ATTACHMENT D

FIELD FORMS – SLUG TESTING

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: DNB-R7A-PZ-5 **Transducer ID:** DNB-R7A-PZ-5 **Date:** 11/13/08

TOC Elevation: 11.895 NAVD88 (ft) **Transducer SN:** 1037346 **Logger:** WCS / RR

Screen Interval: 5-10 (ft) **Barologger ID:**

Sand Pack Interval: ? (ft)

Casing Diameter: 1.68 (inches) **Bore Diameter:** 5.0 (inches)

Total Depth From TOC: (measured)

Depth To Groundwater Below TOC: 3.90 (ft) **Time:** 12:12 (PST)

Depth To Groundwater Below Rim: 4.70 (ft) **Water Level Meter Used:** Solinst

TOC Reference Point Description:

Temporary Casing Extension: **Length from TOC:** None (ft) **Length from Rim:** 0.20 (ft)

Slug Volume: Diameter(D): 0.091 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ 0.24 gal

SLUG TEST # 1 **Type:** (Insert) Withdraw

Initial Water Level Reading: 3.90 (ft) 6.02 **Start Time:** 12:24 (PST)

Initial Transducer Reading: 8.2040 **Finish Time:** 13:10 (PST)

Initial Barologger Reading: 3.05445

Download Datalogger File: (YES) NO **File Name:** Test 19

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** 12.10 (ft)

SLUG TEST # 2 **Type:** Insert (Withdraw)

Initial Water Level Reading: (ft) **Start Time:** 13:10 (PST)

Initial Transducer Reading: 8.7444 **Finish Time:** 14:10 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:** Test 20

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # 3 **Type:** (Insert) Withdraw

Initial Water Level Reading: (ft) **Start Time:** 14:12 (PST)

Initial Transducer Reading: 8.3769 **Finish Time:** 14:33 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:** Test 21

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: PNB-R7A-PZ-S
Transducer ID: PNB-R7A-PZ-S
Date: 11/13/08
TOC Elevation: 11.895 NAVD88 (ft)
Transducer SN: 1037346
Logger: WKS / RR
Screen Interval: 5-10 (ft)
Barologger ID:
Sand Pack Interval: ? (ft)
Casing Diameter: 1.68 (inches)
Bore Diameter: 5.0 (inches)
Total Depth From TOC: (measured)
Depth To Groundwater Below TOC: (ft)
Time: (PST)
Depth To Groundwater Below Rim: (ft)
Water Level Meter Used: Solinst
TOC Reference Point Description:
Temporary Casing Extension: **Length from TOC:** None (ft) **Length from Rim:** None (ft)
Slug Volume: Diameter(D): 0.09 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48$ gal/ft^3 0.24 gal

SLUG TEST # 1 **Type:** Insert (Withdraw)
Initial Water Level Reading: (ft) **Start Time:** 14:34 (PST)
Initial Transducer Reading: 8.6915 **Finish Time:** (PST)
Initial Barologger Reading:
Download Datalogger File: (YES) NO **File Name:** test 22
Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # **Type:** Insert Withdraw
Initial Water Level Reading: (ft) **Start Time:** (PST)
Initial Transducer Reading: **Finish Time:** (PST)
Initial Barologger Reading:
Download Datalogger File: YES NO **File Name:**
Time Interval Set To Record Every: seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # **Type:** Insert Withdraw
Initial Water Level Reading: (ft) **Start Time:** (PST)
Initial Transducer Reading: **Finish Time:** (PST)
Initial Barologger Reading:
Download Datalogger File: YES NO **File Name:**
Time Interval Set To Record Every: seconds **Transducer Depth Below TOC:** (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: DNB-R7-PZ-D **Transducer ID:** DNB-R7-PZ-D **Date:** ~~9-13~~ 11-13-08

TOC Elevation: 11.662 NAVD88 (ft) **Transducer SN:** 1037335 **Logger:** Allie

Screen Interval: 25.0 – 35.0 (ft) **Barologger ID:**

Sand Pack Interval: ? (ft)

Casing Diameter: 2 (inches) **Bore Diameter:** (inches)

Total Depth From TOC: (measured)

Depth To Groundwater Below TOC: (ft) **Time:** (PST)

Depth To Groundwater Below Rim: 1.85 - 3.~~40~~ 20 ~~35~~ (ft) **Water Level Meter Used:** Solinst

TOC Reference Point Description:

Temporary Casing Extension: **Length from TOC:** (ft) **Length from Rim:** 1.85 (ft)

Slug Volume: Diameter(D): (ft) Length: (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ gal

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SLUG TEST # -1 **Type:** (Insert) Withdraw

Initial Water Level Reading: 3.35 ~~3.20~~ ~~3.40~~ ~~3.35~~ (ft) **Start Time:** (PST)

Initial Transducer Reading: 33.4756 **Finish Time:** 1:40 (PST)

Initial Barologger Reading: 3.05445

Download Datalogger File: (YES) NO **File Name:** DNB-R7-PZ-D-1

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # -2 **Type:** Insert (Withdraw)

Initial Water Level Reading: (ft) **Start Time:** 1:42 (PST)

Initial Transducer Reading: 33.65430 **Finish Time:** 2:20 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:** DNB-R7-PZ-D-2

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # -3 **Type:** (Insert) Withdraw

Initial Water Level Reading: (ft) **Start Time:** 2:20 (PST)

Initial Transducer Reading: 33.62400 **Finish Time:** 2:43 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:**

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

Comments: Computer turned off during Test 1.

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: EMB-RIA-S P2
Transducer ID: EMB-RIA-PZ-S
Date: 11/13/08
TOC Elevation: 11.431 NAVD88 (ft)
Transducer SN: 1037388
Logger: WIS/RR
Screen Interval: 5.0 - 10.0 (ft)
Barologger ID:
Sand Pack Interval: 4.0 - 10.0 (ft)
Casing Diameter: ~~2~~ 1.68 (inches) inside
Bore Diameter: 5.0 (inches)
Total Depth From TOC: (measured)
Depth To Groundwater Below TOC: (ft)
Time: 8:37 (PST)
Depth To Groundwater Below Rim: 6.87 (ft) below top of temp casing
Water Level Meter Used: Solinst
TOC Reference Point Description:
Temporary Casing Extension: **Length from TOC:** (ft) **Length from Rim:** 3.31 (ft)
Slug Volume: Diameter(D): 0.091 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ 0.26 gal

SLUG TEST # 1 **Type:** (Insert) Withdraw
Initial Water Level Reading: 6.87 (ft)
Start Time: 8:42 (PST)
Initial Transducer Reading: 8.7250
Finish Time: 8:43 (PST)
Initial Barologger Reading: 3.09874
Download Datalogger File: (YES) NO **File Name:** test 7
Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # 2 **Type:** Insert (Withdraw)
Initial Water Level Reading: (ft)
Start Time: 8:44 (PST)
Initial Transducer Reading: 7.4635
Finish Time: 8:46 (PST)
Initial Barologger Reading:
Download Datalogger File: (YES) NO **File Name:** test 8
Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # 3 **Type:** (Insert) Withdraw
Initial Water Level Reading: 6.87 (ft)
Start Time: 8:47 (PST)
Initial Transducer Reading: 8.7240
Finish Time: 8:49 (PST)
Initial Barologger Reading:
Download Datalogger File: (YES) NO **File Name:** test 9
Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: ENB-R1A-S P2 **Transducer ID:** ENB-R1A-P2-S **Date:** 11/13/08

TOC Elevation: 11.431 NAVD88 (ft) **Transducer SN:** _____ **Logger:** WKS/RR

Screen Interval: 5.0 - 10.0 (ft) **Barologger ID:** _____

Sand Pack Interval: _____ (ft)

Casing Diameter: ~~2~~ 1.68 (inches) inside **Bore Diameter:** 5.0 (inches)

Total Depth From TOC: _____ (measured)

Depth To Groundwater Below TOC: _____ (ft) **Time:** _____ (PST)

Depth To Groundwater Below Rim: _____ (ft) **Water Level Meter Used:** Solinst

TOC Reference Point Description: _____

Temporary Casing Extension: **Length from TOC:** 3.31 (ft) **Length from Rim:** _____ (ft)

Slug Volume: Diameter(D): 0.091 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ 0.24 gal

SLUG TEST # 4 **Type:** Insert Withdraw

Initial Water Level Reading: _____ (ft) **Start Time:** 8:50 (PST)

Initial Transducer Reading: 8.7404 **Finish Time:** _____ (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** test 10

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 5 **Type:** Insert Withdraw

Initial Water Level Reading: 6.87 (ft) **Start Time:** 8:54 (PST)

Initial Transducer Reading: 8.7246 **Finish Time:** 8:56 (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** test 11

Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 6 **Type:** Insert Withdraw

Initial Water Level Reading: _____ (ft) **Start Time:** 8:57 (PST)

Initial Transducer Reading: 8.7397 **Finish Time:** 8:58 (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** test 12

Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

ENB - R1A - P2 - D transducer ID

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: ENB-R1A-D (P2)
Transducer ID: ENB-R1A-P2-D
Date: 11-13-08
TOC Elevation: ~~9.567~~ 11.941 NAVD88 (ft)
Transducer SN: 1037351
Logger: WKS-RR
Screen Interval: 19.5 - 29.5 (ft)
Barologger ID:
Sand Pack Interval: 18.0 - 29.5 (ft)
Casing Diameter: 1.68 (inches) inside
Bore Diameter: 5.0 (inches)
Total Depth From TOC: NA (measured)
Depth To Groundwater Below TOC: 4.21 (ft) below top of temp casing 4.21
Time: 07:50 (PST)
Depth To Groundwater Below Rim: 0.78 (ft)
Water Level Meter Used: Solinst
TOC Reference Point Description:
Temporary Casing Extension: **Length from TOC:** (ft) **Length from Rim:** 3.43 (ft)
Slug Volume: Diameter(D): 0.091 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48$ gal/ft^3 0.24 gal

SLUG TEST # 1

Type: (Insert) Withdraw
Initial Water Level Reading: 4.21 (ft) below top of temp casing
Start Time: 7:50 (PST)
Initial Transducer Reading: 317660
Finish Time: 7:53 (PST)
Initial Barologger Reading: 309269
Download Datalogger File: (YES) NO
File Name: test 1
Time Interval Set To Record Every: seconds
Transducer Depth Below TOC: (ft)

SLUG TEST # 2

Type: Insert (Withdraw)
Initial Water Level Reading: (ft)
Start Time: 7:55 (PST)
Initial Transducer Reading:
Finish Time: 7:58 (PST)
Initial Barologger Reading:
Download Datalogger File: (YES) NO
File Name: test 2
Time Interval Set To Record Every: seconds
Transducer Depth Below TOC: (ft)

SLUG TEST # 3

Type: (Insert) Withdraw
Initial Water Level Reading: 4.23 (ft)
Start Time: 8:02 (PST)
Initial Transducer Reading: 317489
Finish Time: (PST)
Initial Barologger Reading: 309258
Download Datalogger File: (YES) NO
File Name: test 3
Time Interval Set To Record Every: seconds
Transducer Depth Below TOC: (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: ENB-RIA-D PZ
Transducer ID: _____ **Date:** 11/13/08
TOC Elevation: 11.441 NAVD88 (ft) **Transducer SN:** _____ **Logger:** WKS-RK
Screen Interval: 19.5 - 29.5 (ft) **Barologger ID:** _____
Sand Pack Interval: 18.0 - 29.5 (ft)
Casing Diameter: 2 1.68 (inches) inside **Bore Diameter:** 5.0 (inches)
Total Depth From TOC: _____ (measured)
Depth To Groundwater Below TOC: _____ (ft) **Time:** _____ (PST)
Depth To Groundwater Below Rim: _____ (ft) **Water Level Meter Used:** Solinst
TOC Reference Point Description: _____
Temporary Casing Extension: **Length from TOC:** _____ (ft) **Length from Rim:** _____ (ft)
Slug Volume: Diameter(D): _____ (ft) Length: _____ (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ _____ gal

SLUG TEST # 4 **Type:** Insert (Withdraw)
Initial Water Level Reading: _____ (ft) **Start Time:** 8:04 (PST)
Initial Transducer Reading: 31.7603 **Finish Time:** 8:06 (PST)
Initial Barologger Reading: _____
Download Datalogger File: (YES) NO **File Name:** test 4
Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 5 **Type:** (Insert) Withdraw
Initial Water Level Reading: 4.23 (ft) **Start Time:** 8:08 (PST)
Initial Transducer Reading: 31.7531 **Finish Time:** 8:10 (PST)
Initial Barologger Reading: _____
Download Datalogger File: (YES) NO **File Name:** test 5
Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 6 **Type:** Insert (Withdraw)
Initial Water Level Reading: _____ (ft) **Start Time:** 8:11 (PST)
Initial Transducer Reading: 31.7581 **Finish Time:** 8:13 (PST)
Initial Barologger Reading: _____
Download Datalogger File: (YES) NO **File Name:** test 4
Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: RW18-A1A-PZ-5 **Transducer ID:** RW18-A1A-PZ-5 **Date:** 11/13/08

TOC Elevation: 10.326 NAVD88 (ft) **Transducer SN:** 1087383 **Logger:** WKS / RR

Screen Interval: 4-9.0 (ft) **Barologger ID:**

Sand Pack Interval: 3.5-9.0 (ft)

Casing Diameter: 2 1.68 (inches) **Bore Diameter:** 5.0 (inches)

Total Depth From TOC: (measured)

Depth To Groundwater Below TOC: 5.32 below top of temp casing (ft) **Time:** 9:58 (PST)

Depth To Groundwater Below Rim: (ft) **Water Level Meter Used:** Solinst

TOC Reference Point Description: TOP OF RIM

Temporary Casing Extension: **Length from TOC:** (ft) **Length from Rim:** 3.22 (ft)

Slug Volume: Diameter(D): 0.091 (ft) Length: 5 (ft) $= \pi(D/2)^2 \times L \times 7.48$ gal/ft^3 0.29 gal

SLUG TEST # 1 **Type:** (Insert) Withdraw

Initial Water Level Reading: 5.32 (ft) **Start Time:** 9:59 (PST)

Initial Transducer Reading: 9.2683 **Finish Time:** 10:17 (PST)

Initial Barologger Reading: 3.05756

Download Datalogger File: (YES) NO **File Name:** test 13

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # 2 **Type:** Insert (Withdraw)

Initial Water Level Reading: (ft) **Start Time:** 10:18 (PST)

Initial Transducer Reading: 9.3185 **Finish Time:** 10:33 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:** test 14

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

SLUG TEST # 3 **Type:** (Insert) Withdraw

Initial Water Level Reading: 5.34 (ft) **Start Time:** 10:35 (PST)

Initial Transducer Reading: 9.2550 **Finish Time:** 10:46 (PST)

Initial Barologger Reading:

Download Datalogger File: (YES) NO **File Name:** test 15

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** (ft)

Comments:

DOYLE DRIVE PIEZOMETER GROUNDWATER LEVEL MOINITORING, SAN FRANCISCO, CA

PIEZOMETER AND TRANSDUCER DATALOGGER INFORMATION, SLUG TEST

Piezometer ID: RW18-A1A-S (PZ) **Transducer ID:** R18-A1A-PZ-S **Date:** 11/13/08

TOC Elevation: 10.326 NAVD88 (ft) **Transducer SN:** 1037333 **Logger:** WKS / RC

Screen Interval: 4.0 - 9.0 (ft) **Barologger ID:**

Sand Pack Interval: 3.5 - 9.0 (ft)

Casing Diameter: 2/68 (inches) **Bore Diameter:** 5.0 (inches)

Total Depth From TOC: _____ (measured)

Depth To Groundwater Below TOC: _____ (ft) **Time:** _____ (PST)

Depth To Groundwater Below Rim: _____ (ft) **Water Level Meter Used:** Solinst

TOC Reference Point Description: _____

Temporary Casing Extension: **Length from TOC:** _____ (ft) **Length from Rim:** _____ (ft)

Slug Volume: Diameter(D): _____ (ft) Length: _____ (ft) $= \pi(D/2)^2 \times L \times 7.48\ gal/ft^3$ _____ gal

SLUG TEST # 4

Type: Insert Withdraw

Initial Water Level Reading: _____ (ft) **Start Time:** 10:48 (PST)

Initial Transducer Reading: 9.3535 **Finish Time:** 11:03 (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** Test 16

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 5

Type: Insert Withdraw

Initial Water Level Reading: _____ (ft) **Start Time:** 11:04 (PST)

Initial Transducer Reading: 9.2565 **Finish Time:** 11:21 (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** Test 17

Time Interval Set To Record Every: 1 seconds **Transducer Depth Below TOC:** _____ (ft)

SLUG TEST # 6

Type: Insert Withdraw

Initial Water Level Reading: _____ (ft) **Start Time:** 11:22 (PST)

Initial Transducer Reading: 9.3419 **Finish Time:** 11:40 (PST)

Initial Barologger Reading: _____

Download Datalogger File: YES NO **File Name:** Test 18

Time Interval Set To Record Every: _____ seconds **Transducer Depth Below TOC:** _____ (ft)

Comments: