

# TRANSMITTAL

THE IT GROUP  
4005 Port Chicago Highway  
Concord, CA 94520-1120  
(925)288-9898

**To:** Lynn Hornecker

**Date:** 7 January 2003

**From:** David Kelly *DK*

**Subject:** Data Transmittal – Well Abandonment and Closure for Potable Water Supply Well at Building 151

The abandonment and closure of an inactive potable water supply well located at Building 151 was completed on December 17, 2002 in order to reduce the possibility of contaminant migration between aquifers via the existing potable water supply well. This task was conducted in accordance with 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, Revision 2* (IT 2002).

Preliminary work included conducting a down-hole video log survey, a gamma survey of the well, and collection and analysis at an off site laboratory of a water sample from the well. The video and gamma survey were conducted in an effort to determine the depth and construction details, prior to abandonment of the well, because there was no State of California Well Completion Report or other records available for the well. Site personnel measured the well diameter at 12-inches. Based on the video survey, the well's depth prior to destruction is believed to have been approximately 439 feet (ft) below ground surface (bgs). The video survey revealed moderate to heavy incrustation on casing walls throughout the well space. No visible perforations were visible due to incrustation. A copy of the written report for the video survey is provided in Attachment 1. A copy of the gamma survey chart, without interpretation of results, is provided in Attachment 2. A copy of analytical results for the well's water is provided in Attachment 3.

An approved Well Destruction permit number 02-204 was obtained from the Stanislaus County Department of Environmental Resources prior to commencing well closure activities. Additional permits for this work included a NASA Construction Permit and NASA Safety Clearance permit. NASA approved both requests under NASA permit number 02P076.

A C57 licensed subcontractor was contracted to perform the abandonment and closure of the well. The well's casing was mechanically perforated at one foot intervals from approximately 357 ft bgs to approximately 50 ft bgs. Because of heavy incrustation on the casing walls, the perforator could not be lowered beyond 357 ft bgs. Following destruction of the casing, the well was grouted via a tremie pipe from the total depth to ground surface using a two part sand to one part cement by weight as specified in the California Well Standards. A total of 22 cubic yards of

material was used to backfill the well. No water was displaced to ground surface as a result of grouting. A portion of Building 151's roof was removed in order to allow access to equipment while performing the well closure. The building was restored upon completion of the work.

Upon completion of work, Stanislaus County's Environmental Health and Safety Inspector closed the Well Destruction Permit following a final inspection. Work under this permit and the final inspection were completed with no exceptions noted. A copy of the permit is provided in Attachment 4.

cc: B Hulet  
T Barry  
E Ramirez  
Project Files

**ATTACHMENT 1  
VISUAL WELL LOG**

✓

# Water Well Technology, Inc.

P.O. Box 519 Fair Oaks, CA 95628

(800) 961-WELL (916)961-9355 Fax (916) 961-1773

## VISUAL WELL LOG

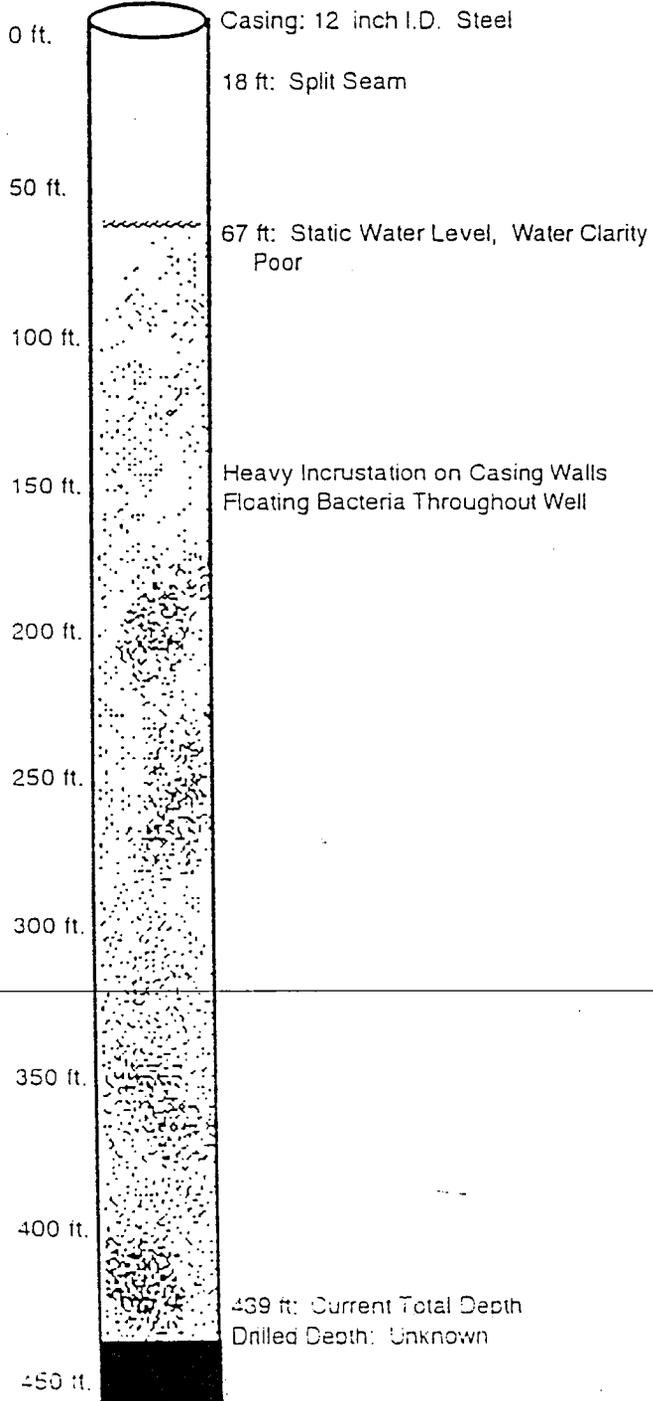
November 15, 2000

Building 151 Well

IT Group

Survey By: Brett Oliver

Evaluation By: Marlys Ellsworth



**REASON FOR VIDEO:**  
General Evaluation

**AREA VIEWED:**  
0 to 439 ft.

**INCRUSTATION:**  
Moderate to Heavy Incrustation

**BACTERIA:**  
Floating Bacteria Throughout Well

**PERFORATIONS:**  
None Visible due to Heavy Incrustation

**EVALUATION FROM VIDEO SURVEY:**  
This is a 12 inch well with a SWL of 67 ft. Due to the heavy incrustation and floating debris, we were unable to fully evaluate the casings condition.

**AREAS OF CONCERN:**  
\*Split Seam @ 18 ft.  
\*Plugged Perforations

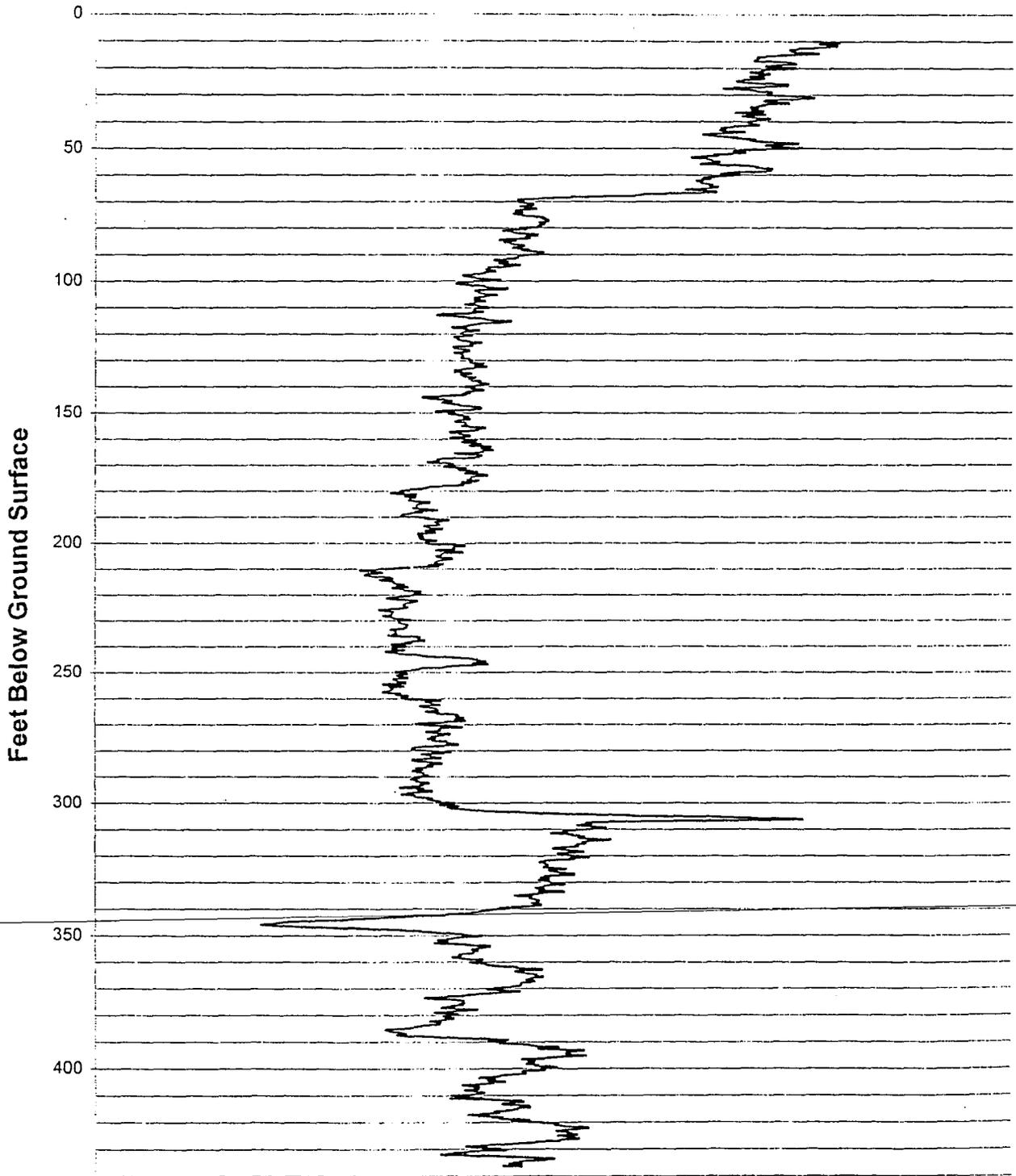
**NOTES:**

**RECOMMENDATIONS:**  
Clean this well using our hydro jet vac system which employs a steel wire brush to remove incrustation from the casing walls, jet-vac system to surge air & chlorine through the outer formation and a swab for final cleaning. Follow the cleaning with a rephoto for a more complete evaluation of the casing's current condition.

**ATTACHMENT 2  
GAMMA SURVEY LOG**

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# GAMMA Building 151



Gamma

**ATTACHMENT 3  
ANALYTICAL REPORT**

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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 #: 801-005752  
Collected by: Rose Condit  
Collected on: 11/15/00  
Sample Description: Water  
Project Description: 800063 Crows Landing  
Received: 11/16/00  
Extracted: 11/21/00  
Tested: 11/16-21/00  
Reported: 11/28/00

## Analysis of Water Samples

Component Analyzed	Method	Unit	PQL	Analysis Result	
				151-WSW-175 00-05752-1	151-WSW-400 00-05752-2
ALKALINITY	310.1	mg-CaCO <sub>3</sub> /L	20	82	82
SOLIDS, TOTAL DISSOLVED (TDS)	160.1	mg/L	10	657	563
Dilution Factor				20	20
CHLORIDE	9056	mg/L	0.2	44	44
NITRATE AS N	9056	mg/L	0.04	2.2	1
NITRITE AS N	9056	mg/L	0.05	<1	<1
ORTHOPHOSPHATE	9056	mg/L	0.1	<2	<2
SULFATE	9056	mg/L	0.5	297	267
TTLC 17 METALS					
Dilution Factor				1	1
ANTIMONY	6010	µg/L	10	<10	<10
ARSENIC	6010	µg/L	5	<5	1.8J
BARJUM	6010	µg/L	10	13.6	30.2
BERYLLIUM	6010	µg/L	2	0.078J	0.058J
CADMIUM	6010	µg/L	2	<2	<2
CHROMIUM	6010	µg/L	5	15.1	12.0
COBALT	6010	µg/L	5	0.98J	1.1J
COPPER	6010	µg/L	10	6.4J	4.6J
LEAD	6010	µg/L	5	5.1	<5
MERCURY	7470	µg/L	0.5	0.34J	0.30J
MOLYBDENUM	6010	µg/L	5	3.4J	2.8J
NICKEL	6010	µg/L	5	2.7J	2.2J
SELENIUM	6010	µg/L	10	5.2J	27.9
SILVER	6010	µg/L	10	<10	<10
THALLIUM	6010	µg/L	10	3.8J	2.0J
VANADIUM	6010	µg/L	10	4.1J	7.8J
ZINC	6010	µg/L	10	17.8	19.8
Dilution Factor				1	1
GASOLINE RANGE ORGANICS	M8015V	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
JET FUEL	M8015E	mg/L	0.05	<0.05	<0.05
Dilution Factor				1	1
DIESEL RANGE ORGANICS	M8015E	mg/L	0.05	0.06 (a)	0.07
Dilution Factor				1	1
MOTOR OIL RANGE ORGANICS	M8015E	mg/L	0.1	<0.1	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		
				151-WSW-175 00-05752-1	151-WSW-400 00-05752-2	Trip Blank 00-05752-3
<b>VOLATILE ORGANICS</b>						
Dilution Factor				1	1	1
BENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
BROMOBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
BROMOCHLOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
BROMODICHLOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
BROMOFORM	8260	µg/L	0.5	<0.5	<0.5	<0.5
BROMOMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
N-BUTYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
SEC-BUTYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TERT-BUTYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CARBON TETRACHLORIDE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOCHLOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CHLOROFORM	8260	µg/L	0.5	0.9	<0.5	<0.5
CHLOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
2-CHLOROTOLUENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
4-CHLOROTOLUENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMO-3-CHLOROPROPANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DIBROMOETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
DIBROMOMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,4-DICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
DICHLORODIFLUOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROETHENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,2-DICHLOROETHENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,2-DICHLOROETHENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2-DICHLOROPROPANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,3-DICHLOROPROPANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
2,2-DICHLOROPROPANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1-DICHLOROPROPENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
CIS-1,3-DICHLOROPROPENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TRANS-1,3-DICHLOROPROPENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
ETHYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
HEXACHLOROBUTADIENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
ISOPROPYLBENZENE (CUMENE)	8260	µg/L	0.5	<0.5	<0.5	<0.5
P-ISOPROPYLTOLUENE	8260	µg/L	0.5	<0.5	<0.5	<0.5

Applied P & Ch Laboratory

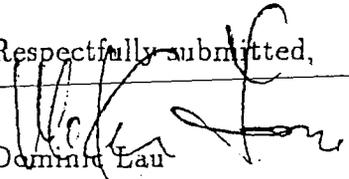
13760 Magnolia Ave. Chino CA 91710

Tel: (909) 590-1828 Fax: (909) 590-1488

# APCL Analytical Report

Component Analyzed	Method	Unit	PQL	Analysis Result		
				151-WSW-175	151-WSW-400	Trip Blank
				00-05752-1	00-05752-2	00-05752-3
METHYLENE CHLORIDE	8260	µg/L	0.5	1.1	0.9	2.1
METHYL-T-BUTYL ETHER (MTBE)	8260	µg/l.	5	<5	<5	<5
NAPHTHALENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
N-PROPYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
STYRENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1,1,2-TETRACHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2,2-TETRACHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TETRACHLOROETHENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TOLUENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRICHLOROBENZENE	8260	µg/l.	0.5	<0.5	<0.5	<0.5
1,1,1-TRICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,1,2-TRICHLOROETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROETHENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
TRICHLOROFLUOROMETHANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2,3-TRICHLOROPROPANE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,2,4-TRIMETHYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
1,3,5-TRIMETHYLBENZENE	8260	µg/L	0.5	<0.5	<0.5	<0.5
VINYL CHLORIDE	8260	µg/L	0.5	<0.5	<0.5	<0.5
XYLENE (TOTAL)	8260	µg/L	1	<1	<1	<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 Diesel, sample chromatogram only contain an unknown peak at about C<sub>16</sub> range.

Respectfully submitted,  
  
 Dominic Lau  
 Laboratory Director  
 Applied P & Ch Laboratory

**EPA METHOD 7196A**  
**Hexavalent Chromium**

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**APPL, INC.**

001

Data Validation Package  
for

EPA METHOD 7196A  
Hexavalent Chromium

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LABORATORY NAME: APPL, Inc.

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**APPL, INC.**

EPA METHOD 7196A  
Hexavalent Chromium

**Case Narrative**

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Case Narrative  
EPA METHOD 7196A  
Hexavalent Chromium  
APPL, Inc. State Certification No. CA1312

ARF: 34019

Project: 800063 CROWS LANDING

**Sample Receipt Information:**

The sample group was assigned Analytical Request Form (ARF) number 34019 and the sample numbers and requested analysis were compared to the chain of custody. No exceptions were encountered.

Sample Table

CLIENT ID	APPL ID	Matrix	Date Sampled	Date Received	Date Analyzed
151 WSW 175	99273	Water	11/15/00	11/16/00	11/16/00
157 WSW 400	99274	Water	11/15/00	11/16/00	11/16/00

**Sample Preparation:**

The samples were prepared according to the method. All sample data were investigated for trace levels ranging between the PQL and current MDL of 0.0062 mg/L. All such findings were flagged with a "J" indicator.

**Analysis Information:**

**Samples:**

The samples were analyzed by EPA method 7196A.

**Calibrations:**

Calibrations were performed according to the method. No other problems were encountered.

**Blanks:**

No target compounds were detected at or above the reporting level.

**Spikes:**

~~The laboratory control spike and spike duplicate met all acceptance criteria. A~~  
matrix spike and matrix spike duplicate was run on sample 157 WSW 400. All acceptance criteria were met for the MS/MSD.

**Summary:**

All data were acceptable.

**CERTIFICATION**

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the hard copy has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

  
Mike Ray, Laboratory Manager/ Date

EPA METHOD 7196A  
Hexavalent Chromium

Chain of Custody and ARF

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APPL - Analysis Request Form

# 34019

Client: IT Corporation  
 Address: 4005 Port Chicago Highway  
Concord, CA 94520-1120  
 Attn: Rose Condit  
 Phone: 925-288-2151 Fax: 925-228-0888  
 Job: 800063 CROWSLANDING  
 PO #: NA  
 Chain of Custody (Y/N): Y # 573656  
 RAD Screen (Y/N): Y pH (Y/N): N  
 Turn Around Type: STD

Received by: NSR  
 Date Received: 11/16/00 Time: 10:00  
 Delivered by: FED EXPRESS  
 Shuttle Custody Seals (Y/N): N  
 Chest Temp(s): 2°C HB/C443343  
 Time in/Color: 1030 / BLACK  
 Samples Chilled until Placed in Refrig/Freezer: Y  
 Project Manager: GLEN BROWN  
 QC Report Type: DVP4  
 Due Date: 11/28/00

Comments:  
 NEED TO REPORT 'J' VALUES BETWEEN MDL- PQL

Client ID	APPL ID	Sampled	Analyses Requested
1. 151 WSW 175	AP99273W	11/15/00	CR6-7
2. 157 WSW 400	AP99274W	11/15/00	CR6-7

Sample Distribution: Wetlab: 2-CR6-7

Charges:

Invoice To:

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006



# ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD\*

Reference Document No. 573656  
Page 1 of 1

Project Name/No. 1 800063 Crossland Samples Shipment Date 7 11/15/00  
 Sample Team Members 2 RC Lab Destination 8 APPL  
 Profit Center No. 3 Lab Contact 9 6 Brown  
 Project Manager 4 B Hulet Project Contact/Phone 12 RCondit 288-2157  
 Purchase Order No. 6 Carrier/Waybill No. 13 Fedex  
 Required Report Date 11

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

## ONE CONTAINER PER LINE

Sample Number <sup>14</sup>	Sample Description/Type <sup>15</sup>	Date/Time Collected <sup>16</sup>	Container Type <sup>17</sup>	Sample Volume <sup>18</sup>	Pre-servative <sup>19</sup>	Requested Testing Program <sup>20</sup>	Condition on Receipt <sup>21</sup>	Disposal Record No. <sup>22</sup>
151 WSW 175		11/15/00 1410	HDDE	250ml	None	Hex Cr - 7196A	Received 125ml 11-16-00 NS	
157 WSW 400		↓ 1444	HOPE	↓	↓	↓ ↓	↓ FOR LAB USE ONLY	
[Large diagonal scribble across the table]								
							FOR LAB USE ONLY	

Special Instructions: <sup>23</sup>

Possible Hazard Identification: <sup>24</sup>

Non-hazard  Flammable  Skin Irritant  Poison B  Unknown

Sample Disposal: <sup>25</sup>

Return to Client  Disposal by Lab  Archive \_\_\_\_\_ (mos.)

Turnaround Time Required: <sup>26</sup>

Normal  Rush

QC Level: <sup>27</sup>

I  II  III Project Specific (specify): Level III Report

1. Relinquished by <sup>28</sup> R Condit  
(Signature/Affiliation)

Date: 11/15/00  
Time: \_\_\_\_\_

1. Received by <sup>28</sup> FedEx  
(Signature/Affiliation)

Date: 11/15  
Time: \_\_\_\_\_

2. Relinquished by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

2. Received by  
(Signature/Affiliation)

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Relinquished by  
(Signature/Affiliation) [Signature]

Date: \_\_\_\_\_  
Time: \_\_\_\_\_

3. Received by  
(Signature/Affiliation) [Signature]

Date: 11/16/00  
Time: 1000

Comments: <sup>29</sup>

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

# COOLER RECEIPT FORM

Project: 8000023 Crowslanding Date Received: 11-16-00 Number of Coolers: 1

A. PRELIMINARY EXAMINATION PHASE: Date Cooler Opened: 11-16-00 C.O.C.# 5731050

by (print) May Thao (sign) [Signature]

1. Did cooler come with a shipping slip (air bill, etc.)?  YES  NO  NA  
If yes enter carrier name and air bill number: FED Express
2. Were custody seals on outside of cooler?  YES  NO  NA  
How many? 2 Date on seal? 11/15/00 Name on seal? See Below
3. Were custody seals unbroken and intact at the time of arrival?  YES  NO  NA
4. Were samples screened for radioactivity?  YES  NO  NA
5. Were custody papers sealed in a plastic bag and taped inside the lid?  YES  NO  NA
6. Were the custody papers filled out properly?  YES  NO  NA
7. Were the custody papers signed in the appropriate place?  YES  NO  NA
8. Was the project identifiable from custody papers?  YES  NO  NA
9. If required, was enough ice used?  YES  NO  NA  
Type of ice: wet ice
10. Shuttle temperature(s): 2°C Serial number of certified thermometer used: H210443343
11. Initials and date of person receiving cooler (Date): 11-16-00 (Initials): mt

B. LOG-IN PHASE: Date samples were logged in: 11-16-00  
by (print) Nora S Rubaleka (sign) [Signature]

1. Describe type of packing in cooler: Samples, BAG OF wet ice
2. Were all bottles sealed in separate bags?  YES  NO  NA
3. Did all bottles arrive unbroken and were labels in good condition?  YES  NO  NA
4. Were all bottle labels complete (ID, date, time, signature, preservative, etc.)?  YES  NO  NA
5. Did all bottle labels agree with custody papers?  YES  NO  NA
6. Were correct containers used for the tests indicated?  YES  NO  NA
7. Were correct preservatives added to the samples?  YES  NO  NA
8. Was a sufficient amount of sample sent for tests indicated?  YES  NO  NA
9. Were bubbles absent in volatile samples? If no, list by sample ID  YES  NO  NA
10. Was a sufficient amount of holding time remaining to analyze the samples?  YES  NO  NA
11. Is location where sample was taken listed on the COC?  YES  NO  NA

Comments: Sample Volume Received was 125ml Not 250ml as listed on C.O.C. mt  
11/16/00

Name of project manager notified \_\_\_\_\_ Date and Time of notification \_\_\_\_\_  
Name of client notified \_\_\_\_\_ Date and Time of notification \_\_\_\_\_  
Information given to client \_\_\_\_\_ By whom (Initials): \_\_\_\_\_



APCL

## COOLER CUSTODY SEAL

Date 11/15/00  
Signature [Signature]

EPA METHOD 7196A  
Hexavalent Chromium

**QC Summary**

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# WETLAB BLANK

APPL Inc.

03 West Swift Avenue

Fresno, CA 93722

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date	QC Group
SW846 7196	Hexavalent Chromium	Not detected	0.02	mg/L	11/16/00	11/16/00	001116A-30500

010

Laboratory Control Spike Recoveries  
WETLAB

APPL Inc.  
4203 West Swift Avenue  
Fresno, CA 93722

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
SW846 719	Hexavalent Chromium	0.16	0.170	0.180	106	113	80-120	1/16/00	1/16/00	1/16/00	1/16/00	001116A-30500

011

Comments:

**WETLAB**

**Sample/Sample Duplicate Results**

IT Corporation  
4005 Port Chicago Highway  
Concord, CA 94520-1120

APPL Inc.  
4203 West Swift Avenue  
Fresno, CA 93722

Attn: Rose Condit  
Project: 800063 CROWSLANDING

ARF: 34019

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SW846 71	Hexavalent Chromium	AP99273	Not detected	Not detected	NA	0.02	mg/L	11/16/00	11/16/00	11/16/00	11/16/00

012

Matrix Spike Recoveries  
WETLAB

APPL Inc.  
4203 West Swift Avenue  
Fresno, CA 93722

Method	Compound Name	pike Lvl mg/L	Matrix Res mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recovery	DUP % Recovery	Recovery Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group	QC Sample
SW846 719	Hexavalent Chromium	0.16	ND	0.150	0.150	93.8	93.8	80-120	1/16/00	1/16/00	1/16/00	1/16/00	001116A-30500	AP99273

013

Comments:

EPA METHOD 7196A  
Hexavalent Chromium

**Sample Data**

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**PPPL, INC.**

# Wet Lab Analysis

IT Corporation

1005 Port Chicago Highway  
Concord, CA 94520-1120

APPL Inc.

4203 West Swift Avenue  
Fresno, CA 93722

Attn: Rose Condit

Project: 800063 CROWSLANDING

Sample ID: 151 WSW 175

Sample Collection Date: 11/15/00

APPL ID: AP99273

ARF: 34019

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
SW846 7196A	Hexavalent Chromium	Not detected	0.02	mg/L	11/16/00	11/16/00

# Wet Lab Analysis

IT Corporation  
4005 Port Chicago Highway  
Cord, CA 94520-1120

APPL Inc.  
4203 West Swift Avenue  
Fresno, CA 93722

Attn: Rose Condit

Project: 800063 CROWSLANDING

Sample ID: 157 WSW 400

Sample Collection Date: 11/15/00

APPL ID: AP99274

ARF: 34019

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
SW846 7196A	Hexavalent Chromium	0.017J	0.02	mg/L	11/16/00	11/16/00

Estimated value, below quantitation limit.

016

Printed: 11/22/00 2:59:15 PM

**ATTACHMENT 4**  
**WELL DESTRUCTION PERMIT APPLICATION**  
**AND FINAL APPROVED PERMIT**

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Lat: 37.407215247  
 Long: 121.105283329  
 T. 6S R. 8E Sec. 17  
 1/4 Sec. SE corner SEC 17  
 Quad. Crows Landing  
 A.P.N. \_\_\_\_\_

**STANISLAUS COUNTY**  
**DEPARTMENT OF ENVIRONMENTAL RESOURCES**  
 3800 CORNUCOPIA WAY, SUITE C, MODESTO, CA 95368-9492  
 (209) 525-6700

Permit No. 02-204  
 Date Issued 9-17-02

**APPLICATION FOR WELL CONSTRUCTION OR DESTRUCTION**

THIS PERMIT EXPIRES 1 YEAR FROM DATE ISSUED

Application is hereby made to the Stanislaus County Department of Environmental Resources (D.E.R.) for a permit to construct and/or destroy the work herein described. PLEASE NOTIFY THIS DEPARTMENT (USING PERMIT # AND D.W.R. WELL DRILLERS REPORT) WHEN WELL WORK IS COMPLETED.

JOB ADDRESS/LOCATION NASA Crows Landing Flight Facility IKE Crows Road city Crows Landing

Distance & Direction from Nearest Cross Streets Bell Road and IKE Crows Road

Owner's Name US NAVY Phone (619) 532-0783

Address 1230 Columbia St. Suite 870 City/State San Diego, CA 92101

Contractor's Name Water Development License # 283326 Phone (620) 663-2829

TYPE OF WORK: NEW WELL  DEEPEN  RECONDITION  DESTRUCTION   
 (Check one) OTHER

DISTANCE TO NEAREST: SEPTIC TANK \_\_\_\_\_ SEWER LINES \_\_\_\_\_ PIT PRIVY \_\_\_\_\_  
 OTHER WELL \_\_\_\_\_ SEWAGE DISPOSAL FIELD \_\_\_\_\_ SEEPAGE PIT \_\_\_\_\_  
 DRY WELL \_\_\_\_\_ OTHER \_\_\_\_\_  
 ANIMAL ENCLOSURE \_\_\_\_\_

INTENDED USE	TYPE OF WELL	CONSTRUCTION / DESTRUCTION SPECIFICATIONS
<input type="checkbox"/> Industrial	<input type="checkbox"/> Cable Tool	Dia. of Well Excavation _____
<input type="checkbox"/> Domestic / Private	<input type="checkbox"/> Drilled	Dia. of Well Casing <u>12 inch</u>
<input type="checkbox"/> Domestic / Public	<input type="checkbox"/> Gravel Pack	Gauge of Casing <u>steel</u>
<input type="checkbox"/> Irrigation	<input type="checkbox"/> Rotary	Depth Conductor Casing _____
<input type="checkbox"/> Cathodic protection	<input checked="" type="checkbox"/> Other <u>unk/own</u>	Depth of Grout Seal _____
<input checked="" type="checkbox"/> Other <u>FIRE Protection</u>		Type of Grout _____ # Bags _____
		Grout Manufacturer _____
		Grout Name _____

Well Destruction: Describe method if different than minimum state standards: \_\_\_\_\_

Existing well present?  YES  NO Status: Active  To Be Destroyed  Inactive

**D.E.R. USE ONLY**  
 Permit Issued by: Mary-Hate Cook Date: 9/17/02  
 Permit Denied by: \_\_\_\_\_ Date: \_\_\_\_\_ (See Attached)  
 Grout Seal Inspected by: Mary-Hate Cook Date: 11/4/02  
 Final Inspection by: Mary-Hate Cook Date: 12/19/02

ORIGINAL-Office

COPY-Contractor

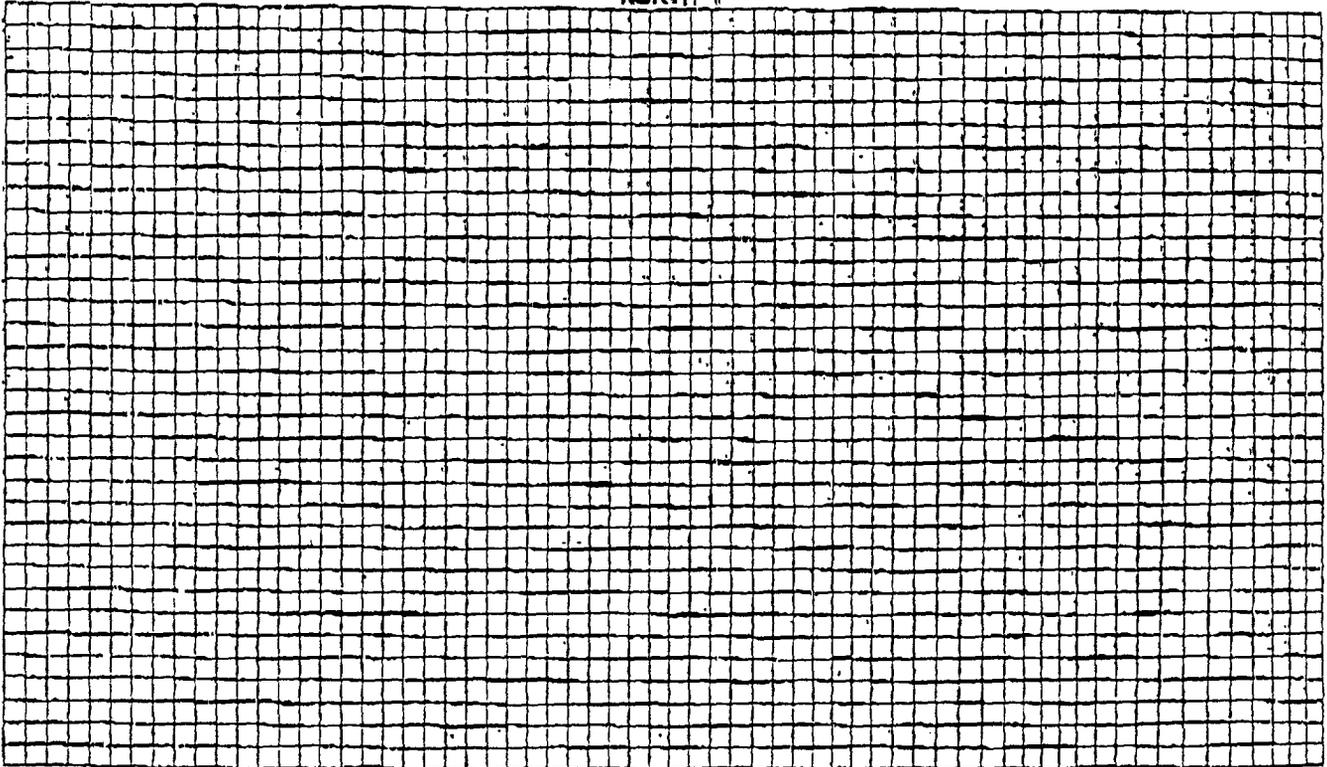
COPY-Applicant



(Indicate Distances in Feet)

1. Name of street and distance from nearest cross roads to well site.
2. Outline of the property, easements.
3. Outlines and locations of all existing and proposed structures, including covered areas such as patios, driveways, and walks.
4. Location of house sewer outlet, public sewer, sewage disposal system, or proposed sewage disposal system, proposed expansion of sewage disposal system, industrial waste pond, or any other possible source of contamination.
5. Location of other wells within radius of 300 feet on the property or adjoining property.
6. Location of sewage disposal system on adjoining property or within a radius of 100 ft. (private well) 150 ft. (public well).

NORTH ↑



Written description of well location (if not visible from road):

I HEREBY CERTIFY THAT I HAVE PREPARED THIS APPLICATION AND THAT THE WORK WILL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LAWS OF THE STATE OF CALIFORNIA, THE ORDINANCES OF THE COUNTY OF STANISLAUS AND THE RULES AND REGULATIONS OF THE STANISLAUS COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES (DER). DER WILL BE CONTACTED FOR INSPECTION OF ANNULAR SEAL INSTALLATION, AND AFTER WELL WORK HAS BEEN COMPLETED.

1. All existing wells within a 300 foot radius of the proposed new well(s) on the property or adjoining property have been located and so indicated.
2. Proposed well(s) will be located at least 50-100 feet from any sewage disposal system on property or adjoining property. Public well requires a distance of 100-150 feet from disposal system (100 ft. septic tank and leach lines, 150 ft. pits).
3. Submit well logs on all public wells drilled, as notice of well work completion.

SIGNED:

*Dee Peet*

(OWNER OR AUTHORIZED REPRESENTATIVE)

DATE:

9/17/02

EXPIRES ONE YEAR  
FROM DATE

**WELL PERMIT**

Stanislaus County  
Dept. Of Environmental Resources  
3800 Cornucopia Way, Suite C  
Modesto, CA. 95358

Permit No. 02-204

Date Issued 9-17-02

JOB ADDRESS NASHA CROW LANDING, IKE CROW RD CROW LANDING

OWNER U S Navy CONTRACTOR Water Development

In accordance with the provisions of the Stanislaus County Ordinance Code, permission is granted to install, repair, or destruct a well as set forth in the application on file with the Stanislaus County Department of Environmental Resources. All work done by virtue of this permit must conform to the provisions of the laws of the State of California, the ordinances of the County of Stanislaus, and the Rules and Regulations of the Stanislaus County Department of Environmental Resources.

THIS INSTALLATION MUST NOT BE CONCEALED OR USED UNTIL INSPECTED AND APPROVED.

TYPE OF WORK: NEW WELL ( ) DEEPEN ( ) RECONDITION ( ) DESTRUCTION (X)  
PUMP INSTALLATION ( ) PUMP REPAIR ( ) PUMP REPLACEMENT ( )  
OTHER \_\_\_\_\_

**FOR INSPECTION CALL:**

24 hours before completion  
between 7:30 - 8:30 A.M.  
Or 4:00 - 5:00 P.M.  
(209) 525-6700

**FINAL INSPECTION AND APPROVAL:**

Date 12/13/02 By Mary-Hate Cook R.S.

TO BE POSTED ON JOB

## Transmittal

Date: 15 JAN 2003

From: Lynn Marie Hornecker *LMH*  
Code 06CC.LMH

To: Diane Silva  
Code ~~01LS.DS~~ 05G.DS  
Administrative Record Manager

Subj: CERCLA ADMINISTRATIVE RECORD MATERIALS  
NALF Crows Landing

Installation: NALF Crows Landing

UIC Number: N60211

Document Title: *Well Abandonment and Closure for Potable  
Water Supply Well At Bldg 157*

Author: *Lynn Hornecker*

Recipient: *Mike Senke, Stanislaus County*

Record Date: *10 January 2003*

Approximate Number of Pages: *40*

Sites: *IRP Site 17 ~~vicinity~~ Admin Area Plume*

Key Words: *well ~~destruction~~ closure*

Contract:

CTO Number:

*Note: Well is near the Admin Area Plume*