCL

Applied Physics & Chemistry Laboratory

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Tel. (909) 590-1828 Fax (909) 590-1498

August 06, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-4892 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-014892
Collected by: M.Magee
Collected on: 07/23/01

Received: 07/25/01
Extracted: 07/30/01
Tested: 07/27-31/01
Reported: 08/01/01

Sample Description: Ground Water
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-04 (S) 01-04892-1	Analysis Result 17-MW-05 (MS) 01-04892-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.04J [a]	0.06 [a]
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.06J	0.05J
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.1	0.1
VOLATILE ORGANICS					
Dilution Factor				1 [b]	1 [c]
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [d]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	233	402
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	5.7	18.9
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.1	5.0
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-04 (S) 01-04892-1	17-MW-05 (MS) 01-04892-2
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (d)	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (d)	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-11 (MS) 01-04892-3	117-MW-11 (S) 01-04892-4
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	0.55 [a]	0.19 [a]
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 [e]	0.2
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.1	0.30
VOLATILE ORGANICS					
Dilution Factor				1 [f]	1 [g]
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	176	3.2
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [d]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	215	1,270 [h]
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	6.1	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	3.4	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	9.2	1.9
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	5.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-11 (MS) 01-04892-3	117-MW-11 (S) 01-04892-4
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (d)	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	5.4	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (d)	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	0.8J
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	1.4
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0

(a) Not a typical Gasoline or JP-4 pattern.
(b) Sample also contained about 170 µg/L of Tetrahydrofuran.
(c) Sample also contained about 300 µg/L of Tetrahydrofuran.
(d) MDL reported.
(e) Sample chromatogram mainly contained two unknown peaks at about C_{12}-C_{14} range.
(f) Sample also contained about 166 µg/L of Tetrahydrofuran.
(g) Sample also contained about 964 µg/L of Tetrahydrofuran.
(h) Analyzed with a dilution factor of 10.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-4892

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-4892

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
17-MW-05 (MS)	01-04892-2
17-MW-04 (S)	01-04892-1
117-MW-11 (S)	01-04892-4
117-MW-11 (MS)	01-04892-3
Trip Blank	01-04892-5

2. Analytical Methodology

Samples are analyzed by EPA methods

8260 (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the igroup

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 562878
Page 1 of 2

Project Name/No.[1] Crows Landing 800063
Sample Team Members[2] M. Magee
Profit Center No.[3] 5515001
Project Manager[4] Bob Hulet
Purchase Order No.[6] 173773
Required Report Date[11] 8/8/01

Samples Shipment Date[7] 7/24/01
Lab Destination[8] APCL
Lab Contact[9] M Heckman
Project Contact/Phone[12] Rose Condit 925-288-2151
Carrier/Waybill No.[13] Fed Ex 826785979020 0215

Bill to:[5] IT Corp
4005 Port Chicago Hywy
Concord, CA 94520
Attn: Rich Iannacca

Report to:[10] Same
Attn: Rose Condit

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Pre-servative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
17-MW-05(MS)	Groundwater	7/23/01 1525	40 mil VOA	5x	HCL	VOC + MTBE + TBA + EDB (8260B)	SAMPLES	
↓	↓	↓	Liter Amber	2x	Ice	TPH GAS/JF (8015B) TPH DIESEL/MO (8015B)	RECEIVED	
17-MW-4(S)		7/23/01 1625	40 mil VOA	5x	HCL	VOC + MTBE + TBA + EDB (8260B)	GOOD CONDITION	
↓		↓	Liter Amber	2x	ICE	TPH GAS/JF (8015B) TPH DIESEL/MO (8015B)	TEMP = 2.8°C	
117-MW-11(S)		7/23/01 1735	40 mil VOA	5x	HCL	VOC + MTBE + TBA + EDB (8260B)		
↓		↓	Liter Amber	2x	ICE	TPH GAS/JF (8015B) TPH DIESEL/MO (8015B)		
117-MW-11(MS)		7/23/01 1740	40 mil VOA	5x	HCL	VOC + MTBE + TBA + EDB (8015B)		
↓	↓	↓	Liter Amber	2x	ICE	TPH GAS/JF (8015B) TPH DIESEL/MO (8015B)		

FOR LAB USE ONLY
4892

Special Instructions:[23] SILICA GEL CLEANUP FOR TPH DIESEL/MO

Possible Hazard Identification:[24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☑

Sample Disposal:[25]
Return to Client ☐ Disposal by Lab ☑ Archive _____ (mos.)

Turnaround Time Required:[26]
Normal ☑ Rush ☐ 10-DAY TAT

QC Level:[27]
I. ☐ II. ☐ III. ☑ Project Specific (specify): _____

1. Relinquished by[28] (Signature/Affiliation) DAVE PEER QC — Date: 7/24/01 Time: 0840	1. Received by[28] (Signature/Affiliation) FEDEX — Date: Time:
2. Relinquished by (Signature/Affiliation) FEDEX — Date: Time:	2. Received by (Signature/Affiliation) [signature] — Date: 7/25/01 Time: 9:40
3. Relinquished by (Signature/Affiliation) — Date: Time:	3. Received by (Signature/Affiliation) — Date: Time:

Comments:[29]

*See back of form for special instructions.

MCA 3/15/91

INTERNATIONAL TECHNOLOGY CORPORATION

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD (cont.)*

Reference Document No.[30] 562878
Page 2 of 2

Project Name CROWS LANDING 800063

Project No. 800063

Samples Shipment Date 7/24/01

ONE CONTAINER PER LINE

Sample[14] Number	Sample[15] Description/Type	Date/Time[16] Collected	Container[17] Type	Sample[18] Volume	Pre-[19] servative	Requested Testing[20] Program	Condition on[21] Receipt	Disposal[22] Record No.
TRIP BLANK	WATER		VOA	1x40mL	HCL	VOC + MTBE + TBA + EDB (8260B) TPH GAS/JP (8015B)		
TEMP BLANK	WATER		VOA	1x40mL	ICE	TEMPERATURE		

No FURTHER ENTRIES
MJ

4892

FOR LAB USE ONLY

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

MCA 3/15/91

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

October 8, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicage Highway
Concord CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-6091 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One diskette containing EDD deliverable.
(4) One original and one copy of Level D Data Package Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

/R. Kirakozova/for

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-016091
Collected by: BM/RC
Collected on: 09/26/01

Received: 09/28/01
Extracted: 10/01/01
Tested: 10/01-03/01
Reported: 10/04/01

Sample Description: Water from Crows Landing
Project Description: Site 117 800063

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-04(9/01) 01-06091-1	17-MW-05(9/01) 01-06091-2	117-MW-04(9/01) 01-06091-3
Dilution Factor				1	1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05	<0.05
Dilution Factor				1	1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1	<0.1
Dilution Factor				1	1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1	<0.1
VOLATILE ORGANICS						
Dilution Factor				1	1	1
ACETONE	8260B	µg/L	10	<10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	<0.5	1.2
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [a]	<0.63	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	11.9	22.4	4.3
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.9	5.7	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 17-MW-04(9/01) 01-06091-1	17-MW-05(9/01) 01-06091-2	117-MW-04(9/01) 01-06091-3
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [a]	<0.56	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [a]	2	3	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20	<20

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-07(9/01) 01-06091-4	117-MW-10MS(9/01) 01-06091-5
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	0.34 [b]
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.03J	<0.1 [c]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	<0.1
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	<0.5	83.8
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [a]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	0.3J
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	13.5	4.2
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	2.7	1.7
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	4.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-07(9/01) 01-06091-4	117-MW-10MS(9/01) 01-06091-5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [a]	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	9.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [a]	<2	5.2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	88

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result CL-99-17 01-06091-6	TRIP BLANK 01-06091-7
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.03J	-
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	-
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	2.1	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [a]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	9.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.3	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result CL-99-17 01-06091-6	TRIP BLANK 01-06091-7
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 [a]	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 [a]	<2	<2
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
[a] MDL reported.
[b] Not a typical Gasoline or Jp-4 pattern.
[c] Sample chromatogram contained isolated unknown peaks in Diesel range.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level D Data Package Deliverables

General Information

Project: 800063 Crows Landing

APCL Service ID: 01-6091

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino, CA 91710
Telephone (909)590-1828
Fax (909)590-1498

Applied P & Ch Laboratory
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Tel: (909) 590-1828 Fax: (909) 590-1498

Case Narrative

Project: 800063/Crows Landing/Site 117

For The IT Group

APCL Service No: 01-6091

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-04(9/01)	01-06091-3
117-MW-10MS(9/01)	01-06091-5
117-MW-07(9/01)	01-06091-4
17-MW-04(9/01)	01-06091-1
17-MW-05(9/01)	01-06091-2
CL-99-17	01-06091-6
TRIP BLANK	01-06091-7

2. Analytical Methodology

Samples are analyzed by EPA methods

8260B (Volatile organics),
M8015V (Gasoline),
M8015V (JP-4),
M8015E (TPH: Diesel),
M8015E (TPH: Motor Oil),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None.

6. Anomaly

None.

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the Group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 563979
Page 1 of ____

Project Name/No. [1] Crows Landing 800063
Sample Team Members [2] BM/RC
Profit Center No. [3]
Project Manager [4] B. Hulet
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 9/27/01
Lab Destination [8] APCL
Lab Contact [9] M Heckman
Project Contact/Phone [12] R Condit 288-2157
Carrier/Waybill No. [13] Golden State Courier

Bill to: [5] IT-Concord
Rich Jannica
Report to: [10] IT-Concord
Rose Condit

White: To accompany samples
Yellow: Field copy

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-04(9/01)	Post Aquifer	9/26/01 845	VOA Liter	5 2	HCL None	EPA 8260+MTBE, EDB, TBA TPH-gas/JF, TPH-D	M.O	
117-MW-1DMS(9/01)	testing at	1015					SAMPLE RECEIVED IN GOOD CONDITION	
117-MW-07(9/01)	Site 117	1110						
17-MW-04(9/01)		1310					*1 Liter only	
17-MW-05(9/01)		1405					TEMP 2.0°C	
CL-99-17		1310						
trip blank		—				TPH-gas/JF EPA 8260+EDB+TBA		

FOR LAB USE ONLY

6091

Special Instructions: [23] Silica gel cleanup for TPH D/M.O.

Possible Hazard Identification: [24]
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☒ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☐ Project Specific (specify): Level IV

1. Relinquished by [28] (Signature/Affiliation) Jeremy Condit	Date: 9/27/01 Time:	1. Received by [28] (Signature/Affiliation) Golden State	Date: Time:
2. Relinquished by (Signature/Affiliation) G.S.	Date: Time:	2. Received by (Signature/Affiliation) [signature]	Date: 9/28/01 Time: 1015
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

*See back of form for special instructions.

APCL

Applied Physics & Chemistry Laboratory

13760 Magnolia Ave. Chino CA 91710
Tel. (909) 590-1828 Fax (909) 590-1498

October 11, 2001

The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord, CA 94520-1120

Dear Rose,

This package contains samples in our Service ID 01-6092 and your project 800063 Crows Landing. Enclosed please find:

(1) Original report.
(2) Oringinal Chain of Custody.
(3) One original and one copy of Level C Data Package Deliverable.
(4) One Diskette containing EDD Deliverable.

If anything is missing or you have any questions, please feel free to contact me.

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

Applied P & Ch Laboratory
13760 Magnolia Ave. Chino CA 91710
Tel: (909) 590-1828 Fax: (909) 590-1498

APCL Analytical Report

Submitted to:
The IT Group
Attention: Rose Condit
4005 Port Chicago Highway
Concord CA 94520-1120
Tel: (925)288-9898 Fax: (925)288-0888

Service ID #: 801-016092
Collected by: RC/BM
Collected on: 09/27/01

Received: 09/28/01
Extracted: 10/01/01
Tested: 10/01-05/01
Reported: 10/09/01

Sample Description: Water from Crows Landing
Project Description: 800063 Crows Landing

Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-05(9/01) 01-06092-1	117-MW-11MS(9/01) 01-06092-2
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	0.54 [a]
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	0.1	<0.1 [b]
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.85 [c]	0.1
VOLATILE ORGANICS					
Dilution Factor				1	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	1.6	247 [d]
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 [e]	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	0.5
CARBON DISULFIDE	8260B	µg/L	10	5J	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	4.7
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	<0.5	13.2
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	7.4
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-05(9/01) 01-06092-1	117-MW-11MS(9/01) 01-06092-2
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	µg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	µg/L	0.56 (e)	<0.56	<0.56
2-HEXANONE	8260B	µg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	µg/L	0.5	<0.5	1.1
P-ISOPROPYLTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	µg/L	2 (e)	5.9	5.4
4-METHYL-2-PENTANONE (MIBK)	8260B	µg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	µg/L	1	<1	<1
NAPHTHALENE	8260B	µg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
STYRENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	µg/L	1	<1	<1
T-BUTYL ALCOHOL	8260B	µg/L	20	<20	46

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-11S(S/01) 01-06092-3	TRIP BLANK 01-06092-4
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
JP-4	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1 (f)	-
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	0.2	-
VOLATILE ORGANICS					
Dilution Factor				1 (g)	1
ACETONE	8260B	µg/L	10	<10	<10
BENZENE	8260B	µg/L	0.5	2.7	<0.5
BROMOBENZENE	8260B	µg/L	0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
BROMOFORM	8260B	µg/L	0.5	<0.5	<0.5
BROMOMETHANE	8260B	µg/L	0.63 (e)	<0.63	<0.63
2-BUTANONE (MEK)	8260B	µg/L	10	<10	<10
N-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260B	µg/L	0.5	<0.5	<0.5
CARBON DISULFIDE	8260B	µg/L	10	<10	<10
CARBON TETRACHLORIDE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
CHLOROFORM	8260B	µg/L	0.5	1.9	<0.5
CHLOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DIBROMOETHANE (EDB)	8260B	µg/L	0.5	<0.5	<0.5
DIBROMOMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
1,4-DICHLOROBENZENE	8260B	µg/L	0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260B	µg/L	0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260B	µg/L	0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260B	µg/L	0.5	<0.5	<0.5

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APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result 117-MW-11S(9/01) 01-06092- 3	TRIP BLANK 01-06092-4
2,2-DICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260B	μg/L	0.5	<0.5	<0.5
ETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260B	μg/L	0.56 (e)	<0.56	<0.56
2-HEXANONE	8260B	μg/L	10	<10	<10
ISOPROPYLBENZENE (CUMENE)	8260B	μg/L	0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260B	μg/L	0.5	<0.5	<0.5
METHYLENE CHLORIDE	8260B	μg/L	2 (e)	2	7.2
4-METHYL-2-PENTANONE (MIBK)	8260B	μg/L	10	<10	<10
METHYL-T-BYTYL ETHER (MTBE)	8260B	μg/L	1	3.2	<1
NAPHTHALENE	8260B	μg/L	0.5	<0.5	<0.5
N-PROPYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
STYRENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TETRACHLOROETHENE	8260B	μg/L	0.5	1.5	<0.5
TOLUENE	8260B	μg/L	0.5	1.4	<0.5
1,2,3-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROETHENE	8260B	μg/L	0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260B	μg/L	0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260B	μg/L	0.5	<0.5	<0.5
VINYL CHLORIDE	8260B	μg/L	0.5	<0.5	<0.5
XYLENE (TOTAL)	8260B	μg/L	1	0.6J	<1
T-BUTYL ALCOHOL	8260B	μg/L	20	<20	<20

PQL: Practical Quantitation Limit. MDL: Method Detection Limit. CRDL: Contract Required Detection Limit
N.D.: Not Detected or less than the practical quantitation limit. "-": Analysis is not required.
J: Reported between PQL and MDL.
Listed Dilution Factors (DF) are relative to the method default DF. All unlisted DFs are 1.0
(a) Not a typical Gasoline or JP-4 pattern.
(b) Sample chromatogram contained an unknown peak at C_{11} range.
(c) Sample also contained unknown mixture in Motor Oil range.
(d) Analyzed with a dilution factor of 2.
(e) MDL reported.
(f) Sample chromatogram contained unknown isolated peaks at C_{11} to C_{15} range.
(g) Sample also contained about 180 μg/L of Tetrahydrofuran.

Respectfully submitted,

Dominic Lau
Laboratory Director
Applied P & Ch Laboratory

Level C Data Package Deliverables

General Information

Project : 800063 Crows Landing

APCL Service ID: 01-6092

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Case Narrative

Project: Crows Landing/Crows Landing/800063

For The IT Group

APCL Service No: 01-6092

1. Sample Identification

The sample identifications are listed in the following table:

The IT Group Sample ID	APCL Sample ID
117-MW-11MS(9/01)	01-06092-2
117-MW-11S(9/01)	01-06092-3
117-MW-05(9/01)	01-06092-1
TRIP BLANK	01-06092-4

2. Analytical Methodology

Samples are analyzed by EPA methods

8260 (Volatile organics),
M8015V/M8015G (Gasoline),
M8015E/M8015D (TPH: Diesel),
M8015E/M8015M (TPH: Motor Oil),
M8015V/M8015V (JP-4),

3. Holding Time

All samples were extracted, digested and analyzed within the holding times defined by the appropriate EPA methods of the analyses.

4. Preservation

All samples were preserved and stored according to the appropriate EPA methods.

5. Tele-log

None

6. Anomaly

None

027200

"I certify that these data are technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in the hardcopy data package and its electronic data deliverable submitted on diskette had been authorized by the Laboratory Manager or her/his designee, as verified by the following signature."

Respectfully submitted,

Kevin Xie, Ph.D.,
QA/QC Director
Applied P & Ch Laboratory

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

Reference Document No. 563980
Page 1 of 1

Project Name/No. [1] Crows Landing 800063
Sample Team Members [2] RC/BM
Profit Center No. [3]
Project Manager [4] B Holet
Purchase Order No. [6]
Required Report Date [11]

Samples Shipment Date [7] 9/27/01
Lab Destination [8] APCL
Lab Contact [9] M Heckman
Project Contact/Phone [12] R Condit 288 2157
Carrier/Waybill No. [13] FedEx 8267 8597 9980

Bill to: [5] IT-Concord
Rich Iannizza
Report to: [10] IT-Concord
Rose Condit

ONE CONTAINER PER LINE

Sample Number [14]	Sample Description/Type [15]	Date/Time Collected [16]	Container Type [17]	Sample Volume [18]	Pre-servative [19]	Requested Testing Program [20]	Condition on Receipt [21]	Disposal Record No. [22]
117-MW-11MS(9/01)	Post Aquifer Testing at site -117	9/27/01 930	VOA	5	HCL	EPA 8260, EDB, TBA MTBE TPH-gas/JF		
117-MW-11S (9/01)		1030	Liter	2	None	TPH-DSL/m.o	SAMPLES RECEIVED GOOD CONDITION TEMP = 29°C	
117-MW-05 (9/01)		1135						
Trip blank		—	VOA	2		EPA 8260 + EDB TBA MTBE TPH-gas/JF		

FOR LAB USE ONLY

Special Instructions: [23] Silica gel cleanup on TPH-D/m.o

Possible Hazard Identification: [24]
Non-hazard ☒ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐

Sample Disposal: [25]
Return to Client ☐ Disposal by Lab ☐ Archive _____ (mos.)

Turnaround Time Required: [26]
Normal ☒ Rush ☐

QC Level: [27]
I. ☐ II. ☐ III. ☒ Project Specific (specify):

1. Relinquished by [28] (Signature/Affiliation) Rosemary Condit	Date: 9/27/01 Time:	1. Received by [28] (Signature/Affiliation) FedEx 8267 8597 9980	Date: 9/27 Time:
2. Relinquished by (Signature/Affiliation) FEDEX	Date: Time:	2. Received by (Signature/Affiliation) Michael A. Heckman	Date: 9/28/01 Time: 1010
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments: [29]

White: To accompany samples
Yellow: Field copy
*See back of form for special instructions.

IT CORPORATION
A Member of The IT Group

IT TRANSMITTAL/DELIVERABLE RECEIPT

CONTRACT: N62474-98-D-2076 **DOCUMENT CONTROL NUMBER: 3269.0**

TO: Administrative Contract Officer
Navy Regional Environmental Contracts
NAVFACENGCOM-SWDIV
Michelle Crook, 02R1.MC
1230 Columbia St., Suite 1100
San Diego, CA 92101

Date: January 02, 2002

CTO: 0004

Location: NASA Crows Landing

FROM: Bob Hulet
Project Manager

DESCRIPTION OF ENCLOSURE: ***Preliminary Data Package, from UST 117, Time-critical removal actions at 1,2-DCA Source Area, IRP Site 17, Administration Area Plume, Nasa Crows Landing Facility, dated Jan. 2, 2002.***

TYPE: General Information

VERSION: N/A **REVISION No:** 0

ADMIN RECORD: Yes

SCHEDULED DELIVERY DATE: N/A **ACTUAL DELIVERY DATE:** January 02, 2002

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Don Chuck, NASA (1C/1E)
Francesco D'Onofrio, California Department of Toxic Substances Control (1C/1E)
Jim Simpson, Stanislaus County (1C/1E)

Date/Time Received _____/_____