# Paducah-OREIS Data Report

## QC

## SWOU05-A1NSDDC Surface Water OU - NSDD Activity 1 Contingency

### NSDDAC-903FB

Collected: 9/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDAC-923FB

Collected: 9/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDAC-943FB

Collected: 9/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-A1OUTFAL — Surface Water OU - Outfalls Activity 1 Contingency

### OF15AC-901FB

Collected: 9/13/2005 | Matrix: WATER | Media Type: WQ | Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF15AC-920FB

Collected: 9/13/2005 | Matrix: WATER | Media Type: WQ | Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01AC-901FB

Collected: 9/28/2005 | Matrix: WATER | Media Type: WQ | Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-A1OUTFAL — Surface Water OU - Outfalls Activity 1 Contingency

### OF10AC-901FB

Collected: 9/28/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-EQUIP — Surface Water Operable Unit - Equipment Testing

### RI-EQUIP-DI

Collected: 6/13/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1221 | U | 0.13 | ug | | | 0.13 | SW846-8082 |
| PCB-1232 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1242 | U | 0.06 | ug | | | 0.06 | SW846-8082 |
| PCB-1248 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1254 | U | 0.09 | ug | | | 0.09 | SW846-8082 |
| PCB-1260 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.13 | ug | | | 0.13 | SW846-8082 |

### RI-EQUIP-HEX

Collected: 6/13/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1221 | U | 0.13 | ug | | | 0.13 | SW846-8082 |
| PCB-1232 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1242 | U | 0.06 | ug | | | 0.06 | SW846-8082 |
| PCB-1248 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1254 | U | 0.09 | ug | | | 0.9 | SW846-8082 |
| PCB-1260 | U | 0.1 | ug | | | 0.1 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.13 | ug | | | 0.13 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A101 Surface Water OU - Outfall 001 Activity 1 EU1

### OF01A-001FB

Collected: 9/6/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A102 Surface Water OU - Outfall 001 Activity 1 EU2

### OF01A-031FB

Collected: 9/6/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A103 Surface Water OU - Outfall 001 Activity 1 EU3

### OF01A-061FB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | | 0.06 | ug/L | | | 0.06 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-077FB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A104 Surface Water OU - Outfall 001 Activity 1 EU4

### OF01A-094FB

Collected: 9/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | | 0.07 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-112FB

Collected: 9/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.15 | ug/L | | | 0.15 | SW846-8082 |
| PCB-1242 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1248 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A105 Surface Water OU - Outfall 001 Activity 1 EU5

### OF01A-124FB

Collected: 9/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A106 Surface Water OU - Outfall 001 Activity 1 EU6

### OF01A-169FB

Collected: 9/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-150FB

Collected: 9/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UXY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UXY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UXY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A107 Surface Water OU - Outfall 001 Activity 1 EU07

### OF01A-188FB

Collected: 7/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-207FB

Collected: 7/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A108 Surface Water OU - Outfall 001 Activity 1 EU08

### OF01A-215FB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-235FB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A109 Surface Water OU - Outfall 001 Activity 1 EU09

### OF01A-242FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A110 Surface Water OU - Outfall 001 Activity 1 EU10

### OF01A-255FB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-275FB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-295FB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A111 Surface Water OU - Outfall 001 Activity 1 EU11

### OF01A-301FB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A112 Surface Water OU - Outfall 001 Activity 1 EU12

### OF01A-338FB

Collected: 9/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-368FB

Collected: 9/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-334FB

Collected: 9/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UXY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UXY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UXY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A113 Surface Water OU - Outfall 001 Activity 1 EU13

### OF01A-398FB

Collected: 9/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-377FB

Collected: 9/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A114 Surface Water OU - Outfall 001 Activity 1 EU14

### OF01A-416FB

Collected: 8/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-440FB

Collected: 8/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.15 | ug/L | | | 0.15 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |

## QC

## SWOU05-K001A115 Surface Water OU - Outfall 001 Activity 1 EU15

### OF01A-477FB

Collected: 7/12/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-457FB

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A116 Surface Water OU - Outfall 001 Activity 1 EU16

### OF01A-484FB

Collected: 7/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-503FB

Collected: 7/11/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A117 Surface Water OU - Outfall 001 Activity 1 EU17

### OF01A-523RI

Collected: 6/21/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-523FB

Collected: 6/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A118 Surface Water OU - Outfall 001 Activity 1 EU18

### OF01A-548RI

Collected: 6/21/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-548FB

Collected: 6/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A119 Surface Water OU - Outfall 001 Activity 1 EU19

### OF01A-595FB

Collected: 7/12/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-575FB

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K001A120 Surface Water OU - Outfall 001 Activity 1 EU20

### OF01A-604FB

Collected: 7/25/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF01A-619FB

Collected: 7/25/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A121 Surface Water OU - Outfall 001 Activity 1 EU21

### OF01A-650FB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-675FB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.15 | ug/L | | | 0.15 | SW846-8082 |
| PCB-1242 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1248 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.19 | ug/L | | | 0.19 | SW846-8082 |

## QC

## SWOU05-K001A122 Surface Water OU - Outfall 001 Activity 1 EU22

### OF01A-683FB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-695FB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K001A123 Surface Water OU - Outfall 001 Activity 1 EU23

### OF01A-710FB

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF01A-730FB

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A2010 Surface Water OU - Outfall 001 Activity 2 EU1 AND

### OF01B-01-01TB

Collected: 9/6/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2010 Surface Water OU - Outfall 001 Activity 2 EU1 AND

## OF01B-01-01RI

Collected: 9/6/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | BUX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00661 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Alpha activity | U | 25.9 | pCi/L | 18.3 | 18.4 | 62.3 | RL-7111 |
| Americium-241 | U | -0.0058 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Beta activity | U | 6.75 | pCi/L | 1.79 | 1.82 | 87.3 | RL-7111 |
| Cesium-137 | U | -9.52 | pCi/L | 19 | 19 | 23.6 | RL-7124 |
| Cobalt-60 | U | -1.75 | pCi/L | 3.51 | 10.7 | 20.3 | RL-7124 |
| Neptunium-237 | U | 0.0167 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0158 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00209 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Technetium-99 | U | 12.5 | pCi/L | 13.9 | 13.9 | 19.1 | RL-7116 |
| Thorium-228 | U | 0.0383 | pCi/L | 0.04 | 0.36 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.143 | pCi/L | 0.07 | 0.25 | 0.58 | RL-7128 |
| Thorium-232 | U | -0.0065 | pCi/L | 0.01 | 0.04 | 0.11 | RL-7128 |

## QC

## SWOU05-K001A2010 Surface Water OU - Outfall 001 Activity 2 EU1 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0343 | ug/L | 0.1 | 0.4 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.0259 | pCi/L | 0.06 | 0.08 | 0.17 | RL-7128 |
| Uranium-238 | U | 0.0105 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2010 Surface Water OU - Outfall 001 Activity 2 EU1 AND

### OF01B-01-01FB

Collected: 9/6/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | BUX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0015 | pCi/L | 0 | 0.02 | 0.09 | RL-7128 |
| Alpha activity | U | -19.6 | pCi/L | 0 | 1.15 | 62.3 | RL-7111 |
| Americium-241 | U | -0.0205 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Beta activity | U | 25.6 | pCi/L | 6.34 | 6.47 | 87.1 | RL-7111 |
| Cesium-137 | U | 3.01 | pCi/L | 6.02 | 13.8 | 25.3 | RL-7124 |
| Cobalt-60 | U | -0.865 | pCi/L | 1.73 | 10.3 | 20.1 | RL-7124 |
| Neptunium-237 | U | 0.0043 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-238 | U | 0.00909 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00252 | pCi/L | 0.01 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 17.6 | pCi/L | 14.1 | 14.1 | 19.1 | RL-7116 |
| Thorium-228 | U | 0.00788 | pCi/L | 0.04 | 0.36 | 0.85 | RL-7128 |
| Thorium-230 | U | 0.0494 | pCi/L | 0.05 | 0.24 | 0.58 | RL-7128 |
| Thorium-232 | U | 0.0155 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |

## QC

## SWOU05-K001A2010 Surface Water OU - Outfall 001 Activity 2 EU1 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0128 | ug/L | 0.04 | 0.39 | 0.87 | RL-7128 |
| Uranium-234 | U | -0.0402 | pCi/L | 0.03 | 0.07 | 0.17 | RL-7128 |
| Uranium-238 | U | 0.00454 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Acenaphthylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benz(a)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(a)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(ghi)perylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Chrysene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluorene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Naphthalene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Phenanthrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A2030 Surface Water OU - Outfall 001 Activity 2 EU3 AND

### OF01B-03-01TB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2030 Surface Water OU - Outfall 001 Activity 2 EU3 AND

### OF01B-03-01RI

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0148 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | -2.11 | pCi/L | 2.44 | 2.44 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0898 | pCi/L | 0.05 | 0.07 | 0.14 | RL-7128 |
| Beta activity | U | 11.4 | pCi/L | 2.97 | 3.02 | 86.8 | RL-7111 |
| Cesium-137 | U | -0.63 | pCi/L | 1.26 | 10.8 | 21.3 | RL-7124 |
| Cobalt-60 | U | 0.237 | pCi/L | 0.47 | 14.8 | 29.8 | RL-7124 |
| Neptunium-237 | U | 0.0286 | pCi/L | 0.04 | 0.07 | 0.21 | RL-7128 |
| Plutonium-238 | U | 0.0221 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0317 | pCi/L | 0.03 | 0.04 | 0.09 | RL-7128 |
| Technetium-99 | U | 4.34 | pCi/L | 9.56 | 9.56 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.122 | pCi/L | 0.08 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | 0.145 | pCi/L | 0.1 | 0.58 | 1.36 | RL-7128 |
| Thorium-232 | U | -0.0134 | pCi/L | 0.01 | 0.09 | 0.24 | RL-7128 |

## QC

## SWOU05-K001A2030 Surface Water OU - Outfall 001 Activity 2 EU3 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.114 | ug/L | 0.31 | 14.5 | 0.9 | RL-7128 |
| Uranium-234 | U | 0.00126 | pCi/L | 0.03 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0407 | pCi/L | 0.04 | 0.12 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2030 Surface Water OU - Outfall 001 Activity 2 EU3 AND

### OF01B-03-01FB

Collected: 7/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0088 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | -17.9 | pCi/L | 0 | 1.05 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0385 | pCi/L | 0.04 | 0.06 | 0.14 | RL-7128 |
| Beta activity | U | 2.02 | pCi/L | 0.54 | 0.55 | 86.7 | RL-7111 |
| Cesium-137 | U | -0.483 | pCi/L | 0.96 | 4.91 | 8.59 | RL-7124 |
| Cobalt-60 | U | -0.412 | pCi/L | 0.82 | 4.9 | 8.62 | RL-7124 |
| Neptunium-237 | U | 0.0016 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0239 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0148 | pCi/L | 0.02 | 0.03 | 0.06 | RL-7128 |
| Potassium-40 | X | 204 | pCi/L | 97.4 | 99.8 | 94.9 | RL-7124 |
| Technetium-99 | U | -0.794 | pCi/L | 9.81 | 9.81 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.208 | pCi/L | 0.09 | 0.43 | 0.99 | RL-7128 |
| Thorium-230 | U | -0.033 | pCi/L | 0.05 | 0.57 | 1.35 | RL-7128 |

## QC

## SWOU05-K001A2030 Surface Water OU - Outfall 001 Activity 2 EU3 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Thorium-232 | U | -0.01 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |
| Uranium | U | 0.071 | ug/L | 0.15 | 0.47 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.199 | pCi/L | 0.07 | 0.17 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0252 | pCi/L | 0.04 | 0.12 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2070 Surface Water OU - Outfall 001 Activity 2 EU7 AND

### OF01B-07-01RI

Collected: 7/7/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.02 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | -16.4 | pCi/L | 0 | 0.96 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0307 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | -19.2 | pCi/L | 5.65 | 5.73 | 87.2 | RL-7111 |
| Cesium-137 | U | -14.6 | pCi/L | 29.3 | 29.3 | 18.9 | RL-7124 |
| Cobalt-60 | U | 12.6 | pCi/L | 25.2 | 25.2 | 26 | RL-7124 |
| Neptunium-237 | U | 0.033 | pCi/L | 0.03 | 0.06 | 0.19 | RL-7128 |
| Plutonium-238 | U | -0.0249 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0314 | pCi/L | 0.03 | 0.04 | 0.07 | RL-7128 |
| Technetium-99 | U | -1.48 | pCi/L | 9.53 | 9.53 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0358 | pCi/L | 0.06 | 0.28 | 0.67 | RL-7128 |
| Thorium-230 | U | 0.605 | pCi/L | 0.18 | 0.61 | 1.36 | RL-7128 |
| Thorium-232 | U | 0.0526 | pCi/L | 0.05 | 0.1 | 0.24 | RL-7128 |

## QC

## SWOU05-K001A2070 Surface Water OU - Outfall 001 Activity 2 EU7 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0739 | ug/L | 0.19 | 0.88 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.0156 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0217 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JUX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JUX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2070 Surface Water OU - Outfall 001 Activity 2 EU7 AND

### OF01B-07-01FB

Collected: 7/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0112 | pCi/L | 0.03 | 0.04 | 0.09 | RL-7128 |
| Alpha activity | U | -1.95 | pCi/L | 2.25 | 2.25 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0234 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 6.72 | pCi/L | 1.78 | 1.81 | 86.9 | RL-7111 |
| Cesium-137 | U | -5.85 | pCi/L | 11.7 | 15.8 | 22.6 | RL-7124 |
| Cobalt-60 | U | -0.415 | pCi/L | 0.83 | 12.1 | 23.8 | RL-7124 |
| Neptunium-237 | U | -0.0117 | pCi/L | 0.02 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.00015 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0107 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.54 | pCi/L | 9.51 | 9.51 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0527 | pCi/L | 0.05 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.0794 | pCi/L | 0.07 | 0.57 | 1.36 | RL-7128 |
| Thorium-232 | U | -0.0282 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

***QUALIFIER Codes** See attached List.

## QC

## SWOU05-K001A2070 Surface Water OU - Outfall 001 Activity 2 EU7 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0804 | ug/L | 0.22 | 0.52 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0478 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0288 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A2091 Surface Water OU - Outfall 001 Activity 2 EU09 AND

### OF01B-09-01TB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2091 Surface Water OU - Outfall 001 Activity 2 EU09 AND

### OF01B-09-01RI

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0090 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | -1.5 | pCi/L | 1.74 | 1.74 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0853 | pCi/L | 0.06 | 0.08 | 0.14 | RL-7128 |
| Beta activity | U | -2.67 | pCi/L | 0.73 | 0.74 | 86.7 | RL-7111 |
| Cesium-137 | U | -3.68 | pCi/L | 7.36 | 13.3 | 24.5 | RL-7124 |
| Cobalt-60 | U | -1.04 | pCi/L | 2.09 | 15.6 | 30.6 | RL-7124 |
| Neptunium-237 | U | 0.00218 | pCi/L | 0.03 | 0.07 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.0013 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0115 | pCi/L | 0.03 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 5.5 | pCi/L | 9.58 | 9.58 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0818 | pCi/L | 0.07 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | 0.275 | pCi/L | 0.1 | 0.58 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0038 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K001A2091 Surface Water OU - Outfall 001 Activity 2 EU09 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0425 | ug/L | 0.11 | 0.64 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0136 | pCi/L | 0.03 | 0.15 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0129 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2091 Surface Water OU - Outfall 001 Activity 2 EU09 AND

### OF01B-09-01FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0406 | pCi/L | 0.02 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | 10.7 | pCi/L | 9.58 | 9.6 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0743 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | -35.6 | pCi/L | 11.4 | 11.5 | 86.9 | RL-7111 |
| Cesium-137 | U | 5.24 | pCi/L | 10.5 | 13.2 | 27.1 | RL-7124 |
| Cobalt-60 | U | -4.13 | pCi/L | 8.26 | 13.4 | 24.9 | RL-7124 |
| Neptunium-237 | U | 0.0283 | pCi/L | 0.03 | 0.06 | 0.19 | RL-7128 |
| Plutonium-238 | U | 0.12 | pCi/L | 0.06 | 0.08 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0612 | pCi/L | 0.04 | 0.05 | 0.07 | RL-7128 |
| Technetium-99 | U | 0.847 | pCi/L | 9.75 | 9.75 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.115 | pCi/L | 0.08 | 0.42 | 0.98 | RL-7128 |
| Thorium-230 | U | -0.0315 | pCi/L | 0.04 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0172 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K001A2091 Surface Water OU - Outfall 001 Activity 2 EU09 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0298 | ug/L | 0.05 | 1.01 | 0.89 | RL-7128 |
| Uranium-234 | U | 0.0127 | pCi/L | 0.05 | 0.16 | 0.39 | RL-7128 |
| Uranium-238 | U | -0.0037 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A2111 Surface Water OU - Outfall 001 Activity 2 EU11 AND

### OF01B-11-01TB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

**SWOU05-K001A2131** **Surface Water OU - Outfall 001 Activity 2 EU13 AND**

**OF01B-14-01TB**

Collected: 8/29/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2131 Surface Water OU - Outfall 001 Activity 2 EU13 AND

### OF01B-14-01RI

Collected: 8/29/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0205 | pCi/L | 0.02 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 7.57 | pCi/L | 6.77 | 6.79 | 62.2 | RL-7111 |
| Americium-241 | U | 0.0219 | pCi/L | 0.05 | 0.08 | 0.18 | RL-7128 |
| Beta activity | U | 39.6 | pCi/L | 9.39 | 9.6 | 86.8 | RL-7111 |
| Cesium-137 | U | -6.78 | pCi/L | 13.6 | 13.6 | 19.7 | RL-7124 |
| Cobalt-60 | U | 5.95 | pCi/L | 11.9 | 12.8 | 26.1 | RL-7124 |
| Neptunium-237 | U | 0.0141 | pCi/L | 0.05 | 0.09 | 0.34 | RL-7128 |
| Plutonium-238 | U | 0.0118 | pCi/L | 0.02 | 0.07 | 0.17 | RL-7128 |
| Plutonium-239/240 | U | 0.0118 | pCi/L | 0.02 | 0.04 | 0.09 | RL-7128 |
| Technetium-99 | U | 17 | pCi/L | 14.1 | 14.1 | 19.1 | RL-7116 |
| Thorium-228 | U | 0.0754 | pCi/L | 0.06 | 0.45 | 1.07 | RL-7128 |
| Thorium-230 | U | 0.0438 | pCi/L | 0.07 | 0.31 | 0.74 | RL-7128 |
| Thorium-232 | U | 0.0228 | pCi/L | 0.03 | 0.05 | 0.15 | RL-7128 |

## QC

## SWOU05-K001A2131 Surface Water OU - Outfall 001 Activity 2 EU13 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0177 | ug/L | 0.03 | 1.25 | 1.08 | RL-7128 |
| Uranium-234 | U | 0.071 | pCi/L | 0.07 | 0.1 | 0.2 | RL-7128 |
| Uranium-238 | U | -0.0028 | pCi/L | 0 | 0.19 | 0.34 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Acenaphthylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benz(a)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(a)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Chrysene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluorene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Naphthalene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Phenanthrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2131 Surface Water OU - Outfall 001 Activity 2 EU13 AND

### OF01B-14-01FB

Collected: 8/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0108 | pCi/L | 0.01 | 0.02 | 0.09 | RL-7128 |
| Alpha activity | U | 3.02 | pCi/L | 3.02 | 3.03 | 62.3 | RL-7111 |
| Americium-241 | U | 0.129 | pCi/L | 0.07 | 0.1 | 0.18 | RL-7128 |
| Beta activity | U | 18.5 | pCi/L | 4.71 | 4.8 | 87.3 | RL-7111 |
| Cesium-137 | U | 8.95 | pCi/L | 17.9 | 21.3 | 41.6 | RL-7124 |
| Cobalt-60 | U | -15.9 | pCi/L | 31.8 | 31.8 | 26.3 | RL-7124 |
| Neptunium-237 | U | -0.0086 | pCi/L | 0.04 | 0.08 | 0.21 | RL-7128 |
| Plutonium-238 | U | 0.0687 | pCi/L | 0.04 | 0.08 | 0.17 | RL-7128 |
| Plutonium-239/240 | U | -0.0097 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Technetium-99 | U | 13.2 | pCi/L | 14 | 14 | 19.1 | RL-7116 |
| Thorium-228 | U | 0.0272 | pCi/L | 0.04 | 0.44 | 1.06 | RL-7128 |
| Thorium-230 | U | 0.214 | pCi/L | 0.1 | 0.32 | 0.72 | RL-7128 |
| Thorium-232 | U | 0.00034 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |

## QC

## SWOU05-K001A2131 Surface Water OU - Outfall 001 Activity 2 EU13 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.056 | ug/L | 0.16 | 0.49 | 1.08 | RL-7128 |
| Uranium-234 | U | 0.178 | pCi/L | 0.08 | 0.12 | 0.21 | RL-7128 |
| Uranium-238 | U | -0.0172 | pCi/L | 0.03 | 0.14 | 0.34 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JUX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

**SWOU05-K001A2151** **Surface Water OU - Outfall 001 Activity 2 EU15 AND**

**OF01B-15-04TB**

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2151 Surface Water OU - Outfall 001 Activity 2 EU15 AND

### OF01B-15-04RI

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0168 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | 2.78 | pCi/L | 2.78 | 2.79 | 60.3 | RL-7111 |
| Americium-241 | U | -0.0218 | pCi/L | 0.01 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 23.1 | pCi/L | 5.77 | 5.88 | 86.6 | RL-7111 |
| Cesium-137 | U | -1.24 | pCi/L | 2.48 | 12.6 | 24.2 | RL-7124 |
| Cobalt-60 | U | -7.12 | pCi/L | 14.2 | 14.2 | 21.5 | RL-7124 |
| Neptunium-237 | U | 0.00715 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | 0.00696 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0159 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.81 | pCi/L | 9.55 | 9.55 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.21 | pCi/L | 0.09 | 0.43 | 0.98 | RL-7128 |
| Thorium-230 | U | 0.0418 | pCi/L | 0.07 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | 0.00321 | pCi/L | 0.03 | 0.09 | 0.24 | RL-7128 |

## QC

## SWOU05-K001A2151 Surface Water OU - Outfall 001 Activity 2 EU15 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0379 | ug/L | 0.09 | 0.47 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.0431 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0101 | pCi/L | 0.04 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2151 Surface Water OU - Outfall 001 Activity 2 EU15 AND

### OF01B-15-04FB

Collected: 7/14/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00514 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 3.39 | pCi/L | 3.39 | 3.39 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0108 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 9.02 | pCi/L | 2.37 | 2.41 | 86.5 | RL-7111 |
| Cesium-137 | U | -0.642 | pCi/L | 1.29 | 2.4 | 4.06 | RL-7124 |
| Cobalt-60 | U | -0.461 | pCi/L | 0.92 | 2.55 | 4.26 | RL-7124 |
| Neptunium-237 | U | -0.0050 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00155 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0008 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | -5.5 | pCi/L | 9.38 | 9.38 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.227 | pCi/L | 0.09 | 0.43 | 0.98 | RL-7128 |
| Thorium-230 | U | 0.0986 | pCi/L | 0.08 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0302 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K001A2151 Surface Water OU - Outfall 001 Activity 2 EU15 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0898 | ug/L | 0.19 | 0.76 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.0464 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0294 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

### OF01B-18-01TB

Collected: 6/21/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

### OF01B-17-01TB

Collected: 6/22/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

### OF01B-18-01RI

Collected: 6/21/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.033 | pCi/L | 0.05 | 0.06 | 0.11 | RL-7128 |
| Alpha activity | U | -1.32 | pCi/L | 1.53 | 1.53 | 61.1 | RL-7111 |
| Americium-241 | U | 0.0566 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | -7.56 | pCi/L | 2.12 | 2.15 | 89.1 | RL-7111 |
| Cesium-137 | U | 16.2 | pCi/L | 32.4 | 32.4 | 28.2 | RL-7124 |
| Cobalt-60 | U | 14.2 | pCi/L | 28.4 | 28.4 | 32.4 | RL-7124 |
| Neptunium-237 | U | 0.0181 | pCi/L | 0.04 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0001 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | 0.0113 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 2.57 | pCi/L | 9.58 | 9.58 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0202 | pCi/L | 0.04 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.306 | pCi/L | 0.12 | 0.59 | 1.36 | RL-7128 |
| Thorium-232 | U | 0.026 | pCi/L | 0.03 | 0.1 | 0.25 | RL-7128 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.63 | ug/L | 0.9 | 1.3 | 0.9 | RL-7128 |
| Uranium-234 | | 1.59 | pCi/L | 0.23 | 0.41 | 0.39 | RL-7128 |
| Uranium-238 | U | 0.207 | pCi/L | 0.09 | 0.15 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

## OF01B-17-01RI

Collected: 6/22/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0379 | pCi/L | 0.03 | 0.04 | 0.11 | RL-7128 |
| Alpha activity | U | -7.72 | pCi/L | 10.9 | 10.9 | 61.2 | RL-7111 |
| Americium-241 | U | 0.0751 | pCi/L | 0.06 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 14.2 | pCi/L | 3.65 | 3.72 | 89.3 | RL-7111 |
| Cesium-137 | U | 7.39 | pCi/L | 14.8 | 17.7 | 28.7 | RL-7124 |
| Cobalt-60 | U | -1.68 | pCi/L | 3.36 | 13.8 | 26.2 | RL-7124 |
| Neptunium-237 | U | 0.0258 | pCi/L | 0.04 | 0.07 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.0129 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | 0.00563 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 0.643 | pCi/L | 9.29 | 9.29 | 13.2 | RL-7116 |
| Thorium-228 | U | -0.0403 | pCi/L | 0.07 | 0.28 | 0.69 | RL-7128 |
| Thorium-230 | U | -0.0189 | pCi/L | 0.12 | 0.58 | 1.39 | RL-7128 |
| Thorium-232 | U | -0.0016 | pCi/L | 0.07 | 0.12 | 0.28 | RL-7128 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0793 | ug/L | 0.15 | 0.91 | 0.89 | RL-7128 |
| Uranium-234 | U | 0.0163 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0208 | pCi/L | 0.01 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

### OF01B-18-01FB

Collected: 6/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0119 | pCi/L | 0.02 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | 20.2 | pCi/L | 15.3 | 15.3 | 61.1 | RL-7111 |
| Americium-241 | U | 0.0176 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | -0.333 | pCi/L | 0.09 | 0.09 | 88.7 | RL-7111 |
| Cesium-137 | U | -10.6 | pCi/L | 21.2 | 21.2 | 24.3 | RL-7124 |
| Cobalt-60 | U | 3.64 | pCi/L | 7.28 | 13.6 | 27.8 | RL-7124 |
| Neptunium-237 | U | 0.0177 | pCi/L | 0.03 | 0.07 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.035 | pCi/L | 0.01 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0159 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.48 | pCi/L | 9.62 | 9.62 | 13.2 | RL-7116 |
| Thorium-228 | U | -0.0027 | pCi/L | 0.05 | 0.28 | 0.67 | RL-7128 |
| Thorium-230 | U | 0.163 | pCi/L | 0.12 | 0.59 | 1.37 | RL-7128 |
| Thorium-232 | U | -0.0085 | pCi/L | 0.06 | 0.11 | 0.27 | RL-7128 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0874 | ug/L | 0.24 | 0.49 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.219 | pCi/L | 0.08 | 0.18 | 0.4 | RL-7128 |
| Uranium-238 | U | -0.0275 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

### OF01B-17-01FB

Collected: 6/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JUX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0209 | pCi/L | 0.02 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | 4.25 | pCi/L | 4.25 | 4.25 | 61.1 | RL-7111 |
| Americium-241 | U | 0.00748 | pCi/L | 0.04 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | -9.92 | pCi/L | 2.81 | 2.85 | 88.7 | RL-7111 |
| Cesium-137 | U | -8.71 | pCi/L | 17.4 | 17.4 | 22.8 | RL-7124 |
| Cobalt-60 | U | -4.44 | pCi/L | 8.89 | 11.9 | 22.1 | RL-7124 |
| Neptunium-237 | U | 0.0483 | pCi/L | 0.05 | 0.08 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0303 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | -0.0065 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 1.34 | pCi/L | 9.6 | 9.6 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0563 | pCi/L | 0.07 | 0.28 | 0.69 | RL-7128 |
| Thorium-230 | U | -0.0474 | pCi/L | 0.12 | 0.58 | 1.39 | RL-7128 |
| Thorium-232 | U | 0.0308 | pCi/L | 0.06 | 0.11 | 0.29 | RL-7128 |

## QC

## SWOU05-K001A2171 Surface Water OU - Outfall 001 Activity 2 EU17 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.13 | ug/L | 0.34 | 22.5 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.00095 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0405 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K001A2212 Surface Water OU - Outfall 001 Activity 2 EU21 AND

### OF01B-21-01TB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2212 Surface Water OU - Outfall 001 Activity 2 EU21 AND

### OF01B-21-01RI

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0088 | pCi/L | 0.02 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 15.5 | pCi/L | 12.7 | 12.7 | 60.3 | RL-7111 |
| Americium-241 | U | -0.0047 | pCi/L | 0.01 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | -21.4 | pCi/L | 6.39 | 6.48 | 86.8 | RL-7111 |
| Cesium-137 | U | -6 | pCi/L | 12 | 16.6 | 24.1 | RL-7124 |
| Cobalt-60 | U | 0.405 | pCi/L | 0.81 | 12.2 | 24.2 | RL-7124 |
| Neptunium-237 | U | 0.00046 | pCi/L | 0.01 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0151 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00504 | pCi/L | 0.01 | 0.02 | 0.08 | RL-7128 |
| Technetium-99 | U | 2.06 | pCi/L | 9.42 | 9.42 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.781 | pCi/L | 0.15 | 0.47 | 0.98 | RL-7128 |
| Thorium-230 | U | 0.124 | pCi/L | 0.08 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | 0.00875 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K001A2212 Surface Water OU - Outfall 001 Activity 2 EU21 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0749 | ug/L | 0.23 | 0.82 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.019 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0238 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K001A2212 Surface Water OU - Outfall 001 Activity 2 EU21 AND

### OF01B-21-01FB

Collected: 7/13/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00504 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | -8.01 | pCi/L | 11.3 | 11.3 | 60.3 | RL-7111 |
| Americium-241 | U | -0.0027 | pCi/L | 0.01 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 23.1 | pCi/L | 5.78 | 5.89 | 86.7 | RL-7111 |
| Cesium-137 | U | -8.69 | pCi/L | 17.4 | 17.4 | 21.8 | RL-7124 |
| Cobalt-60 | U | -5.41 | pCi/L | 10.8 | 13 | 23.5 | RL-7124 |
| Neptunium-237 | U | -0.005 | pCi/L | 0.01 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00085 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0093 | pCi/L | 0.02 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | 7.99 | pCi/L | 9.64 | 9.64 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.839 | pCi/L | 0.16 | 0.47 | 0.98 | RL-7128 |
| Thorium-230 | U | 0.19 | pCi/L | 0.08 | 0.58 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0029 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K001A2212 Surface Water OU - Outfall 001 Activity 2 EU21 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.177 | ug/L | 0.37 | 1.28 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0982 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0586 | pCi/L | 0.04 | 0.12 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A101 Surface Water OU - Outfall 002 Activity 1 EU01

### OF02A-001FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | JU | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | JU | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | JU | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | JU | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | JU | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | JU | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | JU | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | JU | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | JU | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF02A-016FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UX | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | UX | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF02A-032FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

**QC**

## SWOU05-K002A102 Surface Water OU - Outfall 002 Activity 1 EU02

### OF02A-051FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1221 | UX | 0.2 | ug/L | | | 0.2 | SW846-8082 |
| PCB-1232 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1242 | UX | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1248 | UX | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | UX | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| PCB-1260 | UX | 0.06 | ug/L | | | 0.06 | SW846-8082 |
| PCB-1268 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.2 | ug/L | | | 0.2 | SW846-8082 |

## QC

## SWOU05-K002A103 Surface Water OU - Outfall 002 Activity 1 EU03

### OF02A-084FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K002A104 Surface Water OU - Outfall 002 Activity 1 EU04

### OF02A-105FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF02A-121FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K002A105 Surface Water OU - Outfall 002 Activity 1 EU05

### OF02A-131FB

Collected: 7/20/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF02A-151FB

Collected: 7/20/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K002A106 Surface Water OU - Outfall 002 Activity 1 EU06

### OF02A-154FB

Collected: 7/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

**QC**

## SWOU05-K002A107 Surface Water OU - Outfall 002 Activity 1 EU07

### OF02A-175FB

Collected: 7/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K002A108 Surface Water OU - Outfall 002 Activity 1 EU08

### OF02A-189FB

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF02A-208FB

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K002A2010 Surface Water OU - Outfall 002 Activity 2 EU01 AND

### OF02B-01-01TB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2010 Surface Water OU - Outfall 002 Activity 2 EU01 AND

### OF02B-01-01RI

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.029 | pCi/L | 0.03 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | -7.62 | pCi/L | 10.8 | 10.8 | 53 | RL-7111 |
| Americium-241 | U | 0.0558 | pCi/L | 0.04 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 25.8 | pCi/L | 6.36 | 6.49 | 80.6 | RL-7111 |
| Cesium-137 | U | 0.78 | pCi/L | 1.56 | 17.6 | 32.8 | RL-7124 |
| Cobalt-60 | U | -15.8 | pCi/L | 31.7 | 31.7 | 27.9 | RL-7124 |
| Neptunium-237 | U | 0.0174 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0046 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00467 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 19.3 | pCi/L | 17.4 | 17.4 | 23.6 | RL-7116 |
| Thorium-228 | U | -0.0144 | pCi/L | 0.08 | 0.36 | 0.88 | RL-7128 |
| Thorium-230 | U | 0.128 | pCi/L | 0.14 | 0.3 | 0.67 | RL-7128 |
| Thorium-232 | U | 0.0335 | pCi/L | 0.04 | 0.06 | 0.18 | RL-7128 |

## QC

## SWOU05-K002A2010 Surface Water OU - Outfall 002 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0327 | ug/L | 0.06 | 0.57 | 0.84 | RL-7128 |
| Uranium-234 | U | 0.03 | pCi/L | 0.04 | 0.1 | 0.24 | RL-7128 |
| Uranium-238 | U | 0.00649 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2010 Surface Water OU - Outfall 002 Activity 2 EU01 AND

### OF02B-01-01FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0085 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | -10.3 | pCi/L | 20.6 | 20.6 | 53 | RL-7111 |
| Americium-241 | U | 0.0326 | pCi/L | 0.04 | 0.06 | 0.12 | RL-7128 |
| Beta activity | U | -11.2 | pCi/L | 3.19 | 3.24 | 80.5 | RL-7111 |
| Cesium-137 | U | 7.4 | pCi/L | 14.8 | 17.3 | 35.5 | RL-7124 |
| Cobalt-60 | U | 8.36 | pCi/L | 16.7 | 19.8 | 44.5 | RL-7124 |
| Neptunium-237 | U | -0.0284 | pCi/L | 0.03 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0098 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | -0.0462 | pCi/L | 0.04 | 0.05 | 0.09 | RL-7128 |
| Technetium-99 | U | 10.9 | pCi/L | 17.1 | 17.1 | 23.6 | RL-7116 |
| Thorium-228 | UT | -0.025 | pCi/L | 0.08 | 0.36 | 0.9 | RL-7128 |
| Thorium-230 | UT | 0.0586 | pCi/L | 0.12 | 0.29 | 0.7 | RL-7128 |
| Thorium-232 | UT | -0.0441 | pCi/L | 0.15 | 0.15 | 0.34 | RL-7128 |

## QC

## SWOU05-K002A2010 Surface Water OU - Outfall 002 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0020 | ug/L | 0.0059 | 0.36 | 0.84 | RL-7128 |
| Uranium-234 | U | 0.0601 | pCi/L | 0.05 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | 0.00064 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K002A2030 Surface Water OU - Outfall 002 Activity 2 EU03 AND

### OF02B-03-01TB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2030 Surface Water OU - Outfall 002 Activity 2 EU03 AND

### OF02B-03-01RI

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.15 | ug/L | | | 0.15 | SW846-8082 |
| PCB-1242 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1248 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00515 | pCi/L | 0.01 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | 3.69 | pCi/L | 3.69 | 3.7 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0041 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 2.02 | pCi/L | 0.54 | 0.55 | 87 | RL-7111 |
| Cesium-137 | U | 22.2 | pCi/L | 44.5 | 44.5 | 44.3 | RL-7124 |
| Cobalt-60 | U | -6.57 | pCi/L | 13.1 | 16.1 | 30.6 | RL-7124 |
| Neptunium-237 | U | 0.0229 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0057 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.014 | pCi/L | 0.02 | 0.03 | 0.06 | RL-7128 |
| Technetium-99 | U | 4.1 | pCi/L | 9.72 | 9.72 | 13.4 | RL-7116 |
| Thorium-228 | U | 0.156 | pCi/L | 0.08 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | 0.13 | pCi/L | 0.08 | 0.58 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0408 | pCi/L | 0.06 | 0.11 | 0.24 | RL-7128 |

## QC

## SWOU05-K002A2030 Surface Water OU - Outfall 002 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0555 | ug/L | 0.12 | 0.55 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0474 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0179 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

## SWOU05-K002A2030 Surface Water OU - Outfall 002 Activity 2 EU03 AND

### OF02B-03-01FB

Collected: 7/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0164 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 14.9 | pCi/L | 12.2 | 12.2 | 60.3 | RL-7111 |
| Americium-241 | U | 0.00181 | pCi/L | 0.02 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | -7.34 | pCi/L | 2.05 | 2.09 | 86.5 | RL-7111 |
| Cesium-137 | U | -1.34 | pCi/L | 2.69 | 18.7 | 32.7 | RL-7124 |
| Cobalt-60 | U | -17.3 | pCi/L | 34.5 | 34.5 | 32.9 | RL-7124 |
| Neptunium-237 | U | -0.0041 | pCi/L | 0.02 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | 0.029 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0019 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.51 | pCi/L | 9.65 | 9.65 | 13.4 | RL-7116 |
| Thorium-228 | U | 0.0481 | pCi/L | 0.07 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | -0.0424 | pCi/L | 0.07 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0123 | pCi/L | 0.01 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K002A2030 Surface Water OU - Outfall 002 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.292 | ug/L | 0.46 | 0.83 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.147 | pCi/L | 0.07 | 0.17 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.101 | pCi/L | 0.07 | 0.13 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K002A2050 Surface Water OU - Outfall 002 Activity 2 EU05 AND

### OF02B-05-01TB

Collected: 7/20/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2050 Surface Water OU - Outfall 002 Activity 2 EU05 AND

### OF02B-05-01RI

Collected: 7/20/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.012 | pCi/L | 0.02 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 9.87 | pCi/L | 8.06 | 8.09 | 58 | RL-7111 |
| Americium-241 | U | 0.00129 | pCi/L | 0.01 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 19.6 | pCi/L | 5.55 | 5.65 | 79.7 | RL-7111 |
| Cesium-137 | U | -6.7 | pCi/L | 13.4 | 25.6 | 43.2 | RL-7124 |
| Cobalt-60 | U | -7.74 | pCi/L | 15.5 | 15.5 | 26.8 | RL-7124 |
| Neptunium-237 | U | 0.00072 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0109 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0039 | pCi/L | 0.01 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | 11.4 | pCi/L | 9.82 | 9.83 | 13.4 | RL-7116 |
| Thorium-228 | U | -0.0444 | pCi/L | 0.03 | 0.41 | 0.99 | RL-7128 |
| Thorium-230 | U | -0.0003 | pCi/L | 0.07 | 0.58 | 1.36 | RL-7128 |
| Thorium-232 | U | -0.0074 | pCi/L | 0.05 | 0.1 | 0.24 | RL-7128 |

## QC

## SWOU05-K002A2050 Surface Water OU - Outfall 002 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0346 | ug/L | 0.1 | 1.09 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.00334 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |
| Uranium-238 | U | -0.0098 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2050 Surface Water OU - Outfall 002 Activity 2 EU05 AND

### OF02B-05-01FB

Collected: 7/20/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0269 | pCi/L | 0.04 | 0.04 | 0.09 | RL-7128 |
| Alpha activity | U | -4.25 | pCi/L | 4.91 | 4.92 | 58.2 | RL-7111 |
| Americium-241 | U | -0.0163 | pCi/L | 0.03 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 7.52 | pCi/L | 2.24 | 2.28 | 79.8 | RL-7111 |
| Cesium-137 | U | 16.4 | pCi/L | 32.8 | 32.8 | 44.2 | RL-7124 |
| Cobalt-60 | U | 2.7 | pCi/L | 5.41 | 17.9 | 39 | RL-7124 |
| Neptunium-237 | U | 0.0373 | pCi/L | 0.03 | 0.07 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0050 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0103 | pCi/L | 0.02 | 0.02 | 0.08 | RL-7128 |
| Technetium-99 | U | 1.08 | pCi/L | 9.47 | 9.47 | 13.4 | RL-7116 |
| Thorium-228 | U | -0.013 | pCi/L | 0.05 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | -0.0156 | pCi/L | 0.05 | 0.58 | 1.36 | RL-7128 |
| Thorium-232 | U | -0.0301 | pCi/L | 0.04 | 0.1 | 0.24 | RL-7128 |

## QC

## SWOU05-K002A2050 Surface Water OU - Outfall 002 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0729 | ug/L | 0.2 | 0.57 | 0.87 | RL-7128 |
| Uranium-234 | U | -0.016 | pCi/L | 0.05 | 0.1 | 0.3 | RL-7128 |
| Uranium-238 | U | 0.0287 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | UX | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K002A2070 Surface Water OU - Outfall 002 Activity 2 EU07 AND

### OF02B-08-01TB

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K002A2070 Surface Water OU - Outfall 002 Activity 2 EU07 AND

### OF02B-08-01RI

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00594 | pCi/L | 0.01 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | -2.11 | pCi/L | 2.44 | 2.44 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0833 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 11.4 | pCi/L | 2.97 | 3.03 | 86.9 | RL-7111 |
| Cesium-137 | U | -5.99 | pCi/L | 12 | 24.2 | 40.9 | RL-7124 |
| Cobalt-60 | U | 1.87 | pCi/L | 3.74 | 19.4 | 41 | RL-7124 |
| Neptunium-237 | U | -0.0098 | pCi/L | 0.03 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0166 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0017 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.02 | pCi/L | 9.59 | 9.59 | 13.4 | RL-7116 |
| Thorium-228 | U | 0.0298 | pCi/L | 0.07 | 0.42 | 0.99 | RL-7128 |
| Thorium-230 | U | -0.0874 | pCi/L | 0 | 0.8 | 1.35 | RL-7128 |
| Thorium-232 | U | 0.0176 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K002A2070 Surface Water OU - Outfall 002 Activity 2 EU07 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0909 | ug/L | 0.21 | 0.74 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0428 | pCi/L | 0.06 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0296 | pCi/L | 0.04 | 0.12 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

## SWOU05-K002A2070 Surface Water OU - Outfall 002 Activity 2 EU07 AND

### OF02B-08-01FB

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0084 | pCi/L | 0.03 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | -7.1 | pCi/L | 10 | 10.1 | 60.3 | RL-7111 |
| Americium-241 | U | 0.0676 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 2.02 | pCi/L | 0.54 | 0.55 | 86.7 | RL-7111 |
| Cesium-137 | U | -10.1 | pCi/L | 20.3 | 22.8 | 37.1 | RL-7124 |
| Cobalt-60 | U | -5.9 | pCi/L | 11.8 | 15 | 28.9 | RL-7124 |
| Neptunium-237 | U | 0.0271 | pCi/L | 0.03 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.0168 | pCi/L | 0.04 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0185 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | | 14 | pCi/L | 9.91 | 9.91 | 13.4 | RL-7116 |
| Thorium-228 | U | 0.19 | pCi/L | 0.08 | 0.42 | 0.98 | RL-7128 |
| Thorium-230 | U | 0.0607 | pCi/L | 0.07 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0044 | pCi/L | 0.01 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K002A2070 Surface Water OU - Outfall 002 Activity 2 EU07 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.036 | ug/L | 0.08 | 0.37 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.116 | pCi/L | 0.06 | 0.17 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0134 | pCi/L | 0.04 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A101 Surface Water OU - Outfall 008 Activity 1 EU01

### OF08A-001FB

Collected: 8/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF08A-021FB

Collected: 8/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K008A102 Surface Water OU - Outfall 008 Activity 1 EU02

### OF08A-041FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A103 Surface Water OU - Outfall 008 Activity 1 EU03

### OF08A-063FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

**QC**

## SWOU05-K008A104 Surface Water OU - Outfall 008 Activity 1 EU04

### OF08A-082FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.15 | ug/L | | | 0.15 | SW846-8082 |
| PCB-1242 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1248 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |

## QC

## SWOU05-K008A105 Surface Water OU - Outfall 008 Activity 1 EU05

### OF08A-105FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF08A-125FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K008A106 Surface Water OU - Outfall 008 Activity 1 EU06

### OF08A-139FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF08A-160FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

**QC**

## SWOU05-K008A107 Surface Water OU - Outfall 008 Activity 1 EU07

### OF08A-170FB

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K008A108 Surface Water OU - Outfall 008 Activity 1 EU08

### OF08A-199FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF08A-218FB

Collected: 8/24/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K008A109 Surface Water OU - Outfall 008 Activity 1 EU09

### OF08A-239FB

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF08A-260FB

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JU | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K008A110 Surface Water OU - Outfall 008 Activity 1 EU10

### OF08A-301FB

Collected: 7/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF08A-320FB

Collected: 7/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K008A111 Surface Water OU - Outfall 008 Activity 1 EU11

### OF08A-324FB

Collected: 8/4/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF08A-341FB

Collected: 8/4/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K008A112 Surface Water OU - Outfall 008 Activity 1 EU12

### OF08A-357FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF08A-370FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

**QC**

## SWOU05-K008A113 Surface Water OU - Outfall 008 Activity 1 EU13

### OF08A-380FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K008A114 Surface Water OU - Outfall 008 Activity 1 EU14

### OF08A-411FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF08A-430FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

**QC**

**SWOU05-K008A2010** **Surface Water OU - Outfall 008 Activity 2 EU01 AND**

**OF08B-02-01TB**

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2010 Surface Water OU - Outfall 008 Activity 2 EU01 AND

### OF08B-02-01RI

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0032 | pCi/L | 0.02 | 0.02 | 0.08 | RL-7128 |
| Alpha activity | U | -6.84 | pCi/L | 9.67 | 9.67 | 54.1 | RL-7111 |
| Americium-241 | U | -0.0003 | pCi/L | 0.01 | 0.04 | 0.12 | RL-7128 |
| Beta activity | U | 10.9 | pCi/L | 2.84 | 2.89 | 83.1 | RL-7111 |
| Cesium-137 | U | -11.4 | pCi/L | 22.8 | 22.8 | 25.1 | RL-7124 |
| Cobalt-60 | U | 5.64 | pCi/L | 11.3 | 20.4 | 44.2 | RL-7124 |
| Neptunium-237 | U | -0.028 | pCi/L | 0.04 | 0.07 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0194 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0296 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.89 | pCi/L | 14.4 | 14.4 | 20.1 | RL-7116 |
| Thorium-228 | U | 0.256 | pCi/L | 0.09 | 0.44 | 1.02 | RL-7128 |
| Thorium-230 | U | 0.0149 | pCi/L | 0.05 | 0.59 | 1.4 | RL-7128 |
| Thorium-232 | U | 0.012 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K008A2010 Surface Water OU - Outfall 008 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.118 | ug/L | 0.25 | 1.16 | 0.85 | RL-7128 |
| Uranium-234 | U | 0.0871 | pCi/L | 0.06 | 0.11 | 0.23 | RL-7128 |
| Uranium-238 | U | 0.0401 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2010 Surface Water OU - Outfall 008 Activity 2 EU01 AND

### OF08B-02-01FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.018 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | 12.9 | pCi/L | 10.5 | 10.5 | 54.1 | RL-7111 |
| Americium-241 | U | 0.0137 | pCi/L | 0.03 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 4.18 | pCi/L | 1.12 | 1.14 | 83.1 | RL-7111 |
| Cesium-137 | | 75.1 | pCi/L | 32 | 33.5 | 36.6 | RL-7124 |
| Cobalt-60 | U | 15.7 | pCi/L | 31.5 | 31.5 | 56.8 | RL-7124 |
| Neptunium-237 | U | -0.0054 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0304 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.023 | pCi/L | 0.03 | 0.03 | 0.06 | RL-7128 |
| Technetium-99 | U | 6.21 | pCi/L | 14.5 | 14.5 | 20.1 | RL-7116 |
| Thorium-228 | U | 0.242 | pCi/L | 0.08 | 0.44 | 1.01 | RL-7128 |
| Thorium-230 | U | 0.00128 | pCi/L | 0.04 | 0.59 | 1.4 | RL-7128 |
| Thorium-232 | U | -0.0026 | pCi/L | 0 | 0.12 | 0.23 | RL-7128 |

## QC

## SWOU05-K008A2010 Surface Water OU - Outfall 008 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0623 | ug/L | 0.21 | 3.48 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.00198 | pCi/L | 0.05 | 0.11 | 0.24 | RL-7128 |
| Uranium-238 | U | -0.0181 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A2030 Surface Water OU - Outfall 008 Activity 2 EU03 AND

### OF08B-03-01TB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A2050 Surface Water OU - Outfall 008 Activity 2 EU05 AND

### OF08B-05-01TB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2050 Surface Water OU - Outfall 008 Activity 2 EU05 AND

### OF08B-05-01RI

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0085 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | -2 | pCi/L | 2.3 | 2.31 | 54.1 | RL-7111 |
| Americium-241 | U | 0.037 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | 10.9 | pCi/L | 2.85 | 2.9 | 83.3 | RL-7111 |
| Cesium-137 | U | 1.83 | pCi/L | 3.67 | 16.6 | 32.2 | RL-7124 |
| Cobalt-60 | U | -9.32 | pCi/L | 18.6 | 18.6 | 32 | RL-7124 |
| Neptunium-237 | U | 0.0353 | pCi/L | 0.04 | 0.07 | 0.15 | RL-7128 |
| Plutonium-238 | U | 0.00664 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00506 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | -1.53 | pCi/L | 14.4 | 14.4 | 20 | RL-7116 |
| Thorium-228 | U | 0.217 | pCi/L | 0.09 | 0.37 | 0.85 | RL-7128 |
| Thorium-230 | U | 0.286 | pCi/L | 0.1 | 0.28 | 0.62 | RL-7128 |
| Thorium-232 | | 0.21 | pCi/L | 0.08 | 0.12 | 0.21 | RL-7128 |

## QC

## SWOU05-K008A2050 Surface Water OU - Outfall 008 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0714 | ug/L | 0.21 | 0.49 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0405 | pCi/L | 0.06 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | -0.0227 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2050 Surface Water OU - Outfall 008 Activity 2 EU05 AND

### OF08B-05-01FB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00653 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | 8.92 | pCi/L | 7.97 | 7.99 | 54.1 | RL-7111 |
| Americium-241 | U | -0.0059 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | -13.8 | pCi/L | 3.99 | 4.05 | 83.3 | RL-7111 |
| Cesium-137 | U | -1.59 | pCi/L | 3.19 | 18.1 | 33.8 | RL-7124 |
| Cobalt-60 | U | 3.81 | pCi/L | 7.61 | 18.6 | 40.8 | RL-7124 |
| Neptunium-237 | U | 0.012 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-238 | U | 0.0182 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0104 | pCi/L | 0.01 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | -1.97 | pCi/L | 14.2 | 14.2 | 20 | RL-7116 |
| Thorium-228 | U | 0.0159 | pCi/L | 0.07 | 0.36 | 0.88 | RL-7128 |
| Thorium-230 | U | 0.0377 | pCi/L | 0.11 | 0.28 | 0.65 | RL-7128 |
| Thorium-232 | U | -0.043 | pCi/L | 0.08 | 0.11 | 0.25 | RL-7128 |

## QC

## SWOU05-K008A2050 Surface Water OU - Outfall 008 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0308 | ug/L | 0.1 | 0.35 | 0.85 | RL-7128 |
| Uranium-234 | U | -0.0333 | pCi/L | 0.05 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | -0.0114 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Acenaphthylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benz(a)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(a)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Chrysene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluorene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Naphthalene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Phenanthrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A2070 Surface Water OU - Outfall 008 Activity 2 EU07 AND

### OF08B-07-01TB

Collected: 8/4/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A2091 Surface Water OU - Outfall 008 Activity 2 EU09 AND

### OF08B-09-01TB

Collected: 8/8/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K008A2111 Surface Water OU - Outfall 008 Activity 2 EU11 AND

### OF08B-12-01TB

Collected: 8/23/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2111 Surface Water OU - Outfall 008 Activity 2 EU11 AND

### OF08B-12-01RI

Collected: 8/23/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0162 | pCi/L | 0.02 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | 3.18 | pCi/L | 3.18 | 3.19 | 65.3 | RL-7111 |
| Americium-241 | U | -0.026 | pCi/L | 0 | 0.07 | 0.15 | RL-7128 |
| Beta activity | DU | 16.6 | pCi/L | 4.24 | 4.32 | 89.3 | RL-7111 |
| Cesium-137 | U | 2.29 | pCi/L | 4.58 | 18.6 | 35.1 | RL-7124 |
| Cobalt-60 | U | 8.12 | pCi/L | 16.2 | 23.4 | 48.8 | RL-7124 |
| Neptunium-237 | U | -0.0122 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00922 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.00344 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 9.45 | pCi/L | 14.4 | 14.4 | 19.8 | RL-7116 |
| Thorium-228 | U | -0.0207 | pCi/L | 0.03 | 0.35 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.0587 | pCi/L | 0.05 | 0.26 | 0.63 | RL-7128 |
| Thorium-232 | U | 0.00688 | pCi/L | 0.02 | 0.05 | 0.12 | RL-7128 |

## QC

## SWOU05-K008A2111 Surface Water OU - Outfall 008 Activity 2 EU11 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0489 | ug/L | 0.08 | 0.41 | 0.85 | RL-7128 |
| Uranium-234 | U | 0.0501 | pCi/L | 0.04 | 0.1 | 0.24 | RL-7128 |
| Uranium-238 | U | 0.0139 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K008A2111 Surface Water OU - Outfall 008 Activity 2 EU11 AND

### OF08B-12-01FB

Collected: 8/23/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0189 | pCi/L | 0.03 | 0.04 | 0.09 | RL-7128 |
| Alpha activity | U | 14.1 | pCi/L | 11.5 | 11.5 | 65.2 | RL-7111 |
| Americium-241 | U | 0.0786 | pCi/L | 0.05 | 0.08 | 0.14 | RL-7128 |
| Beta activity | DU | 31 | pCi/L | 7.58 | 7.73 | 89.2 | RL-7111 |
| Cesium-137 | U | -10.1 | pCi/L | 20.3 | 20.3 | 29.2 | RL-7124 |
| Cobalt-60 | U | -4.39 | pCi/L | 8.78 | 19.8 | 38.3 | RL-7124 |
| Neptunium-237 | U | -0.0137 | pCi/L | 0.03 | 0.06 | 0.19 | RL-7128 |
| Plutonium-238 | U | 0.0111 | pCi/L | 0.03 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.00505 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Technetium-99 | U | 5.67 | pCi/L | 14.3 | 14.3 | 19.8 | RL-7116 |
| Thorium-228 | U | 0.0176 | pCi/L | 0.05 | 0.35 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.0486 | pCi/L | 0.06 | 0.27 | 0.63 | RL-7128 |
| Thorium-232 | U | -0.0064 | pCi/L | 0.02 | 0.04 | 0.12 | RL-7128 |

## QC

## SWOU05-K008A2111 Surface Water OU - Outfall 008 Activity 2 EU11 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0177 | ug/L | 0.05 | 0.66 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.103 | pCi/L | 0.09 | 0.12 | 0.27 | RL-7128 |
| Uranium-238 | U | 0.00301 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | U | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

**SWOU05-K008A2131** **Surface Water OU - Outfall 008 Activity 2 EU13 AND**

**OF08B-14-01TB**

Collected: 8/23/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A101 Surface Water OU - Outfall 010 Activity 1 EU01

### OF10A-001FB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | JU | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | JU | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | JU | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | JU | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | JU | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | JU | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | JU | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | JU | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | JU | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-021FB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A102 Surface Water OU - Outfall 010 Activity 1 EU02

### OF10A-042FB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A103 Surface Water OU - Outfall 010 Activity 1 EU03

### OF10A-079FB

Collected: 8/10/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K010A104 Surface Water OU - Outfall 010 Activity 1 EU04

### OF10A-111FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-130FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | X | 0.19 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | X | 0.19 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K010A105 Surface Water OU - Outfall 010 Activity 1 EU05

### OF10A-152FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-162FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | | 0.26 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | | 0.26 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K010A106 Surface Water OU - Outfall 010 Activity 1 EU06

### OF10A-172FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-184FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A107 Surface Water OU - Outfall 010 Activity 1 EU07

### OF10A-206FB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K010A108 Surface Water OU - Outfall 010 Activity 1 EU08

### OF10A-220FB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF10A-236FB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K010A109 Surface Water OU - Outfall 010 Activity 1 EU09

### OF10A-257FB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-275FB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UX | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K010A110 Surface Water OU - Outfall 010 Activity 1 EU10

### OF10A-278FB

Collected: 8/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF10A-296FB

Collected: 8/18/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A2010 Surface Water OU - Outfall 010 Activity 2 EU01 AND

### OF10B-01-01TB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UXY | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2010 Surface Water OU - Outfall 010 Activity 2 EU01 AND

## OF10B-01-01RI

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0257 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | 17.6 | pCi/L | 13.3 | 13.4 | 61.8 | RL-7111 |
| Americium-241 | U | 0.105 | pCi/L | 0.06 | 0.08 | 0.13 | RL-7128 |
| Beta activity | U | 45.7 | pCi/L | 10.7 | 10.9 | 89.6 | RL-7111 |
| Cesium-137 | U | -12.3 | pCi/L | 24.6 | 24.6 | 20.1 | RL-7124 |
| Cobalt-60 | U | -13.3 | pCi/L | 26.6 | 26.6 | 23.1 | RL-7124 |
| Neptunium-237 | U | 0.0182 | pCi/L | 0.03 | 0.06 | 0.19 | RL-7128 |
| Plutonium-238 | U | 0.00114 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0106 | pCi/L | 0.02 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 5.6 | pCi/L | 13.6 | 13.6 | 18.8 | RL-7116 |
| Thorium-228 | U | 0.0586 | pCi/L | 0.08 | 0.36 | 0.86 | RL-7128 |
| Thorium-230 | U | -0.0646 | pCi/L | 0 | 0.36 | 0.67 | RL-7128 |
| Thorium-232 | U | 0.00076 | pCi/L | 0.06 | 0.07 | 0.34 | RL-7128 |

## QC

## SWOU05-K010A2010 Surface Water OU - Outfall 010 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0722 | ug/L | 0.11 | 0.37 | 0.85 | RL-7128 |
| Uranium-234 | U | 0.0363 | pCi/L | 0.05 | 0.1 | 0.26 | RL-7128 |
| Uranium-238 | U | 0.0283 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UY | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2010 Surface Water OU - Outfall 010 Activity 2 EU01 AND

### OF10B-01-01FB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0013 | pCi/L | 0.02 | 0.02 | 0.07 | RL-7128 |
| Alpha activity | U | 36.9 | pCi/L | 23.4 | 23.5 | 61.8 | RL-7111 |
| Americium-241 | U | 0.0871 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 2.09 | pCi/L | 0.56 | 0.57 | 89.9 | RL-7111 |
| Cesium-137 | U | 13.4 | pCi/L | 9.48 | 9.65 | 33.6 | RL-7124 |
| Cobalt-60 | U | -0.656 | pCi/L | 1.31 | 19.6 | 39.5 | RL-7124 |
| Neptunium-237 | U | 0.0196 | pCi/L | 0.03 | 0.06 | 0.15 | RL-7128 |
| Plutonium-238 | U | -0.0102 | pCi/L | 0.01 | 0.05 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | -0.0002 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 7.7 | pCi/L | 13.6 | 13.6 | 18.8 | RL-7116 |
| Thorium-228 | UT | -0.0337 | pCi/L | 0.06 | 0.36 | 0.87 | RL-7128 |
| Thorium-230 | UT | 0.602 | pCi/L | 0.2 | 0.35 | 0.66 | RL-7128 |
| Thorium-232 | UT | -0.0451 | pCi/L | 0.06 | 0.07 | 0.21 | RL-7128 |

## QC

## SWOU05-K010A2010 Surface Water OU - Outfall 010 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.00254 | ug/L | 0.0074 | 0.28 | 0.83 | RL-7128 |
| Uranium-234 | U | 0.0169 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |
| Uranium-238 | U | 0.00105 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UY | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A2030 Surface Water OU - Outfall 010 Activity 2 EU03 AND

### OF10B-03-01TB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UXY | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2030 Surface Water OU - Outfall 010 Activity 2 EU03 AND

### OF10B-03-01RI

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0273 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | 8.22 | pCi/L | 7.35 | 7.37 | 61.8 | RL-7111 |
| Americium-241 | U | 0.0688 | pCi/L | 0.05 | 0.07 | 0.14 | RL-7128 |
| Beta activity | U | 19 | pCi/L | 4.84 | 4.93 | 89.6 | RL-7111 |
| Cesium-137 | U | 7.17 | pCi/L | 14.4 | 14.4 | 26.9 | RL-7124 |
| Cobalt-60 | U | -11.5 | pCi/L | 23 | 23 | 29.6 | RL-7124 |
| Neptunium-237 | U | -0.0009 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0021 | pCi/L | 0.01 | 0.05 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0112 | pCi/L | 0.02 | 0.03 | 0.08 | RL-7128 |
| Technetium-99 | U | -6.82 | pCi/L | 13.8 | 13.8 | 19.8 | RL-7116 |
| Thorium-228 | U | 0.0509 | pCi/L | 0.05 | 0.36 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.0168 | pCi/L | 0.05 | 0.27 | 0.63 | RL-7128 |
| Thorium-232 | U | -0.0065 | pCi/L | 0.03 | 0.05 | 0.13 | RL-7128 |

## QC

## SWOU05-K010A2030 Surface Water OU - Outfall 010 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.022 | ug/L | 0.05 | 0.3 | 0.85 | RL-7128 |
| Uranium-234 | U | 0.0105 | pCi/L | 0.05 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | -0.0116 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UY | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2030 Surface Water OU - Outfall 010 Activity 2 EU03 AND

### OF10B-03-01FB

Collected: 8/15/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00783 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Alpha activity | U | -14.2 | pCi/L | 28.4 | 28.4 | 61.8 | RL-7111 |
| Americium-241 | U | 0.0708 | pCi/L | 0.06 | 0.08 | 0.14 | RL-7128 |
| Beta activity | U | 23.9 | pCi/L | 5.97 | 6.09 | 89.6 | RL-7111 |
| Cesium-137 | U | 9.2 | pCi/L | 18.4 | 18.4 | 32.9 | RL-7124 |
| Cobalt-60 | U | 0.829 | pCi/L | 1.66 | 16.1 | 34.4 | RL-7124 |
| Neptunium-237 | U | -0.0228 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0137 | pCi/L | 0.01 | 0.05 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.00276 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 11.9 | pCi/L | 14.5 | 14.5 | 19.8 | RL-7116 |
| Thorium-228 | U | -0.0032 | pCi/L | 0.05 | 0.35 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.0303 | pCi/L | 0.05 | 0.26 | 0.63 | RL-7128 |
| Thorium-232 | U | -0.0058 | pCi/L | 0.01 | 0.04 | 0.12 | RL-7128 |

## QC

## SWOU05-K010A2030 Surface Water OU - Outfall 010 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0282 | ug/L | 0.09 | 2.04 | 0.84 | RL-7128 |
| Uranium-234 | U | -0.0015 | pCi/L | 0.05 | 0.1 | 0.22 | RL-7128 |
| Uranium-238 | U | -0.0107 | pCi/L | 0.04 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UY | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A2050 Surface Water OU - Outfall 010 Activity 2 EU05 AND

### OF10B-06-01TB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2050 Surface Water OU - Outfall 010 Activity 2 EU05 AND

## OF10B-06-01RI

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0272 | pCi/L | 0.03 | 0.04 | 0.09 | RL-7128 |
| Alpha activity | U | -7.62 | pCi/L | 10.8 | 10.8 | 61.8 | RL-7111 |
| Americium-241 | U | 0.105 | pCi/L | 0.07 | 0.09 | 0.14 | RL-7128 |
| Beta activity | U | 6.95 | pCi/L | 1.84 | 1.87 | 89.9 | RL-7111 |
| Cesium-137 | U | -0.139 | pCi/L | 0.27 | 18.7 | 35.1 | RL-7124 |
| Cobalt-60 | U | -8.39 | pCi/L | 16.8 | 16.8 | 28.9 | RL-7124 |
| Neptunium-237 | U | 0.0115 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0175 | pCi/L | 0.03 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0111 | pCi/L | 0.02 | 0.03 | 0.08 | RL-7128 |
| Technetium-99 | U | -0.63 | pCi/L | 14.3 | 14.3 | 19.8 | RL-7116 |
| Thorium-228 | U | 0.00292 | pCi/L | 0.05 | 0.35 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.081 | pCi/L | 0.06 | 0.27 | 0.63 | RL-7128 |
| Thorium-232 | U | 0.0074 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |

## QC

## SWOU05-K010A2050 Surface Water OU - Outfall 010 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0229 | ug/L | 0.06 | 0.23 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.0252 | pCi/L | 0.07 | 0.11 | 0.23 | RL-7128 |
| Uranium-238 | U | -0.0119 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K010A2050 Surface Water OU - Outfall 010 Activity 2 EU05 AND

### OF10B-06-01FB

Collected: 8/17/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | UX | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0248 | pCi/L | 0.02 | 0.03 | 0.09 | RL-7128 |
| Alpha activity | U | 25.4 | pCi/L | 18 | 18.1 | 61.9 | RL-7111 |
| Americium-241 | U | 0.0396 | pCi/L | 0.04 | 0.07 | 0.14 | RL-7128 |
| Beta activity | U | 9.44 | pCi/L | 2.48 | 2.52 | 90.4 | RL-7111 |
| Cesium-137 | U | 6.15 | pCi/L | 12.3 | 18.2 | 35.9 | RL-7124 |
| Cobalt-60 | U | -10.2 | pCi/L | 20.5 | 20.5 | 30.8 | RL-7124 |
| Neptunium-237 | U | -0.0134 | pCi/L | 0.02 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | 0.0221 | pCi/L | 0.03 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0346 | pCi/L | 0.03 | 0.04 | 0.07 | RL-7128 |
| Technetium-99 | U | 11.1 | pCi/L | 14.5 | 14.5 | 19.8 | RL-7116 |
| Thorium-228 | U | 0.0497 | pCi/L | 0.05 | 0.35 | 0.84 | RL-7128 |
| Thorium-230 | U | 0.0358 | pCi/L | 0.06 | 0.27 | 0.63 | RL-7128 |
| Thorium-232 | U | -0.0059 | pCi/L | 0.02 | 0.04 | 0.12 | RL-7128 |

## QC

## SWOU05-K010A2050 Surface Water OU - Outfall 010 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0172 | ug/L | 0.04 | 1.02 | 0.85 | RL-7128 |
| Uranium-234 | U | 0.0793 | pCi/L | 0.06 | 0.1 | 0.26 | RL-7128 |
| Uranium-238 | U | 0.00193 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A2070 Surface Water OU - Outfall 010 Activity 2 EU07 AND

### OF10B-08-01TB

Collected: 8/16/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UY | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K010A2091 Surface Water OU - Outfall 010 Activity 2 EU09 AND

### OF10B-10-01TB

Collected: 8/18/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K011A101 Surface Water OU - Outfall 011 Activity 1 EU01

### OF11A-001FB

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF11A-021FB

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K011A201 Surface Water OU - Outfall 011 Activity 2 EU01

### OF11B-01-01TB

Collected: 8/11/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K011A201 Surface Water OU - Outfall 011 Activity 2 EU01

### OF11B-01-01RI

Collected: 8/11/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0161 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | -7.53 | pCi/L | 10.7 | 10.7 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0946 | pCi/L | 0.05 | 0.07 | 0.12 | RL-7128 |
| Beta activity | U | 11.2 | pCi/L | 2.92 | 2.98 | 85.4 | RL-7111 |
| Cesium-137 | U | 12.3 | pCi/L | 24.6 | 24.6 | 16.6 | RL-7124 |
| Cobalt-60 | U | 4.08 | pCi/L | 8.15 | 8.15 | 15.4 | RL-7124 |
| Neptunium-237 | U | 0.0202 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0153 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0193 | pCi/L | 0.03 | 0.03 | 0.09 | RL-7128 |
| Technetium-99 | U | 10.1 | pCi/L | 14 | 14 | 19.2 | RL-7116 |
| Thorium-228 | U | 0.00071 | pCi/L | 0.05 | 0.36 | 0.86 | RL-7128 |
| Thorium-230 | U | -0.032 | pCi/L | 0.07 | 0.26 | 0.63 | RL-7128 |
| Thorium-232 | U | -0.0027 | pCi/L | 0.02 | 0.08 | 0.22 | RL-7128 |

## QC

## SWOU05-K011A201 Surface Water OU - Outfall 011 Activity 2 EU01

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0053 | ug/L | 0.01 | 0.81 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.00325 | pCi/L | 0.04 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | 0.00074 | pCi/L | 0.01 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K011A201 Surface Water OU - Outfall 011 Activity 2 EU01

### OF11B-01-01FB

Collected: 8/11/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UX | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UX | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UX | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UX | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UX | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UX | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0139 | pCi/L | 0.02 | 0.02 | 0.07 | RL-7128 |
| Alpha activity | U | -6.04 | pCi/L | 8.54 | 8.55 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0151 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | -14.2 | pCi/L | 4.1 | 4.16 | 85.6 | RL-7111 |
| Cesium-137 | U | 3.58 | pCi/L | 7.15 | 7.62 | 13.8 | RL-7124 |
| Cobalt-60 | U | 3.64 | pCi/L | 7.28 | 7.53 | 13.7 | RL-7124 |
| Neptunium-237 | U | 0.0177 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00081 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0064 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 10 | pCi/L | 13.9 | 13.9 | 19.2 | RL-7116 |
| Thorium-228 | U | 0.0147 | pCi/L | 0.06 | 0.36 | 0.87 | RL-7128 |
| Thorium-230 | U | -0.0778 | pCi/L | 0.07 | 0.26 | 0.64 | RL-7128 |
| Thorium-232 | U | 0.0252 | pCi/L | 0.04 | 0.08 | 0.24 | RL-7128 |

## QC

## SWOU05-K011A201 Surface Water OU - Outfall 011 Activity 2 EU01

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.009 | ug/L | 0.02 | 0.2 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.0463 | pCi/L | 0.05 | 0.1 | 0.25 | RL-7128 |
| Uranium-238 | U | -0.0052 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Acenaphthylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benz(a)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(a)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(ghi)perylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Chrysene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluorene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Naphthalene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Phenanthrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

**QC**

## SWOU05-K012A101 Surface Water OU - Outfall 012 Activity 1 EU01

### OF12A-001FB

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K012A201 Surface Water OU - Outfall 012 Activity 2 EU01

### OF12B-01-01TB

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K012A201 Surface Water OU - Outfall 012 Activity 2 EU01

### OF12B-01-01RI

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0083 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | 27.9 | pCi/L | 18.6 | 18.7 | 53 | RL-7111 |
| Americium-241 | U | 0.105 | pCi/L | 0.06 | 0.08 | 0.14 | RL-7128 |
| Beta activity | U | -15.5 | pCi/L | 4.53 | 4.6 | 80.6 | RL-7111 |
| Cesium-137 | U | -4.3 | pCi/L | 8.6 | 13.4 | 23.3 | RL-7124 |
| Cobalt-60 | U | -3.23 | pCi/L | 6.45 | 10.8 | 20 | RL-7124 |
| Neptunium-237 | U | 0.0177 | pCi/L | 0.03 | 0.06 | 0.15 | RL-7128 |
| Plutonium-238 | U | 0.00697 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0123 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 1.01 | pCi/L | 14.9 | 14.9 | 21 | RL-7116 |
| Thorium-228 | UT | -0.0018 | pCi/L | 0.12 | 0.37 | 0.9 | RL-7128 |
| Thorium-230 | UT | 0.076 | pCi/L | 0.15 | 0.3 | 0.71 | RL-7128 |
| Thorium-232 | UT | -0.0892 | pCi/L | 0.08 | 0.09 | 0.24 | RL-7128 |

## QC

## SWOU05-K012A201 Surface Water OU - Outfall 012 Activity 2 EU01

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0474 | ug/L | 0.11 | 0.41 | 0.84 | RL-7128 |
| Uranium-234 | U | 0.0209 | pCi/L | 0.03 | 0.09 | 0.22 | RL-7128 |
| Uranium-238 | U | 0.0172 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Acenaphthylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benz(a)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(a)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(ghi)perylene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Chrysene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluoranthene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Fluorene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Naphthalene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Phenanthrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| Pyrene | U | 5.3 | ug/L | | | 5.3 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

## QC

## SWOU05-K012A201 Surface Water OU - Outfall 012 Activity 2 EU01

### OF12B-01-01FB

Collected: 8/9/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0165 | pCi/L | 0.03 | 0.03 | 0.07 | RL-7128 |
| Alpha activity | U | -15.5 | pCi/L | 0 | 0.9 | 53 | RL-7111 |
| Americium-241 | U | 0.0229 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | -2.48 | pCi/L | 0.68 | 0.69 | 80.4 | RL-7111 |
| Cesium-137 | U | -2.37 | pCi/L | 4.74 | 16.7 | 31.1 | RL-7124 |
| Cobalt-60 | U | 1.43 | pCi/L | 2.87 | 22 | 45 | RL-7124 |
| Neptunium-237 | U | 0.00569 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0105 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00895 | pCi/L | 0.01 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | 0.654 | pCi/L | 14.9 | 14.9 | 21 | RL-7116 |
| Thorium-228 | U | -0.0204 | pCi/L | 0.06 | 0.36 | 0.87 | RL-7128 |
| Thorium-230 | U | 0.0101 | pCi/L | 0.1 | 0.28 | 0.65 | RL-7128 |
| Thorium-232 | U | 0.0139 | pCi/L | 0.04 | 0.06 | 0.16 | RL-7128 |

## QC

## SWOU05-K012A201 Surface Water OU - Outfall 012 Activity 2 EU01

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0894 | ug/L | 0.2 | 0.4 | 0.84 | RL-7128 |
| Uranium-234 | U | 0.0577 | pCi/L | 0.05 | 0.1 | 0.23 | RL-7128 |
| Uranium-238 | U | 0.0326 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A101 Surface Water OU - Outfall 015 Activity 1 EU01

### OF15A-001FB

Collected: 7/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF15A-020FB

Collected: 7/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K015A102 Surface Water OU - Outfall 015 Activity 1 EU02

### OF15A-035FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF15A-052FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.08 | ug/L | | | 0.08 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K015A103 Surface Water OU - Outfall 015 Activity 1 EU03

### OF15A-063FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

### OF15A-082FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

## QC

## SWOU05-K015A104 Surface Water OU - Outfall 015 Activity 1 EU04

### OF15A-090FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF15A-110FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

**QC**

## SWOU05-K015A105 Surface Water OU - Outfall 015 Activity 1 EU05

### OF15A-123FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

## QC

## SWOU05-K015A106 Surface Water OU - Outfall 015 Activity 1 EU06

### OF15A-137FB

Collected: 7/25/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UX | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UX | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K015A107 Surface Water OU - Outfall 015 Activity 1 EU07

### OF15A-152FB

Collected: 7/28/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF15A-171FB

Collected: 7/28/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-K015A108 Surface Water OU - Outfall 015 Activity 1 EU08

### OF15A-189FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### OF15A-214FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A109 Surface Water OU - Outfall 015 Activity 1 EU09

### OF15A-234FB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A110 Surface Water OU - Outfall 015 Activity 1 EU10

### OF15A-259FB

Collected: 7/22/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

**QC**

## SWOU05-K015A111 Surface Water OU - Outfall 015 Activity 1 EU11

### OF15A-285FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A2010 Surface Water OU - Outfall 015 Activity 2 EU01 AND

### OF15B-01-01TB

Collected: 8/1/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2010 Surface Water OU - Outfall 015 Activity 2 EU01 AND

## OF15B-01-01RI

Collected: 8/1/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0035 | pCi/L | 0 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | 3.08 | pCi/L | 3.08 | 3.09 | 66.6 | RL-7111 |
| Americium-241 | U | 0.0321 | pCi/L | 0.03 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | 18.8 | pCi/L | 4.77 | 4.86 | 88.4 | RL-7111 |
| Cesium-137 | U | 17 | pCi/L | 15.2 | 15.3 | 19.8 | RL-7124 |
| Cobalt-60 | U | -10.6 | pCi/L | 21.1 | 21.1 | 17.7 | RL-7124 |
| Neptunium-237 | U | 0.00073 | pCi/L | 0.02 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0049 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0063 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 19.9 | pCi/L | 11.5 | 11.5 | 21.9 | RL-7116 |
| Thorium-228 | U | 0.351 | pCi/L | 0.11 | 0.44 | 1.02 | RL-7128 |
| Thorium-230 | U | 0.0254 | pCi/L | 0.05 | 0.59 | 1.4 | RL-7128 |
| Thorium-232 | U | -0.0017 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-K015A2010 Surface Water OU - Outfall 015 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.192 | ug/L | 0.18 | 1.76 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.105 | pCi/L | 0.06 | 0.11 | 0.24 | RL-7128 |
| Uranium-238 | U | 0.065 | pCi/L | 0.04 | 0.12 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | JUX | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2010 Surface Water OU - Outfall 015 Activity 2 EU01 AND

### OF15B-01-01FB

Collected: 8/1/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0028 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | 9.88 | pCi/L | 8.83 | 8.85 | 66.6 | RL-7111 |
| Americium-241 | U | 0.00124 | pCi/L | 0.02 | 0.05 | 0.12 | RL-7128 |
| Beta activity | U | 4.47 | pCi/L | 1.2 | 1.22 | 88.9 | RL-7111 |
| Cesium-137 | U | 4.47 | pCi/L | 8.94 | 15.5 | 29.7 | RL-7124 |
| Cobalt-60 | U | 5.7 | pCi/L | 11.4 | 12.6 | 29 | RL-7124 |
| Neptunium-237 | U | 0.033 | pCi/L | 0.05 | 0.08 | 0.2 | RL-7128 |
| Plutonium-238 | U | 0.0439 | pCi/L | 0.04 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.00108 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | 17.5 | pCi/L | 11.4 | 11.4 | 21.9 | RL-7116 |
| Thorium-228 | U | 0.453 | pCi/L | 0.14 | 0.46 | 1.03 | RL-7128 |
| Thorium-230 | U | 0.678 | pCi/L | 0.17 | 0.63 | 1.41 | RL-7128 |
| Thorium-232 | U | -0.0018 | pCi/L | 0.03 | 0.09 | 0.25 | RL-7128 |

## QC

## SWOU05-K015A2010 Surface Water OU - Outfall 015 Activity 2 EU01 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.2 | ug/L | 0.5 | 3.1 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.0165 | pCi/L | 0.05 | 0.11 | 0.26 | RL-7128 |
| Uranium-238 | U | 0.0678 | pCi/L | 0.05 | 0.12 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Acenaphthylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benz(a)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(a)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(ghi)perylene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Chrysene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluoranthene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Fluorene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Naphthalene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Phenanthrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| Pyrene | JU | 4.7 | ug/L | | | 4.7 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A2030 Surface Water OU - Outfall 015 Activity 2 EU03 AND

### OF15B-03-01TB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2030 Surface Water OU - Outfall 015 Activity 2 EU03 AND

### OF15B-03-01RI

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00429 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Alpha activity | U | 1.37 | pCi/L | 1.37 | 1.37 | 58 | RL-7111 |
| Americium-241 | U | 0.00715 | pCi/L | 0.02 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | -4.61 | pCi/L | 1.46 | 1.48 | 79.7 | RL-7111 |
| Cesium-137 | U | -7.59 | pCi/L | 15.2 | 21.9 | 40.8 | RL-7124 |
| Cobalt-60 | U | -3.15 | pCi/L | 6.3 | 18.6 | 38.4 | RL-7124 |
| Neptunium-237 | U | -0.0224 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | -0.0015 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0162 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | -2.36 | pCi/L | 14.1 | 14.1 | 20 | RL-7116 |
| Thorium-228 | U | -0.0263 | pCi/L | 0.05 | 0.42 | 1 | RL-7128 |
| Thorium-230 | U | 0.164 | pCi/L | 0.1 | 0.6 | 1.41 | RL-7128 |
| Thorium-232 | U | 0.00841 | pCi/L | 0.03 | 0.09 | 0.25 | RL-7128 |

## QC

## SWOU05-K015A2030 Surface Water OU - Outfall 015 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0251 | ug/L | 0.08 | 0.39 | 0.86 | RL-7128 |
| Uranium-234 | U | -0.0143 | pCi/L | 0.04 | 0.09 | 0.22 | RL-7128 |
| Uranium-238 | U | -0.0091 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JU | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | JU | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2030 Surface Water OU - Outfall 015 Activity 2 EU03 AND

### OF15B-03-01FB

Collected: 7/26/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.13 | ug/L | | | 0.13 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.11 | ug/L | | | 0.11 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.019 | pCi/L | 0.02 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | -8.91 | pCi/L | 12.6 | 12.6 | 58 | RL-7111 |
| Americium-241 | U | 0.0147 | pCi/L | 0.02 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 2.67 | pCi/L | 0.81 | 0.82 | 79.7 | RL-7111 |
| Cesium-137 | U | -6.47 | pCi/L | 12.9 | 23.1 | 42.5 | RL-7124 |
| Cobalt-60 | U | 6.27 | pCi/L | 12.5 | 20.1 | 43.2 | RL-7124 |
| Neptunium-237 | U | -0.0106 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.019 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0072 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 0.438 | pCi/L | 15.2 | 15.2 | 20 | RL-7116 |
| Thorium-228 | U | -0.0788 | pCi/L | 0.07 | 0.42 | 1.02 | RL-7128 |
| Thorium-230 | U | 0.0955 | pCi/L | 0.13 | 0.6 | 1.42 | RL-7128 |
| Thorium-232 | U | -0.017 | pCi/L | 0.02 | 0.09 | 0.27 | RL-7128 |

## QC

## SWOU05-K015A2030 Surface Water OU - Outfall 015 Activity 2 EU03 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0952 | ug/L | 0.16 | 0.38 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.0701 | pCi/L | 0.06 | 0.1 | 0.22 | RL-7128 |
| Uranium-238 | U | 0.0349 | pCi/L | 0.03 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | JU | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JUX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A2050 Surface Water OU - Outfall 015 Activity 2 EU05 AND

### OF15B-05-01TB

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2050 Surface Water OU - Outfall 015 Activity 2 EU05 AND

### OF15B-05-01RI

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.013 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | -7.59 | pCi/L | 10.7 | 10.7 | 66.6 | RL-7111 |
| Americium-241 | U | 0.0572 | pCi/L | 0.04 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | -2.72 | pCi/L | 0.74 | 0.76 | 88.5 | RL-7111 |
| Cesium-137 | U | 3.61 | pCi/L | 7.22 | 14.6 | 30.1 | RL-7124 |
| Cobalt-60 | U | 6.33 | pCi/L | 12.7 | 16 | 37.9 | RL-7124 |
| Neptunium-237 | U | -0.0165 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.005 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.0006 | pCi/L | 0.02 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | -2.3 | pCi/L | 14.1 | 14.1 | 20 | RL-7116 |
| Thorium-228 | U | 0.153 | pCi/L | 0.07 | 0.43 | 1.02 | RL-7128 |
| Thorium-230 | U | 0.014 | pCi/L | 0.05 | 0.59 | 1.4 | RL-7128 |
| Thorium-232 | U | -0.0128 | pCi/L | 0.07 | 0.11 | 0.24 | RL-7128 |

## QC

## SWOU05-K015A2050 Surface Water OU - Outfall 015 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0466 | ug/L | 0.12 | 0.69 | 0.86 | RL-7128 |
| Uranium-234 | U | 0.00908 | pCi/L | 0.05 | 0.1 | 0.24 | RL-7128 |
| Uranium-238 | U | 0.0137 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Acenaphthylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benz(a)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(a)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Chrysene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluoranthene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Fluorene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Naphthalene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Phenanthrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| Pyrene | U | 4.9 | ug/L | | | 4.9 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2050 Surface Water OU - Outfall 015 Activity 2 EU05 AND

### OF15B-05-01FB

Collected: 8/3/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | BU | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | BU | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1221 | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.19 | ug/L | | | 0.19 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0117 | pCi/L | 0.03 | 0.03 | 0.08 | RL-7128 |
| Alpha activity | U | -8.42 | pCi/L | 11.9 | 11.9 | 66.6 | RL-7111 |
| Americium-241 | U | 0.0732 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 11.6 | pCi/L | 3.03 | 3.08 | 88.5 | RL-7111 |
| Cesium-137 | U | 4.95 | pCi/L | 9.91 | 17.3 | 34.7 | RL-7124 |
| Cobalt-60 | U | -5.4 | pCi/L | 10.8 | 18.5 | 35.8 | RL-7124 |
| Neptunium-237 | U | -0.0044 | pCi/L | 0.03 | 0.06 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00068 | pCi/L | 0.01 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0106 | pCi/L | 0.02 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | -2.85 | pCi/L | 14.2 | 14.2 | 20 | RL-7116 |
| Thorium-228 | U | 0.437 | pCi/L | 0.14 | 0.46 | 1.03 | RL-7128 |
| Thorium-230 | U | 0.0516 | pCi/L | 0.07 | 0.6 | 1.41 | RL-7128 |
| Thorium-232 | U | -0.0103 | pCi/L | 0.05 | 0.1 | 0.25 | RL-7128 |

## QC

## SWOU05-K015A2050 Surface Water OU - Outfall 015 Activity 2 EU05 AND

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.193 | ug/L | 0.5 | 1.87 | 0.87 | RL-7128 |
| Uranium-234 | U | 0.0123 | pCi/L | 0.05 | 0.11 | 0.24 | RL-7128 |
| Uranium-238 | U | 0.0668 | pCi/L | 0.05 | 0.12 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Acenaphthylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benz(a)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(a)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(b)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(ghi)perylene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Benzo(k)fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Chrysene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluoranthene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Fluorene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Naphthalene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Phenanthrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| Pyrene | U | 4.8 | ug/L | | | 4.8 | SW846-8270 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 5 | ug/L | | | 5 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-K015A2070 Surface Water OU - Outfall 015 Activity 2 EU07 AND

### OF15B-07-01TB

Collected: 7/28/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-K015A2091 Surface Water OU - Outfall 015 Activity 2 EU09 AND

### OF15B-10-01TB

Collected: 7/22/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | JUX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

### OF15B-09-01TB

Collected: 7/27/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | UX | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | UX | 5 | ug/L | | | 5 | SW846-8260 |

## QC

## SWOU05-NSDDA101 Surface Water OU - NSDD Activity 1- EU1

### NSDDA-001FB

Collected: 7/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-018FB

Collected: 7/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA102 Surface Water OU - NSDD Activity 1- EU2

### NSDDA-029FB

Collected: 7/6/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-041FB

Collected: 7/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA103 Surface Water OU - NSDD Activity 1- EU3

### NSDDA-059FB

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-080FB

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

## QC

## SWOU05-NSDDA104 Surface Water OU - NSDD Activity 1- EU4

### NSDDA-081FB

Collected: 6/24/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

## QC

## SWOU05-NSDDA105 Surface Water OU - NSDD Activity 1- EU5

### NSDDA-104FB

Collected: 6/23/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

## QC

## SWOU05-NSDDA106 Surface Water OU - NSDD Activity 1- EU6

### NSDDA-123FB

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA107 Surface Water OU - NSDD Activity 1- EU7

### NSDDA-165FB

Collected: 6/28/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-145FB

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA108 Surface Water OU - NSDD Activity 1- EU8

### NSDDA-196FB

Collected: 6/24/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-219FB

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA109 Surface Water OU - NSDD Activity 1- EU9

### NSDDA-221FB

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

### NSDDA-240FB

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-NSDDA110 Surface Water OU - NSDD Activity 1- EU10

### NSDDA-243FB

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |

## QC

## SWOU05-NSDDA202 Surface Water OU - NSDD Activity 2- EU2

### NSDDB-02-01RI

Collected: 7/6/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.061 | pCi/L | 0.04 | 0.05 | 0.1 | RL-7128 |
| Alpha activity | U | 19.4 | pCi/L | 14.7 | 14.7 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0181 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 2.02 | pCi/L | 0.54 | 0.55 | 86.6 | RL-7111 |
| Cesium-137 | U | -16.9 | pCi/L | 33.8 | 33.8 | 20.3 | RL-7124 |
| Cobalt-60 | U | 1.32 | pCi/L | 2.64 | 13.9 | 24.4 | RL-7124 |
| Neptunium-237 | U | 0.031 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0059 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0167 | pCi/L | 0.02 | 0.03 | 0.06 | RL-7128 |
| Technetium-99 | U | 1.96 | pCi/L | 9.41 | 9.41 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0249 | pCi/L | 0.04 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.0429 | pCi/L | 0.06 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | -0.0131 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-NSDDA202 Surface Water OU - NSDD Activity 2- EU2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.254 | ug/L | 0.23 | 0.5 | 0.87 | RL-7128 |
| Uranium-234 | | 0.524 | pCi/L | 0.12 | 0.22 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.076 | pCi/L | 0.05 | 0.12 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA202 Surface Water OU - NSDD Activity 2- EU2

### NSDDB-02-01FB

Collected: 7/6/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.0289 | pCi/L | 0.04 | 0.05 | 0.1 | RL-7128 |
| Alpha activity | U | 4.23 | pCi/L | 4.23 | 4.23 | 59.1 | RL-7111 |
| Americium-241 | U | -0.0092 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Beta activity | U | -9.71 | pCi/L | 2.75 | 2.79 | 86.8 | RL-7111 |
| Cesium-137 | U | -23 | pCi/L | 45.9 | 45.9 | 18.2 | RL-7124 |
| Cobalt-60 | U | -6.1 | pCi/L | 12.2 | 14.1 | 25.3 | RL-7124 |
| Neptunium-237 | U | 0.031 | pCi/L | 0.03 | 0.07 | 0.17 | RL-7128 |
| Plutonium-238 | U | -0.0063 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0162 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 2.12 | pCi/L | 9.48 | 9.48 | 13.2 | RL-7116 |
| Thorium-228 | U | -0.0317 | pCi/L | 0.04 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.178 | pCi/L | 0.1 | 0.58 | 1.36 | RL-7128 |
| Thorium-232 | U | -0.0158 | pCi/L | 0.01 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-NSDDA202 Surface Water OU - NSDD Activity 2- EU2

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0477 | ug/L | 0.08 | 0.51 | 0.87 | RL-7128 |
| Uranium-234 | | 0.437 | pCi/L | 0.11 | 0.21 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.0115 | pCi/L | 0.04 | 0.12 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA204 Surface Water OU - NSDD Activity 2- EU4

### NSDDB-04-01RI

Collected: 6/24/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0049 | pCi/L | 0 | 0.04 | 0.11 | RL-7128 |
| Alpha activity | U | -3.09 | pCi/L | 3.56 | 3.57 | 59 | RL-7111 |
| Americium-241 | U | 0.0126 | pCi/L | 0.04 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 27.7 | pCi/L | 6.83 | 6.96 | 86.5 | RL-7111 |
| Cesium-137 | U | -9.46 | pCi/L | 18.9 | 18.9 | 20.8 | RL-7124 |
| Cobalt-60 | U | 7.29 | pCi/L | 14.6 | 15.7 | 32.1 | RL-7124 |
| Neptunium-237 | U | 0.0349 | pCi/L | 0.03 | 0.07 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0294 | pCi/L | 0.01 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | -0.0118 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 1.44 | pCi/L | 14.4 | 14.4 | 19.8 | RL-7116 |
| Thorium-228 | U | -0.0205 | pCi/L | 0.02 | 0.27 | 0.66 | RL-7128 |
| Thorium-230 | U | -0.0004 | pCi/L | 0.05 | 0.57 | 1.36 | RL-7128 |
| Thorium-232 | U | 0.0115 | pCi/L | 0.04 | 0.1 | 0.24 | RL-7128 |

## QC

## SWOU05-NSDDA204 Surface Water OU - NSDD Activity 2- EU4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0246 | ug/L | 0.07 | 0.48 | 0.89 | RL-7128 |
| Uranium-234 | U | -0.0258 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0075 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |

# Paducah-OREIS Data Report

## QC

## SWOU05-NSDDA204 Surface Water OU - NSDD Activity 2- EU4

### NSDDB-04-01FB

Collected: 6/24/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0042 | pCi/L | 0.03 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | -0.176 | pCi/L | 0.2 | 0.2 | 59.1 | RL-7111 |
| Americium-241 | U | 0.0979 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | -26.1 | pCi/L | 7.97 | 8.07 | 86.8 | RL-7111 |
| Cesium-137 | U | -10.7 | pCi/L | 21.4 | 21.4 | 20.6 | RL-7124 |
| Cobalt-60 | U | -2.99 | pCi/L | 5.98 | 12.3 | 23.3 | RL-7124 |
| Neptunium-237 | U | 0.0071 | pCi/L | 0.03 | 0.07 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.0408 | pCi/L | 0.03 | 0.07 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.00532 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 7.55 | pCi/L | 14.3 | 14.3 | 19.8 | RL-7116 |
| Thorium-228 | UT | -0.0275 | pCi/L | 0 | 0.39 | 0.76 | RL-7128 |
| Thorium-230 | UT | -0.166 | pCi/L | 0.23 | 0.62 | 1.47 | RL-7128 |
| Thorium-232 | UT | -0.002 | pCi/L | 0.09 | 0.13 | 0.39 | RL-7128 |

***QUALIFIER Codes** See attached List.

## QC

## SWOU05-NSDDA204 Surface Water OU - NSDD Activity 2- EU4

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.02 | ug/L | 0.05 | 0.55 | 0.89 | RL-7128 |
| Uranium-234 | U | -0.0103 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0061 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA205 Surface Water OU - NSDD Activity 2- EU5

### NSDDB-05-01RI

Collected: 6/23/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0049 | pCi/L | 0 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | 30.6 | pCi/L | 20.4 | 20.5 | 61.2 | RL-7111 |
| Americium-241 | U | 0.0987 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 14.1 | pCi/L | 3.65 | 3.72 | 89.2 | RL-7111 |
| Cesium-137 | U | 7.02 | pCi/L | 14 | 14 | 22.7 | RL-7124 |
| Cobalt-60 | U | 9.37 | pCi/L | 18.7 | 18.7 | 26.3 | RL-7124 |
| Neptunium-237 | U | 0.013 | pCi/L | 0.04 | 0.07 | 0.17 | RL-7128 |
| Plutonium-238 | U | 0.00541 | pCi/L | 0.02 | 0.06 | 0.15 | RL-7128 |
| Plutonium-239/240 | U | 0.0228 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 8.84 | pCi/L | 9.74 | 9.74 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0341 | pCi/L | 0.05 | 0.28 | 0.67 | RL-7128 |
| Thorium-230 | U | 0.131 | pCi/L | 0.12 | 0.58 | 1.38 | RL-7128 |
| Thorium-232 | U | -0.0384 | pCi/L | 0.05 | 0.11 | 0.26 | RL-7128 |

## QC

## SWOU05-NSDDA205 Surface Water OU - NSDD Activity 2- EU5

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0855 | ug/L | 0.2 | 10.3 | 0.87 | RL-7128 |
| Uranium-234 | U | -0.0014 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.028 | pCi/L | 0.02 | 0.11 | 0.27 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA205 Surface Water OU - NSDD Activity 2- EU5

### NSDDB-05-01FB

Collected: 6/23/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00428 | pCi/L | 0.03 | 0.05 | 0.1 | RL-7128 |
| Alpha activity | U | 1.7 | pCi/L | 1.7 | 1.71 | 61.2 | RL-7111 |
| Americium-241 | U | 0.00618 | pCi/L | 0.02 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 50.3 | pCi/L | 11.6 | 11.9 | 89.2 | RL-7111 |
| Cesium-137 | U | -22.8 | pCi/L | 45.7 | 45.7 | 18.8 | RL-7124 |
| Cobalt-60 | U | -3.36 | pCi/L | 6.71 | 10.7 | 20.1 | RL-7124 |
| Neptunium-237 | U | -0.0168 | pCi/L | 0.04 | 0.07 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0241 | pCi/L | 0 | 0.08 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | 0.0179 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | -1.55 | pCi/L | 9.5 | 9.5 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0087 | pCi/L | 0.06 | 0.28 | 0.67 | RL-7128 |
| Thorium-230 | U | 0.0649 | pCi/L | 0.12 | 0.58 | 1.37 | RL-7128 |
| Thorium-232 | U | -0.0372 | pCi/L | 0.03 | 0.1 | 0.26 | RL-7128 |

## QC

## SWOU05-NSDDA205 Surface Water OU - NSDD Activity 2- EU5

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.0012 | ug/L | 0.0036 | 0.53 | 0.88 | RL-7128 |
| Uranium-234 | U | -0.0323 | pCi/L | 0.03 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0003 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA206 Surface Water OU - NSDD Activity 2- EU6

### NSDDB-06-01RI

Collected: 6/23/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0132 | pCi/L | 0.01 | 0.03 | 0.11 | RL-7128 |
| Alpha activity | U | 13.4 | pCi/L | 10.9 | 10.9 | 61.2 | RL-7111 |
| Americium-241 | U | 0.0317 | pCi/L | 0.03 | 0.06 | 0.13 | RL-7128 |
| Beta activity | U | 33.5 | pCi/L | 8.12 | 8.29 | 89.4 | RL-7111 |
| Cesium-137 | U | -5.48 | pCi/L | 11 | 15.6 | 22.1 | RL-7124 |
| Cobalt-60 | U | 12.5 | pCi/L | 25.1 | 25.1 | 29.1 | RL-7124 |
| Neptunium-237 | U | 0.0196 | pCi/L | 0.03 | 0.07 | 0.18 | RL-7128 |
| Plutonium-238 | U | -0.0236 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | -0.0062 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 5.52 | pCi/L | 9.73 | 9.74 | 13.2 | RL-7116 |
| Thorium-228 | U | 0.0496 | pCi/L | 0.08 | 0.28 | 0.69 | RL-7128 |
| Thorium-230 | U | -0.0364 | pCi/L | 0.08 | 0.58 | 1.39 | RL-7128 |
| Thorium-232 | U | -0.0615 | pCi/L | 0.07 | 0.12 | 0.28 | RL-7128 |

## QC

## SWOU05-NSDDA206 Surface Water OU - NSDD Activity 2- EU6

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0254 | ug/L | 0.07 | 0.47 | 0.9 | RL-7128 |
| Uranium-234 | U | -0.0374 | pCi/L | 0.05 | 0.16 | 0.39 | RL-7128 |
| Uranium-238 | U | -0.0065 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA206 Surface Water OU - NSDD Activity 2- EU6

### NSDDB-06-01FB

Collected: 6/23/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.0049 | pCi/L | 0 | 0.04 | 0.11 | RL-7128 |
| Alpha activity | U | -7.19 | pCi/L | 10.2 | 10.2 | 61.1 | RL-7111 |
| Americium-241 | U | 0.0673 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | 2.06 | pCi/L | 0.55 | 0.56 | 88.7 | RL-7111 |
| Cesium-137 | U | -5.51 | pCi/L | 11 | 15.4 | 21.4 | RL-7124 |
| Cobalt-60 | U | -2.89 | pCi/L | 5.78 | 12.4 | 20.1 | RL-7124 |
| Neptunium-237 | U | 0.00672 | pCi/L | 0.02 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.00070 | pCi/L | 0.02 | 0.06 | 0.16 | RL-7128 |
| Plutonium-239/240 | U | 0.0122 | pCi/L | 0.02 | 0.03 | 0.07 | RL-7128 |
| Technetium-99 | U | 3.37 | pCi/L | 9.66 | 9.66 | 13.2 | RL-7116 |
| Thorium-228 | UT | -0.0543 | pCi/L | 0.09 | 0.29 | 0.73 | RL-7128 |
| Thorium-230 | UT | 0.171 | pCi/L | 0.25 | 0.63 | 1.44 | RL-7128 |
| Thorium-232 | UT | 0.0593 | pCi/L | 0.18 | 0.2 | 0.35 | RL-7128 |

## QC

## SWOU05-NSDDA206 Surface Water OU - NSDD Activity 2- EU6

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0626 | ug/L | 0.21 | 0.74 | 0.89 | RL-7128 |
| Uranium-234 | U | -0.0453 | pCi/L | 0.04 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0203 | pCi/L | 0.02 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | U | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | U | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA207 Surface Water OU - NSDD Activity 2- EU7

### NSDDB-07-01RI

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | -0.004 | pCi/L | 0.02 | 0.03 | 0.1 | RL-7128 |
| Alpha activity | U | -2.96 | pCi/L | 3.42 | 3.42 | 59.1 | RL-7111 |
| Americium-241 | U | 0.116 | pCi/L | 0.06 | 0.08 | 0.13 | RL-7128 |
| Beta activity | U | 25.5 | pCi/L | 6.32 | 6.44 | 86.8 | RL-7111 |
| Cesium-137 | U | -11.2 | pCi/L | 22.4 | 22.4 | 21 | RL-7124 |
| Cobalt-60 | U | 18.8 | pCi/L | 37.6 | 37.6 | 32.6 | RL-7124 |
| Neptunium-237 | U | 0.00025 | pCi/L | 0.01 | 0.06 | 0.18 | RL-7128 |
| Plutonium-238 | U | 0.0364 | pCi/L | 0.03 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | -0.002 | pCi/L | 0.01 | 0.02 | 0.07 | RL-7128 |
| Technetium-99 | U | -1.36 | pCi/L | 9.79 | 9.79 | 1.38 | RL-7116 |
| Thorium-228 | U | 0.0471 | pCi/L | 0.04 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.27 | pCi/L | 0.1 | 0.58 | 1.35 | RL-7128 |
| Thorium-232 | U | 0.00679 | pCi/L | 0.02 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-NSDDA207 Surface Water OU - NSDD Activity 2- EU7

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.106 | ug/L | 0.36 | 1.92 | 0.88 | RL-7128 |
| Uranium-234 | U | -0.011 | pCi/L | 0.05 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0349 | pCi/L | 0.01 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA207 Surface Water OU - NSDD Activity 2- EU7

### NSDDB-07-01FB

Collected: 6/29/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | BJNU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | UX | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | BU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | BJU | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | BU | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | UW | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | NU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | UX | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | BU | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | U | 0.00403 | pCi/L | 0.02 | 0.04 | 0.1 | RL-7128 |
| Alpha activity | U | -11.9 | pCi/L | 23.8 | 23.8 | 59.1 | RL-7111 |
| Americium-241 | U | 0.087 | pCi/L | 0.05 | 0.07 | 0.13 | RL-7128 |
| Beta activity | U | -5.01 | pCi/L | 1.39 | 1.41 | 86.6 | RL-7111 |
| Cesium-137 | U | -13 | pCi/L | 26 | 26 | 21.2 | RL-7124 |
| Cobalt-60 | U | 2.08 | pCi/L | 4.15 | 12.1 | 24.8 | RL-7124 |
| Neptunium-237 | U | 0.0244 | pCi/L | 0.03 | 0.06 | 0.17 | RL-7128 |
| Plutonium-238 | U | 0.0111 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.0398 | pCi/L | 0.03 | 0.04 | 0.06 | RL-7128 |
| Technetium-99 | U | -9.94 | pCi/L | 9.72 | 9.72 | 13.8 | RL-7116 |
| Thorium-228 | U | 0.0288 | pCi/L | 0.04 | 0.28 | 0.66 | RL-7128 |
| Thorium-230 | U | 0.0449 | pCi/L | 0.07 | 0.57 | 1.35 | RL-7128 |
| Thorium-232 | U | 0.00593 | pCi/L | 0.03 | 0.09 | 0.23 | RL-7128 |

## QC

## SWOU05-NSDDA207 Surface Water OU - NSDD Activity 2- EU7

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | -0.0997 | ug/L | 0.29 | 1.17 | 0.88 | RL-7128 |
| Uranium-234 | U | 0.0413 | pCi/L | 0.06 | 0.16 | 0.38 | RL-7128 |
| Uranium-238 | U | -0.0342 | pCi/L | 0.03 | 0.11 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |

# Paducah-OREIS Data Report

## QC

## SWOU05-NSDDA208 Surface Water OU - NSDD Activity 2- EU8

### NSDDB-08-07RI

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | JU | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | | 0.165 | pCi/L | 0.07 | 0.08 | 0.09 | RL-7128 |
| Alpha activity | U | 23.3 | pCi/L | 16.5 | 16.6 | 59.1 | RL-7111 |
| Americium-241 | U | -0.0097 | pCi/L | 0.02 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 27.8 | pCi/L | 6.85 | 6.99 | 86.8 | RL-7111 |
| Cesium-137 | U | -7.23 | pCi/L | 14.5 | 16.5 | 23.3 | RL-7124 |
| Cobalt-60 | U | 6.92 | pCi/L | 13.8 | 13.8 | 25.1 | RL-7124 |
| Neptunium-237 | U | 0.0249 | pCi/L | 0.03 | 0.07 | 0.16 | RL-7128 |
| Plutonium-238 | U | 0.00565 | pCi/L | 0.02 | 0.06 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00996 | pCi/L | 0.02 | 0.02 | 0.06 | RL-7128 |
| Technetium-99 | U | 11.8 | pCi/L | 14.4 | 14.5 | 19.8 | RL-7116 |
| Thorium-228 | UT | 0.0892 | pCi/L | 0.09 | 0.29 | 0.7 | RL-7128 |
| Thorium-230 | UT | 0.142 | pCi/L | 0.14 | 0.59 | 1.39 | RL-7128 |
| Thorium-232 | UT | 0.0119 | pCi/L | 0.06 | 0.11 | 0.3 | RL-7128 |

***QUALIFIER Codes** See attached List.

## QC

## SWOU05-NSDDA208 Surface Water OU - NSDD Activity 2- EU8

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.771 | ug/L | 0.42 | 0.67 | 0.88 | RL-7128 |
| Uranium-234 | | 1.67 | pCi/L | 0.2 | 0.4 | 0.38 | RL-7128 |
| Uranium-238 | U | 0.233 | pCi/L | 0.08 | 0.15 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |

## QC

## SWOU05-NSDDA208 Surface Water OU - NSDD Activity 2- EU8

### NSDDB-08-07FB

Collected: 6/27/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **METAL** | | | | | | | |
| Aluminum | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Antimony | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Arsenic | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Barium | BU | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Beryllium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Cadmium | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Calcium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Chromium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Cobalt | U | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Copper | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Iron | U | 0.1 | mg/L | | | 0.1 | SW846-6010A |
| Lead | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Magnesium | U | 0.025 | mg/L | | | 0.02 | SW846-6010A |
| Manganese | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Mercury | U | 0.0002 | mg/L | | | 0.0002 | SW846-7470 |
| Molybdenum | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Nickel | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Potassium | U | 0.2 | mg/L | | | 0.2 | SW846-6010A |
| Selenium | U | 0.005 | mg/L | | | 0.005 | SW846-6020 |
| Silver | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Sodium | U | 1 | mg/L | | | 1 | SW846-6010A |
| Thallium | U | 0.002 | mg/L | | | 0.002 | SW846-6020 |
| Uranium | BU | 0.001 | mg/L | | | 0.001 | SW846-6020 |
| Vanadium | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| Zinc | U | 0.02 | mg/L | | | 0.02 | SW846-6020 |
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Activity of U-235 | | 0.112 | pCi/L | 0.06 | 0.07 | 0.09 | RL-7128 |
| Alpha activity | U | -1.7 | pCi/L | 1.96 | 1.96 | 59.1 | RL-7111 |
| Americium-241 | U | -0.0035 | pCi/L | 0.01 | 0.05 | 0.13 | RL-7128 |
| Beta activity | U | 2.02 | pCi/L | 0.54 | 0.55 | 87 | RL-7111 |
| Cesium-137 | U | -12.5 | pCi/L | 24.9 | 24.9 | 20.6 | RL-7124 |
| Cobalt-60 | U | -7.88 | pCi/L | 15.8 | 15.8 | 20.7 | RL-7124 |
| Neptunium-237 | U | -0.0154 | pCi/L | 0.04 | 0.07 | 0.2 | RL-7128 |
| Plutonium-238 | U | -0.0012 | pCi/L | 0.02 | 0.05 | 0.14 | RL-7128 |
| Plutonium-239/240 | U | 0.00959 | pCi/L | 0.02 | 0.03 | 0.09 | RL-7128 |
| Technetium-99 | U | 3.05 | pCi/L | 14.2 | 14.2 | 19.8 | RL-7116 |
| Thorium-228 | UT | -0.102 | pCi/L | 0.08 | 0.29 | 0.73 | RL-7128 |
| Thorium-230 | UT | 0.254 | pCi/L | 0.21 | 0.61 | 1.42 | RL-7128 |
| Thorium-232 | UT | 0.099 | pCi/L | 0.1 | 0.14 | 0.36 | RL-7128 |

***QUALIFIER Codes** See attached List.

## QC

## SWOU05-NSDDA208 Surface Water OU - NSDD Activity 2- EU8

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Uranium | U | 0.405 | ug/L | 0.28 | 0.54 | 0.88 | RL-7128 |
| Uranium-234 | | 2.03 | pCi/L | 0.22 | 0.46 | 0.37 | RL-7128 |
| Uranium-238 | U | 0.119 | pCi/L | 0.07 | 0.13 | 0.28 | RL-7128 |
| **SVOA** | | | | | | | |
| Acenaphthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Acenaphthylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benz(a)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(a)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(b)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(ghi)perylene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Benzo(k)fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Chrysene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Dibenz(a,h)anthracene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluoranthene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Fluorene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Indeno(1,2,3-cd)pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Naphthalene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Phenanthrene | JU | 5 | ug/L | | | 5 | SW846-8270 |
| Pyrene | JU | 5 | ug/L | | | 5 | SW846-8270 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS1BW1 SWOU Storm Water Biweekly Sampling Step 1

**W333-010101TB**

Collected: 7/19/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

## QC

## SWOU05-SS1BW2 SWOU Storm Water Biweekly Sampling Step 1

### W337-06-01-02TB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

### W337-06-01-02FB

Collected: 8/2/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | U | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | U | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | U | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | U | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | U | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | U | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | U | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | U | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Uranium | U | 0.0247 | ug/L | 0.07 | 0.32 | 0.86 | RL-7128 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS1BW3 SWOU Storm Water Biweekly Sampling Step 1

**W333-01-01-03TB**

Collected: 8/23/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS1BW4 SWOU Storm Water Biweekly Sampling Step 1

### W333-01-01-04TB

Collected: 8/31/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

## QC

## SWOU05-SS1BW5 SWOU Storm Water Biweekly Sampling Step 1

### W340-01-01-05TB

Collected: 9/21/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

### W340-01-01-05RI

Collected: 9/21/2005 Matrix: WATER Media Type: WQ Sample Type: RI

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Uranium | U | 0.0701 | ug/L | 0.16 | 0.45 | 0.87 | RL-7128 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

### W340-01-01-05FB

Collected: 9/21/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1221 | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| PCB-1232 | UY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UY | 0.18 | ug/L | | | 0.18 | SW846-8082 |
| **RADS** | | | | | | | |
| Uranium | U | 0.396 | ug/L | 0.82 | 1.12 | 0.87 | RL-7128 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS1BW6 SWOU Storm Water Biweekly Sampling Step 1

**W333-01-01-06TB**

Collected: 9/29/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

## QC

## SWOU05-SS2BW1 SWOU Storm Water Biweekly Sampling Step 2

### W340-05-02-01TB

Collected: 10/7/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

### W340-05-02-01FB

Collected: 10/7/2005 Matrix: WATER Media Type: WQ Sample Type: FB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **PPCB** | | | | | | | |
| PCB-1016 | UXY | 0.16 | ug/L | | | 0.16 | SW846-8082 |
| PCB-1221 | UXY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| PCB-1232 | UXY | 0.14 | ug/L | | | 0.14 | SW846-8082 |
| PCB-1242 | UXY | 0.1 | ug/L | | | 0.1 | SW846-8082 |
| PCB-1248 | UXY | 0.12 | ug/L | | | 0.12 | SW846-8082 |
| PCB-1254 | UXY | 0.07 | ug/L | | | 0.07 | SW846-8082 |
| PCB-1260 | UXY | 0.05 | ug/L | | | 0.05 | SW846-8082 |
| PCB-1268 | UXY | 0.09 | ug/L | | | 0.09 | SW846-8082 |
| Polychlorinated biphenyl | UXY | 0.17 | ug/L | | | 0.17 | SW846-8082 |
| **RADS** | | | | | | | |
| Uranium | U | 0.0284 | ug/L | 0.07 | 0.16 | 0.36 | RL-7128 |
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS2BW2 SWOU Storm Water Biweekly Sampling Step 2

### W340-05-02-02TB

Collected: 10/21/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |

# Paducah-OREIS Data Report

**QC**

## SWOU05-SS2BW3 SWOU Storm Water Biweekly Sampling Step 2

### TBW340-02-02-03

Collected: 11/4/2005 Matrix: WATER Media Type: WQ Sample Type: TB

| Analysis | Qualifiers* | Results | Units | Counting Error (+/-) | Total Propagated Uncertainty | Detect Limit | Method |
|---|---|---|---|---|---|---|---|
| **VOA** | | | | | | | |
| 1,1,1-Trichloroethane | U | 5 | ug/L | | | 5 | SW846-8260 |
| Trichloroethene | U | 1 | ug/L | | | 1 | SW846-8260 |