# APPENDIX A

## WATER-LEVEL ELEVATION DATABASE

Water-Level Elevation Database,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia.

| Well ID | Unit Monitored | Measuring Date | M.P. *Elevation | Depth to Water (feet) | Depth to Product (feet) | Oil Thickness (feet) | Groundwater *Elevation | Comment |
|---|---|---|---|---|---|---|---|---|
| MW-1 | UA | 2/26/96 | 419.32 | 6.45 | | | 412.87 | |
| MW-1 | UA | 6/17/96 | 419.32 | 8.07 | | | 411.25 | |
| MW-1 | UA | 12/13/96 | 419.32 | 4.32 | | | 415 | |
| MW-1 | UA | 2/10/97 | 419.32 | 7.64 | | | 411.68 | |
| MW-1 | UA | 9/9/97 | 419.32 | 8.2 | | | 411.12 | |
| MW-1A | LA | 2/26/96 | 419.02 | 6.17 | | | 412.85 | |
| MW-1A | LA | 6/17/96 | 419.02 | 7.77 | | | 411.25 | |
| MW-1A | LA | 12/13/96 | 419.02 | 4.08 | | | 414.94 | |
| MW-1A | LA | 2/10/97 | 419.02 | 7.3 | | | 411.72 | |
| MW-1A | LA | 9/9/97 | 419.02 | 7.93 | | | 411.09 | |
| GM-1T | PF | 2/26/96 | | 14.77 | | | | No MPELEV |
| GM-1T | PF | 6/17/96 | | | | | | Destroyed |
| MW-2A | LA/FP | 2/26/96 | 442.39 | 29.94 | | | 412.45 | |
| MW-2A | LA/FP | 6/17/96 | 442.39 | 30.99 | | | 411.4 | |
| MW-2A | LA/FP | 12/13/96 | 442.39 | 29.33 | | | 413.06 | |
| MW-2A | LA/FP | 2/10/97 | 442.39 | 30.85 | | | 411.54 | |
| MW-2A | LA/FP | 9/9/97 | 442.39 | 31.43 | | | 410.96 | |
| GM-2T | PF | 2/26/96 | | 14.81 | | | | No MPELEV |
| GM-2T | PF | 6/17/96 | | 15.07 | | | | No MPELEV |
| GM-2T | PF | 12/13/96 | | 15.83 | | | | No MPELEV |
| GM-2T | PF | 2/10/97 | | 15.79 | | | | No MPELEV |
| GM-2T | PF | 9/9/97 | | NM | | | | No MPELEV |
| GM-3T | PF | 2/26/96 | | 16.05 | | | | No MPELEV |
| GM-3T | PF | 6/17/96 | | 16.34 | | | | No MPELEV |
| GM-3T | PF | 12/13/96 | | 16.82 | | | | No MPELEV |
| GM-3T | PF | 2/10/97 | | 16.85 | 16.81 | 0.04 | | No MPELEV |
| GM-3T | PF | 9/9/97 | | 17.09 | 17.07 | 0.02 | | No MPELEV |
| OR-1 | RIVER | 2/26/96 | 419.55 | 6.83 | | | 412.72 | |
| OR-1 | RIVER | 6/17/96 | 419.55 | 8.40 | | | 411.15 | |
| OR-1 | RIVER | 12/13/96 | 419.55 | 4.58 | | | 414.97 | |
| OR-1 | RIVER | 2/10/97 | 419.55 | 8.03 | | | 411.52 | |
| OR-1 | RIVER | 9/9/97 | 419.55 | 8.47 | | | 411.08 | |
| OR-2 | RIVER | 2/26/96 | 442.94 | 30.8 | | | 412.14 | |
| OR-2 | RIVER | 6/17/96 | 442.94 | 32.29 | | | 410.65 | |
| OR-2 | RIVER | 12/13/96 | 442.94 | 28.63 | | | 414.31 | |
| OR-2 | RIVER | 2/10/97 | 442.94 | 31.91 | | | 411.03 | |
| OR-2 | RIVER | 9/9/97 | 442.94 | 32.2 | | | 410.74 | |
| P-1 | UA | 2/26/96 | 451.08 | 37.36 | | | 413.72 | |
| P-1 | UA | 6/17/96 | 451.08 | 38.47 | | | 412.61 | |
| P-1 | UA | 12/13/96 | 451.08 | 36.5 | | | 414.58 | |
| P-1 | UA | 2/10/97 | 451.08 | 38.45 | | | 412.63 | |
| P-1 | UA | 9/9/97 | 451.08 | 39.09 | | | 411.99 | |
| P-2 | UA | 2/26/96 | 456.15 | 42.51 | | | 413.64 | |
| P-2 | UA | 6/17/96 | 456.15 | 44.04 | | | 412.11 | |
| P-2 | UA | 12/13/96 | 456.15 | 41.1 | | | 415.05 | |

Water-Level Elevation Database,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia.

| Well ID | Unit Monitored | Measuring Date | M.P. *Elevation | Depth to Water (feet) | Depth to Product (feet) | Oil Thickness (feet) | Groundwater *Elevation | Comment |
|---|---|---|---|---|---|---|---|---|
| P-2 | UA | 2/10/97 | 456.15 | 43.77 | | | 412.38 | |
| P-2 | UA | 9/9/97 | 456.15 | 44.39 | | | 411.76 | |
| PDA-1 | UA/FP | 2/26/96 | 495.32 | 40.81 | | | 454.51 | |
| PDA-1 | UA/FP | 6/17/96 | 495.32 | 39.07 | | | 456.25 | |
| PDA-1 | UA/FP | 8/15/96 | 495.32 | 40.16 | | | 455.16 | |
| PDA-1 | UA/FP | 12/13/96 | 495.32 | 41.21 | | | 454.11 | |
| PDA-1 | UA/FP | 2/10/97 | 495.32 | 40.41 | | | 454.91 | |
| PDA-1 | UA/FP | 9/9/97 | 495.32 | 41.36 | | | 453.96 | |
| PDA-2 | UA/FP | 2/26/96 | 442.39 | 25.1 | | | 417.29 | |
| PDA-2 | UA/FP | 6/17/96 | 442.39 | 25.70 | | | 416.69 | |
| PDA-2 | UA/FP | 8/15/96 | 442.39 | 26.42 | | | 415.97 | |
| PDA-2 | UA/FP | 12/13/96 | 442.39 | 25.32 | | | 417.07 | |
| PDA-2 | UA/FP | 2/10/97 | 442.39 | 26.41 | | | 415.98 | |
| PDA-2 | UA/FP | 9/9/97 | 442.39 | 27.34 | | | 415.05 | |
| PDA-3 | UA/FP | 2/26/96 | 441.95 | 24.91 | | | 417.04 | |
| PDA-3 | UA/FP | 6/17/96 | 441.95 | 25.55 | | | 416.4 | |
| PDA-3 | UA/FP | 8/15/96 | 441.95 | 26.36 | | | 415.59 | |
| PDA-3 | UA/FP | 12/13/96 | 441.95 | 24.98 | | | 416.97 | |
| PDA-3 | UA/FP | 2/10/97 | 441.95 | 26.17 | | | 415.78 | |
| PDA-3 | UA/FP | 9/9/97 | 441.95 | 27.12 | | | 414.83 | |
| PDA-4 | UA/FP | 2/26/96 | 442.96 | 25.05 | | | 417.91 | |
| PDA-4 | UA/FP | 6/17/96 | 442.96 | 25.57 | | | 417.39 | |
| PDA-4 | UA/FP | 8/15/96 | 442.96 | 26.49 | | | 416.47 | |
| PDA-4 | UA/FP | 12/13/96 | 442.96 | 25.7 | | | 417.26 | |
| PDA-4 | UA/FP | 2/10/97 | 442.96 | 26.41 | | | 416.55 | |
| PDA-4 | UA/FP | 9/9/97 | 442.96 | 27.44 | | | 415.52 | |
| R-210 | LA | 2/26/96 | 446 | 32.49 | | | 413.51 | |
| R-210 | LA | 6/17/96 | 446 | 34.10 | | | 411.9 | |
| R-210 | LA | 8/15/96 | 446 | 34.24 | | | 411.76 | |
| R-210 | LA | 12/13/96 | 446 | 30.87 | | | 415.13 | |
| R-210 | LA | 2/10/97 | 446 | 33.69 | | | 412.31 | |
| R-210 | LA | 9/9/97 | 446 | 34.3 | | | 411.7 | |
| R-310 | BR | 2/26/96 | 446.12 | 32.1 | | | 414.02 | |
| R-310 | BR | 6/17/96 | 446.12 | 33.99 | | | 412.13 | |
| R-310 | BR | 12/13/96 | 446.12 | 31.81 | | | 414.31 | |
| R-310 | BR | 2/10/97 | 446.12 | 33.35 | | | 412.77 | |
| R-310 | BR | 9/9/97 | 446.12 | 34.42 | | | 411.7 | |
| RSA-1 | UA/FP | 2/26/96 | 496.04 | 45.05 | | | 450.99 | |
| RSA-1 | UA/FP | 6/17/96 | 496.04 | 43.54 | | | 452.5 | |
| RSA-1 | UA/FP | 8/15/96 | 496.04 | 44.01 | | | 452.03 | |
| RSA-1 | UA/FP | 12/13/96 | 496.04 | 45.15 | | | 450.89 | |
| RSA-1 | UA/FP | 2/10/97 | 496.04 | 44.88 | | | 451.16 | |
| RSA-1 | UA/FP | 9/9/97 | 496.04 | 44.87 | | | 451.17 | |
| RSA-2 | UA/FP | 2/26/96 | 443.81 | 25.36 | | | 418.45 | |
| RSA-2 | UA/FP | 6/17/96 | 443.81 | 25.97 | | | 417.84 | |

Water-Level Elevation Database,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia.

| Well ID | Unit Monitored | Measuring Date | M.P. *Elevation | Depth to Water (feet) | Depth to Product (feet) | Oil Thickness (feet) | Groundwater *Elevation | Comment |
|---|---|---|---|---|---|---|---|---|
| RSA-2 | UA/FP | 8/15/96 | 443.81 | 26.92 | | | 416.89 | |
| RSA-2 | UA/FP | 12/13/96 | 443.81 | 26.19 | | | 417.62 | |
| RSA-2 | UA/FP | 2/10/97 | 443.81 | 26.92 | | | 416.89 | |
| RSA-2 | UA/FP | 9/9/97 | 443.81 | 27.9 | | | 415.91 | |
| RSA-3 | UA/FP | 2/26/96 | 442 | 24.53 | | | 417.47 | |
| RSA-3 | UA/FP | 6/17/96 | 442 | 25.09 | | | 416.91 | |
| RSA-3 | UA/FP | 8/15/96 | 442 | 26.11 | | | 415.89 | |
| RSA-3 | UA/FP | 12/13/96 | 442 | 25.62 | | | 416.38 | |
| RSA-3 | UA/FP | 2/10/97 | 442 | 26.29 | | | 415.71 | |
| RSA-3 | UA/FP | 9/9/97 | 442 | 27.17 | | | 414.83 | |
| RW-1 | PF | 2/26/96 | 442.98 | 11.07 | | | 431.91 | |
| RW-1 | PF | 6/17/96 | 442.98 | 10.78 | | | 432.2 | |
| RW-1 | PF | 12/13/96 | 442.98 | 11.26 | | | 431.72 | |
| RW-1 | PF | 2/10/97 | 442.98 | 11.03 | | | 431.95 | |
| RW-1 | PF | 9/9/97 | 442.98 | NM | | | NM | |
| RW-2 | PF | 2/26/96 | 442.98 | 10.55 | 10 | 0.55 | 432.9 | |
| RW-2 | PF | 6/17/96 | 442.98 | 9.93 | 9.66 | 0.27 | 433.28 | |
| RW-2 | PF | 12/13/96 | 442.98 | 10.89 | 10.7 | 0.19 | 432.25 | |
| RW-2 | PF | 2/10/97 | 442.98 | 10.66 | 10.61 | 0.05 | 432.36 | |
| RW-2 | PF | 9/9/97 | 442.98 | NM | | | NM | |
| SDB-1 | SWR | 2/26/96 | 490.2 | 54.08 | | | 436.12 | |
| SDB-1 | SWR | 6/17/96 | 490.2 | 53.66 | | | 436.54 | |
| SDB-1 | SWR | 8/15/96 | 490.2 | 54.3 | | | 435.9 | |
| SDB-1 | SWR | 12/13/96 | 490.2 | 54.32 | | | 435.88 | |
| SDB-1 | SWR | 2/10/97 | 490.2 | 54.14 | | | 436.06 | |
| SDB-1 | SWR | 9/17/97 | 490.2 | 54.48 | | | 435.72 | |
| SDB-2 | SWR | 2/26/96 | 488.18 | 55.08 | | | 433.1 | |
| SDB-2 | SWR | 6/17/96 | 488.18 | 55.08 | | | 433.1 | |
| SDB-2 | SWR | 12/13/96 | 488.18 | 55.34 | | | 432.84 | |
| SDB-2 | SWR | 2/10/97 | 488.18 | 55.19 | | | 432.99 | |
| SDB-2 | SWR | 9/9/97 | 488.18 | 55.44 | | | 432.74 | |
| SDB-3 | SWR | 2/26/96 | 488.94 | Dry, >41.6 | | | <447.34 | |
| SDB-3 | SWR | 6/17/96 | 488.94 | Dry, >41.6 | | | <447.34 | |
| SDB-3 | SWR | 12/13/96 | 488.94 | Dry, >41.6 | | | <447.34 | |
| SDB-3 | SWR | 2/10/97 | 488.94 | Dry, >41.6 | | | <447.34 | |
| SDB-3 | SWR | 9/9/97 | 488.94 | Dry, >41.6 | | | <447.34 | |
| SDB-4 | SWR | 2/26/96 | 488.58 | 51.93 | | | 436.65 | |
| SDB-4 | SWR | 6/17/96 | 488.58 | 51.98 | | | 436.6 | |
| SDB-4 | SWR | 8/15/96 | 488.58 | 52.23 | | | 436.35 | |
| SDB-4 | SWR | 12/13/96 | 488.58 | 52.21 | | | 436.37 | |
| SDB-4 | SWR | 2/10/97 | 488.58 | 51.99 | | | 436.59 | |
| SDB-4 | SWR | 9/17/97 | 488.58 | 52.25 | | | 436.33 | |
| SDB-5 | SWR | 2/26/96 | 488.67 | 48.2 | | | 440.47 | |
| SDB-5 | SWR | 6/17/96 | 488.67 | 48.37 | | | 440.3 | |
| SDB-5 | SWR | 12/13/96 | 488.67 | 48.32 | | | 440.35 | |

Water-Level Elevation Database,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia.

| Well ID | Unit Monitored | Measuring Date | M.P. *Elevation | Depth to Water (feet) | Depth to Product (feet) | Oil Thickness (feet) | Groundwater *Elevation | Comment |
|---|---|---|---|---|---|---|---|---|
| SDB-5 | SWR | 2/10/97 | 488.67 | 48.24 | | | 440.43 | |
| SDB-5 | SWR | 9/9/97 | 488.67 | Dry, >48.38 | | | <440.37 | |
| VA-1 | UA | 2/26/96 | 440.67 | 27.46 | | | 413.21 | |
| VA-1 | UA | 6/17/96 | 440.67 | 29.07 | | | 411.6 | |
| VA-1 | UA | 8/15/96 | 440.67 | 29.15 | | | 411.52 | |
| VA-1 | UA | 12/13/96 | 440.67 | 25.54 | | | 415.13 | |
| VA-1 | UA | 2/10/97 | 440.67 | 28.59 | | | 412.08 | |
| VA-1 | UA | 9/9/97 | 440.67 | 29.23 | | | 411.44 | |
| VA-1A | LA | 2/26/96 | 422.15 | 9.35 | | | 412.8 | Damaged |
| VA-1A | LA | 6/17/96 | 422.15 | 10.96 | | | 411.19 | |
| VA-1A | LA | 12/13/96 | 422.15 | 7.27 | | | 414.88 | |
| VA-1A | LA | 2/10/97 | 422.15 | 10.48 | | | 411.67 | |
| VA-1A | LA | 9/9/97 | 422.15 | 11.12 | | | 411.03 | |
| VA-2 | UA | 2/26/96 | 442 | 28.7 | | | 413.3 | |
| VA-2 | UA | 6/17/96 | 442 | 30.23 | | | 411.77 | |
| VA-2 | UA | 8/15/96 | 442 | 30.41 | | | 411.59 | |
| VA-2 | UA | 12/13/96 | 442 | 27.1 | | | 414.9 | |
| VA-2 | UA | 2/10/97 | 442 | 29.79 | | | 412.21 | |
| VA-2 | UA | 9/9/97 | 442 | 30.49 | | | 411.51 | |
| VA-3 | UA | 2/26/96 | 453.66 | 40.16 | | | 413.5 | |
| VA-3 | UA | 6/17/96 | 453.66 | 41.57 | | | 412.09 | |
| VA-3 | UA | 8/15/96 | 453.66 | 41.84 | | | 411.82 | |
| VA-3 | UA | 12/13/96 | 453.66 | 38.88 | | | 414.78 | |
| VA-3 | UA | 2/10/97 | 453.66 | 41.39 | | | 412.27 | |
| VA-3 | UA | 9/9/97 | 453.66 | 42.02 | | | 411.64 | |
| VP-2 | PF | 2/26/96 | | 12.72 | | | | No MPELEV |
| VP-2 | PF | 6/17/96 | | 12.83 | | | | No MPELEV |
| VP-2 | PF | 8/15/96 | | 14.56 | | | | No MPELEV |
| VP-2 | PF | 12/13/96 | | 14.6 | | | | No MPELEV |
| VP-2 | PF | 2/10/97 | | 14.6 | | | | No MPELEV |
| VP-2 | PF | 9/9/97 | | 14.63 | | | | No MPELEV |

UA: Upper Portion Alluvial Aquifer
LA: Lower Portion Alluvial Aquifer
SWR: Soil & Rock Rubble/Rock.
PS: Perched Zone, Silty Sand.
PF: Perched Zone, Fill.
FP: Fully Penetrating Well.
BR: Bedrock
NM: Not Measured.
MPELEV: Measuring Point Elevation.
M.P.: Measuring Point.
* : Elevation referenced to plant datum.

WPSC\FOLLANS\DOCC\APP\WAT-LEV.XLS

# APPENDIX B

## COG DRIP LEG INVENTORY

ARCADIS GERAGHTY&MILLER

COG Drip Leg Inventory,
Steubenville East Coke Plant,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia

| Number | COG Drip Leg Description | Location | Formerly Discharged to Ground? | SWMU I.D. |
|---|---|---|---|---|
| | | | | |
| 1 | Battery #1 Underfire | East of Coal Hopper | | |
| 2 | Final Cooler Inlet | South of Final Coolers | | |
| 3 | Benzol Scrubbers | Bottom of Both Scrubbers | | |
| 4 | #1 Fuel Gas Precipitator | On #1 Fuel Gas Precipitator | Yes | B-30 |
| 5 | Inlet to Fuel Gas Precipitators | South of Fuel Gas Precipitators | Yes | B-30 |
| 6 | #2 Fuel Gas Precipitators | On #2 Fuel Gas Precipitators | Yes | B-30 |
| 7-12 | Bottom Drains (2), Elephant Ears Drains (4) | Off of the Fuel Gas Precipitators | | |
| 13 | North Exhausters Inlet | North of Exhausters | | |
| 14 | South Exhausters Inlet | South of Exhausters/East of Barometric Condenser | | |
| 15-26 | Exhauster Drains (4 exhausters, 3@) | Exhauster Floor and Floor Below | | |
| 27 | Inlet to #1 Booster | Basement of Exhauster Building | | |
| 28-51 | Booster Steamouts (3 boosters, 8@) | Exhauster Floor | | |
| 52 | Low Pressure Gas Drip Downstream of Booster | Northeast Corner of Exhauster Building | | |
| 53 | High Pressure Gas Drip Downstream of Booster | 10' North of NE Corner of Exhauster Building | Yes | B-30 |
| 54 | Gas Holder Water Overflow | East Side of Gas Holder | | |
| 55 | Oil and Muck from Gas Holder | Southwest Side of Gas Holder | | |
| 56 | #1 Saturator Inlet | Northwest of Saturator #1 | | |
| 57 | #2 Saturator Inlet | Southwest of #2 Saturator | | |
| 58 | #1 and #2 Saturator Outlet | Southwest of #1 Saturator | | |
| 59-62 | Detarrer Drains (4) | Southeast Corner of Exhauster Building | | |
| 63 | Ammonia Vapor Inlet to Saturator | Northeast Corner of Salt Storage Building | Yes | B-30 |
| 64 | Desulf Drips | East of Saturators | | |
| 65 | #2 Battery Underfire | Northwest of Decanter | Yes | B-30 |
| 66 | #3 Battery Underfire | West of Decanter | Yes | B-30 |
| 67 | #3 Battery Underfire | Southwest of Decanter | Yes | B-30 |
| 68 | Boiler House Drip | West of Boiler House | Yes | C-20 |
| 69 | Sinter Plant Drip | East of Boiler House | Yes | H-12 |
| 70 | COG to Sinter Plant | Southeast of Reaction Chamber | Yes | B-30 |
| 71 | Acid Gas to Destructor Inlet | Southeast of Reaction Chamber | Yes | B-30 |

ARCADIS GERAGHTY&MILLER

COG Drip Leg Inventory,
Steubenville East Coke Plant,
Wheeling-Pittsburgh Steel Corporation,
Follansbee, West Virginia

| Number | COG Drip Leg Description | Location | Formerly Discharged to Ground? | SWMU I.D. |
|---|---|---|---|---|
| 72 | Bleeder Seal Drip | Southeast of Gas Holder | | |
| 73 | High Pressure Drip Before Bridge | East of Pipe Bridge | Yes | A-14 |
| 74 | Low Pressure Drip Before Bridge | East of Pipe Bridge | Yes | A-14 |
| 75 | #1 Primary Cooler Outlet | North of #1 Primary Cooler | | |
| 76 | #2 Primary Cooler Outlet | North of #2 Primary Cooler | | |
| 77 | Elbow Downstream of Primary Coolers | Northwest of Primary Cooler | | |
| 78 | Sinter Plant COG Supply Line Drip | West of Coke Plant Shower Room | Yes | E-4 |
| 79 | Sinter Plant COG Supply Line Drip | East of #8 Battery North Crossover | Yes | E-4 |
| 80 | Sinter Plant COG Supply Line Drip | East of #8 Battery Quench Station | Yes | E-4 |
| 81 | Sinter Plant COG Supply Line Drip | Northeast of Sinter Plant Shower Room | Yes | E-4 |
| 82 | Sinter Plant COG Supply Line Drip | East of C.U.R.D. North Ore Pile | Yes | E-4 |
| 83 | Sinter Plant COG Supply Line Drip | East of Sinter Plant Office | Yes | F-4 |
| 84 | Sinter Plant COG Supply Line Drip | East of Sinter Plant Office | Yes | F-4 |
| 85 | Sinter Plant COG Supply Line Drip | North of Sinter Plant Canteen | Yes | F-4 |

WPSC\FOLLANS\DOCC\TABLES\DRIP-LST.XLS

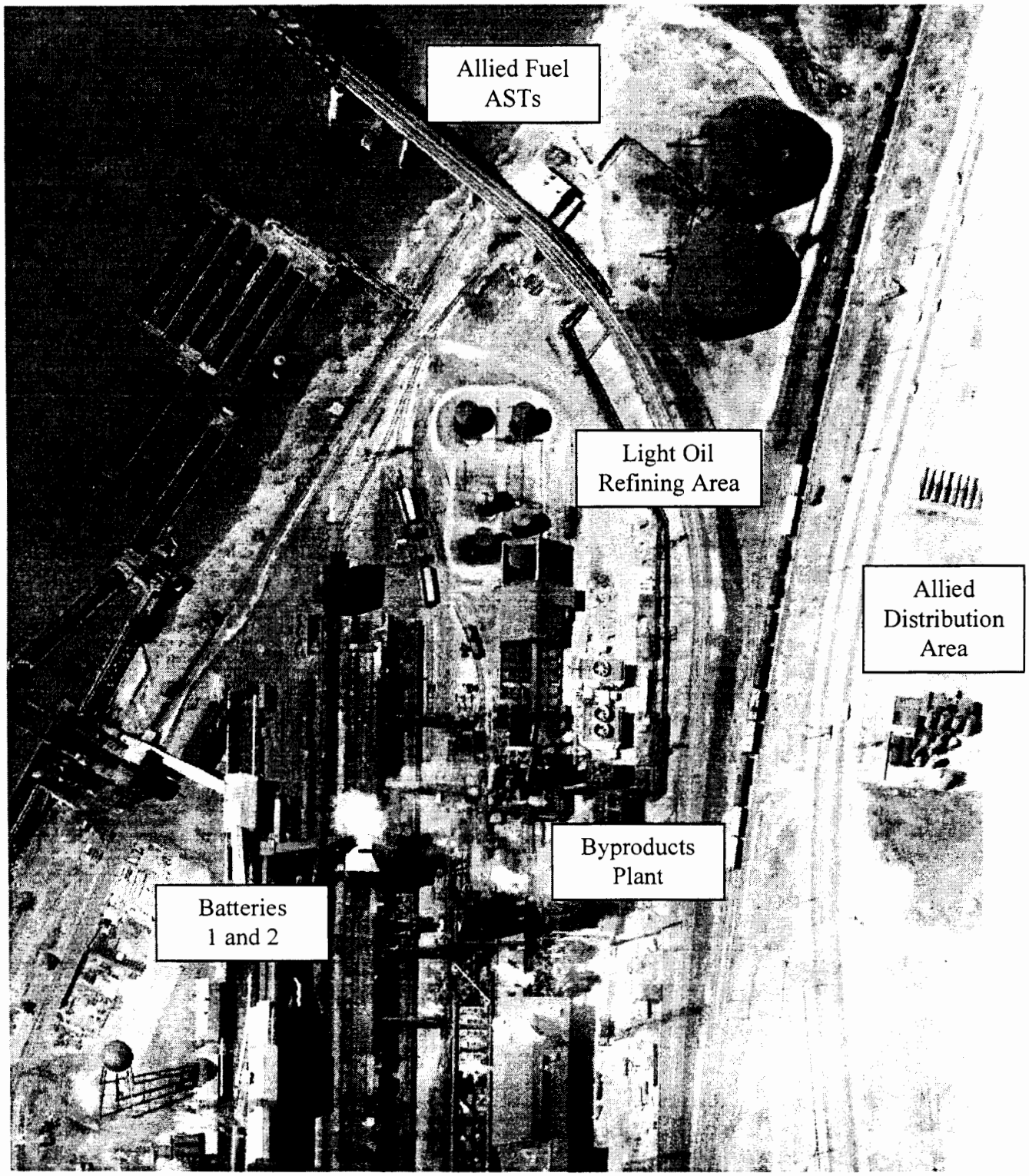
# APPENDIX C

## HISTORICAL AERIAL PHOTOGRAPHS

N

**1954 Aerial Photograph**
**Steubenville East Coke Plant**

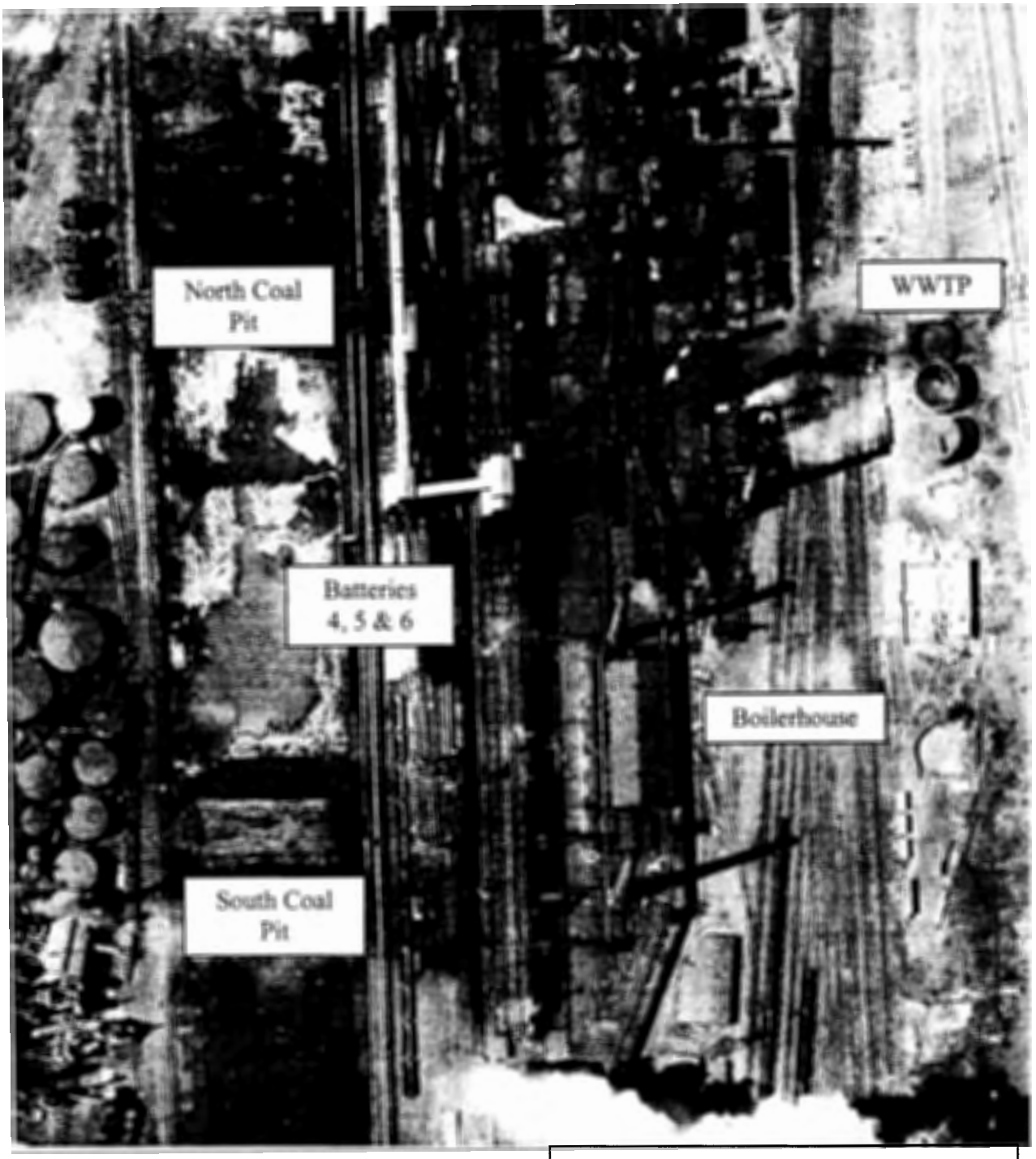
g:\prjcts\whelpit\photos\54aerial.ppt




N

**Early 1970s Aerial Photograph (No.1)**
**Steubenville East Coke Plant**

g:\prjcts\whelpit\photos\702#1aer.ppt




**Early 1970s Aerial Photograph (No.2)**
**Steubenville East Coke Plant**

N

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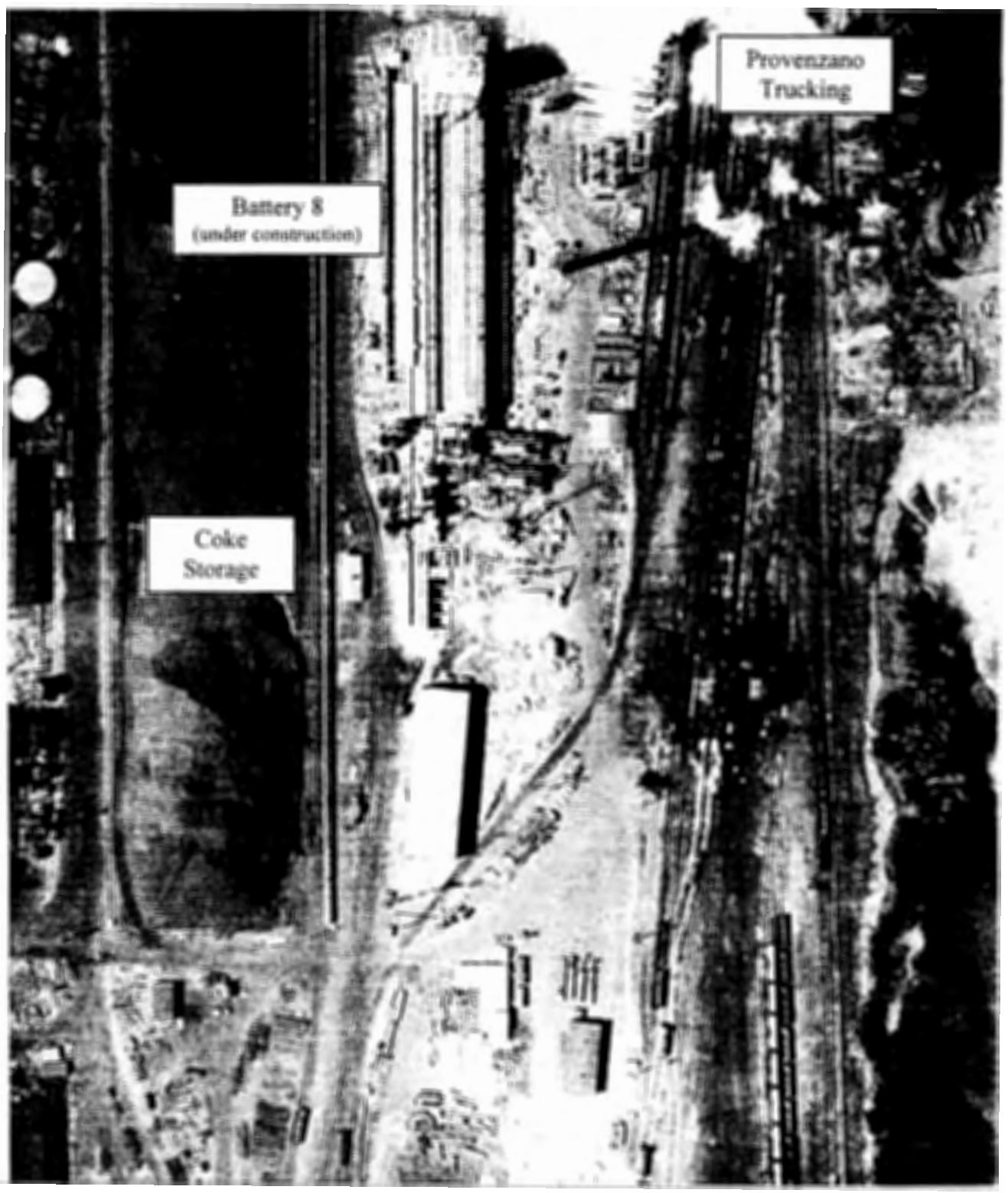
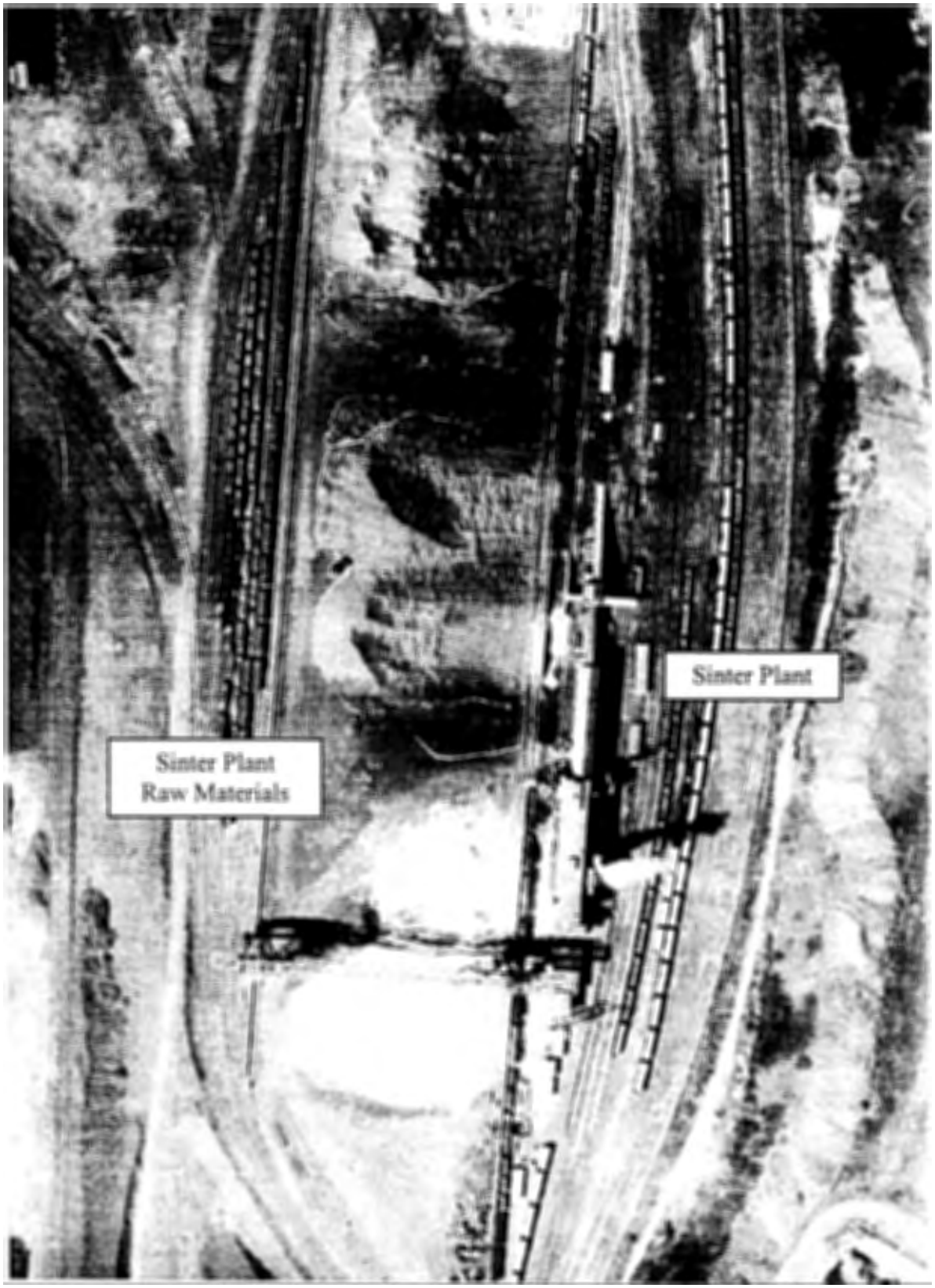


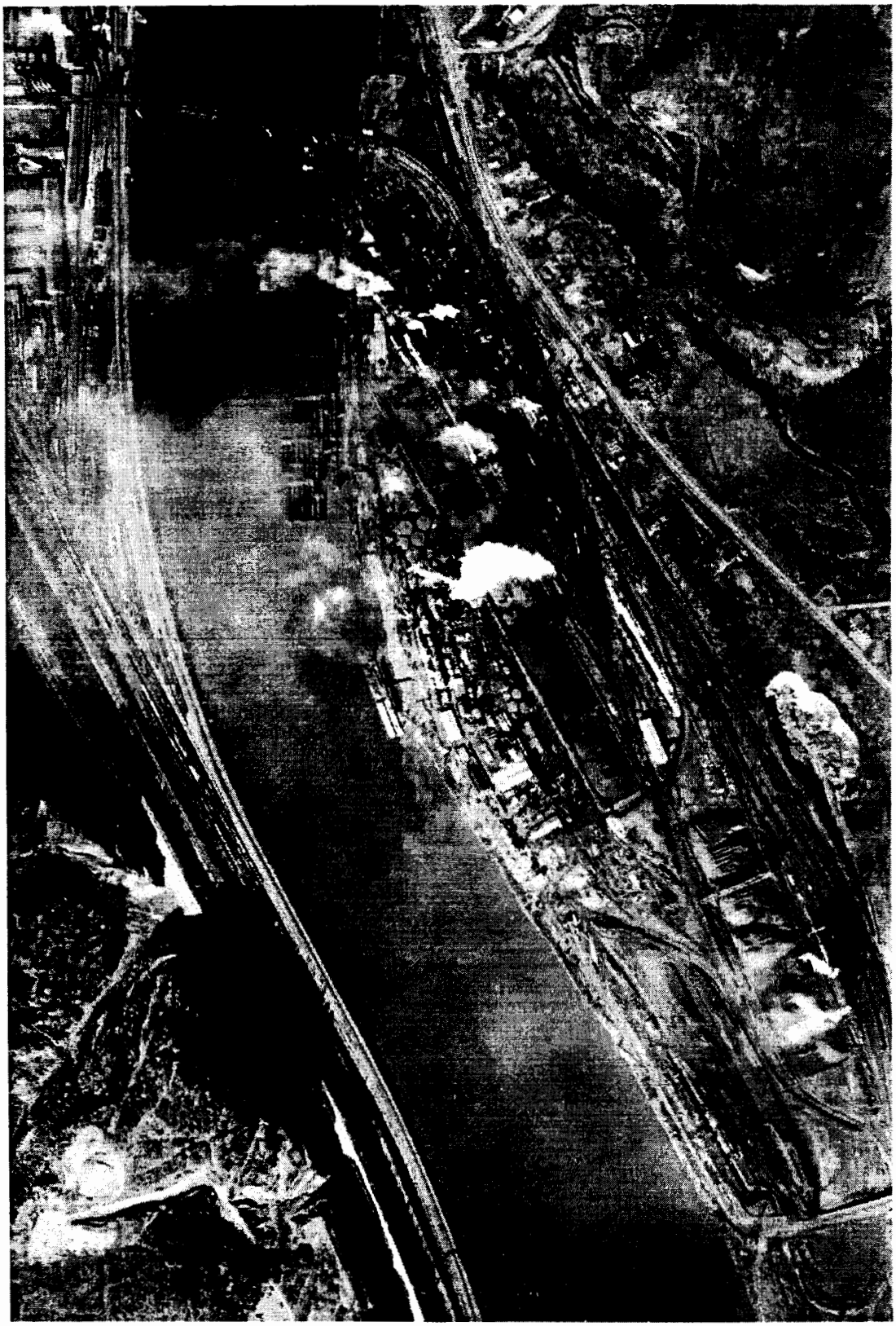

N

**Early 1970s Aerial Photograph (No.3)**
**Steubenville East Coke Plant**




N

**Early 1970s Aerial Photograph (No.4)**
**Steubenville East Coke Plant**



N

**1966 Aerial Photograph**
**Steubenville East Coke Plant**

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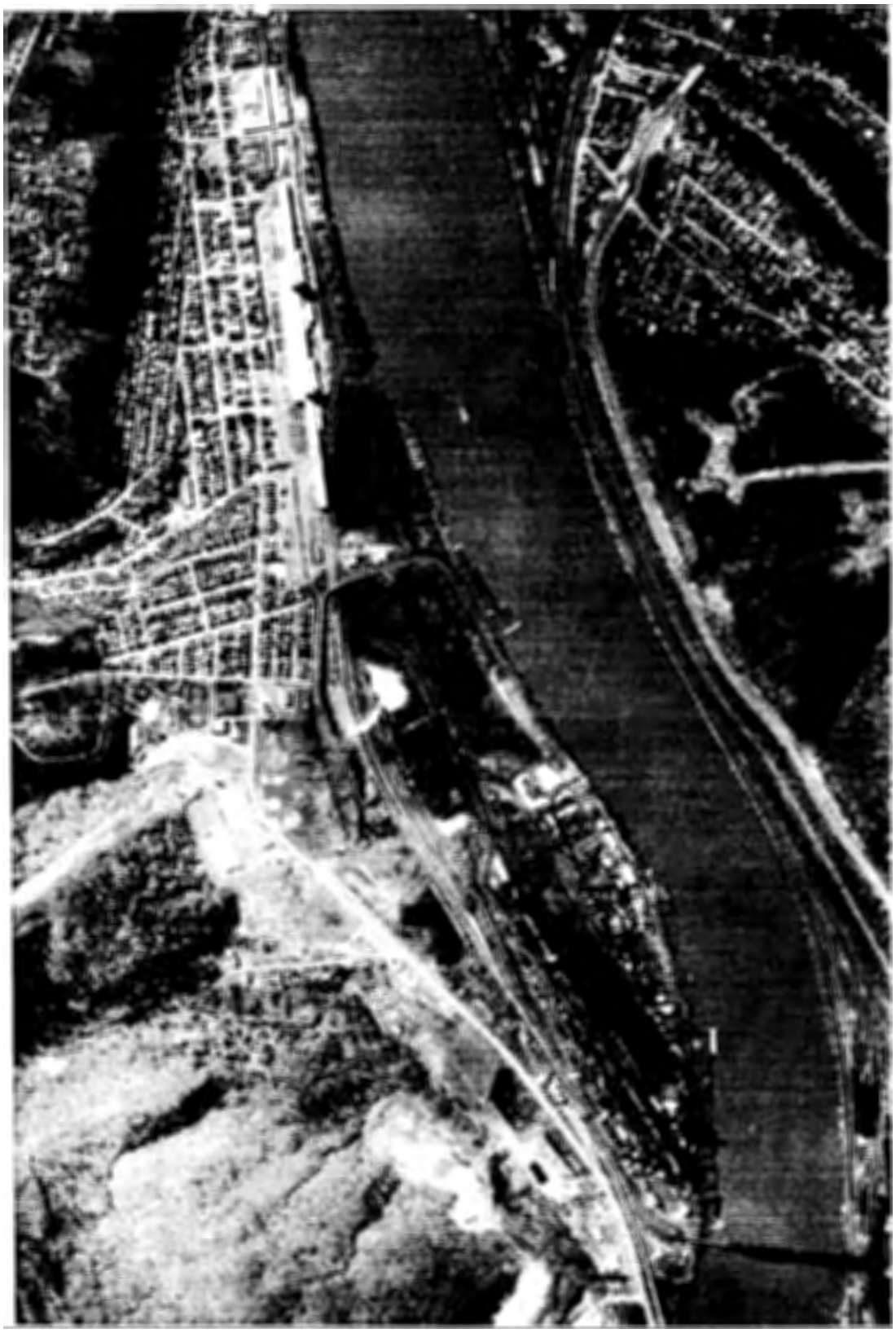

N

**1994 Aerial Photograph**
**Steubenville East Coke Plant**

g:\prjcts\whelpit\photos\94aerial.ppt

# APPENDIX D

## TRANSFORMER AND CAPACITOR RECORDS

WHEELING-PITTSBURGH STEEL CORPORATION

O: A. A. Biss
Corp. Engineering

Date: 3/29/74

repared By: J. A. Weekley

lant: Steubenville East

| er. No. | Vendor | Age | Application | Capacity KVA | Voltage Pri. | Voltage Sec. | Phase | Remarks |
|---|---|---|---|---|---|---|---|---|
| 113212 | A.C. | | #19 Sub | 50 | 2400/4160 | 120/240 | 1 | |
| 113213 | A.C. | | " " | " | " | " | 1 | |
| 392033 | Westinghouse | | #18 Sub | 344 | 2300 | 241 | 3 | Type SL Rectifier Trans |
| 392034 | " | | #17 Sub | " | " | " | 3 | " " |
| 392035 | " | | #16 Sub | " | " | " | 3 | " " |
| 108838 | A.C. | | #16 Sub | 100 | 2400/4160 | 240/480 | 1 | |
| 108839 | A.C. | | " | " | " | " | 1 | |
| 108840 | A.C. | | " | " | " | " | 1 | |
| 414394 | " | | " | " | " | 120/240 | 1 | |
| 414395 | " | | " | " | " | " | 1 | |
| 414396 | " | | " | " | " | " | 1 | |
| 697334 | Westinghouse | | #14 Sub | 3 | 2400/4160 | 240/480 | 1 | Spare |
| -854835 | G.E. | | Motor Control Room - Sinter Plant | 750 | 4160 | 277/480 | 3 | |

TRANSFORMER INVENTORY, PCB'S - EAST PLANT, DATE 3/18/81

Please list all liquid-filled transformers.

| Location and W.P. Designation | Manufacturer | Rating, KVA | Serial No. | Type | Coolant Volume, Gallons | Coolant Trade-name | PCB Assessment: Contains | PCB Assessment: Does not contain | PCB Assessment: Unknown | Remarks | * Coolant PCB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| #19 SUB | A.C. | 50 | 2113212 | | 30 | CHLOREXTOL | ✓ | | | | |
| #19 SUB | A.C. | 50 | 2113213 | | 30 | CHLOREXTOL | ✓ | | | | |
| #18 SUB | WEST. | 344 | 4392033 | SL | 556 | ASKAREL | ✓ | | | RECTIFIER TRANS. | |
| #17 SUB. | WEST. | 344 | 4392034 | SL | 556 | ASKAREL | ✓ | | | RECTIFIER TRANS. | |
| #16 SUB. | WEST. | 344 | 4392035 | SL | 556 | ASKAREL | ✓ | | | RECTIFIER TRANS. | |
| #16 SUB. | A.C. | 100 | 2108838 | | 65 | CHLOREXTOL | ✓ | | | | |
| #16 SUB. | A.C. | 100 | 2108839 | | 65 | CHLOREXTOL | ✓ | | | | |
| #16 SUB. | A.C. | 100 | 2108840 | | 65 | CHLOREXTOL | ✓ | | | | |
| #16 SUB. | A.C. | 100 | 2414394 | | 65 | CHLOREXTOL | ✓ | | | | |
| #16 SUB. | A.C. | 100 | 2414395 | | 65 | CHLOREXTOL | ✓ | | | | |
| #16 SUB. | A.C. | 100 | 2414396 | | 65 | CHLOREXTOL | ✓ | | | | |
| #14 SUB. | WEST. | 3 | 3697334 | | 5.5 | INTERTHERM | ✓ | | | SPARE | |
| MOTOR ROOM SINTER PLANT | G.E. | 750 | C854835 | | 190 | ASKAREL | ✓ | | | | |
| #37 SUB. | G.E. | 1000 | C249174-B | | 166 | ASKAREL | ✓ | | | | |
| #37 SUB. | G.E. | 1000 | C249174-A | | 166 | ASKAREL | ✓ | | | | |
| #35 SUB. | G.E. | 1500 | H884144 | | 211 | ASKAREL | ✓ | | | | |
| #32 SUB. | G.E. | 1500 | H884142 | | 211 | ASKAREL | ✓ | | | | |
| #33 SUB. | G.E. | 750 | H884143 | | 152 | ASKAREL | ✓ | | | | |

10-17-88

# P.C.B. RECORDS FOR COKE PLANT

## COKE PLANT

| | | |
|---|---|---|
| #16 SUBSTATION | 6 UNITS | |
| #17 SUBSTATION | 1 UNIT | |
| #18 SUBSTATION | 1 UNIT | |
| #19 SUBSTATION | 2 UNITS | |
| #32 SUBSTATION | 2 UNITS | |
| #33 SUBSTATION | 1 UNIT | |
| #35 SUBSTATION | 1 UNIT | |
| #37 SUBSTATION | 2 UNITS | |
| SINTER PLANT MOTOR ROOM | 1 UNIT | |
| | 17 PCB UNITS | |
| SPARE PARTS CONATMINATED 10C | 5 PCB UNITS | (CONTAMINATED) |

P.C.B. RECORDS FOR #16 SUBSTATION
COKE PLANT

6 UNITS

REV. 10-17-88

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 AC | 100 KVA | 2414394 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |
| 1 AC | 100 KVA | 2414395 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |
| 1 AC | 100 KVA | 2414396 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |
| 1 AC | 100 KVA | 2108838 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |
| 1 AC | 100 KVA | 2108839 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |
| 1 AC | 100 KVA | 2108840 | 4160/2400 - 480/220, | CHLOREXTOL, | 65 GALLONS |

P.C.B. RECORDS FOR #17 SUBSTATION
COKE PLANT

1 UNITS REV. 10-17-88

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 WESTINGHSE | 344 KVA | 4392034 | 2400/240 | SL.RECT. | ASKAREL | 556 GALS |

P.C.B. RECORDS FOR #18 SUBSTATION
COKE PLANT

1 UNIT

REV. 10-17-88

1 WESTINGHSE 344 KVA 4392033 2400/240 SL.RECT. ASKAREL 556 GALS

P.C.B. RECORDS FOR #19 SUBSTATION
COKE PLANT

2 UNITS

REV. 10-17-88

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 AC | 2113212 | 50 KVA | 4160/2400 - 240/120 | CHLOREXTOL | 30 GALLONS |
| 1 AC | 2113213 | 50 KVA | 4160/2400 - 240/120 | CHLOREXTOL | 30 GALLONS |

P.C.B. RECORDS FOR #32 SUBSTATION
COKE PLANT

2 UNITS

REV. 10-17-88

| | | | | | |
|---|---|---|---|---|---|
| 1 G.E. | H884142 | 1500 KVA | | ASKAREL | 211 GALLONS |
| 1 WESTINGHOUSE | PAV-7956-01 | 570 KVA | | INTERTEEN | 196 GALLONS |

P.C.B. RECORDS FOR #33 SUBSTATION
COKE PLANT

1 UNIT REV. 10-17-88

1 G.E. H884143 750 KVA ASKAREL 152 GALLONS

P.C.B. RECORDS FOR #35 SUBSTATION
COKE PLANT

1 UNIT

REV. 10-17-88

1 G.E. H884144 1500 KVA ASKAREL 211 GALLONS

P.C.B. RECORDS FOR #37 SUBSTATION
COKE PLANT

2 UNITS REV. 10-17-88

| | | | | |
|---|---|---|---|---|
| 1 G.E. | C 249174-A | 1000 KVA | ASKAREL | 166 GALLONS |
| 1 G.E. | C 249174-B | 1000 KVA | ASKAREL | 166 GALLONS |

P.C.B. RECORDS FOR SINTER PLANT MOTOR ROOM
COKE PLANT

1 UNIT REV. 10-17-88

1 G.E. C 854835 750 KVA 4160 480/277 ASKAREL 190 GALLONS

SPARE PARTS CONTAMINATED 10-C
COKE PLANT

5 UNITS

REV. 10-17-88

| | | | | |
|---|---|---|---|---|
| G.E. | 15 KVA | 2230063 | 160 P.P.M. | CERT # 41575 |
| G.E. | 75 KVA | 8624962 | 110 P.P.M. | CERT # 41576 |
| G.E. | 75 KVA | 8624990 | 410 P.P.M. | CERT # 41577 |
| G.E. | 75 KVA | 2889544 | | CERT # 45271 |
| G.E. | 75 KVA | 2889608 | | CERT # 45272 |

PCB 1990 ANNUAL REPORT (Feb.5,1990-Dec.31,1990)
Region III Coke Plant
EPA ID # WVD 004319539

WHEELING PITTSBURGH STEEL CORP.
Coke Plant Rte. 2
Follansbee, WV 26037

In Service as of 12/31/90:

Total number of PCB transformers = 21 units
Total KG of PCB in transformers = 19,240.923KG

Total number of PCB capacitors = 53 units
Total KG of PCB's in PCB capacitors = 210.35KG

Total number of PCB units = 74 units

Total PCB's in KG 19,451.273KG

DISPOSALS:

| MANIFEST # | DATE | DESCRIPTION | WEIGHT | DATE REMOVED FROM SERVICE |
|---|---|---|---|---|
| `01 | 4/24/90 | Drums #37,#38,#39 cont. dirt | 150 KG solids | 11/89 |
| MP001 | 4/24/90 | Drum #36 Caps. | 60KG solid 10KG PCB | found 5/22/89 |
| TOTALS: | | | 210 KG solids 10 KG PCB | |

**Wheeling Pittsburgh**
STEEL CORPORATION

RECEIVED
SEP 25 1991
Environmental Control

REV 9-89

## INTEROFFICE CORRESPONDENCE

TO: T. J. Waligura

DATE: September 20, 1991
FROM: R. B. Roberts

SUBJECT: ANSWERS TO ADDITIONAL QUESTIONS RELATED TO U.S.E.P.A. PCB INSPECTION AT THE COKE PLANT

Enclosed is the information from the General Electric Company relative to the retrofilled 3000 KVA transformer at the Coke Plant. It is identified as CP-24 S/N 1879253, 21.4 PPM. However, this transformer is still on the quarterly inspection and is still being inspected quarterly.

The five transformers "find dates" are as follows:

| | | |
|---|---|---|
| 1. | Precip. transformer S/N L495318 PGLC | 10/6/82 |
| 2. | 570 KVA S/N PAV 7956-01 | 7/24/85 |
| 3. | Precip transformer S/N L495319 PGLC | 7/7/86 |
| 4. | Maintenance Office transformer S/N 2143214 | 7/7/86 |
| 5. | Chem Lab transformer S/N 46350 | 7/7/86 |

The above transformers are not in any substations or they would have been found in 1981 as a result of our normal Substation inspections. As these were found they were placed on the quarterly inspection. None of the above transformers were leaking when found.

R. B. Roberts/lac

R. B. Roberts
Electrical Systems Engineer

RBR/mfj
USEPA.PCB

CC: R. A. Chappano
R. B. Bennington
R. L. Tucker

PCB 1991 ANNUAL REPORT (Jan.1,1991-Dec.31,1991)
Region III Coke Plant
EPA ID # WVD 004319539

WHEELING PITTSBURGH STEEL CORP.
Coke Plant Rte. 2
Follansbee, WV 26037

In Service as of 12/31/91:

| | |
|---|---|
| Total number of PCB transformers | = 19 UNITS |
| Total KG of PCB in transformers | = 17,256.891KG |
| Total number of PCB capacitors | = 5 UNITS |
| Total KG of PCB's in PCB capacitors | = 95.616KG |
| Total number of PCB units | = 24 UNITS |
| Total PCB's in KG | = 17,352.507KG |

DISPOSALS:

| MANIFEST # | DATE | DESCRIPTION | WEIGHT | DATE REMOVED FROM SERVICE |
|---|---|---|---|---|
| 76264 | 03/01/91 | Drum # 41 contam debris | 100 KG | 04/18/90 |
| 016 | 08/27/91 | Sprague Cap. Ser# 096069 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096228 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096229 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096261 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096262 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096263 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096264 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | Sprague Cap. Ser# 096265 | 19.123KG | 08/26/91 |
| 01016 | 08/27/91 | GE 1000 KVA Ser# L 249174A | 992.016KG | 08/26/91 |
| 01016 | 08/27/91 | GE 1000 KVA Ser# L 249174B | 992.016KG | 08/26/91 |
| 01016 | 08/27/91 | Trans. Carcass Ser# L 249174A | 308.484KG | 08/26/91 |
| 01016 | 08/27/91 | Trans. Carcass Ser# L 249174B | 308.484KG | 08/26/91 |

TALS: 2,137.018 KG PCB
716.968 KG SOLIDS

PCB 1992 ANNUAL REPORT (Jan.1,1992-Dec.31,1992)
Region III Coke Plant
EPA ID # WVD 004319539

WHEELING PITTSBURGH STEEL CORP.
Coke Plant Rte. 2
Follansbee, WV 26037

In Service as of 12/31/92:

Total number of PCB transformers = 13 UNITS
Total KG of PCB in transformers = 1,4926.251 KG

Total number of PCB capacitors = 5 UNITS
Total KG of PCB's in PCB capacitors = 95.616 KG

Total number of PCB units = 18 UNITS
Total PCB's in KG = 15,021.867 KG

DISPOSALS:

| MANIFEST # | DATE | DESCRIPTION | WEIGHT | DATE REMOVED FROM SERVICE |
|---|---|---|---|---|
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2108838 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2108838 | 581 KG | 04/25/92 |
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2108839 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2108839 | 592 KG | 04/25/92 |
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2108840 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2108840 | 594 KG | 04/25/92 |
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2414394 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2414394 | 590 KG | 04/25/92 |
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2414395 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2414395 | 599 KG | 04/25/92 |
| 02131 | 04/27/92 | A/C 100KVA TRANS SER # 2414396 | 388.44KG | 04/25/92 |
| 02131 | 04/27/92 | Trans carcass SER # 2414396 | 592 KG | 04/25/92 |

TOTALS:

2,330.64 KG PCB
3,548 KG SOLIDS

**PCB 1993 ANNUAL REPORT (Jan.1,1993-Dec.31,1993)**
**Region III Coke Plant**
**EPA ID # WVD 004319539**

**WHEELING PITTSBURGH STEEL CORP.**
**Coke Plant Rte. 2**
**Follansbee, WV 26037**

**In Service as of 12/31/93:**

| | |
|---|---|
| Total number of PCB transformers | = 12 UNITS |
| Total KG of PCB in transformers | = 14,746.97 KG |
| Total number of PCB capacitors | = 4 UNITS |
| Total KG of PCB's in PCB capacitors | = 77.616 KG |
| Total number of PCB units | = 16 UNITS |
| Total PCB's in KG | = 14,824.586 KG |

**DISPOSALS:**

| MANIFEST # | DATE | DESCRIPTION | WEIGHT | DATE REMOVED FROM SERVICE |
|---|---|---|---|---|
| 04301 | 06/22/93 | cap ser Y67567 | 18KG | 03/03/93 |

**IN STORAGE FOR DISPOSAL AS OF 12/31/93:**

| DESCRIPTION | WEIGHT | OUT OF SERVICE DATE |
|---|---|---|
| A/C 50 KVA TRANS. ser. 2143214 30 gals. in south vault | 179.28 KG | 06/23/93 |

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9 25
5 Subs
unused Sub near 1° Coolers

| Post-it® Fax Note 7671 | Date 1/22 pages |
|---|---|
| To Bob Smith | From B. Pocomile |
| Co./Dept. | Co. |
| Phone # | Phone # |
| Fax # 2613 | Fax # |

Pls. refer to 7/22 E-mail.

# PCB RISK ANALYSIS UPDA
## STEUBENVILLE EAST COKE P
### NOVEMBER 1994

| STUDY NAME | STUDY DESIGNATION | SERIAL # | MFR | KVA | STUDY RISK | STATUS | COMMENTS |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| CP-36 | 17 SUB | 4392034 | WEST | 344 | 349 | IN SERVICE | |
| CP-39 | 19 SUB | 2113213 | AC | 50 | 346 | IN SERVICE | REMOVAL PLANNED |
| CP-38 | 19 SUB | 2113212 | AC | 50 | 292 | IN SERVICE | REMOVAL PLANNED |
| CP-34 | 16 SUB | 2108839 | AC | 100 | 292 | REMOVED | |
| CP-35 | 16 SUB | 2108840 | AC | 100 | 292 | REMOVED | |
| CP-30 | 16 SUB | 2414394 | AC | 100 | 286 | REMOVED | |
| CP-31 | 16 SUB | 2414395 | AC | 100 | 286 | REMOVED | |
| CP-32 | 16 SUB | 2414396 | AC | 100 | 286 | REMOVED | |
| CP-24 | SINTER PLT. | 1879253 | AC | 3000 | 286 | IN SERVICE | SERIAL # NOT NOTED ON GE STUDY. |
| | | | | | | | BETWEEN 31 & 14 SUBS ON ROAD |
| CP-47 | CHEM LAB | 46350 | SQD | 1000 | 280 | IN SERVICE | |
| CP-37 | 18 SUB | 4392033 | WEST | 344 | 277 | IN SERVICE | RECTIFIER |
| CP-40 | 32 SUB | H884142 | GE | 1500 | 271 | IN SERVICE | SERIAL # INCORRECT IN GE STUDY. |
| | | | | | | | #8 BATTERY |
| CP-43 | 35 SUB | H884144 | GE | 1500 | 271 | IN SERVICE | JOINS 19 SUB |
| CP-41 | 32 SUB | PAV795601 | WEST | 570 | 267 | IN SERVICE | RECTIFIER UPSTAIRS |
| CP-33 | 16 SUB | 2108838 | AC | 100 | 266 | REMOVED | |
| CP-46 | SINTER PLT. | C854835 | GE | 750 | 264 | IN SERVICE | GAS SCRUBBER |
| CP-42 | 33 SUB | H884143 | GE | 750 | 256 | IN SERVICE | COAL SCREENS |
| CP-45 | 37 SUB | C249174B | GE | 1000 | 255 | REMOVED | |
| CP-44 | 37 SUB | C249174A | GE | 1000 | 253 | REMOVED | |
| | | | | | | | |
| N/A | PRECIP | L495319PGLC | PYR. | 45 | N/A | IN SERVICE | NOT LOCATED DURING GE STUDY. |
| | | | | | | | |

*SERIAL #1879253 WAS RETROFILLED WITH NON-PCB OIL. ALTHOUGH PCB LEVELS ARE NOW APPROX. 20 PPM, THE TRANSFORMER MUST REACH A TEMP OF 55 DEG C BEFORE IT CAN BE TESTED AND REMOVED FROM THE PCB TRANSFORMER LIST. ACCORDING TO DICK ROBERTS, THE TRANSFORMER IS LIGHTLY LOADED AND IS NOT LIKELY TO REACH 55 DEG C IN SERVICE.

**SUMMARY:** 8 OF 19 PCB TRANSFORMERS IDENTIFIED IN THE GE STUDY HAVE BEEN REMOVED.
ONE (10 TRANSFORMER HAS BEEN RETROFILLED WITH NON-PCB OIL BUT IS STILL CONSIDERED A PCB TRANSFORMER.
ONE (1) PCB TRANSFORMER WAS NOT IDENTIFIED IN THE GE STUDY.

JUL 23 '98 09:46 FR ENVIRONMENTAL CNTRL 304 234 2613 TO 915408824409 P.02/04

PCB 1994 ANNUAL REPORT (Jan.1,1994-Dec.31,1994)
Region III Coke Plant
EPA ID # WVD 004319539

WHEELING PITTSBURGH STEEL CORP.
Coke Plant Rte. 2
Follansbee, WV 26037

In Service as of 12/31/94:

Total number of PCB transformer = 11 UNITS
Total KG of PCB in transformers = 14,746.97 KG

Total number of PCB capacitors = 4 UNITS
Total KG of PCB's in PCB capacitors = 77.616 KG

Total number of PCB units = 15 UNITS
Total PCB's in KG = 14,824.586 KG
DISPOSALS:

| Manifest # | Date | Description | Weight | Date Removed from service |
|---|---|---|---|---|
| 46004 | 04/14/94 | A/C 50 KVA liquid ser.2113211 30 gals | 179.28 KG | 06/23/93 |
| 46004 | 04/14/94 | A/C 50 KVA carcass ser. 2113211 | 152.968 KG | 06/23/93 |
| 07644 | 12/09/94 | transformer non-regulated liquid 5 ppm | N/A | 09/16/94 |
| 07644 | 12/09/94 | transformer non-regulated carcass | N/A | 09/16/94 |

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**PCB 1995 ANNUAL REPORT (Jan.1,1995-Dec.31,1995)**
**Region III Coke Plant**
**EPA ID # WVD 004319539**

**WHEELING PITTSBURGH STEEL CORP.**
**Coke Plant Rte. 2**
**Follansbee, WV 26037**

In Service as of 12/31/95:

| | |
|---|---|
| Total number of PCB transformer | = 9 UNITS |
| Total KG of PCB in transformers | = 14,388.41 KG |
| Total number of PCB capacitors | = 4 UNITS |
| Total KG of PCB's in PCB capacitors | = 77.616 KG |
| Total number of PCB units | = 13 UNITS |
| Total PCB's in KG | = 14,466.026 KG |

DISPOSALS:

| Manifest No. | Date | Description | Weight | Date Removed from Service |
|---|---|---|---|---|
| 00101 | 12/06/95 | A/C 50 KVA liquid ser.2113212 30 gals | 179.28 KG | 10/11/95 |
| 00101 | 12/06/95 | A/C 50 KVA carcass ser.2113212 | 152.968 KG | 10/11/95 |
| 00101 | 12/06/95 | A/C 50 KVA liquid ser.2113213 30 gals | 179.28 KG | 10/11/95 |
| 00101 | 12/06/95 | A/C 50 KVA carcass ser.2113213 | 152.968 KG | 10/11/95 |

| | | | | |
|---|---|---|---|---|
| 00101 | 12/06/95 | GE 3000 KVA liquid ser.1879253 1000 GALS unregulated | N/A | 11/21/95 |
| 00101 | 12/06/95 | GE 3000 KVA carcass ser.1879253 unregulated | N\A | 11/21/95 |

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PCB SE Coke Plt mfile

PCB 1996 ANNUAL REPORT (Jan.1,1996-Dec.31,1996)
Region III Coke Plant
EPA ID # WVD 004319539

WHEELING PITTSBURGH STEEL CORP.
Coke Plant Rte. 2
Follansbee, WV 26037

In Service as of 12/31/96:

| | |
|---|---|
| Total number of PCB transformer | = 9 UNITS |
| Total KG of PCB in transformers | = 14,388.41 KG |
| Total number of PCB capacitors | = 4 UNITS |
| Total KG of PCB's in PCB capacitors | = 77.616 KG |
| Total number of PCB units | = 13 UNITS |
| Total PCB's in KG | = 14,466.026 KG |

DISPOSALS: NONE

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**PCB 1997 ANNUAL REPORT (Jan.1,1997-Dec.31,1997)**
**Region III Coke Plant**
**EPA ID # WVD 004319539**

**WHEELING PITTSBURGH STEEL CORP.**
**Coke Plant Rte. 2**
**Follansbee, WV 26037**

**In Service as of 12/31/97/:**

| | |
|---|---|
| Total number of PCB transformer | = 9 UNITS |
| Total KG of PCB in transformers | = 14,388.41 KG |
| Total number of PCB capacitors | = 4 UNITS |
| Total KG of PCB's in PCB capacitors | = 77.616 KG |
| Total number of PCB units | = 13 UNITS |
| Total PCB's in KG | = 14,466.026 KG |

**DISPOSALS: NONE**

# APPENDIX E

## WASTE ANALYSES

# APPENDIX E-1

## ASTM LEACH TEST ON THE BOF RESIDUALS
## (EXCERPTED FROM GERAGHTY & MILLER, INC., 1992)

TABLE 4
ANALYTICAL RESULTS FOR THE ASTM LEACH TEST ON
THE BOF RESIDUALS
BOF RESIDUALS STORAGE AREA

WHEELING PITTSBURGH STEEL CORPORATION
FOLLANSBEE, WEST VIRGINIA

| PARAMETER | UNITS | DETECTION LIMIT | BOF RESIDUALS(1) |
|---|---|---|---|
| **INORGANIC PARAMETER** | | | |
| Alkalinity (as CaCO3) | mg/L | 2 | 35 |
| Ammonia (as N) | mg/L | 0.1 | 0.13 |
| Chloride | mg/L | 2 | ND |
| Fluoride | mg/L | 0.1 | ND |
| pH | S.U. | — | 9.72 |
| Specific Conductance | umhos/cm | 5 | 135 |
| Sulfate | mg/L | 5 | 13 |
| Total Organic Carbon (TOC) | mg/L | 1 | 3 |
| Total Dissolved Solids (TDS) | mg/L | 5 | 96 |
| **METALS PARAMETER** | | | |
| Aluminum | mg/L | 0.1 | 0.1 |
| Arsenic | mg/L | 0.005 | ND |
| Cadmium | mg/L | 0.01 | ND |
| Calcium | mg/L | 0.2 | 16.4 |
| Chromium | mg/L | 0.01 | ND |
| Copper | mg/L | 0.01 | ND |
| Iron | mg/L | 0.1 | 0.2 |
| Lead | mg/L | 0.005 | ND |
| Magnesium | mg/L | 0.3 | 1.8 |
| Manganese | mg/L | 0.01 | ND |
| Mercury | mg/L | 0.0008 | ND |
| Nickel | mg/L | 0.04 | ND |
| Potassium | mg/L | 0.5 | 1.1 |
| Silver | mg/L | 0.01 | ND |
| Sodium | mg/L | 0.4 | 1.5 |
| Zinc | mg/L | 0.01 | 0.04 |

(1) The BOF residuals were sampled on May 29, 1992.

Note: There were no detections of any constituents in the method blanks, with the exception of aluminum at 0.1 mg/L in Method Blank #2.

# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

June 23, 1992

Mrs. Elizabeth Tandy
Geraghty & Miller
429 Washington Trust Building
Washington, PA 15301

Dear Mrs. Tandy:

Enclosed is the data report of results for the analyses of samples received at Ceimic Corporation on June 2, 1992.

Please call if you have any questions regarding this data.

Sincerely,

Phyllis Shiller

Phyllis Shiller
Inorganic Laboratory
Manager

PS/ll

enc.

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 782-8905

# METALS ANALYSES

# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

**ASTM LEACHING PROCEDURE (D3987-85)**

**METALS**

Client: Geraghty & Miller

Client Sample ID: BOF Sludge

Date Sample Received: 6/02/92 Laboratory ID: 920278-01

Date Analysis Completed: 6/15/92 Concentration in: mg/L (ppm)

| Target Analyte | Sample Concentration | Method Reporting Limits |
|---|---|---|
| Aluminum | 0.1 | 0.1 |
| Arsenic | ND | 0.005 |
| Cadmium | ND | 0.01 |
| Calcium | 16.4 | 0.2 |
| Chromium | ND | 0.01 |
| Copper | ND | 0.01 |
| Iron | 0.2 | 0.1 |
| Lead | ND | 0.005 |
| Magnesium | 1.8 | 0.3 |
| Manganese | ND | 0.01 |
| Mercury | ND | 0.0008 |
| Nickel | ND | 0.04 |
| Potassium | 1.1 | 0.5 |
| Silver | ND | 0.01 |
| Sodium | 1.5 | 0.4 |
| Zinc | 0.04 | 0.01 |

ND = Not detected

Reported by: Kyle R. Kissel Approved by: Phyllis Shell

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

QUALITY CONTROL

METHOD BLANK

Client: Geraghty & Miller

Client Sample ID: Method Blank #1

Project No.: 920278 Laboratory ID: 0610PBW

Date Analysis Completed: 6/15/92 Concentration in: mg/L (ppm)

| Target Analyte | Sample Concentration | Method Reporting Limit |
|---|---|---|
| Aluminum | ND | 0.1 |
| Arsenic | ND | 0.005 |
| Cadmium | ND | 0.01 |
| Calcium | ND | 0.2 |
| Chromium | ND | 0.01 |
| Copper | ND | 0.01 |
| Iron | ND | 0.1 |
| Lead | ND | 0.005 |
| Magnesium | ND | 0.3 |
| Manganese | ND | 0.01 |
| Mercury | ND | 0.0008 |
| Nickel | ND | 0.04 |
| Potassium | ND | 0.5 |
| Silver | ND | 0.01 |
| Sodium | ND | 0.4 |
| Zinc | ND | 0.01 |

ND = Not detected

Reported by: Kyle R. Krause Approved by: Phyllis Shile

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**METHOD BLANK**

Client: Geraghty & Miller

Client Sample ID: Method Blank #2

Project No.: 920278 Laboratory ID: ASTMBL

Date Analysis Completed: 6/15/92 Concentration in: mg/L (ppm)

| Target Analyte | Sample Concentration | Method Reporting Limit |
|---|---|---|
| Aluminum | 0.1 | 0.1 |
| Arsenic | ND | 0.005 |
| Cadmium | ND | 0.01 |
| Calcium | ND | 0.2 |
| Chromium | ND | 0.01 |
| Copper | ND | 0.01 |
| Iron | ND | 0.1 |
| Lead | ND | 0.005 |
| Magnesium | ND | 0.3 |
| Manganese | ND | 0.01 |
| Mercury | ND | 0.0008 |
| Nickel | ND | 0.04 |
| Potassium | ND | 0.5 |
| Silver | ND | 0.01 |
| Sodium | ND | 0.4 |
| Zinc | ND | 0.01 |

ND = Not detected

Reported by: Kyle R. Krause Approved by: [illegible]

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**LABORATORY CONTROL SAMPLE**

Client: Geraghty & Miller

Client Sample ID: Laboratory Control Sample

Project No.: 920278 Laboratory ID: 0610LCSW

Date Analysis Completed: 6/15/92 Matrix: Aqueous

| Target Analyte | % Recovery | Control Limits |
|---|---|---|
| Aluminum | 109% | 75-125 % |
| Arsenic | 88 | 75-125 |
| Cadmium | 122 | 75-125 |
| Calcium | 115 | 75-125 |
| Chromium | 118 | 75-125 |
| Copper | 110 | 75-125 |
| Iron | 111 | 75-125 |
| Lead | 91 | 75-125 |
| Magnesium | 114 | 75-125 |
| Manganese | 117 | 75-125 |
| Mercury | 113 | 75-125 |
| Nickel | 124 | 75-125 |
| Potassium | 120 | 75-125 |
| Silver | 82 | 75-125 |
| Sodium | 113 | 75-125 |
| Zinc | 122 | 75-125 |

Reported by: Kyle R. Kreiner Approved by: Rylie Shile

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# INORGANIC ANALYTES

# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**ASTM LEACHING PROCEDURE (D3987-85)**

**INORGANIC ANALYTES**

Client: Geraghty & Miller

Client ID: BOF Sludge

Laboratory ID: 920278-01

Date Sample Received: 6/02/92

Date Sampled: 5/29/92

| Target Analyte | Result | Units | Method Reporting Limit | Date Analyzed |
|---|---|---|---|---|
| Alkalinity (as $CaCO_3$) | 35 | mg/L (ppm) | 2 | 6/08/92 |
| Ammonia (as N) | 0.13 | mg/L (ppm) | 0.1 | 6/12/92 |
| Chloride | ND | mg/L (ppm) | 2 | 6/11/92 |
| Fluoride | ND | mg/L (ppm) | 0.1 | 6/12/92 |
| pH | 9.72 | S.U | --- | 6/08/92 |
| Specific Conductance | 135 | umhos/cm | 5 | 6/10/92 |
| Sulfate | 13 | mg/L (ppm) | 5 | 6/11/92 |
| Total Organic Carbon (TOC) | 3 | mg/L (ppm) | 1 | 6/22/92 |
| Total Dissolved Solids (TDS) | 96 | mg/L (ppm) | 5 | 6/09/92 |

ND = Not detected

Reported by: Jeffrey D. Mauzman

Approved by: Phillis Shell

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**METHOD BLANK**

Client: Geraghty & Miller

Client ID: Method Blank

Project No.: 920278

Laboratory ID: PBW

| Target Analyte | Result | Units | Method Reporting Limit | Date Analyzed |
|---|---|---|---|---|
| Alkalinity (as $CaCo_3$) | ND | mg/L (ppm) | 2 | 6/08/92 |
| Ammonia (as N) | ND | mg/L (ppm) | 0.1 | 6/12/92 |
| Chloride | ND | mg/L (ppm) | 2 | 6/11/92 |
| Fluoride | ND | mg/L (ppm) | 0.1 | 6/12/92 |
| Specific Conductance | ND | umohs/cm | 5 | 6/10/92 |
| Sulfate | ND | mg/L (ppm) | 5 | 6/11/92 |
| Total Dissolved Solids (TDS) | ND | mg/L (ppm) | 5 | 6/09/92 |
| Total Organic Carbon (TOC) | ND | mg/L (ppm) | 1 | 6/22/92 |

ND = Not detected

Reported by: Jeffrey D. Maynor

Approved by: Billie Shell

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**LABORATORY CONTROL SAMPLE**

Client: Geraghty & Miller

Client Sample ID: Laboratory Control Sample

Project No.: 920278

Laboratory ID: LCSW

Matrix: Aqueous

| Target Analyte | % Recovery | Control Limits |
|---|---|---|
| Alkalinity (as $CaCO_3$) | 95% | 75-125% |
| Ammonia (as N) | 98 | 75-125 |
| Chloride | 102 | 75-125 |
| Fluoride | 104 | 75-125 |
| Specific Conductance | 105 | 75-125 |
| Sulfate | 96 | 75-125 |
| Total Dissolved Solids (TDS) | 102 | 75-125 |
| Total Organic Carbon (TOC) | 102 | 75-125 |

Reported by: Jeffrey D. Maynor

Approved by: Phyllis Shill

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 782-8905

RAGHTY & MILLER, INC.
Environmental Services

Laboratory Task Order No. _____

# CHAIN-OF-CUSTODY RECORD

Page ___ of 1

Project Number PA09005

Project Location Wheeling Pitt - Follansbee

Laboratory Ceimic

Sampler(s)/Affiliation ET / G+M

| SAMPLE IDENTITY | Code | Date/Time Sampled | Lab ID | SAMPLE BOTTLE / CONTAINER DESCRIPTION: 8 oz glass jars | | | | | | | | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BOF Sludge | S | 5/29/92 | | 2 | | | | | | | | | 2 |

Sample Code: L = Liquid; S = Solid; A = Air

Total No. of Bottles/ Containers: 2

| | | | | |
|---|---|---|---|---|
| Relinquished by: Elizabeth Lindy | Organization: Geraghty & Miller | Date 6/1/92 | Time 9:00 am | Seal Intact? Yes No N/A |
| Received by: | Organization: | Date / / | Time | |
| Relinquished by: | Organization: | Date / / | Time | Seal Intact? Yes No N/A |
| Received by: Chris Shetler | Organization: Ceimic Lab | Date 6/2/92 | Time 9:45 | |

Special Instructions/Remarks:
See attached list for parameters - ASTM shake extraction method D 3987-85

☐ Hand Delivered ☐ Other ☐ Federal Express ☐ Common Carrier FedEx ☐ Lab Courier ☐ Other

1 KEMRON PORT Work Order # NO-10-045
ived: 10/03/90 10/30/90 16:03:09

PORT Wheeling-Pittsburgh Steel
TO 1134 Market St.
Wheeling, WV 26003

ATTEN Marty Stephenson

IENT WHEPIT 59500 SAMPLES 1
PANY Wheeling-Pittsburgh Steel
LITY Wheeling, WV
FAX # 304-234-2678

K ID Steub.S.BOF WWT Sludge
AKEN M. Stephenson
RANS UPS
TYPE
O. #
OICE under separate cover

PREPARED BY KEMRON ENVIRONMENTAL SERVICES
109 STARLITE PARK
MARIETTA, OHIO 45750

ATTEN
PHONE (614) 373-4071

David L. Bunyan
CERTIFIED BY

CONTACT S ANDERSON

ANALYTICAL METHODS AND DOCUMENTATION ARE FOUND AT THE END OF THIS REPORT. ALL RESULTS ON SOILS/SLUDGES ARE REPORTED "AS RECEIVED" UNLESS OTHERWISE SPECIFIED.

SAMPLE IDENTIFICATION
Steub.S.BOF

TEST CODES and NAMES used on this workorder

| | | | |
|---|---|---|---|
| AG_S | Silver, Total | TC_ME | TCLP Metals |
| AL_S | Aluminum, Total | TC_SV | TCLP Semivolatiles |
| AS_S | Arsenic, Total | TC_VOA | TCLP Volatile Compounds |
| BA_S | Barium, Total | TC_ZHE | TCLP Zero Headspace Extr. |
| CD_S | Cadmium, Total | TOC_S | Organic Carbon, Leachable |
| CN_S | Cyanide, Total | ZN_S | Zinc, Total |
| CR_S | Chromium, Total | | |
| FE_S | Iron, Total | | |
| FLASH | Ignitability | | |
| HG_S | Mercury, Total | | |
| NI_S | Nickel, Total | | |
| OG_IRS | Oil and Grease | | |
| PB_S | Lead, Total | | |
| PCT_S | Percent Solids | | |
| PFLT | Paint Filter Liquids Test | | |
| PHEN_S | Phenolics, Total | | |
| PH_LS | pH (Lab) - Solid Matrix | | |
| REACTC | Cyanide Reactivity | | |
| REACTS | Sulfide Reactivity | | |
| SE_S | Selenium, Total | | |
| TC_EX | TCLP Extraction - Regular | | |

KEMRON ENVIRONMENTAL SERVICES

2 KEMRON R RT work order # NO 10-045
ived: 10/03/90 Results by Sample

IPLE ID Steub.S.BOF SAMPLE # 01 FRACTIONS: A
Date & Time Collected 10/02/90 13:45:00 Category SLUDGE

| | | | | | |
|---|---|---|---|---|---|
| _S 2.3 mg/kg Ag | AL_S 31 mg/kg Al | AS_S 0.4 mg/kg As | BA_S 1.2 mg/kg Ba | CD_S 6.3 mg/kg Cd | CN_S 1.4 mg/kg CN |
| _S 34 mg/kg Cr | FE_S 33,000 mg/kg Fe | FLASH >95 Degrees C | HG_S <0.25 mg/kg Hg | NI_S 15 mg/kg Ni | OG_IRS <25 mg/kg |
| _S 550 mg/kg Pb | PCT_S 71 % wt. | PFLT NO LIQUID NA | PHEN_S <0.1 mg/kg Phenol | PH_LS 10.7 S.U. | REACTC <10 mg/kg HCN |
| ACTS <100 mg/kg H2S | SE_S 0.1 mg/kg Se | TOC_S 55 mg/kg | ZN_S 79,000 mg/kg Zn | | |

3 KEMRON R..ORT Work Order # NO-10-045
lved: 10/03/90

Results by Sample

LE ID Steub.S.BOF FRACTION 01A TEST CODE TC ME NAME TCLP Metals
Date & Time Collected 10/02/90 13:45:00 Category SLUDGE

TCLP EXTRACTION DATE: 10/08/90

UNITS: mg/L VERIFIED: CRS

| EPA HW# | CAS# | COMPOUND NAME | RESULT | REGULATORY LIMIT |
|---|---|---|---|---|
| D004 | 7440-38-2 | Arsenic | <0.004 | 5.0 |
| D005 | 7440-39-3 | Barium | 0.34 | 100.0 |
| D006 | 7440-43-9 | Cadmium | 0.2 | 1.0 |
| D007 | 7440-47-3 | Chromium | 0.2 | 5.0 |
| D008 | 7439-92-1 | Lead | 4 | 5.0 |
| D009 | 7439-97-6 | Mercury | <0.0005 | 0.2 |
| D010 | 7782-49-2 | Selenium | <0.04 | 1.0 |
| D011 | 7440-22-4 | Silver | <0.04 | 5.0 |
| | | Nickel | <0.04 | |
| | | Zinc | 1400 | |

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED

ived: 10/03/90

Results by Sample

LE ID Steub.S.BOF FRACTION 01A TEST CODE TC_SV NAME TCLP Semivolatiles

Date & Time Collected 10/02/90 13:45:00 Category SLUDGE

ANALYST: WSN EXTRACTED: 10/15/90 FILE #: 1WP12996 TCLP EXTRACTION DATE: 10/15/90

INSTRMT: FINN_1 INJECTED: 10/18/90 FACTOR: 4 UNITS: ug/L VERIFIED: RJW

| EPA HW# | CAS# | COMPOUND NAME | RESULT | DET LIMIT | REGULATORY LIMIT |
|---|---|---|---|---|---|
| D023 | 95-48-7 | o-Cresol | BDL | 20 | 200000 |
| D024 | 108-39-4 | m-Cresol | BDL | 20 | 200000 |
| D025 | 106-44-5 | p-Cresol | BDL | 20 | 200000 |
| D027 | 106-46-7 | 1,4-Dichlorobenzene | BDL | 20 | 7500 |
| D030 | 121-14-2 | 2,4-Dinitrotoluene | BDL | 20 | 130 |
| D032 | 118-74-1 | Hexachlorobenzene | BDL | 20 | 130 |
| D033 | 87-68-3 | Hexachlorobutadiene | BDL | 20 | 500 |
| D034 | 67-72-1 | Hexachloroethane | BDL | 20 | 3000 |
| D036 | 98-95-3 | Nitrobenzene | BDL | 20 | 2000 |
| D037 | 87-86-5 | Pentachlorophenol | BDL | 100 | 100000 |
| D038 | 110-86-1 | Pyridine | BDL | 100 | 5000 |
| D041 | 95-95-4 | 2,4,5-Trichlorophenol | BDL | 20 | 400000 |
| D042 | 88-06-2 | 2,4,6-Trichlorophenol | BDL | 20 | 2000 |

'ES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

DEC 13 '90 17:25 FROM MATERIALS CONTROL PAGE.018

lved: 10/03/90

Results by Sample

LE ID Steub.S.BOF FRACTION 01A TEST CODE TC_VOA NAME TCLP Volatile Compounds

Date & Time Collected 10/02/90 13:45:00 Category SLUDGE

ANALYST: TLD FILE #: 3WP7683 TCLP EXTRACTION DATE: 10/09/90

INSTRMT: FINN_3 INJECTED: 10/09/90 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

| EPA HW# | CAS# | COMPOUND NAME | RESULT | DET LIMIT | REGULATORY LIMIT |
|---|---|---|---|---|---|
| D018 | 71-43-2 | Benzene | BDL | 5.0 | 500 |
| D019 | 56-23-5 | Carbon tetrachloride | BDL | 5.0 | 500 |
| D021 | 108-90-7 | Chlorobenzene | BDL | 5.0 | 100000 |
| D022 | 67-66-3 | Chloroform | BDL | 5.0 | 6000 |
| D028 | 107-06-2 | 1,2-Dichloroethane | BDL | 5.0 | 500 |
| D029 | 75-35-4 | 1,1-Dichloroethene | BDL | 5.0 | 700 |
| D035 | 78-93-3 | Methyl ethyl ketone | BDL | 100 | 200000 |
| D039 | 127-18-4 | Tetrachloroethene | BDL | 5.0 | 700 |
| D040 | 79-01-6 | Trichloroethene | BDL | 5.0 | 500 |
| D043 | 75-01-4 | Vinyl chloride | BDL | 10 | 200 |

ES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

DEC 13 '90 17:26 FROM MATERIALS CONTROL PAGE.019

KEMRON RE RT Work Order # N0-04-293

ed: 04/25/90 05/09/90 15:07:33

RT Wheeling-Pittsburgh Steel
TO 1134 Market St.
Wheeling, WV 26003

EN Marty Stephenson

NT WHEPIT 59500 SAMPLES 1
NY Wheeling-Pittsburgh Steel
TY Wheeling, WV
FAX # 304-234-2678

ID WWTP Sludge/Prev. 02-188-01
EN Client
NS UPS
PE
# 630838
CE under separate cover

PREPARED KEMRON ENVIRONMENTAL SERVICES
BY 109 STARLITE PARK
MARIETTA, OHIO 45750

CERTIFIED BY David L. Bungam

ATTEN
PHONE (614) 373-4071

CONTACT S ANDERSON

ANALYTICAL METHODS AND DOCUMENTATION ARE FOUND AT THE END OF THIS REPORT. ALL RESULTS ON SOILS/SLUDGES ARE REPORTED "AS RECEIVED" UNLESS OTHERWISE SPECIFIED.

| PLE IDENTIFICATION | TEST CODES and NAMES used on this report | |
|---|---|---|
| WWTP Sludge | FE S | Iron, Total |

RECEIVED
MAY 14 1990
Environmental Cont

Kemron
ENVIRONMENTAL SERVICES

DEC 13 '90 17:26 FROM MATERIALS CONTROL PAGE.020

2 KEMRON REPORT Work Order # N0-04-293

ved: 04/25/90 Results by Sample

PLE ID BOF WWTP Sludge SAMPLE # 01 FRACTIONS: A

Date & Time Collected 02/13/90 Category SLUDGE

8 380,000 *
mg/kg Fe

RECEIVED
MAY 14 1990
Environmental Control

Kemron
ENVIRONMENTAL SERVICES

# ANALYTICAL DOCUMENTATION

| PARAMETER | ANALYST | ANALYSIS DATE |
|---|---|---|
| FE_S | PNW | 05/03/90 |

REPORT COMMENTS:

* This result is approximate. In order to obtain more accurate results, a method suitable for the determination of high levels, (% levels) would have to be utilized.

Kemron
ENVIRONMENTAL SERVICES

KEMRON RE. .T Work Order # N0-04-293

od: 04/25/90 Test Methodology

ODE FE_8 NAME Iron, Total

thod 200.7 (ICP) or 236.1 (AA - Direct Aspiration)

KEMRON ENVIRONMENTAL SERVICES

ved: 02/16/90

KEMRON REPORT
03/20/90 10:30:15

Work Order # N0-02-188

ORT Wheeling-Pittsburgh Steel
TO 1134 Market St.
Wheeling, WV 26003

TEN Marty Stephenson

ENT WHEPIT 59500 SAMPLES 7
ANY Wheeling-Pittsburgh Steel
ITY Wheeling, WV

ID BOF WWT Sludge Project
KEN Client
ANS UPS
YPE
. #
ICE under separate cover

PREPARED KEMRON ENVIRONMENTAL SERVICES
BY 109 STARLITE PARK
MARIETTA, OHIO 45750

David L. Benjamin
CERTIFIED BY

ATTEN
PHONE (614) 373-4071

CONTACT S ANDERSON

ANALYTICAL METHODS AND DOCUMENTATION ARE FOUND AT THE END OF THIS REPORT. ALL RESULTS ON SOILS/SLUDGES ARE REPORTED "AS RECEIVED" UNLESS OTHERWISE SPECIFIED.

MPLE IDENTIFICATION
eubenville So. BOF
rtins Ferry WWT Sludge
lenport Skim Basin End
lenprot Skim Basin Mid
lenport Skim Basin Mid
lenport Tube Set Basin I
lenport Tube Set Basin E
lenpt Hot Strip Set.Bas.

Original w/ALPT PICK

TEST CODES and NAMES used on this report

| | | | |
|---|---|---|---|
| AG_S | Silver, Total | PCT_S | Percent Solids |
| AL_S | Aluminum, Total | PHEN_S | Phenolics, Total |
| AS_S | Arsenic, Total | PH_LS | pH (Lab) - Solid Matrix |
| BA_S | Barium, Total | REACTC | Cyanide Reactivity |
| CD_S | Cadmium, Total | REACTS | Sulfide Reactivity |
| CN_FS | Cyanide, Free | SE_S | Selenium, Total |
| CN_S | Cyanide, Total | SPGRAV | Specific Gravity |
| CR_S | Chromium, Total | TOC_S | Organic Carbon, Leachable |
| CU_S | Copper, Total | ZN_S | Zinc, Total |
| EP_MET | EP Toxicity Metals | | |
| FE_S | Iron, Total | | |
| FLASH | Ignitability | | |
| F_S | Fluoride, Leachable | | |
| HG_S | Mercury, Total | | |
| M8240 | Volatile Organics | | |
| MO_S | Molybdenum, Total | | |
| NH3_S | Nitrogen, Ammonia | | |
| NI_S | Nickel, Total | | |
| OG_IRS | Oil and Grease | | |
| PB_FUS | Lead, Total | | |
| PCB_S | Polychlorinated Biphenyls | | |

Kemron
ENVIRONMENTAL SERVICES

DEC 13 '90 17:27 FROM MATERIALS CONTROL

2 KEMRON REPORT Work Order # N0-02-188
ived: 02/16/90-- Results by Sample

MPLE ID Steubenville So. BOF SAMPLE # 01 FRACTIONS: A,B
Date & Time Collected 02/13/90 Category SLUDGE

S 42,000 ** mg/kg Fe PCT_S 69 % wt. ZN_S 55,000 mg/kg Zn

THE LAB RE-RAN THE FE (IRON) ANALYSIS AND GOT 380,000 mg/kg WHICH IS REPORTED.

3 KEMRON R1 T Work Order # N0-02-188
ved: 02/16/90 Results by Sample

E ID Steubenville So. BOF FRACTION 01A TEST CODE EP MET NAME EP Toxicity Metals
Date & Time Collected 02/13/90 Category SLUDGE

EP TOXICITY TEST

VERIFIED: RJW

UNITS: MG/L

| EPA# | CONTAMINANT | RESULT | RCRA LIMIT |
|---|---|---|---|
| D004 | Arsenic | <0.04 | 5.0 |
| D005 | Barium | 0.2 | 100.0 |
| D006 | Cadmium | 0.08 | 1.0 |
| D007 | Chromium | <0.04 | 5.0 |
| D008 | Lead | 0.7 | 5.0 |
| D009 | Mercury | <0.001 | 0.2 |
| D010 | Selenium | <0.04 | 1.0 |
| D011 | Silver | <0.08 | 5.0 |
| | Nickel | <0.08 | ------ |
| | Zinc | 590 | ------ |

NOTES AND DEFINITIONS FOR THIS REPORT.
NA = NOT ANALYZED

KEMRON RE RT Work Order # N0-02-188

ed: 02/16/90 Results by Sample

ID Steubenville So. BOF FRACTION 01B TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 02/13/90 Category SLUDGE

ANALYST: WSN FILE #: 3WP3592
INSTRMT: FINN_3 INJECTED: 02/20/90 FACTOR: 1 UNITS: ug/L VERIFIED: RJW

| CAS# | COMPOUND | RESULT | DET LIMIT |
|---|---|---|---|
| 74-87-3 | Chloromethane | BDL | 10 |
| 74-83-9 | Bromomethane | BDL | 10 |
| 75-01-4 | Vinyl chloride | BDL | 10 |
| 75-00-3 | Chloroethane | BDL | 10 |
| 75-09-2 | Methylene chloride | 10 | 5 |
| 67-64-1 | Acetone | 630 | 10 |
| 75-15-0 | Carbon disulfide | BDL | 5 |
| 75-35-4 | 1,1-Dichloroethene | BDL | 5 |
| 75-34-3 | 1,1-Dichloroethane | BDL | 5 |
| 540-59-0 | 1,2-Dichloroethene (total) | BDL | 5 |
| 67-66-3 | Chloroform | BDL | 5 |
| 107-06-2 | 1,2-Dichloroethane | BDL | 5 |
| 78-93-3 | 2-Butanone | 8 | 10 |
| 71-55-6 | 1,1,1-Trichloroethane | BDL | 5 |
| 56-23-5 | Carbon tetrachloride | BDL | 5 |
| 108-05-4 | Vinyl acetate | BDL | 10 |
| 75-27-4 | Bromodichloromethane | BDL | 5 |
| 78-87-5 | 1,2-Dichloropropane | BDL | 5 |
| 10061-01-5 | cis-1,3-Dichloropropene | BDL | 5 |
| 79-01-6 | Trichloroethene | BDL | 5 |
| 124-48-1 | Dibromochloromethane | BDL | 5 |
| 79-00-5 | 1,1,2-Trichloroethane | BDL | 5 |
| 71-43-2 | Benzene | 62 | 5 |
| 10061-02-6 | trans-1,3-Dichloropropene | BDL | 5 |
| 110-75-8 | 2-Chloroethyl vinyl ether | BDL | 10 |
| 75-25-2 | Bromoform | BDL | 5 |
| 591-78-6 | 2-Hexanone | BDL | 10 |
| 108-10-1 | 4-Methyl-2-pentanone | BDL | 10 |
| 127-18-4 | Tetrachloroethene | BDL | 5 |
| 108-88-3 | Toluene | 17 | 5 |
| 79-34-5 | 1,1,2,2,-Tetrachloroethane | BDL | 5 |
| 108-90-7 | Chlorobenzene | BDL | 5 |

E ID Steubenville So. BOF FRACTION 01B TEST CODE M8240 NAME Volatile Organics
Date & Time Collected 02/13/90 Category SLUDGE

| CAS# | COMPOUND | RESULT | DET LIMIT |
|---|---|---|---|
| 100-41-4 | Ethyl benzene | BDL | 5 |
| 100-42-5 | Styrene | BDL | 5 |
| 1330-20-7 | Xylenes (Total) | BDL | 5 |

SURROGATES

| | | |
|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | % Recovery |
| Toluene-d8 | 101 | % Recovery |
| p-Bromofluorobenzene | 88 | % Recovery |

ES AND DEFINITIONS FOR THIS REPORT
DET LIMIT = DETECTION LIMIT
BDL = BELOW DETECTION LIMIT
* = SEMI-QUANTITATIVE SCREEN ONLY

DEC 13 '90 17:29 FROM MATERIALS CONTROL PAGE.028

Antech Ltd.
One Triangle Drive
Export
Pennsylvania 15632
412/733-1161

General Data Table

Client: Mr. Martin Stephenson
Wheeling-Pittsburgh Steel Corporation
1134 Market Street
Wheeling, WV 26003

Antech Project No.: 89-1873
Receipt Date: 10/25/89
Verbal Report Date: NR
Report Date: 12/12/89
Page 1 of 2

Reference: Waste Characterization; Requestor No. 590968; Requisition No. 040000000510; Purchase Order No. S891102516

| Parameter | Units | Sample Identification 10-0735 (Steubenville South BOF Sludge) |
|---|---|---|
| Ammonia | µg/g $NH_3$-N | 36 |
| Specific Gravity | - | 4.2 |
| Free Cyanide | µg/g | <1 |
| Total Cyanide | µg/g | <1 |
| Flash Point | °F | >200 |
| Oil and Grease | µg/g | <50 |
| pH (1:1) | pH units | 11.00 |
| Phenolics | µg/g | <1 |
| Total Solids @ 105°C | % | 70.8 |
| Reactive Cyanide | µg/g | <1 |
| Reactive Sulfide | µg/g | <10 |
| Polychlorinated Biphenyls(1) | µg/g | <1 |
| Fluoride | µg/g | 30 |
| ASTM: | | |
| Total Organic Carbon | mg/1 | 1 |
| Total Metals: | | |
| Aluminum | µg/g | 240 |
| Arsenic | µg/g | 6.1 |
| Barium | µg/g | <100 |
| Cadmium | µg/g | <10 |
| Chromium | µg/g | 410 |
| Copper | µg/g | 60 |
| Iron | µg/g | 290,000 |
| Lead | µg/g | 530 |
| Mercury | µg/g | <0.01 |
| Molybdenum | µg/g | <100 |
| Nickel | µg/g | <100 |
| Selenium | µg/g | <0.1 |
| Silver | µg/g | <10 |
| Zinc | µg/g | 140 |

Total analysis + total metals processed on an as recieved basis.
(confirmation from entire laboratories)

DEC 15 1989

General Data Table

Client: Mr. Martin Stephenson
Wheeling-Pittsburgh Steel Corporation
1134 Market Street
Wheeling, WV 26003

Antech Project No.: 89-1873
Receipt Date: 10/25/89
Verbal Report Date: NR
Report Date: 12/12/89
Page 2 of 2

Reference: Waste Characterization; Requestor No. 590968; Requisition No. 040000000510; Purchase Order No. S891102516

| Parameter | Units | Sample Identification 10-0735 (Steubenville South BOF Sludge) |
|---|---|---|
| EP Toxicity Metals: | | |
| Arsenic | mg/l | <0.1 |
| Barium | mg/l | <10 |
| Cadmium | mg/l | <0.1 |
| Chromium | mg/l | 0.9 |
| Lead | mg/l | 1.2 |
| Mercury | mg/l | <0.01 |
| Nickel | mg/l | <1 |
| Selenium | mg/l | <0.1 |
| Silver | mg/l | <0.1 |
| Zinc | mg/l | <1 |
| EP Toxicity Data: | | |
| Initial pH | pH units | 10.35 |
| Final pH | pH units | 5.10 |
| Amount of 0.5N Acetic Acid Added per 100-Gram Sample | ml | 370 |

(1) EPA Method 8080.

Approved: Thomas W. Hill/DIN

Volatile Organic Analyses
EPA Method 8240
Wheeling-Pittsburgh Steel Corporation
Antech Project No. 89-1873
Waste Characterization; Requestor No. 590968
Requisition No. 040000000510; Purchase Order No. S891102516

| Parameter | Units | Sample Identification 10-0735 (Steubenville South BOF Sludge) |
|---|---|---|
| Chloromethane | µg/kg | <2,500 |
| Bromomethane | µg/kg | <2,500 |
| Vinyl Chloride | µg/kg | <2,500 |
| Chloroethane | µg/kg | <2,500 |
| Methylene Chloride | µg/kg | 8,200 |
| Acetone | µg/kg | <25,000 |
| Carbon Disulfide | µg/kg | <1,250 |
| 1,1-Dichloroethene | µg/kg | <1,250 |
| 1,1-Dichloroethane | µg/kg | <1,250 |
| Trans-1,2-Dichloroethene | µg/kg | <1,250 |
| Chloroform | µg/kg | <1,250 |
| 1,2-Dichloroethane | µg/kg | <1,250 |
| 2-Butanone | µg/kg | <25,000 |
| 1,1,1-Trichloroethane | µg/kg | <1,250 |
| Carbon Tetrachloride | µg/kg | <1,250 |
| Vinyl Acetate | µg/kg | <12,500 |
| Bromodichloromethane | µg/kg | <1,250 |
| 1,1,2,2-Tetrachloroethane | µg/kg | <1,250 |
| 1,2-Dichloropropane | µg/kg | <1,250 |
| Trans-1,3-Dichloropropene | µg/kg | <1,250 |
| Trichloroethene | µg/kg | <1,250 |
| Dibromochloromethane | µg/kg | <1,250 |
| 1,1,2-Trichloroethane | µg/kg | <1,250 |
| Benzene | µg/kg | <1,250 |
| Cis-1,3-Dichloropropene | µg/kg | <1,250 |
| 2-Chloroethylvinyl Ether | µg/kg | <2,500 |
| Bromoform | µg/kg | <1,250 |
| 2-Hexanone | µg/kg | <12,500 |
| 4-Methyl-2-pentanone | µg/kg | <12,500 |
| Tetrachloroethene | µg/kg | <1,250 |
| Toluene | µg/kg | <1,250 |
| Chlorobenzene | µg/kg | <1,250 |
| Ethylbenzene | µg/kg | <1,250 |
| Styrene | µg/kg | <1,250 |
| Total Xylenes | µg/kg | <1,250 |

FEB -2 1990
Environmental Control

Volatile Organic Analyses
EPA Method 8240
Wheeling-Pittsburgh Steel Corporation
Antech Project No. 89-1873
Waste Characterization; Requestor No. 590968
Requisition No. 040000000510; Purchase Order No. S891102516

| Parameter | Units | Sample Identification (Method Blank) |
|---|---|---|
| Chloromethane | µg/kg | <2,500 |
| Bromomethane | µg/kg | <2,500 |
| Vinyl Chloride | µg/kg | <2,500 |
| Chloroethane | µg/kg | <2,500 |
| Methylene Chloride | µg/kg | 7,250 |
| Acetone | µg/kg | <25,000 |
| Carbon Disulfide | µg/kg | <1,250 |
| 1,1-Dichloroethene | µg/kg | <1,250 |
| 1,1-Dichloroethane | µg/kg | <1,250 |
| Trans-1,2-Dichloroethene | µg/kg | <1,250 |
| Chloroform | µg/kg | <1,250 |
| 1,2-Dichloroethane | µg/kg | <1,250 |
| 2-Butanone | µg/kg | <25,000 |
| 1,1,1-Trichloroethane | µg/kg | <1,250 |
| Carbon Tetrachloride | µg/kg | <1,250 |
| Vinyl Acetate | µg/kg | <12,500 |
| Bromodichloromethane | µg/kg | <1,250 |
| 1,1,2,2-Tetrachloroethane | µg/kg | <1,250 |
| 1,2-Dichloropropane | µg/kg | <1,250 |
| Trans-1,3-Dichloropropene | µg/kg | <1,250 |
| Trichloroethene | µg/kg | <1,250 |
| Dibromochloromethane | µg/kg | <1,250 |
| 1,1,2-Trichloroethane | µg/kg | <1,250 |
| Benzene | µg/kg | <1,250 |
| Cis-1,3-Dichloropropene | µg/kg | <1,250 |
| 2-Chloroethylvinyl Ether | µg/kg | <2,500 |
| Bromoform | µg/kg | <1,250 |
| 2-Hexanone | µg/kg | <12,500 |
| 4-Methyl-2-pentanone | µg/kg | <12,500 |
| Tetrachloroethene | µg/kg | <1,250 |
| Toluene | µg/kg | <1,250 |
| Chlorobenzene | µg/kg | <1,250 |
| Ethylbenzene | µg/kg | <1,250 |
| Styrene | µg/kg | <1,250 |
| Total Xylenes | µg/kg | <1,250 |

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AUG 22 1988
Environmental

Antech Ltd.
One Triangle Drive
Export
Pennsylvania 15632
412/733-1161

General Data Table

Client: Ms. Nancy A. Ray
Environmental Coordinator
Wheeling-Pittsburgh Steel Corporation
Environmental Control Department
1134 Market Street
Wheeling, WV 26003

Antech Project No.: 88-1142
Receipt Date: 7/25/88
Verbal Report Date: NR
Report Date: 8/16/88
Page 1 of 1

Reference: Waste Characterization; Pennsylvania Department of Environmental Resources Module 1 Total Analyses; WPSC Requisition No. 590832; Purchase Order No. 662620

| Parameter | Units | Sample Identification SS-BOF |
|---|---|---|
| Total Residue @ 105°C | % | 66 |
| Volatile Residue @ 550°C | % | 1.0 |
| pH (1:1) | pH units | 11.70 |
| Total Cyanide | µg/g | <1 |
| Oil and Grease | µg/g | <50 |
| Flash Point | °F | >200 |
| Corrosivity | pH units | 11.70 |
| Reactivity: | | |
| Cyanide | µg/g | <1 |
| Sulfide | µg/g | <10 |
| Arsenic | µg/g | 11 |
| Barium | µg/g | <100 |
| Cadmium | µg/g | 8.9 |
| Chromium | µg/g | 200 |
| Lead | µg/g | 1,900 |
| Mercury | µg/g | 0.72 |
| Nickel | µg/g | 48 |
| Selenium | µg/g | <0.1 |
| Silver | µg/g | 12 |
| Copper | µg/g | 91 |
| Molybdenum | µg/g | <100 |
| Zinc | µg/g | 4,000 |
| Iron | µg/g | 260,000 |
| Fluoride | µg/g | 1.0 |
| Total Organic Halogens | µg/g | <25 |

Approved: Thomas W. Hill
Thomas W. Hill
Vice President, Technical Services

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Environmental

Antech Ltd.
One Triangle Drive
Export
Pennsylvania 15632
412/733-1161

# General Data Table

Client: Ms. Nancy A. Ray
Environmental Coordinator
Wheeling-Pittsburgh Steel Corporation
Environmental Control Department
1134 Market Street
Wheeling, WV 26003

Antech Project No.: 88-1142
Receipt Date: 7/25/88
Verbal Report Date: NR
Report Date: 8/16/88
Page 1 of 1

Reference: Waste Characterization; Pennsylvania Department of Environmental Resources Module 1 Leaching Analyses; WPSC Requisition No. 590832; Purchase Order No. 662620

| Parameter | Units | Sample Identification SS-BOF Sludge |
|---|---|---|
| ASTM Extractable (D3987-85): | | |
| pH | pH units | 11.30 |
| Oil and Grease | mg/l | <1 |
| Ammonia | mg/l $NH_3$-N | 0.1 |
| Phenolics | mg/l | 0.10 |
| Cyanide | mg/l | <0.1 |
| COD | mg/l | 55 |
| Total Organic Carbon | mg/l | 25 |
| Total Dissolved Solids @ 180°C | mg/l | 1,240 |
| Total Volatile Solids @ 550°C | mg/l | 130 |
| Total Organic Halogens | µg/l | 13 |
| EP Toxicity Metals: | | |
| Antimony | mg/l | <10 |
| Arsenic | mg/l | <0.1 |
| Barium | mg/l | <10 |
| Cadmium | mg/l | <0.1 |
| Chromium | mg/l | <0.1 |
| Hexavalent Chromium | mg/l | <0.1 |
| Lead | mg/l | 0.3 |
| Mercury | mg/l | <0.01 |
| Nickel | mg/l | <1 |
| Selenium | mg/l | <0.1 |
| Silver | mg/l | <0.1 |
| Copper | mg/l | <1 |
| Molybdenum | mg/l | <10 |
| Zinc | mg/l | 100 |
| Fluoride | mg/l | 0.09 |

Approved: Thomas W. Hill
Thomas W. Hill
Director of Technical Services

# APPENDIX E-2

## ASTM LEACH TEST ON THE PLANT DEBRIS AREA COMPOSITE
## (EXCERPTED FROM GERAGHTY & MILLER, INC., 1991)

TABLE 3

ANALYTICAL RESULTS
PLANT DEBRIS AREA
WHEELING PITTSBURGH STEEL CORPORATION
FOLLANSBEE, WEST VIRGINIA

| PARAMETERS | UNITS | DETECTION LIMITS | GROUND WATER SAMPLES | | | | | | ASTM SHAKE TEST OF WASTE COMPOSITE | USEPA PRIMARY DRINKING WATER STANDARDS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | PDA-1 | PDA-2 | PDA-3 | PDA-3 (Duplicate) | PDA-4 | FIELD BLANK | | |
| Date Sampled | | | 6/24/91 | 6/25/91 | 6/25/91 | 6/25/91 | 6/25/91 | 6/25/91 | 8/10/91 | |
| Field Temperature | °C | -- | 13.8 | 15.4 | 16.7 | -- | 17.2 | -- | -- | |
| Field pH | S.U. | -- | 6.75 | 6.49 | 6.88 | -- | 7.12 | -- | -- | |
| Field Conductivity | umhos/cm | -- | 880 | 1640 | 2200 | -- | 2000 | -- | -- | |
| pH | S.U. | -- | 7.18 | 6.89 | 7.12 | 7.08 | 7.26 | 5.48 | 7.32 | |
| Specific Conductance | umhos/cm | 5 | 959 | 1,570 | 2,090 | 2,090 | 1,970 | ND | 455 | |
| Total Suspended Solids | mg/L | 5 | 802 | 2,020 | 90 | 86 | 672 | ND | 6 | |
| Total Organic Carbon | mg/L | 1 | ND | 3 | 4 | 4 | 3 | ND | 24 | |
| Total Organic Halogens | mg/L | 0.005 | 0.007 | 0.141 | 0.007 | ND | 0.074 | ND | ND(2) | |
| Arsenic | mg/L | 0.005 | ND | ND | ND | ND | 0.006 | ND | 0.028 | 0.05 |
| Barium | mg/L | 0.01 | 0.03 | 0.01 | 0.01 | 0.01 | 0.03 | ND | 0.01 | 2 |
| Cadmium | mg/L | 0.01 | ND | ND | ND | ND | ND | ND | ND | 0.01 |
| Chromium | mg/L | 0.01 | ND | ND | ND | ND | ND | ND | ND | 0.05 |
| Lead | mg/L | 0.005 | ND | ND | ND | ND | ND | ND | ND | 0.05 |
| Mercury | mg/L | 0.0008 | ND | ND | ND | ND | ND | ND | ND | 0.002 |
| Phenolics (total) | mg/L | 0.1 | ND | ND | ND | ND | ND | ND | ND | |
| Selenium | mg/L | 0.005 | ND | ND(1) | ND(1) | ND | ND | ND | ND | 0.01 |
| Silver | mg/L | 0.02 | ND | ND | ND | ND | ND | ND | ND | 0.05 |

(Revised 10/28/91)

ND = Not detected
(1) = Method reporting limit was adjusted to 0.05 mg/L to account for sample matrix effects.
(2) = Sample obtained 10/9/91.

GERAGHTY & MILLER, INC.

# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

**INORGANIC ANALYTES**

Client: Geraghty & Miller

Client ID: PDA

Date Sample Received: 10/10/91 Laboratory ID: 910565-03

Date Analysis Completed: 10/16/91 Concentration in: ug/L (ppb)

| Target Analyte | Sample Concentration | Method Reporting Limit |
|---|---|---|
| Total Organic Halide (TOX)* | ND | 5 |

ND = Not detected

* ASTM extraction performed before analysis

Reported by: A.A.L. Approved by: [signature]

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**INORGANIC ANALYTES**

Client: Geraghty & Miller

Client ID: Debris Area

Laboratory ID: 910459-01

Date Sample Received: 8/12/91

Date Analysis Completed: 8/26/91

| Target Analyte | Result | Units | Method Reporting Limit |
|---|---|---|---|
| pH | 7.32 | S.U. | --- |
| Specific Conductance | 455 | umhos/cm | 5 |
| Total Organic Carbon (TOC) | 24 | mg/L (ppm) | 1 |
| Total Phenols | ND | mg/L (ppm) | 0.1 |
| Total Suspended Solids | 6 | mg/L (ppm) | 5 |

ND = Not detected

* All analyses were performed after ASTM leaching procedure.

Reported by: N.E. Lefebvre

Approved by: Phyllis Shulin

Revised: 9/18/91

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**LEACHATE METALS**

Client: Geraghty & Miller

Client Sample ID: Debris Area

Date Sample Received: 8/12/91 Laboratory ID: 910459-01

Date Analysis Completed: 8/21/91 Concentration in: mg/L (ppm)

| Target Analyte | Sample Concentration | Method Reporting Limit |
|---|---|---|
| Arsenic | 0.028 | 0.005 |
| Barium | 0.01 | 0.01 |
| Cadmium | ND | 0.01 |
| Chromium | ND | 0.01 |
| Lead | ND | 0.005 |
| Mercury | ND | 0.0008 |
| Selenium | ND | 0.005 |
| Silver | ND | 0.02 |

ND = Not detected

Reported by: _____ Approved by: _____

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Client: Geraghty & Miller

Client Sample ID: Laboratory Control Sample

Project No.: 910459 Laboratory ID: 0814LCSW2

Date Analysis Completed: 8/21/91 Matrix: Aqueous

| Target Analyte | % Recovery | Control Limits |
|---|---|---|
| **Leachate Metals** | | |
| Arsenic | 116 % | 75-125% |
| Barium | 86 | 75-125 |
| Cadmium | 87 | 75-125 |
| Calcium | 85 | 75-125 |
| Chromium | 89 | 75-125 |
| Copper | 89 | 75-125 |
| Iron | 86 | 75-125 |
| Lead | 92 | 75-125 |
| Magnesium | 88 | 75-125 |
| Manganese | 85 | 75-125 |
| Mercury | 106 | 75-125 |
| Molybdenum | 98 | 75-125 |
| Nickel | 88 | 75-125 |
| Potassium | 84 | 75-125 |
| Selenium | 98 | 75-125 |
| Silver | 93 | 75-125 |
| Sodium | 82 | 75-125 |
| Zinc | 87 | 75-125 |

Reported by: _____ Approved by: _____

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**METHOD BLANK**

Client: Geraghty & Miller

Client Sample ID: Method Blank

Project No.: 910459 Laboratory ID: 0814PBW2

Date Analysis Completed: 8/21/91 Concentration in: mg/L (ppm)

| Target Analyte | Sample Concentration | Method Reporting Limit |
|---|---|---|
| **Leachate Metals** | | |
| Arsenic | ND | 0.005 |
| Barium | ND | 0.01 |
| Cadmium | ND | 0.01 |
| Calcium | ND | 0.2 |
| Chromium | ND | 0.01 |
| Copper | ND | 0.01 |
| Iron | ND | 0.05 |
| Lead | ND | 0.005 |
| Magnesium | ND | 0.3 |
| Manganese | ND | 0.01 |
| Mercury | ND | 0.0008 |
| Molybdenum | ND | 0.2 |
| Nickel | ND | 0.04 |
| Potassium | 0.4 | 0.4 |
| Selenium | ND | 0.005 |
| Silver | ND | 0.02 |
| Sodium | ND | 0.4 |
| Zinc | ND | 0.1 |

ND = Not detected

Reported by: _____ Approved by: _____

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**INORGANIC ANALYTES**

Client: Geraghty & Miller

Client ID: Debris Area

Laboratory ID: 910459-01

Date Sample Received: 8/12/91

Date Analysis Completed: 8/26/91

| Target Analyte | Result | Units | Method Reporting Limit |
|---|---|---|---|
| pH | 7.32 | S.U. | --- |
| Specific Conductance | 455 | umhos/cm | 5 |
| Total Phenols | ND | mg/L (ppm) | 0.1 |
| Total Suspended Solids | 6 | mg/L (ppm) | 5 |

ND = Not detected

* All analyses were performed after ASTM leaching procedure.

Reported by: [signature] Approved by: [signature]

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# CEIMIC
## CORPORATION

*"Analytical Chemistry for Environmental Management"*

QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Client: Geraghty & Miller

Client Sample ID: Laboratory Control Sample

Project No.: 910459

Laboratory ID: LCSW

Date Analysis Completed: 8/26/91

| Target Analyte | % Recovery | Control Limits |
|---|---|---|
| Alkalinity (as $CaCO^3$) | 109 % | 75-125 % |
| Chloride | 92 | 75-125 |
| Cyanide | 78 | 75-125 |
| Nitrogen | | |
| Ammonia (as N) | 112 | 75-125 |
| Nitrate (as N) | 86 | 75-125 |
| pH | 98 | 75-125 |
| Specific Conductance | 102 | 75-125 |
| Sulfate | 108 | 75-125 |
| Total Dissolved Solids | 111 | 75-125 |
| Total Suspended Solids | 93 | 75-125 |

Reported by: [illegible] Approved by: Phyllis Stolk

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# CEIMIC
## CORPORATION
*"Analytical Chemistry for Environmental Management"*

**QUALITY CONTROL**

**METHOD BLANK**

Client: Geraghty & Miller

Client ID: Method Blank

Project No.: 910459

Laboratory ID: PBW

Date Analysis Completed: 8/26/91

| Target Analyte | Result | Units | Method Reporting Limit |
|---|---|---|---|
| Alkalinity (as $CaCO_3$) | ND | mg/L (ppm) | 2 |
| Chloride | ND | mg/L (ppm) | 2 |
| Cyanide | | | |
| Total | ND | mg/L (ppm) | 0.01 |
| Amenable | ND | mg/L (ppm) | 0.01 |
| Nitrogen | | | |
| Ammonia (as N) | ND | mg/L (ppm) | 0.1 |
| Nitrate (as N) | ND | mg/L (ppm) | 0.02 |
| TKN (as N) | ND | mg/L (ppm) | 0.05 |
| Specific Conductance | ND | umhos/cm | 5 |
| Sulfate | ND | mg/L (ppm) | 5 |
| Total Dissolved Solids | ND | mg/L (ppm) | 5 |
| Total Suspended Solids | ND | mg/L (ppm) | 5 |

ND = Not detected

Reported by: N. Lefebvre  Approved by: Phyllis Stuller

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# APPENDIX E-3

## SW-846 METHOD 1310 LEACH TEST ON BIOLOGICAL TREATMENT PLANT SLUDGE

WADSWORTH/ALERT
LABORATORIES, INC.

COMPANY : WHEELING-PITTSBURGH STEEL
LAB #: 2094-76233
MATRIX : SOLID

DATE RECEIVED: 12/ 2/88

SAMPLE ID : STEUBENVILLE EAST BIO TREATMENT PLT. SLUDGE 12-1-88

## METALS ANALYTICAL REPORT
## SELECTED LIST

Leachate testing in accordance with USEPA Manual SW846 Method 1310

EP EXTRACTION DATE: 12/ 3/88

| ELEMENT | PREPARATION - ANALYSIS DATE | RESULT | DETECTION LIMIT | |
|---|---|---|---|---|
| Silver | 12/ 5-12/ 6/88 | ND | 0.01 | mg/l |
| Arsenic | 12/ 5-12/ 6/88 | 0.007 | 0.005 | mg/l |
| Barium | 12/ 5-12/ 6/88 | 0.18 | 0.01 | mg/l |
| Cadmium | 12/ 5-12/ 6/88 | ND | 0.01 | mg/l |
| Chromium | 12/ 5-12/ 6/88 | ND | 0.02 | mg/l |
| Mercury | 12/ 5-12/ 6/88 | ND | 0.005 | mg/l |
| Nickel | 12/ 5-12/ 6/88 | ND | 0.04 | mg/l |
| Lead | 12/ 5-12/ 6/88 | ND | 0.05 | mg/l |
| Selenium | 12/ 5-12/ 6/88 | 0.006 | 0.005 | mg/l |
| Final pH | 12/ 4/88 | 4.8 | | su |
| Initial pH | 12/ 3/88 | 5.5 | | su |

NOTE: ND (None Detected)

WADSWORTH/ALERT
LABORATORIES, INC.

COMPANY : WHEELING-PITTSBURGH STEEL
LAB #: 2094-76233
MATRIX : SOLID

DATE RECEIVED: 12/ 2/88

SAMPLE ID : STEUB. EAST BIO TREATMENT PLT. SLUDGE 12-1-88

## ANALYTICAL REPORT

| PARAMETER | PREPARATION - ANALYSIS DATE | RESULT | DETECTION LIMIT | |
|---|---|---|---|---|
| Cyanide | 12/ 5/88 | 17 | 5 | mg/kg |
| Flash Point | 12/ 6/88 | >180 | | deg F |
| Total Recoverable Phenolics | 12/ 5-12/ 8/88 | 0.6 | 0.2 | mg/kg |
| pH | 12/ 2/88 | 7.0 | | su |
| Sulfide | 12/ 5/88 | ND | 50 | mg/kg |
| Total Solids | 12/ 5-12/ 6/88 | 1.5 | 0.5 | % |

NOTE: ND (None Detected)

WADSWORTH/ALERT
LABORATORIES, INC.

# QUALITY CONTROL SECTION

WADSWORTH/ALERT
LABORATORIES, INC.

# MATRIX SPIKE DATA

| LAB ID | PARAMETER | SPIKE PERCENT RECOVERY | SPK/DUP PERCENT RECOVERY | SPIKE MATRIX |
|---|---|---|---|---|
| 881205 | Arsenic | 129 | 89 | WATER |
| 881205 | Barium | 80 | 80 | WATER |
| 881205 | Cadmium | 80 | 79 | WATER |
| 881205 | Chromium | 74 | 74 | WATER |
| 881205 | Lead | 82 | 85 | WATER |
| 881205 | Mercury | 64 | 74 | WATER |
| 881201 | Selenium | 66 | 77 | WATER |
| 881205 | Silver | 92 | 90 | WATER |
| 881205 | Nickel | 75 | 76 | WATER |

WADSWORTH/ALERT
LABORATORIES, INC.

# MATRIX SPIKE DATA

| LAB ID | PARAMETER | SPIKE PERCENT RECOVERY | SPK/DUP PERCENT RECOVERY | SPIKE MATRIX |
|---|---|---|---|---|
| 881128 | Cyanide | 83 | 105 | SOLID |
| 881122 | Phenols | 80 | 76 | SOLID |
| 881115 | Sulfide | 77 | 73 | SOLID |

WADSWORTH/ALERT
LABORATORIES, INC.

# MATRIX SPIKE RECOVERY
# CONTROL LIMITS

| PARAMETER | WATER RECOVERY CONTROL LIMITS | SOLID RECOVERY CONTROL LIMITS |
|---|---|---|
| Aluminum | 77-120 | 66-131 |
| Antimony | 63-122 | 48-137 |
| Arsenic | 61-137 | 61-137 |
| Barium | 75-114 | 65-123 |
| Beryllium | 71-117 | 60-128 |
| Cadmium | 76-108 | 68-116 |
| Calcium | 72-122 | 59-135 |
| Chromium | 73-108 | 65-116 |
| Cobalt | 80-110 | 73-117 |
| Copper | 77-112 | 68-121 |
| Hexavalent Chrome | 85-107 | 79-113 |
| Iron | 65-125 | 65-125 |
| Lead | 74-111 | 64-121 |
| Magnesium | 68-134 | 68-134 |
| Manganese | 78-114 | 69-123 |
| Mercury | 61-122 | 61-122 |
| Molybdenum | 77-119 | 66-130 |
| Nickel | 68-117 | 56-129 |
| Potassium | 75-126 | 63-138 |
| Selenium | 51-130 | 51-130 |
| Silicon | 86-113 | 79-120 |
| Silver | 68-114 | 57-125 |
| Sodium | 66-131 | 49-148 |
| Strontium | 83-114 | 75-121 |
| Thallium | 64-121 | 64-121 |
| Tin | 68-128 | 68-128 |
| Vanadium | 82-113 | 75-120 |
| Zinc | 70-118 | 57-131 |

WADSWORTH/ALERT
LABORATORIES, INC.

# MATRIX SPIKE RECOVERY
# CONTROL LIMITS

| PARAMETER | WATER RECOVERY CONTROL LIMITS | SOLID RECOVERY CONTROL LIMITS |
|---|---|---|
| Alkalinity | 81-112 | 73-119 |
| Ammonia Nitrogen | 79-119 | 69-129 |
| Bromide | 80-121 | 70-131 |
| Chemical Oxygen Demand | 83-119 | 74-128 |
| Chloride | 91-117 | 84-123 |
| Cyanide | 52-126 | 52-126 |
| Fluoride | 78-123 | 67-135 |
| Hardness | 88-113 | |
| Methylene Blue Active Substances | 73-126 | 60-140 |
| Nitrate Nitrogen | 64-122 | 49-137 |
| Nitrite Nitrogen | 94-108 | 91-111 |
| Phenols | 68-128 | 54-142 |
| Phosphate | 60-142 | 60-142 |
| Sulfate | 84-114 | 77-121 |
| Sulfide | 44-121 | 44-121 |
| Total Kjeldahl Nitrogen | 83-115 | 75-123 |
| Total Organic Carbon | 79-128 | |
| Total Organic Halogen | 65-110 | |
| Total Organic Nitrogen | 78-120 | 67-131 |

WADSWORTH/ALERT
LABORATORIES, INC.

COMPANY : Wadsworth/Alert Laboratories, Inc.
LABORATORY ID : 9088-91205
SAMPLE MATRIX : WATER

RECEIVING DATE : 12/ 5/88

SAMPLE ID : INTRA-LAB BLANK , 12/5 /88

## METALS ANALYTICAL BLANK REPORT

| ELEMENT | PREPARATION - ANALYSIS DATE | RESULT | DETECTION LIMIT | |
|---|---|---|---|---|
| Silver | 12/ 5-12/ 6/88 | ND | 0.01 | mg/l |
| Arsenic | 12/ 5-12/ 6/88 | ND | 0.005 | mg/l |
| Barium | 12/ 5-12/ 6/88 | ND | 0.01 | mg/l |
| Cadmium | 12/ 5-12/ 6/88 | ND | 0.01 | mg/l |
| Chromium | 12/ 5-12/ 6/88 | ND | 0.02 | mg/l |
| Mercury | 12/ 5-12/ 7/88 | ND | 0.0002 | mg/l |
| Nickel | 12/ 5-12/ 6/88 | ND | 0.04 | mg/l |
| Lead | 12/ 5-12/ 6/88 | ND | 0.05 | mg/l |
| Selenium | 12/ 5-12/ 6/88 | ND | 0.005 | mg/l |

ND - NONE DETECTED

WADSWORTH/ALERT
LABORATORIES, INC.

COMPANY : Wadsworth/Alert Laboratories
LAB #: 9088-91205
MATRIX : WATER

DATE RECEIVED: 12/ 5/88

SAMPLE ID : INTRA-LAB BLANK , 12/5 /88

## GENERAL ANALYTICAL BLANK REPORT

| PARAMETER | PREPARATION - ANALYSIS DATE | RESULT | DETECTION LIMIT | |
|---|---|---|---|---|
| Chloride | 12/ 5/88 | ND | 2 | mg/l |
| Cyanide | 12/ 5/88 | ND | 0.005 | mg/l |
| Chemical Oxygen Demand | 12/ 5/88 | ND | 5 | mg/l |
| Total Recoverable Phenolics | 12/ 5-12/ 8/88 | ND | 0.01 | mg/l |
| Sulfate | 12/ 5/88 | ND | 5 | mg/l |
| Sulfide | 12/ 5/88 | ND | 1 | mg/l |
| Total Dissolved Solids | 12/ 5-12/ 6/88 | ND | 5 | mg/l |
| Total Solids | 12/ 5-12/ 6/88 | ND | 0.5 | % |
| Total Suspended Solids | 12/ 5-12/ 6/88 | ND | 5 | mg/l |

NOTE: ND (None Detected)

# APPENDIX E-4

## COG DRIP LEG ANALYSES

Microbac Laboratories, Inc.
Schiller Division
449 Rochester Road Pittsburgh, Pennsylvania 15237-1733
412/369-4830
Air • Fuel • Water • Food • Wastes

ICF/KAISER ENGINEERS, INC.
Four Gateway Center - 12th Floor
Pittsburgh, PA. 15222

50-264 A
5-22-90
11010
19125
June 1, 1990

Attention: Mr. Cliff Gregory

SUBJECT: #1 COG LOW PRESSURE LINE ON WEST VIRGINIA SIDE OF PIPE BRIDGE
5-22-90 / 0945 hours

BY: KDT

| TESTS (E.P.Tox.) | RESULTS (mg/1) |
|---|---|
| ARSENIC | 0.200 |
| BARIUM | <1.0 |
| CADMIUM | <0.10 |
| CHROMIUM | 0.20 |
| LEAD | <1.0 |
| MERCURY | 0.033 |
| SELENIUM | 0.247 |
| SILVER | <0.10 |

LEACHATE INFORMATION

Aqueous X
# of Phases 1
% Solids <0.5 %

Respectfully,

David J. Denis,
Laboratory Director

DJD/na

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Microbac Laboratories, Inc.
Scriller Division
449 Rochester Road Pittsburgh, Pennsylvania 15237-1733
412/369-4830
Air • Fuel • Water • Food • Wastes

ICF/SRW KAISER
4 Gateway Center, 12th Floor
Pittsburgh, PA 15222

SAS# 5230-6401 to -6406

ANALYST: SAK
DATE: 5/30/90

ATTN: CLIFF GREGORY

TABLE I

VOLATILE ORGANIC COMPOUNDS BY METHOD 624

| PARAMETER | SAMPLE IDENTIFICATION #1 COG LOW PRESSURE LINE | | | UNITS |
|---|---|---|---|---|
| | 50-264A #1 | 50-264A #2 | 50-264A #3 | |
| Benzene | 32 | 39 | 34 | mg/L |
| Bromodichloromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Bromoform | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Bromomethane | < 1 | < 1 | < 1 | mg/L |
| Carbon Tetrachloride | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chloroethane | < 1 | < 1 | < 1 | mg/L |
| 2-chloroethylvinyl ether | < 1 | < 1 | < 1 | mg/L |
| Chloroform | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chloromethane | < 1 | < 1 | < 1 | mg/L |
| Dibromochloromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,3-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,4-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1-Dichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1-Dichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| trans-1,2-Dichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichloropropane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| cis-1,3-Dichloropropene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| trans-1,3-Dichloropropene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Ethylbenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Methylene Chloride | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1,2,2-Tetrachloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Tetrachloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Toluene | 3 | 4 | 3 | mg/L |
| 1,1,1-Trichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1,2-Trichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Trichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Trichlorofluoromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Vinyl Chloride | < 1 | < 1 | < 1 | mg/L |

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Laboratories serving states east of the Mississippi
USDA-EPA-NIOSH

Microbac

# Microbac Laboratories, Inc.

Schiller Division
449 Rochester Road Pittsburgh, Pennsylvania 15237-1733
412/369-4830
Air • Fuel • Water • Food • Wastes

ICF/KAISER ENGINEERS, INC.
Four Gateway Center - 12th Floor
Pittsburgh, PA. 15222

50-264 B
5-22-90
11010
19125
June 1, 1990

Attention: Mr. Cliff Gregory

SUBJECT: #2 COG TO SINTER PLANT (EAST OF COKE PLANT BOILER HOUSE)
5-22-90 / 1000 hours
BY: KDY

| TESTS (E.P.Tox.) | RESULTS (mg/l) |
|---|---|
| ARSENIC | 0.139 |
| BARIUM | <1.0 |
| CADMIUM | <0.10 |
| CHROMIUM | 0.20 |
| LEAD | <1.0 |
| MERCURY | 0.003 |
| SELENIUM | 0.299 |
| SILVER | <0.10 |

LEACHATE INFORMATION

Aqueous X
# of Phases 1
% Solids <0.5 %

Respectfully,

David J. Denis,
Laboratory Director

DJD/na

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ICF/SRW KAISER
4 Gateway Center, 12th Floor
Pittsburgh, PA 15222

ATTN: CLIFF GREGORY



SAS# 5230-6401 to -6406

ANALYST: SAK
DATE: 5/30/90

TABLE I (Cont'd.)

VOLATILE ORGANIC COMPOUNDS BY METHOD 624

| PARAMETER | SAMPLE IDENTIFICATION #2 COG TO SINTER PLANT | | | UNITS |
|---|---|---|---|---|
| | 50-264B #1 | 50-264B #2 | 50-264B #3 | |
| Benzene | 23 | 66 | 52 | mg/L |
| Bromodichloromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Bromoform | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Bromomethane | < 1 | < 1 | < 1 | mg/L |
| Carbon Tetrachloride | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chloroethane | < 1 | < 1 | < 1 | mg/L |
| 2-chloroethylvinyl ether | < 1 | < 1 | < 1 | mg/L |
| Chloroform | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Chloromethane | < 1 | < 1 | < 1 | mg/L |
| Dibromochloromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,3-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,4-Dichlorobenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1-Dichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1-Dichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| trans-1,2-Dichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,2-Dichloropropane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| cis-1,3-Dichloropropene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| trans-1,3-Dichloropropene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Ethylbenzene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Methylene Chloride | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1,2,2-Tetrachloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Tetrachloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Toluene | 4 | 11 | 8 | mg/L |
| 1,1,1-Trichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| 1,1,2-Trichloroethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Trichloroethene | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Trichlorofluoromethane | < 0.5 | < 0.5 | < 0.5 | mg/L |
| Vinyl Chloride | < 1 | < 1 | < 1 | mg/L |

Approval: _____

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