

Appendix B

Calculation Worksheets for Ambient Nickel Concentrations and Field Log Sheets

Company Name: Reliable- Electroless Nickel Plating

| NAME/AREA | PARAMETER | Date | Sample mg/L | Minutes | LPM Flowrate | Total LITERS | Blank mg/L | RESULTS (mg/m3) | OSHA LIM |
|--------------------|-----------|------|----------------|---------|-----------------|-----------------|---------------|-----------------|----------|
| Condition 3 - East | Ni | | 0.21 | 420 | 2.0 | 840 | 0 | 0.006250 | 1.00 |
| Condition 3 - West | Ni | | 0.18 | 420 | 2.0 | 840 | 0 | 0.005357 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 4 - East | Ni | | 0.18 | 377 | 2.0 | 754 | 0 | 0.005968 | 1.00 |
| Condition 4 - West | Ni | | 0.16 | 376 | 2.0 | 752 | 0 | 0.005319 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 5 - East | Ni | | 0.21 | 378 | 2.0 | 756 | 0 | 0.006944 | 1.00 |
| Condition 5 - West | Ni | | 0.19 | 377 | 2.0 | 754 | 0 | 0.006300 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 6 - East | Ni | | 0.51 | 409 | 2.0 | 818 | 0 | 0.015587 | 1.00 |
| Condition 6 - West | Ni | | 0.40 | 409 | 2.0 | 818 | 0 | 0.012225 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |

Calculation: $[(\text{Sample (mg/L)} - \text{Blank (mg/L)}) \times 0.025 \text{ L}] / [(\text{Total Liters})/1000] = X \text{ (mg/m}^3\text{)}$

PROJECT # 110077: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 11/11/05

LOD = 0.008

RL = 0.050

BY ICP ON 11/15/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading | |
|----------|----------|---------|--|
| LRB | 25 | -0.004 | <MDL of 0.007 mg/L = 0.006 |
| LFB | 25 | 0.716 | = 100 x 0.716/0.8 = 89.5% Recovery (80-120%) |
| 110077-1 | 25 | 0.206 | 3 EAST |
| 110077-2 | 25 | 0.180 | 3 West |
| 110077-3 | 25 | 0.505 | 6 EAST |
| 110077-4 | 25 | 0.404 | 6 West |
| 110077-5 | 25 | 0.209 | 5 EAST |
| 110077-6 | 25 | 0.185 | 5 West |
| 110077-7 | 25 | 0.180 | 4 EAST |
| 110077-8 | 25 | 0.156 | 4 West |
| 110077-9 | 25 | -0.003 | = 0.006 |

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED



DATE- 10/31/05

Condition # 3

COMPANY NAME Melrose Victory

SAMPLER: Jeff Zeke

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: West EN Trunk (West)

PUMP SERIAL # 0005 0203021

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

Start
~ 9:00am

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 420

TOTAL LITERS SAMPLED 840

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: West EN Trunk (East)

PUMP SERIAL # 0005 0203022

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 420

TOTAL LITERS SAMPLED 840

Company Name: ABQC - Watts Nickel Rack

| NAME/AREA | PARAMETER | Date | Sample mg/L | LPM Minutes | Total Flowrate | Blank LITERS | Blank mg/L | RESULTS (mg/m3) | OSHA LIM |
|---------------------|-----------|------|----------------|----------------|-------------------|-----------------|---------------|-----------------|----------|
| Condition 10 - East | Ni | | 0.21 | 398 | 2.0 | 796 | 0.002 | 0.006533 | 1.00 |
| Condition 10 - West | Ni | | 0.04 | 401 | 2.0 | 802 | 0.002 | 0.001185 | 1.00 |
| Blank | Ni | | 0.002 | 0 | 0 | 0 | 0.002 | | |
| Condition 11 - East | Ni | | 0.62 | 389 | 2.0 | 778 | 0 | 0.019923 | 1.00 |
| Condition 11 - West | Ni | | 0.09 | 388 | 2.0 | 776 | 0 | 0.002899 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 12 - East | Ni | | 2.16 | 411 | 2.0 | 822 | 0 | 0.065693 | 1.00 |
| Condition 12 - West | Ni | | 0.24 | 406 | 2.0 | 812 | 0 | 0.007389 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 13 - East | Ni | | 2.31 | 416 | 2.0 | 832 | 0.002 | 0.069351 | 1.00 |
| Condition 13 - West | Ni | | 0.15 | 414 | 2.0 | 828 | 0.002 | 0.004469 | 1.00 |
| Blank | Ni | | 0.002 | 0 | 0 | 0 | 0 | | |
| Condition 14 - East | Ni | | 0.20 | 403 | 2.0 | 806 | 0 | 0.006203 | 1.00 |
| Condition 14 - West | Ni | | 0.14 | 403 | 2.0 | 806 | 0 | 0.004342 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 15 - East | Ni | | 0.13 | 393 | 2.0 | 786 | 0 | 0.004135 | 1.00 |
| Condition 15 - West | Ni | | 0.04 | 393 | 2.0 | 786 | 0 | 0.001272 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |

Calculation: $[(\text{Sample (mg/L)} - \text{Blank (mg/L)}) \times 0.025 \text{ L}] / [(\text{Total Liters})/1000] = X \text{ (mg/m}^3\text{)}$

PROJECT # 020072: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 02/06/06

LOD = 0.008

RL □ 0.050

BY ICP ON 02/09/06

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|----------|----------|---------|
| LRB | 25 | -0.002 |
| LFB | 25 | 2.16 |
| 020072-1 | 25 | 0.002 |
| 020072-2 | 25 | 0.209 |
| 020072-3 | 25 | 0.036 |
| 020072-4 | 25 | 2.310 |
| 020072-5 | 25 | 0.149 |

<MDL of 0.007 mg/L = 0.006

= $100 \times 2.16 / 20 = 108\%$ Recovery (80-120%)

= 0.006

ABQC 10 East

ABQC 10 West

ABQC 13 East

ABQC 13 West

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.

PROJECT # 010218: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion *on 01124106*

LOD = 0.008

RL = 0.050

BY ICP *ON 01127106*

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|----------|----------|---------|
| LRB | 25 | -0.001 |
| LFB | 25 | 1.98 |
| 010218-1 | 25 | 2.16 |
| 010218-2 | 25 | 0.238 |
| 010218-3 | 25 | -0.001 |
| 010218-4 | 25 | 0.622 |
| 010218-5 | 25 | 0.087 |

<MDL of 0.007 mg/L

= 0.006

= $100 \times 1.98 / 2.0 = 99\%$ Recovery, (80-120%)

ABQC 12 East

ABQC 12 West

= 0.006

ABQC 11 East

ABQC 11 West

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED

PROJECT # 140200: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 11/14/05

LOD = 0.008

RL = 0.050

BY ICP ON 11115/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading | |
|-----------|----------|---------|--|
| LRB | 25 | -0.001 | <MDL of 0.007 mg/L = 0.006 |
| LFB | 25 | 1.80 | = 100 x 1.00/100 = 90% Recovery. (80-120%) |
| 110200-1 | 25 | 0.202 | ABQC 14 East |
| 110200-2 | 25 | 0.144 | ABQC 14 West |
| 110200-3 | 25 | 0.000 | = 0.006 |
| 110200-4 | 25 | 0.130 | ABQC 15 East |
| 110200-5 | 25 | 0.042 | ABQC 15 West |
| 110200-6 | 25 | 4.06 | Woods 7 East |
| 110200-7 | 25 | 0.448 | Woods 7 West |
| 110200-8 | 25 | 0.002 | = 0.006 |
| 110200-9 | 25 | 2.11 | Woods 24 East |
| 110200-10 | 25 | 0.382 | Woods 24 West |

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.

AIR MONITORING DATA SHEET

Condition #11
 Mesh Plus
 NW Melts
 D.K.

DATE 1/12/05
 COMPANY NAME ABQC
 SAMPLER: JEFF Zok

TESTTYPE: EMPLOYEE AREA
 EMPLOYEE NAME/SS # NA
 AREA: Nickel Melts East
 PUMP SERIAL # 20050203021
 PARAMETER(S) Nickel
 MEDIA TYPE -
 SERIAL # 25093115
 PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0
 POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0
 TOTAL SAMPLE TIME (MIN.) 389 (min)
 TOTAL LITERS SAMPLED 778 (L)

TESTTYPE: EMPLOYEE AREA
 EMPLOYEE NAME/SS # ~~Nickel Melts West~~ NA
 AREA: Nickel Melts West
 PUMP SERIAL # 20050203022
 PARAMETER(S) Nickel
 MEDIA TYPE -
 SERIAL # 25093146
 PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 0.0
 POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0
 TOTAL SAMPLE TIME (MIN.) 388 (min)
 TOTAL LITERS SAMPLED 776 (L)



AIR MONITORING DATA SHEET

DATE 1/11/06

Condition #12

COMPANY NAME DBDC

No Matter
No Mesh (A)

SAMPLER: JEFF Zick

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Nickel Walk East

PUMP SERIAL # 2005 0203001

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # 25093149

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 111 min

TOTAL LITERS SAMPLED 822 L

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Nickel Walk West

PUMP SERIAL # 2005 0203002

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # 25093112

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 406 (min)

TOTAL LITERS SAMPLED 216 L



Scientific
CONTROL LABORATORIES, INC.
TESTING — CONSULTING

AIR MONITORING DATA SHEET

#13

Edw. C. ...
Mesh Co.
Health Agent

DATE 8/2/06

COMPANY NAME DBAC

SAMPLER: Jeff Lake

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Rock Wotts Nickel Tank (East)

PUMP SERIAL # 20050203021

PARAMETER(S) Nickel

MEDIA TYPE MCE

SERIAL # 20082349

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 416 (min)

TOTAL LITERS SAMPLED 832 (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Rock Wotts Nickel Tank (West)

PUMP SERIAL # 20050203022

PARAMETER(S) Nickel

MEDIA TYPE MCE

SERIAL # 20082370

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 414 (min)

TOTAL LITERS SAMPLED 828 (L)

AIR MONITORING DATA SHEET

Christmas #11

DATE 11/8/05

COMPANY NAME ABQC

SAMPLER: JEFF ZOL

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS #

AREA: Walls Nickel (East j)

PUMP SERIAL # 20050203022

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 393 (min)

TOTAL LITERS SAMPLED 786 (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS #

AREA: Back visits Nickel (West)

PUMP SERIAL # 20050203021

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 393 (min)

TOTAL LITERS SAMPLED 786 (L)

Company Name: Artistic - Watts Nickel Barrel

| NAME/AREA | PARAMETER | Date | Sample mg/L | LPM Minutes | Total Flowrate | Blank LITERS mg/L | RESULTS (mg/m3) | OSHA LIM |
|----------------------|-----------|------|----------------|----------------|-------------------|----------------------|-----------------|----------|
| Condition 18 - North | Ni | | 0.09 | 443 | 2.0 | 886 | 0.002511 | 1.00 |
| Condition 18 - South | Ni | | 0.11 | 443 | 2.0 | 886 | 0.003076 | 1.00 |
| Blank | Ni | | 0.001 | 0 | 0 | 0 | | |
| Condition 19 - North | Ni | | 0.01 | 290 | 2.0 | 580 | 0.000388 | 1.00 |
| Condition 19 - South | Ni | | 0.01 | 290 | 2.0 | 580 | 0.000388 | 1.00 |
| Blank | Ni | | 0.001 | 0 | 0 | 0 | | |
| Condition 20 - North | Ni | | 0.04 | 425 | 2.0 | 850 | 0.001147 | 1.00 |
| Condition 20 - South | Ni | | 0.03 | 426 | 2.0 | 852 | 0.000851 | 1.00 |
| Blank | Ni | | 0.001 | 0 | 0 | 0 | | |
| Condition 21 - North | Ni | | 0.02 | 287 | 2.0 | 574 | 0.000828 | 1.00 |
| Condition 21 - South | Ni | | 0.02 | 288 | 2.0 | 576 | 0.000825 | 1.00 |
| Blank | Ni | | 0.001 | 0 | 0 | 0 | | |

Calculation: $[(\text{Sample (mg/L)} - \text{Blank (mg/L)}) \times 0.025 \text{ L}] / [(\text{Total Liters})/1000] = X \text{ (mg/m}^3\text{)}$

PROJECT # 100016: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 1014105

LOD = 0.008

RL = 0.050

BY ICP ON 1015105

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|----------|----------|---------|
| LRB | 25 | 0.211 |
| LFB | 25 | 4.01 |
| 100016-1 | 25 | 0.092 |
| 100016-2 | 25 | 0.107 |
| 100016-3 | 25 | 0.012 |
| 100016-4 | 25 | 0.012 |
| 100016-5 | 25 | 0.044 |
| 100016-6 | 25 | 0.029 |
| 100016-7 | 25 | 0.017 |
| 100016-8 | 25 | 0.015 |
| 100016-9 | 25 | 0.001 |

>MDL of 0.007 mg/L & > RL of 0.05 mg/L

= $100 \times 4.01/4.0 = 100\%$ Recovery so okay

= FLAG "B"

18 Arctic White North

= FLAG "B"

18 Arctic White South

19 " North

19 " South

20 " North

20 " South

21 " North

21 " South

=0.006

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

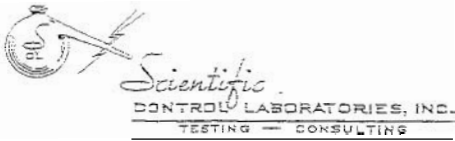
LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

FLAG "B" = The result is over the detection limits as quantified for nickel. Therefore the result may be significant and must be "flagged" to indicate that it may be a false positive "hit", as occurred in the LRB.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.



AIR MONITORING DATA SHEET

DATE 9/26/05

COMPANY NAME Artistic Plzby Co #19

SAMPLER: 57

TESTTYPE: EMPLOYEE AREA Walls Nickel Panel North

EMPLOYEE NAME/SS # _____
no weller, no CMP, no Transfer

AREA: Walls Nickel North

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 29 11:45

TOTAL LITERS SAMPLED 580

TEST TYPE: EMPLOYEE AREA Walls Nickel Panel South

EMPLOYEE NAME/SS # _____
no weller, no CMP, no Transfer

AREA: Walls Nickel Panel South

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 290 min 11:45

TOTAL LITERS SAMPLED 580 L

AIR MONITORING DATA SHEET

DATE 0/29/05

COMPANY NAME Deutsche Plab Co #20

SAMPLER: JE

TEST TYPE: EMPLOYEE AREA Walls Nickel Based Metals
Wells, CMP

EMPLOYEE NAME/SS # _____

AREA: Walls Nickel Metals

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

8:50 AM

POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 425 min

TOTAL LITERS SAMPLED 850 L

TEST TYPE: EMPLOYEE AREA Walls Nickel Based Metals
Wells, CMP

EMPLOYEE NAME/SS # _____

AREA: Walls Nickel Metals

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

~~8:50 AM~~

8:50 AM

POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 426 min

TOTAL LITERS SAMPLED 850 (L)

AIR MONITORING DATA SHEET

DATE 9/30/05

COMPANY NAME Artistic Ply Co #21

SAMPLER: JZ

TEST TYPE: EMPLOYEE AREA Walls, Nickel Barrel North
EMPLOYEE NAME/SS # - Walls, no cmo, no Transfer

AREA: Walls Nickel Barrel North

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 287 min 9:15

TOTAL LITERS SAMPLED 574 (L)

TESTTYPE: EMPLOYEE AREA Walls Nickel Barrel South
EMPLOYEE NAME/SS # - Walls, no cmo, no Transfer

AREA: Walls Nickel Barrel South

PUMP SERIAL # _____

PARAMETER(S) Nickel

MEDIA TYPE _____

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 288 min 9:14

TOTAL LITERS SAMPLED 576 (L)

Company Name: Elite Finishing - Nickel Sulfamate Rack

| NAME/AREA | PARAMETER | Date | Sample mg/L | Minutes | LPM Flowrate | Total LITERS | Blank mg/L | RESULTS (mg/m3) | OSHA LIM |
|----------------------|-----------|------|----------------|---------|-----------------|-----------------|---------------|-----------------|----------|
| Condition 22 - North | Ni | | 0.09 | 431 | 2.0 | 862 | 0 | 0.002610 | 1.00 |
| Condition 22 - South | Ni | | 0.16 | 431 | 2.0 | 862 | 0 | 0.004640 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 23 - North | Ni | | 0.06 | 189 | 2.0 | 378 | 0.006 | 0.003571 | 1.00 |
| Condition 23 - South | Ni | | 0.29 | 401 | 2.0 | 802 | 0.006 | 0.008853 | 1.00 |
| Blank | Ni | | 0.006 | 0 | 0 | 0 | 0 | | |
| Condition 25 - North | Ni | | 0.05 | 400 | 2.0 | 800 | 0.006 | 0.001375 | 1.00 |
| Condition 25 - South | Ni | | 0.06 | 400 | 2.0 | 800 | 0.006 | 0.001688 | 1.00 |
| Blank | Ni | | 0.006 | 0 | 0 | 0 | 0 | | |
| Condition 26 - North | Ni | | 0.17 | 331 | 2.0 | 662 | 0.001 | 0.006382 | 1.00 |
| Condition 26 - South | Ni | | 0.17 | 331 | 2.0 | 662 | 0.001 | 0.006382 | 1.00 |
| Blank | Ni | | 0.001 | 0 | 0 | 0 | 0 | | |

Calculation: $[(\text{Sample (mg/L)} - \text{Blank (mg/L)}) \times 0.025 \text{ L}] / [(\text{Total Liters})/1000] = X \text{ (mg/m}^3\text{)}$

PROJECT # 100305: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 11/7/05

LOD = 0.008

RL = 0.050

BY ICP ON 11/9/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading | |
|-----------|----------|---------|---|
| LRB | 25 | -0.005 | <MDL of 0.007 mg/L = 0.006 |
| LFB | 25 | 1.00 | = 100 x 1.00/1.00 = 100% Recovery. (80.120%) |
| 100305-1 | 25 | 7.28 | |
| 100305-2 | 25 | 0.914 | |
| 100305-3 | 25 | 0.085 | ELITE 22 North |
| 100305-4 | 25 | 0.16 | ELITE 22 South |
| 100305-5 | 25 | -0.005 | = 0.006 BLANK |
| 100305-6 | 25 | 5.83 | |
| 100305-7 | 25 | 0.174 | |
| 100305-8 | 25 | 6.90 | |
| 100305-9 | 25 | 0.433 | |
| 100305-10 | 25 | -0.005 | = 0.006 |

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume

PROJECT # 110325: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 12/20/05

LOD = 0.008

RL = 0.050

BY ICP ON 12/30/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|----------|----------|---------|
| LRB | 25 | -0.002 |
| LFB | 25 | 0.75 |
| 110325-1 | 25 | 0.064 |
| 110325-2 | 25 | 0.288 |
| 110325-3 | 25 | 0.006 |
| 110325-4 | 25 | 0.049 |
| 110325-5 | 25 | 0.060 |

<MDL \neq 0.007 mg/L = 0.006

= $100 \times 0.749 / 0.80 = 96\%$ Recovery. (80-120%)

23 North ELITE

3 South ELITE

= 0.006

21 North ELITE

21 South ELITE

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again. no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.

PROJECT # 120034: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 12/20/05

LOD = 0.008

RL = 0.050

BY ICP ON 12/30/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|----------|----------|---------|
| LRB | 25 | -0.002 |
| LFB | 25 | 0.75 |
| 120034-1 | 25 | 0.174 |
| 120034-2 | 25 | 0.176 |
| 120034-3 | 25 | 0.001 |

<MDL of 0.007 mg/L = 0.006

= $100 \times 0.749/0.80 = 96\%$ Recovery, (80-120%)

26 North

26 South

= 0.006

EXPLANATIONS:

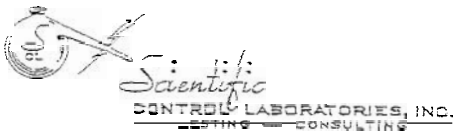
LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.



AIR MONITORING DATA SHEET

DATE 10/18/05 Credita #22

COMPANY NAME ELITE METAL FINISHING

SAMPLER: JEFF ZELI

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Nickel Sulfamate Rack ~~JE~~ JE

PUMP SERIAL # 20050203021

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 431 min

TOTAL LITERS SAMPLED 862 (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Nickel Sulfamate Rack ~~JE~~ JE

PUMP SERIAL # 20050203022

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

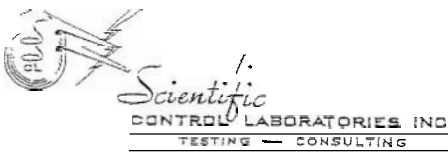
~ 8:30 am

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 431 min

TOTAL LITERS SAMPLED 862 (L)



AIR MONITORING DATA SHEET

DATE ~~11/15/05~~ 11/15/05

Concentration 3

No Mesh Pkg;
to be

COMPANY NAME ELITE

SAMPLER: _____

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Nickel Sulfamate Tank North (25082348)

PUMP SERIAL # 20050303022

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

~~12:00 - 4:00~~

TOTAL SAMPLE TIME (MIN.) 189 (min)

TOTAL LITERS SAMPLED 378 (L)

R "Boltz Died"

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Sulfamate Tank South (25082354)

PUMP SERIAL # 20050303022

PARAMETER(S) Nickel

MEDIA TYPE -

SERIAL # _____

~ 7:00 - 9:00

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 401 (min)

TOTAL LITERS SAMPLED 802 (L)

AIR MONITORING DATA SHEET

#25 Educator
w/ Mosh. Pass

DATE 11/14

COMPANY NAME FLITE Technology

SAMPLER: _____

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/ISS # _____

AREA: Nickel Sulfamate Tank (North) (21082369)

PUMP SERIAL # 2005020302

PARAMETER(S) Nickel

MEDIA TYPE —

SERIAL # —

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 450 min

TOTAL LITERS SAMPLED 800 L

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/ISS # _____

AREA: Nickel Sulfamate Tank (South) (21082355)

PUMP SERIAL # 2005020302

PARAMETER(S) Nickel

MEDIA TYPE —

SERIAL # —

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 450 (min)

TOTAL LITERS SAMPLED 800 L

Company Name: Artistic - Woods

| NAME/AREA | PARAMETER | Date | Sample mg/L | Minutes | LPM Flowrate | Total LITERS | Blank mg/L | RESULTS (mg/m3) | OSHA LIM |
|---------------------|-----------|------|----------------|---------|-----------------|-----------------|---------------|-----------------|----------|
| Condition 7 - East | Ni | | 4.06 | 403 | 2.0 | 806 | 0.002 | 0.125868 | 1.00 |
| Condition 7 - West | Ni | | 0.45 | 403 | 2.0 | 806 | 0.002 | 0.013896 | 1.00 |
| Blank | Ni | | 0.002 | 0 | 0 | 0 | 0.002 | | |
| Condition 24 - East | Ni | | 2.11 | 390 | 2.0 | 780 | 0.002 | 0.067564 | 1.00 |
| Condition 24 - West | Ni | | 0.38 | 393 | 2.0 | 786 | 0.002 | 0.012023 | 1.00 |
| Blank | Ni | | 0.002 | 0 | 0 | 0 | 0 | | |
| Condition 27 - East | Ni | | 7.28 | 295 | 2.0 | 590 | 0 | 0.308475 | 1.00 |
| Condition 27 - West | Ni | | 0.92 | 289 | 2.0 | 578 | 0 | 0.039792 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 28 - East | Ni | | 5.83 | 398 | 2.0 | 796 | 0 | 0.183103 | 1.00 |
| Condition 28 - West | Ni | | 0.17 | 392 | 2.0 | 784 | 0 | 0.005421 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |
| Condition 29 - East | Ni | | 6.90 | 407 | 2.0 | 814 | 0 | 0.211916 | 1.00 |
| Condition 29 - West | Ni | | 0.43 | 403 | 2.0 | 806 | 0 | 0.013337 | 1.00 |
| Blank | Ni | | 0 | 0 | 0 | 0 | 0 | | |

Calculation: $[(\text{Sample (mg/L)} - \text{Blank (mg/L)}) \times 0.025 \text{ L}] / [(\text{Total Liters})/1000] = X \text{ (mg/m}^3\text{)}$

PROJECT # 110200: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 11/14/05

LOD = 0.008

RL = 0.050

BY ICP ON 11/15/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading | |
|-----------|----------|---------|--|
| LRB | 25 | -0.001 | <MDL of 0.007 mg/L = 0.006 |
| LFB | 25 | 1.80 | = 100 x 1.0011.00 = 90% Recovery, (80-120%) |
| 110200-1 | 25 | 0.202 | |
| 110200-2 | 25 | 0.144 | |
| 110200-3 | 25 | 0.000 | = 0.006 |
| 110200-4 | 25 | 0.130 | |
| 110200-5 | 25 | 0.042 | |
| 110200-6 | 25 | 4.06 | Earl |
| 110200-7 | 25 | 0.448 | Woods 7 |
| 110200-8 | 25 | 0.002 | = 0.006 |
| 110200-9 | 25 | 2.11 | Woods 24 Earl |
| 110200-10 | 25 | 0.382 | Woods 24 Earl |

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP.

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.

PROJECT # 100305: METHOD 121 FOR NICKEL

AIR FILTER CASSETTES

IDL = 0.004

LOQ = 0.017

Digestion on 11/7/05

LOD = 0.008

RL = 0.050

BY ICP ON 11/9/05

MDL = 0.007

(All DL in mg/L)

DATA:

| Sample # | Dilution | Reading |
|-----------|----------|---------|
| LRB | 25 | -0.005 |
| LFB | 25 | 1.00 |
| 100305-1 | 25 | 7.28 |
| 100305-2 | 25 | 0.914 |
| 100305-3 | 25 | 0.085 |
| 100305-4 | 25 | 0.16 |
| 100305-5 | 25 | -0.005 |
| 100305-6 | 25 | 5.83 |
| 100305-7 | 25 | 0.174 |
| 100305-8 | 25 | 6.90 |
| 100305-9 | 25 | 0.433 |
| 100305-10 | 25 | -0.005 |

<MDL of 0.007 mg/L = 0.006

= 100 x 1.00/1.00 = 100% Recovery. (80-120%)

Wood's 27 East

Woods 27 West

ELITE 22 North

ELITE 22 South

= 0.006 BLANK

Wood's 28 East

Wood's 28 West

Wood's 29 East

Wood 29 West

= 0.006 BLANK

EXPLANATIONS:

LRB = Laboratory Reagent Blank, where a beaker containing reagents used during the digestion process were added, no filter.

LFB = Laboratory Fortified Blank, where LRB is essentially spiked with nickel and carried the digestion process, again, no filter.

DILUTION = 25 ml class A volumetric flask was used to measure the final volume.

READING = mg/L as determined by average of three replicates on ICP

IN ORDER TO FACILITATE FURTHER CALCULATIONS, IF A READING IS <MDL, THEN 0.006 IS USED.



Scientific
CONTROL LABORATORIES, INC.
TESTING — CONSULTING

AIR MONITORING DATA SHEET

Condition #7

DATE 11/9/05

COMPANY NAME Artistic Plzby Co.

SAMPLER: Jeff Zak

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Wood's Nickel Steels (East)

PUMP SERIAL # 20050203022

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM a.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 403 min

TOTAL LITERS SAMPLED 806 L

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: Wood's Nickel Steels (West)

PUMP SERIAL # 20050203021

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 403 min

TOTAL LITERS SAMPLED 806 L

AIR MONITORING DATA SHEET

Audit #24

DATE 11/16/04

COMPANY NAME Debtstic Pblin Co

SAMPLER: Jefftek

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: WOOD'S Nickel Skele Tank (East)

PUMP SERIAL # 20050203022

PARAMETER(S) Ni

MEDIA TYPE —

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 390 (min)

TOTAL LITERS SAMPLED 780 (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # _____

AREA: WOOD'S Nickel Skele Tank (West)

PUMP SERIAL # 20050203021

PARAMETER(S) Ni

MEDIA TYPE —

SERIAL # _____

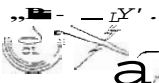
PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 393 (min)

TOTAL LITERS SAMPLED 786 (L)

830-3W



DATE 10/17/05
 COMPANY NAME Artistic Plating Company #27
 SAMPLER: JZ

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA
 AREA: Wood's Nickel Strike (East)

PUMP SERIAL # 20050203022

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 295 min

TOTAL LITERS SAMPLED 590 L

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA
 AREA: Wood's Nickel Strike (West)

PUMP SERIAL # 20050203021

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # -

PRE-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
 Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 289 min

TOTAL LITERS SAMPLED 578 L

DATE 10/19/05

COMPANY NAME Artistic Plating Co

start
(9:15) - 3:30

SAMPLER: _____

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Wood's Nickel Strike (East)

PUMP SERIAL # 20050003002

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 398 min

TOTAL LITERS SAMPLED 796 (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Wood's Nickel Strike (West)

PUMP SERIAL # 20050003001

PARAMETER(S) Ni

MEDIA TYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 392 min

TOTAL LITERS SAMPLED 784 (L)

AIR MONITORING DATA SHEET

DATE 10/20/05

COMPANY NAME Artistic Plzky Company

#29

SAMPLER: JT

≈ 8:50

TEST TYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Wood's Nickel Strike (East)

PUMP SERIAL # 2005 020 3022

PARAMETER(S) Ni

MEDIATYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 407 (min)

TOTAL LITERS SAMPLED (L)

TESTTYPE: EMPLOYEE AREA

EMPLOYEE NAME/SS # NA

AREA: Wood's Nickel Strike (West)

PUMP SERIAL # 2005 020 3021

PARAMETER(S) Ni

MEDIATYPE -

SERIAL # _____

PRE-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

POST-CALIBRATION FLOW RATE
Time (500 mL) _____ seconds LPM 2.0

TOTAL SAMPLE TIME (MIN.) 403 (min)

TOTAL LITERS SAMPLED 806 (L)