WSCF0667

# WSCF
# ANALYTICAL RESULTS REPORT

**for**

**Effluent and Environmental Monitoring (EEM)**
**Post Office Box 1970 T6-36**
**Richland, WA 99352**

**Attention: Larry Diediker**

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Analytical: _____

Client Services: _____

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DEC 2002

0059124

Report#: 20021438
Report Date: 21-nov-2002
*Report W004/ver. 4.9*
*Effluent and Environmental Monitoring (EEM)*

B02-016

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Larry Diediker
**Project:** ISS: Interim Safe Storage

**Group #:** 20021438

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W02F002953 | S442364 | E,T,C | CePr-144 Rel.% Count Error | FILTER | LA-508-481 | | 287. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | CE/PR-144 | CePr-144 by GEA | FILTER | LA-508-481 | U | -3.04e+00 | pCi | | 15.20 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Co-60 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 309. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 10198-40-0 | Co-60 by GEA | FILTER | LA-508-481 | U | 3.82e-01 | pCi | | 2.18 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Cs-134 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 125. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13967-70-9 | Cs-134 by GEA | FILTER | LA-508-481 | U | 9.64e-01 | pCi | | 2.19 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Cs-137 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 59.5 | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 10045-97-3 | Cs-137 by GEA | FILTER | LA-508-481 | U | 2.30e+00 | pCi | | 2.49 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Eu-152 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 82.2 | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 14683-23-9 | Eu-152 by GEA | FILTER | LA-508-481 | U | 5.01e+00 | pCi | | 4.34 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Eu-154 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 627. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 15585-10-1 | Eu-154 by GEA | FILTER | LA-508-481 | U | -5.11e-01 | pCi | | 5.68 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Eu-155 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 271. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 14391-16-3 | Eu-155 by GEA | FILTER | LA-508-481 | U | 9.31e-01 | pCi | | 4.33 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Nb-94 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 340. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 14681-63-1 | Nb-94 by GEA | FILTER | LA-508-481 | U | -3.56e-01 | pCi | | 1.74 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Ru-103 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 1000 | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13968-53-1 | Ru-103 by GEA | FILTER | LA-508-481 | U | 1.02e-01 | pCi | | 1.79 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Ru-106 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 259. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13967-48-1 | Ru-106 by GEA | FILTER | LA-508-481 | U | -3.61e+00 | pCi | | 15.90 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Sb-125 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 789. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 14234-35-6 | Sb-125 by GEA | FILTER | LA-508-481 | U | 3.23e-01 | pCi | | 4.43 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Sn-113 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 224. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13966-06-8 | Sn-113 by GEA | FILTER | LA-508-481 | U | -4.76e-01 | pCi | | 1.80 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Zn-65 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 179. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13982-39-3 | Zn-65 by GEA | FILTER | LA-508-481 | U | -1.56e+00 | pCi | | 4.58 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13981-16-3 | Pu-238 by AEA | FILTER | LA-508-471 | U | -4.1e-02 | pCi | | 0.28 | 11/11/02 | 09/17/02 | 10/17/02 |

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**
B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
D - Compound concentration resulted from a dilution.
J - Estimated value.
Z - See Comments.
U - The analyte was analyzed for but not detected.

**DF=Dilution Factor**
N - Identification is based on a mass spectral library search.

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report W004/ver. 4.9*
*Effluent and Environmental Monitoring (EEM)*

AIR QUALITY DOCUMENT

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Larry Diediker
**Project:** ISS: Interim Safe Storage

**Group #:** 20021438

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W02F002953 | S442364 | E,T,C | Pu-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 360 | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Pu-239/240 AEA Total Cntg Err | FILTER | LA-508-471 | | 46. | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | PU-239/240 | Pu-239/240 by AEA | FILTER | LA-508-471 | | 2.5e-01 | pCi | | 0.08 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | Sr-90 Rel.% Count Error | FILTER | LA-508-415 | | 45 | % | | 0.00 | 11/20/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 10098-97-2 | Sr-90 by Beta Counting | FILTER | LA-508-415 | | 2.9 | pCi | | 1.20 | 11/20/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 13966-29-5 | U-234 by AEA | FILTER | LA-508-471 | | 1.2e-01 | pCi | | 0.07 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | U-234 by AEA Total Cntg Error | FILTER | LA-508-471 | | 65. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 15117-96-1 | U-235 by AEA | FILTER | LA-508-471 | | 5.5e-02 | pCi | | 0.03 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | U-235 by AEA Total Cntg Error | FILTER | LA-508-471 | | 91. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | 24678-82-8 | U-238 by AEA | FILTER | LA-508-471 | | 4.0e-02 | pCi | | 0.03 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002953 | S442364 | E,T,C | U-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 100. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | CePr-144 Rel.% Count Error | FILTER | LA-508-481 | | 115. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | CE/PR-144 | CePr-144 by GEA | FILTER | LA-508-481 | U | -9.04e+00 | pCi | | 16.50 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Co-60 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 323. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 10198-40-0 | Co-60 by GEA | FILTER | LA-508-481 | U | -3.30e-01 | pCi | | 1.82 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Cs-134 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 133. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13967-70-9 | Cs-134 by GEA | FILTER | LA-508-481 | U | 7.82e-01 | pCi | | 1.95 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Cs-137 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 111. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 10045-97-3 | Cs-137 by GEA | FILTER | LA-508-481 | U | 8.82e-01 | pCi | | 1.83 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Eu-152 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 275. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 14683-23-9 | Eu-152 by GEA | FILTER | LA-508-481 | U | -1.02e+00 | pCi | | 4.19 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Eu-154 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 866. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 15585-10-1 | Eu-154 by GEA | FILTER | LA-508-481 | U | -3.56e-01 | pCi | | 5.38 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Eu-155 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 198. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 14391-16-3 | Eu-155 by GEA | FILTER | LA-508-481 | U | 1.35e+00 | pCi | | 4.64 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Nb-94 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 914. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 14681-63-1 | Nb-94 by GEA | FILTER | LA-508-481 | U | 1.01e-01 | pCi | | 1.64 | 10/23/02 | 09/17/02 | 10/17/02 |

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*Effluent and Environmental Monitoring (EEM)*

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# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Larry Diediker **Group #:** 20021438
**Project:** ISS: Interim Safe Storage

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W02F002954 | S442365 | E,T,C | Ru-103 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 248. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13968-53-1 | Ru-103 by GEA | FILTER | LA-508-481 | U | -3.60e-01 | pCi | | 1.49 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Ru-106 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 443. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13967-48-1 | Ru-106 by GEA | FILTER | LA-508-481 | U | -1.96e+00 | pCi | | 15.20 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Sb-125 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 167. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 14234-35-6 | Sb-125 by GEA | FILTER | LA-508-481 | U | 1.40e+00 | pCi | | 4.19 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Sn-113 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 115. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13966-06-8 | Sn-113 by GEA | FILTER | LA-508-481 | U | -9.45e-01 | pCi | | 1.75 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Zn-65 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 798. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13982-39-3 | Zn-65 by GEA | FILTER | LA-508-481 | U | 2.78e-01 | pCi | | 3.42 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13981-16-3 | Pu-238 by AEA | FILTER | LA-508-471 | U | -2.1e-02 | pCi | | 0.25 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Pu-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 630 | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Pu-239/240 AEA Total Cntg Err | FILTER | LA-508-471 | | 88. | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | PU-239/240 | Pu-239/240 by AEA | FILTER | LA-508-471 | U | 7.3e-02 | pCi | | 0.08 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | Sr-90 Rel.% Count Error | FILTER | LA-508-415 | | 52 | % | | 0.00 | 11/20/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 10098-97-2 | Sr-90 by Beta Counting | FILTER | LA-508-415 | | 2.5 | pCi | | 1.20 | 11/20/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 13966-29-5 | U-234 by AEA | FILTER | LA-508-471 | | 9.1e-02 | pCi | | 0.07 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | U-234 by AEA Total Cntg Error | FILTER | LA-508-471 | | 70. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 15117-96-1 | U-235 by AEA | FILTER | LA-508-471 | U | 1.1e-02 | pCi | | 0.03 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | U-235 by AEA Total Cntg Error | FILTER | LA-508-471 | | 200. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | 24678-82-8 | U-238 by AEA | FILTER | LA-508-471 | U | 6.3e-02 | pCi | | 0.07 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002954 | S442365 | E,T,C | U-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 87. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | CePr-144 Rel.% Count Error | FILTER | LA-508-481 | | 276. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | CE/PR-144 | CePr-144 by GEA | FILTER | LA-508-481 | U | -3.53e+00 | pCi | | 16.80 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Co-60 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 271. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 10198-40-0 | Co-60 by GEA | FILTER | LA-508-481 | U | -4.50e-01 | pCi | | 2.09 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Cs-134 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 234. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |

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E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.
D - Compound concentration resulted from a dilution.
J - Estimated value. Z - See Comments.
U - The analyte was analyzed for but not detected.

**DF=Dilution Factor**

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report W004/ver. 4.9*
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# ANALYTICAL RESULTS REPORT

**Attention:** Larry Diediker **Group #:** 20021438
**Project:** ISS: Interim Safe Storage

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W02F002955 | S442366 | 13967-70-9 | Cs-134 by GEA | FILTER | LA-508-481 | U | 4.66e-01 | pCi | | 1.98 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Cs-137 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 886. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 10045-97-3 | Cs-137 by GEA | FILTER | LA-508-481 | U | 1.23e-01 | pCi | | 1.87 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Eu-152 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 143. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 14683-23-9 | Eu-152 by GEA | FILTER | LA-508-481 | U | 1.64e+00 | pCi | | 4.19 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Eu-154 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 310. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 15585-10-1 | Eu-154 by GEA | FILTER | LA-508-481 | U | 9.47e-01 | pCi | | 5.55 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Eu-155 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 426. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 14391-16-3 | Eu-155 by GEA | FILTER | LA-508-481 | U | 5.63e-01 | pCi | | 4.31 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Nb-94 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 178. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 14681-63-1 | Nb-94 by GEA | FILTER | LA-508-481 | U | 4.95e-01 | pCi | | 1.61 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Ru-103 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 1000 | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 13968-53-1 | Ru-103 by GEA | FILTER | LA-508-481 | U | -6.93e-03 | pCi | | 1.63 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Ru-106 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 641. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 13967-48-1 | Ru-106 by GEA | FILTER | LA-508-481 | U | 1.39e+00 | pCi | | 15.80 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Sb-125 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 162. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 14234-35-6 | Sb-125 by GEA | FILTER | LA-508-481 | U | 1.48e+00 | pCi | | 4.41 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Sn-113 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 203. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 13966-06-8 | Sn-113 by GEA | FILTER | LA-508-481 | U | -4.89e-01 | pCi | | 1.72 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Zn-65 Rel.% Count Error (GEA) | FILTER | LA-508-481 | | 166. | % | | 0.00 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 13982-39-3 | Zn-65 by GEA | FILTER | LA-508-481 | U | 1.62e+00 | pCi | | 4.49 | 10/23/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 13981-16-3 | Pu-238 by AEA | FILTER | LA-508-471 | U | 2.0e-02 | pCi | | 0.29 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Pu-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 820 | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Pu-239/240 AEA Total Cntg Err | FILTER | LA-508-471 | | 44. | % | | 0.00 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | PU-239/240 | Pu-239/240 by AEA | FILTER | LA-508-471 | | 3.0e-01 | pCi | | 0.12 | 11/11/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | Sr-90 Rel.% Count Error | FILTER | LA-508-415 | | 45 | % | | 0.00 | 11/20/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 10098-97-2 | Sr-90 by Beta Counting | FILTER | LA-508-415 | | 3.0 | pCi | | 1.20 | 11/20/02 | 09/17/02 | 10/17/02 |

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**
B - The analyte was detected in the associated method blank.
E - Compound concentration exceeded calibration range.
D - Compound concentration resulted from a dilution.
J - Estimated value. Z - See Comments.
U - The analyte was analyzed for but not detected.

**DF=Dilution Factor**
N - Identification is based on a mass spectral library search.

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report W004/ver. 4.9*
*Effluent and Environmental Monitoring (EEM)*

AIR QUALITY DOCUMENT

# WSCF
# ANALYTICAL RESULTS REPORT

**Attention:** Larry Diediker
**Project:** ISS: Interim Safe Storage

**Group #:** 20021438

| Sample # | Client ID | CAS # | Test Performed | Matrix | WSCF Method | RQ | Result | Unit | DF | MDL | Analyze | Sample | Receive |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| W02F002955 | S442366 | 13966-29-5 | U-234 by AEA | FILTER | LA-508-471 | | 1.1e-01 | pCi | | 0.02 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | U-234 by AEA Total Cntg Error | FILTER | LA-508-471 | | 55. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 15117-96-1 | U-235 by AEA | FILTER | LA-508-471 | U | 2.0e-02 | pCi | | 0.07 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | U-235 by AEA Total Cntg Error | FILTER | LA-508-471 | | 200. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | 24678-82-8 | U-238 by AEA | FILTER | LA-508-471 | | 6.9e-02 | pCi | | 0.02 | 11/06/02 | 09/17/02 | 10/17/02 |
| W02F002955 | S442366 | E,T,C | U-238 by AEA Total Cntg Error | FILTER | LA-508-471 | | 62. | % | | 0.00 | 11/06/02 | 09/17/02 | 10/17/02 |

AIR QUALITY DOCUMENT

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**
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E - Compound concentration exceeded calibration range.
N - Identification is based on a mass spectral library search.
D - Compound concentration resulted from a dilution.
J - Estimated value.
Z - See Comments.
U - The analyte was analyzed for but not detected.

**DF=Dilution Factor**

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

*Report W004/ver. 4.9*
*Effluent and Environmental Monitoring (EEM)*

# WSCF
# ANALYTICAL COMMENT REPORT

**Attention:**
**Project Number**

**Group #:** 20021438

| Sample # | Client ID | Lab Area | Test | Comment |
|---|---|---|---|---|

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Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

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# WSCF
# TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**
**Project Number** :

**Group #:** 20021438

| Sample # | Client ID | Test Name | Peak Name | CAS# | RT | RQ | Result | Units |
|---|---|---|---|---|---|---|---|---|

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RQ=Result Qualifier

B - The analyte was detected in the associated method blank.
N - Identification is based on a mass spectral library search.
J - Estimated value.
U - The analyte was analyzed for but not detected.

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# WSCF
# METHOD REFERENCES REPORT

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

**LA-508-415** LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS
**None** No reference to any industry method.

**LA-508-471** LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP
**None** No reference to any industry method.

**LA-508-481** LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE
**None** No reference to any industry method.

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Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

# WSCF Sample Site Cross-Reference Report

Group#: 20021438

**Date Printed: 21-nov-2002**

WSCF0067
B02-016

| Sample# | Site Name | Sample ID |
|---|---|---|
| W02F002953 | N523C | S442364 |
| W02F002954 | N524C | S442365 |
| W02F002955 | N525C | S442366 |

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