Appendix 5

Piezometer Construction Details
REVISED March 30, 2011

Prepared by: GREDELL Engineering Resources, Inc.
Top Casing Elev: 473.26 ft
Ground Surface Elev: 469.90 ft
Maximum Groundwater Elevation: 464.60 ft
Minimum Groundwater Elevation: 456.43 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 376 lb.

Remarks:
Natural Sand Collapse Comprises 80% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (10/20 Sand): 449.12 ft
Top of Screen (20 - Slot): 445.62 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 996108.40
E: 726981.78

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.97 bsc
Base Elev: 435.29 ft

10.25 inches
Piezometer Construction Quantities:

1. Primary Filter Sand - 200 lb.

Remarks:
Natural Sand Collapse Comprises 95% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack:
Top Primary Filter Pack (20/40 Sand): 448.21 ft
Top of Screen (10 - Slot): 445.71 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 996215.71
E: 728171.12

Bottom Hole Depth: 33.8 bgs
Base Sump: 36.76 btec
Base Elev: 435.38 ft

8.25 Inches
Piezometer Construction Quantities:

1. Primary Filter Sand: 150 lb.

Remarks:
- Natural Sand Collapse Comprises @ 65% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Casing Elev: 472.40 ft
Ground Surface Elev: 469.35 ft
Maximum Groundwater Elevation: 464.49 ft
Minimum Groundwater Elevation: 457.17 ft

Top Secondary Filter Pack: 449.08 ft
Top Primary Filter Pack (20/40 Sand): 447.58 ft
Top of Screen (10" Slot): 445.18 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 995802.44
E: 727271.36

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.55 blc
Base Elev: 434.85 ft

8.25 inches
Top Casing Elev: 472.19 ft
Ground Surface Elev: 469.30 ft
Maximum Groundwater Elevation: 464.23 ft
Minimum Groundwater Elevation: 457.81 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 225 lb.

Remarks:
Natural Sand Collapse Comprises @50% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 447.23 ft
Top of Screen (T0 - Slot): 444.93 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 995789.75
E: 727851.61

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.59 btoc
Base Elev: 434.60 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

LABADIE POWER PLANT

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 470.84 ft
Ground Surface Elev: 467.90 ft
Maximum Groundwater Elevation: 464.09 ft
Minimum Groundwater Elevation: 458.09 ft

Piezometer Construction Quantities:


Remarks:
Natural Sand Collapse Comprises @40% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 447.24 ft
Top of Screen (10′ - Slot): 443.84 ft
4′ (Nominal) Schedule 40 PVC (10 ft length)

Coordinates
N: 995768.95
E: 728438.40

Bottom Hole Depth: 34.8 bgs
10.25 inches
Base Sump: 37.33 bgs
Base Elev: 433.51 ft

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC

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Top Casing Elev:  472.28 ft
Ground Surface Elev:  469.35 ft
Maximum Groundwater Elevation:  464.66 ft
Minimum Groundwater Elevation:  467.02 ft

Piezometer Construction Quantities:
1. Primary Filter Sand = 226 lb.
2. Secondary Filter Sand = 50 lb.
3. Bentonite Slurry = 90 gal.

Remarks:
Natural Sand Collapse Comprises @ 50 % of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 447.61 ft
Top of Screen (10 - Slotted): 445.11 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.50 btec
Base Elev: 434.78 ft

Coordinates
N: 995510.59
E: 726856.24

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AMEREN MISSOURI
LABADIE POWER PLANT

AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101

Date Piezometer Completed: 9/17/09

LAND
1/2010 N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

Telephone: (573) 659-9078
Facsimile: (573) 659-9079
Piezometer Construction Quantities:

1. Primary Filter Sand - 375 lb.
2. Secondary Filter Sand - 75 lb.

Remarks:
- Natural Sand Collapse Comprises 40% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 449.00 ft
Top Primary Filter Pack (10/20 Sand): 447.30 ft
Top of Screen (20 - Slot): 444.10 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.50 bloc
Base Elev: 433.77 ft

Coordinates
N: 995503.30
E: 727579.54

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND AIR WATER
1505 East High Street Jefferson City, Missouri 65101
Telephone: (573) 659-9078 Facsimile: (573) 659-9079

LABADIE POWER PLANT

Date Piezometer Completed: 10/07/09

DATE: 1/2010 SCALE: N.T.S. DRAWN BY: BED APPROVED BY: MCC
Top Casing Elev: 471.44 ft
Ground Surface Elev: 468.50 ft
Maximum Groundwater Elevation: 464.16 ft
Minimum Groundwater Elevation: 458.27 ft

Piezometer Construction Quantities:

1. Primary Filter Sand = 226 lb.
2. Secondary Filter Sand = 50 lb.
3. Bentonite Slurry = 72 gal.

Remarks:
Natural Sand Collapse Comprises 50% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 448.06 ft
Top Primary Filter Pack (20/40 Sand): 446.86 ft
Top of Screen (10 - Slot): 444.16 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 995476.21
E: 728133.29

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.61 bgs
Base Elev: 433.83 ft

8.25 inches
Top Casing Elev: 471.99 ft
Ground Surface Elev: 469.07 ft
Maximum Groundwater Elevation: 464.66 ft
Minimum Groundwater Elevation: 457.63 ft

Piezometer Construction Quantities:
1. Primary Filter Sand = 240 lb.
2. Secondary Filter Sand = 80 lb.

Remarks:
Natural Sand Collapse Comprises 90% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 448.65 ft
Filter Pack
Top Primary Filter Pack (20/40 Sand): 447.05 ft
Top of Screen (10-6 Slot): 444.05 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 996206.06
E: 727247.55

Bottom Hole Depth: 35.2 bgs
Base Sump: 38.27 bloc
Base Elev: 433.72 ft

8.25 inches
Top Casing Elev: 470.83 ft
Ground Surface Elev: 467.73 ft
Maximum Groundwater Elevation: 464.33 ft
Minimum Groundwater Elevation: 458.09 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 226 lb.

Remarks:
Natural Sand Collapse Comprises @ 50% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack

Top Primary Filter Pack (20/40 Sand): 446.02 ft
Top of Screen (10' - Slot): 443.62 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 995188.03
E: 727844.69

Bottom Hole Depth: 36.0 bgs
Base Sump: 37.54 bloc
Base Elev: 433.29 ft
Top Casing Elev: 470.22 ft
Ground Surface Elev: 467.67 ft
Maximum Groundwater Elevation: 464.57 ft
Minimum Groundwater Elevation: 457.66 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 350 lb.
2. Secondary Filter Sand - 100 lb.

Remarks:
Natural Sand Collapse Comprises 40% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 447.66 ft
Top Primary Filter Pack (20/40 Sand): 446.46 ft
Top of Screen (1'0 - Slot): 443.46 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994921.76
E: 726950.89

Bottom Hole Depth: 34.5 bgs
Base Sump: 37.09 bloc
Base Elev: 433.13 ft

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Fax: (573) 659-9079

WATER

PIEZOMETER CONSTRUCTION DIAGRAM

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AMEREN MISSOURI
LABADIE POWER PLANT

10/12/09

Date Piezometer Completed:

1/2010

DATE

SCALE

DRAWN BY:

APPROVED BY:

Bed

MCC

N.T.S.
Top Casing Elev: 471.18 ft
Ground Surface Elev: 468.44 ft
Maximum Groundwater Elevation: 464.47 ft
Minimum Groundwater Elevation: 458.02 ft

Piezometer Construction Quantities:

1. Primary Filter Sand: 240 lb.

Remarks:
- Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 447.01 ft
Top of Screen (10 - 40): 444.21 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994910.34
E: 727569.71

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.30 btoc
Base Elev: 433.88 ft

8.25 Inches
Piezometer Construction Quantities:

1. Primary Filter Sand = 250 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
- Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
- Top Secondary: 447.93 ft
- Top Primary Filter Pack (20/40 Sand): 446.83 ft
- Top of Screen (10 - Slot): 444.53 ft
- 2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
- N: 994886.38
- E: 728125.58

Bottom Hole Depth: 33.0 bgs
Base Sump: 36.41 bsc
Base Elev: 434.20 ft
Top Casing Elev: 471.23 ft
Ground Surface Elev: 468.20 ft
Maximum Groundwater Elevation: 464.42 ft
Minimum Groundwater Elevation: 468.59 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 100 lb.

Remarks:
Natural Sand Collapse Comprises @ 80% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
449.07 ft

Top Primary Filter Pack (20/40 Sand): 447.07 ft

Top of Screen (10 - Slot): 444.07 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 995058.28
E: 728509.44

Bottom Hole Depth: 35.3 bgs

Base Sump: 37.49 btec

Base Elev: 433.74 ft

8.25 Inches

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

LABADIE POWER PLANT

P - 36

Date Piezometer Completed:
9/15/09

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 470.11 ft
Ground Surface Elev: 467.15 ft
Maximum Groundwater Elevation: 464.32 ft
Minimum Groundwater Elevation: 458.00 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 225 lb.

Remarks:
Natural Sand Collapse Comprises <50 % of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 448.26 ft
Top Primary Filter Pack (20/40 Sand): 446.08 ft
Top of Screen (T0 - Slot): 443.28 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994618.74
E: 727238.62

Bottom Hole Depth: 34.6 bgs
Base Sump: 37.16 bloc
Base Elev: 432.95 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101

LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING

Date Piezometer Completed: 9/22/09

P - 38

WATER

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

LAND

AIR

DRAWN BY: MCC
APPROVED BY:
Top Casing Elev: 469.93 ft
Ground Surface Elev: 467.06 ft
Maximum Groundwater Elevation: 464.08 ft
Minimum Groundwater Elevation: 458.33 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 150 lb.

Remarks:
- Natural Sand Collapse Comprises @70% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 448.23 ft
Top Primary Filter Pack (20/40 Sand): 446.53 ft
Top of Screen (10 - Slot): 442.53 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.73 boc
Base Elev: 432.20 ft

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

PIEZOMETER CONSTRUCTION DIAGRAM

Date Piezometer Completed: 10/12/09

AMEREN MISSOURI
LABADIE POWER PLANT
Top Casing Elev: 470.60 ft
Ground Surface Elev: 467.74 ft
Maximum Groundwater Elevation: 463.98 ft
Minimum Groundwater Elevation: 458.47 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 425 lb.

Remarks:
Natural Sand Collapse Comprises 30% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 448.03 ft Filter Pack
Top Primary Filter Pack (10/20 Sand): 446.73 ft
Top of Screen (20 - Slot): 443.53 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994538.42
E: 728420.83

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.40 btoc
Base Elev: 433.20 ft

10.25 inches
Piezometer Construction Quantities:

1. Primary Filter Sand = 200 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 66% of Calculated Sand Volume.

Top Casing Elev: 469.20 ft
Ground Surface Elev: 466.07 ft
Maximum Groundwater Elevation: 464.64 ft
Minimum Groundwater Elevation: 458.13 ft

Top Secondary Filter Pack: 446.73 ft
Top Primary Filter Pack (20/40 Sand): 445.03 ft
Top of Screen (10 Slot): 442.33 ft
2” (Nominal) Schedule 40 PVC (.10 ft Length)

Coordinates
N: 994333.02
E: 726946.21

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.20 blos
8.25 inches Base Elev: 432.00 ft
Top Casing Elev: 420.07 ft
Ground Surface Elev: 467.12 ft

Maximum Groundwater Elevation: 464.28 ft
Minimum Groundwater Elevation: 458.39 ft

Piezometer Construction Quantities:

1. Primary Filter Sand = 175 lb.
2. Secondary Filter Sand = 80 lb.

Remarks:
Natural Sand Collapse Comprises 86% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 447.86 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 445.96 ft
Top of Screen (10 - Slot): 442.96 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates:
N: 994324.97
E: 727532.26

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.44 bgs
c
Base Elev: 432.63 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND

AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101

AIR

LABADIE POWER PLANT

WATER

Date Piezometer Completed: 9/18/09

P - 45

Drawn By: MCC

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

<table>
<thead>
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<th>DATE</th>
<th>SCALE</th>
<th>DRAWN BY</th>
<th>APPROVED BY</th>
</tr>
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<td>N.T.S.</td>
<td>BED</td>
<td>MCC</td>
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</tbody>
</table>
Top Casing Elev: 469.86 ft
Ground Surface Elev: 467.10 ft
Maximum Groundwater Elevation: 464.11 ft
Minimum Groundwater Elevation: 458.80 ft

**Piezometer Construction Quantities:**

1. Primary Filter Sand - 200 lb.

**Remarks:**
- Natural Sand Collapse Comprises 75% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

**Coordinates**
- N: 994320.66
- E: 728124.52

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.09 btec
Base Elev: 432.77 ft
Piezometer Construction Quantities:

1. Primary Filter Sand — 276 lb.
2. Secondary Filter Sand — 60 lb.

Remarks:
Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Coordinates
N: 994499.84
E: 728938.97

Top Secondary Filter Pack
448.28 ft
Top Primary Filter Pack (20/40 Sand): 446.48 ft
Top of Screen (10’ Slot): 443.08 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.81 bloc
Base Elev: 432.75 ft

8.25 inches

GREDELL Engineering Resources, Inc.
ENVIROLONAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

PIEZOMETER CONSTRUCTION DIAGRAM

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

P - 49

LABADIE POWER PLANT

AMEREN MISSOURI

Approved by: MCC

Date Piezometer Completed: 10/14/09

Date: 1/2010

Scale: N.T.S.

Drawn by: BED
Top Casing Elev: 469.06 ft
Ground Surface Elev: 466.26 ft
Maximum Groundwater Elevation: 463.77 ft
Minimum Groundwater Elevation: 466.98 ft

Piezometer Construction Quantities:
1. Primary Filter Sand – 150 lb.

Remarks:
Natural Sand Collapse Comprises @ 70 % of Calculated Sand Volume.

Top Secondary 447.77 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 445.77 ft
Top of Screen (T0 – Slot): 442.07 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994463.37
E: 729490.00

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.32 bts
Base Elev: 431.74 ft

8.25 inches
Top Casing Elev: 469.10 ft
Ground Surface Elev: 466.46 ft
Maximum Groundwater Elevation: 463.61 ft
Minimum Groundwater Elevation: 458.87 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 350 lb.

Remarks:
Natural Sand Collapse Comprises @45% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 447.03 ft
Filter Pack

Top Primary Filter Pack
(20/40 Sand): 445.83 ft
Top of Screen (10 – Slot): 442.33 ft
4” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994428.21
E: 730049.96

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.10 bloc
Base Elev: 432.00 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 470.02 ft
Ground Surface Elev: 467.33 ft
Maximum Groundwater Elevation: 463.42 ft
Minimum Groundwater Elevation: 458.79 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 276 lb.

Remarks:
Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 448.14 ft
Top Primary Filter Pack (20/40 Sand): 446.34 ft
Top of Screen (10 - Slot): 443.34 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994395.43
E: 730584.11

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.01 bloc
Base Elev: 433.01 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
AIR
WATER

AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101

LABADIE POWER PLANT

DATE 1/2010  SCALE N.T.S.  DRAWN BY: BED  APPROVED BY: MCC
Top Casing Elev: 468.87 ft
Ground Surface Elev: 465.99 ft
Maximum Groundwater Elevation: 463.21 ft
Minimum Groundwater Elevation: 458.84 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 400 lb.
2. Secondary Filter Sand — 100 lb.

Remarks:
Natural Sand Collapse Comprises @35% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 445.02 ft
Top of Screen (10 slot): 441.92 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994356.77
E: 731212.53

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.28 bgs
Base Elev: 431.59 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AIR
WATER

AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101

10/15/09

LABADIE POWER PLANT

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

Telephone: (573) 659-9078
Facsimile: (573) 659-9079
Piezometer Construction Quantities:

1. Primary Filter Sand – 225 lb.

Remarks:
Natural Sand Collapse Comprises 50% of Calculated Sand Volume.

Top Casing Elev: 467.94 ft
Ground Surface Elev: 465.36 ft
Maximum Groundwater Elevation: 464.44 ft
Minimum Groundwater Elevation: 458.31 ft

Top Secondary Filter Pack: 445.20 ft
Top Primary Filter Pack (20/40 Sand): 443.70 ft
Top of Screen (10” Slot): 440.90 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994039.34
E: 727225.40

Bottom Hole Depth: 35.3 bgs
8.25 inches
Base Sump: 37.37 bloc
Base Elev: 430.67 ft

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AMEREN MISSOURI
LABADIE POWER PLANT

P - 59
PIEZOMETER CONSTRUCTION DIAGRAM

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

Telephone: (573) 659-9078
Facsimile: (573) 659-9079
Top Casing Elev: 468.87 ft
Ground Surface Elev: 468.92 ft

Maximum Groundwater Elevation: 464.24 ft
Minimum Groundwater Elevation: 468.46 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 350 lb.

Remarks:
Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.

Top Secondary Filter Pack: 446.07 ft
Top Primary Filter Pack (10/20 Sand): 444.87 ft
Top of Screen (20 - Slot): 441.67 ft
4” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994020.22
E: 727813.31

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.53 bgs

Piezometer Construction Diagram

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PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
WATER

1505 East High Street
Jefferson City, Missouri 65101
Phone: (573) 659-9078
Facsimile: (573) 659-9079

LABADIE POWER PLANT

Date Piezometer Completed: 10/26/09

DRAWN BY: BED
APPROVED BY: MCC

DATE: 1/2010
SCALE: N.T.S.
Top Casing Elev: 469.30 ft
Ground Surface Elev: 466.20 ft
Maximum Groundwater Elevation: 464.06 ft
Minimum Groundwater Elevation: 458.66 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 190 lb.

Remarks:
Natural Sand Collapse Comprises @ 60% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.74 ft
Top of Screen (10 – Slot): 442.14 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 994004.98
E: 728407.71

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.29 bloc
8.25 inches
Base Elev: 431.81 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

ACEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE
1/2010

SCALE
N.T.S.

DRAWN BY:
BED

APPROVED BY:
MCC
Top Casing Elev: 471.31 ft
Ground Surface Elev: 468.06 ft
Maximum Groundwater Elevation: 463.84 ft
Minimum Groundwater Elevation: 458.97 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 280 lb.

Remarks:
Natural Sand Collapse Comprises 40% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 446.90 ft
Top of Screen (10 - Slot): 444.00 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993990.81
E: 729165.81

Bottom Hole Depth: 34.9 bgs
8.25 inches
Base Sump: 37.64 boc
Base Elev: 433.67 ft

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING

LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101

Date Piezometer Completed: 10/13/09

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 467.73 ft
Ground Surface Elev: 465.06 ft
Maximum Groundwater Elevation: 463.41 ft
Minimum Groundwater Elevation: 459.02 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 226 lb.
2. Secondary Filter Sand - 60 lb.

Remarks:
Natural Sand Collapse Comprises @ 45 % of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 443.92 ft
Top of Screen (10 - Slot): 440.52 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993965.46
E: 730346.87

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.54 blac
Base Elev: 430.19 ft

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PIEZOMETER CONSTRUCTION DIAGRAM
GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND AIR WATER
AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

LABADIE POWER PLANT

DATE: 3/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 250 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
- Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Coordinates
- N: 993948.36
- E: 730927.90

Top Primary Filter Pack
(20/40 Sand): 446.31 ft

Top of Screen (10 - Slot): 443.41 ft

2" (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 34.9 bgs

Base Sump: 37.62 bts

Base Elev: 433.08 ft

8.25 inches
Top Casing Elev: 469.94 ft
Ground Surface Elev: 467.06 ft

Maximum Groundwater Elevation: 464.51 ft
Minimum Groundwater Elevation: 458.47 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 275 lb.
2. Secondary Filter Sand - 75 lb.

Remarks:
Natural Sand Collapse Comprises 90% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 447.83 ft
Top Primary Filter Pack (10/20 Sand): 446.13 ft
Top of Screen (20 - Slot): 443.43 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993742.59
E: 726924.60

Bottom Hole Depth: 34.0 bgs
Base Sump: 36.84 bloc
Base Elev: 433.10 ft
10.25 inches
Top Casing Elev: 468.75 ft
Ground Surface Elev: 466.12 ft

Maximum Groundwater Elevation: 464.28 ft
Minimum Groundwater Elevation: 458.39 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 260 lb.

Remarks:
Natural Sand Collapse Comprises @ 45% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
446.15 ft

Top Primary Filter Pack
(20/40 Sand): 444.85 ft

Top of Screen (1'0 - Slot): 441.85 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993730.50
E: 727611.13

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.23 bloc

Base Elev: 431.62 ft
8.25 inches
Top Casing Elev: 468.05 ft
Ground Surface Elev: 465.41 ft
Maximum Groundwater Elevation: 464.09 ft
Minimum Groundwater Elevation: 458.57 ft

Piezometer Construction Quantities:

1. Primary Filter Sand: 250 lb.

Remarks:
Natural Sand Collapse Comprises 90% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary: 445.73 ft
Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.03 ft
Top of Screen (10 - Slot): 440.93 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993714.81
E: 728102.38

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.46 btec
Base Elev: 430.60 ft

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PIEZOMETER CONSTRUCTION DIAGRAM
GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AMEREN MISSOURI
1505 East High Street
Jefferson City, Missouri 65101
AIR
LABADIE POWER PLANT
WATER
Date Piezometer Completed: 9/28/09

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<tr>
<td>1/2010</td>
<td>N.T.S.</td>
<td>BED</td>
<td>MCC</td>
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Top Casing Elev: 469.84 ft
Ground Surface Elev: 467.01 ft
Maximum Groundwater Elevation: 463.89 ft
Minimum Groundwater Elevation: 468.86 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 265 lb.
2. Secondary Filter Sand - 80 lb.

Remarks:
Natural Sand Collapse Comprises @40% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack
(20/40 Sand): 445.67 ft
Top of Screen (10 - Slot): 442.57 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993695.02
E: 728850.48

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.60 btec

Base Elev: 432.24 ft

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
AIR
WATER

Date Piezometer Completed: 10/28/09

1505 East High Street
Jefferson City, Missouri 65101

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 470.31 ft
Ground Surface Elev: 467.64 ft
Maximum Groundwater Elevation: 463.74 ft
Minimum Groundwater Elevation: 459.08 ft

Piezometer Construction Quantities:
1. Primary Filter Sand = 360 lb.
2. Secondary Filter Sand = 50 lb.
3. Bentonite Slurry = 75 gal.

Remarks:
Natural Sand Collapse Comprises 3.40 % of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (10/20 Sand): 446.41 ft
Top of Screen (20 - Slot): 443.21 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993679.30
E: 729444.97

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.43 bloc
Base Elev: 432.88 ft
Top Casing Elev: 467.65 ft
Ground Surface Elev: 464.71 ft
Maximum Groundwater Elevation: 463.89 ft
Minimum Groundwater Elevation: 459.90 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 250 lb.

Remarks:
Natural Sand Collapse Comprises @ 45% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 445.24 ft
Top Primary Filter Pack (20/40 Sand): 443.74 ft
Top of Screen (1/4 - Slot): 440.74 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993664.23
E: 730089.18

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.14 bgl
Base Elev: 430.41 ft

GREDELL Engineering Resources, Inc.
PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT

P - 83

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

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<td>N.T.S.</td>
<td>BED</td>
<td>MCC</td>
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11/10/09
Top Casing Elev: 466.75 ft
Ground Surface Elev: 464.41 ft
Maximum Groundwater Elevation: 463.40 ft
Minimum Groundwater Elevation: 459.11 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 350 lb.

Remarks:
Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
(20/40 Sand): 445.37 ft
Top Primary Filter Pack (20/40 Sand): 443.57 ft
Top of Screen (10 - Slot): 440.37 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993647.31
E: 730619.20

Bottom Hole Depth: 34.0 bgs
Base Sump: 36.71 bloc
Base Elev: 430.04 ft

10.25 inches

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PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND

AIR
1505 East High Street
Jefferson City, Missouri 65101

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010
SCALE N.Y.S.
DRAWN BY: BED
APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand – 310 lb.

Remarks:
Natural Sand Collapse Comprises @ 30% of Calculated Sand Volume.

Top Casing Elev: 469.64 ft
Ground Surface Elev: 466.69 ft
Maximum Groundwater Elevation: 463.07 ft
Minimum Groundwater Elevation: 459.08 ft

Top Primary Filter Pack (20/40 Sand): 447.40 ft
Top of Screen (10' Slot): 443.80 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993693.54
E: 731420.88

Bottom Hole Depth: 35.0 bgs
Base Sump: 36.17 bloc
Base Elev: 433.47 ft

P - 87
PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

Date Piezometer Completed:
10/26/09

LABADIE POWER PLANT

DATE  SCALE  DRAWN BY  BED  APPROVED BY
1/2010  N.T.S.  MCC
Top Casing Elev: 469.13 ft
Ground Surface Elev: 466.25 ft
Maximum Groundwater Elevation: 464.39 ft
Minimum Groundwater Elevation: 468.53 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 275 lb.

Remarks:
Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.95 ft
Top of Screen (T0 - Slot): 442.45 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993401.94
E: 727072.92

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.01 bloc
Base Elev: 432.12 ft

8.25 inches
Top Casing Elev: 468.10 ft
Ground Surface Elev: 465.38 ft
Maximum Groundwater Elevation: 464.29 ft
Minimum Groundwater Elevation: 458.80 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 225 lb.
2. Secondary Filter Sand - 60 lb.

Remarks:
Natural Sand Collapse Comprises @ 50 % of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary 446.12 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.92 ft
Top of Screen (10 - Slot): 441.42 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993427.80
E: 727804.04

Bottom Hole Depth: 36.1 bgs
Base Sump: 37.01 boc
Base Elev: 431.09 ft

8.25 inches

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PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE
SCALE
DRAWN BY: BED
APPROVED BY: MCC

1/2010
N.T.S.
Top Casing Elev: 468.82 ft
Ground Surface Elev: 465.91 ft
Maximum Groundwater Elevation: 463.76 ft
Minimum Groundwater Elevation: 459.02 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 250 lb.

Remarks:
- Natural Sand Collapse Comprises 46% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 446.46 ft
Top Primary Filter Pack (20/40 Sand): 445.15 ft
Top of Screen (10'- Slot): 442.25 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates:
N: 993388.35
E: 729062.32

Bottom Hole Depth: 35.0 bgs
Base Sump: 36.90 bgs
Base Elev: 431.92 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

Date Piezometer Completed:
10/20/09

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 469.92 ft
Ground Surface Elev: 467.22 ft
Maximum Groundwater Elevation: 463.62 ft
Minimum Groundwater Elevation: 459.25 ft

Piezometer Construction Quantities:

1. Primary Filter Sand: 250 lb.

Remarks:
Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 447.43 ft
Top Primary Filter Pack (20/40 Sand): 446.13 ft
Top of Screen (10" Slot): 443.13 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993368.45
E: 729728.06

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.12 btec

Base Elev: 432.80 ft

8.25 Inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING

1505 East High Street
Jefferson City, Missouri 65101

Date Piezometer Completed: 10/20/09

Date Drawn: 1/2010
Scale: N.T.S.

Approved By: MCC
Top Casing Elev: 469.67 ft
Ground Surface Elev: 467.06 ft
Maximum Groundwater Elevation: 463.40 ft
Minimum Groundwater Elevation: 459.26 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 250 lb.

Remarks:
Natural Sand Collapse Comprises @ 45% of Calculated Sand Volume.

Top Secondary Filter Pack
447.65 ft
(20/40 Sand): 446.15 ft
Top of Screen (T.O - Stai): 443.15 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993349.44
E: 730302.43

Bottom Hole Depth: 34.8 bgs
Base Sump: 36.65 btec
Base Elev: 432.82 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

AMEREN MISSOURI

LABADIE POWER PLANT

Date Piezometer Completed: 10/21/09

DATE SCALE DRAWN BY: APPROVED BY:
1/2010 N.T.S. BED MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 75 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
Natural Sand Collapse Comprises 80% of Calculated Sand Volume.

Top Casing Elev: 467.21 ft
Ground Surface Elev: 464.38 ft
Maximum Groundwater Elevation: 463.21 ft
Minimum Groundwater Elevation: 459.23 ft

Top Secondary Filter Pack: 446.69 ft
Top Primary Filter Pack (20/40 Sand): 444.19 ft
Top of Screen (T0 - Slot): 440.99 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993336.45
E: 730887.27

Bottom Hole Depth: 34.1 bgs
Base Sump: 36.55 ft
Base Elev: 430.66 ft

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PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT
GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101
AIR
WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079
Date Piezometer Completed: 10/21/09
DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand - 200 lb.

Remarks:
Natural Sand Collapse Comprises @ 60% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Casing Elev: 467.27 ft
Ground Surface Elev: 464.29 ft
Maximum Groundwater Elevation: 464.42 ft
Minimum Groundwater Elevation: 458.52 ft

Top Secondary Filter Pack
(20/40 Sand): 446.33 ft
Top Primary Filter Pack
(20/40 Sand): 446.43 ft
Top of Screen (10 - Slot): 441.73 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993140.49
E: 727003.68

Bottom Hole Depth: 34.7 bgs
Base Sump: 35.87 bloc
Base Elev: 431.40 ft

8.25 Inches
Top Casing Elev: 467.78 ft

Ground Surface Elev: 465.00 ft

Maximum Groundwater Elevation: 464.13 ft
Minimum Groundwater Elevation: 458.70 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 426 lb.
2. Secondary Filter Sand — 75 lb.

Remarks:
Natural Sand Collapse Comprises @ 30 % of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Coordinates
N: 993126.75
E: 726958.40

Top Secondary Filter Pack
445.47 ft
Top Primary Filter Pack
(10/20 Sand): 443.97 ft
Top of Screen (20 - Slot): 440.77 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.34 bloc
Base Elev: 430.44 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND

AMEREN MISSOURI

LABADIE POWER PLANT

AIR

WATER

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

1505 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079
Piezometer Construction Quantities:

1. Primary Filter Sand - 260 lb.

Remarks:
Natural Sand Collapse Comprises @ 40 % of Calculated Sand Volume.

Top Secondary Filter Pack
445.25 ft

Top Primary Filter Pack
(20/40 Sand): 443.65 ft

Top of Screen (10 - Slot): 440.65 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993103.58
E: 728837.82

Bottom Hole Depth: 35.0 bgs

Base Sump: 37.78 btoc
Base Elev: 430.32 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENIRONMENTAL ENGINEERING

LAND
AIR
WATER

Date Piezometer Completed: 10/29/09

.Date 1/2010 SCALE N.T.S. DRAWN BY: BED
APPROVED BY: MCC

Telephone: (573) 659-9078 Facsimile: (573) 659-9079
Top Casing Elev: 468.55 ft
Ground Surface Elev: 466.71 ft
Maximum Groundwater Elevation: 463.61 ft
Minimum Groundwater Elevation: 459.22 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 250 lb.

Remarks:
- Natural Sand Collapse Comprises @45% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 446.13 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.13 ft
Top of Screen (10 - Slot): 441.43 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993084.09
E: 729427.93

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.46 btoc
Base Elev: 431.10 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010
SCALE h.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 260 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
- Natural Sand Collapse Comprises 8.45% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Primary Filter Pack (20/40 Sand): 445.41 ft
Top of Screen (10 - Slot): 442.31 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates:
- N: 993066.85
- E: 730012.30

Bottom Hole Depth: 35.2 bgs
Base Sump: 37.37 bsc
Base Elev: 431.98 ft
Top Casing Elev: 468.92 ft
Ground Surface Elev: 465.92 ft
Maximum Groundwater Elevation: 468.19 ft
Minimum Groundwater Elevation: 459.34 ft

Piezometer Construction Quantities:

1. Primary Filter Sand 260 lb.
2. Secondary Filter Sand 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 45% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.
Some Sand Collapse During Installation of Secondary Filter Sand.

Top Secondary Filter Pack 447.55 ft
Top Primary Filter Pack (20/40 Sand): 445.15 ft
Top of Screen (10 - Slot): 442.55 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993051.48
E: 730620.74

Bottom Hole Depth: 35.3 bgs
Base Sump: 36.70 blac
Base Elev: 432.22 ft

8.25 inches

Piezometer Construction Diagram

GreDeLL Engineering Resources, Inc.
Environmental Engineering

Ameren Missouri
Labadie Power Plant

Date Piezometer Completed: 11/04/09

Top Casing Elev: 466.78 ft
Ground Surface Elev: 463.94 ft
Maximum Groundwater Elevation: 463.07 ft
Minimum Groundwater Elevation: 463.35 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 450 lb.

Remarks:
Natural Sand Collapse Comprises 25% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 442.47 ft
Top of Screen (10 – Slot): 439.57 ft
4” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 993026.22
E: 731203.72

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.54 blsc
Base Elev: 429.24 ft

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

P - 114

Date Piezometer Completed:
11/12/09

10.25 inches
Top Casing Elev: 467.55 ft
Ground Surface Elev: 464.82 ft
Maximum Groundwater Elevation: 464.32 ft
Minimum Groundwater Elevation: 458.69 ft

Piezometer Construction Quantities:

1. Primary Filter Sand = 225 lb.
2. Secondary Filter Sand = 40 lb.
3. Bentonite Slurry = 75 gal.

Remarks:
Natural Sand Collapse Comprises @50% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 445.30 ft
Top Primary Filter Pack (20/40 Sand): 443.60 ft
Top of Screen (10 - Slot): 440.40 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992841.30
E: 727788.60

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.48 btec
Base Elev: 430.07 ft

8.25 Inches
Top Casing Elev: 467.70 ft
Ground Surface Elev: 464.81 ft
Maximum Groundwater Elevation: 463.88 ft
Minimum Groundwater Elevation: 458.89 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 226 lb.

Remarks:
Natural Sand Collapse Comprises @ 50% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 443.27 ft
Top of Screen (10 - Slot): 440.07 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992825.03
E: 728377.28

Bottom Hole Depth: 35.2 bgs
Base Sump: 37.96 bgl

Base Elev: 429.74 ft

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
1505 East High Street
Jefferson City, Missouri 65101
AIR
WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

P - 118
AMEREN MISSOURI
LABADIE POWER PLANT

DATE
1/2010

SCALE
N.T.S.

DRAWN BY:
BED

APPROVED BY:
MCC
Top Casing Elev: 467.65 ft
Ground Surface Elev: 464.75 ft
Maximum Groundwater Elevation: 463.79 ft
Minimum Groundwater Elevation: 459.13 ft

Piezometer Construction Quantities:
1. Primary Filter Sand = 375 lb.
2. Secondary Filter Sand = 75 lb.

Remarks:
Natural Sand Collapse Comprises 40% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (10/20 Sand): 443.89 ft
Top of Screen (20 - Slot): 440.59 ft
4\" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992787.68
E: 729146.90

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.39 btoc

10.25 inches
Base Elev: 430.26 ft

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND

AMEREN MISSOURI

LABADIE POWER PLANT

AIR

1505 East High Street
Jefferson City, Missouri 65101

WATER

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC

P - 120
Top Casing Elev: 467.71 ft
Ground Surface Elev: 464.74 ft
Maximum Groundwater Elevation: 463.67 ft
Minimum Groundwater Elevation: 459.31 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 276 lb.

Remarks:
- Natural Sand Collapse Comprises 34% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.40 ft
Top of Screen (10 – Slot): 440.60 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992758.84
E: 729781.01

Bottom Hole Depth: 35.2 bgs
Base Sump: 37.44 btec
Base Elev: 430.27 ft

P - 122
PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
AIR
WATER

Date Piezometer Completed: 11/10/09

1505 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand — 250 lb.
2. Secondary Filter Sand — 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 45% of Calculated Sand Volume.

Top Casing Elev: 467.99 ft
Ground Surface Elev: 464.92 ft
Maximum Groundwater Elevation: 463.39 ft
Minimum Groundwater Elevation: 459.48 ft

Top Secondary Filter Pack: 445.49 ft
Top Primary Filter Pack (20/40 Sand): 443.59 ft
Top of Screen (10 - Slot): 440.59 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992775.57
E: 730303.49

Bottom Hole Depth: 36.3 bgs
Base Sump: 37.73 boc
Base Elev: 430.26 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

P - 124
Piezometer Construction Quantities:

1. Primary Filter Sand - 440 lb.

Remarks:
Natural Sand Collapse Comprises @ 30% of Calculated Sand Volume.

Top Casing Elev: 468.83 ft
Ground Surface Elev: 465.77 ft
Maximum Groundwater Elevation: 463.13 ft
Minimum Groundwater Elevation: 459.43 ft

Top Secondary Filter Pack 447.19 ft
Top Primary Filter Pack (20/40 Sand): 445.89 ft
Top of Screen (10 - Slot): 442.29 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Base Sump: 36.87 bgs
Base Elev: 431.96 ft

P - 126
PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND.
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (673) 669-9078
Facsimile: (673) 669-9079

WATER

Date Piezometer Completed: 11/11/09

AMEREN MISSOURI
LABADIE POWER PLANT

COORDINATES:
N: 992667.51
E: 730879.77

10.25 Inches
Piezometer Construction Quantities:

1. Primary Filter Sand – 400 lb.

Remarks:
Natural Sand Collapse Comprises @ 35% of Calculated Sand Volume.

Top Casing Elev: 468.60 ft
Ground Surface Elev: 465.74 ft
Maximum Groundwater Elevation: 464.40 ft
Minimum Groundwater Elevation: 458.69 ft

Top Secondary Filter Pack
Filter Pack

Top Primary Filter Pack
(10/20 Sand): 444.64 ft
Top of Screen (20 – Slot): 441.54 ft
4” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992561.87
E: 727386.52

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.39 btc

10.25 Base Elev: 431.21 ft

Inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI

LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND

1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE
1/2010

SCALE
N.T.S.

DRAWN BY:
BED

APPROVED BY:
MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 240 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
- Natural Sand Collapse Comprises @ 50% of Calculated Sand Volume.
- Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Coordinates
- N: 992537.68
- E: 728078.04

Bottom Hole Depth: 34.9 bgs

Top Sump: 37.35 bloc

Top Casing Elev: 468.13 ft

Ground Surface Elev: 465.15 ft

Maximum Groundwater Elevation: 464.09 ft

Minimum Groundwater Elevation: 458.87 ft

8.25 inches

Base Elev: 430.78 ft

Top Secondary Filter Pack: 446.21 ft

Top Primary Filter Pack (20/40 Sand): 444.71 ft

Top of Screen (1 0 - Slot): 441.11 ft

2" (Nominal) Schedule 40 PVC (10 ft Length)
Top Casing Elev: 468.47 ft
Ground Surface Elev: 465.36 ft
Maximum Groundwater Elevation: 463.81 ft
Minimum Groundwater Elevation: 459.12 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 260 lb.

Remarks:
Natural Sand Collapse Comprises @45% of Calculated Sand Volume.

Top Secondary: 445.79 ft
Filter Pack
Top Primary Filter Pack (20/40 Sand): 444.49 ft
Top of Screen (T0 - Slot): 441.09 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992536.17
E: 728817.00

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.71 btoe
Base Elev: 430.76 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING

DATE 1/2010 DRAWN BY: BED
SCALE N.T.S. APPROVED BY: MCC
Top Casing Elev: 466.82 ft
Ground Surface Elev: 464.10 ft
Maximum Groundwater Elevation: 463.69 ft
Minimum Groundwater Elevation: 459.31 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 150 lb.

Remarks:
Natural Sand Collapse Comprises @70% of Calculated Sand Volume.

Top Secondary: 446.83 ft
Filter Pack:
Top Primary Filter Pack (20/40 Sand): 444.13 ft
Top of Screen (10 - Slot): 439.53 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992491.31
E: 729438.21

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.62 bloc
Base Elev: 429.20 ft

8.25 inches
Piezometer Construction Quantities:

1. Primary Filter Sand - 426 lb.
2. Secondary Filter Sand - 75 lb.

Remarks:
Natural Sand Collapse Comprises @30% of Calculated Sand Volume.

Top Casing Elev: 466.73 ft
Ground Surface Elev: 463.71 ft
Maximum Groundwater Elevation: 463.48 ft
Minimum Groundwater Elevation: 459.46 ft

Top Secondary Filter Pack
443.83 ft

Top Primary Filter Pack
(20/40 Sand): 442.23 ft

Top of Screen (10 - Slot): 439.43 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992488.64
E: 730004.49

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.63 bloc

10.25 inches

Base Elev: 429.10 ft
Piezometer Construction Quantities:

1. Primary Filter Sand = 240 lb.
2. Secondary Filter Sand = 50 lb.
3. Bentonite Slurry = 38 gal.

Remarks:
- Natural Sand Collapse Comprises 50% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack: 446.04 ft
Top Primary Filter Pack (20/40 Sand): 444.84 ft
Top of Screen (10 - Slot): 441.74 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
- N: 992404.70
- E: 731394.93

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.16 btc
Base Elev: 431.41 ft

[Diagram with details on well construction and geotechnical data]
Piezometer Construction Quantities:

1. Primary Filter Sand — 300 lb.
2. Secondary Filter Sand — 50 lb.

Remarks:
- Natural Sand Collapse Comprises 8-30% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Casing Elev: 467.86 ft
Ground Surface Elev: 464.83 ft
Maximum Groundwater Elevation: 464.20 ft
Minimum Groundwater Elevation: 458.87 ft

Top Secondary Filter Pack: 445.13 ft

Top Primary Filter Pack (20/40 Sand): 443.13 ft

Top of Screen (10 - Slot): 440.43 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
- N: 992250.72
- E: 727764.69

Bottom Hole Depth: 35.1 bgs
Base Sump: 37.56 btoc

8.25 inches
Base Elev: 430.10 ft
Piezometer Construction Quantities:

1. Primary Filter Sand - 300 lb.
2. Secondary Filter Sand - 80 lb.
3. Bentonite Slurry - 64 gal.

Remarks:
Natural Sand Collapse Comprises 50% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (10/20 Sand): 443.25 ft
Top of Screen (20 Slot): 440.55 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992238.95
E: 728361.22

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.52 bloc
Base Elev: 430.22 ft

Piezometer Elevation:
Top Casing Elev: 467.74 ft
Ground Surface Elev: 464.56 ft
Maximum Groundwater Elevation: 463.94 ft
Minimum Groundwater Elevation: 459.09 ft
Top Casing Elev: 467.48 ft
Ground Surface Elev: 464.80 ft
Maximum Groundwater Elevation: 463.69 ft
Minimum Groundwater Elevation: 459.28 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 225 lb.

Remarks:
Natural Sand Collapse Comprises @ 60% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 445.93 ft
Top of Screen (10 - Slot): 440.53 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992266.54
E: 729102.62

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.28 btoc
Base Elev: 430.20 ft

Piezometer Construction Diagram

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
AMEREN MISSOURI
LABADIE POWER PLANT
1505 East High Street
Jefferson City, Missouri 65101

WATER

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

11/09/09
Telephone: (573) 659-9078
Facsimile: (573) 659-9079
**Piezometer Construction Quantities:**

1. Primary Filter Sand - 225 lb.

**Remarks:**
- Natural Sand Collapse Comprises 25% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

**Coordinates**
- N: 992252.64
- E: 729630.10

**Top Secondary Filter Pack**
- 443.88 ft

**Top Primary Filter Pack (20/40 Sand):**
- 442.65 ft

**Top of Screen (10 - Slot):**
- 439.75 ft
- 2" (Nominal) Schedule 40 PVC (10 ft Length)

**Base Sump:**
- 37.42 bgs

**Base Elev:**
- 429.42 ft

**Bottom Hole Depth:**
- 34.7 bgs

---

**PIEZOMETER CONSTRUCTION DIAGRAM**

**LAND**
- 1605 East High Street
- Jefferson City, Missouri 65101

**AIR**
- Telephone: (573) 659-9078
- Facsimile: (573) 659-9079

**WATER**

**DATE:** 1/2010
**SCALE:** N.T.S.
**DRAWN BY:** BED
**APPROVED BY:** MCC

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**AMEREN MISSOURI**

**LABADIE POWER PLANT**

**P - 148**
Top Casing Elev: 465.91 ft
Ground Surface Elev: 463.22 ft
Maximum Groundwater Elevation: 463.44 ft
Minimum Groundwater Elevation: 459.56 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 275 lb.

Remarks:
Natural Sand Collapse Comprises @ 40 % of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 441.42 ft
Top of Screen (10 - Slot): 438.62 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 992189.21
E: 730266.27

Bottom Hole Depth: 35.1 bgs
Base Sump: 37.62 blac
Base Elev: 428.29 ft

Date Piezometer Completed: 11/14/09

PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
1505 East High Street
Jefferson City, Missouri 65101

LAND AIR WATER

DATE: 1/2010 SCALE: N.T.S. DRAWN BY: BED APPROVED BY: MCC
Top Casing Elev: 466.27 ft
Ground Surface Elev: 463.44 ft
Maximum Groundwater Elevation: 463.97 ft
Minimum Groundwater Elevation: 459.07 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 250 lb.

Remarks:
Natural Sand Collapse Comprises 46% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack: 443.87 ft
Top Primary Filter Pack (20/40 Sand): 442.27 ft
Top of Screen (1/0 - Slot): 439.27 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991943.98
E: 728065.97

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.33 btc
Base Elev: 428.94 ft

8.25 inches
Piezometer Construction Quantities:

1. Primary Filter Sand - 250 lb.

Remarks:
- Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
- Top Secondary Filter Pack: 444.89 ft
- Top Primary Filter Pack (20/40 Sand): 443.69 ft
- Top of Screen (1½ - Slot): 440.69 ft
- 2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates:
- N: 991964.30
- E: 728791.30

Bottom Hole Depth: 34.8 bgs

8.25 Inches

Base Sump: 37.24 bloc

Base Elev: 430.36 ft
Top Casing Elev: 467.63 ft
Ground Surface Elev: 464.72 ft
Maximum Groundwater Elevation: 463.51 ft
Minimum Groundwater Elevation: 458.47 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 250 lb.
2. Secondary Filter Sand — 50 lb.

Remarks:
Natural Sand Collapse Comprises 45% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
(20/40 Sand): 443.52 ft
Top of Screen (10 - Slot): 440.32 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991945.43
E: 729368.05

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.64 bts
Base Elev: 429.99 ft

8.25 inches

PIEZOMETER
CONSTRUCTION
DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

AMEREN MISSOURI
LABADIE POWER PLANT

Date Piezometer Completed: 11/13/09

LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 466.42 ft
Ground Surface Elev: 463.70 ft
Maximum Groundwater Elevation: 463.11 ft
Minimum Groundwater Elevation: 459.60 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 275 lb.

Remarks:
Natural Sand Collapse Comprises @40% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 443.65 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 442.05 ft
Top of Screen (10 - Slot): 438.85 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991884.45
E: 729979.25

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.90 btoc
Base Elev: 428.52 ft

8.25 inches

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
AMEREN MISSOURI
LABADIE POWER PLANT

WATER

Date Piezometer Completed: 12/11/09

1505 East High Street
Jefferson City, Missouri 65101

Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC
Top Casing Elev: 485.98 ft
Ground Surface Elev: 463.28 ft
Maximum Groundwater Elevation: 463.07 ft
Minimum Groundwater Elevation: 459.26 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 425 lb.
2. Secondary Filter Sand - 75 lb.

Remarks:
Natural Sand Collapse Comprises 30% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 441.60 ft
Top of Screen (10 - Slot): 436.60 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991801.20
E: 730561.78

Bottom Hole Depth: 34.6 bgs
Base Sump: 37.71 bloc
Base Elev: 428.27 ft

10.25 inches
Top Casing Elev: 466.83 ft
Ground Surface Elev: 463.42 ft
Maximum Groundwater Elevation: 462.86 ft
Minimum Groundwater Elevation: 459.67 ft

Piezometer Construction Quantities:
1. Primary Filter Sand: 375 lb.
2. Secondary Filter Sand: 100 lb.

Remarks:
- Natural Sand Collapse Comprises @40% of Calculated Sand Volume.
- Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Primary Filter Pack (10/20 Sand): 442.10 ft
Top of Screen (20 - Slot): 438.90 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991871.12
E: 731189.33

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.26 blac
Base Elev: 428.57 ft
Top Casing Elev: 466.80 ft
Ground Surface Elev: 464.06 ft
Maximum Groundwater Elevation: 464.33 ft
Minimum Groundwater Elevation: 459.07 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 400 lb.

Remarks:
Natural Sand Collapse Comprises @ 35 % of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack - 444.63 ft
Top Primary Filter Pack (10/20 Sand): 443.13 ft
Top of Screen (20 - Slot): 439.83 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991660.67
E: 727734.64

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.30 btoc
Base Elev: 429.50 ft

10.25 Inches
Top Casing Elev: 466.66 ft
Ground Surface Elev: 463.60 ft
Maximum Groundwater Elevation: 463.82 ft
Minimum Groundwater Elevation: 469.33 ft

Piezometer Construction Quantities:
1. Primary Filter Sand — 140 lb.

Remarks:
Natural Sand Collapse Comprises @ 70% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack
(20/40 Sand): 442.69 ft
Top of Screen (10 - Slot): 439.79 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991646.82
E: 728350.01

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.10 btoc
Base Elev: 429.46 ft

8.25 Inches
Top Casing Elev: 467.42 ft
Ground Surface Elev: 464.75 ft
Maximum Groundwater Elevation: 463.62 ft
Minimum Groundwater Elevation: 459.50 ft

Piezometer Construction Quantities:
1. Primary Filter Sand - 400 lb.

Remarks:
Natural Sand Collapse Comprises @ 35% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 443.02 ft
Top of Screen (10 - Slot): 439.82 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991653.97
E: 729053.82

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.53 btoc
Base Elev: 429.49 ft

8.25 inches
Top Casing Elev: 466.87 ft
Ground Surface Elev: 463.97 ft
Maximum Groundwater Elevation: 463.38 ft
Minimum Groundwater Elevation: 459.57 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 275 lb.
2. Secondary Filter Sand — 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 40% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 442.60 ft
Top of Screen (10 – Slot): 439.80 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991629.80
E: 729636.72

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.70 bloc
Base Elev: 429.17 ft

8.25 inches
Piezometer Construction Quantities:

1. Primary Filter Sand - 300 lb.

Remarks:
Natural Sand Collapse Comprises @ 30% of Calculated Sand Volume.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 441.95 ft
Top of Screen (10 - Slot): 438.75 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991592.90
E: 730.278.01

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.91 blc
Base Elev: 428.42 ft
8.25 Inches
Top Casing Elev: 466.06 ft
Ground Surface Elev: 463.57 ft
Maximum Groundwater Elevation: 462.96 ft
Minimum Groundwater Elevation: 459.70 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 250 lb.

Remarks:
Natural Sand Collapse Comprises @ 90 % of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 443.00 ft
Top of Screen (10 - Slot): 436.00 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991556.51
E: 730873.59

Bottom Hole Depth: 35.0 bgs
Base Sump: 37.79 bgs
Base Elev: 428.27 ft

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

PIEZOMETER CONSTRUCTION DIAGRAM

1505 East High Street
Jefferson City, Missouri 65101

LAND
AIR
WATER

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

AMEREN MISSOURI
LABADIE POWER PLANT

Date Piezometer Completed: 12/15/09
Top Casing Elev: 466.87 ft
Ground Surface Elev: 464.07 ft
Maximum Groundwater Elevation: 464.10 ft
Minimum Groundwater Elevation: 459.40 ft

Piezometer Construction Quantities:

1. Primary Filter Sand = 176 lb.
2. Secondary Filter Sand = 80 lb.

Remarks:
Natural Sand Collapse Comprises 80% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary Filter Pack
Top Primary Filter Pack (20/40 Sand): 442.74 ft
Top of Screen (10 - Slot): 440.04 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991336.76
E: 728049.81

Bottom Hole Depth: 34.6 bgs
Base Sump: 37.16 bgs
8.25 inches
Base Elev: 429.71 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING

AMEREN MISSOURI
1605 East High Street
Jefferson City, Missouri 65101

LABADIE POWER PLANT

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 250 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 60 % of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 444.59 ft
Top Primary Filter Pack (20/40 Sand): 443.19 ft
Top of Screen (10 - Slot): 439.29 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991350.86
E: 728780.92

Bottom Hole Depth: 34.9 ft
Base Sump: 37.97 ft
Base Elev: 428.96 ft

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
LAND
AIR
WATER

AMEREN MISSOURI
LABADIE POWER PLANT

Date Piezometer Completed: 12/03/09
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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1605 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

AMEREN MISSOURI
LABADIE POWER PLANT

Top Casing Elev: 467.36 ft
Ground Surface Elev: 464.42 ft
Maximum Groundwater Elevation: 463.55 ft
Minimum Groundwater Elevation: 459.62 ft

Piezometer Construction Quantities:
1. Primary Filter Sand — 225 lb.
2. Secondary Filter Sand — 50 lb.

Remarks:
Natural Sand Collapse Comprises @ 50 %
of Calculated Sand Volume.
Lower than Calculated Grout Volume Used
Due to Hole Collapse and/or Shrinkage.

Top Secondary 444.58 ft
Filter Pack
Top Primary Filter Pack
(20/40 Sand): 443.08 ft
Top of Screen (10 — Slot): 440.18 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991334.49
E: 729380.23

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.50 ft
Base Elev: 429.85 ft

8.25 Inches
Top Casing Elev: 466.96 ft
Ground Surface Elev: 463.40 ft
Maximum Groundwater Elevation: 463.15 ft
Minimum Groundwater Elevation: 499.74 ft

Piezometer Construction Quantities:
1. Primary Filter Sand — 175 lb.

Remarks:
Natural Sand Collapse Comprises @60% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 443.67 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 441.87 ft
Top of Screen (10 - Slot): 438.67 ft
2” (Nominal) Schedule 40 PVC 10 ft Length

Coordinates
N: 991309.56
E: 729980.89

Bottom Hole Depth: 35.2 bgs
Base Sump: 37.72 btoc
Base Elev: 428.24 ft

PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
AIR
WATER

Date Piezometer Completed: 12/11/09

1506 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE SCALE DRAWN BY: APPROVED BY:
1/2010 N.T.S. BED MCC
Top Casing Elev: 466.26 ft
Ground Surface Elev: 463.75 ft
Maximum Groundwater Elevation: 463.08 ft
Minimum Groundwater Elevation: 459.72 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 275 lb.

Remarks:
Natural Sand Collapse Comprises @40 % of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 442.99 ft
Filter Pack

Top Primary Filter Pack (20/40 Sand): 441.79 ft
Top of Screen (10 - Slot): 438.79 ft
2” (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991289.70
E: 730646.03

Bottom Hole Depth: 35.1 bgs
Base Sump: 37.80 bts

Base Elev: 428.46 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

DATE 1/2010 SCALE N.T.S. DRAWN BY: BED APPROVED BY: MCC
Piezometer Construction Quantities:

1. Primary Filter Sand = 300 lb.
2. Secondary Filter Sand = 50 lb.

Remarks:
Natural Sand Collapse Comprises @.35% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Casing Elev: 465.67 ft
Ground Surface Elev: 462.88 ft
Maximum Groundwater Elevation: 462.82 ft
Minimum Groundwater Elevation: 459.76 ft

Top Secondary 443.68 ft
Filter Pack

Top Primary Filter Pack (20/40 Sand): 442.68 ft
Top of Screen (10 - Slot): 439.68 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991308.51
E: 731386.11

Bottom Hole Depth: 35.1 bgs
Base Sump: 36.42 bgs
Base Elev: 429.25 ft

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

WATER

LABADIE POWER PLANT

PIEZOMETER CONSTRUCTION DIAGRAM

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Date Piezometer Completed: 10/28/09

AMEREN MISSOURI
Top Casing Elev: 467.93 ft
Ground Surface Elev: 464.91 ft

Maximum Groundwater Elevation: 463.86 ft
Minimum Groundwater Elevation: 459.56 ft

Piezometer Construction Quantities:

1. Primary Filter Sand = 100 lb.

Remarks:
Natural Sand Collapse Compries @ 80% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Primary Filter Pack
(20/40 Sand): 444.65 ft
Top of Screen (10 - Slot): 441.16 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991099.00
E: 728325.94

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.11 btorc
Base Elev: 430.82 ft

8.25 Inches
Piezometer Construction Quantities:

1. Primary Filter Sand = 225 lb.
2. Secondary Filter Sand = 60 lb.

Remarks:
Natural Sand Collapse Comprises @50% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Casing Elev: 467.10 ft
Ground Surface Elev: 464.41 ft
Maximum Groundwater Elevation: 463.64 ft
Minimum Groundwater Elevation: 459.61 ft

Top Secondary 444.65 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 442.95 ft
Top of Screen (10 – Slot): 439.75 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

8.25 Inches

Bottom Hole Depth: 34.8 bgs
Base Sump: 37.68 bts
Base Elev: 429.42 ft

Coordinates
N: 991032.57
E: 729099.94

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
AMEREN MISSOURI
1506 East High Street
Jefferson City, Missouri 65101

AIR
LABADIE POWER PLANT

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC
Top Casing Elev: 467.00 ft
Ground Surface Elev: 464.11 ft
Maximum Groundwater Elevation: 463.36 ft
Minimum Groundwater Elevation: 459.76 ft

Piezometer Construction Quantities:

1. Primary Filter Sand — 490 lb.
2. Secondary Filter Sand — 100 lb.
3. Bentonite Slurry — 64 gal.

Remarks:
Natural Sand Collapse Comprises @ 20% of Calculated Sand Volume.

Top Secondary Filter Pack

Top Primary Filter Pack (10/20 Sand): 443.34 ft
Top of Screen (20 - Slot): 440.14 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991026.43
E: 729688.59

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.19 btec

10.25 inches
Base Elev: 429.81 ft

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PIEZOMETER CONSTRUCTION DIAGRAM
AMEREN MISSOURI
LABADIE POWER PLANT

GREDELL Engineering Resources, Inc.
ENVIROMENTAL ENGINEERING
LAND
AIR
WATER

1505 East High Street
Jefferson City, Missouri 65101
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE 1/2010
SCALE N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

Date Piezometer Completed:
12/04/09

SIGNATURE
Top Casing Elev: 466.07 ft

Ground Surface Elev: 463.44 ft

Maximum Groundwater Elevation: 463.17 ft
Minimum Groundwater Elevation: 459.78 ft

Piezometer Construction Quantities:

1. Primary Filter Sand - 350 lb.

Remarks:
Natural Sand Collapse Comprises 10% of Calculated Sand Volume.

Top Secondary Filter Pack 442.66 ft
Top Primary Filter Pack (20/40 Sand): 441.36 ft
Top of Screen (10 - Slot): 438.26 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 991088.81
E: 730256.04

Bottom Hole Depth: 35.1 bgs

Base Sump: 38.14 blsc
Base Elev: 427.93 ft

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PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

LABADIE POWER PLANT

Date Piezometer Completed:
12/11/09

LABADIE POWER PLANT
Top Casing Elev: 466.40 ft
Ground Surface Elev: 463.54 ft
Maximum Groundwater Elevation: 462.98 ft
Minimum Groundwater Elevation: 459.81 ft

Piezometer Construction Quantities:

1. Primary Filter Sand: 375 lb.
2. Secondary Filter Sand: 100 lb.

Remarks:
Natural Sand Collapse Comprises @40% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Primary Filter Pack
(10/20 Sand): 442.51 ft
Top of Screen (20 - Slot): 439.31 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 990891.95
E: 730887.14

Bottom Hole Depth: 34.7 bgs
Base Sump: 37.12 bloc

Base Elev: 428.9 ft

PIEZOMETER CONSTRUCTION DIAGRAM

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING

LAND
1505 East High Street
Jefferson City, Missouri 65101

AIR

WATER
Telephone: (573) 659-9078
Facsimile: (573) 659-9079

DATE: 1/2010
SCALE: N.T.S.
DRAWN BY: BED
APPROVED BY: MCC

AMEREN MISSOURI
LABADIE POWER PLANT

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Piezometer Construction Quantities:

1. Primary Filter Sand - 480 lb.

Remarks:
Natural Sand Collapse Comprises @25% of Calculated Sand Volume.
Higher than Calculated Grout Volume Used Attributable to Apparent Washouts in Borehole.

Top Casing Elev: 468.13 ft
Ground Surface Elev: 465.28 ft
Maximum Groundwater Elevation: 463.79 ft
Minimum Groundwater Elevation: 459.72 ft

Top Secondary 445.54 ft
Top Primary Filter Pack (20/40 Sand): 443.74 ft
Top of Screen (10 - Slot): 440.74 ft
4" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 990738.72
E: 728782.05

Bottom Hole Depth: 34.9 bgs
Base Sump: 37.32 bloc
Base Elev: 430.41 ft

10.25 inches

GREDELL Engineering Resources, Inc.
ENVIRONMENTAL ENGINEERING
Piezometer Construction Quantities:

1. Primary Filter Sand - 226 lb.
2. Secondary Filter Sand - 75 lb.

Remarks:
Natural Sand Collapse Comprises @50% of Calculated Sand Volume.
Lower than Calculated Grout Volume Used Due to Hole Collapse and/or Shrinkage.

Top Secondary 444.97 ft Filter Pack
Top Primary Filter Pack (20/40 Sand): 443.67 ft
Top of Screen (1.0 - Slot): 440.27 ft
2" (Nominal) Schedule 40 PVC (10 ft Length)

Coordinates
N: 990667.70
E: 729279.14

Bottom Hole Depth: 35.0 bgs

8.25 inches

Base Sump: 37.77 bltc
Base Elev: 429.94 ft
TOP OF RISER _EL 473.92_
WEEP HOLE
GROUND SURFACE _EL 470.70_

RISER: 2"Ø, PVC SCH. 40
SCREEN: 2"Ø, PVC SCH. 40
BACKFILL: BENTONITE CHIPS
PRIMARY FILTER: CME SILICA FILTER
   SAND (150 LBS)
SECONDARY FILTER: NONE
COORDINATES: N 996214.10
   E 727590.30
DATE DRILLED: 3/14/2007
DEPTH OF WATER WHEN DRILLED: 19 FT

HINGED CAP WITH LOCK
4" x 4" STEEL CASING
CONCRETE PAD
DEPTH OF CASING 2'-0"
0.7 FT DIAMETER OF BORE HOLE
2" DIA. OF RISER & SCREEN
BACKFILL
EL 453.70 TOP OF PRIMARY FILTER
EL 451.70 TOP OF SCREEN
EL 441.70 BOTTOM OF WELL
EL 440.70 BOTTOM OF HOLE

NOTE: DIAGRAM NOT TO SCALE
TOP OF RISER: EL 469.59
WEEP HOLE
GROUND SURFACE: EL 466.40

RISER: 2"Ø, PVC SCH. 40
SCREEN: 2"Ø, PVC SCH. 40
BACKFILL: BENTONITE CHIPS
PRIMARY FILTER: CME SILICA FILTER SAND (150 LBS)
SECONDARY FILTER: NONE
COORDINATES: N 99370.60 E 72605.50
DATE DRILLED: 3/12/2007
DEPTH OF WATER WHEN DRILLED: 14 FT

4" x 4" STEEL CASING
CONCRETE PAD
DEPTH OF CASING 2'-0"

0.7 FT DIAMETER OF BORE HOLE
2" DIA. OF RISER & SCREEN
BACKFILL

EL 450.00 TOP OF PRIMARY FILTER
EL 448.00 TOP OF SCREEN
EL 438.00 BOTTOM OF WELL
EL 436.40 BOTTOM OF HOLE

NOTE: DIAGRAM NOT TO SCALE
TOP OF RISER  EL 469.85
WEEP HOLE
GROUND SURFACE  EL 466.10

RISER: 2"Ø, PVC SCH. 40
SCREEN: 2"Ø, PVC SCH. 40
BACKFILL: BENTONITE CHIPS
PRIMARY FILTER: CME SILICA FILTER SAND (150 LBS)
SECONDARY FILTER: NONE
COORDINATES: N 990178.70
E 728523.00
DATE DRILLED: 3/12/2007
DEPTH OF WATER WHEN DRILLED: 13.5 FT

HINGED CAP WITH LOCK
4" x 4" STEEL CASING
CONCRETE PAD
DEPTH OF CASING 2'-0"
0.4 FT DIAMETER OF BORE HOLE
2" DIA. OF RISER & SCREEN
BACKFILL
EL 449.60 TOP OF PRIMARY FILTER
EL 447.60 TOP OF SCREEN
EL 437.60 BOTTOM OF WELL
EL 436.10 BOTTOM OF HOLE

NOTE: DIAGRAM NOT TO SCALE