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Scientific Notebook # 219

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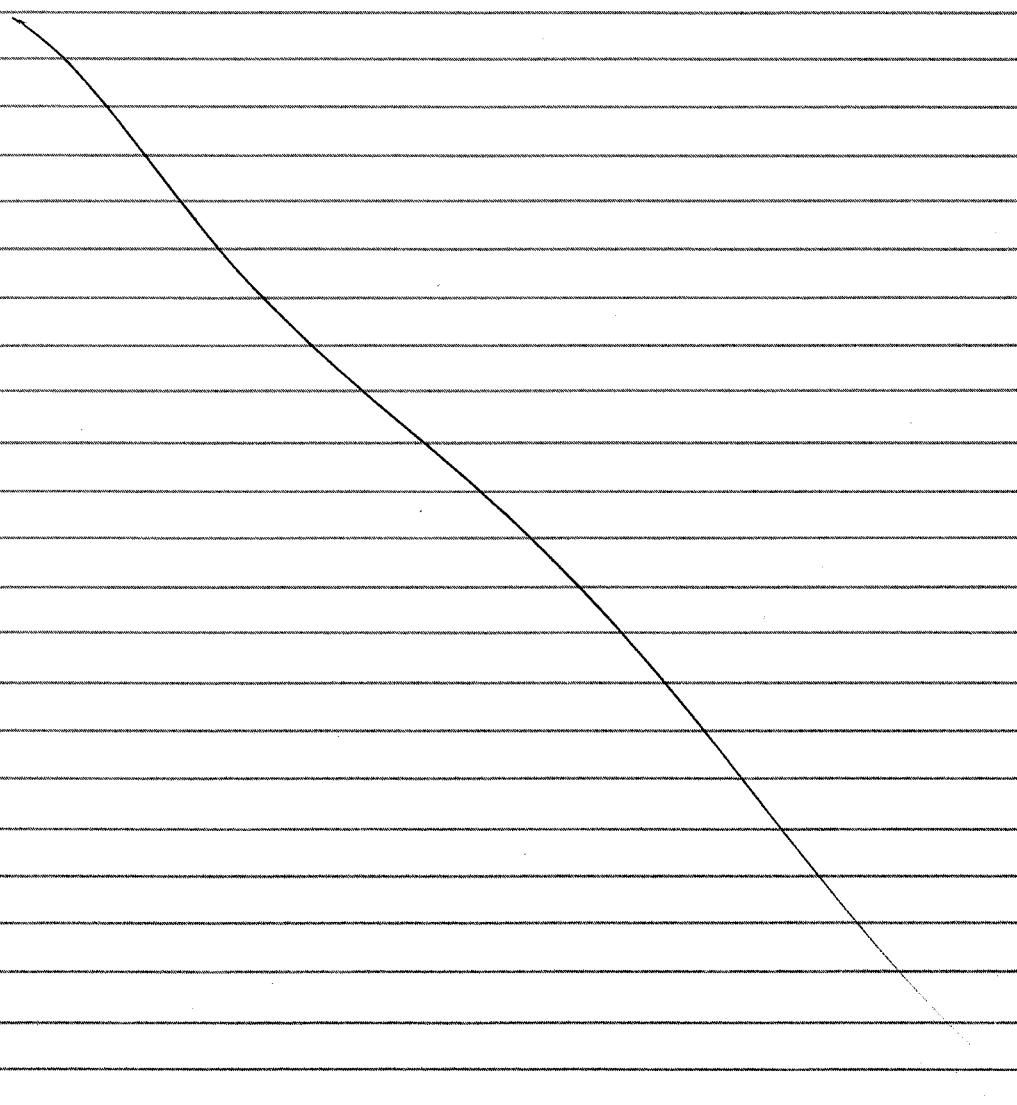
5/7/97 JP

20-5709-101

Hanford Tank Waste Remediation Project

Initial entry 5/7/97<sup>by</sup> James D. Pugh JP

This notebook chronicles work for the  
Hanford Tank Waste Remediation Project



5/7/98

Development of Geographic Information System Database for the 200 West and 200 East Areas at the Hanford site

QI: create coverages and database on characteristics and chemistry of underground storage tanks within the 200 West and 200 East Areas of the Hanford Site

Method: Use ARC/INFO geographic information system to create database for the 200 West and 200 East Areas.

Equipment, software, etc:

ARC/INFO software  
UNIX workstation: BEMORE, BIGBEND  
ARCVIEW software

## 5/7/97 Procedures and Results

A map of the 200 West and 200 East Areas at the Hanford site was first created in ARC/INFO.

The map was created by digitizing the geographic locations of streets, buildings, tank farms, and storage tanks at the site directly from an existing map of the 200 AREAS. This existing map was Figure 3.2.3 from U.S. Department of Energy Report, 1996. Tank Waste Remediation System, Hanford Site, Richland Washington, Final Environmental Impact Statement, DOE/EIS-0189, Volume 4, Richland, WA.

The GIS was divided into six coverages which are listed below

HAN STREETS

HAN BLDGS

HAN FARMS

HAN TANKS

TANK SUMM

TANK CHEM

The first four coverages provide information on site infrastructure (streets, buildings, tank farms, and tanks)

The last two coverages provide information on tank status, characteristics, and chemistry.

Geographic

Data such as street names, building names, etc., were manually entered into the database.

Data on tank status, characteristics, and contents (e.g., shell type, total capacity, liquid and solid wastes) were manually entered into the GIS from charts and tables in a waste tank summary report prepared for the DOE by Westinghouse Hanford Corporation. (Hanlon, B.M., 1996. Waste Tank Summary Report for Month Ending July 31, 1996. WAC-EP-0182-100. Richland WA. Westinghouse Hanford Company).

An electronic version of the HDW report (Agnew, S.F., 1996. Hanford Tank Chemical and Radionuclide Inventories: HDW Model Rev. 3. LA-UR-96-858. Los Alamos, NM: Los Alamos National Laboratory) was obtained over the internet and used to input the estimated chemical and radionuclide inventories of tanks into the GIS.



The data items in each of the  
converger is listed below.

HANSTREETS

- \* FNODE#
- \* TNODE#
- \* LPOLY#
- \* RPOLY#
- \* LENGTH
- \* HANSTREETS#
- \* HANSTREETS-ID
- STREET NAME

Note \* denotes items assigned by  
ARC/INFO.

HANBLDGS

- \* AREA
- \* PERIMETER
- \* HANBLDGS#
- \* HANBLDGS-ID
- BLDG NAME

HANFARMS

- \* AREA
- \* PERIMETER
- \* HANFARMS#
- \* HANFARMS-ID
- FARM NAME

HANTANKS

- \* AREA
- \* PERIMETER
- \* HANTANKS#
- \* HANTANKS-ID
- TANK NO

TANKSUMM

- \* AREA
- \* PERIMETER
- \* TANKSUMM#
- \* TANKSUMM-ID
- REFERENCE
- TANK NO
- SHELL TYPE
- TOTAL CAPACITY
- WATCH LIST CAT
- DATE ADDED
- TANK INTEGRITY
- TOTAL WASTE
- SUPERNATANT LIQ
- SLUDGE
- SALTCAKE
- WASTE TYPE



TANKCHEM

AREA

PERIMETER

TANKCHEM#

TANKCHEM-ID

REFERENCE

TANK NO

SHELL TYPE

TOTAL WASTE

CHEMICAL CONSTITUENTS

Na

AL

Fe

Cr

Bi

Mn

Hg

Zr

Pb

Ni

Sr

Mn

Cu

K

hydroxide

nitrate

nitrite

carbonate

phosphate

sulfate

Si

F

Cl

C<sub>6</sub>H<sub>5</sub>O<sub>7</sub>

EDTA

HEDTA

glycolate

acetate

oxalate

DBP

butanol

ammonia

Fe-cyanide

Radiological constituents

Pu

U

Cs

Sr



Data which was entered into each  
coverage is shown below.

HANSTREETS

STREET NAME

- 1,
- 2,
- 3,
- 4,
- 5,Belolt Ave.
- 6,10th Street
- 7,
- 8,13th Street
- 9,Dayton Ave.
- 10,
- 11,
- 12,19th Street
- 13,14th Street
- 14,
- 15,Camden Ave.
- 16,12th Street
- 17,
- 18,
- 19,
- 20,
- 21,
- 22,4th Street
- 23,Akron Ave.
- 24,1st Street
- 25,Canton Ave.
- 26,
- 27,
- 28,Baltimore Ave.
- 29,7th Street
- 30,
- 31,
- 32,8th Street

HAN BLDGS

BLDG NAME

- 21,T-Plant
- 22,242-I Evaporator Crystalizer
- 23,
- 24,244-TXR Process Vault
- 25,Z-Plant (PFP)
- 26,241-UR Process Vault
- 27,U-Plant
- 28,241-WR Vault
- 29,
- 30,242-S Evaporator (Inactive)
- 31,
- 32,REDOX
- 33,222-S Lab
- 34,244-BXR Process Vault
- 35,225-B WESF
- 36,221 B-Plant
- 37,Criticality Lab
- 38,Strontium Semiworks
- 39,244-CR Process Vault
- 40,244-AR Process Vault
- 41,204-AR Vault
- 42,242-A Evaporator
- 43,PUREX Plant



HAN FARMS

FARM NAME

- 70, T
- 71, TY
- 72, TX
- 73, U
- 74, SY
- 75, S
- 76, SX
- 77, BY
- 78, BX
- 79, B
- 80, C
- 81, AN
- 82, AZ
- 83, AX
- 84, AY
- 85, A
- 86, AW
- 87, AP

TANK SUMM

| REFERENCE | TANK ID                     | SHELL TYPE | TOTAL CAPACITY | WASTE LIST CAT | DATE ADDED            | TANK INTEGRITY | TOTAL WASTE | SUPPLEMENTAL LIQ | SILUDGE   | SALT CRACK | WASTE TYPE |                            |
|-----------|-----------------------------|------------|----------------|----------------|-----------------------|----------------|-------------|------------------|-----------|------------|------------|----------------------------|
| 200       | B.M. Hanlon WHC-EP-0182-100 | T-103      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 27 Kgal          | 4 Kgal    | 23 Kgal    | 0 Kgal     | Non-complexed              |
| 201       | B.M. Hanlon WHC-EP-0182-100 | T-102      | Single-shell   | 530 Kgal       |                       |                | Sound       | 32 Kgal          | 13 Kgal   | 19 Kgal    | 0 Kgal     | Non-complexed              |
| 202       | B.M. Hanlon WHC-EP-0182-100 | T-101      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 102 Kgal         | 1 Kgal    | 101 Kgal   | 0 Kgal     | Non-complexed              |
| 203       | B.M. Hanlon WHC-EP-0182-100 | T-106      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 21 Kgal          | 2 Kgal    | 19 Kgal    | 0 Kgal     | Non-complexed              |
| 204       | B.M. Hanlon WHC-EP-0182-100 | T-105      | Single-shell   | 530 Kgal       |                       |                | Sound       | 98 Kgal          | 0 Kgal    | 98 Kgal    | 0 Kgal     | Non-complexed              |
| 205       | B.M. Hanlon WHC-EP-0182-100 | T-104      | Single-shell   | 530 Kgal       |                       |                | Sound       | 390 Kgal         | 0 Kgal    | 390 Kgal   | 0 Kgal     | Non-complexed              |
| 206       | B.M. Hanlon WHC-EP-0182-100 | T-109      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 58 Kgal          | 0 Kgal    | 58 Kgal    | 0 Kgal     | Non-complexed              |
| 207       | B.M. Hanlon WHC-EP-0182-100 | T-108      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 44 Kgal          | 0 Kgal    | 44 Kgal    | 0 Kgal     | Non-complexed              |
| 208       | B.M. Hanlon WHC-EP-0182-100 | T-107      | Single-shell   | 530 Kgal       | Ferrocyanide          | Feb-91         | Asmd Lkr    | 173 Kgal         | 0 Kgal    | 173 Kgal   | 0 Kgal     | Non-complexed              |
| 209       | B.M. Hanlon WHC-EP-0182-100 | T-112      | Single-shell   | 530 Kgal       |                       |                | Sound       | 67 Kgal          | 7 Kgal    | 60 Kgal    | 0 Kgal     | Non-complexed              |
| 210       | B.M. Hanlon WHC-EP-0182-100 | T-111      | Single-shell   | 530 Kgal       | Organics              | Feb-94         | Asmd Lkr    | 446 Kgal         | 0 Kgal    | 446 Kgal   | 0 Kgal     | Non-complexed              |
| 211       | B.M. Hanlon WHC-EP-0182-100 | T-110      | Single-shell   | 530 Kgal       | Hydrogen              | Jan-91         | Sound       | 379 Kgal         | 3 Kgal    | 376 Kgal   | 0 Kgal     | Non-complexed              |
| 212       | B.M. Hanlon WHC-EP-0182-100 | T-201      | Single-shell   | 55 Kgal        |                       |                | Sound       | 29 Kgal          | 1 Kgal    | 28 Kgal    | 0 Kgal     | Non-complexed              |
| 213       | B.M. Hanlon WHC-EP-0182-100 | T-202      | Single-shell   | 55 Kgal        |                       |                | Sound       | 21 Kgal          | 0 Kgal    | 21 Kgal    | 0 Kgal     | Non-complexed              |
| 214       | B.M. Hanlon WHC-EP-0182-100 | T-203      | Single-shell   | 55 Kgal        |                       |                | Sound       | 35 Kgal          | 0 Kgal    | 35 Kgal    | 0 Kgal     | Non-complexed              |
| 215       | B.M. Hanlon WHC-EP-0182-100 | T-204      | Single-shell   | 55 Kgal        |                       |                | Sound       | 38 Kgal          | 0 Kgal    | 38 Kgal    | 0 Kgal     | Non-complexed              |
| 216       | B.M. Hanlon WHC-EP-0182-100 | TY-102     | Single-shell   | 758 Kgal       |                       |                | Sound       | 64 Kgal          | 0 Kgal    | 0 Kgal     | 64 Kgal    | Non-complexed              |
| 217       | B.M. Hanlon WHC-EP-0182-100 | TY-101     | Single-shell   | 758 Kgal       | Ferrocyanide          | Jan-91         | Asmd Lkr    | 118 Kgal         | 0 Kgal    | 118 Kgal   | 0 Kgal     | Non-complexed              |
| 218       | B.M. Hanlon WHC-EP-0182-100 | TY-104     | Single-shell   | 758 Kgal       | Ferrocyanide-Organics | Jan-91 May-94  | Asmd Lkr    | 46 Kgal          | 3 Kgal    | 43 Kgal    | 0 Kgal     | Non-complexed              |
| 219       | B.M. Hanlon WHC-EP-0182-100 | TY-103     | Single-shell   | 758 Kgal       | Ferrocyanide          | Jan-91         | Asmd Lkr    | 162 Kgal         | 0 Kgal    | 162 Kgal   | 0 Kgal     | Non-complexed              |
| 220       | B.M. Hanlon WHC-EP-0182-100 | TY-106     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 17 Kgal          | 0 Kgal    | 17 Kgal    | 0 Kgal     | Non-complexed              |
| 221       | B.M. Hanlon WHC-EP-0182-100 | TY-105     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 231 Kgal         | 0 Kgal    | 231 Kgal   | 0 Kgal     | Non-complexed              |
| 222       | B.M. Hanlon WHC-EP-0182-100 | TX-118     | Single-shell   | 758 Kgal       | Ferrocyanide-Organics | Jan-91 Jan-91  | Sound       | 347 Kgal         | 0 Kgal    | 0 Kgal     | 347 Kgal   | Non-complexed              |
| 223       | B.M. Hanlon WHC-EP-0182-100 | TX-117     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 626 Kgal         | 0 Kgal    | 0 Kgal     | 626 Kgal   | Non-complexed              |
| 224       | B.M. Hanlon WHC-EP-0182-100 | TX-116     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 631 Kgal         | 0 Kgal    | 0 Kgal     | 631 Kgal   | Non-complexed              |
| 225       | B.M. Hanlon WHC-EP-0182-100 | TX-115     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 640 Kgal         | 0 Kgal    | 0 Kgal     | 640 Kgal   | Non-complexed              |
| 226       | B.M. Hanlon WHC-EP-0182-100 | TX-114     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 535 Kgal         | 0 Kgal    | 0 Kgal     | 535 Kgal   | Non-complexed              |
| 227       | B.M. Hanlon WHC-EP-0182-100 | TX-113     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 607 Kgal         | 0 Kgal    | 0 Kgal     | 607 Kgal   | Non-complexed              |
| 228       | B.M. Hanlon WHC-EP-0182-100 | TX-112     | Single-shell   | 758 Kgal       |                       |                | Sound       | 649 Kgal         | 0 Kgal    | 0 Kgal     | 649 Kgal   | Non-complexed              |
| 229       | B.M. Hanlon WHC-EP-0182-100 | TX-111     | Single-shell   | 758 Kgal       |                       |                | Sound       | 370 Kgal         | 0 Kgal    | 0 Kgal     | 370 Kgal   | Non-complexed              |
| 230       | B.M. Hanlon WHC-EP-0182-100 | TX-110     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 462 Kgal         | 0 Kgal    | 0 Kgal     | 462 Kgal   | Non-complexed              |
| 231       | B.M. Hanlon WHC-EP-0182-100 | TX-109     | Single-shell   | 758 Kgal       |                       |                | Sound       | 384 Kgal         | 0 Kgal    | 0 Kgal     | 384 Kgal   | Non-complexed              |
| 232       | B.M. Hanlon WHC-EP-0182-100 | TX-108     | Single-shell   | 758 Kgal       |                       |                | Sound       | 134 Kgal         | 0 Kgal    | 0 Kgal     | 134 Kgal   | Non-complexed              |
| 233       | B.M. Hanlon WHC-EP-0182-100 | TX-107     | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 36 Kgal          | 1 Kgal    | 0 Kgal     | 35 Kgal    | Non-complexed              |
| 234       | B.M. Hanlon WHC-EP-0182-100 | TX-106     | Single-shell   | 758 Kgal       |                       |                | Sound       | 453 Kgal         | 0 Kgal    | 0 Kgal     | 453 Kgal   | Non-complexed              |
| 235       | B.M. Hanlon WHC-EP-0182-100 | TX-105     | Single-shell   | 758 Kgal       | Organics              | Jan-91         | Asmd Lkr    | 609 Kgal         | 0 Kgal    | 0 Kgal     | 609 Kgal   | Non-complexed              |
| 236       | B.M. Hanlon WHC-EP-0182-100 | TX-104     | Single-shell   | 758 Kgal       |                       |                | Sound       | 65 Kgal          | 1 Kgal    | 0 Kgal     | 64 Kgal    | Non-complexed              |
| 237       | B.M. Hanlon WHC-EP-0182-100 | TX-103     | Single-shell   | 758 Kgal       |                       |                | Sound       | 157 Kgal         | 0 Kgal    | 157 Kgal   | 0 Kgal     | Non-complexed              |
| 238       | B.M. Hanlon WHC-EP-0182-100 | TX-102     | Single-shell   | 758 Kgal       |                       |                | Sound       | 217 Kgal         | 0 Kgal    | 0 Kgal     | 217 Kgal   | Non-complexed              |
| 239       | B.M. Hanlon WHC-EP-0182-100 | TX-101     | Single-shell   | 758 Kgal       |                       |                | Sound       | 87 Kgal          | 3 Kgal    | 84 Kgal    | 0 Kgal     | Non-complexed              |
| 240       | B.M. Hanlon WHC-EP-0182-100 | U-103      | Single-shell   | 530 Kgal       | Hydrogen-Organics     | Jan-91 May-94  | Sound       | 468 Kgal         | 13 Kgal   | 32 Kgal    | 423 Kgal   | Non-complexed              |
| 241       | B.M. Hanlon WHC-EP-0182-100 | U-102      | Single-shell   | 530 Kgal       |                       |                | Sound       | 374 Kgal         | 18 Kgal   | 43 Kgal    | 313 Kgal   | Non-complexed              |
| 242       | B.M. Hanlon WHC-EP-0182-100 | U-101      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 25 Kgal          | 3 Kgal    | 22 Kgal    | 0 Kgal     | Non-complexed              |
| 243       | B.M. Hanlon WHC-EP-0182-100 | U-106      | Single-shell   | 530 Kgal       | Organics              | Jan-91         | Sound       | 226 Kgal         | 15 Kgal   | 26 Kgal    | 185 Kgal   | Non-complexed              |
| 244       | B.M. Hanlon WHC-EP-0182-100 | U-105      | Single-shell   | 530 Kgal       | Hydrogen-Organics     | Jan-91 May-94  | Sound       | 418 Kgal         | 37 Kgal   | 32 Kgal    | 349 Kgal   | Non-complexed              |
| 245       | B.M. Hanlon WHC-EP-0182-100 | U-104      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 122 Kgal         | 0 Kgal    | 122 Kgal   | 0 Kgal     | Non-complexed              |
| 246       | B.M. Hanlon WHC-EP-0182-100 | U-109      | Single-shell   | 530 Kgal       | Hydrogen              | Jan-91         | Sound       | 463 Kgal         | 19 Kgal   | 48 Kgal    | 396 Kgal   | Non-complexed              |
| 247       | B.M. Hanlon WHC-EP-0182-100 | U-108      | Single-shell   | 530 Kgal       | Hydrogen              | Jan-91         | Sound       | 468 Kgal         | 24 Kgal   | 29 Kgal    | 415 Kgal   | Non-complexed              |
| 248       | B.M. Hanlon WHC-EP-0182-100 | U-107      | Single-shell   | 530 Kgal       | Organics-Hydrogen     | Jan-91 Dec-93  | Sound       | 406 Kgal         | 31 Kgal   | 15 Kgal    | 360 Kgal   | Double-shell slurry feed   |
| 249       | B.M. Hanlon WHC-EP-0182-100 | U-112      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 49 Kgal          | 4 Kgal    | 45 Kgal    | 0 Kgal     | Non-complexed              |
| 250       | B.M. Hanlon WHC-EP-0182-100 | U-111      | Single-shell   | 530 Kgal       | Organics              | Aug-93         | Sound       | 329 Kgal         | 0 Kgal    | 26 Kgal    | 303 Kgal   | Double-shell slurry feed   |
| 251       | B.M. Hanlon WHC-EP-0182-100 | U-110      | Single-shell   | 530 Kgal       |                       |                | Asmd Lkr    | 186 Kgal         | 0 Kgal    | 186 Kgal   | 0 Kgal     | Non-complexed              |
| 252       | B.M. Hanlon WHC-EP-0182-100 | U-201      | Single-shell   | 55 Kgal        |                       |                | Sound       | 5 Kgal           | 1 Kgal    | 4 Kgal     | 0 Kgal     | Non-complexed              |
| 253       | B.M. Hanlon WHC-EP-0182-100 | U-202      | Single-shell   | 55 Kgal        |                       |                | Sound       | 5 Kgal           | 1 Kgal    | 4 Kgal     | 0 Kgal     | Non-complexed              |
| 254       | B.M. Hanlon WHC-EP-0182-100 | U-203      | Single-shell   | 55 Kgal        | Organics              | May-94         | Sound       | 3 Kgal           | 1 Kgal    | 2 Kgal     | 0 Kgal     | Non-complexed              |
| 255       | B.M. Hanlon WHC-EP-0182-100 | U-204      | Single-shell   | 55 Kgal        | Organics              | May-94         | Sound       | 3 Kgal           | 1 Kgal    | 2 Kgal     | 0 Kgal     | Non-complexed              |
| 256       | B.M. Hanlon WHC-EP-0182-100 | SY-102     | Double-shell   | 1160 Kgal      |                       |                | Sound       | 543 Kgal         | 472 Kgal  | 71 Kgal    | 0 Kgal     | Dilute non-complex/PPF TRU |
| 257       | B.M. Hanlon WHC-EP-0182-100 | SY-101     | Double-shell   | 1160 Kgal      | Hydrogen              | Jan-91         | Sound       | 1113 Kgal        | 1072 Kgal | 41 Kgal    | 0 Kgal     | Complexant concentrate     |
| 258       | B.M. Hanlon WHC-EP-0182-100 | SY-103     | Double-shell   | 1160 Kgal      | Hydrogen              | Jan-91         | Sound       | 747 Kgal         | 381 Kgal  | 362 Kgal   | 0 Kgal     | Complexant concentrate     |
| 259       | B.M. Hanlon WHC-EP-0182-100 | S-103      | Single-shell   | 758 Kgal       |                       |                | Sound       | 248 Kgal         | 17 Kgal   | 10 Kgal    | 221 Kgal   | Double-shell slurry feed   |
| 260       | B.M. Hanlon WHC-EP-0182-100 | S-102      | Single-shell   | 758 Kgal       | Hydrogen-Organics     | Jan-91 Jan-91  | Sound       | 549 Kgal         | 0 Kgal    | 4 Kgal     | 454 Kgal   | Double-shell slurry feed   |
| 261       | B.M. Hanlon WHC-EP-0182-100 | S-101      | Single-shell   | 758 Kgal       |                       |                | Sound       | 427 Kgal         | 12 Kgal   | 244 Kgal   | 171 Kgal   | Non-complexed              |
| 262       | B.M. Hanlon WHC-EP-0182-100 | S-106      | Single-shell   | 758 Kgal       |                       |                | Sound       | 479 Kgal         | 4 Kgal    | 28 Kgal    | 447 Kgal   | Non-complexed              |
| 263       | B.M. Hanlon WHC-EP-0182-100 | S-105      | Single-shell   | 758 Kgal       |                       |                | Sound       | 456 Kgal         | 0 Kgal    | 2 Kgal     | 454 Kgal   | Non-complexed              |
| 264       | B.M. Hanlon WHC-EP-0182-100 | S-104      | Single-shell   | 758 Kgal       |                       |                | Asmd Lkr    | 294 Kgal         | 1 Kgal    | 293 Kgal   | 0 Kgal     | Non-complexed              |
| 265       | B.M. Hanlon WHC-EP-0182-100 | S-109      | Single-shell   | 758 Kgal       |                       |                | Sound       | 568 Kgal         | 0 Kgal    | 13 Kgal    | 555 Kgal   | Non-complexed              |
| 266       | B.M. Hanlon WHC-EP-0182-100 | S-108      | Single-shell   | 758 Kgal       |                       |                | Sound       | 604 Kgal         | 0 Kgal    | 4 Kgal     | 600 Kgal   | Non-complexed              |
| 267       | B.M. Hanlon WHC-EP-0182-100 | S-107      | Single-shell   | 758 Kgal       |                       |                | Sound       | 376 Kgal         | 14 Kgal   | 293 Kgal   | 69 Kgal    | Non-complexed              |
| 268       | B.M. Hanlon WHC-EP-0182-100 | S-112      | Single-shell   | 758 Kgal       | Hydrogen              | Jan-91         | Sound       | 523 Kgal         | 0 Kgal    | 5 Kgal     | 518 Kgal   | Non-complexed              |
| 269       | B.M. Hanlon WHC-EP-0182-100 | S-111      | Single-shell   | 758 Kgal       | Hydrogen-Organics     | Jan-91 May-94  | Sound       | 596 Kgal         | 10 Kgal   | 139 Kgal   | 447 Kgal   | Non-complexed              |
| 270       | B.M. Hanlon WHC-EP-0182-100 | S-110      | Single-shell   | 758 Kgal       |                       |                | Sound       | 390 Kgal         | 0 Kgal    | 131 Kgal   | 259 Kgal   | Non-complexed              |
| 271       | B.M. Hanlon WHC-EP-0182-100 | SX-103     | Single-shell   | 1000 Kgal      | Hydrogen-Organics     | Jan-91 May-94  | Sound       | 652 Kgal         | 1 Kgal    | 115 Kgal   | 536 Kgal   | Non-complexed              |
| 272       | B.M. Hanlon WHC-EP-0182-100 | SX-102     | Single-shell   | 1000 Kgal      | Hydrogen              | Jan-91         | Sound       | 543 Kgal         | 0 Kgal    | 117 Kgal   | 426 Kgal   | Double-shell slurry feed   |
| 273       | B.M. Hanlon WHC-EP-0182-100 | SX-101     | Single-shell   | 1000 Kgal      | Hydrogen              | Jan-91         | Sound       | 456 Kgal         | 1 Kgal    | 112 Kgal   | 343 Kgal   | Dilute complexed           |



|     |                             |        |              |           |                   |        |        |          |           |           |          |          |                          |
|-----|-----------------------------|--------|--------------|-----------|-------------------|--------|--------|----------|-----------|-----------|----------|----------|--------------------------|
| 274 | B.M. Hanlon WHC-EP-0182-100 | SX-106 | Single-shell | 1000 Kgal | Hydrogen-Organics | Jan-91 | Jan-91 | Sound    | 538 Kgal  | 61 Kgal   | 12 Kgal  | 465 Kgal | Non-complexed            |
| 275 | B.M. Hanlon WHC-EP-0182-100 | SX-105 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 683 Kgal  | 0 Kgal    | 73 Kgal  | 610 Kgal | Double-shell slurry feed |
| 276 | B.M. Hanlon WHC-EP-0182-100 | SX-104 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Asmd Lkr | 614 Kgal  | 0 Kgal    | 136 Kgal | 478 Kgal | Double-shell slurry feed |
| 277 | B.M. Hanlon WHC-EP-0182-100 | SX-109 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Asmd Lkr | 244 Kgal  | 0 Kgal    | 0 Kgal   | 244 Kgal | Non-complexed            |
| 278 | B.M. Hanlon WHC-EP-0182-100 | SX-108 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 87 Kgal   | 0 Kgal    | 87 Kgal  | 0 Kgal   | Non-complexed            |
| 279 | B.M. Hanlon WHC-EP-0182-100 | SX-107 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 104 Kgal  | 0 Kgal    | 104 Kgal | 0 Kgal   | Non-complexed            |
| 280 | B.M. Hanlon WHC-EP-0182-100 | SX-112 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 92 Kgal   | 0 Kgal    | 92 Kgal  | 0 Kgal   | Non-complexed            |
| 281 | B.M. Hanlon WHC-EP-0182-100 | SX-111 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 125 Kgal  | 0 Kgal    | 125 Kgal | 0 Kgal   | Non-complexed            |
| 282 | B.M. Hanlon WHC-EP-0182-100 | SX-110 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 62 Kgal   | 0 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 283 | B.M. Hanlon WHC-EP-0182-100 | SX-115 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 12 Kgal   | 0 Kgal    | 12 Kgal  | 0 Kgal   | Non-complexed            |
| 284 | B.M. Hanlon WHC-EP-0182-100 | SX-114 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 181 Kgal  | 0 Kgal    | 181 Kgal | 0 Kgal   | Non-complexed            |
| 285 | B.M. Hanlon WHC-EP-0182-100 | SX-113 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 26 Kgal   | 0 Kgal    | 26 Kgal  | 0 Kgal   | Non-complexed            |
| 286 | B.M. Hanlon WHC-EP-0182-100 | BY-112 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Sound    | 291 Kgal  | 0 Kgal    | 5 Kgal   | 286 Kgal | Non-complexed            |
| 287 | B.M. Hanlon WHC-EP-0182-100 | BY-109 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 423 Kgal  | 0 Kgal    | 83 Kgal  | 340 Kgal | Non-complexed            |
| 288 | B.M. Hanlon WHC-EP-0182-100 | BY-106 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Asmd Lkr | 642 Kgal  | 0 Kgal    | 95 Kgal  | 547 Kgal | Non-complexed            |
| 289 | B.M. Hanlon WHC-EP-0182-100 | BY-103 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Asmd Lkr | 400 Kgal  | 0 Kgal    | 5 Kgal   | 395 Kgal | Non-complexed            |
| 290 | B.M. Hanlon WHC-EP-0182-100 | BY-111 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Sound    | 459 Kgal  | 0 Kgal    | 21 Kgal  | 438 Kgal | Non-complexed            |
| 291 | B.M. Hanlon WHC-EP-0182-100 | BY-108 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Asmd Lkr | 228 Kgal  | 0 Kgal    | 154 Kgal | 74 Kgal  | Non-complexed            |
| 292 | B.M. Hanlon WHC-EP-0182-100 | BY-105 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Asmd Lkr | 503 Kgal  | 0 Kgal    | 158 Kgal | 345 Kgal | Non-complexed            |
| 293 | B.M. Hanlon WHC-EP-0182-100 | BY-102 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 277 Kgal  | 0 Kgal    | 0 Kgal   | 277 Kgal | Non-complexed            |
| 294 | B.M. Hanlon WHC-EP-0182-100 | BY-110 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Sound    | 398 Kgal  | 0 Kgal    | 103 Kgal | 295 Kgal | Non-complexed            |
| 295 | B.M. Hanlon WHC-EP-0182-100 | BY-107 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Asmd Lkr | 266 Kgal  | 0 Kgal    | 60 Kgal  | 206 Kgal | Non-complexed            |
| 296 | B.M. Hanlon WHC-EP-0182-100 | BY-104 | Single-shell | 758 Kgal  | Percrocyanide     | Jan-91 | Jan-91 | Sound    | 406 Kgal  | 0 Kgal    | 40 Kgal  | 366 Kgal | Non-complexed            |
| 297 | B.M. Hanlon WHC-EP-0182-100 | BY-101 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 387 Kgal  | 0 Kgal    | 109 Kgal | 278 Kgal | Non-complexed            |
| 298 | B.M. Hanlon WHC-EP-0182-100 | BX-112 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 165 Kgal  | 1 Kgal    | 164 Kgal | 0 Kgal   | Non-complexed            |
| 299 | B.M. Hanlon WHC-EP-0182-100 | BX-109 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 193 Kgal  | 0 Kgal    | 193 Kgal | 0 Kgal   | Non-complexed            |
| 300 | B.M. Hanlon WHC-EP-0182-100 | BX-106 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 38 Kgal   | 0 Kgal    | 38 Kgal  | 0 Kgal   | Non-complexed            |
| 301 | B.M. Hanlon WHC-EP-0182-100 | BX-103 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 68 Kgal   | 6 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 302 | B.M. Hanlon WHC-EP-0182-100 | BX-111 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 162 Kgal  | 1 Kgal    | 52 Kgal  | 109 Kgal | Non-complexed            |
| 303 | B.M. Hanlon WHC-EP-0182-100 | BX-108 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 26 Kgal   | 0 Kgal    | 26 Kgal  | 0 Kgal   | Non-complexed            |
| 304 | B.M. Hanlon WHC-EP-0182-100 | BX-105 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 51 Kgal   | 5 Kgal    | 43 Kgal  | 3 Kgal   | Non-complexed            |
| 305 | B.M. Hanlon WHC-EP-0182-100 | BX-102 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 96 Kgal   | 0 Kgal    | 96 Kgal  | 0 Kgal   | Non-complexed            |
| 306 | B.M. Hanlon WHC-EP-0182-100 | BX-110 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 207 Kgal  | 3 Kgal    | 195 Kgal | 9 Kgal   | Non-complexed            |
| 307 | B.M. Hanlon WHC-EP-0182-100 | BX-107 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 345 Kgal  | 1 Kgal    | 344 Kgal | 0 Kgal   | Non-complexed            |
| 308 | B.M. Hanlon WHC-EP-0182-100 | BX-104 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 99 Kgal   | 3 Kgal    | 96 Kgal  | 0 Kgal   | Non-complexed            |
| 309 | B.M. Hanlon WHC-EP-0182-100 | BX-101 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 43 Kgal   | 1 Kgal    | 42 Kgal  | 0 Kgal   | Non-complexed            |
| 310 | B.M. Hanlon WHC-EP-0182-100 | B-204  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 50 Kgal   | 1 Kgal    | 49 Kgal  | 0 Kgal   | Non-complexed            |
| 311 | B.M. Hanlon WHC-EP-0182-100 | B-203  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 51 Kgal   | 1 Kgal    | 50 Kgal  | 0 Kgal   | Non-complexed            |
| 312 | B.M. Hanlon WHC-EP-0182-100 | B-202  | Single-shell | 55 Kgal   |                   |        |        | Sound    | 27 Kgal   | 0 Kgal    | 27 Kgal  | 0 Kgal   | Non-complexed            |
| 313 | B.M. Hanlon WHC-EP-0182-100 | B-201  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 29 Kgal   | 1 Kgal    | 28 Kgal  | 0 Kgal   | Non-complexed            |
| 314 | B.M. Hanlon WHC-EP-0182-100 | B-112  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 33 Kgal   | 3 Kgal    | 30 Kgal  | 0 Kgal   | Non-complexed            |
| 315 | B.M. Hanlon WHC-EP-0182-100 | B-109  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 127 Kgal  | 0 Kgal    | 127 Kgal | 0 Kgal   | Non-complexed            |
| 316 | B.M. Hanlon WHC-EP-0182-100 | B-106  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 117 Kgal  | 1 Kgal    | 116 Kgal | 0 Kgal   | Non-complexed            |
| 317 | B.M. Hanlon WHC-EP-0182-100 | B-103  | Single-shell | 530 Kgal  | Organics          | Jan-91 | Jan-91 | Asmd Lkr | 59 Kgal   | 0 Kgal    | 59 Kgal  | 0 Kgal   | Non-complexed            |
| 318 | B.M. Hanlon WHC-EP-0182-100 | B-111  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 237 Kgal  | 1 Kgal    | 236 Kgal | 0 Kgal   | Non-complexed            |
| 319 | B.M. Hanlon WHC-EP-0182-100 | B-108  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 94 Kgal   | 0 Kgal    | 94 Kgal  | 0 Kgal   | Non-complexed            |
| 320 | B.M. Hanlon WHC-EP-0182-100 | B-105  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 306 Kgal  | 0 Kgal    | 40 Kgal  | 266 Kgal | Non-complexed            |
| 321 | B.M. Hanlon WHC-EP-0182-100 | B-102  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 32 Kgal   | 4 Kgal    | 18 Kgal  | 10 Kgal  | Non-complexed            |
| 322 | B.M. Hanlon WHC-EP-0182-100 | B-110  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 246 Kgal  | 1 Kgal    | 245 Kgal | 0 Kgal   | Non-complexed            |
| 323 | B.M. Hanlon WHC-EP-0182-100 | B-107  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 165 Kgal  | 1 Kgal    | 164 Kgal | 0 Kgal   | Non-complexed            |
| 324 | B.M. Hanlon WHC-EP-0182-100 | B-104  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 371 Kgal  | 1 Kgal    | 301 Kgal | 69 Kgal  | Non-complexed            |
| 325 | B.M. Hanlon WHC-EP-0182-100 | B-101  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 113 Kgal  | 0 Kgal    | 113 Kgal | 0 Kgal   | Non-complexed            |
| 326 | B.M. Hanlon WHC-EP-0182-100 | C-110  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 178 Kgal  | 1 Kgal    | 177 Kgal | 0 Kgal   | Dilute complexed         |
| 327 | B.M. Hanlon WHC-EP-0182-100 | C-111  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 57 Kgal   | 0 Kgal    | 57 Kgal  | 0 Kgal   | Non-complexed            |
| 328 | B.M. Hanlon WHC-EP-0182-100 | C-112  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 104 Kgal  | 0 Kgal    | 104 Kgal | 0 Kgal   | Non-complexed            |
| 329 | B.M. Hanlon WHC-EP-0182-100 | C-107  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 237 Kgal  | 0 Kgal    | 237 Kgal | 0 Kgal   | Dilute complexed         |
| 330 | B.M. Hanlon WHC-EP-0182-100 | C-108  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 66 Kgal   | 0 Kgal    | 66 Kgal  | 0 Kgal   | Non-complexed            |
| 331 | B.M. Hanlon WHC-EP-0182-100 | C-109  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 66 Kgal   | 4 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 332 | B.M. Hanlon WHC-EP-0182-100 | C-104  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 295 Kgal  | 0 Kgal    | 295 Kgal | 0 Kgal   | Complexant concentrate   |
| 333 | B.M. Hanlon WHC-EP-0182-100 | C-105  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 134 Kgal  | 2 Kgal    | 132 Kgal | 0 Kgal   | Non-complexed            |
| 334 | B.M. Hanlon WHC-EP-0182-100 | C-106  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 229 Kgal  | 32 Kgal   | 197 Kgal | 0 Kgal   | Non-complexed            |
| 335 | B.M. Hanlon WHC-EP-0182-100 | C-101  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 88 Kgal   | 0 Kgal    | 88 Kgal  | 0 Kgal   | Non-complexed            |
| 336 | B.M. Hanlon WHC-EP-0182-100 | C-102  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 316 Kgal  | 0 Kgal    | 316 Kgal | 0 Kgal   | Dilute complexed         |
| 337 | B.M. Hanlon WHC-EP-0182-100 | C-103  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 195 Kgal  | 133 Kgal  | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 338 | B.M. Hanlon WHC-EP-0182-100 | C-204  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 3 Kgal    | 0 Kgal    | 3 Kgal   | 0 Kgal   | Non-complexed            |
| 339 | B.M. Hanlon WHC-EP-0182-100 | C-203  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 5 Kgal    | 0 Kgal    | 5 Kgal   | 0 Kgal   | Non-complexed            |
| 340 | B.M. Hanlon WHC-EP-0182-100 | C-202  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 1 Kgal    | 0 Kgal    | 1 Kgal   | 0 Kgal   | Empty                    |
| 341 | B.M. Hanlon WHC-EP-0182-100 | C-201  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 2 Kgal    | 0 Kgal    | 2 Kgal   | 0 Kgal   | Non-complexed            |
| 342 | B.M. Hanlon WHC-EP-0182-100 | AN-107 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1057 Kgal | 810 Kgal  | 247 Kgal | 0 Kgal   | Complexant concentrate   |
| 343 | B.M. Hanlon WHC-EP-0182-100 | AN-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 415 Kgal  | 398 Kgal  | 17 Kgal  | 0 Kgal   | Double-shell slurry feed |
| 344 | B.M. Hanlon WHC-EP-0182-100 | AN-105 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 1129 Kgal | 1129 Kgal | 0 Kgal   | 0 Kgal   | Double-shell slurry feed |
| 345 | B.M. Hanlon WHC-EP-0182-100 | AN-104 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 1058 Kgal | 794 Kgal  | 264 Kgal | 0 Kgal   | Double-shell slurry feed |
| 346 | B.M. Hanlon WHC-EP-0182-100 | AN-103 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 958 Kgal  | 21 Kgal   | 0 Kgal   | 0 Kgal   | Double-shell slurry feed |
| 347 | B.M. Hanlon WHC-EP-0182-100 | AN-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1080 Kgal | 991 Kgal  | 89 Kgal  | 0 Kgal   | Complexant concentrate   |

|     |                             |        |              |           |                   |        |        |          |           |           |          |          |                              |
|-----|-----------------------------|--------|--------------|-----------|-------------------|--------|--------|----------|-----------|-----------|----------|----------|------------------------------|
| 348 | B.M. Hanlon WHC-EP-0182-100 | AN-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1084 Kgal | 1051 Kgal | 33 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 349 | B.M. Hanlon WHC-EP-0182-100 | AZ-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 934 Kgal  | 839 Kgal  | 95 Kgal  | 0 Kgal   | Aging                        |
| 350 | B.M. Hanlon WHC-EP-0182-100 | AZ-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 855 Kgal  | 820 Kgal  | 35 Kgal  | 0 Kgal   | Aging                        |
| 351 | B.M. Hanlon WHC-EP-0182-100 | AY-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 924 Kgal  | 830 Kgal  | 94 Kgal  | 0 Kgal   | Dilute complexed             |
| 352 | B.M. Hanlon WHC-EP-0182-100 | AX-103 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 112 Kgal  | 0 Kgal    | 2 Kgal   | 110 Kgal | Complexant concentrate       |
| 353 | B.M. Hanlon WHC-EP-0182-100 | AX-101 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 748 Kgal  | 0 Kgal    | 3 Kgal   | 745 Kgal | Double-shell slurry feed     |
| 354 | B.M. Hanlon WHC-EP-0182-100 | AY-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 812 Kgal  | 782 Kgal  | 30 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 355 | B.M. Hanlon WHC-EP-0182-100 | AX-104 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 7 Kgal    | 0 Kgal    | 7 Kgal   | 0 Kgal   | Non-complexed                |
| 356 | B.M. Hanlon WHC-EP-0182-100 | AX-102 | Single-shell | 1000 Kgal | Organics          | May-94 | May-94 | Asmd Lkr | 39 Kgal   | 3 Kgal    | 7 Kgal   | 29 Kgal  | Complexant concentrate       |
| 357 | B.M. Hanlon WHC-EP-0182-100 | A-104  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 28 Kgal   | 0 Kgal    | 28 Kgal  | 0 Kgal   | Non-complexed                |
| 358 | B.M. Hanlon WHC-EP-0182-100 | A-105  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 19 Kgal   | 0 Kgal    | 19 Kgal  | 0 Kgal   | Non-complexed                |
| 359 | B.M. Hanlon WHC-EP-0182-100 | A-106  | Single-shell | 1000 Kgal |                   |        |        | Sound    | 125 Kgal  | 0 Kgal    | 125 Kgal | 0 Kgal   | Concentrated phosphate       |
| 360 | B.M. Hanlon WHC-EP-0182-100 | A-101  | Single-shell | 1000 Kgal | Hydrogen-Organics | Jan-91 | May-94 | Sound    | 953 Kgal  | 0 Kgal    | 3 Kgal   | 950 Kgal | Double-shell slurry feed     |
| 361 | B.M. Hanlon WHC-EP-0182-100 | A-102  | Single-shell | 1000 Kgal |                   |        |        | Sound    | 41 Kgal   | 4 Kgal    | 15 Kgal  | 22 Kgal  | Double-shell slurry feed     |
| 362 | B.M. Hanlon WHC-EP-0182-100 | A-103  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 371 Kgal  | 5 Kgal    | 366 Kgal | 0 Kgal   | Double-shell slurry feed     |
| 363 | B.M. Hanlon WHC-EP-0182-100 | AW-101 | Double-shell | 1160 Kgal | Hydrogen          | Jun-93 | Jun-93 | Sound    | 1128 Kgal | 1044 Kgal | 84 Kgal  | 0 Kgal   | Double-shell slurry feed     |
| 364 | B.M. Hanlon WHC-EP-0182-100 | AW-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 100 Kgal  | 64 Kgal   | 36 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 365 | B.M. Hanlon WHC-EP-0182-100 | AW-103 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 515 Kgal  | 152 Kgal  | 363 Kgal | 0 Kgal   | Dilute non-complex/PUREX TRU |
| 366 | B.M. Hanlon WHC-EP-0182-100 | AW-104 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1122 Kgal | 832 Kgal  | 179 Kgal | 111 Kgal | Dilute non-complexed         |
| 367 | B.M. Hanlon WHC-EP-0182-100 | AW-105 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 440 Kgal  | 160 Kgal  | 280 Kgal | 0 Kgal   | Dilute non-complex/PUREX TRU |
| 368 | B.M. Hanlon WHC-EP-0182-100 | AW-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 323 Kgal  | 98 Kgal   | 225 Kgal | 0 Kgal   | Dilute non-complexed         |
| 369 | B.M. Hanlon WHC-EP-0182-100 | AP-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1042 Kgal | 1042 Kgal | 0 Kgal   | 0 Kgal   | Double-shell slurry feed     |
| 370 | B.M. Hanlon WHC-EP-0182-100 | AP-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1098 Kgal | 1098 Kgal | 0 Kgal   | 0 Kgal   | Concentrated phosphate       |
| 371 | B.M. Hanlon WHC-EP-0182-100 | AP-103 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 24 Kgal   | 23 Kgal   | 1 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 372 | B.M. Hanlon WHC-EP-0182-100 | AP-104 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 27 Kgal   | 27 Kgal   | 0 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 373 | B.M. Hanlon WHC-EP-0182-100 | AP-105 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 156 Kgal  | 2 Kgal    | 154 Kgal | 0 Kgal   | Double-shell slurry feed     |
| 374 | B.M. Hanlon WHC-EP-0182-100 | AP-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 213 Kgal  | 213 Kgal  | 0 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 375 | B.M. Hanlon WHC-EP-0182-100 | AP-107 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 23 Kgal   | 23 Kgal   | 0 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 376 | B.M. Hanlon WHC-EP-0182-100 | AP-108 | Double-shell | 1160 Kgal |                   |        |        |          |           |           |          |          |                              |



|     |                             |        |              |           |                   |        |        |          |           |           |          |          |                          |
|-----|-----------------------------|--------|--------------|-----------|-------------------|--------|--------|----------|-----------|-----------|----------|----------|--------------------------|
| 274 | B.M. Hanlon WHC-EP-0182-100 | SX-106 | Single-shell | 1000 Kgal | Hydrogen-Organics | Jan-91 | Jan-91 | Sound    | 538 Kgal  | 61 Kgal   | 12 Kgal  | 465 Kgal | Non-complexed            |
| 275 | B.M. Hanlon WHC-EP-0182-100 | SX-105 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 683 Kgal  | 0 Kgal    | 73 Kgal  | 610 Kgal | Double-shell slurry feed |
| 276 | B.M. Hanlon WHC-EP-0182-100 | SX-104 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Asmd Lkr | 614 Kgal  | 0 Kgal    | 136 Kgal | 478 Kgal | Double-shell slurry feed |
| 277 | B.M. Hanlon WHC-EP-0182-100 | SX-109 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Asmd Lkr | 244 Kgal  | 0 Kgal    | 0 Kgal   | 244 Kgal | Non-complexed            |
| 278 | B.M. Hanlon WHC-EP-0182-100 | SX-108 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 87 Kgal   | 0 Kgal    | 87 Kgal  | 0 Kgal   | Non-complexed            |
| 279 | B.M. Hanlon WHC-EP-0182-100 | SX-107 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 104 Kgal  | 0 Kgal    | 104 Kgal | 0 Kgal   | Non-complexed            |
| 280 | B.M. Hanlon WHC-EP-0182-100 | SX-112 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 92 Kgal   | 0 Kgal    | 92 Kgal  | 0 Kgal   | Non-complexed            |
| 281 | B.M. Hanlon WHC-EP-0182-100 | SX-111 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 125 Kgal  | 0 Kgal    | 125 Kgal | 0 Kgal   | Non-complexed            |
| 282 | B.M. Hanlon WHC-EP-0182-100 | SX-110 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 62 Kgal   | 0 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 283 | B.M. Hanlon WHC-EP-0182-100 | SX-115 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 12 Kgal   | 0 Kgal    | 12 Kgal  | 0 Kgal   | Non-complexed            |
| 284 | B.M. Hanlon WHC-EP-0182-100 | SX-114 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 181 Kgal  | 0 Kgal    | 181 Kgal | 0 Kgal   | Non-complexed            |
| 285 | B.M. Hanlon WHC-EP-0182-100 | SX-113 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 26 Kgal   | 0 Kgal    | 26 Kgal  | 0 Kgal   | Non-complexed            |
| 286 | B.M. Hanlon WHC-EP-0182-100 | BY-112 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Sound    | 291 Kgal  | 0 Kgal    | 5 Kgal   | 286 Kgal | Non-complexed            |
| 287 | B.M. Hanlon WHC-EP-0182-100 | BY-109 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 423 Kgal  | 0 Kgal    | 83 Kgal  | 340 Kgal | Non-complexed            |
| 288 | B.M. Hanlon WHC-EP-0182-100 | BY-106 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Asmd Lkr | 642 Kgal  | 0 Kgal    | 95 Kgal  | 547 Kgal | Non-complexed            |
| 289 | B.M. Hanlon WHC-EP-0182-100 | BY-103 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Asmd Lkr | 400 Kgal  | 0 Kgal    | 5 Kgal   | 395 Kgal | Non-complexed            |
| 290 | B.M. Hanlon WHC-EP-0182-100 | BY-111 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Sound    | 459 Kgal  | 0 Kgal    | 21 Kgal  | 438 Kgal | Non-complexed            |
| 291 | B.M. Hanlon WHC-EP-0182-100 | BY-108 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Asmd Lkr | 228 Kgal  | 0 Kgal    | 154 Kgal | 74 Kgal  | Non-complexed            |
| 292 | B.M. Hanlon WHC-EP-0182-100 | BY-105 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Asmd Lkr | 503 Kgal  | 0 Kgal    | 158 Kgal | 345 Kgal | Non-complexed            |
| 293 | B.M. Hanlon WHC-EP-0182-100 | BY-102 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 277 Kgal  | 0 Kgal    | 0 Kgal   | 277 Kgal | Non-complexed            |
| 294 | B.M. Hanlon WHC-EP-0182-100 | BY-110 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Sound    | 398 Kgal  | 0 Kgal    | 103 Kgal | 295 Kgal | Non-complexed            |
| 295 | B.M. Hanlon WHC-EP-0182-100 | BY-107 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Asmd Lkr | 266 Kgal  | 0 Kgal    | 60 Kgal  | 206 Kgal | Non-complexed            |
| 296 | B.M. Hanlon WHC-EP-0182-100 | BY-104 | Single-shell | 758 Kgal  | Potrocyanide      | Jan-91 | Jan-91 | Sound    | 406 Kgal  | 0 Kgal    | 40 Kgal  | 366 Kgal | Non-complexed            |
| 297 | B.M. Hanlon WHC-EP-0182-100 | BY-101 | Single-shell | 758 Kgal  |                   |        |        | Sound    | 387 Kgal  | 0 Kgal    | 109 Kgal | 278 Kgal | Non-complexed            |
| 298 | B.M. Hanlon WHC-EP-0182-100 | BX-112 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 165 Kgal  | 1 Kgal    | 164 Kgal | 0 Kgal   | Non-complexed            |
| 299 | B.M. Hanlon WHC-EP-0182-100 | BX-109 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 193 Kgal  | 0 Kgal    | 193 Kgal | 0 Kgal   | Non-complexed            |
| 300 | B.M. Hanlon WHC-EP-0182-100 | BX-106 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 38 Kgal   | 0 Kgal    | 38 Kgal  | 0 Kgal   | Non-complexed            |
| 301 | B.M. Hanlon WHC-EP-0182-100 | BX-103 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 68 Kgal   | 6 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 302 | B.M. Hanlon WHC-EP-0182-100 | BX-111 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 162 Kgal  | 1 Kgal    | 52 Kgal  | 109 Kgal | Non-complexed            |
| 303 | B.M. Hanlon WHC-EP-0182-100 | BX-108 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 26 Kgal   | 0 Kgal    | 26 Kgal  | 0 Kgal   | Non-complexed            |
| 304 | B.M. Hanlon WHC-EP-0182-100 | BX-105 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 51 Kgal   | 5 Kgal    | 43 Kgal  | 3 Kgal   | Non-complexed            |
| 305 | B.M. Hanlon WHC-EP-0182-100 | BX-102 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 96 Kgal   | 0 Kgal    | 96 Kgal  | 0 Kgal   | Non-complexed            |
| 306 | B.M. Hanlon WHC-EP-0182-100 | BX-110 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 207 Kgal  | 3 Kgal    | 195 Kgal | 9 Kgal   | Non-complexed            |
| 307 | B.M. Hanlon WHC-EP-0182-100 | BX-107 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 345 Kgal  | 1 Kgal    | 344 Kgal | 0 Kgal   | Non-complexed            |
| 308 | B.M. Hanlon WHC-EP-0182-100 | BX-104 | Single-shell | 530 Kgal  |                   |        |        | Sound    | 99 Kgal   | 3 Kgal    | 96 Kgal  | 0 Kgal   | Non-complexed            |
| 309 | B.M. Hanlon WHC-EP-0182-100 | BX-101 | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 43 Kgal   | 1 Kgal    | 42 Kgal  | 0 Kgal   | Non-complexed            |
| 310 | B.M. Hanlon WHC-EP-0182-100 | B-204  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 50 Kgal   | 1 Kgal    | 49 Kgal  | 0 Kgal   | Non-complexed            |
| 311 | B.M. Hanlon WHC-EP-0182-100 | B-203  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 51 Kgal   | 1 Kgal    | 50 Kgal  | 0 Kgal   | Non-complexed            |
| 312 | B.M. Hanlon WHC-EP-0182-100 | B-202  | Single-shell | 55 Kgal   |                   |        |        | Sound    | 27 Kgal   | 0 Kgal    | 27 Kgal  | 0 Kgal   | Non-complexed            |
| 313 | B.M. Hanlon WHC-EP-0182-100 | B-201  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 29 Kgal   | 1 Kgal    | 28 Kgal  | 0 Kgal   | Non-complexed            |
| 314 | B.M. Hanlon WHC-EP-0182-100 | B-112  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 33 Kgal   | 3 Kgal    | 30 Kgal  | 0 Kgal   | Non-complexed            |
| 315 | B.M. Hanlon WHC-EP-0182-100 | B-109  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 127 Kgal  | 0 Kgal    | 127 Kgal | 0 Kgal   | Non-complexed            |
| 316 | B.M. Hanlon WHC-EP-0182-100 | B-106  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 117 Kgal  | 1 Kgal    | 116 Kgal | 0 Kgal   | Non-complexed            |
| 317 | B.M. Hanlon WHC-EP-0182-100 | B-103  | Single-shell | 530 Kgal  | Organics          | Jan-91 | Jan-91 | Asmd Lkr | 59 Kgal   | 0 Kgal    | 59 Kgal  | 0 Kgal   | Non-complexed            |
| 318 | B.M. Hanlon WHC-EP-0182-100 | B-111  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 237 Kgal  | 1 Kgal    | 236 Kgal | 0 Kgal   | Non-complexed            |
| 319 | B.M. Hanlon WHC-EP-0182-100 | B-108  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 94 Kgal   | 0 Kgal    | 94 Kgal  | 0 Kgal   | Non-complexed            |
| 320 | B.M. Hanlon WHC-EP-0182-100 | B-105  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 306 Kgal  | 0 Kgal    | 40 Kgal  | 266 Kgal | Non-complexed            |
| 321 | B.M. Hanlon WHC-EP-0182-100 | B-102  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 32 Kgal   | 4 Kgal    | 18 Kgal  | 10 Kgal  | Non-complexed            |
| 322 | B.M. Hanlon WHC-EP-0182-100 | B-110  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 246 Kgal  | 1 Kgal    | 245 Kgal | 0 Kgal   | Non-complexed            |
| 323 | B.M. Hanlon WHC-EP-0182-100 | B-107  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 165 Kgal  | 1 Kgal    | 164 Kgal | 0 Kgal   | Non-complexed            |
| 324 | B.M. Hanlon WHC-EP-0182-100 | B-104  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 371 Kgal  | 1 Kgal    | 301 Kgal | 69 Kgal  | Non-complexed            |
| 325 | B.M. Hanlon WHC-EP-0182-100 | B-101  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 113 Kgal  | 0 Kgal    | 113 Kgal | 0 Kgal   | Non-complexed            |
| 326 | B.M. Hanlon WHC-EP-0182-100 | C-110  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 178 Kgal  | 1 Kgal    | 177 Kgal | 0 Kgal   | Dilute complexed         |
| 327 | B.M. Hanlon WHC-EP-0182-100 | C-111  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 57 Kgal   | 0 Kgal    | 57 Kgal  | 0 Kgal   | Non-complexed            |
| 328 | B.M. Hanlon WHC-EP-0182-100 | C-112  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 104 Kgal  | 0 Kgal    | 104 Kgal | 0 Kgal   | Non-complexed            |
| 329 | B.M. Hanlon WHC-EP-0182-100 | C-107  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 237 Kgal  | 0 Kgal    | 237 Kgal | 0 Kgal   | Dilute complexed         |
| 330 | B.M. Hanlon WHC-EP-0182-100 | C-108  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 66 Kgal   | 0 Kgal    | 66 Kgal  | 0 Kgal   | Non-complexed            |
| 331 | B.M. Hanlon WHC-EP-0182-100 | C-109  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 66 Kgal   | 4 Kgal    | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 332 | B.M. Hanlon WHC-EP-0182-100 | C-104  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 295 Kgal  | 0 Kgal    | 295 Kgal | 0 Kgal   | Complexant concentrate   |
| 333 | B.M. Hanlon WHC-EP-0182-100 | C-105  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 134 Kgal  | 2 Kgal    | 132 Kgal | 0 Kgal   | Non-complexed            |
| 334 | B.M. Hanlon WHC-EP-0182-100 | C-106  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 229 Kgal  | 32 Kgal   | 197 Kgal | 0 Kgal   | Non-complexed            |
| 335 | B.M. Hanlon WHC-EP-0182-100 | C-101  | Single-shell | 530 Kgal  |                   |        |        | Asmd Lkr | 88 Kgal   | 0 Kgal    | 88 Kgal  | 0 Kgal   | Non-complexed            |
| 336 | B.M. Hanlon WHC-EP-0182-100 | C-102  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 316 Kgal  | 0 Kgal    | 316 Kgal | 0 Kgal   | Dilute complexed         |
| 337 | B.M. Hanlon WHC-EP-0182-100 | C-103  | Single-shell | 530 Kgal  |                   |        |        | Sound    | 195 Kgal  | 133 Kgal  | 62 Kgal  | 0 Kgal   | Non-complexed            |
| 338 | B.M. Hanlon WHC-EP-0182-100 | C-204  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 3 Kgal    | 0 Kgal    | 3 Kgal   | 0 Kgal   | Non-complexed            |
| 339 | B.M. Hanlon WHC-EP-0182-100 | C-203  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 5 Kgal    | 0 Kgal    | 5 Kgal   | 0 Kgal   | Non-complexed            |
| 340 | B.M. Hanlon WHC-EP-0182-100 | C-202  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 1 Kgal    | 0 Kgal    | 1 Kgal   | 0 Kgal   | Empty                    |
| 341 | B.M. Hanlon WHC-EP-0182-100 | C-201  | Single-shell | 55 Kgal   |                   |        |        | Asmd Lkr | 2 Kgal    | 0 Kgal    | 2 Kgal   | 0 Kgal   | Non-complexed            |
| 342 | B.M. Hanlon WHC-EP-0182-100 | AN-107 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1057 Kgal | 810 Kgal  | 247 Kgal | 0 Kgal   | Complexant concentrate   |
| 343 | B.M. Hanlon WHC-EP-0182-100 | AN-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 415 Kgal  | 398 Kgal  | 17 Kgal  | 0 Kgal   | Double-shell slurry feed |
| 344 | B.M. Hanlon WHC-EP-0182-100 | AN-105 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 1129 Kgal | 1129 Kgal | 0 Kgal   | 0 Kgal   | Double-shell slurry feed |
| 345 | B.M. Hanlon WHC-EP-0182-100 | AN-104 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 1058 Kgal | 794 Kgal  | 264 Kgal | 0 Kgal   | Double-shell slurry feed |
| 346 | B.M. Hanlon WHC-EP-0182-100 | AN-103 | Double-shell | 1160 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 958 Kgal  | 21 Kgal   | 0 Kgal   | 0 Kgal   | Double-shell slurry feed |
| 347 | B.M. Hanlon WHC-EP-0182-100 | AN-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1080 Kgal | 991 Kgal  | 89 Kgal  | 0 Kgal   | Complexant concentrate   |

|     |                             |        |              |           |                   |        |        |          |           |           |          |          |                              |
|-----|-----------------------------|--------|--------------|-----------|-------------------|--------|--------|----------|-----------|-----------|----------|----------|------------------------------|
| 348 | B.M. Hanlon WHC-EP-0182-100 | AN-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1084 Kgal | 1051 Kgal | 33 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 349 | B.M. Hanlon WHC-EP-0182-100 | AZ-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 934 Kgal  | 839 Kgal  | 95 Kgal  | 0 Kgal   | Aging                        |
| 350 | B.M. Hanlon WHC-EP-0182-100 | AZ-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 855 Kgal  | 820 Kgal  | 35 Kgal  | 0 Kgal   | Aging                        |
| 351 | B.M. Hanlon WHC-EP-0182-100 | AY-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 924 Kgal  | 830 Kgal  | 94 Kgal  | 0 Kgal   | Dilute complexed             |
| 352 | B.M. Hanlon WHC-EP-0182-100 | AX-103 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 112 Kgal  | 0 Kgal    | 2 Kgal   | 110 Kgal | Complexant concentrate       |
| 353 | B.M. Hanlon WHC-EP-0182-100 | AX-101 | Single-shell | 1000 Kgal | Hydrogen          | Jan-91 | Jan-91 | Sound    | 748 Kgal  | 0 Kgal    | 3 Kgal   | 745 Kgal | Double-shell slurry feed     |
| 354 | B.M. Hanlon WHC-EP-0182-100 | AY-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 812 Kgal  | 782 Kgal  | 30 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 355 | B.M. Hanlon WHC-EP-0182-100 | AX-104 | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 7 Kgal    | 0 Kgal    | 7 Kgal   | 0 Kgal   | Non-complexed                |
| 356 | B.M. Hanlon WHC-EP-0182-100 | AX-102 | Single-shell | 1000 Kgal | Organics          | May-94 | May-94 | Asmd Lkr | 39 Kgal   | 3 Kgal    | 7 Kgal   | 29 Kgal  | Complexant concentrate       |
| 357 | B.M. Hanlon WHC-EP-0182-100 | A-104  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 28 Kgal   | 0 Kgal    | 28 Kgal  | 0 Kgal   | Non-complexed                |
| 358 | B.M. Hanlon WHC-EP-0182-100 | A-105  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 19 Kgal   | 0 Kgal    | 19 Kgal  | 0 Kgal   | Non-complexed                |
| 359 | B.M. Hanlon WHC-EP-0182-100 | A-106  | Single-shell | 1000 Kgal |                   |        |        | Sound    | 125 Kgal  | 0 Kgal    | 125 Kgal | 0 Kgal   | Concentrated phosphate       |
| 360 | B.M. Hanlon WHC-EP-0182-100 | A-101  | Single-shell | 1000 Kgal | Hydrogen-Organics | Jan-91 | May-94 | Sound    | 953 Kgal  | 0 Kgal    | 3 Kgal   | 950 Kgal | Double-shell slurry feed     |
| 361 | B.M. Hanlon WHC-EP-0182-100 | A-102  | Single-shell | 1000 Kgal |                   |        |        | Sound    | 41 Kgal   | 4 Kgal    | 15 Kgal  | 22 Kgal  | Double-shell slurry feed     |
| 362 | B.M. Hanlon WHC-EP-0182-100 | A-103  | Single-shell | 1000 Kgal |                   |        |        | Asmd Lkr | 371 Kgal  | 5 Kgal    | 366 Kgal | 0 Kgal   | Double-shell slurry feed     |
| 363 | B.M. Hanlon WHC-EP-0182-100 | AW-101 | Double-shell | 1160 Kgal | Hydrogen          | Jun-93 | Jun-93 | Sound    | 1128 Kgal | 1044 Kgal | 84 Kgal  | 0 Kgal   | Double-shell slurry feed     |
| 364 | B.M. Hanlon WHC-EP-0182-100 | AW-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 100 Kgal  | 64 Kgal   | 36 Kgal  | 0 Kgal   | Dilute non-complexed         |
| 365 | B.M. Hanlon WHC-EP-0182-100 | AW-103 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 515 Kgal  | 152 Kgal  | 363 Kgal | 0 Kgal   | Dilute non-complex/PUREX TRU |
| 366 | B.M. Hanlon WHC-EP-0182-100 | AW-104 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1122 Kgal | 832 Kgal  | 179 Kgal | 111 Kgal | Dilute non-complexed         |
| 367 | B.M. Hanlon WHC-EP-0182-100 | AW-105 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 440 Kgal  | 160 Kgal  | 280 Kgal | 0 Kgal   | Dilute non-complex/PUREX TRU |
| 368 | B.M. Hanlon WHC-EP-0182-100 | AW-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 323 Kgal  | 98 Kgal   | 225 Kgal | 0 Kgal   | Dilute non-complexed         |
| 369 | B.M. Hanlon WHC-EP-0182-100 | AP-101 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1042 Kgal | 1042 Kgal | 0 Kgal   | 0 Kgal   | Double-shell slurry feed     |
| 370 | B.M. Hanlon WHC-EP-0182-100 | AP-102 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 1098 Kgal | 1098 Kgal | 0 Kgal   | 0 Kgal   | Concentrated phosphate       |
| 371 | B.M. Hanlon WHC-EP-0182-100 | AP-103 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 24 Kgal   | 23 Kgal   | 1 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 372 | B.M. Hanlon WHC-EP-0182-100 | AP-104 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 156 Kgal  | 2 Kgal    | 154 Kgal | 0 Kgal   | Dilute non-complexed         |
| 373 | B.M. Hanlon WHC-EP-0182-100 | AP-105 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 215 Kgal  | 213 Kgal  | 0 Kgal   | 0 Kgal   | Double-shell slurry feed     |
| 374 | B.M. Hanlon WHC-EP-0182-100 | AP-106 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 23 Kgal   | 23 Kgal   | 0 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 375 | B.M. Hanlon WHC-EP-0182-100 | AP-107 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 47 Kgal   | 47 Kgal   | 0 Kgal   | 0 Kgal   | Dilute non-complexed         |
| 376 | B.M. Hanlon WHC-EP-0182-100 | AP-108 | Double-shell | 1160 Kgal |                   |        |        | Sound    | 47 Kgal   | 47 Kgal   | 0 Kgal   | 0 Kgal   | Dilute complexed             |

## TANKCHEM

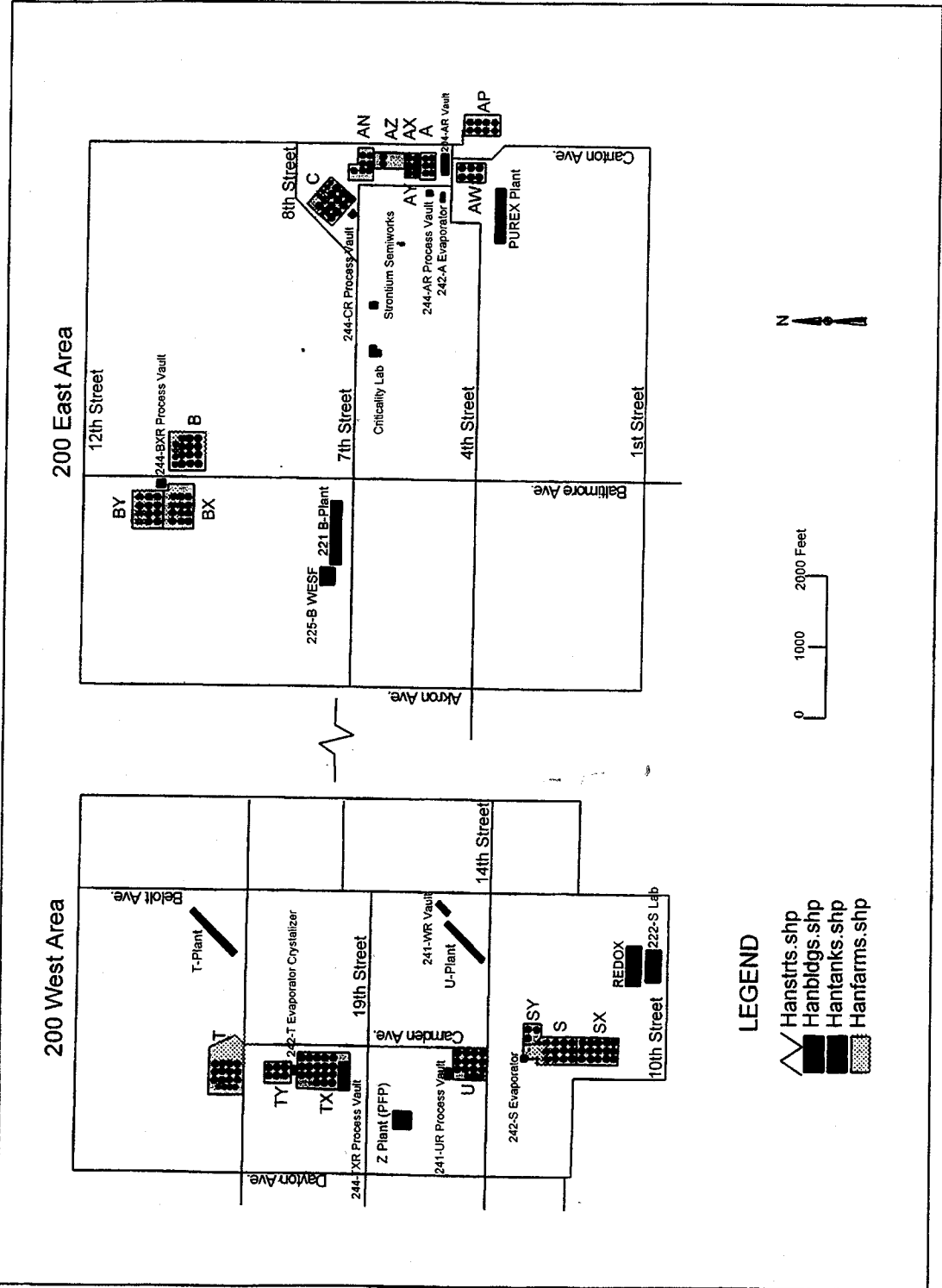
| REFERENCE                 | TANK NO | SHALL TYPE   | TOTAL WASTE | AK    | AI    | IC       | CI       | DI       | LI       | HY        | ZF       | PU       | NI       | SI       | MM       | CU      | K        | OH       | NZ      | NZ      | CO      | PO      |         |
|---------------------------|---------|--------------|-------------|-------|-------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|---------|----------|----------|---------|---------|---------|---------|---------|
| 2001.F. Agnew LAUR 96-858 | T-100   | Single-shell | 27 Kgal     | 1.68  | 3.71  | 0.292    | 0.00017  | 1.43E-06 | 4.56E-11 | 0.00372   | 1.41E-06 | 0.2005   | 0.000814 | 1.50E-11 | 7.61E-05 | 0.206   | 0.00174  | 14       | 0.374   | 0.169   | 0.278   | 0.0151  |         |
| 201.F. Agnew LAUR 96-858  | T-102   | Single-shell | 137 Kgal    | 2.964 | 3.11  | 0.15     | 0.00132  | 0        | 0        | 0.00314   | 0        | 0        | 0.173    | 0.000599 | 0        | 0       | 0.176    | 0.000994 | 121     | 0.178   | 0.12    | 0.288   | 0.025   |
| 202.F. Agnew LAUR 96-858  | T-101   | Single-shell | 101 Kgal    | 2.69  | 2.25  | 0.161    | 0.00072  | 0.000486 | 0.0001   | 0.00378   | 0.000247 | 0.1121   | 0.00161  | 1.95E-05 | 0.000602 | 0.119   | 0.0101   | 2.33     | 1.3     | 0.43    | 0.241   | 0.0219  |         |
| 203.F. Agnew LAUR 96-858  | T-106   | Single-shell | 21 Kgal     | 4.44  | 4.7   | 0.184    | 0.00077  | 0.001    | 0        | 0.00244   | 0.00334  | 0.0702   | 0.00199  | 0        | 0.00025  | 0.00207 | 174      | 0.436    | 0.46    | 0.0925  | 0.419   |         |         |
| 204.F. Agnew LAUR 96-858  | T-105   | Single-shell | 149 Kgal    | 4.01  | 0.229 | 0.439    | 0.00357  | 0.0795   | 0        | 1.54E-05  | 0.00186  | 0        | 0.00127  | 0        | 0        | 0.118   | 0.0045   | 2.1      | 0.815   | 0.0699  | 0.118   | 0.979   |         |
| 205.F. Agnew LAUR 96-858  | T-104   | Single-shell | 445 Kgal    | 4.11  | 0.099 | 0.318    | 0.00424  | 0.0595   | 1.31E-04 | 7.75E-05  | 0.00015  | 2.50E-06 | 0.00121  | 5.55E-09 | 1.87E-05 | 0.00759 | 0.00311  | 2.44     | 0.335   | 0.233   | 0.059   | 1.56    |         |
| 206.F. Agnew LAUR 96-858  | T-109   | Single-shell | 58 Kgal     | 9.29  | 0.17  | 0.232    | 0.00526  | 0.0435   | 0        | 0.00039   | 0.00334  | 0        | 0.0114   | 0        | 0.113    | 0.0143  | 143      | 0.39     | 0.239   | 0.248   | 1.18    |         |         |
| 207.F. Agnew LAUR 96-858  | T-107   | Single-shell | 44 Kgal     | 7.18  | 0.316 | 0.27     | 0.00435  | 0.0505   | 0        | 7.00E-05  | 0.00666  | 0        | 0.00633  | 0        | 0        | 0.0933  | 0.00064  | 2.01     | 1.79    | 0.217   | 0.166   | 1.52    |         |
| 208.F. Agnew LAUR 96-858  | T-109   | Single-shell | 186 Kgal    | 4.63  | 0.453 | 0.207    | 0.00153  | 0.0731   | 0        | 0.0001    | 0.00775  | 0        | 0.0011   | 0        | 0        | 0.0717  | 0.00207  | 2.49     | 0.355   | 0.271   | 0.173   | 1.73    |         |
| 209.F. Agnew LAUR 96-858  | T-113   | Single-shell | 67 Kgal     | 1.97  | 0     | 0.703    | 0.00438  | 0.0605   | 0        | 0         | 0        | 0        | 0.00135  | 0        | 0        | 0.247   | 0.00312  | 2.16     | 0.583   | 0.0113  | 0.471   | 0.134   |         |
| 210.F. Agnew LAUR 96-858  | T-111   | Single-shell | 450 Kgal    | 2.36  | 0     | 0.68     | 0.00441  | 0.0579   | 0.0196   | 0         | 0        | 0        | 0.00142  | 0.112    | 0.000303 | 0.332   | 0.0216   | 2.38     | 0.8     | 0.0152  | 0.332   | 0.403   |         |
| 211.F. Agnew LAUR 96-858  | T-118   | Single-shell | 373 Kgal    | 3.02  | 0     | 0.645    | 0.00298  | 0.0713   | 0.00064  | 0         | 0        | 0        | 0.00125  | 0.0413   | 0.000102 | 0.196   | 0.0105   | 2.84     | 0.854   | 0.0173  | 0.196   | 0.651   |         |
| 212.F. Agnew LAUR 96-858  | T-201   | Single-shell | 29 Kgal     | 4.50  | 0     | 0.349    | 0.00333  | 0.0583   | 0.229    | 0         | 0        | 0        | 0.0013   | 0        | 0.000373 | 0.335   | 0.22     | 4.75     | 1.38    | 0       | 0.315   | 0.0935  |         |
| 213.F. Agnew LAUR 96-858  | T-202   | Single-shell | 21 Kgal     | 4.51  | 0     | 0.361    | 0.00344  | 0.0604   | 0.237    | 0         | 0        | 0        | 0.00134  | 1.27     | 0.00386  | 0.244   | 0.228    | 4.91     | 1.33    | 0       | 0.244   | 0.0965  |         |
| 214.F. Agnew LAUR 96-858  | T-203   | Single-shell | 15 Kgal     | 4.51  | 0     | 0.361    | 0.00344  | 0.0604   | 0.237    | 0         | 0        | 0        | 0.00134  | 1.27     | 0.00386  | 0.244   | 0.228    | 4.91     | 1.33    | 0       | 0.244   | 0.0965  |         |
| 215.F. Agnew LAUR 96-858  | T-204   | Single-shell | 18 Kgal     | 4.51  | 0     | 0.361    | 0.00344  | 0.0604   | 0.237    | 0         | 0        | 0        | 0.00134  | 1.27     | 0.00386  | 0.244   | 0.228    | 4.91     | 1.33    | 0       | 0.244   | 0.0965  |         |
| 216.F. Agnew LAUR 96-858  | T-102   | Single-shell | 114 Kgal    | 8.63  | 0.619 | 0.104    | 0.00206  | 0.0215   | 0.91E-10 | 2.34E-05  | 0.000199 | 0.000440 | 0.00786  | 2.30E-10 | 0.00115  | 0.0035  | 0.0283   | 1.63     | 3.33    | 0.067   | 0.291   | 0.41    |         |
| 217.F. Agnew LAUR 96-858  | T-102   | Single-shell | 115 Kgal    | 5.01  | 0.33  | 0.151    | 0.00518  | 0.147    | 0        | 1.52E-05  | 0.0156   | 0        | 0.121    | 0        | 0        | 0.19    | 0.00797  | 1.69     | 1.34    | 0.484   | 0.334   | 0.926   |         |
| 218.F. Agnew LAUR 96-858  | T-104   | Single-shell | 46 Kgal     | 3.34  | 0     | 1.47     | 0.00274  | 0        | 0        | 0         | 0        | 0        | 0.00137  | 0        | 0        | 0.333   | 0.0148   | 5.19     | 2.25    | 0.345   | 0.476   | 0.111   |         |
| 219.F. Agnew LAUR 96-858  | T-103   | Single-shell | 167 Kgal    | 4.24  | 0.404 | 0.635    | 0.0112   | 0.0631   | 1.85E-10 | 2.78E-06  | 0.00075  | 0.000246 | 0.0574   | 1.28E-10 | 0.000634 | 0.206   | 0.0183   | 3.84     | 1.79    | 0.709   | 0.334   | 0.199   |         |
| 220.F. Agnew LAUR 96-858  | T-103   | Single-shell | 21 Kgal     | 10.3  | 0.076 | 0.16     | 0.000139 | 0        | 0        | 0         | 0        | 0        | 0.00137  | 0        | 0        | 0.00137 | 0.0175   | 0.0241   | 0.00453 | 0       | 0       | 0       | 0       |
| 221.F. Agnew LAUR 96-858  | T-105   | Single-shell | 251 Kgal    | 4.09  | 0     | 1.68     | 0.00334  | 0        | 0        | 0         | 0        | 0        | 0.00135  | 0        | 0        | 0.254   | 0.0181   | 3.81     | 2.59    | 0.344   | 0.43    | 0.136   |         |
| 222.F. Agnew LAUR 96-858  | T-118   | Single-shell | 281 Kgal    | 4.84  | 0.207 | 0.338    | 0.00287  | 0.0189   | 1.43E-05 | 4.87E-06  | 0.000562 | 0.000392 | 0.0181   | 4.70E-06 | 0.00127  | 0.0735  | 0.283    | 7.74     | 2.28    | 0.086   | 0.247   | 0.671   |         |
| 223.F. Agnew LAUR 96-858  | T-117   | Single-shell | 353 Kgal    | 8.65  | 0.717 | 0.0915   | 0.021    | 0.0180   | 1.08E-09 | 0.000033  | 0.000230 | 0.000795 | 3.67E-10 | 0.00105  | 0.0658   | 0.0317  | 3.29     | 3.33     | 0.951   | 0.257   | 0.699   |         |         |
| 224.F. Agnew LAUR 96-858  | T-116   | Single-shell | 561 Kgal    | 8.11  | 0.476 | 0.14     | 0.021    | 0.0269   | 0.055    | 0.00033   | 0.000107 | 0.000374 | 0.00122  | 0.00374  | 0        | 0       | 0.00122  | 0.00374  | 0       | 0       | 0       | 0       | 0       |
| 225.F. Agnew LAUR 96-858  | T-115   | Single-shell | 581 Kgal    | 9.16  | 0.177 | 0.029    | 0.0185   | 0.00204  | 0.000107 | 0.000133  | 0.00153  | 0        | 0.00144  | 0.00109  | 0.00044  | 0.00109 | 0.00109  | 0.00109  | 0.00109 | 0.00109 | 0.00109 | 0.00109 | 0.00109 |
| 226.F. Agnew LAUR 96-858  | T-114   | Single-shell | 293 Kgal    | 9.34  | 1.09  | 0.0316   | 0.0259   | 0.00771  | 1.55E-09 | 1.39E-05  | 0.00187  | 0.00105  | 0.000666 | 4.50E-10 | 0.00022  | 0.0409  | 0.0433   | 4.81     | 4.37    | 1.51    | 0.344   | 1.59    |         |
| 227.F. Agnew LAUR 96-858  | T-113   | Single-shell | 607 Kgal    | 27.7  | 0.117 | 0.017    | 0.017    | 0.017    | 0.017    | 0.017     | 0.017    | 0.017    | 0.017    | 0.017    | 0.017    | 0.017   | 0.017    | 0.017    | 0.017   | 0.017   | 0.017   | 0.017   | 0.017   |
| 228.F. Agnew LAUR 96-858  | T-112   | Single-shell | 640 Kgal    | 9.13  | 1.12  | 0.0146   | 0.0179   | 0.00087  | 1.31E-09 | 1.37E-05  | 0.00159  | 0.000554 | 0.000456 | 3.29E-10 | 0.00041  | 0.0014  | 0.0014   | 4.92     | 4.37    | 1.51    | 0.344   | 1.59    |         |
| 229.F. Agnew LAUR 96-858  | T-111   | Single-shell | 370 Kgal    | 8.33  | 1.04  | 0.0243   | 0.0331   | 0.00669  | 1.19E-09 | 1.33E-05  | 0.00197  | 0.000769 | 0.000486 | 3.98E-10 | 0.00031  | 0.0034  | 0.0034   | 4.52     | 3.8     | 1.31    | 0.335   | 1.186   |         |
| 230.F. Agnew LAUR 96-858  | T-110   | Single-shell | 467 Kgal    | 8.56  | 1.05  | 0.0229   | 0.0335   | 0.00682  | 1.26E-09 | 1.46E-05  | 0.00184  | 0.000813 | 0.000303 | 4.20E-10 | 0.00011  | 0.0034  | 0.0034   | 4.56     | 3.95    | 1.36    | 0.344   | 1.614   |         |
| 231.F. Agnew LAUR 96-858  | T-109   | Single-shell | 384 Kgal    | 4.11  | 0.7   | 0.339    | 0.0041   | 0.0579   | 0        | 0.000078  | 0.00059  | 0        | 0.00136  | 0        | 0        | 0.038   | 0.00038  | 1.44     | 0.383   | 0.01    | 0.058   | 1.07    |         |
| 232.F. Agnew LAUR 96-858  | T-108   | Single-shell | 134 Kgal    | 6.63  | 0.791 | 0.8533   | 0.0269   | 0.00135  | 0.0339   | 0.738E-06 | 0.001    | 0.000663 | 0.004    | 3.43E-10 | 0.0017   | 0.0322  | 0.0325   | 3.87     | 3.16    | 1.1     | 0.303   | 0.984   |         |
| 233.F. Agnew LAUR 96-858  | T-107   | Single-shell | 156 Kgal    | 7.4   | 0.149 | 0.0773   | 0.00535  | 0.000237 | 1.81E-10 | 1.30E-06  | 0.000174 | 0.000118 | 0.000080 | 6.10E-11 | 0.000099 | 0.00227 | 0.00632  | 3.39     | 0.618   | 0.202   | 0.474   | 0.103   |         |
| 234.F. Agnew LAUR 96-858  | T-106   | Single-shell | 241 Kgal    | 8.75  | 1.09  | 0.0185   | 0.0429   | 0.00172  | 1.31E-09 | 9.42E-06  | 0.00127  | 0.000489 | 0.000579 | 4.78E-10 | 0.0002   | 0.0064  | 0.0429   | 4.83     | 4.14    | 1.43    | 0.348   | 0.9373  |         |
| 235.F. Agnew LAUR 96-858  | T-105   | Single-shell | 609 Kgal    | 9.34  | 1.14  | 0.000606 | 0.0188   | 0.00196  | 1.54E-09 | 1.08E-05  | 0.00145  | 0.00099  | 0.000561 | 5.14E-10 | 0.00035  | 0.0066  | 0.0456   | 5.14     | 4.38    | 1.58    | 0.391   | 1.109   |         |
| 236.F. Agnew LAUR 96-858  | T-104   | Single-shell | 65 Kgal     | 7.7   | 0.731 | 0.0372   | 0.0547   | 0.00116  | 8.91E-10 | 6.93E-06  | 0.000663 | 0.000576 | 0.000382 | 2.97E-10 | 0.00125  | 0.0437  | 0.0308   | 6.63     | 2.97    | 0.985   | 0.793   | 1.71    |         |
| 237.F. Agnew LAUR 96-858  | T-103   | Single-shell | 171 Kgal    | 5.34  | 0.613 | 0.00779  | 0.0211   | 0.00102  | 1.99E-05 | 6.14E-04  | 0.000788 | 0.000448 | 0.000372 | 2.03E-05 | 0.00144  | 0.0183  | 0.0278   | 7.71     | 7.46    | 0.843   | 0.215   | 0.064   |         |
| 238.F. Agnew LAUR 96-858  | T-102   | Single-shell | 217 Kgal    | 8.79  | 1.01  | 0.00723  | 0.0346   | 0.00173  | 1.33E-09 | 9.48E-06  | 0.00138  | 0.000825 | 0.000513 | 4.42E-10 | 0.00025  | 0.0236  | 0.0431   | 4.59     | 4.08    | 1.41    | 0.386   | 0.9960  |         |
| 239.F. Agnew LAUR 96-858  | T-101   | Single-shell | 97 Kgal     | 3.02  | 3.83  | 0.898    | 0.708    | 1.11E-05 | 3.30E-06 | 6.30E-07  | 4.33E-05 | 6.91E-05 | 0.0446   | 7.67E-07 | 0.000706 | 0.192   | 0.0113   | 17.3     | 0.469   | 1.76    | 0.397   | 0.0207  |         |
| 240.F. Agnew LAUR 96-858  | T-100   | Single-shell | 469 Kgal    | 11.5  | 1.47  | 0.0155   | 0.0353   | 0.00143  | 0.0403   | 0.91E-04  | 0.001    | 0.00086  | 0.000623 | 1.35E-05 | 0.0016   | 0.0093  | 0.0538   | 2.25     | 4.99    | 2.15    | 0.77    | 0.121   |         |
| 241.F. Agnew LAUR 96-858  | T-102   | Single-shell | 274 Kgal    | 11.4  | 1.44  | 0.021    | 0.0332   | 0.00144  | 0.0703   | 0.93E-06  | 0.00107  | 0.00097  | 0.00061  | 1.69E-05 | 0.00039  | 0.0429  | 0.0538   | 7.71     | 4.91    | 2.1     | 0.656   | 0.14    |         |
| 242.F. Agnew LAUR 96-858  | T-101   | Single-shell | 323 Kgal    | 4.43  | 0     | 0.104    | 0.00199  | 0        | 0        | 0         | 0        | 0        | 0.000546 | 0        | 0        | 0.074   | 0.000241 | 10.8     | 0.053   | 0.00063 | 1.66    | 0.332   |         |
| 243.F. Agnew LAUR 96-858  | T-100   | Single-shell | 122 Kgal    | 13.1  | 1.68  | 0.0215   | 0.0415   | 0.00133  | 1.43E-05 | 8.88E-06  | 0.000823 | 0.00104  | 0.00068  | 1.75E-05 | 0.00437  | 0.0459  | 0.0599   | 8.61     | 2.99    | 2.48    | 0.735   | 0.413   |         |
| 244.F. Agnew LAUR 96-858  | T-103   | Single-shell | 418 Kgal    | 12.6  | 1.2   | 0.0171   | 0.0281   | 0.00154  | 1.40E-05 | 0.00001   | 0.00108  | 0.00107  | 0.00088  | 1.42E-05 | 0.000393 | 0.0429  | 0.0589   | 7.97     | 2.47    | 2.4     | 0.621   | 0.133   |         |
| 245.F. Agnew LAUR 96-858  | T-104   | Single-shell | 123 Kgal    | 10.7  | 0.921 | 0.0753   | 0.0234   | 0.00125  | 1.17E-10 | 1.22E-05  | 0.00119  | 0.00134  | 0.00340  | 3.75E-10 | 0.00129  | 0.0787  | 0.0316   | 7.79     | 2.84    | 1.06    | 0.812   | 0.197   |         |
| 246.F. Agnew LAUR 96-858  | T-105   | Single-shell | 163 Kgal    | 14.2  | 2.43  | 0.0234   | 0.069    | 0.00108  | 3.79E-05 | 0.000231  | 0.00086  | 0.00074  | 0.0054   | 0.00476  | 0.0020   | 0.0641  | 0.09     | 2.87     | 2.81    | 0.84    | 0.322   |         |         |
| 247.F. Agnew LAUR 96-858  | T-106   | Single-shell | 124 Kgal    | 12.6  | 0.043 | 0.065    | 0.00118  | 1.22E-05 | 0.000631 | 0.000796  | 0.0191   | 0.00706  | 1.41E-05 | 0.000447 | 0.00054  | 0.00991 | 1.82     | 4.43     | 2.56    | 0.316   | 0.999   |         |         |
| 248.F. Agnew LAUR 96-858  | T-107   | Single-shell | 406 Kgal    | 11.1  | 3.38  | 0.0371   | 0.0482   | 0.00115  | 3.79E-05 | 0.000771  | 0.000792 | 0.00228  | 0.000556 | 1.26E-05 | 0.000344 | 0.0511  | 0.0464   | 13.4     | 4.42    | 2.1     | 0.330   | 0.067   |         |



|       |   |                   |        |              |        |        |      |      |         |       |           |          |          |          |          |          |          |         |         |       |       |       |       |       |       |
|-------|---|-------------------|--------|--------------|--------|--------|------|------|---------|-------|-----------|----------|----------|----------|----------|----------|----------|---------|---------|-------|-------|-------|-------|-------|-------|
| 2741S | A | Agave LA UR-96-88 | 5X-105 | Single shell | 538 Kg | male/f | 11.4 | 1.52 | 0.00043 | 0.057 | 0.01150   | 4.478-05 | 3.805-06 | 0.000973 | 0.000973 | 1.495-03 | 0.00394  | 0.00373 | 0.9545  | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |       |
| 2742S | A | Agave LA UR-96-88 | 5X-106 | Single shell | 583 Kg | male/f | 12.7 | 1.87 | 0.00065 | 0.149 | 0.02151   | 4.975-05 | 4.000-06 | 0.000850 | 0.00103  | 0.00103  | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2743S | A | Agave LA UR-96-88 | 5X-107 | Single shell | 574 Kg | male/f | 10.6 | 2.08 | 0.017   | 0.214 | 0.000499  | 2.838-05 | 2.755-06 | 0.000474 | 0.000796 | 0.001    | 1.515-03 | 0.00495 | 0.00434 | 0.973 | 6.44  | 2.4   | 2.4   | 0.4   | 0.071 |
| 2744S | A | Agave LA UR-96-88 | 5X-108 | Single shell | 614 Kg | male/f | 12.9 | 1.75 | 0.0006  | 0.176 | 0.0205    | 4.740-05 | 4.000-06 | 0.00074  | 0.00094  | 0.001    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2745S | A | Agave LA UR-96-88 | 5X-109 | Single shell | 874 Kg | male/f | 2.54 | 4.27 | 1.36    | 0.000 | 0.000     | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000    | 0.000   | 0.000   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 2746S | A | Agave LA UR-96-88 | 5X-110 | Single shell | 104 Kg | male/f | 3.62 | 3.63 | 1.24    | 1.28  | 1.3316-06 | 5.008-12 | 1.945-07 | 0.000725 | 0.000725 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2747S | A | Agave LA UR-96-88 | 5X-111 | Single shell | 125 Kg | male/f | 4.82 | 3.42 | 1.23    | 1.81  | 1.3316-06 | 5.008-12 | 1.945-07 | 0.000725 | 0.000725 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2748S | A | Agave LA UR-96-88 | 5X-112 | Single shell | 125 Kg | male/f | 4.82 | 3.42 | 1.23    | 1.81  | 1.3316-06 | 5.008-12 | 1.945-07 | 0.000725 | 0.000725 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2749S | A | Agave LA UR-96-88 | 5X-113 | Single shell | 125 Kg | male/f | 4.82 | 3.42 | 1.23    | 1.81  | 1.3316-06 | 5.008-12 | 1.945-07 | 0.000725 | 0.000725 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2750S | A | Agave LA UR-96-88 | 5X-114 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2751S | A | Agave LA UR-96-88 | 5X-115 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2752S | A | Agave LA UR-96-88 | 5X-116 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2753S | A | Agave LA UR-96-88 | 5X-117 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2754S | A | Agave LA UR-96-88 | 5X-118 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2755S | A | Agave LA UR-96-88 | 5X-119 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2756S | A | Agave LA UR-96-88 | 5X-120 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2757S | A | Agave LA UR-96-88 | 5X-121 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2758S | A | Agave LA UR-96-88 | 5X-122 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2759S | A | Agave LA UR-96-88 | 5X-123 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2760S | A | Agave LA UR-96-88 | 5X-124 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2761S | A | Agave LA UR-96-88 | 5X-125 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2762S | A | Agave LA UR-96-88 | 5X-126 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2763S | A | Agave LA UR-96-88 | 5X-127 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2764S | A | Agave LA UR-96-88 | 5X-128 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2765S | A | Agave LA UR-96-88 | 5X-129 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2766S | A | Agave LA UR-96-88 | 5X-130 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2767S | A | Agave LA UR-96-88 | 5X-131 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2768S | A | Agave LA UR-96-88 | 5X-132 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2769S | A | Agave LA UR-96-88 | 5X-133 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2770S | A | Agave LA UR-96-88 | 5X-134 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2771S | A | Agave LA UR-96-88 | 5X-135 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2772S | A | Agave LA UR-96-88 | 5X-136 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2773S | A | Agave LA UR-96-88 | 5X-137 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2774S | A | Agave LA UR-96-88 | 5X-138 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2775S | A | Agave LA UR-96-88 | 5X-139 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2776S | A | Agave LA UR-96-88 | 5X-140 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2777S | A | Agave LA UR-96-88 | 5X-141 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2778S | A | Agave LA UR-96-88 | 5X-142 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2779S | A | Agave LA UR-96-88 | 5X-143 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2780S | A | Agave LA UR-96-88 | 5X-144 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2781S | A | Agave LA UR-96-88 | 5X-145 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2782S | A | Agave LA UR-96-88 | 5X-146 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2783S | A | Agave LA UR-96-88 | 5X-147 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2784S | A | Agave LA UR-96-88 | 5X-148 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2785S | A | Agave LA UR-96-88 | 5X-149 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209-11 | 2.747-07 | 0.000138 | 0.000138 | 0.000    | 1.505-03 | 0.00445 | 0.00424 | 0.954 | 6.59  | 3.13  | 2.77  | 0.43  | 0.090 |
| 2786S | A | Agave LA UR-96-88 | 5X-150 | Single shell | 181 Kg | male/f | 3.5  | 3.13 | 0.623   | 1.12  | 2.5535-06 | 3.209    |          |          |          |          |          |         |         |       |       |       |       |       |       |

[illegible][illegible][illegible]

The ARCVIEW software desktop mapping package can be used to display and examine coverages.  
A map of the Hanford 200 Areas created with ARCVIEW using the Hanford coverage is shown on the following page.





5/7/97 JF

Development of geologic and geographic map of Hanford site.

Obj - create map of Hanford site using ARC/INFO that shows geology + geography.

Method: use ARC/INFO geographic information system to create database of geologic + geographic features for Hanford site.

Equipment, software.

- ARC/INFO software
- UNIX workstations
- ARCVIEW desktop mapping software.

## Procedure + Results

A base map of the Hanford site was created from base data taken from the U.S. Geological Survey 1:250,000 scale Walla Walla topographic map. Data was digitized directly from the topographic map subsequent to scanning the map into the computer system. Digitizing was performed using the ARCEDIT program within ARC/INFO.

The GIS database for the Hanford site map was divided into several coverages which are listed below.

HAN-CITIES

HAN-CREEKS

HAN-DITCH

HAN-GEOL

HAN-LAKES

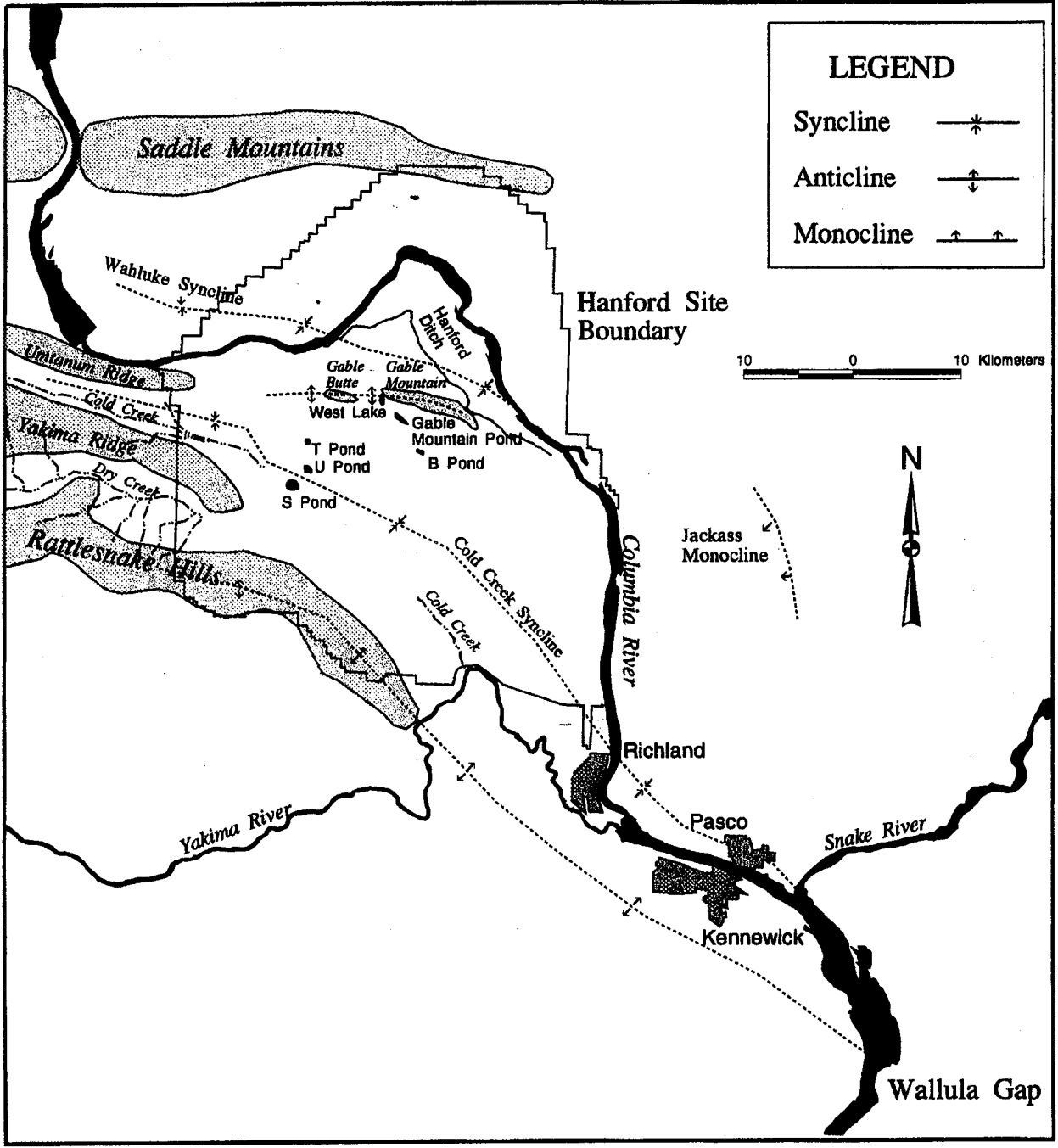
HAN-MAP

HAN-RAILS

HAN-ROADS

HAN-RIVERS

The ARCVIEW desktop mapping software package can be used to display & examine the coverage. A map of the Hanford site created from the coverage is shown on the following page.

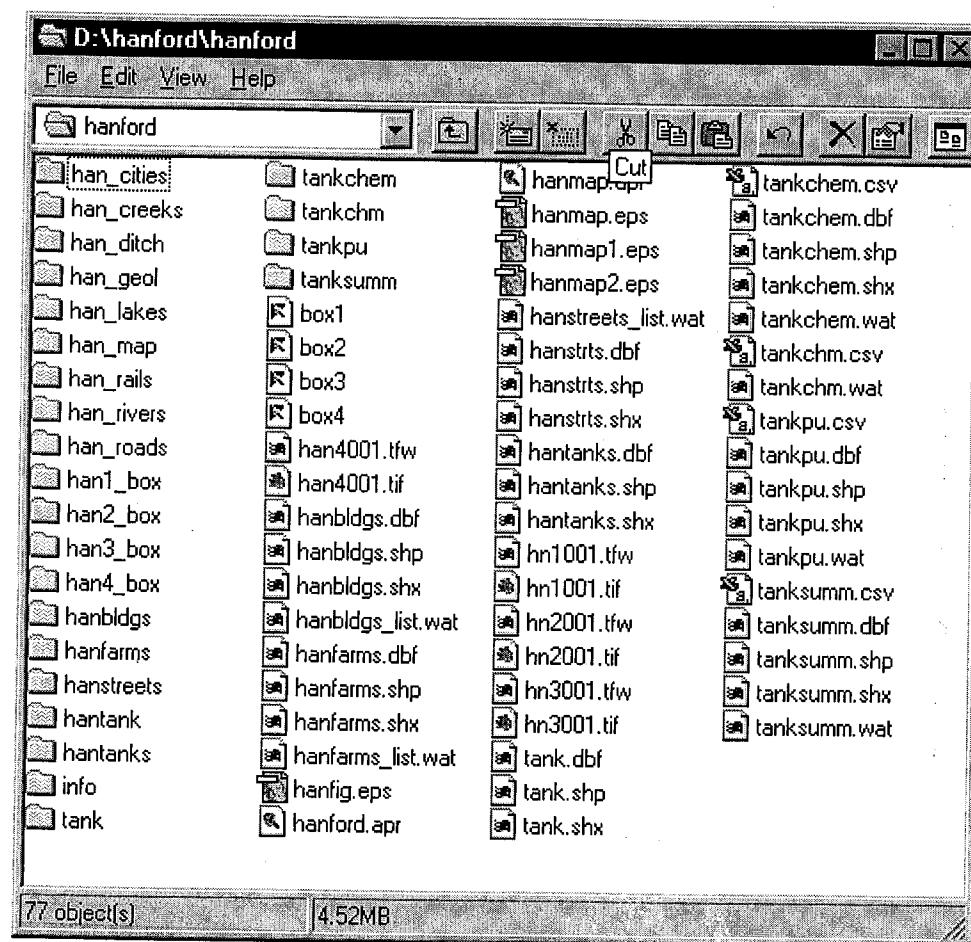




2/3/00

The GIS coverages and associated files used to develop the coverages were copied to an 8mm tape.

A list of the coverages and files is listed below:



The 8mm tape containing the coverages and files is attached to this notebook.

Find Entry:

This Notebook appears to comply with QAP-001.

P. C. Lee  
2/4/2000

**ADDITIONAL INFORMATION FOR SCIENTIFIC NOTEBOOK #: 219**

|                                                        |                                                                                                                                                                                               |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Document Date:</b>                                  | 05/07/1997                                                                                                                                                                                    |
| <b>Availability:</b>                                   | Southwest Research Institute®<br>Center for Nuclear Waste Regulatory Analyses<br>6220 Culebra Road<br>San Antonio, Texas 78228                                                                |
| <b>Contact:</b>                                        | Southwest Research Institute®<br>Center for Nuclear Waste Regulatory Analyses<br>6220 Culebra Road<br>San Antonio, TX 78228-5166<br>Attn.: Director of Administration<br>210.522.5054         |
| <b>Data Sensitivity:</b>                               | <input checked="" type="checkbox"/> "Non-Sensitive" <input type="checkbox"/> Sensitive<br><input type="checkbox"/> "Non-Sensitive - Copyright" <input type="checkbox"/> Sensitive - Copyright |
| <b>Date Generated:</b>                                 | 02/03/2000                                                                                                                                                                                    |
| <b>Operating System:</b><br>(including version number) | Windows                                                                                                                                                                                       |
| <b>Application Used:</b><br>(including version number) |                                                                                                                                                                                               |
| <b>Media Type:</b><br>(CDs, 3 1/2, 5 1/4 disks, etc.)  | 8 - mm tapes                                                                                                                                                                                  |
| <b>File Types:</b><br>(.exe, .bat, .zip, etc.)         | various                                                                                                                                                                                       |
| <b>Remarks:</b><br>(computer runs, etc.)               | Media contains: GIS coverages and files.                                                                                                                                                      |