**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/30/01
Personnel: PKJ JNT

Well ID: MW-5
Equipment: 2" DEDICATED SUBMERSIBLE GRUNDFOS PUMP
Contractor: NA

| | Before | Reference Point | After |
|---|---|---|---|
| Depth to Water (ft.) | 106.45 | TOC | 106.96 |
| Depth to Sediment (ft.) | 140 | TOC | 140 |
| Thickness of Sediment (ft.) | 0 | TOC | 0 |

Depth of Well (ft.) 140
Diameter of Casing (ft.) .333
Water Column Height (ft.) 33.55

Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 21.9

Casing Volumes Purged 3.2

Total Volume Purged (gal.) 70

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1345 | | | | | 2 | PUMP ON @ 300 HZ |
| 1350 | 7.54 | 18 | 16.7 | .355 | 2 | CLEAR |
| 1355 | 7.39 | 21 | 16.3 | .355 | 2 | CLEAR |
| 1400 | 7.35 | 15 | 16.4 | .354 | 2 | CLEAR |
| 1405 | 7.36 | 12 | 16.5 | .353 | 2 | CLEAR |
| 1410 | 7.35 | 8 | 16.3 | .353 | 2 | CLEAR |
| 1415 | 7.35 | 7 | 16.3 | .355 | 2 | CLEAR |
| 1420 | 7.37 | 10 | 16.4 | .354 | 2 | CLEAR - REDUCED |
| | | | | | | FLOW TO A TRICKLE |
| | | | | | | FOR SAMPLING |

Notes:

MW-5-D IS A FIELD DUPLICATE, TAKEN AFTER REGULAR SAMPLE (MW-5)

NO ODOR WHILE PURGING

**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/30/01
Personnel: PRJ / JNT

Well ID: MW-6
Equipment: 2" DEDICATED SUBMERSIBLE GRUNDFOS PUMP
Contractor: NA

| | Before | Reference Point | After |
|---|---|---|---|
| Depth to Water (ft.) | 107.95 | TOC | 108.21 |
| Depth to Sediment (ft.) | 245 | TOC | 245 |
| Thickness of Sediment (ft.) | 0 | TOC | 0 |

Depth of Well (ft.) 245
Diameter of Casing (ft.) .333
Water Column Height (ft.) 37.05

Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 24.2

Casing Volumes Purged 3.3

Total Volume Purged (gal.) 80

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1510 | | | | | 2 | PUMP ON @ 400 Hz |
| 1515 | 7.27 | 12 | 20.8 | 1.08 | 2 | CLEAR |
| 1520 | 7.29 | 10 | 20.9 | 1.08 | 2 | CLEAR |
| 1525 | 7.30 | 15 | 20.8 | 1.07 | 2 | CLEAR |
| 1530 | 7.31 | 12 | 20.8 | 1.07 | 2 | CLEAR |
| 1535 | 7.31 | 9 | 20.9 | 1.07 | 2 | CLEAR |
| 1540 | 7.31 | 11 | 20.8 | 1.06 | 2 | CLEAR |
| 1545 | 7.30 | 10 | ~~20~~ 20.8 | 1.06 | 2 | CLEAR |
| 1550 | 7.31 | 9 | 20.9 | 1.06 | 2 | CLEAR - REDUCED FLOW TO A TRICKLE FOR SAMPLING |

Notes:

MW-6-D IS A FIELD DUPLICATE, TAKEN AFTER PARENT SAMPLE (MW-6)

NO ODOR WHILE PURGING

**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/30/01
Personnel: PEJ/JNT

Well ID: MW-8
Equipment: 2" SUBMERSIBLE GRUNDFOS Pump
Contractor: NA

| | Before | Reference Point | After |
|---|---|---|---|
| Depth to Water (ft.) | 172.67 | TOC | 172.75 |
| Depth to Sediment (ft.) | 205 | TOC | 205 |
| Thickness of Sediment (ft.) | 0 | TOC | 0 |

Depth of Well (ft.) 205
Diameter of Casing (ft.) .333
Water Column Height (ft.) 32.33
Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 21.11
Casing Volumes Purged 3.1
Total Volume Purged (gal.) 67.5

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1040 | | | | | 1.5 | Pump on @ 325 Hz |
| 1045 | 8.30 | 6 | 18.1 | .429 | 1.5 | SLIGHTLY CLOUDY |
| 1050 | 8.01 | 4 | 18.3 | .430 | 1.5 | CLEAR |
| 1055 | 7.83 | 3 | 18.5 | .425 | 1.5 | CLEAR |
| 1100 | 7.85 | 9 | 18.6 | .424 | 1.5 | CLEAR |
| 1105 | 7.86 | 9 | 18.8 | .424 | 1.5 | CLEAR |
| 1110 | 7.87 | 7 | 18.8 | .424 | 1.5 | CLEAR |
| 1115 | 7.89 | 10 | 19.0 | .426 | 1.5 | CLEAR |
| 1120 | 7.88 | 8 | 19.1 | .427 | 1.5 | CLEAR |
| 1125 | 7.85 | 7 | 19.0 | .426 | 1.5 | CLEAR - REDUCED FLOW TO A TRICKLE FOR SAMPLING |

Notes:
MS/MSD Sample No odor while purging

**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/29/01
Personnel: PRJ/JNT

Well ID: MW-10
Equipment: 2" DEDICATED GRUNDFOS SUBMERSIBLE PUMP
Contractor: NA

| | Before | Reference Point | After PRJ |
|---|---|---|---|
| Depth to Water (ft.) | 120.02 | TOC | ~~119.86~~ 120.92 |
| Depth to Sediment (ft.) | 155.00 | TOC | 155.00 |
| Thickness of Sediment (ft.) | 0 | TOC | 0 |

Depth of Well (ft.) 155
Diameter of Casing (ft.) .333
Water Column Height (ft.) 34.98

Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 22.84

Casing Volumes Purged 3.5

Total Volume Purged (gal.) 77

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1330 | | | | | 2 | PUMP ON @ 300 Hz |
| 1335 | 7.50 | 7 | 21.9 | 1.12 | 2 | CLEAR |
| 1340 | 7.46 | 7 | 21.8 | 1.10 | 2 | CLEAR |
| 1345 | 7.51 | 8 | 21.3 | 1.06 | 2 | CLEAR |
| 1350 | 7.40 | 11 | 21.0 | 1.03 | 2 | CLEAR |
| 1355 | 7.43 | 6 | 20.9 | 1.03 | 2 | CLEAR |
| 1400 | 7.40 | 4 | 20.8 | 1.03 | 2 | CLEAR |
| 1405 | 7.39 | 5 | 20.8 | 1.03 | 2 | CLEAR |
| 1410 | 7.40 | 6 | 20.8 | 1.03 | 2 | CLEAR - REDUCED |
| | | | | | | FLOW TO A TRICKLE |
| | | | | | | FOR SAMPLING |

Notes:

MW-10-D IS A FIELD DUPLICATE, TAKEN AFTER REGULAR SAMPLE MW-10

NO ODOR WHILE PURGING

**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/29/01
Personnel: PRS/JNT

Well ID: MW-13
Equipment: 2" DEDICATED SUBMERSIBLE GRUNDFOS PUMP
Contractor: NA

| | Before | Reference Point | After |
|---|---|---|---|
| Depth to Water (ft.) | 214.30 | TOC | 214.96 |
| Depth to Sediment (ft.) | 235 | TOC | 235 |
| Thickness of Sediment (ft.) | Ø | TOC | Ø |

Depth of Well (ft.) 235
Diameter of Casing (ft.) .333
Water Column Height (ft.) 20.7

Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 13.5
Casing Volumes Purged 3.3

Total Volume Purged (gal.) 45

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1020 | | | | | 1.5 | PUMP ON @ 350 HZ |
| 1025 | 7.80 | 10 | 21.7 | .606 | 1.5 | CLEAR |
| 1030 | 7.86 | 10 | 22.2 | .489 | 1.5 | CLEAR |
| 1035 | 7.83 | 8 | 22.2 | .484 | 1.5 | CLEAR |
| 1040 | 7.90 | 12 | 22.2 | .484 | 1.5 | CLEAR |
| 1045 | 7.83 | 11 | 22.4 | .482 | 1.5 | CLEAR |
| 1050 | 7.88 | 9 | 22.5 | .482 | 1.5 | CLEA - REDUCED FLOW TO A TRICKLE FOR SAMPLING |

Notes:
MS/MSD Sample NO ODOR while purging

**SOTA Environmental Technology, Inc.**



# WELL DEVELOPMENT AND SAMPLING LOG

Project Name: JPL Pasadena
Project No: 00HW019
Date: 10/29/01
Personnel: PROJECT

Well ID: MW-16
Equipment: 2" DEDICATED GRUNDFOS SUBMERSIBLE PUMP
Contractor: NA

| | Before | Reference Point | After |
|---|---|---|---|
| Depth to Water (ft.) | 267.81 | TOC | 267.88 |
| Depth to Sediment (ft.) | 285 | TOC | 285 |
| Thickness of Sediment (ft.) | 0 | TOC | 0 |

Depth of Well (ft.) 285
Diameter of Casing (ft.) .333
Water Column Height (ft.) 17.19

Casing Volume (gal.) = $\pi$(Casing Diam.[ft.]/2)$^2$ (Water Column Ht.[ft.]) 7.48 gal./ft$^3$) = 11.22

Casing Volumes Purged 3.1

Total Volume Purged (gal.) 35

| Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (µmhos) | Pump Rate (gpm) | Comments |
|---|---|---|---|---|---|---|
| 1440 | | | | | 1 | PUMP ON @ 385 Hz |
| 1445 | 8.13 | 0 | 22.8 | .712 | 1 | CLEAR |
| 1450 | 8.55 | 4 | 22.9 | .763 | 1 | CLEAR |
| 1455 | 7.89 | 6 | 23.2 | .535 | 1 | CLEAR |
| 1500 | 7.87 | 5 | 23.2 | .534 | 1 | CLEAR |
| 1505 | 7.87 | 8 | 23.1 | .535 | 1 | CLEAR |
| 1510 | 7.88 | 7 | 23.3 | .536 | 1 | CLEAR |
| 1515 | 7.86 | 7 | 23.1 | .536 | 1 | CLEAR - REDUCED |
| | | | | | | FLOW TO A TRICKLE |
| | | | | | | FOR SAMPLING |

Notes:
MS/MSD Sample NO ODOR While Purging

**SOTA Environmental Technology, Inc.**



**Groundwater Sampling**

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JWT

Well ID: MW-18
Sampling Zone No.: 5
Starting Time: 1045

Depth (ft.): 684
Finishing Time: 1125

Date: 10/10/01

Water Pressure Inside MP Casing - Beginning of Session: 147.70
End of Session: 147.68

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 147.70 | ✓ | 172.58 | ✓ | 172.53 | ✓ | ✓ | 147.68 | 1120 | 10.40 | 5 | 19.6 | .349 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS/JNT

Well ID: MW-18
Sampling Zone No.: 4
Starting Time: 1128

Depth (ft.): 564
Finishing Time: 1155

Date: 10/10/01

Water Pressure Inside MP Casing - Beginning of Session: 96.50
End of Session: 96.53

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 96.50 | ✓ | 127.96 | ✓ | 127.98 | ✓ | ✓ | 96.53 | 1150 | 9.26 | 20 | 21.4 | .364 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS / JWT

Well ID: MW-18
Sampling Zone No.: 3
Starting Time: 1200

Depth (ft.): 424
Finishing Time: 1237

Date: 10/10/01

Water Pressure Inside MP Casing - Beginning of Session: 35.56
End of Session: 35.58

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 35.56 | ✓ | 79.45 | ✓ | 79.48 | ✓ | ✓ | 35.58 | 1232 | 9.07 | 6 | 21.6 | .414 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JNT

Well ID: MW-18
Sampling Zone No.: 2
Starting Time: 1242

Depth (ft.): 330
Finishing Time: 1220

Date: 10/10/01

Water Pressure Inside MP Casing - Beginning of Session: 14.15
End of Session: 14.18

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14.15 | ✓ | 39.93 | ✓ | 39.93 | ✓ | ✓ | 14.18 | 1215 | 8.63 | 8 | 22.6 | .395 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



**Groundwater Sampling**

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PGS/JNT

Well ID: MW-19
Sampling Zone No.: 5
Starting Time: 1028

Depth (ft.): 498
Finishing Time: 1120

Date: 10/11/01

Water Pressure Inside MP Casing - Beginning of Session: 78.25
End of Session: 78.28

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 78.25 | ✓ | 93.00 | ✓ | 93.03 | ✓ | ✓ | 78.28 | 1115 | 9.64 | 60 | 21.7 | .771 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



**Groundwater Sampling**

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ / JNT

Well ID: MW-19
Sampling Zone No.: 4
Starting Time: 1125
Depth (ft.): 444
Finishing Time: 1200
Date: 10/11/01

Water Pressure Inside MP Casing - Beginning of Session: 54.72
End of Session: 54.74

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 54.72 | ✓ | 71.30 | ✓ | 71.29 | ✓ | ✓ | 54.74 | 1155 | 8.69 | 18 | 20.9 | .388 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ/JWT

Well ID: MW-19
Sampling Zone No.: 3
Starting Time: 1205

Depth (ft.): 392
Finishing Time: 1345

Date: 10/11/01

Water Pressure Inside MP Casing - Beginning of Session: 32.02
End of Session: 32.01

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 32.02 | ✓ | 96.19 | ✓ | 96.21 | ✓ | ✓ | 32.01 | 1340 | 7.76 | 55 | 21.2 | 1.00 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS SLIGHTLY CLOUDY, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: RBS/JWT

Well ID: MW-19
Sampling Zone No.: 2
Starting Time: 1355

Depth (ft.): 314
Finishing Time: 1425

Date: 10/11/01

Water Pressure Inside MP Casing - Beginning of Session: 14.16
End of Session: 14.21

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14.16 | ✓ | 64.42 | ✓ | 64.42 | ✓ | ✓ | 14.21 | 1420 | 8.38 | 70 | 22.5 | .536 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: REJ/JNT

Well ID: MW-19
Sampling Zone No.: 1
Starting Time: 1430

Depth (ft.): 242
Finishing Time: 1455

Date: 10/11/01

Water Pressure Inside MP Casing - Beginning of Session: 14.13
End of Session: 14.12

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14.13 | ✓ | 37.84 | ✓ | 37.87 | ✓ | ✓ | 14.12 | 1450 | 8.03 | 42 | 23.8 | .335 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER WAS CLOUDY, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS/JNT

Well ID: MW-17
Sampling Zone No.: 5
Starting Time: 0935

Depth (ft.): 726
Finishing Time: 1015

Date: 10/12/01

Water Pressure Inside MP Casing - Beginning of Session: 169.54
End of Session: 169.54

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 169.54 | ✓ | 191.56 | ✓ | 190.85 | ✓ | ✓ | 169.54 | 1010 | 9.00 | 54 | 17.7 | .375 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
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| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS/JNT

Well ID: MW-17
Sampling Zone No.: 4
Starting Time: 1017

Depth (ft.): 582
Finishing Time: 1045

Date: 10/12/01

Water Pressure Inside MP Casing - Beginning of Session: 107.95
End of Session: 107.98

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 107.95 | ✓ | 133.91 | ✓ | 133.94 | ✓ | ✓ | 107.98 | 1040 | 9.02 | 54 | 18.3 | .371 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS/JWT

Well ID: MW-17
Sampling Zone No.: 3
Starting Time: 1048

Depth (ft.): 468
Finishing Time: 1115

Date: 10/12/01

Water Pressure Inside MP Casing - Beginning of Session: 58.30
End of Session: 58.30

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 58.30 | ✓ | 109.87 | ✓ | 109.84 | ✓ | ✓ | 58.30 | 1110 | 9.05 | 44 | 18.9 | .366 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ / JNT

Well ID: MW-17
Sampling Zone No.: 2
Starting Time: 1120

Depth (ft.): 370
Finishing Time: 1145

Date: 10/12/01

Water Pressure Inside MP Casing - Beginning of Session: 15.55
End of Session: 15.58

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 15.55 | ✓ | 70.82 | ✓ | 70.83 | ✓ | ✓ | 15.58 | 1140 | 8.79 | 73 | 19.2 | .338 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS / SNT

Well ID: MW-3
Sampling Zone No.: 5
Starting Time: 1041

Depth (ft.): 653
Finishing Time: 1110

Date: 10/15/01

Water Pressure Inside MP Casing - Beginning of Session: 176.79
End of Session: 176.82

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 176.79 | ✓ | 186.51 | ✓ | 186.49 | ✓ | ✓ | 176.82 | 1105 | 10.53 | 199 | 22.7 | .343 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLOUDY, ROTTEN EGG SMELL

Total Volume: 1 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS | JNT

Well ID: MW-3
Sampling Zone No.: 4
Starting Time: 1114

Depth (ft.): 558
Finishing Time: 1148

Date: 10/15/01

Water Pressure Inside MP Casing - Beginning of Session: 136.95
End of Session: 136.99

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 136.95 | ✓ | 157.34 | ✓ | 157.35 | ✓ | ✓ | 136.99 | 1145 | 9.64 | 51 | 22.4 | .299 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JNT

Well ID: MW-3
Sampling Zone No.: 3
Starting Time: 1150

Depth (ft.): 346
Finishing Time: 1225

Date: 10/15/01

Water Pressure Inside MP Casing - Beginning of Session: 44.77
End of Session: 44.81

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 44.77 | ✓ | 99.92 | ✓ | 99.93 | ✓ | ✓ | 44.81 | 1220 | 9.17 | 10 | 22.9 | .366 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: DKJ/JWT

Well ID: MW-3
Sampling Zone No.: 2
Starting Time: 1230

Depth (ft.): 252
Finishing Time: 1255

Date: 10/15/01

Water Pressure Inside MP Casing - Beginning of Session: 14.18
End of Session: 14.18

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14.18 | ✓ | 60.59 | ✓ | 60.56 | ✓ | ✓ | 14.18 | 1250 | 8.81 | 10 | 24.2 | .438 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRG / JNT

Well ID: MW-21
Sampling Zone No.: 5
Starting Time: 0920

Depth (ft.): 372
Finishing Time: 1015

Date: 10/16/01

Water Pressure Inside MP Casing - Beginning of Session: 131.76
End of Session: 131.75

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 131.76 | ✓ | 137.80 | ✓ | 137.82 | ✓ | ✓ | 131.75 | 1013 | 8.82 | 10 | 19.3 | .761 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



**Groundwater Sampling**

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JNT

Well ID: MW-21
Sampling Zone No.: 4
Starting Time: 1020
Depth (ft.): 310
Finishing Time: 1100

Date: 10/16/01

Water Pressure Inside MP Casing - Beginning of Session: 104.71
End of Session: 104.74

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 104.71 | ✓ | 110.97 | ✓ | 110.99 | ✓ | ✓ | 104.74 | 1057 | 8.65 | 10 | 20.9 | .768 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRS | JNT

Well ID: MW-21
Sampling Zone No.: 3
Starting Time: 1120
Depth (ft.): 240
Finishing Time: 1145
Date: 10/16/01

Water Pressure Inside MP Casing - Beginning of Session: 74.65
End of Session: 74.67

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 74.65 | ✓ | 81.10 | ✓ | 81.10 | ✓ | ✓ | 74.67 | 1140 | 8.47 | 48 | PRS ~~24.3~~ | 1.05 |
| 2 | | | | | | | | | | | | | | | | | | 22.3 | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JNT

Well ID: MW - 21
Sampling Zone No.: 2
Starting Time: 1253

Depth (ft.): 161
Finishing Time: 1313

Date: 10/16/01

Water Pressure Inside MP Casing - Beginning of Session: 40.20
End of Session: 40.27

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 40.20 | ✓ | 46.96 | ✓ | 46.97 | ✓ | ✓ | 40.27 | 1310 | 8.39 | 51 | 23.3 | 1.17 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1 LITER

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | JNT

Well ID: MW-21
Sampling Zone No.: 1
Starting Time: 1315

Depth (ft.): 90
Date: 10/16/01
Finishing Time: 1345

Water Pressure Inside MP Casing - Beginning of Session: 14.11
End of Session:

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 14.11 | ✓ | 14.93 | ✓ | | ✓ | ✓ | | | | | | |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: SCREEN IS DRY

Total Volume: 0 LITERS
PRJ

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ / JNT

Well ID: MW-20 PZ5
Sampling Zone No.: ~~10~~ 5
Starting Time: 1024

Depth (ft.): 900
Date: 10/17/01
Finishing Time: 1100

Water Pressure Inside MP Casing - Beginning of Session: 308.46
End of Session: 308.48

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | √ | √ | √ | √ | √ | √ | 308.46 | √ | 309.72 | √ | 309.73 | √ | √ | 308.48 | 1058 | 10.16 | 7 | 18.0 | .354 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ | INST

Well ID: MW-20
Sampling Zone No.: 4
Starting Time: 1105

Depth (ft.): 700
Finishing Time: 1143

Date: 10/17/01

Water Pressure Inside MP Casing - Beginning of Session: 221.55
End of Session: 221.55

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 221.55 | ✓ | 210.52 | ✓ | 210.46 | ✓ | ✓ | 221.55 | 1140 | 9.57 | 12 | 19.6 | .306 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
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| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



**Groundwater Sampling**

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ/JNT

Well ID: MW-20
Sampling Zone No.: 3
Starting Time: 1145
Depth (ft.): 562
Finishing Time: 1225
Date: 10/17/01

Water Pressure Inside MP Casing - Beginning of Session: 161.50
End of Session: 161.55

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 161.50 | ✓ | 159.17 | ✓ | 159.17 | ✓ | ✓ | 161.55 | 1222 | 8.99 | 9 | 20.8 | .528 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
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| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ/JNT

Well ID: MW-20
Sampling Zone No.: 2
Starting Time: 1230

Depth (ft.): 392
Finishing Time: 1300

Date: 10/17/01

Water Pressure Inside MP Casing - Beginning of Session: 87.58
End of Session: 87.58

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 87.58 | ✓ | 89.68 | ✓ | 89.68 | ✓ | ✓ | 87.58 | 1255 | 8.77 | 17 | 19.2 | .361 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
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| 8 | | | | | | | | | | | | | | | | | | | |
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| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS

**SOTA Environmental Technology, Inc.**



## Groundwater Sampling

Field Data Sheet for Multi-Port Well

Project Name: JPL Pasadena
Project No: 00HW019
Personnel: PRJ/JNT

Well ID: MW-20
Sampling Zone No.: 1
Starting Time: 1305

Depth (ft.): 230
Finishing Time: 1340

Date: 10/17/01

Water Pressure Inside MP Casing - Beginning of Session: 16.93
End of Session: 16.95

| Run No. | Surface Function Checks | | | | | Position Sampler | Sample Collection Checks | | | | | | | | Water Quality Parameters | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Shoe Out | Vacuum Check Valve Closed | Valve Open | Evacuate Container | Valve Closed | Deactivate Set Arm Locate Port | Pressure in MP | Shoe out | Zone Pressure | Open Valve | Zone Pressure | Close Valve | Shoe In | Pressure in MP | Time | pH | Turbidity (NTU) | Temperature (°C) | Conductivity (mmhos) |
| 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | 16.93 | ✓ | 19.02 | ✓ | 19.01 | ✓ | ✓ | 16.95 | 1335 | 8.39 | 48 | 19.8 | .700 |
| 2 | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

Notes: WATER IS CLEAR, NO ODOR

Total Volume: 1.5 LITERS