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7. Abstract <i>A. Laughery For C. Willingham 10-21-94</i> The process simulator ESP (Environmental Simulation Program) was used to simulate laboratory caustic leaching and washing of core samples from Tanks B-110, C-109, and C-112. The results of the laboratory tests and the computer simulations are compared. The results from both, agreed reasonably well for elements contained in solid phases included in the ESP Public data bank. The use of the GEOCHEM data bank and/or a custom Hanford data bank should improve the agreement, making ESP a useful process simulator for aqueous based processing.		
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**COMPUTER SIMULATION OF LABORATORY LEACHING
AND WASHING OF TANK WASTE SLUDGES**

October 1994

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LIST OF TERMS

EDTA	Ethylenediaminetetraacetic acid
ESP	Environmental Simulation Program
ICP	Inductively coupled plasma atomic emissions spectroscopy
PNL	Pacific Northwest Laboratory
Tri-party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>

COMPUTER SIMULATION OF LABORATORY LEACHING AND WASHING OF TANK WASTE SLUDGES

1.0 INTRODUCTION

The new *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology et al. 1994) specifies that Hanford Site tank waste will be pretreated by in-tank caustic leaching and sludge washing. Caustic leaching will dissolve some or all of the aluminum, silicon, chromium, and some other non-radioactive metals. It will also metathesize insoluble phosphate bound with bismuth to soluble phosphate ions. Washing the sludges will remove the mostly nonradioactive soluble species from the radioactive sludges. The end goal of this in-tank processing is to greatly reduce the quantity of solids that must be vitrified as high-level waste.

To develop and design the leaching and washing processes, data or reliable prediction methods are needed. Leaching and washing experiments have been conducted at the Pacific Northwest Laboratory (PNL) using tank core samples. The results from these experiments have been used to calculate separation factors for tank waste species. These separation factors are then used to predict the results of leaching and washing a waste.

Since these separation factors are empirical, they may not be accurate for aqueous systems with chemical compositions different from the one in which they were determined. The capability to simulate the leaching and washing of tank wastes by calculating activity coefficients would allow process simulation to be based more on fundamental thermodynamic principles. This, in turn, would expand the level of confidence in simulating processes with compositions much different than that of materials used for determining separation factors. Also, the need for determining separation factors would be reduced.

For this purpose, a computer program produced by OLI Systems called Environmental Simulation Program (ESP), has been licensed for unlimited use at the Hanford Site (OLI Systems Inc. 1993). This program has the capability to predict what chemical species and which phases will be present in a system based on thermodynamic theory. ESP was selected as the most suitable for Hanford Site process simulation needs after reviewing products available in the United States.

One need with any simulation software is to validate the accuracy of the model predictions. This is the purpose of the work reported here. The results of washing and leaching three tank waste core samples at PNL have been simulated using ESP.

Section 2.0 describes the experimental scheme used at PNL. Section 3.0 describes the model that was developed using ESP. Section 4.0 compares the results from the simulations with the data from the laboratory tests. Section 5.0 provides recommendations for the use of ESP.

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2.0 LABORATORY EXPERIMENTAL SCHEME

Separate small-scale sludge washing and caustic leaching experiments were carried out at PNL with waste samples from single-shell tanks 241-B-110, 241-C-109, and 241-C-112 (Lumetta et al. 1994). The sequence and amounts of material used in the experiments for each waste sample are shown in Figures 1 through 3, which are taken from the Lumetta report. A portion of the damp composite sample was taken from Core 1 of tank 241-B-110, Core 47 of tank 241-C-109, and Core 36 of tank 241-C-112 respectively for use in the experiments.

In each sludge washing experiment, the portion of the composite sample was slurried or diluted with approximately three parts of water (by weight), and then aqueous 10 Mol/L NaOH was added to the slurry so that the wash solution was ~0.1 Mol/L NaOH. A portion of the resulting slurry was used in the sludge washing and leaching experiments. The remainder of the slurry was used in an acid dissolution experiment and which is not covered in this report. Samples labeled B110-4-7 in Figure 1 and C109-1-7 in Figure 2 were the slurries saved for these acid dissolution experiments. After the slurried solids were washed in the sludge washing experiment, then the residual solids were input to the caustic leaching experiment. All solid/liquid separations performed in the experiments were done by centrifugation.

The washing procedure involved treating the sludge twice with 0.1 Mol/L NaOH (~3.5 mL/G sludge for each wash step) for 1 hour at 100 °C. The sludge was then washed with water at room temperature to remove residual soluble material. After each step, the sludge wash mixture was cooled to room temperature (if it had been heated). The mixture was then centrifuged, and the supernatant liquid was decanted. The wash water was combined with the 0.1 Mol/L NaOH wash solutions and analyzed by inductively coupled plasma atomic emissions spectroscopy (ICP) and radiochemical methods.

The washed sludge sample was then digested in 3 Mol/L NaOH solution at 100 °C for a total of about 11 hours each as shown in Figures 1 through 3. Again, after each step, the sludge caustic leach mixture was cooled to room temperature and centrifuged, and the supernatant liquid was decanted. The two strong caustic leachates and the two following wash waters were combined and analyzed as a composite.

The remaining leached sludge was also analyzed by ICP and radiochemical methods after dissolution in acid. The results of the analyses of the combined washing solutions, the combined leaching solutions, and the final sludge were used to calculate the composition of the original sludge.

Figure 1. Laboratory Washing and Leaching of Tank 241-B-110 Sample.

Figure 2. Laboratory Washing and Leaching of Tank 241-C-109 Sample.

Figure 3. Laboratory Washing and Leaching of Tank 241-C-112 Sample.

3.0 COMPUTER PROCESS SIMULATIONS

ESP can calculate electrolyte and non-electrolyte activity coefficients in concentrated aqueous solutions, as well as predict the thermodynamic states in non-aqueous liquids, vapors, and solids. An activity coefficient is a factor which is multiplied times a concentration to account for deviation from ideal solution behavior. The program contains a large database of compounds and species, including actinide compounds and ions.

ESP is divided into three main sections:

- Databook, which contains the data banks
- Process, which contains a selection of unit operation blocks that can be linked to build a process simulation
- Toolkit, which contains the software engine that does the thermodynamic calculations.

ESP uses the revised Helgeson Equation of State, Bromley-Zemaitis framework, Pitzer formulation, and the enhanced SRK Equation of State for predicting thermodynamic properties. ESP can also be used to reconcile the charge balance and pH of laboratory element and anion analyses (such as tank core sample analyses), as well as simulate dynamic processes (such as the draining and filling of a tank).

The uses of ESP at the Hanford Site include modeling of waste evaporation, waste calcine dissolution, and in-tank leaching and washing. It is used for estimating inorganic and organic solubilities in various waste solutions. Planned uses in the near future include simulating the decomplexation of actinides by the heat and digest method, and the leaching, washing, separation, and combination of wastes from tanks 241-AZ-101, 241-AZ-102, and 241-C-106. The intent is to eventually use it to simulate the entire tank waste processing operation.

ESP was used to develop models that simulate the PNL laboratory washing and caustic leaching of each of the three waste tank core samples. Most of the data input to ESP came from the PNL report (Lumetta et al. 1994) or laboratory notebook (Lumetta 1993). Some required data for the tank 241-C-109 waste sample were taken from the core sample report (Simpson 1993). A description of how the ESP simulation model was assembled follows.

The composition of the core sample slurries labeled B110-4, C109-1, and C112-1 in Figures 1 through 3 were entered into ESP using the WaterAnalyzer tool. This composition was calculated by adding wash solution to the sludge having the chemical analysis provided by Lumetta. Using WaterAnalyzer, the hydroxide ion concentration of the slurry was adjusted to give a equilibrium value of 0.1 Mol/L. Then the charges were balanced, or "reconciled", by adding or removing sodium or nitrate ion. The resulting WaterAnalyzer slurry composition was exported, or "sent" to the Process program. The sample files are included in Appendix A.

Within Process, the Process Build mode was selected and unit operation blocks which simulate the various laboratory steps were assembled. These included the conventional blocks "mix," "split," "separate," and "heat exchange." The feed stream to the first block was the stream exported from WaterAnalyzer.

"Mix" blocks were required before some of the sludge wash and caustic leaching "separate" (centrifugation) blocks. This was necessary because the "separate" blocks can only simulate an adiabatic operation. If a significant amount of heat is released due to acid-base reactions, the temperature of the outlet streams could be significantly higher than the feed streams. In the laboratory work, the equilibrium temperatures were the same for the feed and outlet streams.

A mix block can simulate an isothermal process, and thus mix blocks were used to dissipate significant heat of reaction. Some of the simulations have more mix blocks than others, because each author ran one of the simulations, and each author chose to use a different number. The results were not affected by the number, however, as long as the necessary mix blocks were included.

During the PNL work, the insoluble solids content of the centrifuged sludge resulting from each wash or leach step was not determined. In the ESP simulations, the sludge leaving each separate block was estimated to be 50 wt% insoluble solids and 50 wt% solution. This value is typical of what is calculated from tank waste core sample analyses. Also, it was assumed that the liquid streams contained no entrained insoluble solids, and that the separation between the liquids and sludges (not insoluble solids) was complete.

After building the process simulation model by connecting unit operations to simulate the lab work, the Process Analysis mode was used to run the process simulation. Many simulations were run for each laboratory experiment, as small adjustments were made to the model to aid convergence. Once convergence was obtained, a report of the simulation was generated using the Generate Report option, and the results were printed. These simulation reports for tanks 241-B-110, 241-C-109, and 241-C-112 are included in Appendix A.

Each simulation report has a Table of Contents which lists process block and stream names. Following the Table of Contents, the Process Block table lists the block name, block type, inlet stream(s), and outlet stream(s). The Process Blocks table gives an overall view of how the blocks are connected to one another, and may be compared to the PNL sludge washing/caustic leaching experiment diagrams shown in Figures 1 through 3.

4.0 COMPARISON OF RESULTS

Tables 1 through 3 contain comparisons of the ESP predictions with the PNL data. The units for the data in the table are the same as the units used in recording the laboratory analyses. Generally, solid phase or slurry concentrations are reported in wt.% or parts per million by weight (ppm). Solution concentrations are generally reported in moles per volume. The PNL data was obtained by doing sludge washing/leaching experiments on samples of actual waste from tanks 241-B-110, 241-C-109, and 241-C-112 as described previously. The elements included are the ones contained in significant amounts in the waste samples. Sodium concentrations were calculated by ESP, but were not included in the tables because data were not available for the laboratory tests.

The feed slurry composition used by ESP was calculated from the initial sludge composition given in the PNL report. This slurry was the feed to the first solid-liquid separation in both the laboratory experiments and the ESP simulations. As mentioned, the WaterAnalyzer tool was used to balance charges and adjust the hydroxide concentration to 0.1 Mol/L in the slurry.

The tables show the feed slurry composition and a comparison of the lab and ESP element concentrations in the combined weak caustic leachate/wash water solution, combined strong caustic leachate/wash water solution, and the centrifuged leached and washed sludge. The solution concentrations are in mMol/L and the sludge and slurry are in parts per million by weight. The total amount of each element removed or dissolved during the processing is compared in the last two columns.

There are several insoluble species that ESP predicted would be soluble. These are Am, B, Bi, Nd, Si, Sn, and Zn. When the data in the ESP data bank were examined, it was found that there were no solid phase data for B, Bi, Nd, or Sn compounds. Thus, ESP could not predict the formation of any solid phase for these four, and all species containing them would be predicted to be soluble at all conditions.

Am was studied or found in only Tank B-110 waste. ESP did not contain solubility data for AmPO_4 or AmOHCO_3 , although it did contain data for Am_2CO_3 and $\text{Am}(\text{OH})_3$. AmPO_4 is less soluble than the others, and its absence in the ESP data bank could account for the disagreement between the lab and simulation results.

Mn, Sr, and Zn were all predicted to be more soluble than found in the experiments. It is not known at present why the disagreement for Mn. Sr may be co-precipitated with Ca, which means that when the sludge was formed by neutralization, some or all of the Sr atoms replaced some of the Ca atoms in the solid phase. Although ESP can model co-precipitation, this feature was not used in the simulations reported here. Since Sr is an element of considerable importance in tank wastes, further refinement of the ESP results is needed. Both $\text{Zn}_3(\text{PO})_2$ and $\text{Zn}(\text{OH})_2$ are relatively soluble in sodium hydroxide solutions, and thus the prediction from ESP is reasonable since there was very little Zn to begin with. The differences in results from ESP and the laboratory experiments may be because equilibrium was not reached in the experiments.

Table 1. Comparison of Laboratory and Computer Simulation
Results for Tank 241-B-110.

Element	Feed slurry ppm wt.	Mixed wash mMol/L		Mixed leach mMol/L		Leached sludge ppm wt.		Total removed %	
		Lab	ESP	Lab	ESP	Lab	ESP	Lab	ESP
Am	.012	0	1.1 E-5	0	0	NA	0	0	100
Al	316	BD	2.6	BD	0	NA	0	≤53	100
B	---	---	---	---	---	---	---	---	---
Bi	6,330	BD	6.8	BD	0	NA	0	≤3	100
Ca	237	.15	.057	.15	.059	NA	9,310	19	5
Cr	234	.12	.066	.67	.90	NA	0	64	88
Cs	.0045	NA	7.6 E-5	NA	0	NA	0	97	97
Fe	5,540	0	0	0	0	NA	239,000	0	0
La	---	---	---	---	---	---	---	---	---
Mg	40	0	.022	0	.0080	NA	1,590	0	8
Mn	---	---	---	---	---	---	---	---	---
Nd	---	---	---	---	---	---	---	---	---
Ni	---	---	---	---	---	---	---	---	---
P	4,740	34	33	5.4	.085	NA	2,540	≥97	98
Pb	294	BD	0	BD	0	NA	12,700	≤27	0
Pu	---	---	---	---	---	---	---	---	---
Si	2,640	7.4	21	15.8	0	NA	0	74	100
Sn	---	---	---	---	---	---	---	---	---
Sr	61	BD	.014	BD	.070	NA	1,190	0	50
U	---	---	---	---	---	---	---	---	---
Zn	NA	BD	---	.023	---	---	---	---	---

BD = below detection limit
ESP = Environmental Simulation Program
NA = not available.

Table 2. Comparison of Laboratory and Computer Simulation
Results for Tank 241-C-109.

Element	Feed slurry ppm wt.	Mixed wash mMol/L		Mixed leach mMol/L		Leached sludge ppm wt.		Total removed %	
		Lab	ESP	Lab	ESP	Lab	ESP	Lab	ESP
Am	---	---	---	---	---	---	---	---	---
Al	13,400	10.1	2.9	107	76	75,600	67,100	81	66
B	---	---	---	---	---	---	---	---	---
Bi	463	BD	.18	BD	0	14,000	0	≤54	100
Ca	1,980	.16	.041	.066	.065	59,400	37,800	1	1
Cr	85	.35	.057	BD	.29	416	0	85	90
Cs	---	---	---	---	---	---	---	---	---
Fe	2,260	.52	3.0 E-4	.036	.0093	64,600	43,600	5	0
La	190	BD	0	BD	0	5,750	3,680	≤26	0
Mg	---	---	---	---	---	---	---	---	---
Mn	201	BD	2.6 E-4	BD	.27	6,080	2,630	≤5	30
Nd	241	.0091	.38	.058	0	4,880	0	33	100
Ni	2,920	.42	.032	BD	.99	85,500	51,100	3	8
P	1,840	5.0	5.6	1.6	.093	32,000	20,300	42	43
Pb	833	BD	0	.49	0	14,800	16,100	≤42	0
Pu	0.90	NA	2.3 E-7	NA	.20 E-9		17	0	.05
Si	1,320	.52	10.6	1.6	0	33,600	0	16	100
Sn	---	---	---	---	---	---	---	---	---
Sr	34	BD	.0036	BD	.076	102	23	≤25	89
U	2,300	BD	0	BD	0	54,200	34,600	≤55	0
Zn	---	---	---	---	---	---	---	---	---

BD = below detection limit
ESP = Environmental Simulation Program
NA = not available.

Table 3. Comparison of Laboratory and Computer Simulation
Results for Tank 241-C-112.

Element	Feed slurry ppm wt.	Wash liquids mMol/L		Leach Liquids mMol/L		Leached sludge ppm wt.		Total removed %	
		Lab	ESP	Lab	ESP	Lab	ESP	Lab	ESP
Am	---	---	---	---	---	---	---	---	---
Al	1,130	4.0	9.8	6.73	.0082	1,940	0	85	100
B	208	BD	4.5	BD	.00023	2,410	0	≤9	100
Bi	188	BD	.21	BD	0	2,180	0	≤73	100
Ca	2,620	.16	.078	BD	.066	30,000	26,200	1	1
Cr	67	.17	.055	.16	.24	99	0	87	92
Cs	---	---	---	---	---	---	---	---	---
Fe	4,570	.60	.00028	.71	.0010	50,000	46,100	5	0
La	---	---	---	---	---	---	---	---	---
Mg	43	BD	.062	BD	.00024	500	369	NA	15
Mn	40	BD	.00066	BD	.17	457	2	≤21	88
Nd	704	.19	1.14	.13	0	6,350	0	22	100
Ni	1,810	.67	.031	BD	1.1	19,300	15,400	8	9
P	10,400	45.7	68.4	38.1	.098	18,900	13,700	84	87
Pb	192	BD	0	BD	0	2,210	1,940	≤24	0
Pu	---	---	---	---	---	---	---	---	---
Si	2,422	.054	20.1	2.5	.0010	24,800	0	11	100
Sn	147	BD	.29	BD	0	1,690	0	NA	100
Sr	93	BD	.0040	BD	.076	1,070	633	≤10	30
U	24,400	BD	0	BD	0	283,000	247,000	≤8	0
Zn	42	BD	.00076	.063	0	329	0	≥31	100

BD = below detection limit

ESP = Environmental Simulation Program

NA = not available.

ESP predicts that Si is very soluble at the wash and leach conditions, while the laboratory results indicate that substantial amounts of the Si does not dissolve, especially in tanks 241-C-109 and 241-C-112. This may be due to kinetics; that is, more time is required than given in the tests to dissolve the Si. Silica is known to be soluble in sodium hydroxide solutions, but it is also known to take long time periods to dissolve it.

The difference between the prediction and test results for Si may also be due to the formation of aluminosilicates. The ESP user selects which solid species will be considered by ESP by choosing which data banks are accessed. These include a LAB data bank, which includes ions, a PUBLIC data bank, and a GEOCHEM databank. The PUBLIC data bank contains most species that are normally encountered in chemical process simulation, but not aluminosilicates. The GEOCHEM data bank contains data for minerals that usually take long periods of time to form, and is not normally used unless simulating geologically related processes. The GEOCHEM data bank contains data for a large number of aluminosilicates.

The LAB and PUBLIC data banks, but not the GEOCHEM, were used during the simulations reported here. The GEOCHEM data bank was not used because of the great increase in computation times and increased difficulty of convergence. Thus, aluminosilicates were not included in the equilibrium calculations performed for this report. Some initial trials using the GEOCHEM databank have subsequently been made, and it appears that inclusion of sodium aluminosilicate brings the ESP predictions into closer agreement with the laboratory results. This simulation work was not complete when this report was prepared, but plans are to include it in a revision.

For the remaining elements, the ESP predictions and the laboratory results were reasonably close. Notice that although the overall results for washing and leaching agree well, the results for just the washing part of the experiment may not agree as well. This is not of great concern, because the equilibrium concentrations change rapidly for the leachable compounds in the hydroxide concentration range from 0.1 to 3 Mol/L. Thus, a small change in the hydroxide concentration for the simulation can have a large effect on the result. In actual practice, caustic will be added to the waste as needed to give the desired degree of leaching.

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5.0 CONCLUSIONS AND RECOMMENDATIONS

The ESP equilibrium predictions for phosphorus and chromium were surprisingly close to the results for the laboratory tests. This is encouraging, since these are two of the most troublesome elements in making an acceptable glass for permanent disposal. The ability to predict the loading in the final glass will be very useful. The results for aluminum were also reasonably close. There are large amounts of this element in tank sludges, and it is desirable to leach it into solution with caustic.

The agreement with the available data for calcium, cesium, iron, lanthanum, magnesium, nickel, lead, plutonium, and uranium were all good. The disagreement between ESP and the test results for americium, boron, bismuth, neodymium, and tin were due to the lack of data for the solid phases. ESP predicted higher solubilities for manganese, silicon, strontium, and zinc than were found in the laboratory tests.

Future work needed to make ESP more useful as a simulator of tank waste processing includes the following:

1. Work with OLI Systems to include missing solid phase data in the data bank, or supply it in a private Hanford Site data bank. ESP allows the user to create a private data bank.
2. Improve the data for aluminum by supplying OLI Systems with the extensive Hanford Site data, or by including it in a private Hanford Site data bank.
3. Rerun the washing and leaching simulations using the GEOCHEM data bank to determine if including aluminosilicates improves the agreement for silicon and aluminum. Preliminary runs indicate this will be the case.
4. Rerun the simulations using the coprecipitation option for strontium and calcium.
5. Determine whether the disagreement between ESP and the laboratory data is due to non-equilibrium conditions or inadequate data. Experimentally determine data, if needed, and supply it to OLI Systems or use it in a private data bank.

When the deficiencies discussed above are corrected, ESP will have great value in simulating tank waste washing and leaching processes. This is because most in-tank processing will be carried out with mixtures of waste from several tanks. The laboratory data is valid for the tested composition, but needs some theoretical interpretation to be applied to these mixtures. ESP provides the theoretical framework for performing the required calculations. It is recommended for use in studying the various in-tank processing options.

6.0 REFERENCES

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APPENDIX A

WaterAnalyzer Sample Files for B-110, C-109, C-112

ESP Summary Reports for B-110, C-109, C-112

WaterAnalyzer Sample File for Tank B-110

\$MODEL
B-110WA
LAB
\$SAMPLE B-110
DESC 07/27/94 Single RecElec NoRecpH

UNITS USER CALORI GMOLE HOUR CENTIG ATMOSP METER LITER

TEMP 25.000
PRES 1.0000
AMT 1.0
DENS 1090.0
PH 0.0 12.8321
RECELEC Make Up Ion Method using 1572.38 ppm(wt) of NO3ION
EQUIL LAB BALANCE NO3ION NO3ION
CONCENTRATION ppm(wt)
AMIII+3 1.2000E-02 1.20000E-02
BI+3 6330.0 6329.99
CA+2 237.00 237.000
CRIII+3 234.00 234.000
CS+1 4.5000E-02 4.50001E-02
FEIII+3 5540.0 5539.99
MG+2 40.000 39.9999
NA+1 29000. 29000.0
AL+3 316.00 316.001
PB+2 294.00 294.000
SR+2 61.000 61.0000
OH-1 9800.0 9800.01
H3SI04-1 8920.0 8920.00
NO3-1 35000. 36572.4
PO4-3 14500. 14500.0
SOL SCALING
ALOH3PPT 0.100000E+01
CA3PO42PPT 0.100000E+01
CROH3PPT 0.100000E+01
FEIII0H3PPT 0.100000E+01
NIOH2PPT 0.100000E+01
PBOPPT 0.100000E+01
SR3PO42PPT 0.100000E+01
UO2OH2PPT 0.100000E+01
MGOH2PPT 0.999998E+00
MNOH2PPT 0.999998E+00
ALOOHPPT 0.753880E+00
NA3PO4.12H2O 0.382723E-01
SI02PPT 0.246533E-01
END

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\$STREAM B-110
SAMPLE B-110
PROCESS B-110

UNITS	USER	CALORI	GMOLE	HOUR	CENTIG	ATMOSP	METER	LITER
TEMP		25.000						
PRES		1.0000						
TOTAL		0.566449E+02						
H2O		0.543444E+02						
ALOH3		0.119733E-01						
AMIIIOH3		0.504855E-07						
BIOH3		0.309664E-01						
CAOH2		0.604553E-02						
CROH3		0.460085E-02						
CSOH		0.346150E-06						
FEIIIOH3		0.101415E+00						
H3PO4		0.156087E+00						
H4SI04		0.958836E-01						
HNO3		0.600102E+00						
MGOH2		0.168250E-02						
NAOH		0.128959E+01						
PBN032		0.145061E-02						
SROH2		0.711736E-03						
END								

WaterAnalyzer Sample File for Tank C-109

```

$MODEL
C-109WA
LAB
$SAMPLE C-109WA
DESC **NEW Single RecElec NoRecpH
UNITS      USER  CALORI GMOLE  HOUR   CENTIG ATMOSP METER  LITER
TEMP 25.000
PRES 1.0000
AMT 1.0
DENS 1065.0
PH 0.0          12.8603
RECELEC Make Up Ion Method using 13871.1 ppm(wt) of NO3ION
EQUIL LAB BALANCE      NO3ION      NO3ION
CONCENTRATION ppm(wt)
BI+3      463.30      463.300
CA+2      1977.0      1977.00
CRIII+3    84.650      84.6499
FEIII+3    2256.0      2256.00
LA+3      190.00      190.000
MN+2      200.50      200.500
NA+1      14051.      14051.0
ND+3      240.50      240.501
NI+2      2916.0      2916.00
AL+3      13395.      13395.0
PB+2      833.00      833.001
PUIV+4     0.90000      0.900001
SR+2      33.800      33.8000
UO2+2     2031.0      2031.00
OH-1      31700.      31700.0
H3SI04-1   4473.0      4473.00
NO3-1     9860.0      23731.1
PO4-3     5633.0      5633.01
SOL SCALING
PBOPPT      0.506201E+15
ALOH3PPT     0.100000E+01
CA3PO42PPT   0.100000E+01
CROH3PPT     0.100000E+01
FEIII0H3PPT  0.100000E+01
MNOH2PPT     0.100000E+01
NIOH2PPT     0.100000E+01
PUIVOH4PPT   0.100000E+01
SR3PO42PPT   0.100000E+01
UO2OH2PPT    0.100000E+01
LAP04.2H2O   0.999992E+00
ALOOHPPT     0.753201E+00
SI02PPT      0.147049E-01
PB3PO42PPT   0.112802E-01
END

```

\$STREAM C-109
SAMPLE C-109WA
PROCESS C-109

UNITS	USER	CALORI	GMOLE	HOUR	CENTIG	ATMOSP	METER	LITER
TEMP		25.000						
PRES		1.0000						
TOTAL		0.567065E+02						
H2O		0.548845E+02						
ALOH3		0.516711E+00						
BIOH3		0.230743E-02						
CAOH2		0.513419E-01						
CROH3		0.169445E-02						
FEIIIIOH3		0.420446E-01						
H3PO4		0.617332E-01						
H4SI04		0.489506E-01						
HNO3		0.389980E+00						
LAOH3		0.142365E-02						
MNOH2		0.379851E-02						
NAOH		0.636121E+00						
NDOH3		0.173541E-02						
NIOH2		0.517300E-01						
PBN032		0.418434E-02						
PUIVOH4		0.383906E-05						
SROH2		0.401499E-03						
UO2OH2		0.782839E-02						
END								

WaterAnalyzer Sample File for Tank C-112

\$MODEL
C-112WA
LAB
\$SAMPLE C-112WA
DESC 08/12/94 Single RecElec NoRecpH

UNITS USER CALORI GMOLE HOUR CENTIG ATMOSP METER LITER

TEMP 25.000

PRES 1.0000

AMT 1.0

DENS 1097.2

PH 0.0 12.8265

RECELEC Make Up Ion Method using -50.398 ppm(wt) of NO3ION

EQUIL LAB BALANCE NO3ION NO3ION

CONCENTRATION ppm(wt)

BI+3	188.00	188.000
CA+2	2617.0	2617.00
CRIII+3	67.000	67.0003
FEIII+3	4565.0	4565.00
MG+2	43.000	43.0000
MN+2	40.000	40.0000
NA+1	24780.	24780.0
ND+3	704.00	704.001
NI+2	1809.0	1809.00
AL+3	1126.0	1126.00
PB+2	192.00	192.000
SNIV+4	147.00	147.000
SR+2	93.000	92.9996
UO2+2	27720.	27720.0
ZN+2	42.000	42.0000
OH-1	12970.	12970.0
BO2-1	824.00	824.002
H3SI04-1	8197.0	8197.00
NO3-1	300.00	249.602
PO4-3	31980.	31980.0

SOL SCALING

FEIII0H3PPT	0.100001E+01
CA3PO42PPT	0.100000E+01
CROH3PPT	0.100000E+01
ALOH3PPT	0.100000E+01
MGOH2PPT	0.100000E+01
MNOH2PPT	0.100000E+01
NIOH2PPT	0.100000E+01
PBOPPT	0.100000E+01
UO2OH2PPT	0.100000E+01
SR3PO42PPT	0.999996E+00
ALOOHPPT	0.753877E+00
NA3PO4.12H2O	0.382411E-01
SI02PPT	0.249711E-01
END	

\$STREAM C-112

SAMPLE C-112WA

PROCESS C-112

UNITS	USER	CALORI	GMOLE	HOUR	CENTIG	ATMOSP	METER	LITER
TEMP		25.000						
PRES		1.0000						
TOTAL		0.562451E+02						
H2O		0.543470E+02						
ALOH3		0.426342E-01						
BIOH3		0.919049E-03						
BOH3		0.196644E-01						
CAOH2		0.667088E-01						
CROH3		0.131641E-02						
FEIII OH3		0.835077E-01						
H3PO4		0.344010E+00						
H4SI04		0.880497E-01						
HNO3		0.221918E-02						
MGOH2		0.180742E-02						
MNOH2		0.743828E-03						
NAOH		0.110115E+01						
NDOH3		0.498624E-02						
NIOH2		0.314998E-01						
PBNO32		0.946666E-03						
SNIVOH4		0.126507E-02						
SROH2		0.108433E-02						
UO2OH2		0.104874E+00						
ZNOH2		0.656181E-03						
END								

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  0   0   0   0   0   0   L           I
    0       0       0       L           I
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ENVIRONMENTAL SIMULATION PROGRAM

V - 4.0 May 1, 1994

PROCESS: B-110

CHEMISTRY MODEL: B-110

DATE: 09/09/94

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PROCESS BLOCKS

<u>BLOCK NAME</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
First Wash	Separate	B-110	Wash 1 Liquid Wash 1 Sludge
Second Wash	Separate	Wash 1 Sludge .1 M NaOH	Wash 2 Liquid Wash 2 Sludge
Third Wash	Separate	Wash 2 Sludge Third Wash Water	Wash 3 Liquid Wash 3 Sludge
Wash Liquids Mix	Mix	Wash 1 Liquid Wash 3 Liquid Wash 2 Liquid	Wash Liquids
Sludge Slurry Make-up	Mix	Wash 3 Sludge Slurry Water	Sludge Slurry
Sludge Slurry Split	Split	Sludge Slurry	Slurry Sample Slurry To Leach
Leach Mix	Mix	Slurry To Leach 10 M NaOH	Leach Mix Slurry
First Leach	Separate	Leach Mix Slurry	Leach 1 Liquid Leach 1 Sludge
Second Leach	Separate	Leach 1 Sludge 3 M NaOH	Leach 2 Liquid Leach 2 Sludge
Leach Wash	Separate	Leach 2 Sludge Leach Wash Water	Leach Wash Liq. Leach Wash Slud.
Final Wash	Separate	Leach Wash Slud. Final Wash Water	Final Wash Liq. Final Wash Slud.

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<u>BLOCK ID</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
Leach Liquids Mix	Mix	Leach 1 Liquid Final Wash Liq. Leach 2 Liquid Leach Wash Liq.	Leach Liquids

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PROCESS: B-110

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STREAM: B-110

TO : First Wash

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.871			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.10933	0.0	0.0	0.0
HNO3	3.5619E-18	0.0	0.0	0.0
AMIIIOH3	1.0125E-10	0.0	0.0	0.0
AMNO33	9.5020E-19	0.0	0.0	0.0
BIOH3	2.0817E-05	0.0	0.0	0.0
CROH3	1.6568E-09	8.9055E-06	0.0	0.0
CSNO3	1.2602E-10	0.0	0.0	0.0
FEIIIOH3	4.0524E-13	2.0361E-04	0.0	0.0
ALOH3	3.8749E-12	8.4314E-06	0.0	0.0
MGHPO4	3.6164E-13	0.0	0.0	0.0
PBHP04	6.5536E-32	0.0	0.0	0.0
PBNO32	3.6898E-31	0.0	0.0	0.0
PBO	9.5355E-23	2.9124E-06	0.0	0.0
SIO2	7.9073E-08	0.0	0.0	0.0
SRHP04	4.7611E-13	0.0	0.0	0.0
SRNO32	1.0402E-10	0.0	0.0	0.0
OHION	2.0514E-04	0.0	0.0	0.0
ALOH2ION	2.0832E-19	0.0	0.0	0.0
ALOH4ION	1.5607E-05	0.0	0.0	0.0
ALOHION	2.1463E-26	0.0	0.0	0.0
AMIIION	8.8537E-21	0.0	0.0	0.0
AMIIIOH2ION	1.1834E-13	0.0	0.0	0.0
AMIIIOHION	5.8928E-17	0.0	0.0	0.0
AMNO32ION	2.8282E-21	0.0	0.0	0.0
AMNO3ION	5.9113E-21	0.0	0.0	0.0
BIION	3.7208E-33	0.0	0.0	0.0
BINO32ION	2.8805E-33	0.0	0.0	0.0
BINO3ION	5.9944E-33	0.0	0.0	0.0
BIOH2ION	4.4145E-13	0.0	0.0	0.0
BIOH4ION	4.1356E-05	0.0	0.0	0.0
BIOHION	2.1488E-22	0.0	0.0	0.0
CAH2PO4ION	1.6078E-18	0.0	0.0	0.0
CAION	5.4007E-10	0.0	0.0	0.0
CAOHION	1.0016E-10	0.0	0.0	0.0
CAPO4ION	3.2352E-07	0.0	0.0	0.0
CRIIH2PO4ION	8.4244E-34	0.0	0.0	0.0
CRIIHPO4ION	6.0844E-22	0.0	0.0	0.0
CRIIION	4.2772E-28	0.0	0.0	0.0
CRIIINO3ION	3.4044E-27	0.0	0.0	0.0
CROH2ION	1.2269E-16	0.0	0.0	0.0
CROH4ION	3.3009E-07	0.0	0.0	0.0
CROHION	2.6445E-20	0.0	0.0	0.0

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CSION	5.6898E-10	0.0	0.0	0.0
FEIII2OH2ION	1.9705E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.9705E-38	0.0	0.0	0.0
FEIIIHPO4ION	2.4383E-34	0.0	0.0	0.0
FEIIIIION	7.4994E-38	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	1.3162E-20	0.0	0.0	0.0
FEIIIOH4ION	1.7492E-09	0.0	0.0	0.0
FEIIIOHION	4.2040E-28	0.0	0.0	0.0
H2P2O7ION	3.1385E-23	0.0	0.0	0.0
H2PO4ION	2.1418E-12	0.0	0.0	0.0
H3P2O7ION	1.0431E-34	0.0	0.0	0.0
H3SIO4ION	1.9243E-04	0.0	0.0	0.0
HION	3.7456E-16	0.0	0.0	0.0
HP2O7ION	7.6139E-16	0.0	0.0	0.0
HPBO2ION	1.8467E-20	0.0	0.0	0.0
HPO4ION	7.4511E-06	0.0	0.0	0.0
MGH2PO4ION	6.2056E-20	0.0	0.0	0.0
MGION	1.3272E-11	0.0	0.0	0.0
MGOHION	2.8834E-11	0.0	0.0	0.0
MGPO4ION	1.3830E-08	0.0	0.0	0.0
NAION	2.5891E-03	0.0	0.0	0.0
NO3ION	1.2288E-03	0.0	0.0	0.0
ALION	1.8577E-33	0.0	0.0	0.0
P2O7ION	1.3893E-10	0.0	0.0	0.0
PBH2PO4ION	1.9705E-38	0.0	0.0	0.0
PBION	1.3174E-29	0.0	0.0	0.0
PBNO33ION	4.9806E-32	0.0	0.0	0.0
PBNO3ION	2.4380E-30	0.0	0.0	0.0
PBOHION	5.8835E-26	0.0	0.0	0.0
PO4ION	2.9676E-04	0.0	0.0	0.0
SRION	1.7512E-09	0.0	0.0	0.0
SRNO3ION	5.0828E-10	0.0	0.0	0.0
SROHION	1.0703E-10	0.0	0.0	0.0
SRPO4ION	1.1586E-08	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.3641E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.9379E-06	0.0	0.0
SR3PO42	0.0	4.7164E-07	0.0	0.0
<hr/>				
Total mol/hr	0.11392	2.3163E-04	0.0	0.0
Total g/hr	2.1744	2.5616E-02	0.0	0.0
Volume, L/hr	2.0228E-03	7.3960E-06	0.0	0.0
Enthalpy, cal/hr	-7864.	-50.86	0.0	0.0
Density, g/L	1075.0	3463.5		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

ESP V-4.0

PROCESS: B-110

09/09/94

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STREAM: Wash 1 Liquid
TO : Wash Liquids Mix
FROM : First Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.871			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.10804	0.0	0.0	0.0
HNO3	3.5199E-18	0.0	0.0	0.0
AMIIIIOH3	1.0005E-10	0.0	0.0	0.0
AMNO33	9.3900E-19	0.0	0.0	0.0
BIOH3	2.0571E-05	0.0	0.0	0.0
CROH3	1.6373E-09	0.0	0.0	0.0
CSNO3	1.2453E-10	0.0	0.0	0.0
FEIIIOH3	4.0047E-13	0.0	0.0	0.0
ALOH3	3.8292E-12	0.0	0.0	0.0
MGHPO4	3.5738E-13	0.0	0.0	0.0
PBHP04	6.4764E-32	0.0	0.0	0.0
PBNO32	3.6463E-31	0.0	0.0	0.0
PBO	9.4232E-23	0.0	0.0	0.0
SIO2	7.8141E-08	0.0	0.0	0.0
SRHPO4	4.7050E-13	0.0	0.0	0.0
SRNO32	1.0279E-10	0.0	0.0	0.0
OHION	2.0272E-04	0.0	0.0	0.0
ALOH2ION	2.0586E-19	0.0	0.0	0.0
ALOH4ION	1.5423E-05	0.0	0.0	0.0
ALOHION	2.1210E-26	0.0	0.0	0.0
AMIIIIION	8.7494E-21	0.0	0.0	0.0
AMIIIOH2ION	1.1695E-13	0.0	0.0	0.0
AMIIIOHION	5.8233E-17	0.0	0.0	0.0
AMNO32ION	2.7948E-21	0.0	0.0	0.0
AMNO3ION	5.8416E-21	0.0	0.0	0.0
BIION	3.6770E-33	0.0	0.0	0.0
BINO32ION	2.8465E-33	0.0	0.0	0.0
BINO3ION	5.9238E-33	0.0	0.0	0.0
BIOH2ION	4.3624E-13	0.0	0.0	0.0
BIOH4ION	4.0868E-05	0.0	0.0	0.0
BIOHION	2.1235E-22	0.0	0.0	0.0
CAH2PO4ION	1.5889E-18	0.0	0.0	0.0
CAION	5.3371E-10	0.0	0.0	0.0
CAOHION	9.8984E-11	0.0	0.0	0.0
CAPO4ION	3.1971E-07	0.0	0.0	0.0
CRIIIH2PO4ION	8.3251E-34	0.0	0.0	0.0
CRIIIHPO4ION	6.0127E-22	0.0	0.0	0.0
CRIIIIION	4.2268E-28	0.0	0.0	0.0
CRIIINO3ION	3.3643E-27	0.0	0.0	0.0
CROH2ION	1.2124E-16	0.0	0.0	0.0
CROH4ION	3.2620E-07	0.0	0.0	0.0
CROHION	2.6133E-20	0.0	0.0	0.0

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CSION	5.6228E-10	0.0	0.0	0.0
FEIII2OH2ION	1.9473E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.9473E-38	0.0	0.0	0.0
FEIIIHPO4ION	2.4095E-34	0.0	0.0	0.0
FEIIIIION	7.4110E-38	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	1.3007E-20	0.0	0.0	0.0
FEIIIOH4ION	1.7286E-09	0.0	0.0	0.0
FEIIIOHION	4.1545E-28	0.0	0.0	0.0
H2P2O7ION	3.1015E-23	0.0	0.0	0.0
H2PO4ION	2.1166E-12	0.0	0.0	0.0
H3P2O7ION	1.0308E-34	0.0	0.0	0.0
H3SIO4ION	1.9016E-04	0.0	0.0	0.0
HION	3.7015E-16	0.0	0.0	0.0
HP2O7ION	7.5242E-16	0.0	0.0	0.0
HPBO2ION	1.8249E-20	0.0	0.0	0.0
HPO4ION	7.3633E-06	0.0	0.0	0.0
MGH2PO4ION	6.1325E-20	0.0	0.0	0.0
MGION	1.3116E-11	0.0	0.0	0.0
MGOHION	2.8494E-11	0.0	0.0	0.0
MGPO4ION	1.3667E-08	0.0	0.0	0.0
NAION	2.5586E-03	0.0	0.0	0.0
NO3ION	1.2143E-03	0.0	0.0	0.0
ALION	1.8358E-33	0.0	0.0	0.0
P2O7ION	1.3729E-10	0.0	0.0	0.0
PBH2PO4ION	1.9473E-38	0.0	0.0	0.0
PBION	1.3019E-29	0.0	0.0	0.0
PBNO33ION	4.9219E-32	0.0	0.0	0.0
PBNO3ION	2.4093E-30	0.0	0.0	0.0
PBOHION	5.8142E-26	0.0	0.0	0.0
PO4ION	2.9326E-04	0.0	0.0	0.0
SRION	1.7305E-09	0.0	0.0	0.0
SRNO3ION	5.0229E-10	0.0	0.0	0.0
SROHION	1.0577E-10	0.0	0.0	0.0
SRPO4ION	1.1449E-08	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11258	0.0	0.0	0.0
Total g/hr	2.1488	0.0	0.0	0.0
Volume, L/hr	1.9989E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7771.	0.0	0.0	0.0
Density, g/L	1075.0			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 1 Sludge
TO : Second Wash
FROM : First Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.871			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.2879E-03	0.0	0.0	0.0
HNO3	4.1962E-20	0.0	0.0	0.0
AMIIIOH3	1.1928E-12	0.0	0.0	0.0
AMNO33	1.1194E-20	0.0	0.0	0.0
BIOH3	2.4524E-07	0.0	0.0	0.0
CROH3	1.9519E-11	8.9055E-06	0.0	0.0
CSNO3	1.4846E-12	0.0	0.0	0.0
FEIIIOH3	4.7741E-15	2.0361E-04	0.0	0.0
ALOH3	4.5649E-14	8.4314E-06	0.0	0.0
MGHPO4	4.2604E-15	0.0	0.0	0.0
PBHPO4	7.7206E-34	0.0	0.0	0.0
PBNO32	4.3469E-33	0.0	0.0	0.0
PBO	1.1234E-24	2.9124E-06	0.0	0.0
SiO2	9.3154E-10	0.0	0.0	0.0
SRHPO4	5.6089E-15	0.0	0.0	0.0
SRNO32	1.2254E-12	0.0	0.0	0.0
OHION	2.4167E-06	0.0	0.0	0.0
ALOH2ION	2.4542E-21	0.0	0.0	0.0
ALOH4ION	1.8386E-07	0.0	0.0	0.0
ALOHION	2.5285E-28	0.0	0.0	0.0
AMIIIIION	1.0430E-22	0.0	0.0	0.0
AMIIIOH2ION	1.3942E-15	0.0	0.0	0.0
AMIIIOHION	6.9421E-19	0.0	0.0	0.0
AMNO32ION	3.3318E-23	0.0	0.0	0.0
AMNO3ION	6.9639E-23	0.0	0.0	0.0
BIION	4.3834E-35	0.0	0.0	0.0
BINO32ION	3.3934E-35	0.0	0.0	0.0
BINO3ION	7.0619E-35	0.0	0.0	0.0
BIOH2ION	5.2006E-15	0.0	0.0	0.0
BIOH4ION	4.8720E-07	0.0	0.0	0.0
BIOHION	2.5315E-24	0.0	0.0	0.0
CAH2PO4ION	1.8942E-20	0.0	0.0	0.0
CAION	6.3625E-12	0.0	0.0	0.0
CAOHION	1.1800E-12	0.0	0.0	0.0
CAPO4ION	3.8113E-09	0.0	0.0	0.0
CRIIH2PO4ION	9.9246E-36	0.0	0.0	0.0
CRIIHPO4ION	7.1678E-24	0.0	0.0	0.0
CRIIIIION	5.0388E-30	0.0	0.0	0.0
CRIIINO3ION	4.0106E-29	0.0	0.0	0.0
CROH2ION	1.4454E-18	0.0	0.0	0.0
CROH4ION	3.8887E-09	0.0	0.0	0.0
CROHION	3.1154E-22	0.0	0.0	0.0

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CSION	6.7031E-12	0.0	0.0	0.0
FEIII2OH2ION	2.3214E-40	0.0	0.0	0.0
FEIIIH2PO4ION	2.3214E-40	0.0	0.0	0.0
FEIIIHPO4ION	2.8725E-36	0.0	0.0	0.0
FEIIIIION	8.8348E-40	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	1.5506E-22	0.0	0.0	0.0
FEIIIOH4ION	2.0607E-11	0.0	0.0	0.0
FEIIIOHION	4.9526E-30	0.0	0.0	0.0
H2P2O7ION	3.6974E-25	0.0	0.0	0.0
H2PO4ION	2.5232E-14	0.0	0.0	0.0
H3P2O7ION	1.2289E-36	0.0	0.0	0.0
H3SIO4ION	2.2670E-06	0.0	0.0	0.0
HION	4.4126E-18	0.0	0.0	0.0
HP2O7ION	8.9698E-18	0.0	0.0	0.0
HPBO2ION	2.1755E-22	0.0	0.0	0.0
HPO4ION	8.7779E-08	0.0	0.0	0.0
MGH2PO4ION	7.3106E-22	0.0	0.0	0.0
MGION	1.5636E-13	0.0	0.0	0.0
MGOHION	3.3969E-13	0.0	0.0	0.0
MGPO4ION	1.6293E-10	0.0	0.0	0.0
NAION	3.0502E-05	0.0	0.0	0.0
NO3ION	1.4476E-05	0.0	0.0	0.0
ALION	2.1885E-35	0.0	0.0	0.0
P2O7ION	1.6367E-12	0.0	0.0	0.0
PBH2PO4ION	2.3214E-40	0.0	0.0	0.0
PBION	1.5520E-31	0.0	0.0	0.0
PBNO33ION	5.8675E-34	0.0	0.0	0.0
PBNO3ION	2.8722E-32	0.0	0.0	0.0
PBOHION	6.9312E-28	0.0	0.0	0.0
PO4ION	3.4961E-06	0.0	0.0	0.0
SRION	2.0630E-11	0.0	0.0	0.0
SRNO3ION	5.9879E-12	0.0	0.0	0.0
SROHION	1.2609E-12	0.0	0.0	0.0
SRPO4ION	1.3649E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.3641E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.9379E-06	0.0	0.0
SR3PO42	0.0	4.7164E-07	0.0	0.0
<hr/>				
Total mol/hr	1.3421E-03	2.3163E-04	0.0	0.0
Total g/hr	2.5616E-02	2.5616E-02	0.0	0.0
Volume, L/hr	2.3830E-05	7.3960E-06	0.0	0.0
Enthalpy, cal/hr	-92.64	-50.86	0.0	0.0
Density, g/L	1075.0	3463.5		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: .1 M NaOH
TO : Second Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.892			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11101	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	2.0001E-04	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	3.4061E-16	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	2.0001E-04	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11141	0.0	0.0	0.0
Total g/hr	2.0078	0.0	0.0	0.0
Volume, L/hr	2.0054E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7606.	0.0	0.0	0.0
Density, g/L	1001.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 2 Liquid
TO : Wash Liquids Mix
FROM : Second Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.979	24.979	24.979	24.979
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.868			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11092	0.0	0.0	0.0
HNO3	7.0058E-20	0.0	0.0	0.0
AMIIIIOH3	1.1787E-12	0.0	0.0	0.0
AMNO33	4.5133E-26	0.0	0.0	0.0
BIOH3	3.3298E-07	0.0	0.0	0.0
CROH3	1.9968E-09	0.0	0.0	0.0
CSNO3	4.2044E-14	0.0	0.0	0.0
FEIIIIOH3	4.8741E-13	0.0	0.0	0.0
ALOH3	3.3838E-12	0.0	0.0	0.0
MGHPO4	6.9081E-14	0.0	0.0	0.0
PBHP04	1.2785E-32	0.0	0.0	0.0
PBNO32	1.1572E-34	0.0	0.0	0.0
PBO	1.1452E-22	0.0	0.0	0.0
SIO2	1.5188E-09	0.0	0.0	0.0
SRHP04	3.1532E-13	0.0	0.0	0.0
SRNO32	1.1081E-13	0.0	0.0	0.0
OHION	1.9164E-04	0.0	0.0	0.0
ALOH2ION	1.1346E-19	0.0	0.0	0.0
ALOH4ION	8.5097E-06	0.0	0.0	0.0
ALOHION	7.0170E-27	0.0	0.0	0.0
AMIIIIION	9.6310E-24	0.0	0.0	0.0
AMIIIIOH2ION	8.5844E-16	0.0	0.0	0.0
AMIIIOHION	2.0255E-19	0.0	0.0	0.0
AMNO32ION	5.2389E-27	0.0	0.0	0.0
AMNO3ION	3.2486E-25	0.0	0.0	0.0
BIION	5.8253E-36	0.0	0.0	0.0
BINO32ION	1.9992E-38	0.0	0.0	0.0
BINO3ION	4.6074E-37	0.0	0.0	0.0
BIOH2ION	4.4168E-15	0.0	0.0	0.0
BIOH4ION	3.9048E-07	0.0	0.0	0.0
BIOHION	1.0346E-24	0.0	0.0	0.0
CAH2PO4ION	7.1737E-19	0.0	0.0	0.0
CAION	5.8276E-10	0.0	0.0	0.0
CAOHION	3.0374E-10	0.0	0.0	0.0
CAPO4ION	1.2369E-07	0.0	0.0	0.0
CRIIIIH2PO4ION	4.9062E-35	0.0	0.0	0.0
CRIIIIHPO4ION	7.6155E-23	0.0	0.0	0.0
CRIIIIION	5.0069E-29	0.0	0.0	0.0
CRIIINO3ION	1.9339E-29	0.0	0.0	0.0
CROH2ION	1.0727E-16	0.0	0.0	0.0
CROH4ION	2.3515E-07	0.0	0.0	0.0
CROHION	1.1396E-20	0.0	0.0	0.0

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CSION	8.0453E-12	0.0	0.0	0.0
FEIII2OH2ION	1.9992E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.9992E-38	0.0	0.0	0.0
FEIIIHPO4ION	3.0598E-35	0.0	0.0	0.0
FEIIIIION	1.9992E-38	0.0	0.0	0.0
FEIIINO3ION	1.9992E-38	0.0	0.0	0.0
FEIIIOH2ION	1.1489E-20	0.0	0.0	0.0
FEIIIOH4ION	1.2426E-09	0.0	0.0	0.0
FEIIIOHION	1.6600E-28	0.0	0.0	0.0
H2P2O7ION	1.9230E-25	0.0	0.0	0.0
H2PO4ION	2.2067E-13	0.0	0.0	0.0
H3P2O7ION	2.3484E-36	0.0	0.0	0.0
H3SiO4ION	2.2386E-06	0.0	0.0	0.0
HION	3.6299E-16	0.0	0.0	0.0
HP2O7ION	1.3257E-18	0.0	0.0	0.0
HPBO2ION	1.3109E-20	0.0	0.0	0.0
HPO4ION	2.4502E-07	0.0	0.0	0.0
MGH2PO4ION	7.9889E-21	0.0	0.0	0.0
MGION	5.1680E-12	0.0	0.0	0.0
MGOHION	2.5216E-11	0.0	0.0	0.0
MGPO4ION	1.5253E-09	0.0	0.0	0.0
NAION	2.2769E-04	0.0	0.0	0.0
NO3ION	1.4298E-05	0.0	0.0	0.0
ALION	3.1650E-34	0.0	0.0	0.0
P2O7ION	3.3708E-14	0.0	0.0	0.0
PBH2PO4ION	1.9992E-38	0.0	0.0	0.0
PBION	9.2514E-31	0.0	0.0	0.0
PBNO33ION	1.4751E-37	0.0	0.0	0.0
PBNO3ION	2.9874E-32	0.0	0.0	0.0
PBOHION	5.2552E-26	0.0	0.0	0.0
PO4ION	3.2539E-06	0.0	0.0	0.0
SRION	1.5248E-09	0.0	0.0	0.0
SRNO3ION	1.9423E-11	0.0	0.0	0.0
SROHION	2.9414E-10	0.0	0.0	0.0
SRPO4ION	4.4299E-09	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11137	0.0	0.0	0.0
Total g/hr	2.0092	0.0	0.0	0.0
Volume, L/hr	2.0048E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7607.	0.0	0.0	0.0
Density, g/L	1002.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 2 Sludge
TO : Third Wash
FROM : Second Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.979	24.979	24.979	24.979
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.868			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.3757E-03	0.0	0.0	0.0
HNO3	8.6893E-22	0.0	0.0	0.0
AMIII OH3	1.4619E-14	0.0	0.0	0.0
AMNO33	5.5979E-28	0.0	0.0	0.0
BIOH3	4.1300E-09	0.0	0.0	0.0
CROH3	2.4767E-11	8.6693E-06	0.0	0.0
CSNO3	5.2147E-16	0.0	0.0	0.0
FEIII OH3	6.0454E-15	2.0361E-04	0.0	0.0
ALOH3	4.1970E-14	0.0	0.0	0.0
MGHPO4	8.5681E-16	0.0	0.0	0.0
PBHP04	1.5857E-34	0.0	0.0	0.0
PBNO32	1.4352E-36	0.0	0.0	0.0
PBO	1.4204E-24	2.9124E-06	0.0	0.0
SIO2	1.8837E-11	0.0	0.0	0.0
SRHP04	3.9109E-15	0.0	0.0	0.0
SRNO32	1.3744E-15	0.0	0.0	0.0
OHION	2.3769E-06	0.0	0.0	0.0
ALOH2ION	1.4073E-21	0.0	0.0	0.0
ALOH4ION	1.0555E-07	0.0	0.0	0.0
ALOHION	8.7032E-29	0.0	0.0	0.0
AMIIION	1.1945E-25	0.0	0.0	0.0
AMIIIOH2ION	1.0647E-17	0.0	0.0	0.0
AMIIIOHION	2.5122E-21	0.0	0.0	0.0
AMNO32ION	6.4978E-29	0.0	0.0	0.0
AMNO3ION	4.0293E-27	0.0	0.0	0.0
BIION	7.2252E-38	0.0	0.0	0.0
BINO32ION	2.4796E-40	0.0	0.0	0.0
BINO3ION	5.7146E-39	0.0	0.0	0.0
BIOH2ION	5.4781E-17	0.0	0.0	0.0
BIOH4ION	4.8432E-09	0.0	0.0	0.0
BIOHION	1.2832E-26	0.0	0.0	0.0
CAH2PO4ION	8.8976E-21	0.0	0.0	0.0
CAION	7.2280E-12	0.0	0.0	0.0
CAOHION	3.7673E-12	0.0	0.0	0.0
CAPO4ION	1.5342E-09	0.0	0.0	0.0
CRIIH2PO4ION	6.0852E-37	0.0	0.0	0.0
CRIIHPO4ION	9.4456E-25	0.0	0.0	0.0
CRIIION	6.2101E-31	0.0	0.0	0.0
CRIIINO3ION	2.3986E-31	0.0	0.0	0.0
CROH2ION	1.3305E-18	0.0	0.0	0.0
CROH4ION	2.9166E-09	0.0	0.0	0.0
CROHION	1.4135E-22	0.0	0.0	0.0

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CSION	9.9786E-14	0.0	0.0	0.0
FEIII2OH2ION	2.4796E-40	0.0	0.0	0.0
FEIIIH2PO4ION	2.4796E-40	0.0	0.0	0.0
FEIIIHPO4ION	3.7950E-37	0.0	0.0	0.0
FEIIIIION	2.4796E-40	0.0	0.0	0.0
FEIIINO3ION	2.4796E-40	0.0	0.0	0.0
FEIIIOH2ION	1.4250E-22	0.0	0.0	0.0
FEIIIOH4ION	1.5411E-11	0.0	0.0	0.0
FEIIIOHION	2.0589E-30	0.0	0.0	0.0
H2P2O7ION	2.3851E-27	0.0	0.0	0.0
H2PO4ION	2.7370E-15	0.0	0.0	0.0
H3P2O7ION	2.9128E-38	0.0	0.0	0.0
H3SIO4ION	2.7765E-08	0.0	0.0	0.0
HION	4.5022E-18	0.0	0.0	0.0
HP2O7ION	1.6443E-20	0.0	0.0	0.0
HPBO2ION	1.6259E-22	0.0	0.0	0.0
HPO4ION	3.0390E-09	0.0	0.0	0.0
MGH2PO4ION	9.9087E-23	0.0	0.0	0.0
MGION	6.4099E-14	0.0	0.0	0.0
MGOHION	3.1276E-13	0.0	0.0	0.0
MGPO4ION	1.8918E-11	0.0	0.0	0.0
NAION	2.8241E-06	0.0	0.0	0.0
NO3ION	1.7734E-07	0.0	0.0	0.0
ALION	3.9256E-36	0.0	0.0	0.0
P2O7ION	4.1808E-16	0.0	0.0	0.0
PBH2PO4ION	2.4796E-40	0.0	0.0	0.0
PBION	1.1475E-32	0.0	0.0	0.0
PBNO33ION	1.8296E-39	0.0	0.0	0.0
PBNO3ION	3.7053E-34	0.0	0.0	0.0
PBOHION	6.5181E-28	0.0	0.0	0.0
PO4ION	4.0359E-08	0.0	0.0	0.0
SRION	1.8913E-11	0.0	0.0	0.0
SRNO3ION	2.4090E-13	0.0	0.0	0.0
SROHION	3.6483E-12	0.0	0.0	0.0
SRPO4ION	5.4944E-11	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.3627E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.8971E-06	0.0	0.0
SR3PO42	0.0	4.6958E-07	0.0	0.0
<hr/>				
Total mol/hr	1.3813E-03	2.2292E-04	0.0	0.0
Total g/hr	2.4920E-02	2.4920E-02	0.0	0.0
Volume, L/hr	2.4865E-05	7.1156E-06	0.0	0.0
Enthalpy, cal/hr	-94.34	-48.16	0.0	0.0
Density, g/L	1002.2	3502.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Third Wash Water
TO : Third Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	5.0376E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIOH2ION	0.0	0.0	0.0	0.0
FEIIOH4ION	0.0	0.0	0.0	0.0
FEIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SiO4ION	0.0	0.0	0.0	0.0
HION	5.0376E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 3 Liquid
TO : Wash Liquids Mix
FROM : Third Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.723			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	1.6076E-19	0.0	0.0	0.0
AMIIIIOH3	1.3497E-14	0.0	0.0	0.0
AMNO33	3.5832E-28	0.0	0.0	0.0
BIOH3	8.8732E-09	0.0	0.0	0.0
CROH3	5.1419E-09	0.0	0.0	0.0
CSNO3	4.2888E-18	0.0	0.0	0.0
FEIIIIOH3	1.2576E-12	0.0	0.0	0.0
ALOH3	7.6955E-12	0.0	0.0	0.0
MGHPO4	7.1583E-10	0.0	0.0	0.0
PBHP04	1.3339E-28	0.0	0.0	0.0
PBNO32	2.3553E-34	0.0	0.0	0.0
PBO	2.9593E-22	0.0	0.0	0.0
SIO2	3.1117E-09	0.0	0.0	0.0
SRHPO4	1.2958E-11	0.0	0.0	0.0
SRNO32	8.8782E-16	0.0	0.0	0.0
OHION	2.7646E-06	0.0	0.0	0.0
ALOH2ION	2.7415E-17	0.0	0.0	0.0
ALOH4ION	1.0502E-07	0.0	0.0	0.0
ALOHION	1.2339E-22	0.0	0.0	0.0
AMIIIIION	4.0115E-20	0.0	0.0	0.0
AMIIIOH2ION	1.0440E-15	0.0	0.0	0.0
AMIIIOHION	1.7730E-17	0.0	0.0	0.0
AMNO32ION	4.9905E-27	0.0	0.0	0.0
AMNO3ION	2.5154E-23	0.0	0.0	0.0
BIION	5.6550E-32	0.0	0.0	0.0
BINO32ION	5.0023E-38	0.0	0.0	0.0
BINO3ION	8.3121E-35	0.0	0.0	0.0
BIOH2ION	1.2495E-14	0.0	0.0	0.0
BIOH4ION	5.5542E-11	0.0	0.0	0.0
BIOHION	2.1068E-22	0.0	0.0	0.0
CAH2PO4ION	3.1479E-15	0.0	0.0	0.0
CAION	3.9690E-08	0.0	0.0	0.0
CAOHION	3.3064E-10	0.0	0.0	0.0
CAPO4ION	2.6978E-08	0.0	0.0	0.0
CRIIIIH2PO4ION	3.8887E-27	0.0	0.0	0.0
CRIIIIHPO4ION	8.4251E-17	0.0	0.0	0.0
CRIIIIION	4.6835E-23	0.0	0.0	0.0
CRIIINO3ION	3.3732E-25	0.0	0.0	0.0
CROH2ION	2.9455E-14	0.0	0.0	0.0
CROH4ION	3.2277E-09	0.0	0.0	0.0
CROHION	2.2532E-16	0.0	0.0	0.0

CSION	9.9807E-14	0.0	0.0	0.0
FEIII2OH2ION	5.0023E-38	0.0	0.0	0.0
FEIIIH2PO4ION	5.0023E-38	0.0	0.0	0.0
FEIIIHPO4ION	3.3762E-29	0.0	0.0	0.0
FEIIIIION	1.1170E-32	0.0	0.0	0.0
FEIINO3ION	5.0023E-38	0.0	0.0	0.0
FEIIIOH2ION	3.1599E-18	0.0	0.0	0.0
FEIIIOH4ION	1.7104E-11	0.0	0.0	0.0
FEIIIOHION	3.2815E-24	0.0	0.0	0.0
H2P2O7ION	1.4339E-22	0.0	0.0	0.0
H2PO4ION	1.2186E-11	0.0	0.0	0.0
H3P2O7ION	5.4763E-31	0.0	0.0	0.0
H3SIO4ION	2.4535E-08	0.0	0.0	0.0
HION	9.7471E-14	0.0	0.0	0.0
HP2O7ION	2.1170E-18	0.0	0.0	0.0
HPBO2ION	1.8057E-22	0.0	0.0	0.0
HPO4ION	4.4042E-08	0.0	0.0	0.0
MGH2PO4ION	8.8360E-15	0.0	0.0	0.0
MGION	8.7360E-08	0.0	0.0	0.0
MGOHION	6.9222E-09	0.0	0.0	0.0
MGPO4ION	8.3875E-08	0.0	0.0	0.0
NAION	2.8101E-06	0.0	0.0	0.0
NO3ION	1.7645E-07	0.0	0.0	0.0
ALION	2.7000E-28	0.0	0.0	0.0
P2O7ION	6.6328E-17	0.0	0.0	0.0
PBH2PO4ION	1.0478E-33	0.0	0.0	0.0
PBION	1.1734E-26	0.0	0.0	0.0
PBNO33ION	5.0023E-38	0.0	0.0	0.0
PBNO3ION	7.2822E-30	0.0	0.0	0.0
PBOHION	1.4524E-23	0.0	0.0	0.0
PO4ION	1.2899E-09	0.0	0.0	0.0
SRION	1.0296E-07	0.0	0.0	0.0
SRNO3ION	1.8056E-11	0.0	0.0	0.0
SROHION	3.1951E-10	0.0	0.0	0.0
SRPO4ION	9.6610E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0001	0.0	0.0	0.0
Volume, L/hr	5.0157E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.88			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 3 Sludge
TO : Sludge Slurry Make-up
FROM : Third Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.723			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.3814E-03	0.0	0.0	0.0
HNO3	8.0015E-22	0.0	0.0	0.0
AMIIIIOH3	6.7175E-17	0.0	0.0	0.0
AMNO33	1.7834E-30	0.0	0.0	0.0
BIOH3	4.4164E-11	0.0	0.0	0.0
CROH3	2.5592E-11	8.6638E-06	0.0	0.0
CSNO3	2.1346E-20	0.0	0.0	0.0
FEIIIIOH3	6.2596E-15	2.0361E-04	0.0	0.0
ALOH3	3.8303E-14	0.0	0.0	0.0
MGHPO4	3.5628E-12	0.0	0.0	0.0
PBHP04	6.6392E-31	0.0	0.0	0.0
PBNO32	1.1723E-36	0.0	0.0	0.0
PBO	1.4729E-24	2.9124E-06	0.0	0.0
SIO2	1.5488E-11	0.0	0.0	0.0
SRHP04	6.4493E-14	0.0	0.0	0.0
SRNO32	4.4189E-18	0.0	0.0	0.0
OHION	1.3760E-08	0.0	0.0	0.0
ALOH2ION	1.3645E-19	0.0	0.0	0.0
ALOH4ION	5.2269E-10	0.0	0.0	0.0
ALOHION	6.1416E-25	0.0	0.0	0.0
AMIIIIION	1.9966E-22	0.0	0.0	0.0
AMIIIIOH2ION	5.1963E-18	0.0	0.0	0.0
AMIIIIOHION	8.8246E-20	0.0	0.0	0.0
AMNO32ION	2.4839E-29	0.0	0.0	0.0
AMNO3ION	1.2520E-25	0.0	0.0	0.0
BIION	2.8146E-34	0.0	0.0	0.0
BINO32ION	2.4897E-40	0.0	0.0	0.0
BINO3ION	4.1371E-37	0.0	0.0	0.0
BIOH2ION	6.2191E-17	0.0	0.0	0.0
BIOH4ION	2.7644E-13	0.0	0.0	0.0
BIOHION	1.0486E-24	0.0	0.0	0.0
CAH2PO4ION	1.5668E-17	0.0	0.0	0.0
CAION	1.9755E-10	0.0	0.0	0.0
CAOHION	1.6457E-12	0.0	0.0	0.0
CAPO4ION	1.3427E-10	0.0	0.0	0.0
CRIIIIH2PO4ION	1.9355E-29	0.0	0.0	0.0
CRIIIIHPO4ION	4.1934E-19	0.0	0.0	0.0
CRIIIIION	2.3311E-25	0.0	0.0	0.0
CRIIIIINO3ION	1.6789E-27	0.0	0.0	0.0
CROH2ION	1.4661E-16	0.0	0.0	0.0
CROH4ION	1.6065E-11	0.0	0.0	0.0
CROHION	1.1215E-18	0.0	0.0	0.0

CSION	4.9676E-16	0.0	0.0	0.0
FEIII2OH2ION	2.4897E-40	0.0	0.0	0.0
FEIIIH2PO4ION	2.4897E-40	0.0	0.0	0.0
FEIIIHPO4ION	1.6804E-31	0.0	0.0	0.0
FEIIIIION	5.5594E-35	0.0	0.0	0.0
FEIIINO3ION	2.4897E-40	0.0	0.0	0.0
FEIIIOH2ION	1.5727E-20	0.0	0.0	0.0
FEIIIOH4ION	8.5132E-14	0.0	0.0	0.0
FEIIIOHION	1.6333E-26	0.0	0.0	0.0
H2P2O7ION	7.1370E-25	0.0	0.0	0.0
H2PO4ION	6.0653E-14	0.0	0.0	0.0
H3P2O7ION	2.7257E-33	0.0	0.0	0.0
H3SIO4ION	1.2212E-10	0.0	0.0	0.0
HION	4.8514E-16	0.0	0.0	0.0
HP2O7ION	1.0537E-20	0.0	0.0	0.0
HPBO2ION	8.9874E-25	0.0	0.0	0.0
HPO4ION	2.1921E-10	0.0	0.0	0.0
MGH2PO4ION	4.3979E-17	0.0	0.0	0.0
MGION	4.3481E-10	0.0	0.0	0.0
MGOHION	3.4454E-11	0.0	0.0	0.0
MGPO4ION	4.1747E-10	0.0	0.0	0.0
NAION	1.3986E-08	0.0	0.0	0.0
NO3ION	8.7822E-10	0.0	0.0	0.0
ALION	1.3438E-30	0.0	0.0	0.0
P2O7ION	3.3013E-19	0.0	0.0	0.0
PBH2PO4ION	5.2153E-36	0.0	0.0	0.0
PBION	5.8402E-29	0.0	0.0	0.0
PBNO33ION	2.4897E-40	0.0	0.0	0.0
PBNO3ION	3.6245E-32	0.0	0.0	0.0
PBOHION	7.2291E-26	0.0	0.0	0.0
PO4ION	6.4200E-12	0.0	0.0	0.0
SRION	5.1247E-10	0.0	0.0	0.0
SRNO3ION	8.9869E-14	0.0	0.0	0.0
SROHION	1.5903E-12	0.0	0.0	0.0
SRPO4ION	4.8085E-12	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.1830E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.8752E-06	0.0	0.0
SR3PO42	0.0	4.3467E-07	0.0	0.0

Total mol/hr	1.3814E-03	2.2268E-04	0.0	0.0
Total g/hr	2.4887E-02	2.4887E-02	0.0	0.0
Volume, L/hr	2.4964E-05	7.1088E-06	0.0	0.0
Enthalpy, cal/hr	-94.37	-48.06	0.0	0.0
Density, g/L	996.88	3500.8		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash Liquids

TO :

FROM : Wash Liquids Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.528			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.49647	0.0	0.0	0.0
HNO3	1.1135E-17	0.0	0.0	0.0
AMIIIIOH3	1.0117E-10	0.0	0.0	0.0
AMNO33	1.8536E-19	0.0	0.0	0.0
BIOH3	3.7920E-05	0.0	0.0	0.0
CROH3	8.7450E-09	3.7325E-09	0.0	0.0
CSNO3	4.8997E-11	0.0	0.0	0.0
FEIIIIOH3	2.1389E-12	1.6055E-11	0.0	0.0
ALOH3	1.7823E-11	0.0	0.0	0.0
MGHPO4	1.6068E-11	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	2.4037E-07	0.0	0.0	0.0
SRHP04	5.4434E-12	0.0	0.0	0.0
SRNO32	4.1050E-11	0.0	0.0	0.0
OHION	4.3286E-04	0.0	0.0	0.0
ALOH2ION	1.5493E-18	0.0	0.0	0.0
ALOH4ION	2.4038E-05	0.0	0.0	0.0
ALOHION	2.8811E-25	0.0	0.0	0.0
AMIIIIION	2.8844E-20	0.0	0.0	0.0
AMIIIOH2ION	1.9110E-13	0.0	0.0	0.0
AMIIIOHION	1.4733E-16	0.0	0.0	0.0
AMNO32ION	1.5368E-21	0.0	0.0	0.0
AMNO3ION	8.5732E-21	0.0	0.0	0.0
BIION	2.2939E-32	0.0	0.0	0.0
BINO32ION	2.8612E-33	0.0	0.0	0.0
BINO3ION	1.6086E-32	0.0	0.0	0.0
BIOH2ION	1.3030E-12	0.0	0.0	0.0
BIOH4ION	2.4252E-05	0.0	0.0	0.0
BIOHION	9.9403E-22	0.0	0.0	0.0
CAH2PO4ION	1.3635E-17	0.0	0.0	0.0
CAION	5.8402E-10	0.0	0.0	0.0
CAOHION	9.1372E-11	0.0	0.0	0.0
CAPO4ION	5.1124E-07	0.0	0.0	0.0
CRIIIH2PO4ION	1.1319E-31	0.0	0.0	0.0
CRIIIHPO4ION	5.1883E-20	0.0	0.0	0.0
CRIIIIION	7.7546E-27	0.0	0.0	0.0
CRIIINO3ION	2.6081E-26	0.0	0.0	0.0
CROH2ION	1.1490E-15	0.0	0.0	0.0
CROH4ION	5.6088E-07	0.0	0.0	0.0
CROHION	3.9309E-19	0.0	0.0	0.0

CSION	6.4600E-10	0.0	0.0	0.0
FEIII2OH2ION	8.9483E-38	0.0	0.0	0.0
FEIIIH2PO4ION	8.9483E-38	0.0	0.0	0.0
FEIIIHPO4ION	2.0792E-32	0.0	0.0	0.0
FEIIIIION	1.6309E-36	0.0	0.0	0.0
FEIIINO3ION	8.9483E-38	0.0	0.0	0.0
FEIIIOH2ION	1.2327E-19	0.0	0.0	0.0
FEIIIOH4ION	2.9722E-09	0.0	0.0	0.0
FEIIIOHION	5.8740E-27	0.0	0.0	0.0
H2P2O7ION	1.2248E-21	0.0	0.0	0.0
H2PO4ION	3.2865E-11	0.0	0.0	0.0
H3P2O7ION	2.0322E-32	0.0	0.0	0.0
H3SiO4ION	1.9227E-04	0.0	0.0	0.0
HION	3.7439E-15	0.0	0.0	0.0
HP2O7ION	6.9852E-15	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	2.6213E-05	0.0	0.0	0.0
MGH2PO4ION	4.6651E-18	0.0	0.0	0.0
MGION	1.4754E-10	0.0	0.0	0.0
MGOHION	2.3317E-10	0.0	0.0	0.0
MGPO4ION	1.9374E-07	0.0	0.0	0.0
NAION	2.7891E-03	0.0	0.0	0.0
NO3ION	1.2288E-03	0.0	0.0	0.0
ALION	4.7492E-32	0.0	0.0	0.0
P2O7ION	2.0118E-10	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	2.7775E-04	0.0	0.0	0.0
SRION	3.7092E-09	0.0	0.0	0.0
SRNO3ION	5.1902E-10	0.0	0.0	0.0
SROHION	2.0801E-10	0.0	0.0	0.0
SRPO4ION	4.1764E-08	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	2.6064E-08	0.0	0.0
<hr/>				
Total mol/hr	0.50151	2.9813E-08	0.0	0.0
Total g/hr	9.1580	1.2188E-05	0.0	0.0
Volume, L/hr	9.0116E-03	1.0938E-10	0.0	0.0
Enthalpy, cal/hr	-3.4337E+04	-2.6557E-02	0.0	0.0
Density, g/L	1016.3	1.1143E+05		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Slurry Water
TO : Sludge Slurry Make-up
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	1.0075E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	1.0075E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	5.5508E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0032E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Sludge Slurry

TO : Sludge Slurry Split

FROM : Sludge Slurry Make-up

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.378			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.6889E-02	0.0	0.0	0.0
HNO3	1.7857E-21	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	4.4316E-11	0.0	0.0	0.0
CROH3	1.0541E-09	8.6625E-06	0.0	0.0
CSNO3	5.2486E-22	0.0	0.0	0.0
FEIIIOH3	2.5781E-13	2.0361E-04	0.0	0.0
ALOH3	8.5468E-14	0.0	0.0	0.0
MGHPO4	5.6327E-10	0.0	0.0	0.0
PBHPO4	1.0497E-28	0.0	0.0	0.0
PBNO32	1.4176E-37	0.0	0.0	0.0
PBO	6.0665E-23	2.9124E-06	0.0	0.0
SIO2	3.0357E-11	0.0	0.0	0.0
SRHPO4	4.1591E-12	0.0	0.0	0.0
SRNO32	2.1797E-19	0.0	0.0	0.0
OHION	2.5399E-07	0.0	0.0	0.0
ALOH2ION	6.7099E-19	0.0	0.0	0.0
ALOH4ION	5.2264E-10	0.0	0.0	0.0
ALOHION	6.5756E-24	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	2.9145E-33	0.0	0.0	0.0
BINO32ION	1.0254E-38	0.0	0.0	0.0
BINO3ION	1.0793E-37	0.0	0.0	0.0
BIOH2ION	1.3753E-16	0.0	0.0	0.0
BIOH4ION	1.2429E-13	0.0	0.0	0.0
BIOHION	5.0485E-24	0.0	0.0	0.0
CAH2PO4ION	2.2267E-15	0.0	0.0	0.0
CAION	1.5916E-08	0.0	0.0	0.0
CAOHION	6.0930E-11	0.0	0.0	0.0
CAPO4ION	3.8797E-09	0.0	0.0	0.0
CRIIH2PO4ION	1.4681E-26	0.0	0.0	0.0
CRIIHPO4ION	1.4610E-16	0.0	0.0	0.0
CRIIION	9.9071E-23	0.0	0.0	0.0
CRIIINO3ION	1.7977E-26	0.0	0.0	0.0
CROH2ION	1.3307E-14	0.0	0.0	0.0
CROH4ION	2.9647E-10	0.0	0.0	0.0
CROHION	2.2162E-16	0.0	0.0	0.0

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CSION	4.9678E-16	0.0	0.0	0.0
FEIII2OH2ION	1.0254E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.4850E-37	0.0	0.0	0.0
FEIIIHPO4ION	5.8546E-29	0.0	0.0	0.0
FEIIIIION	2.3629E-32	0.0	0.0	0.0
FEIIINO3ION	1.0254E-38	0.0	0.0	0.0
FEIIIOH2ION	1.4275E-18	0.0	0.0	0.0
FEIIIOH4ION	1.5711E-12	0.0	0.0	0.0
FEIIIOHION	3.2276E-24	0.0	0.0	0.0
H2P2O7ION	8.5867E-23	0.0	0.0	0.0
H2PO4ION	4.2956E-12	0.0	0.0	0.0
H3P2O7ION	7.4116E-31	0.0	0.0	0.0
H3SIO4ION	1.0725E-10	0.0	0.0	0.0
HION	4.4030E-14	0.0	0.0	0.0
HP2O7ION	5.5429E-19	0.0	0.0	0.0
HPBO2ION	1.6586E-23	0.0	0.0	0.0
HPO4ION	6.8698E-09	0.0	0.0	0.0
MGH2PO4ION	1.5322E-14	0.0	0.0	0.0
MGION	8.5876E-08	0.0	0.0	0.0
MGOHION	3.1272E-09	0.0	0.0	0.0
MGPO4ION	2.9567E-08	0.0	0.0	0.0
NAION	1.3986E-08	0.0	0.0	0.0
NO3ION	8.7813E-10	0.0	0.0	0.0
ALION	3.0947E-29	0.0	0.0	0.0
P2O7ION	7.4958E-18	0.0	0.0	0.0
PBH2PO4ION	1.8170E-33	0.0	0.0	0.0
PBION	1.1524E-26	0.0	0.0	0.0
PBNO33ION	1.0254E-38	0.0	0.0	0.0
PBNO3ION	1.7826E-31	0.0	0.0	0.0
PBOHION	6.5616E-24	0.0	0.0	0.0
PO4ION	8.7988E-11	0.0	0.0	0.0
SRION	4.1287E-08	0.0	0.0	0.0
SRNO3ION	1.8027E-13	0.0	0.0	0.0
SROHION	5.8877E-11	0.0	0.0	0.0
SRPO4ION	1.3893E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.0647E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.8687E-06	0.0	0.0
SR3PO42	0.0	4.2101E-07	0.0	0.0
<hr/>				
Total mol/hr	5.6890E-02	2.2254E-04	0.0	0.0
Total g/hr	1.0249	2.4871E-02	0.0	0.0
Volume, L/hr	1.0281E-03	7.1053E-06	0.0	0.0
Enthalpy, cal/hr	-3886.	-48.02	0.0	0.0
Density, g/L	996.87	3500.4		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Slurry Sample

TO :

FROM : Sludge Slurry Split

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.378			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	7.0600E-03	0.0	0.0	0.0
HNO3	2.2161E-22	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	5.4996E-12	0.0	0.0	0.0
CROH3	1.3081E-10	1.0750E-06	0.0	0.0
CSNO3	6.5136E-23	0.0	0.0	0.0
FEIIIOH3	3.1995E-14	2.5268E-05	0.0	0.0
ALOH3	1.0607E-14	0.0	0.0	0.0
MGHPO4	6.9902E-11	0.0	0.0	0.0
PBHP04	1.3026E-29	0.0	0.0	0.0
PBNO32	1.7593E-38	0.0	0.0	0.0
PBO	7.5285E-24	3.6143E-07	0.0	0.0
SiO2	3.7673E-12	0.0	0.0	0.0
SRHPO4	5.1614E-13	0.0	0.0	0.0
SRNO32	2.7050E-20	0.0	0.0	0.0
OHION	3.1521E-08	0.0	0.0	0.0
ALOH2ION	8.3269E-20	0.0	0.0	0.0
ALOH4ION	6.4860E-11	0.0	0.0	0.0
ALOHION	8.1603E-25	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	3.6169E-34	0.0	0.0	0.0
BINO32ION	1.2725E-39	0.0	0.0	0.0
BINO3ION	1.3394E-38	0.0	0.0	0.0
BIOH2ION	1.7067E-17	0.0	0.0	0.0
BIOH4ION	1.5424E-14	0.0	0.0	0.0
BIOHION	6.2652E-25	0.0	0.0	0.0
CAH2PO4ION	2.7633E-16	0.0	0.0	0.0
CAION	1.9752E-09	0.0	0.0	0.0
CAOHION	7.5614E-12	0.0	0.0	0.0
CAPO4ION	4.8147E-10	0.0	0.0	0.0
CRIIH2PO4ION	1.8219E-27	0.0	0.0	0.0
CRIIHPO4ION	1.8131E-17	0.0	0.0	0.0
CRIIION	1.2295E-23	0.0	0.0	0.0
CRIIINO3ION	2.2310E-27	0.0	0.0	0.0
CROH2ION	1.6514E-15	0.0	0.0	0.0
CROH4ION	3.6792E-11	0.0	0.0	0.0
CROHION	2.7503E-17	0.0	0.0	0.0

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CSION	6.1651E-17	0.0	0.0	0.0
FEIII2OH2ION	1.2725E-39	0.0	0.0	0.0
FEIIIH2PO4ION	1.8429E-38	0.0	0.0	0.0
FEIIIHPO4ION	7.2656E-30	0.0	0.0	0.0
FEIIIIION	2.9324E-33	0.0	0.0	0.0
FEIIINO3ION	1.2725E-39	0.0	0.0	0.0
FEIIIOH2ION	1.7715E-19	0.0	0.0	0.0
FEIIIOH4ION	1.9497E-13	0.0	0.0	0.0
FEIIIOHION	4.0055E-25	0.0	0.0	0.0
H2P2O7ION	1.0656E-23	0.0	0.0	0.0
H2PO4ION	5.3308E-13	0.0	0.0	0.0
H3P2O7ION	9.1978E-32	0.0	0.0	0.0
H3SIO4ION	1.3309E-11	0.0	0.0	0.0
HION	5.4641E-15	0.0	0.0	0.0
HP2O7ION	6.8788E-20	0.0	0.0	0.0
HPBO2ION	2.0583E-24	0.0	0.0	0.0
HPO4ION	8.5254E-10	0.0	0.0	0.0
MGH2PO4ION	1.9015E-15	0.0	0.0	0.0
MGION	1.0657E-08	0.0	0.0	0.0
MGOHION	3.8808E-10	0.0	0.0	0.0
MGPO4ION	3.6693E-09	0.0	0.0	0.0
NAION	1.7357E-09	0.0	0.0	0.0
NO3ION	1.0898E-10	0.0	0.0	0.0
ALION	3.8406E-30	0.0	0.0	0.0
P2O7ION	9.3023E-19	0.0	0.0	0.0
PBH2PO4ION	2.2550E-34	0.0	0.0	0.0
PBION	1.4301E-27	0.0	0.0	0.0
PBNO33ION	1.2725E-39	0.0	0.0	0.0
PBNO3ION	2.2122E-32	0.0	0.0	0.0
PBOHION	8.1430E-25	0.0	0.0	0.0
PO4ION	1.0919E-11	0.0	0.0	0.0
SRION	5.1238E-09	0.0	0.0	0.0
SRNO3ION	2.2371E-14	0.0	0.0	0.0
SROHION	7.3066E-12	0.0	0.0	0.0
SRPO4ION	1.7242E-11	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.8034E-07	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.8010E-07	0.0	0.0
SR3PO42	0.0	5.2248E-08	0.0	0.0
<hr/>				
Total mol/hr	7.0600E-03	2.7617E-05	0.0	0.0
Total g/hr	0.12719	3.0865E-03	0.0	0.0
Volume, L/hr	1.2759E-04	8.8176E-07	0.0	0.0
Enthalpy, cal/hr	-482.3	-5.959	0.0	0.0
Density, g/L	996.87	3500.4		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Slurry To Leach

TO : Leach Mix

FROM : Sludge Slurry Split

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.378			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	4.9829E-02	0.0	0.0	0.0
HNO3	1.5641E-21	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	3.8816E-11	0.0	0.0	0.0
CROH3	9.2326E-10	7.5875E-06	0.0	0.0
CSNO3	4.5973E-22	0.0	0.0	0.0
FEIIIOH3	2.2582E-13	1.7834E-04	0.0	0.0
ALOH3	7.4862E-14	0.0	0.0	0.0
MGHPO4	4.9337E-10	0.0	0.0	0.0
PBHPO4	9.1938E-29	0.0	0.0	0.0
PBNO32	1.2417E-37	0.0	0.0	0.0
PBO	5.3136E-23	2.5510E-06	0.0	0.0
SIO2	2.6590E-11	0.0	0.0	0.0
SRHPO4	3.6429E-12	0.0	0.0	0.0
SRNO32	1.9092E-19	0.0	0.0	0.0
OHION	2.2247E-07	0.0	0.0	0.0
ALOH2ION	5.8772E-19	0.0	0.0	0.0
ALOH4ION	4.5778E-10	0.0	0.0	0.0
ALOHION	5.7596E-24	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	2.5528E-33	0.0	0.0	0.0
BINO32ION	8.9812E-39	0.0	0.0	0.0
BINO3ION	9.4533E-38	0.0	0.0	0.0
BIOH2ION	1.2046E-16	0.0	0.0	0.0
BIOH4ION	1.0887E-13	0.0	0.0	0.0
BIOHION	4.4220E-24	0.0	0.0	0.0
CAH2PO4ION	1.9503E-15	0.0	0.0	0.0
CAION	1.3941E-08	0.0	0.0	0.0
CAOHION	5.3368E-11	0.0	0.0	0.0
CAPO4ION	3.3982E-09	0.0	0.0	0.0
CRIIH2PO4ION	1.2859E-26	0.0	0.0	0.0
CRIIHPO4ION	1.2797E-16	0.0	0.0	0.0
CRIIIIION	8.6776E-23	0.0	0.0	0.0
CRIIINO3ION	1.5746E-26	0.0	0.0	0.0
CROH2ION	1.1655E-14	0.0	0.0	0.0
CROH4ION	2.5968E-10	0.0	0.0	0.0
CROHION	1.9412E-16	0.0	0.0	0.0

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CSION	4.3513E-16	0.0	0.0	0.0
FEIII2OH2ION	8.9812E-39	0.0	0.0	0.0
FEIIIH2PO4ION	1.3007E-37	0.0	0.0	0.0
FEIIIHPO4ION	5.1281E-29	0.0	0.0	0.0
FEIIIIION	2.0697E-32	0.0	0.0	0.0
FEIIINO3ION	8.9812E-39	0.0	0.0	0.0
FEIIIOH2ION	1.2504E-18	0.0	0.0	0.0
FEIIIOH4ION	1.3761E-12	0.0	0.0	0.0
FEIIIOHION	2.8271E-24	0.0	0.0	0.0
H2P2O7ION	7.5211E-23	0.0	0.0	0.0
H2PO4ION	3.7625E-12	0.0	0.0	0.0
H3P2O7ION	6.4918E-31	0.0	0.0	0.0
H3SiO4ION	9.3937E-11	0.0	0.0	0.0
HION	3.8566E-14	0.0	0.0	0.0
HP2O7ION	4.8551E-19	0.0	0.0	0.0
HPBO2ION	1.4527E-23	0.0	0.0	0.0
HPO4ION	6.0172E-09	0.0	0.0	0.0
MGH2PO4ION	1.3421E-14	0.0	0.0	0.0
MGION	7.5219E-08	0.0	0.0	0.0
MGOHION	2.7391E-09	0.0	0.0	0.0
MGPO4ION	2.5898E-08	0.0	0.0	0.0
NAION	1.2251E-08	0.0	0.0	0.0
NO3ION	7.6916E-10	0.0	0.0	0.0
ALION	2.7107E-29	0.0	0.0	0.0
P2O7ION	6.5656E-18	0.0	0.0	0.0
PBH2PO4ION	1.5916E-33	0.0	0.0	0.0
PBION	1.0094E-26	0.0	0.0	0.0
PBNO33ION	8.9812E-39	0.0	0.0	0.0
PBNO3ION	1.5614E-31	0.0	0.0	0.0
PBOHION	5.7473E-24	0.0	0.0	0.0
PO4ION	7.7068E-11	0.0	0.0	0.0
SRION	3.6164E-08	0.0	0.0	0.0
SRNO3ION	1.5790E-13	0.0	0.0	0.0
SROHION	5.1570E-11	0.0	0.0	0.0
SRPO4ION	1.2169E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.6844E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3886E-06	0.0	0.0
SR3PO42	0.0	3.6877E-07	0.0	0.0
<hr/>				
Total mol/hr	4.9830E-02	1.9492E-04	0.0	0.0
Total g/hr	0.89771	2.1785E-02	0.0	0.0
Volume, L/hr	9.0053E-04	6.2235E-06	0.0	0.0
Enthalpy, cal/hr	-3404.	-42.06	0.0	0.0
Density, g/L	996.87	3500.4		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 10 M NaOH
TO : Leach Mix
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	15.413			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	2.1038E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	3.0002E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	3.4933E-19	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	3.0002E-03	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	2.7038E-02	0.0	0.0	0.0
Total g/hr	0.49900	0.0	0.0	0.0
Volume, L/hr	4.0236E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-1768.	0.0	0.0	0.0
Density, g/L	1240.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Mix Slurry
TO : First Leach
FROM : Leach Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.335			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	7.0867E-02	0.0	0.0	0.0
HNO3	4.7125E-26	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	4.2845E-13	0.0	0.0	0.0
CROH3	6.7352E-10	1.5193E-06	0.0	0.0
CSNO3	7.9203E-23	0.0	0.0	0.0
FEIII OH3	1.6473E-13	1.7831E-04	0.0	0.0
ALOH3	2.6329E-18	0.0	0.0	0.0
MGHPO4	9.6085E-21	0.0	0.0	0.0
PBHP04	1.2773E-38	0.0	0.0	0.0
PBNO32	1.2773E-38	0.0	0.0	0.0
PBO	3.8763E-23	2.5510E-06	0.0	0.0
SIO2	1.1696E-15	0.0	0.0	0.0
SRHPO4	7.4612E-16	0.0	0.0	0.0
SRNO32	3.0138E-21	0.0	0.0	0.0
OHION	2.9938E-03	0.0	0.0	0.0
ALOH2ION	6.7702E-27	0.0	0.0	0.0
ALOH4ION	4.5786E-10	0.0	0.0	0.0
ALOHION	1.3298E-35	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIII OH2ION	0.0	0.0	0.0	0.0
AMIIII OHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	1.2773E-38	0.0	0.0	0.0
BINO32ION	1.2773E-38	0.0	0.0	0.0
BINO3ION	1.2773E-38	0.0	0.0	0.0
BIOH2ION	4.3549E-22	0.0	0.0	0.0
BIOH4ION	3.8497E-11	0.0	0.0	0.0
BIOHION	3.2050E-33	0.0	0.0	0.0
CAH2PO4ION	1.1910E-22	0.0	0.0	0.0
CAION	4.3428E-08	0.0	0.0	0.0
CAOHION	1.3408E-07	0.0	0.0	0.0
CAPO4ION	2.4490E-08	0.0	0.0	0.0
CRIIIIH2PO4ION	1.2773E-38	0.0	0.0	0.0
CRIIIIHPO4ION	8.1553E-31	0.0	0.0	0.0
CRIIIIION	9.6740E-34	0.0	0.0	0.0
CRIIII NO3ION	3.4081E-38	0.0	0.0	0.0
CROH2ION	2.7823E-18	0.0	0.0	0.0
CROH4ION	6.0688E-06	0.0	0.0	0.0
CROHION	9.2604E-24	0.0	0.0	0.0

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CSION	4.3516E-16	0.0	0.0	0.0
FEIII2OH2ION	1.2773E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.2773E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.2773E-38	0.0	0.0	0.0
FEIIIIION	1.2773E-38	0.0	0.0	0.0
FEIIINO3ION	1.2773E-38	0.0	0.0	0.0
FEIIIOH2ION	2.9869E-22	0.0	0.0	0.0
FEIIIOH4ION	3.2160E-08	0.0	0.0	0.0
FEIIIOHION	1.3540E-31	0.0	0.0	0.0
H2P2O7ION	7.2983E-35	0.0	0.0	0.0
H2PO4ION	2.6489E-18	0.0	0.0	0.0
H3P2O7ION	1.2773E-38	0.0	0.0	0.0
H3SIO4ION	1.2053E-10	0.0	0.0	0.0
HION	1.2028E-17	0.0	0.0	0.0
HP2O7ION	4.3892E-26	0.0	0.0	0.0
HPBO2ION	3.3951E-19	0.0	0.0	0.0
HPO4ION	3.1607E-10	0.0	0.0	0.0
MGH2PO4ION	7.7930E-29	0.0	0.0	0.0
MGION	2.9247E-14	0.0	0.0	0.0
MGOHION	6.5435E-13	0.0	0.0	0.0
MGPO4ION	1.7750E-14	0.0	0.0	0.0
NAION	3.0002E-03	0.0	0.0	0.0
NO3ION	7.6929E-10	0.0	0.0	0.0
ALION	1.2773E-38	0.0	0.0	0.0
P2O7ION	2.1641E-19	0.0	0.0	0.0
PBH2PO4ION	1.2773E-38	0.0	0.0	0.0
PBION	1.4265E-31	0.0	0.0	0.0
PBNO33ION	1.2773E-38	0.0	0.0	0.0
PBNO3ION	1.2773E-38	0.0	0.0	0.0
PBOHION	1.2501E-27	0.0	0.0	0.0
PO4ION	2.7568E-07	0.0	0.0	0.0
SRION	1.1933E-07	0.0	0.0	0.0
SRNO3ION	2.5825E-14	0.0	0.0	0.0
SROHION	1.2956E-07	0.0	0.0	0.0
SRPO4ION	8.7698E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7888E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3270E-06	0.0	0.0
SR3PO42	0.0	2.9763E-07	0.0	0.0
<hr/>				
Total mol/hr	7.6868E-02	1.8879E-04	0.0	0.0
Total g/hr	1.3974	2.1111E-02	0.0	0.0
Volume, L/hr	1.2955E-03	6.0420E-06	0.0	0.0
Enthalpy, cal/hr	-5178.	-40.53	0.0	0.0
Density, g/L	1078.6	3494.0		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 1 Liquid
TO : Leach Liquids Mix
FROM : First Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.335			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	6.9796E-02	0.0	0.0	0.0
HNO3	4.6413E-26	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	4.2198E-13	0.0	0.0	0.0
CROH3	6.6334E-10	0.0	0.0	0.0
CSNO3	7.8006E-23	0.0	0.0	0.0
FEIIIOH3	1.6225E-13	0.0	0.0	0.0
ALOH3	2.5932E-18	0.0	0.0	0.0
MGHPO4	9.4633E-21	0.0	0.0	0.0
PBHPO4	1.2580E-38	0.0	0.0	0.0
PBNO32	1.2580E-38	0.0	0.0	0.0
PBO	3.8177E-23	0.0	0.0	0.0
SIO2	1.1520E-15	0.0	0.0	0.0
SRHPO4	7.3485E-16	0.0	0.0	0.0
SRNO32	2.9683E-21	0.0	0.0	0.0
OHION	2.9486E-03	0.0	0.0	0.0
ALOH2ION	6.6679E-27	0.0	0.0	0.0
ALOH4ION	4.5094E-10	0.0	0.0	0.0
ALOHION	1.3097E-35	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	1.2580E-38	0.0	0.0	0.0
BINO32ION	1.2580E-38	0.0	0.0	0.0
BINO3ION	1.2580E-38	0.0	0.0	0.0
BIOH2ION	4.2891E-22	0.0	0.0	0.0
BIOH4ION	3.7915E-11	0.0	0.0	0.0
BIOHION	3.1566E-33	0.0	0.0	0.0
CAH2PO4ION	1.1730E-22	0.0	0.0	0.0
CAION	4.2772E-08	0.0	0.0	0.0
CAOHION	1.3205E-07	0.0	0.0	0.0
CAPO4ION	2.4120E-08	0.0	0.0	0.0
CRIIH2PO4ION	1.2580E-38	0.0	0.0	0.0
CRIIHPO4ION	8.0321E-31	0.0	0.0	0.0
CRIIION	9.5279E-34	0.0	0.0	0.0
CRIIINO3ION	3.3566E-38	0.0	0.0	0.0
CROH2ION	2.7403E-18	0.0	0.0	0.0
CROH4ION	5.9771E-06	0.0	0.0	0.0
CROHION	9.1205E-24	0.0	0.0	0.0

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CSION	4.2858E-16	0.0	0.0	0.0
FEIII2OH2ION	1.2580E-38	0.0	0.0	0.0
FEIIIIH2PO4ION	1.2580E-38	0.0	0.0	0.0
FEIIIIHPO4ION	1.2580E-38	0.0	0.0	0.0
FEIIIIION	1.2580E-38	0.0	0.0	0.0
FEIIINO3ION	1.2580E-38	0.0	0.0	0.0
FEIIIOH2ION	2.9418E-22	0.0	0.0	0.0
FEIIIOH4ION	3.1674E-08	0.0	0.0	0.0
FEIIIOHION	1.3336E-31	0.0	0.0	0.0
H2P2O7ION	7.1880E-35	0.0	0.0	0.0
H2PO4ION	2.6089E-18	0.0	0.0	0.0
H3P2O7ION	1.2580E-38	0.0	0.0	0.0
H3SIO4ION	1.1871E-10	0.0	0.0	0.0
HION	1.1846E-17	0.0	0.0	0.0
HP2O7ION	4.3229E-26	0.0	0.0	0.0
HPBO2ION	3.3438E-19	0.0	0.0	0.0
HPO4ION	3.1129E-10	0.0	0.0	0.0
MGH2PO4ION	7.6753E-29	0.0	0.0	0.0
MGION	2.8805E-14	0.0	0.0	0.0
MGOHION	6.4446E-13	0.0	0.0	0.0
MGPO4ION	1.7482E-14	0.0	0.0	0.0
NAION	2.9549E-03	0.0	0.0	0.0
NO3ION	7.5767E-10	0.0	0.0	0.0
ALION	1.2580E-38	0.0	0.0	0.0
P2O7ION	2.1314E-19	0.0	0.0	0.0
PBH2PO4ION	1.2580E-38	0.0	0.0	0.0
PBION	1.4049E-31	0.0	0.0	0.0
PBNO33ION	1.2580E-38	0.0	0.0	0.0
PBNO3ION	1.2580E-38	0.0	0.0	0.0
PBOHION	1.2312E-27	0.0	0.0	0.0
PO4ION	2.7151E-07	0.0	0.0	0.0
SRION	1.1753E-07	0.0	0.0	0.0
SRNO3ION	2.5435E-14	0.0	0.0	0.0
SROHION	1.2760E-07	0.0	0.0	0.0
SRPO4ION	8.6373E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	7.5707E-02	0.0	0.0	0.0
Total g/hr	1.3763	0.0	0.0	0.0
Volume, L/hr	1.2759E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-5099.	0.0	0.0	0.0
Density, g/L	1078.6			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 1 Sludge
TO : Second Leach
FROM : First Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.335			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.0706E-03	0.0	0.0	0.0
HNO3	7.1194E-28	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	6.4728E-15	0.0	0.0	0.0
CROH3	1.0175E-11	1.5193E-06	0.0	0.0
CSNO3	1.1966E-24	0.0	0.0	0.0
FEIIIOH3	2.4887E-15	1.7831E-04	0.0	0.0
ALOH3	3.9777E-20	0.0	0.0	0.0
MGHPO4	1.4516E-22	0.0	0.0	0.0
PBHPO4	1.9297E-40	0.0	0.0	0.0
PBNO32	1.9297E-40	0.0	0.0	0.0
PBO	5.8561E-25	2.5510E-06	0.0	0.0
SiO2	1.7670E-17	0.0	0.0	0.0
SRHPO4	1.1272E-17	0.0	0.0	0.0
SRNO32	4.5532E-23	0.0	0.0	0.0
OHION	4.5229E-05	0.0	0.0	0.0
ALOH2ION	1.0228E-28	0.0	0.0	0.0
ALOH4ION	6.9170E-12	0.0	0.0	0.0
ALOHION	2.0089E-37	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	1.9297E-40	0.0	0.0	0.0
BINO32ION	1.9297E-40	0.0	0.0	0.0
BINO3ION	1.9297E-40	0.0	0.0	0.0
BIOH2ION	6.5792E-24	0.0	0.0	0.0
BIOH4ION	5.8159E-13	0.0	0.0	0.0
BIOHION	4.8419E-35	0.0	0.0	0.0
CAH2PO4ION	1.7993E-24	0.0	0.0	0.0
CAION	6.5609E-10	0.0	0.0	0.0
CAOHION	2.0255E-09	0.0	0.0	0.0
CAPO4ION	3.6998E-10	0.0	0.0	0.0
CRIIH2PO4ION	1.9297E-40	0.0	0.0	0.0
CRIIHPO4ION	1.2321E-32	0.0	0.0	0.0
CRIIIIION	1.4615E-35	0.0	0.0	0.0
CRIIINO3ION	5.1488E-40	0.0	0.0	0.0
CROH2ION	4.2033E-20	0.0	0.0	0.0
CROH4ION	9.1683E-08	0.0	0.0	0.0
CROHION	1.3990E-25	0.0	0.0	0.0

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CSION	6.5741E-18	0.0	0.0	0.0
FEIII2OH2ION	1.9297E-40	0.0	0.0	0.0
FEIIIH2PO4ION	1.9297E-40	0.0	0.0	0.0
FEIIIHPO4ION	1.9297E-40	0.0	0.0	0.0
FEIIIIION	1.9297E-40	0.0	0.0	0.0
FEIIINO3ION	1.9297E-40	0.0	0.0	0.0
FEIIIOH2ION	4.5125E-24	0.0	0.0	0.0
FEIIIOH4ION	4.8585E-10	0.0	0.0	0.0
FEIIIOHION	2.0456E-33	0.0	0.0	0.0
H2P2O7ION	1.1026E-36	0.0	0.0	0.0
H2PO4ION	4.0019E-20	0.0	0.0	0.0
H3P2O7ION	1.9297E-40	0.0	0.0	0.0
H3SIO4ION	1.8208E-12	0.0	0.0	0.0
HION	1.8171E-19	0.0	0.0	0.0
HP2O7ION	6.6309E-28	0.0	0.0	0.0
HPBO2ION	5.1291E-21	0.0	0.0	0.0
HPO4ION	4.7750E-12	0.0	0.0	0.0
MGH2PO4ION	1.1773E-30	0.0	0.0	0.0
MGION	4.4185E-16	0.0	0.0	0.0
MGOHION	9.8855E-15	0.0	0.0	0.0
MGPO4ION	2.6816E-16	0.0	0.0	0.0
NAION	4.5326E-05	0.0	0.0	0.0
NO3ION	1.1622E-11	0.0	0.0	0.0
ALION	1.9297E-40	0.0	0.0	0.0
P2O7ION	3.2694E-21	0.0	0.0	0.0
PBH2PO4ION	1.9297E-40	0.0	0.0	0.0
PBION	2.1550E-33	0.0	0.0	0.0
PBNO33ION	1.9297E-40	0.0	0.0	0.0
PBNO3ION	1.9297E-40	0.0	0.0	0.0
PBOHION	1.8885E-29	0.0	0.0	0.0
PO4ION	4.1648E-09	0.0	0.0	0.0
SRION	1.8027E-09	0.0	0.0	0.0
SRNO3ION	3.9015E-16	0.0	0.0	0.0
SROHION	1.9573E-09	0.0	0.0	0.0
SRPO4ION	1.3249E-11	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7888E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3270E-06	0.0	0.0
SR3PO42	0.0	2.9763E-07	0.0	0.0
<hr/>				
Total mol/hr	1.1613E-03	1.8879E-04	0.0	0.0
Total g/hr	2.1111E-02	2.1111E-02	0.0	0.0
Volume, L/hr	1.9572E-05	6.0420E-06	0.0	0.0
Enthalpy, cal/hr	-78.22	-40.53	0.0	0.0
Density, g/L	1078.6	3494.0		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 3 M NaOH
TO : Second Leach
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.499			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	3.0002E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	6.6832E-18	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	3.0002E-03	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	6.1509E-02	0.0	0.0	0.0
Total g/hr	1.1200	0.0	0.0	0.0
Volume, L/hr	1.0194E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4126.	0.0	0.0	0.0
Density, g/L	1098.7			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 2 Liquid
TO : Leach Liquids Mix
FROM : Second Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.020	25.020	25.020	25.020
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.495			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5543E-02	0.0	0.0	0.0
HNO3	3.8220E-28	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	3.6671E-15	0.0	0.0	0.0
CROH3	1.0094E-10	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	1.0775E-13	0.0	0.0	0.0
ALOH3	2.3002E-20	0.0	0.0	0.0
MGHPO4	2.2016E-21	0.0	0.0	0.0
PBHP04	1.0011E-38	0.0	0.0	0.0
PBNO32	1.0011E-38	0.0	0.0	0.0
PBO	2.5391E-23	0.0	0.0	0.0
SiO2	1.0306E-17	0.0	0.0	0.0
SRHP04	3.3654E-16	0.0	0.0	0.0
SRNO32	6.3478E-25	0.0	0.0	0.0
OHION	2.9879E-03	0.0	0.0	0.0
ALOH2ION	4.8108E-29	0.0	0.0	0.0
ALOH4ION	6.7904E-12	0.0	0.0	0.0
ALOHION	5.6434E-38	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	1.0011E-38	0.0	0.0	0.0
BINO32ION	1.0011E-38	0.0	0.0	0.0
BINO3ION	1.0011E-38	0.0	0.0	0.0
BIOH2ION	3.0331E-24	0.0	0.0	0.0
BIOH4ION	5.7363E-13	0.0	0.0	0.0
BIOHION	1.3340E-35	0.0	0.0	0.0
CAH2PO4ION	4.2338E-23	0.0	0.0	0.0
CAION	4.0126E-08	0.0	0.0	0.0
CAOHION	1.4022E-07	0.0	0.0	0.0
CAPO4ION	1.9824E-08	0.0	0.0	0.0
CRIIH2PO4ION	1.0011E-38	0.0	0.0	0.0
CRIIHPO4ION	3.5056E-32	0.0	0.0	0.0
CRIIION	4.3018E-35	0.0	0.0	0.0
CRIIINO3ION	1.0011E-38	0.0	0.0	0.0
CROH2ION	3.3963E-19	0.0	0.0	0.0
CROH4ION	1.5814E-06	0.0	0.0	0.0
CROHION	6.7691E-25	0.0	0.0	0.0

CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	1.0011E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.0011E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.0011E-38	0.0	0.0	0.0
FEIIIIION	1.0011E-38	0.0	0.0	0.0
FEIIINO3ION	1.0011E-38	0.0	0.0	0.0
FEIIIOH2ION	1.5900E-22	0.0	0.0	0.0
FEIIIOH4ION	3.6604E-08	0.0	0.0	0.0
FEIIIOHION	4.3059E-32	0.0	0.0	0.0
H2P2O7ION	1.6100E-35	0.0	0.0	0.0
H2PO4ION	1.0822E-18	0.0	0.0	0.0
H3P2O7ION	1.0011E-38	0.0	0.0	0.0
H3SIO4ION	1.7875E-12	0.0	0.0	0.0
HION	6.7424E-18	0.0	0.0	0.0
HP2O7ION	1.5128E-26	0.0	0.0	0.0
HPBO2ION	3.8668E-19	0.0	0.0	0.0
HPO4ION	2.1647E-10	0.0	0.0	0.0
MGH2PO4ION	1.4068E-29	0.0	0.0	0.0
MGION	1.4526E-14	0.0	0.0	0.0
MGOHION	3.4767E-13	0.0	0.0	0.0
MGPO4ION	7.2983E-15	0.0	0.0	0.0
NAION	2.9898E-03	0.0	0.0	0.0
NO3ION	1.1089E-11	0.0	0.0	0.0
ALION	1.0011E-38	0.0	0.0	0.0
P2O7ION	1.2712E-19	0.0	0.0	0.0
PBH2PO4ION	1.0011E-38	0.0	0.0	0.0
PBION	1.5780E-31	0.0	0.0	0.0
PBNO33ION	1.0011E-38	0.0	0.0	0.0
PBNO3ION	1.0011E-38	0.0	0.0	0.0
PBOHION	6.4499E-28	0.0	0.0	0.0
PO4ION	2.7790E-07	0.0	0.0	0.0
SRION	1.1158E-07	0.0	0.0	0.0
SRNO3ION	3.7590E-16	0.0	0.0	0.0
SROHION	1.3551E-07	0.0	0.0	0.0
SRPO4ION	7.0986E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	6.1523E-02	0.0	0.0	0.0
Total g/hr	1.1204	0.0	0.0	0.0
Volume, L/hr	1.0201E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4128.	0.0	0.0	0.0
Density, g/L	1098.4			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 2 Sludge
TO : Leach Wash
FROM : Second Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.020	25.020	25.020	25.020
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.495			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.0357E-03	0.0	0.0	0.0
HNO3	7.1267E-30	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	6.8378E-17	0.0	0.0	0.0
CROH3	1.8822E-12	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIOH3	2.0092E-15	1.7827E-04	0.0	0.0
ALOH3	4.2890E-22	0.0	0.0	0.0
MGHPO4	4.1051E-23	0.0	0.0	0.0
PBHP04	1.8667E-40	0.0	0.0	0.0
PBNO32	1.8667E-40	0.0	0.0	0.0
PBO	4.7346E-25	2.5510E-06	0.0	0.0
SIO2	1.9218E-19	0.0	0.0	0.0
SRHP04	6.2753E-18	0.0	0.0	0.0
SRNO32	1.1837E-26	0.0	0.0	0.0
OHION	5.5713E-05	0.0	0.0	0.0
ALOH2ION	8.9704E-31	0.0	0.0	0.0
ALOH4ION	1.2662E-13	0.0	0.0	0.0
ALOHION	1.0523E-39	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	1.8667E-40	0.0	0.0	0.0
BINO32ION	1.8667E-40	0.0	0.0	0.0
BINO3ION	1.8667E-40	0.0	0.0	0.0
BIOH2ION	5.6557E-26	0.0	0.0	0.0
BIOH4ION	1.0696E-14	0.0	0.0	0.0
BIOHION	2.4874E-37	0.0	0.0	0.0
CAH2PO4ION	7.8946E-25	0.0	0.0	0.0
CAION	7.4822E-10	0.0	0.0	0.0
CAOHION	2.6146E-09	0.0	0.0	0.0
CAPO4ION	3.6964E-10	0.0	0.0	0.0
CRIIH2PO4ION	1.8667E-40	0.0	0.0	0.0
CRIIHPO4ION	6.5368E-34	0.0	0.0	0.0
CRIIION	8.0213E-37	0.0	0.0	0.0
CRIIINO3ION	1.8667E-40	0.0	0.0	0.0
CROH2ION	6.3329E-21	0.0	0.0	0.0
CROH4ION	2.9487E-08	0.0	0.0	0.0
CROHION	1.2622E-26	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	1.8667E-40	0.0	0.0	0.0
FEIIIH2PO4ION	1.8667E-40	0.0	0.0	0.0
FEIIIHPO4ION	1.8667E-40	0.0	0.0	0.0
FEIIIIION	1.8667E-40	0.0	0.0	0.0
FEIIINO3ION	1.8667E-40	0.0	0.0	0.0
FEIIIOH2ION	2.9647E-24	0.0	0.0	0.0
FEIIIOH4ION	6.8253E-10	0.0	0.0	0.0
FEIIIOHION	8.0289E-34	0.0	0.0	0.0
H2P2O7ION	3.0021E-37	0.0	0.0	0.0
H2PO4ION	2.0179E-20	0.0	0.0	0.0
H3P2O7ION	1.8667E-40	0.0	0.0	0.0
H3SIO4ION	3.3331E-14	0.0	0.0	0.0
HION	1.2572E-19	0.0	0.0	0.0
HP2O7ION	2.8208E-28	0.0	0.0	0.0
HPBO2ION	7.2101E-21	0.0	0.0	0.0
HPO4ION	4.0364E-12	0.0	0.0	0.0
MGH2PO4ION	2.6231E-31	0.0	0.0	0.0
MGION	2.7086E-16	0.0	0.0	0.0
MGOHION	6.4828E-15	0.0	0.0	0.0
MGPO4ION	1.3609E-16	0.0	0.0	0.0
NAION	5.5749E-05	0.0	0.0	0.0
NO3ION	2.0677E-13	0.0	0.0	0.0
ALION	1.8667E-40	0.0	0.0	0.0
P2O7ION	2.3704E-21	0.0	0.0	0.0
PBH2PO4ION	1.8667E-40	0.0	0.0	0.0
PBION	2.9424E-33	0.0	0.0	0.0
PBNO33ION	1.8667E-40	0.0	0.0	0.0
PBNO3ION	1.8667E-40	0.0	0.0	0.0
PBOHION	1.2027E-29	0.0	0.0	0.0
PO4ION	5.1818E-09	0.0	0.0	0.0
SRION	2.0805E-09	0.0	0.0	0.0
SRNO3ION	7.0092E-18	0.0	0.0	0.0
SROHION	2.5267E-09	0.0	0.0	0.0
SRPO4ION	1.3236E-11	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7888E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.2601E-06	0.0	0.0
SR3PO42	0.0	2.1474E-07	0.0	0.0
<hr/>				
Total mol/hr	1.1472E-03	1.8709E-04	0.0	0.0
Total g/hr	2.0892E-02	2.0892E-02	0.0	0.0
Volume, L/hr	1.9021E-05	5.9900E-06	0.0	0.0
Enthalpy, cal/hr	-76.97	-40.02	0.0	0.0
Density, g/L	1098.4	3487.8		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Water
TO : Leach Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	5.0376E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	5.0376E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Liq.
TO : Leach Liquids Mix
FROM : Leach Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.012	25.012	25.012	25.012
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.993			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27742	0.0	0.0	0.0
HNO3	9.2864E-27	0.0	0.0	0.0
AMIIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	9.5132E-15	0.0	0.0	0.0
CROH3	2.1421E-09	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIIOH3	1.2543E-12	0.0	0.0	0.0
ALOH3	4.5748E-19	0.0	0.0	0.0
MGHPO4	5.5152E-13	0.0	0.0	0.0
PBHP04	1.0292E-31	0.0	0.0	0.0
PBNO32	5.0001E-38	0.0	0.0	0.0
PBO	2.9537E-22	0.0	0.0	0.0
SIO2	2.0671E-16	0.0	0.0	0.0
SRHPO4	1.1852E-12	0.0	0.0	0.0
SRNO32	3.5234E-28	0.0	0.0	0.0
OHION	5.5505E-05	0.0	0.0	0.0
ALOH2ION	9.5013E-26	0.0	0.0	0.0
ALOH4ION	1.2609E-13	0.0	0.0	0.0
ALOHION	2.8886E-32	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	5.0001E-38	0.0	0.0	0.0
BINO32ION	5.0001E-38	0.0	0.0	0.0
BINO3ION	5.0001E-38	0.0	0.0	0.0
BIOH2ION	7.8122E-22	0.0	0.0	0.0
BIOH4ION	1.2066E-15	0.0	0.0	0.0
BIOHION	8.8997E-31	0.0	0.0	0.0
CAH2PO4ION	1.6788E-17	0.0	0.0	0.0
CAION	1.8779E-08	0.0	0.0	0.0
CAOHION	2.2803E-09	0.0	0.0	0.0
CAPO4ION	4.9957E-08	0.0	0.0	0.0
CRIIIIH2PO4ION	4.9336E-33	0.0	0.0	0.0
CRIIIIHPO4ION	1.5864E-21	0.0	0.0	0.0
CRIIIIION	6.0334E-27	0.0	0.0	0.0
CRIIIIINO3ION	3.2089E-35	0.0	0.0	0.0
CROH2ION	7.1574E-16	0.0	0.0	0.0
CROH4ION	2.7224E-08	0.0	0.0	0.0
CROHION	3.6990E-19	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	5.0001E-38	0.0	0.0	0.0
FEIIIH2PO4ION	5.0001E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.5180E-33	0.0	0.0	0.0
FEIIIIION	3.4446E-36	0.0	0.0	0.0
FEIIINO3ION	5.0001E-38	0.0	0.0	0.0
FEIIIOH2ION	1.8378E-19	0.0	0.0	0.0
FEIIIOH4ION	3.4553E-10	0.0	0.0	0.0
FEIIIOHION	1.2893E-26	0.0	0.0	0.0
H2P2O7ION	4.1001E-26	0.0	0.0	0.0
H2PO4ION	1.9026E-13	0.0	0.0	0.0
H3P2O7ION	6.5925E-36	0.0	0.0	0.0
H3SIO4ION	3.2986E-14	0.0	0.0	0.0
HION	5.6875E-15	0.0	0.0	0.0
HP2O7ION	1.6693E-20	0.0	0.0	0.0
HPBO2ION	3.6491E-21	0.0	0.0	0.0
HPO4ION	1.6304E-08	0.0	0.0	0.0
MGH2PO4ION	3.9686E-19	0.0	0.0	0.0
MGION	3.4909E-10	0.0	0.0	0.0
MGOHION	4.0217E-10	0.0	0.0	0.0
MGPO4ION	1.3083E-09	0.0	0.0	0.0
NAION	5.5517E-05	0.0	0.0	0.0
NO3ION	2.0591E-13	0.0	0.0	0.0
ALION	5.0001E-38	0.0	0.0	0.0
P2O7ION	1.7033E-17	0.0	0.0	0.0
PBH2PO4ION	5.0001E-38	0.0	0.0	0.0
PBION	4.8444E-29	0.0	0.0	0.0
PBNO33ION	5.0001E-38	0.0	0.0	0.0
PBNO3ION	5.0001E-38	0.0	0.0	0.0
PBOHION	8.4502E-25	0.0	0.0	0.0
PO4ION	1.3139E-08	0.0	0.0	0.0
SRION	4.8738E-08	0.0	0.0	0.0
SRNO3ION	7.2394E-18	0.0	0.0	0.0
SROHION	2.2036E-09	0.0	0.0	0.0
SRPO4ION	1.7890E-09	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27753	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0133E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8958E+04	0.0	0.0	0.0
Density, g/L	997.35			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Slud.

TO : Final Wash

FROM : Leach Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.012	25.012	25.012	25.012
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.993			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.1584E-03	0.0	0.0	0.0
HNO3	3.8776E-29	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	3.9723E-17	0.0	0.0	0.0
CROH3	8.9443E-12	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIOH3	5.2372E-15	1.7827E-04	0.0	0.0
ALOH3	1.9102E-21	0.0	0.0	0.0
MGHP04	2.3029E-15	0.0	0.0	0.0
PBHP04	4.2976E-34	0.0	0.0	0.0
PBNO32	2.0878E-40	0.0	0.0	0.0
PBO	1.2334E-24	2.5510E-06	0.0	0.0
SIO2	8.6314E-19	0.0	0.0	0.0
SRHP04	4.9488E-15	0.0	0.0	0.0
SRNO32	1.4712E-30	0.0	0.0	0.0
OHION	2.3176E-07	0.0	0.0	0.0
ALOH2ION	3.9673E-28	0.0	0.0	0.0
ALOH4ION	5.2650E-16	0.0	0.0	0.0
ALOHION	1.2061E-34	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	2.0878E-40	0.0	0.0	0.0
BINO32ION	2.0878E-40	0.0	0.0	0.0
BINO3ION	2.0878E-40	0.0	0.0	0.0
BIOH2ION	3.2620E-24	0.0	0.0	0.0
BIOH4ION	5.0381E-18	0.0	0.0	0.0
BIOHION	3.7161E-33	0.0	0.0	0.0
CAH2PO4ION	7.0099E-20	0.0	0.0	0.0
CAION	7.8414E-11	0.0	0.0	0.0
CAOHION	9.5216E-12	0.0	0.0	0.0
CAPO4ION	2.0860E-10	0.0	0.0	0.0
CRIIH2PO4ION	2.0601E-35	0.0	0.0	0.0
CRIIHPO4ION	6.6241E-24	0.0	0.0	0.0
CRIIION	2.5193E-29	0.0	0.0	0.0
CRIIINO3ION	1.3399E-37	0.0	0.0	0.0
CROH2ION	2.9886E-18	0.0	0.0	0.0
CROH4ION	1.1368E-10	0.0	0.0	0.0
CROHION	1.5445E-21	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	2.0878E-40	0.0	0.0	0.0
FEIIIH2PO4ION	2.0878E-40	0.0	0.0	0.0
FEIIIHPO4ION	6.3385E-36	0.0	0.0	0.0
FEIIIIION	1.4383E-38	0.0	0.0	0.0
FEIIINO3ION	2.0878E-40	0.0	0.0	0.0
FEIIIOH2ION	7.6737E-22	0.0	0.0	0.0
FEIIIOH4ION	1.4428E-12	0.0	0.0	0.0
FEIIIOHION	5.3833E-29	0.0	0.0	0.0
H2P2O7ION	1.7120E-28	0.0	0.0	0.0
H2PO4ION	7.9443E-16	0.0	0.0	0.0
H3P2O7ION	2.7527E-38	0.0	0.0	0.0
H3SIO4ION	1.3773E-16	0.0	0.0	0.0
HION	2.3749E-17	0.0	0.0	0.0
HP2O7ION	6.9703E-23	0.0	0.0	0.0
HPBO2ION	1.5237E-23	0.0	0.0	0.0
HPO4ION	6.8077E-11	0.0	0.0	0.0
MGH2PO4ION	1.6571E-21	0.0	0.0	0.0
MGION	1.4576E-12	0.0	0.0	0.0
MGOHION	1.6793E-12	0.0	0.0	0.0
MGPO4ION	5.4630E-12	0.0	0.0	0.0
NAION	2.3181E-07	0.0	0.0	0.0
NO3ION	8.5978E-16	0.0	0.0	0.0
ALION	2.0878E-40	0.0	0.0	0.0
P2O7ION	7.1122E-20	0.0	0.0	0.0
PBH2PO4ION	2.0878E-40	0.0	0.0	0.0
PBION	2.0228E-31	0.0	0.0	0.0
PBNO33ION	2.0878E-40	0.0	0.0	0.0
PBNO3ION	2.0878E-40	0.0	0.0	0.0
PBOHION	3.5284E-27	0.0	0.0	0.0
PO4ION	5.4862E-11	0.0	0.0	0.0
SRION	2.0351E-10	0.0	0.0	0.0
SRNO3ION	3.0228E-20	0.0	0.0	0.0
SROHION	9.2012E-12	0.0	0.0	0.0
SRPO4ION	7.4701E-12	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7867E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.2376E-06	0.0	0.0
SR3PO42	0.0	1.9863E-07	0.0	0.0
<hr/>				
Total mol/hr	1.1588E-03	1.8705E-04	0.0	0.0
Total g/hr	2.0878E-02	2.0878E-02	0.0	0.0
Volume, L/hr	2.0933E-05	5.9878E-06	0.0	0.0
Enthalpy, cal/hr	-79.16	-39.98	0.0	0.0
Density, g/L	997.35	3486.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Water
TO : Final Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	1.0075E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIII OH2ION	0.0	0.0	0.0	0.0
AMIIII OHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIIION	0.0	0.0	0.0	0.0
CRIIII NO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0

CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	1.0075E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	5.5508E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0032E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Liq.
TO : Leach Liquids Mix
FROM : Final Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.001	25.001	25.001	25.001
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.537			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	8.5399E-11	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIOH3	2.5156E-13	0.0	0.0	0.0
ALOH3	5.8289E-20	0.0	0.0	0.0
MGHPO4	2.6791E-10	0.0	0.0	0.0
PBHP04	4.9929E-29	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	5.9196E-23	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SRHP04	3.1938E-12	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	3.5814E-07	0.0	0.0	0.0
ALOH2ION	3.1738E-25	0.0	0.0	0.0
ALOH4ION	5.1511E-16	0.0	0.0	0.0
ALOHION	2.1620E-30	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	1.1859E-15	0.0	0.0	0.0
CAION	1.2089E-08	0.0	0.0	0.0
CAOHION	6.6568E-11	0.0	0.0	0.0
CAPO4ION	4.3057E-09	0.0	0.0	0.0
CRIIIH2PO4ION	2.7954E-28	0.0	0.0	0.0
CRIIIHPO4ION	4.0026E-18	0.0	0.0	0.0
CRIIIIION	2.6960E-24	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	7.4775E-16	0.0	0.0	0.0
CROH4ION	3.4714E-11	0.0	0.0	0.0
CROHION	8.6568E-18	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	1.0005E-38	0.0	0.0	0.0
FEIIIH2PO4ION	3.4055E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.9315E-29	0.0	0.0	0.0
FEIIIIION	7.7440E-33	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	9.6607E-19	0.0	0.0	0.0
FEIIIOH4ION	2.2155E-12	0.0	0.0	0.0
FEIIIOHION	1.5183E-24	0.0	0.0	0.0
H2P2O7ION	4.1690E-23	0.0	0.0	0.0
H2PO4ION	2.9533E-12	0.0	0.0	0.0
H3P2O7ION	2.4840E-31	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	2.9798E-14	0.0	0.0	0.0
HP2O7ION	3.9064E-19	0.0	0.0	0.0
HPBO2ION	2.3390E-23	0.0	0.0	0.0
HPO4ION	6.8417E-09	0.0	0.0	0.0
MGH2PO4ION	5.0547E-15	0.0	0.0	0.0
MGION	4.0403E-08	0.0	0.0	0.0
MGOHION	2.1162E-09	0.0	0.0	0.0
MGPO4ION	2.0326E-08	0.0	0.0	0.0
NAION	2.2708E-07	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	7.0888E-36	0.0	0.0	0.0
P2O7ION	7.6883E-18	0.0	0.0	0.0
PBH2PO4ION	5.9949E-34	0.0	0.0	0.0
PBION	5.4239E-27	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	4.4408E-24	0.0	0.0	0.0
PO4ION	1.2720E-10	0.0	0.0	0.0
SRION	3.1360E-08	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	6.4326E-11	0.0	0.0	0.0
SRPO4ION	1.5419E-10	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	5.5509E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0032E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	996.87			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Slud.

TO :

FROM : Final Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.001	25.001	25.001	25.001
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.537			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.1583E-03	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
AMIIIIOH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	1.7820E-12	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIIIIOH3	5.2493E-15	1.7827E-04	0.0	0.0
ALOH3	1.2163E-21	0.0	0.0	0.0
MGHPO4	5.5905E-12	0.0	0.0	0.0
PBHP04	1.0419E-30	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	1.2352E-24	2.5510E-06	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SRHP04	6.6644E-14	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
OHION	7.4733E-09	0.0	0.0	0.0
ALOH2ION	6.6229E-27	0.0	0.0	0.0
ALOH4ION	1.0749E-17	0.0	0.0	0.0
ALOHION	4.5115E-32	0.0	0.0	0.0
AMIIIIION	0.0	0.0	0.0	0.0
AMIIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAH2PO4ION	2.4747E-17	0.0	0.0	0.0
CAION	2.5227E-10	0.0	0.0	0.0
CAOHION	1.3891E-12	0.0	0.0	0.0
CAPO4ION	8.9847E-11	0.0	0.0	0.0
CRIIIIH2PO4ION	5.8333E-30	0.0	0.0	0.0
CRIIIIHPO4ION	8.3523E-20	0.0	0.0	0.0
CRIIIIION	5.6257E-26	0.0	0.0	0.0
CRIIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	1.5603E-17	0.0	0.0	0.0
CROH4ION	7.2437E-13	0.0	0.0	0.0
CROHION	1.8064E-19	0.0	0.0	0.0

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CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	2.0877E-40	0.0	0.0	0.0
FEIIIH2PO4ION	7.1062E-40	0.0	0.0	0.0
FEIIHPO4ION	4.0304E-31	0.0	0.0	0.0
FEIIIIION	1.6160E-34	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	2.0159E-20	0.0	0.0	0.0
FEIIIOH4ION	4.6232E-14	0.0	0.0	0.0
FEIIIOHION	3.1683E-26	0.0	0.0	0.0
H2P2O7ION	8.6994E-25	0.0	0.0	0.0
H2PO4ION	6.1627E-14	0.0	0.0	0.0
H3P2O7ION	5.1835E-33	0.0	0.0	0.0
H3SiO4ION	0.0	0.0	0.0	0.0
HION	6.2180E-16	0.0	0.0	0.0
HP2O7ION	8.1516E-21	0.0	0.0	0.0
HPBO2ION	4.8808E-25	0.0	0.0	0.0
HPO4ION	1.4277E-10	0.0	0.0	0.0
MGH2PO4ION	1.0548E-16	0.0	0.0	0.0
MGION	8.4310E-10	0.0	0.0	0.0
MGOHION	4.4159E-11	0.0	0.0	0.0
MGPO4ION	4.2414E-10	0.0	0.0	0.0
NAION	4.7384E-09	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	1.4792E-37	0.0	0.0	0.0
P2O7ION	1.6043E-19	0.0	0.0	0.0
PBH2PO4ION	1.2510E-35	0.0	0.0	0.0
PBION	1.1318E-28	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	9.2667E-26	0.0	0.0	0.0
PO4ION	2.6542E-12	0.0	0.0	0.0
SRION	6.5439E-10	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	1.3423E-12	0.0	0.0	0.0
SRPO4ION	3.2175E-12	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7223E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.2321E-06	0.0	0.0
SR3PO42	0.0	1.8796E-07	0.0	0.0
<hr/>				
Total mol/hr	1.1583E-03	1.8697E-04	0.0	0.0
Total g/hr	2.0868E-02	2.0868E-02	0.0	0.0
Volume, L/hr	2.0933E-05	5.9857E-06	0.0	0.0
Enthalpy, cal/hr	-79.13	-39.95	0.0	0.0
Density, g/L	996.87	3486.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Liquids

TO :

FROM : Leach Liquids Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	13.722			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.45827	0.0	0.0	0.0
HNO3	3.4596E-25	0.0	0.0	0.0
AMIII OH3	0.0	0.0	0.0	0.0
AMNO33	0.0	0.0	0.0	0.0
BIOH3	2.8888E-12	0.0	0.0	0.0
CROH3	6.0612E-09	0.0	0.0	0.0
CSNO3	0.0	0.0	0.0	0.0
FEIII OH3	1.6893E-12	2.2839E-08	0.0	0.0
ALOH3	1.7856E-17	0.0	0.0	0.0
MGHPO4	6.0645E-18	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	7.8652E-15	0.0	0.0	0.0
SRHPO4	3.1302E-14	0.0	0.0	0.0
SRNO32	9.1783E-22	0.0	0.0	0.0
OHION	5.9923E-03	0.0	0.0	0.0
ALOH2ION	1.1614E-25	0.0	0.0	0.0
ALOH4ION	4.5786E-10	0.0	0.0	0.0
ALOHION	1.1748E-33	0.0	0.0	0.0
AMIIION	0.0	0.0	0.0	0.0
AMIIIOH2ION	0.0	0.0	0.0	0.0
AMIIIOHION	0.0	0.0	0.0	0.0
AMNO32ION	0.0	0.0	0.0	0.0
AMNO3ION	0.0	0.0	0.0	0.0
BIION	8.2597E-38	0.0	0.0	0.0
BINO32ION	8.2597E-38	0.0	0.0	0.0
BINO3ION	8.2597E-38	0.0	0.0	0.0
BIOH2ION	7.4275E-21	0.0	0.0	0.0
BIOH4ION	3.6036E-11	0.0	0.0	0.0
BIOHION	2.8148E-31	0.0	0.0	0.0
CAH2PO4ION	1.3279E-20	0.0	0.0	0.0
CAION	1.2919E-07	0.0	0.0	0.0
CAOHION	2.2677E-07	0.0	0.0	0.0
CAPO4ION	1.3064E-07	0.0	0.0	0.0
CRIIH2PO4ION	8.2597E-38	0.0	0.0	0.0
CRIIHPO4ION	1.1434E-27	0.0	0.0	0.0
CRIIION	6.8517E-31	0.0	0.0	0.0
CRIIINO3ION	2.6779E-36	0.0	0.0	0.0
CROH2ION	6.3378E-17	0.0	0.0	0.0
CROH4ION	7.5826E-06	0.0	0.0	0.0
CROHION	1.0887E-21	0.0	0.0	0.0

CSION	0.0	0.0	0.0	0.0
FEIII2OH2ION	8.2597E-38	0.0	0.0	0.0
FEIIIH2PO4ION	8.2597E-38	0.0	0.0	0.0
FEIIHPO4ION	8.2597E-38	0.0	0.0	0.0
FEIIION	8.2597E-38	0.0	0.0	0.0
FEIINO3ION	8.2597E-38	0.0	0.0	0.0
FEIIIOH2ION	7.7487E-21	0.0	0.0	0.0
FEIIIOH4ION	4.5787E-08	0.0	0.0	0.0
FEIIIOHION	1.8087E-29	0.0	0.0	0.0
H2P2O7ION	5.9867E-32	0.0	0.0	0.0
H2PO4ION	2.1302E-16	0.0	0.0	0.0
H3P2O7ION	8.2597E-38	0.0	0.0	0.0
H3SIO4ION	1.2052E-10	0.0	0.0	0.0
HION	2.6910E-16	0.0	0.0	0.0
HP2O7ION	5.8789E-24	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	3.3520E-09	0.0	0.0	0.0
MGH2PO4ION	1.3327E-25	0.0	0.0	0.0
MGION	1.1387E-12	0.0	0.0	0.0
MGOHION	1.6975E-11	0.0	0.0	0.0
MGPO4ION	1.4523E-12	0.0	0.0	0.0
NAION	6.0004E-03	0.0	0.0	0.0
NO3ION	7.4749E-10	0.0	0.0	0.0
ALION	8.2597E-38	0.0	0.0	0.0
P2O7ION	3.4011E-18	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	5.7122E-07	0.0	0.0	0.0
SRION	3.4993E-07	0.0	0.0	0.0
SRNO3ION	2.3953E-14	0.0	0.0	0.0
SROHION	2.2340E-07	0.0	0.0	0.0
SRPO4ION	4.7695E-09	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
CSOH	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	6.5155E-08	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.47027	8.7994E-08	0.0	0.0
Total g/hr	8.4968	6.2406E-06	0.0	0.0
Volume, L/hr	8.2886E-03	2.3226E-09	0.0	0.0
Enthalpy, cal/hr	-3.1980E+04	-1.8991E-02	0.0	0.0
Density, g/L	1025.1	2686.9		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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ENVIRONMENTAL SIMULATION PROGRAM

V - 4.0 May 1, 1994

PROCESS: C-109

CHEMISTRY MODEL: C-109

DATE: 09/06/94

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PROCESS BLOCKS

<u>BLOCK NAME</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
FIRST WASH OF C-109 SAMPLE	Separate	C-109	WASH1 LIQUID WASH1 SLUDGE
SECOND WASH OF C-109 SLUDGE	Separate	INLET TO 2ND WSH	WASH2 LIQUID WASH2 SLUDGE
THIRD WASH OF C-109 SLUDGE	Separate	INLET TO 3RD WSH	WASH3 LIQUID WASH3 SLUDGE
WASH LIQUID MIX (C109-1-2)	Mix	WASH1 LIQUID WASH2 LIQUID WASH3 LIQUID	WASH LIQUID MIX
REHYDRATE C-109 SOLIDS	Mix	WASH3 SLUDGE H2O TO REHYDRATE	REHYDRATED SOLID
SAMPLE SPLIT (WASHED SLURRY)	Split	REHYDRATED SOLID	SLRRY SMPLE WASH SLURRY TO LEACH
MIX STREAMS BEFORE SECOND WASH	Mix	WASH1 SLUDGE 0.1 M NAOH WASH	INLET TO 2ND WSH
MIX STREAMS BEFORE THIRD WASH	Mix	WASH2 SLUDGE WATER TO WASH 3	INLET TO 3RD WSH
MIX STREAMS BEFORE FIRST LEACH	Mix	SLURRY TO LEACH 10 M NAOH	INLET TO LEACH1
FIRST LEACH	Separate	INLET TO LEACH1	LEACH1 LIQUID LEACH1 SLUDGE
MIX STREAMS BEFORE SECOND LEACH	Mix	3.0 M NAOH LEACH1 SLUDGE	INLET TO LEACH2
SECOND LEACH	Separate	INLET TO LEACH2	LEACH2 LIQUID LEACH2 SLUDGE

MIX STREAMS BEFORE FIRST LCH/WSHMix

LEACH2 SLUDGE

INLET TO L/W1

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<u>BLOCK ID</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
		H2O TO LCH/WSH1	
LEACH/WASH1	Separate	INLET TO L/W1	LCH/WSH1 LIQUID LCH/WSH1 SLUDGE
MIX STREAMS BEFORE 2ND LCH/WSH	Mix	LCH/WSH1 SLUDGE H2O TO LCH/WSH2	INLET TO SPLIT
SAMPLE SPLIT (LEACHED SOLIDS)	Split	INLET TO SPLIT	SLURRY SMPLE LCH INLET TO L/W2
LEACH/WASH2 (1 ML H2O)	Separate	INLET TO L/W2	LCH/WSH2 LIQUID LCH/WSH2 SLUDGE
LEACH LIQUID MIX (C109-1-5)	Mix	LEACH1 LIQUID LEACH2 LIQUID LCH/WSH1 LIQUID LCH/WSH2 LIQUID	LEACH LIQUID MIX

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STREAM: C-109

TO : FIRST WASH OF C-109 SAMPLE

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.882			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.10767	0.0	0.0	0.0
HNO3	2.7886E-18	0.0	0.0	0.0
BIOH3	1.7156E-06	0.0	0.0	0.0
CROH3	1.8354E-09	2.9891E-06	0.0	0.0
FEIIIOH3	4.4820E-13	8.1551E-05	0.0	0.0
ALOH3	4.2933E-12	9.8797E-04	0.0	0.0
MNNO32	1.3408E-14	0.0	0.0	0.0
MNOH2	1.6027E-10	7.3663E-06	0.0	0.0
NIOH2	1.1630E-09	1.0017E-04	0.0	0.0
PBHP04	3.1636E-32	0.0	0.0	0.0
PBNO32	2.0177E-31	0.0	0.0	0.0
PBO	1.0564E-22	8.1161E-06	0.0	0.0
PUIVNO34	1.9406E-38	0.0	0.0	0.0
PUIVOH4	4.1451E-13	7.4461E-09	0.0	0.0
SIO2	4.7685E-08	0.0	0.0	0.0
SRHP04	4.0141E-13	0.0	0.0	0.0
SRNO32	9.9347E-11	0.0	0.0	0.0
UO2OH2	5.9718E-11	1.5184E-05	0.0	0.0
OHION	2.1049E-04	0.0	0.0	0.0
ALOH2ION	1.7632E-19	0.0	0.0	0.0
ALOH4ION	1.4276E-05	0.0	0.0	0.0
ALOHION	1.4276E-26	0.0	0.0	0.0
BIION	7.8071E-35	0.0	0.0	0.0
BINO32ION	8.8836E-35	0.0	0.0	0.0
BINO3ION	1.7632E-34	0.0	0.0	0.0
BIOH2ION	2.7923E-14	0.0	0.0	0.0
BIOH4ION	2.7598E-06	0.0	0.0	0.0
BIOHION	9.0483E-24	0.0	0.0	0.0
CAION	5.7090E-10	0.0	0.0	0.0
CAOHION	1.6804E-10	0.0	0.0	0.0
CAPO4ION	2.1805E-07	0.0	0.0	0.0
CRIIIHPO4ION	2.4375E-22	0.0	0.0	0.0
CRIIION	1.8448E-28	0.0	0.0	0.0
CRIIINO3ION	1.3221E-27	0.0	0.0	0.0
CROH2ION	1.1654E-16	0.0	0.0	0.0
CROH4ION	2.9575E-07	0.0	0.0	0.0
CROHION	1.6996E-20	0.0	0.0	0.0
FEIII2OH2ION	1.9406E-38	0.0	0.0	0.0
FEIIIHPO4ION	9.7681E-35	0.0	0.0	0.0
FEIIION	2.6421E-38	0.0	0.0	0.0
FEIIINO3ION	1.9406E-38	0.0	0.0	0.0
FEIIIOH2ION	1.2504E-20	0.0	0.0	0.0

FEIIIOH4ION	1.5640E-09	0.0	0.0	0.0
FEIIIOHION	2.5229E-28	0.0	0.0	0.0
H3SIO4ION	9.4900E-05	0.0	0.0	0.0
HION	3.7038E-16	0.0	0.0	0.0
HP2O7ION	5.3443E-17	0.0	0.0	0.0
HPBO2ION	1.6540E-20	0.0	0.0	0.0
HPO4ION	1.7847E-06	0.0	0.0	0.0
LAION	9.1371E-34	0.0	0.0	0.0
LAOHION	1.8385E-30	0.0	0.0	0.0
MNION	4.2317E-13	0.0	0.0	0.0
MNNO3ION	3.2634E-14	0.0	0.0	0.0
MNOH3ION	5.7514E-10	0.0	0.0	0.0
MNOH4ION	6.9065E-10	0.0	0.0	0.0
MNOHION	3.0861E-11	0.0	0.0	0.0
NAION	1.2338E-03	0.0	0.0	0.0
NDION	3.3661E-06	0.0	0.0	0.0
NIION	1.7797E-15	0.0	0.0	0.0
NINO3ION	2.3546E-16	0.0	0.0	0.0
NIOH3ION	1.6631E-07	0.0	0.0	0.0
NIOHION	3.4215E-13	0.0	0.0	0.0
NO3ION	7.7264E-04	0.0	0.0	0.0
ALION	8.9776E-34	0.0	0.0	0.0
P2O7ION	4.8128E-12	0.0	0.0	0.0
PBION	2.7926E-30	0.0	0.0	0.0
PBNO33ION	1.5388E-32	0.0	0.0	0.0
PBNO3ION	1.4585E-30	0.0	0.0	0.0
PBOHION	5.6527E-26	0.0	0.0	0.0
PO4ION	4.8202E-05	0.0	0.0	0.0
PUIVION	1.9406E-38	0.0	0.0	0.0
PUIVNO32ION	1.9406E-38	0.0	0.0	0.0
PUIVNO33ION	1.9406E-38	0.0	0.0	0.0
PUIVNO3ION	1.9406E-38	0.0	0.0	0.0
PUIVOH2ION	5.8512E-31	0.0	0.0	0.0
PUIVOH3ION	1.5323E-21	0.0	0.0	0.0
PUIVOHION	1.9406E-38	0.0	0.0	0.0
SRION	1.7375E-09	0.0	0.0	0.0
SRNO3ION	5.2215E-10	0.0	0.0	0.0
SROHION	1.7579E-10	0.0	0.0	0.0
SRPO4ION	7.8086E-09	0.0	0.0	0.0
UO22OH2ION	2.7643E-24	0.0	0.0	0.0
UO23OH5ION	6.2822E-17	0.0	0.0	0.0
UO2ION	1.3748E-23	0.0	0.0	0.0
UO2OHION	2.0687E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3122E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.5614E-07	0.0	0.0

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Total mol/hr	0.11005	1.2395E-03	0.0	0.0
Total g/hr	2.0364	0.11359	0.0	0.0
Volume, L/hr	1.9726E-03	3.9898E-05	0.0	0.0
Enthalpy, cal/hr	-7529.	-376.8	0.0	0.0
Density, g/L	1032.3	2847.1		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH1 LIQUID

TO : WASH LIQUID MIX (C109-1-2)

FROM : FIRST WASH OF C-109 SAMPLE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.882			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.10466	0.0	0.0	0.0
HNO3	2.7109E-18	0.0	0.0	0.0
BIOH3	1.6678E-06	0.0	0.0	0.0
CROH3	1.7842E-09	0.0	0.0	0.0
FEIIIIOH3	4.3570E-13	0.0	0.0	0.0
ALOH3	4.1735E-12	0.0	0.0	0.0
MNNO32	1.3034E-14	0.0	0.0	0.0
MNOH2	1.5580E-10	0.0	0.0	0.0
NIOH2	1.1306E-09	0.0	0.0	0.0
PBHPO4	3.0754E-32	0.0	0.0	0.0
PBNO32	1.9615E-31	0.0	0.0	0.0
PBO	1.0269E-22	0.0	0.0	0.0
PUIVNO34	1.8864E-38	0.0	0.0	0.0
PUIVOH4	4.0295E-13	0.0	0.0	0.0
SiO2	4.6355E-08	0.0	0.0	0.0
SRHPO4	3.9022E-13	0.0	0.0	0.0
SRNO32	9.6576E-11	0.0	0.0	0.0
UO2OH2	5.8052E-11	0.0	0.0	0.0
OHION	2.0462E-04	0.0	0.0	0.0
ALOH2ION	1.7140E-19	0.0	0.0	0.0
ALOH4ION	1.3878E-05	0.0	0.0	0.0
ALOHION	1.3878E-26	0.0	0.0	0.0
BIION	7.5893E-35	0.0	0.0	0.0
BINO32ION	8.6359E-35	0.0	0.0	0.0
BINO3ION	1.7140E-34	0.0	0.0	0.0
BIOH2ION	2.7144E-14	0.0	0.0	0.0
BIOH4ION	2.6828E-06	0.0	0.0	0.0
BIOHION	8.7959E-24	0.0	0.0	0.0
CAION	5.5498E-10	0.0	0.0	0.0
CAOHION	1.6336E-10	0.0	0.0	0.0
CAPO4ION	2.1196E-07	0.0	0.0	0.0
CRIIIHPO4ION	2.3695E-22	0.0	0.0	0.0
CRIIIION	1.7934E-28	0.0	0.0	0.0
CRIIIINO3ION	1.2852E-27	0.0	0.0	0.0
CROH2ION	1.1329E-16	0.0	0.0	0.0
CROH4ION	2.8751E-07	0.0	0.0	0.0
CROHION	1.6522E-20	0.0	0.0	0.0
FEIII2OH2ION	1.8864E-38	0.0	0.0	0.0
FEIIIHPO4ION	9.4956E-35	0.0	0.0	0.0
FEIIIION	2.5684E-38	0.0	0.0	0.0
FEIIIINO3ION	1.8864E-38	0.0	0.0	0.0
FEIIIIOH2ION	1.2155E-20	0.0	0.0	0.0

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FEIIIOH4ION	1.5204E-09	0.0	0.0	0.0
FEIIIOHION	2.4526E-28	0.0	0.0	0.0
H3SIO4ION	9.2253E-05	0.0	0.0	0.0
HION	3.6005E-16	0.0	0.0	0.0
HP2O7ION	5.1953E-17	0.0	0.0	0.0
HPBO2ION	1.6079E-20	0.0	0.0	0.0
HPO4ION	1.7349E-06	0.0	0.0	0.0
LAION	8.8823E-34	0.0	0.0	0.0
LAOHION	1.7872E-30	0.0	0.0	0.0
MNION	4.1137E-13	0.0	0.0	0.0
MNNO3ION	3.1724E-14	0.0	0.0	0.0
MNOH3ION	5.5910E-10	0.0	0.0	0.0
MNOH4ION	6.7138E-10	0.0	0.0	0.0
MNOHION	3.0000E-11	0.0	0.0	0.0
NAION	1.1994E-03	0.0	0.0	0.0
NDION	3.2722E-06	0.0	0.0	0.0
NIION	1.7301E-15	0.0	0.0	0.0
NINO3ION	2.2889E-16	0.0	0.0	0.0
NIOH3ION	1.6167E-07	0.0	0.0	0.0
NIOHION	3.3261E-13	0.0	0.0	0.0
NO3ION	7.5109E-04	0.0	0.0	0.0
ALION	8.7272E-34	0.0	0.0	0.0
P2O7ION	4.6786E-12	0.0	0.0	0.0
PBION	2.7147E-30	0.0	0.0	0.0
PBNO33ION	1.4959E-32	0.0	0.0	0.0
PBNO3ION	1.4179E-30	0.0	0.0	0.0
PBOHION	5.4951E-26	0.0	0.0	0.0
PO4ION	4.6858E-05	0.0	0.0	0.0
PUIVION	1.8864E-38	0.0	0.0	0.0
PUIVNO32ION	1.8864E-38	0.0	0.0	0.0
PUIVNO33ION	1.8864E-38	0.0	0.0	0.0
PUIVNO3ION	1.8864E-38	0.0	0.0	0.0
PUIVOH2ION	5.6880E-31	0.0	0.0	0.0
PUIVOH3ION	1.4896E-21	0.0	0.0	0.0
PUIVOHION	1.8864E-38	0.0	0.0	0.0
SRION	1.6890E-09	0.0	0.0	0.0
SRNO3ION	5.0759E-10	0.0	0.0	0.0
SROHION	1.7089E-10	0.0	0.0	0.0
SRPO4ION	7.5908E-09	0.0	0.0	0.0
UO22OH2ION	2.6872E-24	0.0	0.0	0.0
UO23OH5ION	6.1070E-17	0.0	0.0	0.0
UO2ION	1.3364E-23	0.0	0.0	0.0
UO2OHION	2.0110E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.10698	0.0	0.0	0.0
Total g/hr	1.9796	0.0	0.0	0.0
Volume, L/hr	1.9176E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7319.	0.0	0.0	0.0
Density, g/L	1032.3			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH1 SLUDGE

TO : MIX STREAMS BEFORE SECOND WASH

FROM : FIRST WASH OF C-109 SAMPLE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.882			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	3.0029E-03	0.0	0.0	0.0
HNO3	7.7777E-20	0.0	0.0	0.0
BIOH3	4.7849E-08	0.0	0.0	0.0
CROH3	5.1191E-11	2.9891E-06	0.0	0.0
FEIIIIOH3	1.2501E-14	8.1551E-05	0.0	0.0
ALOH3	1.1974E-13	9.8797E-04	0.0	0.0
MNNO32	3.7395E-16	0.0	0.0	0.0
MNOH2	4.4701E-12	7.3663E-06	0.0	0.0
NIOH2	3.2437E-11	1.0017E-04	0.0	0.0
PBHP04	8.8235E-34	0.0	0.0	0.0
PBNO32	5.6276E-33	0.0	0.0	0.0
PBO	2.9464E-24	8.1161E-06	0.0	0.0
PUIVNO34	5.4123E-40	0.0	0.0	0.0
PUIVOH4	1.1561E-14	7.4461E-09	0.0	0.0
SIO2	1.3300E-09	0.0	0.0	0.0
SRHP04	1.1196E-14	0.0	0.0	0.0
SRNO32	2.7708E-12	0.0	0.0	0.0
UO2OH2	1.6656E-12	1.5184E-05	0.0	0.0
OHION	5.8706E-06	0.0	0.0	0.0
ALOH2ION	4.9176E-21	0.0	0.0	0.0
ALOH4ION	3.9817E-07	0.0	0.0	0.0
ALOHION	3.9816E-28	0.0	0.0	0.0
BIION	2.1774E-36	0.0	0.0	0.0
BINO32ION	2.4777E-36	0.0	0.0	0.0
BINO3ION	4.9177E-36	0.0	0.0	0.0
BIOH2ION	7.7878E-16	0.0	0.0	0.0
BIOH4ION	7.6972E-08	0.0	0.0	0.0
BIOHION	2.5236E-25	0.0	0.0	0.0
CAION	1.5923E-11	0.0	0.0	0.0
CAOHION	4.6868E-12	0.0	0.0	0.0
CAPO4ION	6.0814E-09	0.0	0.0	0.0
CRIIIHPO4ION	6.7983E-24	0.0	0.0	0.0
CRIIIION	5.1453E-30	0.0	0.0	0.0
CRIIIINO3ION	3.6875E-29	0.0	0.0	0.0
CROH2ION	3.2505E-18	0.0	0.0	0.0
CROH4ION	8.2488E-09	0.0	0.0	0.0
CROHION	4.7402E-22	0.0	0.0	0.0
FEIII2OH2ION	5.4123E-40	0.0	0.0	0.0
FEIIIHPO4ION	2.7244E-36	0.0	0.0	0.0
FEIIIION	7.3689E-40	0.0	0.0	0.0
FEIIIINO3ION	5.4123E-40	0.0	0.0	0.0
FEIIIIOH2ION	3.4875E-22	0.0	0.0	0.0

FEIII OH4ION	4.3621E-11	0.0	0.0	0.0
FEIII OHION	7.0366E-30	0.0	0.0	0.0
H3SIO4ION	2.6468E-06	0.0	0.0	0.0
HION	1.0330E-17	0.0	0.0	0.0
HP2O7ION	1.4906E-18	0.0	0.0	0.0
HPBO2ION	4.6131E-22	0.0	0.0	0.0
HPO4ION	4.9775E-08	0.0	0.0	0.0
LAION	2.5484E-35	0.0	0.0	0.0
LAOHION	5.1276E-32	0.0	0.0	0.0
MNION	1.1803E-14	0.0	0.0	0.0
MNNO3ION	9.1018E-16	0.0	0.0	0.0
MNOH3ION	1.6041E-11	0.0	0.0	0.0
MNOH4ION	1.9263E-11	0.0	0.0	0.0
MNOHION	8.6073E-13	0.0	0.0	0.0
NAION	3.4412E-05	0.0	0.0	0.0
NDION	9.3883E-08	0.0	0.0	0.0
NIION	4.9637E-17	0.0	0.0	0.0
NINO3ION	6.5670E-18	0.0	0.0	0.0
NIOH3ION	4.6384E-09	0.0	0.0	0.0
NIOHION	9.5428E-15	0.0	0.0	0.0
NO3ION	2.1549E-05	0.0	0.0	0.0
ALION	2.5039E-35	0.0	0.0	0.0
P2O7ION	1.3423E-13	0.0	0.0	0.0
PBION	7.7887E-32	0.0	0.0	0.0
PBNO33ION	4.2918E-34	0.0	0.0	0.0
PBNO3ION	4.0680E-32	0.0	0.0	0.0
PBOHION	1.5766E-27	0.0	0.0	0.0
PO4ION	1.3444E-06	0.0	0.0	0.0
PUIVION	5.4123E-40	0.0	0.0	0.0
PUIVNO32ION	5.4123E-40	0.0	0.0	0.0
PUIVNO33ION	5.4123E-40	0.0	0.0	0.0
PUIVNO3ION	5.4123E-40	0.0	0.0	0.0
PUIVOH2ION	1.6319E-32	0.0	0.0	0.0
PUIVOH3ION	4.2737E-23	0.0	0.0	0.0
PUIVOHION	5.4123E-40	0.0	0.0	0.0
SRION	4.8460E-11	0.0	0.0	0.0
SRNO3ION	1.4563E-11	0.0	0.0	0.0
SROHION	4.9030E-12	0.0	0.0	0.0
SRPO4ION	2.1779E-10	0.0	0.0	0.0
UO22OH2ION	7.7098E-26	0.0	0.0	0.0
UO23OH5ION	1.7522E-18	0.0	0.0	0.0
UO2ION	3.8344E-25	0.0	0.0	0.0
UO2OHION	5.7699E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3122E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.5614E-07	0.0	0.0

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Total mol/hr	3.0694E-03	1.2395E-03	0.0	0.0
Total g/hr	5.6797E-02	0.11359	0.0	0.0
Volume, L/hr	5.5018E-05	3.9898E-05	0.0	0.0
Enthalpy, cal/hr	-210.0	-376.8	0.0	0.0
Density, g/L	1032.3	2847.1		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: INLET TO 2ND WSH

TO : SECOND WASH OF C-109 SLUDGE

FROM : MIX STREAMS BEFORE SECOND WASH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.864			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11421	0.0	0.0	0.0
HNO3	1.0699E-19	0.0	0.0	0.0
BIOH3	5.7718E-08	0.0	0.0	0.0
CROH3	2.0556E-09	2.7560E-06	0.0	0.0
FEIIIIOH3	5.0196E-13	8.1550E-05	0.0	0.0
ALOH3	4.8083E-12	9.7642E-04	0.0	0.0
MNNO32	1.7175E-17	0.0	0.0	0.0
MNOH2	1.7950E-10	7.3654E-06	0.0	0.0
NIOH2	1.3025E-09	1.0004E-04	0.0	0.0
PBHP04	5.2493E-33	0.0	0.0	0.0
PBNO32	2.6179E-34	0.0	0.0	0.0
PBO	1.1831E-22	8.1161E-06	0.0	0.0
PUIVNO34	2.0584E-38	0.0	0.0	0.0
PUIVOH4	4.6424E-13	7.4457E-09	0.0	0.0
SiO2	1.8165E-09	0.0	0.0	0.0
SRHP04	2.3890E-13	0.0	0.0	0.0
SRNO32	4.6234E-13	0.0	0.0	0.0
UO2OH2	6.6881E-11	1.5184E-05	0.0	0.0
OHION	1.9520E-04	0.0	0.0	0.0
ALOH2ION	1.6192E-19	0.0	0.0	0.0
ALOH4ION	1.1945E-05	0.0	0.0	0.0
ALOHION	1.0006E-26	0.0	0.0	0.0
BIION	1.0074E-36	0.0	0.0	0.0
BINO32ION	2.0584E-38	0.0	0.0	0.0
BINO3ION	1.1880E-37	0.0	0.0	0.0
BIOH2ION	7.7076E-16	0.0	0.0	0.0
BIOH4ION	6.7104E-08	0.0	0.0	0.0
BIOHION	1.8026E-25	0.0	0.0	0.0
CAION	1.1191E-09	0.0	0.0	0.0
CAOHION	5.8334E-10	0.0	0.0	0.0
CAPO4ION	9.2594E-08	0.0	0.0	0.0
CRIIHPO4ION	3.1574E-23	0.0	0.0	0.0
CRIIION	5.2039E-29	0.0	0.0	0.0
CRIIINO3ION	2.9602E-29	0.0	0.0	0.0
CROH2ION	1.1136E-16	0.0	0.0	0.0
CROH4ION	2.3939E-07	0.0	0.0	0.0
CROHION	1.1818E-20	0.0	0.0	0.0
FEIII2OH2ION	2.0584E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2653E-35	0.0	0.0	0.0
FEIIION	2.0584E-38	0.0	0.0	0.0
FEIIINO3ION	2.0584E-38	0.0	0.0	0.0
FEIIIOH2ION	1.1947E-20	0.0	0.0	0.0

FEIIIOH4ION	1.2659E-09	0.0	0.0	0.0
FEIIIOHION	1.7230E-28	0.0	0.0	0.0
H3SIO4ION	2.6463E-06	0.0	0.0	0.0
HION	3.7682E-16	0.0	0.0	0.0
HP2O7ION	2.0596E-19	0.0	0.0	0.0
HPBO2ION	1.3388E-20	0.0	0.0	0.0
HPO4ION	9.7675E-08	0.0	0.0	0.0
LAION	7.5022E-34	0.0	0.0	0.0
LAOHION	5.1128E-30	0.0	0.0	0.0
MNION	1.8964E-13	0.0	0.0	0.0
MNNO3ION	1.0139E-15	0.0	0.0	0.0
MNOH3ION	4.6553E-10	0.0	0.0	0.0
MNOH4ION	2.6341E-10	0.0	0.0	0.0
MNOHION	2.9487E-11	0.0	0.0	0.0
NAION	2.3560E-04	0.0	0.0	0.0
NDION	9.3883E-08	0.0	0.0	0.0
NIION	8.4474E-16	0.0	0.0	0.0
NINO3ION	7.3151E-18	0.0	0.0	0.0
NIOH3ION	1.3461E-07	0.0	0.0	0.0
NIOHION	3.2692E-13	0.0	0.0	0.0
NO3ION	2.1549E-05	0.0	0.0	0.0
ALION	4.4730E-34	0.0	0.0	0.0
P2O7ION	5.1092E-15	0.0	0.0	0.0
PBION	9.4948E-31	0.0	0.0	0.0
PBNO33ION	4.8799E-37	0.0	0.0	0.0
PBNO3ION	4.5898E-32	0.0	0.0	0.0
PBOHION	5.4707E-26	0.0	0.0	0.0
PO4ION	1.2701E-06	0.0	0.0	0.0
PUIVION	2.0584E-38	0.0	0.0	0.0
PUIVNO32ION	2.0584E-38	0.0	0.0	0.0
PUIVNO33ION	2.0584E-38	0.0	0.0	0.0
PUIVNO3ION	2.0584E-38	0.0	0.0	0.0
PUIVOH2ION	3.7781E-31	0.0	0.0	0.0
PUIVOH3ION	1.4759E-21	0.0	0.0	0.0
PUIVOHION	2.0584E-38	0.0	0.0	0.0
SRION	2.9316E-09	0.0	0.0	0.0
SRNO3ION	5.5068E-11	0.0	0.0	0.0
SROHION	5.6561E-10	0.0	0.0	0.0
SRPO4ION	3.3160E-09	0.0	0.0	0.0
UO22OH2ION	1.7775E-24	0.0	0.0	0.0
UO23OH5ION	6.0025E-17	0.0	0.0	0.0
UO2ION	9.4484E-24	0.0	0.0	0.0
UO2OHION	1.9766E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3093E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.5395E-07	0.0	0.0

Total mol/hr	0.11467	1.2276E-03	0.0	0.0
Total g/hr	2.0691	0.11265	0.0	0.0
Volume, L/hr	2.0646E-03	3.9516E-05	0.0	0.0
Enthalpy, cal/hr	-7833.	-373.1	0.0	0.0
Density, g/L	1002.2	2850.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH2 LIQUID

TO : WASH LIQUID MIX (C109-1-2)

FROM : SECOND WASH OF C-109 SLUDGE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.864			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11110	0.0	0.0	0.0
HNO3	1.0407E-19	0.0	0.0	0.0
BIOH3	5.6147E-08	0.0	0.0	0.0
CROH3	1.9997E-09	0.0	0.0	0.0
FEIIIOH3	4.8830E-13	0.0	0.0	0.0
ALOH3	4.6774E-12	0.0	0.0	0.0
MNNO32	1.6707E-17	0.0	0.0	0.0
MNOH2	1.7461E-10	0.0	0.0	0.0
NIOH2	1.2671E-09	0.0	0.0	0.0
PBHP04	5.1064E-33	0.0	0.0	0.0
PBNO32	2.5467E-34	0.0	0.0	0.0
PBO	1.1509E-22	0.0	0.0	0.0
PUIVNO34	2.0024E-38	0.0	0.0	0.0
PUIVOH4	4.5160E-13	0.0	0.0	0.0
SIO2	1.7670E-09	0.0	0.0	0.0
SRHP04	2.3240E-13	0.0	0.0	0.0
SRNO32	4.4975E-13	0.0	0.0	0.0
UO2OH2	6.5061E-11	0.0	0.0	0.0
OHION	1.8989E-04	0.0	0.0	0.0
ALOH2ION	1.5751E-19	0.0	0.0	0.0
ALOH4ION	1.1620E-05	0.0	0.0	0.0
ALOHION	9.7337E-27	0.0	0.0	0.0
BIION	9.7999E-37	0.0	0.0	0.0
BINO32ION	2.0024E-38	0.0	0.0	0.0
BINO3ION	1.1556E-37	0.0	0.0	0.0
BIOH2ION	7.4978E-16	0.0	0.0	0.0
BIOH4ION	6.5277E-08	0.0	0.0	0.0
BIOHION	1.7536E-25	0.0	0.0	0.0
CAION	1.0886E-09	0.0	0.0	0.0
CAOHION	5.6746E-10	0.0	0.0	0.0
CAPO4ION	9.0074E-08	0.0	0.0	0.0
CRIIHPO4ION	3.0715E-23	0.0	0.0	0.0
CRIIION	5.0622E-29	0.0	0.0	0.0
CRIIINO3ION	2.8797E-29	0.0	0.0	0.0
CROH2ION	1.0832E-16	0.0	0.0	0.0
CROH4ION	2.3287E-07	0.0	0.0	0.0
CROHION	1.1496E-20	0.0	0.0	0.0
FEIII2OH2ION	2.0024E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2309E-35	0.0	0.0	0.0
FEIIION	2.0024E-38	0.0	0.0	0.0
FEIIINO3ION	2.0024E-38	0.0	0.0	0.0
FEIIIOH2ION	1.1622E-20	0.0	0.0	0.0

FEIIIOH4ION	1.2315E-09	0.0	0.0	0.0
FEIIIOHION	1.6761E-28	0.0	0.0	0.0
H3SIO4ION	2.5743E-06	0.0	0.0	0.0
HION	3.6656E-16	0.0	0.0	0.0
HP2O7ION	2.0036E-19	0.0	0.0	0.0
HPBO2ION	1.3023E-20	0.0	0.0	0.0
HPO4ION	9.5017E-08	0.0	0.0	0.0
LAION	7.2980E-34	0.0	0.0	0.0
LAOHION	4.9736E-30	0.0	0.0	0.0
MNION	1.8448E-13	0.0	0.0	0.0
MNNO3ION	9.8628E-16	0.0	0.0	0.0
MNOH3ION	4.5286E-10	0.0	0.0	0.0
MNOH4ION	2.5624E-10	0.0	0.0	0.0
MNOHION	2.8684E-11	0.0	0.0	0.0
NAION	2.2919E-04	0.0	0.0	0.0
NDION	9.1327E-08	0.0	0.0	0.0
NIION	8.2174E-16	0.0	0.0	0.0
NINO3ION	7.1160E-18	0.0	0.0	0.0
NIOH3ION	1.3095E-07	0.0	0.0	0.0
NIOHION	3.1802E-13	0.0	0.0	0.0
NO3ION	2.0963E-05	0.0	0.0	0.0
ALION	4.3513E-34	0.0	0.0	0.0
P2O7ION	4.9701E-15	0.0	0.0	0.0
PBION	9.2363E-31	0.0	0.0	0.0
PBNO33ION	4.7471E-37	0.0	0.0	0.0
PBNO3ION	4.4649E-32	0.0	0.0	0.0
PBOHION	5.3218E-26	0.0	0.0	0.0
PO4ION	1.2355E-06	0.0	0.0	0.0
PUIVION	2.0024E-38	0.0	0.0	0.0
PUIVNO32ION	2.0024E-38	0.0	0.0	0.0
PUIVNO33ION	2.0024E-38	0.0	0.0	0.0
PUIVNO3ION	2.0024E-38	0.0	0.0	0.0
PUIVOH2ION	3.6752E-31	0.0	0.0	0.0
PUIVOH3ION	1.4358E-21	0.0	0.0	0.0
PUIVOHION	2.0024E-38	0.0	0.0	0.0
SRION	2.8518E-09	0.0	0.0	0.0
SRNO3ION	5.3569E-11	0.0	0.0	0.0
SROHION	5.5022E-10	0.0	0.0	0.0
SRPO4ION	3.2257E-09	0.0	0.0	0.0
UO22OH2ION	1.7291E-24	0.0	0.0	0.0
UO23OH5ION	5.8391E-17	0.0	0.0	0.0
UO2ION	9.1912E-24	0.0	0.0	0.0
UO2OHION	1.9228E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.11155	0.0	0.0	0.0
Total g/hr	2.0128	0.0	0.0	0.0
Volume, L/hr	2.0084E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7620.	0.0	0.0	0.0
Density, g/L	1002.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH2 SLUDGE

TO : MIX STREAMS BEFORE THIRD WASH

FROM : SECOND WASH OF C-109 SLUDGE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.864			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	3.1087E-03	0.0	0.0	0.0
HNO3	2.9122E-21	0.0	0.0	0.0
BIOH3	1.5711E-09	0.0	0.0	0.0
CROH3	5.5955E-11	2.7560E-06	0.0	0.0
FEIIIIOH3	1.3664E-14	8.1550E-05	0.0	0.0
ALOH3	1.3088E-13	9.7642E-04	0.0	0.0
MNNO32	4.6750E-19	0.0	0.0	0.0
MNOH2	4.8860E-12	7.3654E-06	0.0	0.0
NIOH2	3.5455E-11	1.0004E-04	0.0	0.0
PEHPO4	1.4289E-34	0.0	0.0	0.0
PBNO32	7.1262E-36	0.0	0.0	0.0
PBO	3.2205E-24	8.1161E-06	0.0	0.0
PUIVNO34	5.6031E-40	0.0	0.0	0.0
PUIVOH4	1.2637E-14	7.4457E-09	0.0	0.0
SIO2	4.9445E-11	0.0	0.0	0.0
SRHPO4	6.5030E-15	0.0	0.0	0.0
SRNO32	1.2585E-14	0.0	0.0	0.0
UO2OH2	1.8206E-12	1.5184E-05	0.0	0.0
OHION	5.3135E-06	0.0	0.0	0.0
ALOH2ION	4.4075E-21	0.0	0.0	0.0
ALOH4ION	3.2515E-07	0.0	0.0	0.0
ALOHION	2.7237E-28	0.0	0.0	0.0
BIION	2.7422E-38	0.0	0.0	0.0
BINO32ION	5.6031E-40	0.0	0.0	0.0
BINO3ION	3.2337E-39	0.0	0.0	0.0
BIOH2ION	2.0980E-17	0.0	0.0	0.0
BIOH4ION	1.8266E-09	0.0	0.0	0.0
BIOHION	4.9068E-27	0.0	0.0	0.0
CAION	3.0463E-11	0.0	0.0	0.0
CAOHION	1.5879E-11	0.0	0.0	0.0
CAPO4ION	2.5205E-09	0.0	0.0	0.0
CRIIIHPO4ION	8.5947E-25	0.0	0.0	0.0
CRIIIION	1.4165E-30	0.0	0.0	0.0
CRIIINO3ION	8.0579E-31	0.0	0.0	0.0
CROH2ION	3.0311E-18	0.0	0.0	0.0
CROH4ION	6.5163E-09	0.0	0.0	0.0
CROHION	3.2169E-22	0.0	0.0	0.0
FEIII2OH2ION	5.6031E-40	0.0	0.0	0.0
FEIIIHPO4ION	3.4443E-37	0.0	0.0	0.0
FEIIIION	5.6031E-40	0.0	0.0	0.0
FEIIINO3ION	5.6031E-40	0.0	0.0	0.0
FEIIIIOH2ION	3.2521E-22	0.0	0.0	0.0

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FEIIIIOH4ION	3.4460E-11	0.0	0.0	0.0
FEIIIIOHION	4.6901E-30	0.0	0.0	0.0
H3SIO4ION	7.2034E-08	0.0	0.0	0.0
HION	1.0257E-17	0.0	0.0	0.0
HP2O7ION	5.6064E-21	0.0	0.0	0.0
HPBO2ION	3.6442E-22	0.0	0.0	0.0
HPO4ION	2.6588E-09	0.0	0.0	0.0
LAION	2.0421E-35	0.0	0.0	0.0
LAOHION	1.3917E-31	0.0	0.0	0.0
MNION	5.1620E-15	0.0	0.0	0.0
MNNO3ION	2.7598E-17	0.0	0.0	0.0
MNOH3ION	1.2672E-11	0.0	0.0	0.0
MNOH4ION	7.1701E-12	0.0	0.0	0.0
MNOHION	8.0265E-13	0.0	0.0	0.0
NAION	6.4131E-06	0.0	0.0	0.0
NDION	2.5555E-09	0.0	0.0	0.0
NIION	2.2994E-17	0.0	0.0	0.0
NINO3ION	1.9912E-19	0.0	0.0	0.0
NIOH3ION	3.6642E-09	0.0	0.0	0.0
NIOHION	8.8988E-15	0.0	0.0	0.0
NO3ION	5.8658E-07	0.0	0.0	0.0
ALION	1.2176E-35	0.0	0.0	0.0
P2O7ION	1.3907E-16	0.0	0.0	0.0
PBION	2.5845E-32	0.0	0.0	0.0
PBNO33ION	1.3283E-38	0.0	0.0	0.0
PBNO3ION	1.2494E-33	0.0	0.0	0.0
PBOHION	1.4892E-27	0.0	0.0	0.0
PO4ION	3.4572E-08	0.0	0.0	0.0
PUIVION	5.6031E-40	0.0	0.0	0.0
PUIVNO32ION	5.6031E-40	0.0	0.0	0.0
PUIVNO33ION	5.6031E-40	0.0	0.0	0.0
PUIVNO3ION	5.6031E-40	0.0	0.0	0.0
PUIVOH2ION	1.0284E-32	0.0	0.0	0.0
PUIVOH3ION	4.0176E-23	0.0	0.0	0.0
PUIVOHION	5.6031E-40	0.0	0.0	0.0
SRION	7.9799E-11	0.0	0.0	0.0
SRNO3ION	1.4990E-12	0.0	0.0	0.0
SROHION	1.5396E-11	0.0	0.0	0.0
SRPO4ION	9.0263E-11	0.0	0.0	0.0
UO22OH2ION	4.8384E-26	0.0	0.0	0.0
UO23OH5ION	1.6339E-18	0.0	0.0	0.0
UO2ION	2.5719E-25	0.0	0.0	0.0
UO2OHION	5.3805E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3093E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.5395E-07	0.0	0.0

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Total mol/hr	3.1215E-03	1.2276E-03	0.0	0.0
Total g/hr	5.6323E-02	0.11265	0.0	0.0
Volume, L/hr	5.6200E-05	3.9516E-05	0.0	0.0
Enthalpy, cal/hr	-213.2	-373.1	0.0	0.0
Density, g/L	1002.2	2850.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: INLET TO 3RD WSH
TO : THIRD WASH OF C-109 SLUDGE
FROM : MIX STREAMS BEFORE THIRD WASH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.005			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.28065	0.0	0.0	0.0
HNO3	2.7666E-19	0.0	0.0	0.0
BIOH3	3.3570E-09	0.0	0.0	0.0
CROH3	5.1979E-09	2.7511E-06	0.0	0.0
FEIIIOH3	1.2693E-12	8.1550E-05	0.0	0.0
ALOH3	1.2159E-11	9.7642E-04	0.0	0.0
MNNO32	4.5084E-17	0.0	0.0	0.0
MNOH2	4.5389E-10	7.3599E-06	0.0	0.0
NIOH2	3.2936E-09	1.0004E-04	0.0	0.0
PBHP04	5.5817E-29	0.0	0.0	0.0
PBNO32	6.8976E-34	0.0	0.0	0.0
PBO	2.9917E-22	8.1161E-06	0.0	0.0
PUIVNO34	5.0584E-38	0.0	0.0	0.0
PUIVOH4	1.1739E-12	7.4445E-09	0.0	0.0
SIO2	4.4411E-09	0.0	0.0	0.0
SRHP04	9.7626E-12	0.0	0.0	0.0
SRNO32	4.6815E-15	0.0	0.0	0.0
UO2OH2	1.6912E-10	1.5184E-05	0.0	0.0
OHION	5.3976E-06	0.0	0.0	0.0
ALOH2ION	2.2918E-17	0.0	0.0	0.0
ALOH4ION	3.2046E-07	0.0	0.0	0.0
ALOHION	5.5727E-23	0.0	0.0	0.0
BIION	3.3777E-33	0.0	0.0	0.0
BINO32ION	5.0584E-38	0.0	0.0	0.0
BINO3ION	1.5312E-35	0.0	0.0	0.0
BIOH2ION	2.5049E-15	0.0	0.0	0.0
BIOH4ION	4.0654E-11	0.0	0.0	0.0
BIOHION	2.2805E-23	0.0	0.0	0.0
CAION	2.0672E-08	0.0	0.0	0.0
CAOHION	3.1840E-10	0.0	0.0	0.0
CAPO4ION	3.9269E-08	0.0	0.0	0.0
CRIIHPO4ION	1.8659E-17	0.0	0.0	0.0
CRIIION	7.4699E-24	0.0	0.0	0.0
CRIIINO3ION	1.6591E-25	0.0	0.0	0.0
CROH2ION	1.5758E-14	0.0	0.0	0.0
CROH4ION	6.3054E-09	0.0	0.0	0.0
CROHION	6.5122E-17	0.0	0.0	0.0
FEIII2OH2ION	5.0584E-38	0.0	0.0	0.0
FEIIHPO4ION	7.4773E-30	0.0	0.0	0.0
FEIIION	1.7816E-33	0.0	0.0	0.0
FEIIINO3ION	5.0584E-38	0.0	0.0	0.0
FEIIIOH2ION	1.6906E-18	0.0	0.0	0.0

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FEIIIOH4ION	3.3344E-11	0.0	0.0	0.0
FEIIIOHION	9.4870E-25	0.0	0.0	0.0
H3SIO4ION	6.7643E-08	0.0	0.0	0.0
HION	5.2152E-14	0.0	0.0	0.0
HP2O7ION	2.8166E-18	0.0	0.0	0.0
HPBO2ION	3.5263E-22	0.0	0.0	0.0
HPO4ION	7.0269E-08	0.0	0.0	0.0
LAION	2.4784E-32	0.0	0.0	0.0
LAOHION	6.5607E-30	0.0	0.0	0.0
MNION	8.1566E-10	0.0	0.0	0.0
MNNO3ION	1.4595E-13	0.0	0.0	0.0
MNOH3ION	1.2262E-11	0.0	0.0	0.0
MNOH4ION	4.4363E-14	0.0	0.0	0.0
MNOHION	4.1725E-09	0.0	0.0	0.0
NAION	6.4131E-06	0.0	0.0	0.0
NDION	2.5555E-09	0.0	0.0	0.0
NIION	3.7109E-12	0.0	0.0	0.0
NINO3ION	1.0531E-15	0.0	0.0	0.0
NIOH3ION	3.5456E-09	0.0	0.0	0.0
NIOHION	4.6261E-11	0.0	0.0	0.0
NO3ION	5.8656E-07	0.0	0.0	0.0
ALION	6.7270E-29	0.0	0.0	0.0
P2O7ION	1.8182E-16	0.0	0.0	0.0
PBION	3.4002E-27	0.0	0.0	0.0
PBNO33ION	5.0584E-38	0.0	0.0	0.0
PBNO3ION	6.6317E-30	0.0	0.0	0.0
PBOHION	7.7698E-24	0.0	0.0	0.0
PO4ION	4.1474E-09	0.0	0.0	0.0
PUIVION	5.0584E-38	0.0	0.0	0.0
PUIVNO32ION	5.0584E-38	0.0	0.0	0.0
PUIVNO33ION	5.0584E-38	0.0	0.0	0.0
PUIVNO3ION	5.0584E-38	0.0	0.0	0.0
PUIVOH2ION	2.0766E-27	0.0	0.0	0.0
PUIVOH3ION	2.0283E-19	0.0	0.0	0.0
PUIVOHION	1.6698E-36	0.0	0.0	0.0
SRION	5.3630E-08	0.0	0.0	0.0
SRNO3ION	2.9602E-11	0.0	0.0	0.0
SROHION	3.0773E-10	0.0	0.0	0.0
SRPO4ION	1.4063E-09	0.0	0.0	0.0
UO22OH2ION	9.7686E-21	0.0	0.0	0.0
UO23OH5ION	8.4938E-15	0.0	0.0	0.0
UO2ION	5.2034E-20	0.0	0.0	0.0
UO2OHION	2.7970E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3074E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.3555E-07	0.0	0.0

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Total mol/hr	0.28066	1.2275E-03	0.0	0.0
Total g/hr	5.0563	0.11263	0.0	0.0
Volume, L/hr	5.0720E-03	3.9514E-05	0.0	0.0
Enthalpy, cal/hr	-1.9173E+04	-373.1	0.0	0.0
Density, g/L	996.91	2850.4		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH3 LIQUID

TO : WASH LIQUID MIX (C109-1-2)

FROM : THIRD WASH OF C-109 SLUDGE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.005			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27752	0.0	0.0	0.0
HNO3	2.7357E-19	0.0	0.0	0.0
BIOH3	3.3197E-09	0.0	0.0	0.0
CROH3	5.1401E-09	0.0	0.0	0.0
FEIIIIOH3	1.2552E-12	0.0	0.0	0.0
ALOH3	1.2023E-11	0.0	0.0	0.0
MNNO32	4.4582E-17	0.0	0.0	0.0
MNOH2	4.4883E-10	0.0	0.0	0.0
NIOH2	3.2569E-09	0.0	0.0	0.0
PBHPO4	5.5195E-29	0.0	0.0	0.0
PBNO32	6.8208E-34	0.0	0.0	0.0
PBO	2.9584E-22	0.0	0.0	0.0
PUIVNO34	5.0021E-38	0.0	0.0	0.0
PUIVOH4	1.1608E-12	0.0	0.0	0.0
SIO2	4.3916E-09	0.0	0.0	0.0
SRHPO4	9.6539E-12	0.0	0.0	0.0
SRNO32	4.6294E-15	0.0	0.0	0.0
UO2OH2	1.6724E-10	0.0	0.0	0.0
OHION	5.3375E-06	0.0	0.0	0.0
ALOH2ION	2.2663E-17	0.0	0.0	0.0
ALOH4ION	3.1689E-07	0.0	0.0	0.0
ALOHION	5.5106E-23	0.0	0.0	0.0
BIION	3.3400E-33	0.0	0.0	0.0
BINO32ION	5.0021E-38	0.0	0.0	0.0
BINO3ION	1.5142E-35	0.0	0.0	0.0
BIOH2ION	2.4770E-15	0.0	0.0	0.0
BIOH4ION	4.0202E-11	0.0	0.0	0.0
BIOHION	2.2551E-23	0.0	0.0	0.0
CAION	2.0442E-08	0.0	0.0	0.0
CAOHION	3.1486E-10	0.0	0.0	0.0
CAPO4ION	3.8831E-08	0.0	0.0	0.0
CRIIHPO4ION	1.8451E-17	0.0	0.0	0.0
CRIIION	7.3867E-24	0.0	0.0	0.0
CRIIINO3ION	1.6406E-25	0.0	0.0	0.0
CROH2ION	1.5582E-14	0.0	0.0	0.0
CROH4ION	6.2352E-09	0.0	0.0	0.0
CROHION	6.4397E-17	0.0	0.0	0.0
FEIII2OH2ION	5.0021E-38	0.0	0.0	0.0
FEIIHPO4ION	7.3940E-30	0.0	0.0	0.0
FEIIION	1.7618E-33	0.0	0.0	0.0
FEIIINO3ION	5.0021E-38	0.0	0.0	0.0
FEIIIOH2ION	1.6718E-18	0.0	0.0	0.0

FEIIIIOH4ION	3.2973E-11	0.0	0.0	0.0
FEIIIIOHION	9.3814E-25	0.0	0.0	0.0
H3SIO4ION	6.6889E-08	0.0	0.0	0.0
HION	5.1571E-14	0.0	0.0	0.0
HP2O7ION	2.7853E-18	0.0	0.0	0.0
HPBO2ION	3.4870E-22	0.0	0.0	0.0
HPO4ION	6.9486E-08	0.0	0.0	0.0
LAION	2.4508E-32	0.0	0.0	0.0
LAOHION	6.4876E-30	0.0	0.0	0.0
MNION	8.0658E-10	0.0	0.0	0.0
MNNO3ION	1.4433E-13	0.0	0.0	0.0
MNOH3ION	1.2125E-11	0.0	0.0	0.0
MNOH4ION	4.3869E-14	0.0	0.0	0.0
MNOHION	4.1260E-09	0.0	0.0	0.0
NAION	6.3417E-06	0.0	0.0	0.0
NDION	2.5271E-09	0.0	0.0	0.0
NIION	3.6696E-12	0.0	0.0	0.0
NINO3ION	1.0413E-15	0.0	0.0	0.0
NIOH3ION	3.5061E-09	0.0	0.0	0.0
NIOHION	4.5745E-11	0.0	0.0	0.0
NO3ION	5.8002E-07	0.0	0.0	0.0
ALION	6.6520E-29	0.0	0.0	0.0
P2O7ION	1.7980E-16	0.0	0.0	0.0
PBION	3.3623E-27	0.0	0.0	0.0
PBNO33ION	5.0021E-38	0.0	0.0	0.0
PBNO3ION	6.5579E-30	0.0	0.0	0.0
PBOHION	7.6833E-24	0.0	0.0	0.0
PO4ION	4.1012E-09	0.0	0.0	0.0
PUIVION	5.0021E-38	0.0	0.0	0.0
PUIVNO32ION	5.0021E-38	0.0	0.0	0.0
PUIVNO33ION	5.0021E-38	0.0	0.0	0.0
PUIVNO3ION	5.0021E-38	0.0	0.0	0.0
PUIVOH2ION	2.0535E-27	0.0	0.0	0.0
PUIVOH3ION	2.0057E-19	0.0	0.0	0.0
PUIVOHION	1.6512E-36	0.0	0.0	0.0
SRION	5.3033E-08	0.0	0.0	0.0
SRNO3ION	2.9272E-11	0.0	0.0	0.0
SROHION	3.0430E-10	0.0	0.0	0.0
SRPO4ION	1.3906E-09	0.0	0.0	0.0
UO22OH2ION	9.6598E-21	0.0	0.0	0.0
UO23OH5ION	8.3992E-15	0.0	0.0	0.0
UO2ION	5.1454E-20	0.0	0.0	0.0
UO2OHION	2.7659E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0155E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8959E+04	0.0	0.0	0.0
Density, g/L	996.91			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

ESP V-4.0

PROCESS: C-109

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STREAM: WASH3 SLUDGE

TO : REHYDRATE C-109 SOLIDS

FROM : THIRD WASH OF C-109 SLUDGE

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.005			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	3.1258E-03	0.0	0.0	0.0
HNO3	3.0813E-21	0.0	0.0	0.0
BIOH3	3.7389E-11	0.0	0.0	0.0
CROH3	5.7893E-11	2.7511E-06	0.0	0.0
FEIIIIOH3	1.4137E-14	8.1550E-05	0.0	0.0
ALOH3	1.3542E-13	9.7642E-04	0.0	0.0
MNNO32	5.0213E-19	0.0	0.0	0.0
MNOH2	5.0552E-12	7.3599E-06	0.0	0.0
NIOH2	3.6683E-11	1.0004E-04	0.0	0.0
PBHP04	6.2167E-31	0.0	0.0	0.0
PBNO32	7.6823E-36	0.0	0.0	0.0
PBO	3.3321E-24	8.1161E-06	0.0	0.0
PUIVNO34	5.6338E-40	0.0	0.0	0.0
PUIVOH4	1.3074E-14	7.4445E-09	0.0	0.0
SiO2	4.9463E-11	0.0	0.0	0.0
SRHP04	1.0873E-13	0.0	0.0	0.0
SRNO32	5.2141E-17	0.0	0.0	0.0
UO2OH2	1.8836E-12	1.5184E-05	0.0	0.0
OHION	6.0117E-08	0.0	0.0	0.0
ALOH2ION	2.5525E-19	0.0	0.0	0.0
ALOH4ION	3.5691E-09	0.0	0.0	0.0
ALOHION	6.2067E-25	0.0	0.0	0.0
BIION	3.7619E-35	0.0	0.0	0.0
BINO32ION	5.6338E-40	0.0	0.0	0.0
BINO3ION	1.7054E-37	0.0	0.0	0.0
BIOH2ION	2.7898E-17	0.0	0.0	0.0
BIOH4ION	4.5279E-13	0.0	0.0	0.0
BIOHION	2.5399E-25	0.0	0.0	0.0
CAION	2.3024E-10	0.0	0.0	0.0
CAOHION	3.5462E-12	0.0	0.0	0.0
CAPO4ION	4.3736E-10	0.0	0.0	0.0
CRIIIHPO4ION	2.0782E-19	0.0	0.0	0.0
CRIIIION	8.3197E-26	0.0	0.0	0.0
CRIIIINO3ION	1.8479E-27	0.0	0.0	0.0
CROH2ION	1.7550E-16	0.0	0.0	0.0
CROH4ION	7.0227E-11	0.0	0.0	0.0
CROHION	7.2530E-19	0.0	0.0	0.0
FEIII2OH2ION	5.6338E-40	0.0	0.0	0.0
FEIIIHPO4ION	8.3279E-32	0.0	0.0	0.0
FEIIIION	1.9843E-35	0.0	0.0	0.0
FEIIIINO3ION	5.6338E-40	0.0	0.0	0.0
FEIIIIOH2ION	1.8829E-20	0.0	0.0	0.0

FEIIIOH4ION	3.7138E-13	0.0	0.0	0.0
FEIIIOHION	1.0566E-26	0.0	0.0	0.0
H3SIO4ION	7.5338E-10	0.0	0.0	0.0
HION	5.8084E-16	0.0	0.0	0.0
HP2O7ION	3.1371E-20	0.0	0.0	0.0
HPBO2ION	3.9274E-24	0.0	0.0	0.0
HPO4ION	7.8263E-10	0.0	0.0	0.0
LAION	2.7603E-34	0.0	0.0	0.0
LAOHION	7.3070E-32	0.0	0.0	0.0
MNION	9.0845E-12	0.0	0.0	0.0
MNNO3ION	1.6256E-15	0.0	0.0	0.0
MNOH3ION	1.3657E-13	0.0	0.0	0.0
MNOH4ION	4.9409E-16	0.0	0.0	0.0
MNOHION	4.6472E-11	0.0	0.0	0.0
NAION	7.1426E-08	0.0	0.0	0.0
NDION	2.8462E-11	0.0	0.0	0.0
NIION	4.1331E-14	0.0	0.0	0.0
NINO3ION	1.1729E-17	0.0	0.0	0.0
NIOH3ION	3.9490E-11	0.0	0.0	0.0
NIOHION	5.1523E-13	0.0	0.0	0.0
NO3ION	6.5328E-09	0.0	0.0	0.0
ALION	7.4922E-31	0.0	0.0	0.0
P2O7ION	2.0251E-18	0.0	0.0	0.0
PBION	3.7870E-29	0.0	0.0	0.0
PBNO33ION	5.6338E-40	0.0	0.0	0.0
PBNO3ION	7.3861E-32	0.0	0.0	0.0
PBOHION	8.6537E-26	0.0	0.0	0.0
PO4ION	4.6192E-11	0.0	0.0	0.0
PUIVION	5.6338E-40	0.0	0.0	0.0
PUIVNO32ION	5.6338E-40	0.0	0.0	0.0
PUIVNO33ION	5.6338E-40	0.0	0.0	0.0
PUIVNO3ION	5.6338E-40	0.0	0.0	0.0
PUIVOH2ION	2.3128E-29	0.0	0.0	0.0
PUIVOH3ION	2.2591E-21	0.0	0.0	0.0
PUIVOHION	1.8598E-38	0.0	0.0	0.0
SRION	5.9731E-10	0.0	0.0	0.0
SRNO3ION	3.2969E-13	0.0	0.0	0.0
SROHION	3.4274E-12	0.0	0.0	0.0
SRPO4ION	1.5663E-11	0.0	0.0	0.0
UO22OH2ION	1.0880E-22	0.0	0.0	0.0
UO23OH5ION	9.4600E-17	0.0	0.0	0.0
UO2ION	5.7953E-22	0.0	0.0	0.0
UO2OHION	3.1152E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3074E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.3555E-07	0.0	0.0

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Total mol/hr	3.1259E-03	1.2275E-03	0.0	0.0
Total g/hr	5.6315E-02	0.11263	0.0	0.0
Volume, L/hr	5.6490E-05	3.9514E-05	0.0	0.0
Enthalpy, cal/hr	-213.5	-373.1	0.0	0.0
Density, g/L	996.91	2850.4		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WASH LIQUID MIX

TO :

FROM : WASH LIQUID MIX (C109-1-2)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.532			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.49328	0.0	0.0	0.0
HNO3	7.9014E-18	0.0	0.0	0.0
BIOH3	2.8580E-06	0.0	0.0	0.0
CROH3	8.9191E-09	2.1025E-08	0.0	0.0
FEIIIIOH3	2.1780E-12	1.1116E-10	0.0	0.0
ALOH3	2.0863E-11	7.1041E-07	0.0	0.0
MNNO32	2.1623E-14	0.0	0.0	0.0
MNOH2	7.7883E-10	5.3720E-09	0.0	0.0
NIOH2	5.6515E-09	1.1870E-08	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	8.8908E-38	0.0	0.0	0.0
PUIVOH4	2.0143E-12	1.0930E-15	0.0	0.0
SIO2	1.3380E-07	0.0	0.0	0.0
SRHP04	3.9177E-12	0.0	0.0	0.0
SRNO32	4.0690E-11	0.0	0.0	0.0
UO2OH2	2.9019E-10	2.0669E-13	0.0	0.0
OHION	4.0591E-04	0.0	0.0	0.0
ALOH2ION	1.5751E-18	0.0	0.0	0.0
ALOH4ION	2.5104E-05	0.0	0.0	0.0
ALOHION	2.3356E-25	0.0	0.0	0.0
BIION	7.0287E-34	0.0	0.0	0.0
BINO32ION	9.0251E-35	0.0	0.0	0.0
BINO3ION	5.4371E-34	0.0	0.0	0.0
BIOH2ION	8.5475E-14	0.0	0.0	0.0
BIOH4ION	1.6174E-06	0.0	0.0	0.0
BIOHION	4.8433E-23	0.0	0.0	0.0
CAION	8.9137E-10	0.0	0.0	0.0
CAOHION	1.9244E-10	0.0	0.0	0.0
CAPO4ION	3.6292E-07	0.0	0.0	0.0
CRIIIHPO4ION	1.6782E-20	0.0	0.0	0.0
CRIIIION	3.5604E-27	0.0	0.0	0.0
CRIIIINO3ION	1.1876E-26	0.0	0.0	0.0
CROH2ION	1.0711E-15	0.0	0.0	0.0
CROH4ION	5.0559E-07	0.0	0.0	0.0
CROHION	2.7486E-19	0.0	0.0	0.0
FEIII2OH2ION	8.8908E-38	0.0	0.0	0.0
FEIIIHPO4ION	6.7253E-33	0.0	0.0	0.0
FEIIIION	7.3352E-37	0.0	0.0	0.0
FEIIIINO3ION	0.0	0.0	0.0	0.0
FEIIIIOH2ION	1.1491E-19	0.0	0.0	0.0

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FEIIIOH4ION	2.6737E-09	0.0	0.0	0.0
FEIIIOHION	4.0223E-27	0.0	0.0	0.0
H3SIO4ION	9.4813E-05	0.0	0.0	0.0
HION	3.5285E-15	0.0	0.0	0.0
HP2O7ION	3.8540E-16	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	6.0108E-06	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	4.3755E-12	0.0	0.0	0.0
MNNO3ION	1.6783E-13	0.0	0.0	0.0
MNOH3ION	9.8321E-10	0.0	0.0	0.0
MNOH4ION	3.0089E-10	0.0	0.0	0.0
MNOHION	2.8361E-10	0.0	0.0	0.0
NAION	1.4349E-03	0.0	0.0	0.0
NDION	3.3661E-06	0.0	0.0	0.0
NIION	1.9440E-14	0.0	0.0	0.0
NINO3ION	1.2109E-15	0.0	0.0	0.0
NIOH3ION	2.8430E-07	0.0	0.0	0.0
NIOHION	3.1444E-12	0.0	0.0	0.0
NO3ION	7.7263E-04	0.0	0.0	0.0
ALION	2.6838E-32	0.0	0.0	0.0
P2O7ION	6.0135E-12	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	4.3924E-05	0.0	0.0	0.0
PUIVION	8.8908E-38	0.0	0.0	0.0
PUIVNO32ION	8.8908E-38	0.0	0.0	0.0
PUIVNO33ION	8.8908E-38	0.0	0.0	0.0
PUIVNO3ION	8.8908E-38	0.0	0.0	0.0
PUIVOH2ION	8.9260E-30	0.0	0.0	0.0
PUIVOH3ION	1.3964E-20	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	4.9335E-09	0.0	0.0	0.0
SRNO3ION	6.4068E-10	0.0	0.0	0.0
SROHION	3.8868E-10	0.0	0.0	0.0
SRPO4ION	2.6489E-08	0.0	0.0	0.0
UO22OH2ION	4.2032E-23	0.0	0.0	0.0
UO23OH5ION	5.7734E-16	0.0	0.0	0.0
UO2ION	2.2028E-22	0.0	0.0	0.0
UO2OHION	1.9012E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	1.3003E-08	0.0	0.0

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Total mol/hr	0.49607	7.6180E-07	0.0	0.0
Total g/hr	8.9924	6.5058E-05	0.0	0.0
Volume, L/hr	8.9393E-03	2.3733E-08	0.0	0.0
Enthalpy, cal/hr	-3.3898E+04	-0.2398	0.0	0.0
Density, g/L	1005.9	2741.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

ESP V-4.0

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STREAM: H2O TO REHYDRATE
TO : REHYDRATE C-109 SOLIDS
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.3564E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
FUIVNO34	0.0	0.0	0.0	0.0
FUIVOH4	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	9.7223E-11	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0

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FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	9.7223E-11	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
PUIVION	0.0	0.0	0.0	0.0
PUIVNO32ION	0.0	0.0	0.0	0.0
PUIVNO33ION	0.0	0.0	0.0	0.0
PUIVNO3ION	0.0	0.0	0.0	0.0
PUIVOH2ION	0.0	0.0	0.0	0.0
PUIVOH3ION	0.0	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0
UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	5.3564E-02	0.0	0.0	0.0
Total g/hr	0.96498	0.0	0.0	0.0
Volume, L/hr	9.6803E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-3659.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: REHYDRATED SOLID
TO : SAMPLE SPLIT (WASHED SLURRY)
FROM : REHYDRATE C-109 SOLIDS

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.037			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.6690E-02	0.0	0.0	0.0
HNO3	2.9284E-20	0.0	0.0	0.0
BIOH3	3.7794E-11	0.0	0.0	0.0
CROH3	1.0503E-09	2.7500E-06	0.0	0.0
FEIIIOH3	2.5646E-13	8.1550E-05	0.0	0.0
ALOH3	2.4567E-12	9.7642E-04	0.0	0.0
MNNO32	2.4998E-18	0.0	0.0	0.0
MNOH2	9.1710E-11	7.3393E-06	0.0	0.0
NIOH2	6.6548E-10	1.0004E-04	0.0	0.0
PBHPO4	1.8671E-27	0.0	0.0	0.0
PBNO32	3.8246E-35	0.0	0.0	0.0
PBO	6.0449E-23	8.1161E-06	0.0	0.0
PUIVNO34	1.0218E-38	0.0	0.0	0.0
PUIVOH4	2.3719E-13	7.4443E-09	0.0	0.0
SIO2	3.0851E-10	0.0	0.0	0.0
SRHPO4	1.0831E-11	0.0	0.0	0.0
SRNO32	8.6096E-18	0.0	0.0	0.0
UO2OH2	3.4171E-11	1.5184E-05	0.0	0.0
OHION	1.1480E-07	0.0	0.0	0.0
ALOH2ION	4.2039E-17	0.0	0.0	0.0
ALOH4ION	6.8130E-09	0.0	0.0	0.0
ALOHION	8.8795E-22	0.0	0.0	0.0
BIION	2.4910E-32	0.0	0.0	0.0
BINO32ION	1.0218E-38	0.0	0.0	0.0
BINO3ION	7.1208E-36	0.0	0.0	0.0
BIOH2ION	2.5601E-16	0.0	0.0	0.0
BIOH4ION	4.8147E-14	0.0	0.0	0.0
BIOHION	2.0244E-23	0.0	0.0	0.0
CAION	1.0907E-08	0.0	0.0	0.0
CAOHION	1.9372E-11	0.0	0.0	0.0
CAPO4ION	4.5829E-09	0.0	0.0	0.0
CRIIHPO4ION	5.6659E-15	0.0	0.0	0.0
CRIIION	9.8850E-22	0.0	0.0	0.0
CRIIINO3ION	1.3847E-24	0.0	0.0	0.0
CROH2ION	2.8904E-14	0.0	0.0	0.0
CROH4ION	1.3402E-10	0.0	0.0	0.0
CROHION	1.0375E-15	0.0	0.0	0.0
FEIII2OH2ION	1.0218E-38	0.0	0.0	0.0
FEIIHPO4ION	2.2705E-27	0.0	0.0	0.0
FEIIION	2.3582E-31	0.0	0.0	0.0
FEIIINO3ION	1.0446E-37	0.0	0.0	0.0
FEIIIOH2ION	3.1011E-18	0.0	0.0	0.0

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FEIIIOH4ION	7.0873E-13	0.0	0.0	0.0
FEIIIOHION	1.5115E-23	0.0	0.0	0.0
H3SIO4ION	4.9433E-10	0.0	0.0	0.0
HION	9.5634E-14	0.0	0.0	0.0
HP2O7ION	1.5866E-17	0.0	0.0	0.0
HPBO2ION	7.4952E-24	0.0	0.0	0.0
HPO4ION	2.4856E-08	0.0	0.0	0.0
LAION	1.9804E-32	0.0	0.0	0.0
LAOHION	6.3123E-31	0.0	0.0	0.0
MNION	1.2960E-08	0.0	0.0	0.0
MNNO3ION	1.4025E-13	0.0	0.0	0.0
MNOH3ION	2.6062E-13	0.0	0.0	0.0
MNOH4ION	9.4768E-17	0.0	0.0	0.0
MNOHION	7.6536E-09	0.0	0.0	0.0
NAION	7.1426E-08	0.0	0.0	0.0
NDION	2.8462E-11	0.0	0.0	0.0
NIION	5.8976E-11	0.0	0.0	0.0
NINO3ION	1.0119E-15	0.0	0.0	0.0
NIOH3ION	7.5362E-11	0.0	0.0	0.0
NIOHION	8.4856E-11	0.0	0.0	0.0
NO3ION	6.5321E-09	0.0	0.0	0.0
ALION	8.9064E-27	0.0	0.0	0.0
P2O7ION	9.4049E-17	0.0	0.0	0.0
PBION	5.3917E-26	0.0	0.0	0.0
PBNO33ION	1.0218E-38	0.0	0.0	0.0
PBNO3ION	6.3726E-30	0.0	0.0	0.0
PBOHION	1.4253E-23	0.0	0.0	0.0
PO4ION	1.4112E-10	0.0	0.0	0.0
PUIVION	1.0218E-38	0.0	0.0	0.0
PUIVNO32ION	1.0218E-38	0.0	0.0	0.0
PUIVNO33ION	1.0218E-38	0.0	0.0	0.0
PUIVNO3ION	1.0218E-38	0.0	0.0	0.0
PUIVOH2ION	3.3084E-26	0.0	0.0	0.0
PUIVOH3ION	3.7192E-19	0.0	0.0	0.0
PUIVOHION	2.2103E-34	0.0	0.0	0.0
SRION	2.8293E-08	0.0	0.0	0.0
SRNO3ION	9.4308E-13	0.0	0.0	0.0
SROHION	1.8722E-11	0.0	0.0	0.0
SRPO4ION	1.6412E-10	0.0	0.0	0.0
UO22OH2ION	1.5563E-19	0.0	0.0	0.0
UO23OH5ION	1.5580E-14	0.0	0.0	0.0
UO2ION	8.2900E-19	0.0	0.0	0.0
UO2OHION	5.1306E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.3069E-05	0.0	0.0
LAP04.2H2O	0.0	2.7615E-06	0.0	0.0
SR3PO42	0.0	2.2626E-07	0.0	0.0

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Total mol/hr	5.6690E-02	1.2275E-03	0.0	0.0
Total g/hr	1.0213	0.11262	0.0	0.0
Volume, L/hr	1.0245E-03	3.9513E-05	0.0	0.0
Enthalpy, cal/hr	-3873.	-373.1	0.0	0.0
Density, g/L	996.86	2850.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: SLRRY SMPLE WASH

TO :

FROM : SAMPLE SPLIT (WASHED SLURRY)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.037			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	6.8028E-03	0.0	0.0	0.0
HNO3	3.5140E-21	0.0	0.0	0.0
BIOH3	4.5353E-12	0.0	0.0	0.0
CROH3	1.2603E-10	3.3000E-07	0.0	0.0
FEIIIOH3	3.0776E-14	9.7860E-06	0.0	0.0
ALOH3	2.9480E-13	1.1717E-04	0.0	0.0
MNNO32	2.9997E-19	0.0	0.0	0.0
MNOH2	1.1005E-11	8.8072E-07	0.0	0.0
NIOH2	7.9858E-11	1.2004E-05	0.0	0.0
PBHP04	2.2406E-28	0.0	0.0	0.0
PBNO32	4.5896E-36	0.0	0.0	0.0
PBO	7.2539E-24	9.7394E-07	0.0	0.0
PUIVNO34	1.2261E-39	0.0	0.0	0.0
PUIVOH4	2.8463E-14	8.9331E-10	0.0	0.0
SIO2	3.7021E-11	0.0	0.0	0.0
SRHP04	1.2998E-12	0.0	0.0	0.0
SRNO32	1.0332E-18	0.0	0.0	0.0
UO2OH2	4.1006E-12	1.8221E-06	0.0	0.0
OHION	1.3776E-08	0.0	0.0	0.0
ALOH2ION	5.0447E-18	0.0	0.0	0.0
ALOH4ION	8.1756E-10	0.0	0.0	0.0
ALOHION	1.0655E-22	0.0	0.0	0.0
BIION	2.9893E-33	0.0	0.0	0.0
BINO32ION	1.2261E-39	0.0	0.0	0.0
BINO3ION	8.5449E-37	0.0	0.0	0.0
BIOH2ION	3.0721E-17	0.0	0.0	0.0
BIOH4ION	5.7776E-15	0.0	0.0	0.0
BIOHION	2.4293E-24	0.0	0.0	0.0
CAION	1.3089E-09	0.0	0.0	0.0
CAOHION	2.3246E-12	0.0	0.0	0.0
CAPO4ION	5.4995E-10	0.0	0.0	0.0
CRIIHPO4ION	6.7991E-16	0.0	0.0	0.0
CRIIION	1.1862E-22	0.0	0.0	0.0
CRIIINO3ION	1.6617E-25	0.0	0.0	0.0
CROH2ION	3.4685E-15	0.0	0.0	0.0
CROH4ION	1.6083E-11	0.0	0.0	0.0
CROHION	1.2450E-16	0.0	0.0	0.0
FEIII2OH2ION	1.2261E-39	0.0	0.0	0.0
FEIIHPO4ION	2.7246E-28	0.0	0.0	0.0
FEIIION	2.8299E-32	0.0	0.0	0.0
FEIIINO3ION	1.2535E-38	0.0	0.0	0.0
FEIIIOH2ION	3.7213E-19	0.0	0.0	0.0

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FEIIIOH4ION	8.5048E-14	0.0	0.0	0.0
FEIIIOHION	1.8138E-24	0.0	0.0	0.0
H3SIO4ION	5.9320E-11	0.0	0.0	0.0
HION	1.1476E-14	0.0	0.0	0.0
HP2O7ION	1.9040E-18	0.0	0.0	0.0
HPBO2ION	8.9942E-25	0.0	0.0	0.0
HPO4ION	2.9827E-09	0.0	0.0	0.0
LAION	2.3765E-33	0.0	0.0	0.0
LAOHION	7.5748E-32	0.0	0.0	0.0
MNION	1.5552E-09	0.0	0.0	0.0
MNNO3ION	1.6829E-14	0.0	0.0	0.0
MNOH3ION	3.1274E-14	0.0	0.0	0.0
MNOH4ION	1.1372E-17	0.0	0.0	0.0
MNOHION	9.1843E-10	0.0	0.0	0.0
NAION	8.5712E-09	0.0	0.0	0.0
NDION	3.4155E-12	0.0	0.0	0.0
NIION	7.0771E-12	0.0	0.0	0.0
NINO3ION	1.2142E-16	0.0	0.0	0.0
NIOH3ION	9.0435E-12	0.0	0.0	0.0
NIOHION	1.0183E-11	0.0	0.0	0.0
NO3ION	7.8385E-10	0.0	0.0	0.0
ALION	1.0688E-27	0.0	0.0	0.0
P2O7ION	1.1286E-17	0.0	0.0	0.0
PBION	6.4700E-27	0.0	0.0	0.0
PBNO33ION	1.2261E-39	0.0	0.0	0.0
PBNO3ION	7.6471E-31	0.0	0.0	0.0
PBOHION	1.7103E-24	0.0	0.0	0.0
PO4ION	1.6935E-11	0.0	0.0	0.0
PUIVION	1.2261E-39	0.0	0.0	0.0
PUIVNO32ION	1.2261E-39	0.0	0.0	0.0
PUIVNO33ION	1.2261E-39	0.0	0.0	0.0
PUIVNO3ION	1.2261E-39	0.0	0.0	0.0
PUIVOH2ION	3.9701E-27	0.0	0.0	0.0
PUIVOH3ION	4.4631E-20	0.0	0.0	0.0
PUIVOHION	2.6524E-35	0.0	0.0	0.0
SRION	3.3952E-09	0.0	0.0	0.0
SRNO3ION	1.1317E-13	0.0	0.0	0.0
SROHION	2.2466E-12	0.0	0.0	0.0
SRPO4ION	1.9694E-11	0.0	0.0	0.0
UO22OH2ION	1.8676E-20	0.0	0.0	0.0
UO23OH5ION	1.8696E-15	0.0	0.0	0.0
UO2ION	9.9480E-20	0.0	0.0	0.0
UO2OHION	6.1567E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	3.9682E-06	0.0	0.0
LAP04.2H2O	0.0	3.3138E-07	0.0	0.0
SR3PO42	0.0	2.7151E-08	0.0	0.0

Total mol/hr	6.8028E-03	1.4730E-04	0.0	0.0
Total g/hr	0.12256	1.3515E-02	0.0	0.0
Volume, L/hr	1.2294E-04	4.7416E-06	0.0	0.0
Enthalpy, cal/hr	-464.7	-44.77	0.0	0.0
Density, g/L	996.86	2850.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: SLURRY TO LEACH

TO : MIX STREAMS BEFORE FIRST LEACH

FROM : SAMPLE SPLIT (WASHED SLURRY)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.037			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	4.9887E-02	0.0	0.0	0.0
HNO3	2.5770E-20	0.0	0.0	0.0
BIOH3	3.3259E-11	0.0	0.0	0.0
CROH3	9.2423E-10	2.4200E-06	0.0	0.0
FEIIIOH3	2.2569E-13	7.1764E-05	0.0	0.0
ALOH3	2.1619E-12	8.5925E-04	0.0	0.0
MNNO32	2.1998E-18	0.0	0.0	0.0
MNOH2	8.0705E-11	6.4586E-06	0.0	0.0
NIOH2	5.8563E-10	8.8031E-05	0.0	0.0
PBHP04	1.6431E-27	0.0	0.0	0.0
PBNO32	3.3657E-35	0.0	0.0	0.0
PBO	5.3195E-23	7.1422E-06	0.0	0.0
PUIVNO34	8.9916E-39	0.0	0.0	0.0
PUIVOH4	2.0873E-13	6.5509E-09	0.0	0.0
SIO2	2.7149E-10	0.0	0.0	0.0
SRHP04	9.5317E-12	0.0	0.0	0.0
SRNO32	7.5765E-18	0.0	0.0	0.0
UO2OH2	3.0071E-11	1.3362E-05	0.0	0.0
OHION	1.0102E-07	0.0	0.0	0.0
ALOH2ION	3.6994E-17	0.0	0.0	0.0
ALOH4ION	5.9955E-09	0.0	0.0	0.0
ALOHION	7.8139E-22	0.0	0.0	0.0
BIION	2.1921E-32	0.0	0.0	0.0
BINO32ION	8.9916E-39	0.0	0.0	0.0
BINO3ION	6.2663E-36	0.0	0.0	0.0
BIOH2ION	2.2529E-16	0.0	0.0	0.0
BIOH4ION	4.2369E-14	0.0	0.0	0.0
BIOHION	1.7815E-23	0.0	0.0	0.0
CAION	9.5983E-09	0.0	0.0	0.0
CAOHION	1.7047E-11	0.0	0.0	0.0
CAPO4ION	4.0329E-09	0.0	0.0	0.0
CRIIIHPO4ION	4.9860E-15	0.0	0.0	0.0
CRIIIION	8.6988E-22	0.0	0.0	0.0
CRIIINO3ION	1.2186E-24	0.0	0.0	0.0
CROH2ION	2.5436E-14	0.0	0.0	0.0
CROH4ION	1.1794E-10	0.0	0.0	0.0
CROHION	9.1302E-16	0.0	0.0	0.0
FEIII2OH2ION	8.9916E-39	0.0	0.0	0.0
FEIIIHPO4ION	1.9981E-27	0.0	0.0	0.0
FEIIIION	2.0752E-31	0.0	0.0	0.0
FEIIINO3ION	9.1927E-38	0.0	0.0	0.0
FEIIIOH2ION	2.7289E-18	0.0	0.0	0.0

FEIIIIOH4ION	6.2369E-13	0.0	0.0	0.0
FEIIIIOHION	1.3301E-23	0.0	0.0	0.0
H3SIO4ION	4.3501E-10	0.0	0.0	0.0
HION	8.4158E-14	0.0	0.0	0.0
HP2O7ION	1.3962E-17	0.0	0.0	0.0
HPBO2ION	6.5957E-24	0.0	0.0	0.0
HPO4ION	2.1873E-08	0.0	0.0	0.0
LAION	1.7427E-32	0.0	0.0	0.0
LAOHION	5.5548E-31	0.0	0.0	0.0
MNION	1.1405E-08	0.0	0.0	0.0
MNNO3ION	1.2342E-13	0.0	0.0	0.0
MNOH3ION	2.2934E-13	0.0	0.0	0.0
MNOH4ION	8.3396E-17	0.0	0.0	0.0
MNOHION	6.7352E-09	0.0	0.0	0.0
NAION	6.2855E-08	0.0	0.0	0.0
NDION	2.5047E-11	0.0	0.0	0.0
NIION	5.1899E-11	0.0	0.0	0.0
NINO3ION	8.9045E-16	0.0	0.0	0.0
NIOH3ION	6.6319E-11	0.0	0.0	0.0
NIOHION	7.4673E-11	0.0	0.0	0.0
NO3ION	5.7482E-09	0.0	0.0	0.0
ALION	7.8376E-27	0.0	0.0	0.0
P2O7ION	8.2763E-17	0.0	0.0	0.0
PBION	4.7447E-26	0.0	0.0	0.0
PBNO33ION	8.9916E-39	0.0	0.0	0.0
PBNO3ION	5.6079E-30	0.0	0.0	0.0
PBOHION	1.2542E-23	0.0	0.0	0.0
PO4ION	1.2419E-10	0.0	0.0	0.0
PUIVION	8.9916E-39	0.0	0.0	0.0
PUIVNO32ION	8.9916E-39	0.0	0.0	0.0
PUIVNO33ION	8.9916E-39	0.0	0.0	0.0
PUIVNO3ION	8.9916E-39	0.0	0.0	0.0
PUIVOH2ION	2.9114E-26	0.0	0.0	0.0
PUIVOH3ION	3.2729E-19	0.0	0.0	0.0
PUIVOHION	1.9451E-34	0.0	0.0	0.0
SRION	2.4898E-08	0.0	0.0	0.0
SRNO3ION	8.2991E-13	0.0	0.0	0.0
SROHION	1.6475E-11	0.0	0.0	0.0
SRPO4ION	1.4442E-10	0.0	0.0	0.0
UO22OH2ION	1.3696E-19	0.0	0.0	0.0
UO23OH5ION	1.3711E-14	0.0	0.0	0.0
UO2ION	7.2952E-19	0.0	0.0	0.0
UO2OHION	4.5149E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.9100E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	1.9911E-07	0.0	0.0

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Total mol/hr	4.9887E-02	1.0802E-03	0.0	0.0
Total g/hr	0.89875	9.9108E-02	0.0	0.0
Volume, L/hr	9.0158E-04	3.4772E-05	0.0	0.0
Enthalpy, cal/hr	-3408.	-328.3	0.0	0.0
Density, g/L	996.86	2850.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 0.1 M NAOH WASH

TO : MIX STREAMS BEFORE SECOND WASH

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.893			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11120	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	2.0119E-04	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0

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FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	3.4006E-16	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	2.0119E-04	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
PUIVION	0.0	0.0	0.0	0.0
PUIVNO32ION	0.0	0.0	0.0	0.0
PUIVNO33ION	0.0	0.0	0.0	0.0
PUIVNO3ION	0.0	0.0	0.0	0.0
PUIVOH2ION	0.0	0.0	0.0	0.0
PUIVOH3ION	0.0	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0
UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

Total mol/hr	0.11160	0.0	0.0	0.0
Total g/hr	2.0114	0.0	0.0	0.0
Volume, L/hr	2.0090E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7619.	0.0	0.0	0.0
Density, g/L	1001.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: WATER TO WASH 3

TO : MIX STREAMS BEFORE THIRD WASH

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	5.0376E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIION	0.0	0.0	0.0	0.0
CRIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIION	0.0	0.0	0.0	0.0
FEIIIINO3ION	0.0	0.0	0.0	0.0
FEIIIIOH2ION	0.0	0.0	0.0	0.0

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FEIII OH4 ION	0.0	0.0	0.0	0.0
FEIII OH ION	0.0	0.0	0.0	0.0
H3SiO4 ION	0.0	0.0	0.0	0.0
H ION	5.0376E-10	0.0	0.0	0.0
HP2O7 ION	0.0	0.0	0.0	0.0
HPBO2 ION	0.0	0.0	0.0	0.0
HPO4 ION	0.0	0.0	0.0	0.0
LA ION	0.0	0.0	0.0	0.0
LAOH ION	0.0	0.0	0.0	0.0
MN ION	0.0	0.0	0.0	0.0
MNNO3 ION	0.0	0.0	0.0	0.0
MNOH3 ION	0.0	0.0	0.0	0.0
MNOH4 ION	0.0	0.0	0.0	0.0
MNOH ION	0.0	0.0	0.0	0.0
NA ION	0.0	0.0	0.0	0.0
ND ION	0.0	0.0	0.0	0.0
NI ION	0.0	0.0	0.0	0.0
NINO3 ION	0.0	0.0	0.0	0.0
NIOH3 ION	0.0	0.0	0.0	0.0
NIOH ION	0.0	0.0	0.0	0.0
NO3 ION	0.0	0.0	0.0	0.0
AL ION	0.0	0.0	0.0	0.0
P2O7 ION	0.0	0.0	0.0	0.0
PB ION	0.0	0.0	0.0	0.0
PBNO33 ION	0.0	0.0	0.0	0.0
PBNO3 ION	0.0	0.0	0.0	0.0
PBOH ION	0.0	0.0	0.0	0.0
PO4 ION	0.0	0.0	0.0	0.0
PUIV ION	0.0	0.0	0.0	0.0
PUIVNO32 ION	0.0	0.0	0.0	0.0
PUIVNO33 ION	0.0	0.0	0.0	0.0
PUIVNO3 ION	0.0	0.0	0.0	0.0
PUIVOH2 ION	0.0	0.0	0.0	0.0
PUIVOH3 ION	0.0	0.0	0.0	0.0
PUIVOH ION	0.0	0.0	0.0	0.0
SR ION	0.0	0.0	0.0	0.0
SRNO3 ION	0.0	0.0	0.0	0.0
SROH ION	0.0	0.0	0.0	0.0
SRPO4 ION	0.0	0.0	0.0	0.0
UO22OH2 ION	0.0	0.0	0.0	0.0
UO23OH5 ION	0.0	0.0	0.0	0.0
UO2 ION	0.0	0.0	0.0	0.0
UO2OH ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 10 M NAOH

TO : MIX STREAMS BEFORE FIRST LEACH

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	15.833			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	2.0155E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	3.8903E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIION	0.0	0.0	0.0	0.0
CRIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIION	0.0	0.0	0.0	0.0
FEIIIINO3ION	0.0	0.0	0.0	0.0
FEIIIIOH2ION	0.0	0.0	0.0	0.0

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FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	1.3135E-19	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	3.8903E-03	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
PUIVION	0.0	0.0	0.0	0.0
PUIVNO32ION	0.0	0.0	0.0	0.0
PUIVNO33ION	0.0	0.0	0.0	0.0
PUIVNO3ION	0.0	0.0	0.0	0.0
PUIVOH2ION	0.0	0.0	0.0	0.0
PUIVOH3ION	0.0	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0
UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	2.7936E-02	0.0	0.0	0.0
Total g/hr	0.51870	0.0	0.0	0.0
Volume, L/hr	3.9476E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-1804.	0.0	0.0	0.0
Density, g/L	1314.0			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

ESP V-4.0

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STREAM: INLET TO LEACH1

TO : FIRST LEACH

FROM : MIX STREAMS BEFORE FIRST LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.473			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	7.0042E-02	0.0	0.0	0.0
HNO3	2.1368E-25	0.0	0.0	0.0
BIOH3	2.2848E-13	0.0	0.0	0.0
CROH3	1.6697E-10	0.0	0.0	0.0
FEIIIIOH3	1.3939E-13	7.1720E-05	0.0	0.0
ALOH3	1.3352E-12	4.9571E-04	0.0	0.0
MNNO32	3.1649E-28	0.0	0.0	0.0
MNOH2	4.9844E-11	5.1969E-06	0.0	0.0
NIOH2	3.6169E-10	8.3378E-05	0.0	0.0
PBHP04	1.2624E-38	0.0	0.0	0.0
PBNO32	1.2624E-38	0.0	0.0	0.0
PBO	3.2854E-23	7.1422E-06	0.0	0.0
PUIVNO34	1.2624E-38	0.0	0.0	0.0
PUIVOH4	1.2891E-13	6.5510E-09	0.0	0.0
SIO2	4.4115E-15	0.0	0.0	0.0
SRHP04	4.5634E-16	0.0	0.0	0.0
SRNO32	1.4036E-19	0.0	0.0	0.0
UO2OH2	1.8572E-11	1.3362E-05	0.0	0.0
OHION	3.5168E-03	0.0	0.0	0.0
ALOH2ION	2.8435E-21	0.0	0.0	0.0
ALOH4ION	3.6355E-04	0.0	0.0	0.0
ALOHION	3.4369E-30	0.0	0.0	0.0
BIION	1.2624E-38	0.0	0.0	0.0
BINO32ION	1.2624E-38	0.0	0.0	0.0
BINO3ION	1.2624E-38	0.0	0.0	0.0
BIOH2ION	2.0104E-22	0.0	0.0	0.0
BIOH4ION	3.3073E-11	0.0	0.0	0.0
BIOHION	1.0847E-33	0.0	0.0	0.0
CAION	5.2802E-08	0.0	0.0	0.0
CAOHION	1.7607E-07	0.0	0.0	0.0
CAPO4ION	2.4939E-08	0.0	0.0	0.0
CRIIHPO4ION	7.0401E-32	0.0	0.0	0.0
CRIIION	1.2911E-34	0.0	0.0	0.0
CRIIINO3ION	2.9736E-38	0.0	0.0	0.0
CROH2ION	5.9660E-19	0.0	0.0	0.0
CROH4ION	2.4209E-06	0.0	0.0	0.0
CROHION	1.4595E-24	0.0	0.0	0.0
FEIII2OH2ION	1.2624E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2624E-38	0.0	0.0	0.0
FEIIION	1.2624E-38	0.0	0.0	0.0
FEIIINO3ION	1.2624E-38	0.0	0.0	0.0
FEIIIOH2ION	2.1888E-22	0.0	0.0	0.0

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FEIIIOH4ION	4.3767E-08	0.0	0.0	0.0
FEIIIOHION	7.2804E-32	0.0	0.0	0.0
H3SIO4ION	7.0649E-10	0.0	0.0	0.0
HION	8.5991E-18	0.0	0.0	0.0
HP2O7ION	2.2085E-26	0.0	0.0	0.0
HPBO2ION	4.6285E-19	0.0	0.0	0.0
HPO4ION	2.9056E-10	0.0	0.0	0.0
LAION	1.6773E-32	0.0	0.0	0.0
LAOHION	5.7420E-27	0.0	0.0	0.0
MNION	2.2221E-15	0.0	0.0	0.0
MNNO3ION	1.5111E-22	0.0	0.0	0.0
MNOH3ION	1.6095E-08	0.0	0.0	0.0
MNOH4ION	1.2637E-06	0.0	0.0	0.0
MNOHION	5.4021E-13	0.0	0.0	0.0
NAION	3.8903E-03	0.0	0.0	0.0
NDION	2.5047E-11	0.0	0.0	0.0
NIION	7.5994E-18	0.0	0.0	0.0
NINO3ION	1.0903E-24	0.0	0.0	0.0
NIOH3ION	4.6539E-06	0.0	0.0	0.0
NIOHION	5.9861E-15	0.0	0.0	0.0
NO3ION	5.7490E-09	0.0	0.0	0.0
ALION	1.2624E-38	0.0	0.0	0.0
P2O7ION	1.8010E-19	0.0	0.0	0.0
PBION	1.6091E-31	0.0	0.0	0.0
PBNO33ION	1.2624E-38	0.0	0.0	0.0
PBNO3ION	1.2624E-38	0.0	0.0	0.0
PBOHION	8.8494E-28	0.0	0.0	0.0
PO4ION	3.5489E-07	0.0	0.0	0.0
PUIVION	1.2624E-38	0.0	0.0	0.0
PUIVNO32ION	1.2624E-38	0.0	0.0	0.0
PUIVNO33ION	1.2624E-38	0.0	0.0	0.0
PUIVNO3ION	1.2624E-38	0.0	0.0	0.0
PUIVOH2ION	1.5943E-34	0.0	0.0	0.0
PUIVOH3ION	3.9713E-23	0.0	0.0	0.0
PUIVOHION	1.2624E-38	0.0	0.0	0.0
SRION	1.4609E-07	0.0	0.0	0.0
SRNO3ION	1.9795E-13	0.0	0.0	0.0
SROHION	1.7016E-07	0.0	0.0	0.0
SRPO4ION	8.9307E-10	0.0	0.0	0.0
UO22OH2ION	7.4999E-28	0.0	0.0	0.0
UO23OH5ION	1.0997E-18	0.0	0.0	0.0
UO2ION	3.9931E-27	0.0	0.0	0.0
UO2OHION	3.6213E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.9020E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	1.0175E-07	0.0	0.0

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Total mol/hr	7.7822E-02	7.0807E-04	0.0	0.0
Total g/hr	1.4467	6.9884E-02	0.0	0.0
Volume, L/hr	1.3072E-03	2.2935E-05	0.0	0.0
Enthalpy, cal/hr	-5330.	-214.4	0.0	0.0
Density, g/L	1106.7	3047.1		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LEACH1 LIQUID

TO : LEACH LIQUID MIX (C109-1-5)

FROM : FIRST LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.473			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	6.8350E-02	0.0	0.0	0.0
HNO3	2.0852E-25	0.0	0.0	0.0
BIOH3	2.2297E-13	0.0	0.0	0.0
CROH3	1.6293E-10	0.0	0.0	0.0
FEIIIOH3	1.3602E-13	0.0	0.0	0.0
ALOH3	1.3029E-12	0.0	0.0	0.0
MNNO32	3.0884E-28	0.0	0.0	0.0
MNOH2	4.8640E-11	0.0	0.0	0.0
NIOH2	3.5295E-10	0.0	0.0	0.0
PBHPO4	1.2319E-38	0.0	0.0	0.0
PBNO32	1.2319E-38	0.0	0.0	0.0
PBO	3.2060E-23	0.0	0.0	0.0
PUIVNO34	1.2319E-38	0.0	0.0	0.0
PUIVOH4	1.2580E-13	0.0	0.0	0.0
SIO2	4.3049E-15	0.0	0.0	0.0
SRHPO4	4.4532E-16	0.0	0.0	0.0
SRNO32	1.3697E-19	0.0	0.0	0.0
UO2OH2	1.8123E-11	0.0	0.0	0.0
OHION	3.4318E-03	0.0	0.0	0.0
ALOH2ION	2.7748E-21	0.0	0.0	0.0
ALOH4ION	3.5477E-04	0.0	0.0	0.0
ALOHION	3.3538E-30	0.0	0.0	0.0
BIION	1.2319E-38	0.0	0.0	0.0
BINO32ION	1.2319E-38	0.0	0.0	0.0
BINO3ION	1.2319E-38	0.0	0.0	0.0
BIOH2ION	1.9618E-22	0.0	0.0	0.0
BIOH4ION	3.2274E-11	0.0	0.0	0.0
BIOHION	1.0585E-33	0.0	0.0	0.0
CAION	5.1526E-08	0.0	0.0	0.0
CAOHION	1.7182E-07	0.0	0.0	0.0
CAPO4ION	2.4337E-08	0.0	0.0	0.0
CRIIHPO4ION	6.8701E-32	0.0	0.0	0.0
CRIIION	1.2599E-34	0.0	0.0	0.0
CRIIINO3ION	2.9018E-38	0.0	0.0	0.0
CROH2ION	5.8219E-19	0.0	0.0	0.0
CROH4ION	2.3624E-06	0.0	0.0	0.0
CROHION	1.4243E-24	0.0	0.0	0.0
FEIII2OH2ION	1.2319E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2319E-38	0.0	0.0	0.0
FEIIION	1.2319E-38	0.0	0.0	0.0
FEIIINO3ION	1.2319E-38	0.0	0.0	0.0
FEIIIOH2ION	2.1360E-22	0.0	0.0	0.0

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FEIIIOH4ION	4.2710E-08	0.0	0.0	0.0
FEIIIOHION	7.1045E-32	0.0	0.0	0.0
H3SIO4ION	6.8943E-10	0.0	0.0	0.0
HION	8.3914E-18	0.0	0.0	0.0
HP2O7ION	2.1552E-26	0.0	0.0	0.0
HPBO2ION	4.5167E-19	0.0	0.0	0.0
HPO4ION	2.8355E-10	0.0	0.0	0.0
LAION	1.6368E-32	0.0	0.0	0.0
LAOHION	5.6033E-27	0.0	0.0	0.0
MNION	2.1685E-15	0.0	0.0	0.0
MNNO3ION	1.4746E-22	0.0	0.0	0.0
MNOH3ION	1.5706E-08	0.0	0.0	0.0
MNOH4ION	1.2332E-06	0.0	0.0	0.0
MNOHION	5.2716E-13	0.0	0.0	0.0
NAION	3.7964E-03	0.0	0.0	0.0
NDION	2.4442E-11	0.0	0.0	0.0
NIION	7.4158E-18	0.0	0.0	0.0
NINO3ION	1.0640E-24	0.0	0.0	0.0
NIOH3ION	4.5415E-06	0.0	0.0	0.0
NIOHION	5.8416E-15	0.0	0.0	0.0
NO3ION	5.6101E-09	0.0	0.0	0.0
ALION	1.2319E-38	0.0	0.0	0.0
P2O7ION	1.7575E-19	0.0	0.0	0.0
PBION	1.5702E-31	0.0	0.0	0.0
PBNO33ION	1.2319E-38	0.0	0.0	0.0
PBNO3ION	1.2319E-38	0.0	0.0	0.0
PBOHION	8.6356E-28	0.0	0.0	0.0
PO4ION	3.4632E-07	0.0	0.0	0.0
PUIVION	1.2319E-38	0.0	0.0	0.0
PUIVNO32ION	1.2319E-38	0.0	0.0	0.0
PUIVNO33ION	1.2319E-38	0.0	0.0	0.0
PUIVNO3ION	1.2319E-38	0.0	0.0	0.0
PUIVOH2ION	1.5558E-34	0.0	0.0	0.0
PUIVOH3ION	3.8754E-23	0.0	0.0	0.0
PUIVOHION	1.2319E-38	0.0	0.0	0.0
SRION	1.4256E-07	0.0	0.0	0.0
SRNO3ION	1.9317E-13	0.0	0.0	0.0
SROHION	1.6605E-07	0.0	0.0	0.0
SRPO4ION	8.7150E-10	0.0	0.0	0.0
UO22OH2ION	7.3188E-28	0.0	0.0	0.0
UO23OH5ION	1.0731E-18	0.0	0.0	0.0
UO2ION	3.8967E-27	0.0	0.0	0.0
UO2OHION	3.5339E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	7.5942E-02	0.0	0.0	0.0
Total g/hr	1.4117	0.0	0.0	0.0
Volume, L/hr	1.2757E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-5202.	0.0	0.0	0.0
Density, g/L	1106.7			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LEACH1 SLUDGE

TO : MIX STREAMS BEFORE SECOND LEACH

FROM : FIRST LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.473			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.6918E-03	0.0	0.0	0.0
HNO3	5.1611E-27	0.0	0.0	0.0
BIOH3	5.5187E-15	0.0	0.0	0.0
CROH3	4.0328E-12	0.0	0.0	0.0
FEIIIIOH3	3.3667E-15	7.1720E-05	0.0	0.0
ALOH3	3.2249E-14	4.9571E-04	0.0	0.0
MNNO32	7.6442E-30	0.0	0.0	0.0
MNOH2	1.2039E-12	5.1969E-06	0.0	0.0
NIOH2	8.7360E-12	8.3378E-05	0.0	0.0
PBHP04	3.0492E-40	0.0	0.0	0.0
PBNO32	3.0492E-40	0.0	0.0	0.0
PBO	7.9353E-25	7.1422E-06	0.0	0.0
PUIVNO34	3.0492E-40	0.0	0.0	0.0
PUIVOH4	3.1136E-15	6.5510E-09	0.0	0.0
SiO2	1.0655E-16	0.0	0.0	0.0
SRHP04	1.1022E-17	0.0	0.0	0.0
SRNO32	3.3903E-21	0.0	0.0	0.0
UO2OH2	4.4857E-13	1.3362E-05	0.0	0.0
OHION	8.4942E-05	0.0	0.0	0.0
ALOH2ION	6.8681E-23	0.0	0.0	0.0
ALOH4ION	8.7809E-06	0.0	0.0	0.0
ALOHION	8.3012E-32	0.0	0.0	0.0
BIION	3.0492E-40	0.0	0.0	0.0
BINO32ION	3.0492E-40	0.0	0.0	0.0
BINO3ION	3.0492E-40	0.0	0.0	0.0
BIOH2ION	4.8558E-24	0.0	0.0	0.0
BIOH4ION	7.9882E-13	0.0	0.0	0.0
BIOHION	2.6200E-35	0.0	0.0	0.0
CAION	1.2753E-09	0.0	0.0	0.0
CAOHION	4.2527E-09	0.0	0.0	0.0
CAPO4ION	6.0236E-10	0.0	0.0	0.0
CRIIIHPO4ION	1.7004E-33	0.0	0.0	0.0
CRIIION	3.1185E-36	0.0	0.0	0.0
CRIIINO3ION	7.1823E-40	0.0	0.0	0.0
CROH2ION	1.4410E-20	0.0	0.0	0.0
CROH4ION	5.8473E-08	0.0	0.0	0.0
CROHION	3.5253E-26	0.0	0.0	0.0
FEIII2OH2ION	3.0492E-40	0.0	0.0	0.0
FEIIIHPO4ION	3.0492E-40	0.0	0.0	0.0
FEIIIION	3.0492E-40	0.0	0.0	0.0
FEIIINO3ION	3.0492E-40	0.0	0.0	0.0
FEIIIOH2ION	5.2868E-24	0.0	0.0	0.0

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FEIIIOH4ION	1.0571E-09	0.0	0.0	0.0
FEIIIOHION	1.7585E-33	0.0	0.0	0.0
H3SIO4ION	1.7064E-11	0.0	0.0	0.0
HION	2.0770E-19	0.0	0.0	0.0
HP2O7ION	5.3343E-28	0.0	0.0	0.0
HPBO2ION	1.1179E-20	0.0	0.0	0.0
HPO4ION	7.0181E-12	0.0	0.0	0.0
LAION	4.0512E-34	0.0	0.0	0.0
LAOHION	1.3869E-28	0.0	0.0	0.0
MNION	5.3672E-17	0.0	0.0	0.0
MNNO3ION	3.6499E-24	0.0	0.0	0.0
MNOH3ION	3.8874E-10	0.0	0.0	0.0
MNOH4ION	3.0524E-08	0.0	0.0	0.0
MNOHION	1.3048E-14	0.0	0.0	0.0
NAION	9.3965E-05	0.0	0.0	0.0
NDION	6.0497E-13	0.0	0.0	0.0
NIION	1.8355E-19	0.0	0.0	0.0
NINO3ION	2.6334E-26	0.0	0.0	0.0
NIOH3ION	1.1241E-07	0.0	0.0	0.0
NIOHION	1.4459E-16	0.0	0.0	0.0
NO3ION	1.3886E-10	0.0	0.0	0.0
ALION	3.0492E-40	0.0	0.0	0.0
P2O7ION	4.3501E-21	0.0	0.0	0.0
PBION	3.8865E-33	0.0	0.0	0.0
PBNO33ION	3.0492E-40	0.0	0.0	0.0
PBNO3ION	3.0492E-40	0.0	0.0	0.0
PBOHION	2.1374E-29	0.0	0.0	0.0
PO4ION	8.5718E-09	0.0	0.0	0.0
PUIVION	3.0492E-40	0.0	0.0	0.0
PUIVNO32ION	3.0492E-40	0.0	0.0	0.0
PUIVNO33ION	3.0492E-40	0.0	0.0	0.0
PUIVNO3ION	3.0492E-40	0.0	0.0	0.0
PUIVOH2ION	3.8507E-36	0.0	0.0	0.0
PUIVOH3ION	9.5920E-25	0.0	0.0	0.0
PUIVOHION	3.0492E-40	0.0	0.0	0.0
SRION	3.5286E-09	0.0	0.0	0.0
SRNO3ION	4.7811E-15	0.0	0.0	0.0
SROHION	4.1100E-09	0.0	0.0	0.0
SRPO4ION	2.1571E-11	0.0	0.0	0.0
UO22OH2ION	1.8115E-29	0.0	0.0	0.0
UO23OH5ION	2.6562E-20	0.0	0.0	0.0
UO2ION	9.6448E-29	0.0	0.0	0.0
UO2OHION	8.7468E-20	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.9020E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	1.0175E-07	0.0	0.0

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Total mol/hr	1.8797E-03	7.0807E-04	0.0	0.0
Total g/hr	3.4942E-02	6.9884E-02	0.0	0.0
Volume, L/hr	3.1574E-05	2.2935E-05	0.0	0.0
Enthalpy, cal/hr	-128.7	-214.4	0.0	0.0
Density, g/L	1106.7	3047.1		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 3.0 M NAOH
TO : MIX STREAMS BEFORE SECOND LEACH
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.506			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.4959E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	2.9977E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIIOH2ION	0.0	0.0	0.0	0.0

FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	6.5272E-18	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	2.9977E-03	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
PUIVION	0.0	0.0	0.0	0.0
PUIVNO32ION	0.0	0.0	0.0	0.0
PUIVNO33ION	0.0	0.0	0.0	0.0
PUIVNO3ION	0.0	0.0	0.0	0.0
PUIVOH2ION	0.0	0.0	0.0	0.0
PUIVOH3ION	0.0	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0
UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	6.0954E-02	0.0	0.0	0.0
Total g/hr	1.1100	0.0	0.0	0.0
Volume, L/hr	1.0095E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4088.	0.0	0.0	0.0
Density, g/L	1099.6			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: INLET TO LEACH2
TO : SECOND LEACH
FROM : MIX STREAMS BEFORE SECOND LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.462			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.6650E-02	0.0	0.0	0.0
HNO3	5.3846E-27	0.0	0.0	0.0
BIOH3	5.7451E-15	0.0	0.0	0.0
CROH3	4.1995E-12	0.0	0.0	0.0
FEIIIOH3	1.1428E-13	7.1687E-05	0.0	0.0
ALOH3	1.0946E-12	2.1771E-04	0.0	0.0
MNNO32	2.4383E-31	0.0	0.0	0.0
MNOH2	4.0864E-11	4.2513E-06	0.0	0.0
NIOH2	2.9652E-10	7.9826E-05	0.0	0.0
PBHP04	1.0211E-38	0.0	0.0	0.0
PBNO32	1.0211E-38	0.0	0.0	0.0
PBO	2.6935E-23	7.1422E-06	0.0	0.0
PUIVNO34	1.0211E-38	0.0	0.0	0.0
PUIVOH4	1.0569E-13	6.5509E-09	0.0	0.0
SIO2	1.1066E-16	0.0	0.0	0.0
SRHP04	3.8436E-16	0.0	0.0	0.0
SRNO32	1.0301E-22	0.0	0.0	0.0
UO2OH2	1.5226E-11	1.3362E-05	0.0	0.0
OHION	2.7989E-03	0.0	0.0	0.0
ALOH2ION	2.3671E-21	0.0	0.0	0.0
ALOH4ION	2.8678E-04	0.0	0.0	0.0
ALOHION	2.9751E-30	0.0	0.0	0.0
BIION	1.0211E-38	0.0	0.0	0.0
BINO32ION	1.0211E-38	0.0	0.0	0.0
BINO3ION	1.0211E-38	0.0	0.0	0.0
BIOH2ION	5.1280E-24	0.0	0.0	0.0
BIOH4ION	7.9859E-13	0.0	0.0	0.0
BIOHION	2.8673E-35	0.0	0.0	0.0
CAION	4.2219E-08	0.0	0.0	0.0
CAOHION	1.3948E-07	0.0	0.0	0.0
CAPO4ION	2.0118E-08	0.0	0.0	0.0
CRIIHPO4ION	1.9379E-33	0.0	0.0	0.0
CRIIION	3.5359E-36	0.0	0.0	0.0
CRIIINO3ION	1.0211E-38	0.0	0.0	0.0
CROH2ION	1.5226E-20	0.0	0.0	0.0
CROH4ION	5.8473E-08	0.0	0.0	0.0
CROHION	3.8646E-26	0.0	0.0	0.0
FEIII2OH2ION	1.0211E-38	0.0	0.0	0.0
FEIIHPO4ION	1.0211E-38	0.0	0.0	0.0
FEIIION	1.0211E-38	0.0	0.0	0.0
FEIIINO3ION	1.0211E-38	0.0	0.0	0.0
FEIIIOH2ION	1.8204E-22	0.0	0.0	0.0

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FEIIIOH4ION	3.4458E-08	0.0	0.0	0.0
FEIIIOHION	6.2747E-32	0.0	0.0	0.0
H3SIO4ION	1.7064E-11	0.0	0.0	0.0
HION	7.1387E-18	0.0	0.0	0.0
HP2O7ION	1.8948E-26	0.0	0.0	0.0
HPBO2ION	3.6440E-19	0.0	0.0	0.0
HPO4ION	2.3700E-10	0.0	0.0	0.0
LAION	1.3799E-32	0.0	0.0	0.0
LAOHION	4.5761E-27	0.0	0.0	0.0
MNION	1.8318E-15	0.0	0.0	0.0
MNNO3ION	3.8526E-24	0.0	0.0	0.0
MNOH3ION	1.2671E-08	0.0	0.0	0.0
MNOH4ION	9.6386E-07	0.0	0.0	0.0
MNOHION	4.4928E-13	0.0	0.0	0.0
NAION	3.0917E-03	0.0	0.0	0.0
NDION	6.0497E-13	0.0	0.0	0.0
NIION	6.2856E-18	0.0	0.0	0.0
NINO3ION	2.7797E-26	0.0	0.0	0.0
NIOH3ION	3.6640E-06	0.0	0.0	0.0
NIOHION	4.9786E-15	0.0	0.0	0.0
NO3ION	1.3886E-10	0.0	0.0	0.0
ALION	1.0211E-38	0.0	0.0	0.0
P2O7ION	1.4865E-19	0.0	0.0	0.0
PBION	1.2748E-31	0.0	0.0	0.0
PBNO33ION	1.0211E-38	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	7.3794E-28	0.0	0.0	0.0
PO4ION	2.8164E-07	0.0	0.0	0.0
PUIVION	1.0211E-38	0.0	0.0	0.0
PUIVNO32ION	1.0211E-38	0.0	0.0	0.0
PUIVNO33ION	1.0211E-38	0.0	0.0	0.0
PUIVNO3ION	1.0211E-38	0.0	0.0	0.0
PUIVOH2ION	1.3740E-34	0.0	0.0	0.0
PUIVOH3ION	3.2839E-23	0.0	0.0	0.0
PUIVOHION	1.0211E-38	0.0	0.0	0.0
SRION	1.1672E-07	0.0	0.0	0.0
SRNO3ION	4.7797E-15	0.0	0.0	0.0
SROHION	1.3480E-07	0.0	0.0	0.0
SRPO4ION	7.2043E-10	0.0	0.0	0.0
UO22OH2ION	6.4638E-28	0.0	0.0	0.0
UO23OH5ION	9.1459E-19	0.0	0.0	0.0
UO2ION	3.4415E-27	0.0	0.0	0.0
UO2OHION	3.0117E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.8955E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	2.0224E-08	0.0	0.0

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Total mol/hr	6.2833E-02	4.2539E-04	0.0	0.0
Total g/hr	1.1671	4.7725E-02	0.0	0.0
Volume, L/hr	1.0563E-03	1.3937E-05	0.0	0.0
Enthalpy, cal/hr	-4302.	-127.7	0.0	0.0
Density, g/L	1104.9	3424.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LEACH2 LIQUID

TO : LEACH LIQUID MIX (C109-1-5)

FROM : SECOND LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.462			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5492E-02	0.0	0.0	0.0
HNO3	5.2745E-27	0.0	0.0	0.0
BIOH3	5.6277E-15	0.0	0.0	0.0
CROH3	4.1136E-12	0.0	0.0	0.0
FEIIIIOH3	1.1194E-13	0.0	0.0	0.0
ALOH3	1.0723E-12	0.0	0.0	0.0
MNNO32	2.3885E-31	0.0	0.0	0.0
MNOH2	4.0028E-11	0.0	0.0	0.0
NIOH2	2.9046E-10	0.0	0.0	0.0
PBHPO4	1.0002E-38	0.0	0.0	0.0
PBNO32	1.0002E-38	0.0	0.0	0.0
PBO	2.6384E-23	0.0	0.0	0.0
PUIVNO34	1.0002E-38	0.0	0.0	0.0
PUIVOH4	1.0353E-13	0.0	0.0	0.0
SIO2	1.0840E-16	0.0	0.0	0.0
SRHPO4	3.7650E-16	0.0	0.0	0.0
SRNO32	1.0090E-22	0.0	0.0	0.0
UO2OH2	1.4915E-11	0.0	0.0	0.0
OHION	2.7417E-03	0.0	0.0	0.0
ALOH2ION	2.3188E-21	0.0	0.0	0.0
ALOH4ION	2.8092E-04	0.0	0.0	0.0
ALOHION	2.9143E-30	0.0	0.0	0.0
BIION	1.0002E-38	0.0	0.0	0.0
BINO32ION	1.0002E-38	0.0	0.0	0.0
BINO3ION	1.0002E-38	0.0	0.0	0.0
BIOH2ION	5.0231E-24	0.0	0.0	0.0
BIOH4ION	7.8226E-13	0.0	0.0	0.0
BIOHION	2.8087E-35	0.0	0.0	0.0
CAION	4.1356E-08	0.0	0.0	0.0
CAOHION	1.3663E-07	0.0	0.0	0.0
CAPO4ION	1.9707E-08	0.0	0.0	0.0
CRIIIHPO4ION	1.8983E-33	0.0	0.0	0.0
CRIIIIION	3.4636E-36	0.0	0.0	0.0
CRIIINO3ION	1.0002E-38	0.0	0.0	0.0
CROH2ION	1.4915E-20	0.0	0.0	0.0
CROH4ION	5.7277E-08	0.0	0.0	0.0
CROHION	3.7856E-26	0.0	0.0	0.0
FEIII2OH2ION	1.0002E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.0002E-38	0.0	0.0	0.0
FEIIIIION	1.0002E-38	0.0	0.0	0.0
FEIIINO3ION	1.0002E-38	0.0	0.0	0.0
FEIIIOH2ION	1.7832E-22	0.0	0.0	0.0

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FEIIIOH4ION	3.3753E-08	0.0	0.0	0.0
FEIIIOHION	6.1464E-32	0.0	0.0	0.0
H3SIO4ION	1.6715E-11	0.0	0.0	0.0
HION	6.9927E-18	0.0	0.0	0.0
HP2O7ION	1.8560E-26	0.0	0.0	0.0
HPBO2ION	3.5695E-19	0.0	0.0	0.0
HPO4ION	2.3215E-10	0.0	0.0	0.0
LAION	1.3517E-32	0.0	0.0	0.0
LAOHION	4.4825E-27	0.0	0.0	0.0
MNION	1.7944E-15	0.0	0.0	0.0
MNNO3ION	3.7738E-24	0.0	0.0	0.0
MNOH3ION	1.2412E-08	0.0	0.0	0.0
MNOH4ION	9.4415E-07	0.0	0.0	0.0
MNOHION	4.4009E-13	0.0	0.0	0.0
NAION	3.0285E-03	0.0	0.0	0.0
NDION	5.9260E-13	0.0	0.0	0.0
NIION	6.1571E-18	0.0	0.0	0.0
NINO3ION	2.7229E-26	0.0	0.0	0.0
NIOH3ION	3.5891E-06	0.0	0.0	0.0
NIOHION	4.8768E-15	0.0	0.0	0.0
NO3ION	1.3602E-10	0.0	0.0	0.0
ALION	1.0002E-38	0.0	0.0	0.0
P2O7ION	1.4561E-19	0.0	0.0	0.0
PBION	1.2487E-31	0.0	0.0	0.0
PBNO33ION	1.0002E-38	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	7.2285E-28	0.0	0.0	0.0
PO4ION	2.7588E-07	0.0	0.0	0.0
PUIVION	1.0002E-38	0.0	0.0	0.0
PUIVNO32ION	1.0002E-38	0.0	0.0	0.0
PUIVNO33ION	1.0002E-38	0.0	0.0	0.0
PUIVNO3ION	1.0002E-38	0.0	0.0	0.0
PUIVOH2ION	1.3459E-34	0.0	0.0	0.0
PUIVOH3ION	3.2168E-23	0.0	0.0	0.0
PUIVOHION	1.0002E-38	0.0	0.0	0.0
SRION	1.1433E-07	0.0	0.0	0.0
SRNO3ION	4.6819E-15	0.0	0.0	0.0
SROHION	1.3204E-07	0.0	0.0	0.0
SRPO4ION	7.0570E-10	0.0	0.0	0.0
UO22OH2ION	6.3317E-28	0.0	0.0	0.0
UO23OH5ION	8.9589E-19	0.0	0.0	0.0
UO2ION	3.3712E-27	0.0	0.0	0.0
UO2OHION	2.9502E-18	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	6.1548E-02	0.0	0.0	0.0
Total g/hr	1.1432	0.0	0.0	0.0
Volume, L/hr	1.0347E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4214.	0.0	0.0	0.0
Density, g/L	1104.9			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LEACH2 SLUDGE

TO : MIX STREAMS BEFORE FIRST LCH/WSH

FROM : SECOND LEACH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.462			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.1583E-03	0.0	0.0	0.0
HNO3	1.1009E-28	0.0	0.0	0.0
BIOH3	1.1746E-16	0.0	0.0	0.0
CROH3	8.5863E-14	0.0	0.0	0.0
FEIIIIOH3	2.3365E-15	7.1687E-05	0.0	0.0
ALOH3	2.2381E-14	2.1771E-04	0.0	0.0
MNNO32	4.9854E-33	0.0	0.0	0.0
MNOH2	8.3550E-13	4.2513E-06	0.0	0.0
NIOH2	6.0627E-12	7.9826E-05	0.0	0.0
PBHP04	2.0877E-40	0.0	0.0	0.0
PBNO32	2.0877E-40	0.0	0.0	0.0
PBO	5.5070E-25	7.1422E-06	0.0	0.0
PUIVNO34	2.0877E-40	0.0	0.0	0.0
PUIVOH4	2.1609E-15	6.5509E-09	0.0	0.0
SIO2	2.2626E-18	0.0	0.0	0.0
SRHP04	7.8585E-18	0.0	0.0	0.0
SRNO32	2.1061E-24	0.0	0.0	0.0
UO2OH2	3.1131E-13	1.3362E-05	0.0	0.0
OHION	5.7226E-05	0.0	0.0	0.0
ALOH2ION	4.8399E-23	0.0	0.0	0.0
ALOH4ION	5.8636E-06	0.0	0.0	0.0
ALOHION	6.0829E-32	0.0	0.0	0.0
BIION	2.0877E-40	0.0	0.0	0.0
BINO32ION	2.0877E-40	0.0	0.0	0.0
BINO3ION	2.0877E-40	0.0	0.0	0.0
BIOH2ION	1.0485E-25	0.0	0.0	0.0
BIOH4ION	1.6328E-14	0.0	0.0	0.0
BIOHION	5.8625E-37	0.0	0.0	0.0
CAION	8.6321E-10	0.0	0.0	0.0
CAOHION	2.8518E-09	0.0	0.0	0.0
CAPO4ION	4.1133E-10	0.0	0.0	0.0
CRIIHPO4ION	3.9623E-35	0.0	0.0	0.0
CRIIION	7.2294E-38	0.0	0.0	0.0
CRIIINO3ION	2.0877E-40	0.0	0.0	0.0
CROH2ION	3.1131E-22	0.0	0.0	0.0
CROH4ION	1.1955E-09	0.0	0.0	0.0
CROHION	7.9015E-28	0.0	0.0	0.0
FEIII2OH2ION	2.0877E-40	0.0	0.0	0.0
FEIIHPO4ION	2.0877E-40	0.0	0.0	0.0
FEIIION	2.0877E-40	0.0	0.0	0.0
FEIIINO3ION	2.0877E-40	0.0	0.0	0.0
FEIIIOH2ION	3.7219E-24	0.0	0.0	0.0

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FEIIIOH4ION	7.0452E-10	0.0	0.0	0.0
FEIIIOHION	1.2829E-33	0.0	0.0	0.0
H3SIO4ION	3.4890E-13	0.0	0.0	0.0
HION	1.4596E-19	0.0	0.0	0.0
HP2O7ION	3.8740E-28	0.0	0.0	0.0
HPBO2ION	7.4506E-21	0.0	0.0	0.0
HPO4ION	4.8456E-12	0.0	0.0	0.0
LAION	2.8213E-34	0.0	0.0	0.0
LAOHION	9.3563E-29	0.0	0.0	0.0
MNION	3.7453E-17	0.0	0.0	0.0
MNNO3ION	7.8770E-26	0.0	0.0	0.0
MNOH3ION	2.5908E-10	0.0	0.0	0.0
MNOH4ION	1.9707E-08	0.0	0.0	0.0
MNOHION	9.1858E-15	0.0	0.0	0.0
NAION	6.3212E-05	0.0	0.0	0.0
NDION	1.2369E-14	0.0	0.0	0.0
NIION	1.2852E-19	0.0	0.0	0.0
NINO3ION	5.6834E-28	0.0	0.0	0.0
NIOH3ION	7.4914E-08	0.0	0.0	0.0
NIOHION	1.0179E-16	0.0	0.0	0.0
NO3ION	2.8391E-12	0.0	0.0	0.0
ALION	2.0877E-40	0.0	0.0	0.0
P2O7ION	3.0394E-21	0.0	0.0	0.0
PBION	2.6064E-33	0.0	0.0	0.0
PBNO33ION	2.0877E-40	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	1.5088E-29	0.0	0.0	0.0
PO4ION	5.7583E-09	0.0	0.0	0.0
PUIVION	2.0877E-40	0.0	0.0	0.0
PUIVNO32ION	2.0877E-40	0.0	0.0	0.0
PUIVNO33ION	2.0877E-40	0.0	0.0	0.0
PUIVNO3ION	2.0877E-40	0.0	0.0	0.0
PUIVOH2ION	2.8093E-36	0.0	0.0	0.0
PUIVOH3ION	6.7143E-25	0.0	0.0	0.0
PUIVOHION	2.0877E-40	0.0	0.0	0.0
SRION	2.3864E-09	0.0	0.0	0.0
SRNO3ION	9.7725E-17	0.0	0.0	0.0
SROHION	2.7561E-09	0.0	0.0	0.0
SRPO4ION	1.4730E-11	0.0	0.0	0.0
UO22OH2ION	1.3216E-29	0.0	0.0	0.0
UO23OH5ION	1.8700E-20	0.0	0.0	0.0
UO2ION	7.0365E-29	0.0	0.0	0.0
UO2OHION	6.1578E-20	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.8955E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	2.0224E-08	0.0	0.0

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Total mol/hr	1.2847E-03	4.2539E-04	0.0	0.0
Total g/hr	2.3863E-02	4.7725E-02	0.0	0.0
Volume, L/hr	2.1596E-05	1.3937E-05	0.0	0.0
Enthalpy, cal/hr	-87.97	-127.7	0.0	0.0
Density, g/L	1104.9	3424.3		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: H2O TO LCH/WSH1
TO : MIX STREAMS BEFORE FIRST LCH/WSH
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	5.0376E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0

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FEIII OH4 ION	0.0	0.0	0.0	0.0
FEIII OH ION	0.0	0.0	0.0	0.0
H3SiO4 ION	0.0	0.0	0.0	0.0
H ION	5.0376E-10	0.0	0.0	0.0
HP2O7 ION	0.0	0.0	0.0	0.0
HPBO2 ION	0.0	0.0	0.0	0.0
HPO4 ION	0.0	0.0	0.0	0.0
LA ION	0.0	0.0	0.0	0.0
LAOH ION	0.0	0.0	0.0	0.0
MN ION	0.0	0.0	0.0	0.0
MNNO3 ION	0.0	0.0	0.0	0.0
MNOH3 ION	0.0	0.0	0.0	0.0
MNOH4 ION	0.0	0.0	0.0	0.0
MNOH ION	0.0	0.0	0.0	0.0
NA ION	0.0	0.0	0.0	0.0
ND ION	0.0	0.0	0.0	0.0
NI ION	0.0	0.0	0.0	0.0
NINO3 ION	0.0	0.0	0.0	0.0
NIOH3 ION	0.0	0.0	0.0	0.0
NIOH ION	0.0	0.0	0.0	0.0
NO3 ION	0.0	0.0	0.0	0.0
AL ION	0.0	0.0	0.0	0.0
P2O7 ION	0.0	0.0	0.0	0.0
PB ION	0.0	0.0	0.0	0.0
PBNO33 ION	0.0	0.0	0.0	0.0
PBNO3 ION	0.0	0.0	0.0	0.0
PBOH ION	0.0	0.0	0.0	0.0
PO4 ION	0.0	0.0	0.0	0.0
PU I V ION	0.0	0.0	0.0	0.0
PU I VNO32 ION	0.0	0.0	0.0	0.0
PU I VNO33 ION	0.0	0.0	0.0	0.0
PU I VNO3 ION	0.0	0.0	0.0	0.0
PU I VOH2 ION	0.0	0.0	0.0	0.0
PU I VOH3 ION	0.0	0.0	0.0	0.0
PU I VOH ION	0.0	0.0	0.0	0.0
SR ION	0.0	0.0	0.0	0.0
SRNO3 ION	0.0	0.0	0.0	0.0
SROH ION	0.0	0.0	0.0	0.0
SRPO4 ION	0.0	0.0	0.0	0.0
UO22OH2 ION	0.0	0.0	0.0	0.0
UO23OH5 ION	0.0	0.0	0.0	0.0
UO2 ION	0.0	0.0	0.0	0.0
UO2OH ION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: INLET TO L/W1
TO : LEACH/WASH1
FROM : MIX STREAMS BEFORE FIRST LCH/WSH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.020			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27870	0.0	0.0	0.0
HNO3	1.0530E-25	0.0	0.0	0.0
BIOH3	1.4478E-14	0.0	0.0	0.0
CROH3	8.1816E-11	0.0	0.0	0.0
FEIIIIOH3	1.2565E-12	7.1687E-05	0.0	0.0
ALOH3	1.2036E-11	2.2002E-04	0.0	0.0
MNNO32	6.6024E-30	0.0	0.0	0.0
MNOH2	4.4933E-10	4.2702E-06	0.0	0.0
NIOH2	3.2605E-09	7.9858E-05	0.0	0.0
PBHP04	8.8844E-32	0.0	0.0	0.0
PBNO32	5.0232E-38	0.0	0.0	0.0
PBO	2.9617E-22	7.1422E-06	0.0	0.0
PUIVNO34	5.0232E-38	0.0	0.0	0.0
PUIVOH4	1.1621E-12	6.5498E-09	0.0	0.0
SIO2	2.0301E-15	0.0	0.0	0.0
SRHP04	1.1321E-12	0.0	0.0	0.0
SRNO32	4.9927E-26	0.0	0.0	0.0
UO2OH2	1.6742E-10	1.3362E-05	0.0	0.0
OHION	5.9631E-05	0.0	0.0	0.0
ALOH2ION	2.3656E-18	0.0	0.0	0.0
ALOH4ION	3.5521E-06	0.0	0.0	0.0
ALOHION	6.8801E-25	0.0	0.0	0.0
BIION	5.0232E-38	0.0	0.0	0.0
BINO32ION	5.0232E-38	0.0	0.0	0.0
BINO3ION	5.0232E-38	0.0	0.0	0.0
BIOH2ION	1.1267E-21	0.0	0.0	0.0
BIOH4ION	1.9676E-15	0.0	0.0	0.0
BIOHION	1.2281E-30	0.0	0.0	0.0
CAION	1.8913E-08	0.0	0.0	0.0
CAOHION	2.3940E-09	0.0	0.0	0.0
CAPO4ION	5.1123E-08	0.0	0.0	0.0
CRIIHPO4ION	4.9267E-23	0.0	0.0	0.0
CRIIION	2.0239E-28	0.0	0.0	0.0
CRIIINO3ION	1.2543E-35	0.0	0.0	0.0
CROH2ION	2.5868E-17	0.0	0.0	0.0
CROH4ION	1.1138E-09	0.0	0.0	0.0
CROHION	1.2800E-20	0.0	0.0	0.0
FEIII2OH2ION	5.0232E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2417E-33	0.0	0.0	0.0
FEIIION	3.0367E-36	0.0	0.0	0.0
FEIIINO3ION	5.0232E-38	0.0	0.0	0.0
FEIIIOH2ION	1.7455E-19	0.0	0.0	0.0

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FEIIIOH4ION	3.7045E-10	0.0	0.0	0.0
FEIIIOHION	1.1728E-26	0.0	0.0	0.0
H3SIO4ION	3.4687E-13	0.0	0.0	0.0
HION	5.4025E-15	0.0	0.0	0.0
HP2O7ION	1.5796E-20	0.0	0.0	0.0
HPBO2ION	3.9176E-21	0.0	0.0	0.0
HPO4ION	1.6362E-08	0.0	0.0	0.0
LAION	2.6257E-32	0.0	0.0	0.0
LAOHION	5.0429E-29	0.0	0.0	0.0
MNION	1.0376E-11	0.0	0.0	0.0
MNNO3ION	5.7959E-21	0.0	0.0	0.0
MNOH3ION	1.3623E-10	0.0	0.0	0.0
MNOH4ION	6.4386E-12	0.0	0.0	0.0
MNOHION	4.3079E-10	0.0	0.0	0.0
NAION	6.3212E-05	0.0	0.0	0.0
NDION	1.2369E-14	0.0	0.0	0.0
NIION	4.7093E-14	0.0	0.0	0.0
NINO3ION	4.1817E-23	0.0	0.0	0.0
NIOH3ION	3.9391E-08	0.0	0.0	0.0
NIOHION	4.7762E-12	0.0	0.0	0.0
NO3ION	2.5018E-12	0.0	0.0	0.0
ALION	1.1429E-31	0.0	0.0	0.0
P2O7ION	1.7909E-17	0.0	0.0	0.0
PBION	4.4195E-29	0.0	0.0	0.0
PBNO33ION	5.0232E-38	0.0	0.0	0.0
PBNO3ION	2.6325E-37	0.0	0.0	0.0
PBOHION	8.0189E-25	0.0	0.0	0.0
PO4ION	1.4459E-08	0.0	0.0	0.0
PUIVION	5.0232E-38	0.0	0.0	0.0
PUIVNO32ION	5.0232E-38	0.0	0.0	0.0
PUIVNO33ION	5.0232E-38	0.0	0.0	0.0
PUIVNO3ION	5.0232E-38	0.0	0.0	0.0
PUIVOH2ION	2.5672E-29	0.0	0.0	0.0
PUIVOH3ION	2.1025E-20	0.0	0.0	0.0
PUIVOHION	5.0232E-38	0.0	0.0	0.0
SRION	4.9088E-08	0.0	0.0	0.0
SRNO3ION	8.5940E-17	0.0	0.0	0.0
SROHION	2.3136E-09	0.0	0.0	0.0
SRPO4ION	1.8308E-09	0.0	0.0	0.0
UO22OH2ION	1.2076E-22	0.0	0.0	0.0
UO23OH5ION	8.7695E-16	0.0	0.0	0.0
UO2ION	6.4325E-22	0.0	0.0	0.0
UO2OHION	2.8878E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.8932E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	4.1979E-09	0.0	0.0

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Total mol/hr	0.27883	4.2771E-04	0.0	0.0
Total g/hr	5.0237	4.7896E-02	0.0	0.0
Volume, L/hr	5.0366E-03	1.4010E-05	0.0	0.0
Enthalpy, cal/hr	-1.9047E+04	-128.4	0.0	0.0
Density, g/L	997.43	3418.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LCH/WSH1 LIQUID
TO : LEACH LIQUID MIX (C109-1-5)
FROM : LEACH/WASH1

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.020			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27737	0.0	0.0	0.0
HNO3	1.0480E-25	0.0	0.0	0.0
BIOH3	1.4409E-14	0.0	0.0	0.0
CROH3	8.1426E-11	0.0	0.0	0.0
FEIIIIOH3	1.2506E-12	0.0	0.0	0.0
ALOH3	1.1979E-11	0.0	0.0	0.0
MNNO32	6.5710E-30	0.0	0.0	0.0
MNOH2	4.4719E-10	0.0	0.0	0.0
NIOH2	3.2450E-09	0.0	0.0	0.0
PBHP04	8.8421E-32	0.0	0.0	0.0
PBNO32	4.9993E-38	0.0	0.0	0.0
PBO	2.9475E-22	0.0	0.0	0.0
PUIVNO34	4.9993E-38	0.0	0.0	0.0
PUIVOH4	1.1566E-12	0.0	0.0	0.0
SIO2	2.0204E-15	0.0	0.0	0.0
SRHP04	1.1267E-12	0.0	0.0	0.0
SRNO32	4.9689E-26	0.0	0.0	0.0
UO2OH2	1.6662E-10	0.0	0.0	0.0
OHION	5.9347E-05	0.0	0.0	0.0
ALOH2ION	2.3543E-18	0.0	0.0	0.0
ALOH4ION	3.5352E-06	0.0	0.0	0.0
ALOHION	6.8473E-25	0.0	0.0	0.0
BIION	4.9993E-38	0.0	0.0	0.0
BINO32ION	4.9993E-38	0.0	0.0	0.0
BINO3ION	4.9993E-38	0.0	0.0	0.0
BIOH2ION	1.1213E-21	0.0	0.0	0.0
BIOH4ION	1.9583E-15	0.0	0.0	0.0
BIOHION	1.2223E-30	0.0	0.0	0.0
CAION	1.8823E-08	0.0	0.0	0.0
CAOHION	2.3826E-09	0.0	0.0	0.0
CAPO4ION	5.0879E-08	0.0	0.0	0.0
CRIIHPO4ION	4.9032E-23	0.0	0.0	0.0
CRIIION	2.0143E-28	0.0	0.0	0.0
CRIIINO3ION	1.2483E-35	0.0	0.0	0.0
CROH2ION	2.5744E-17	0.0	0.0	0.0
CROH4ION	1.1085E-09	0.0	0.0	0.0
CROHION	1.2739E-20	0.0	0.0	0.0
FEIII2OH2ION	4.9993E-38	0.0	0.0	0.0
FEIIHPO4ION	1.2358E-33	0.0	0.0	0.0
FEIIION	3.0222E-36	0.0	0.0	0.0
FEIIINO3ION	4.9993E-38	0.0	0.0	0.0
FEIIIOH2ION	1.7372E-19	0.0	0.0	0.0

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FEIIIOH4ION	3.6868E-10	0.0	0.0	0.0
FEIIIOHION	1.1672E-26	0.0	0.0	0.0
H3SIO4ION	3.4521E-13	0.0	0.0	0.0
HION	5.3768E-15	0.0	0.0	0.0
HP2O7ION	1.5720E-20	0.0	0.0	0.0
HPBO2ION	3.8990E-21	0.0	0.0	0.0
HPO4ION	1.6284E-08	0.0	0.0	0.0
LAION	2.6132E-32	0.0	0.0	0.0
LAOHION	5.0189E-29	0.0	0.0	0.0
MNION	1.0327E-11	0.0	0.0	0.0
MNNO3ION	5.7682E-21	0.0	0.0	0.0
MNOH3ION	1.3558E-10	0.0	0.0	0.0
MNOH4ION	6.4079E-12	0.0	0.0	0.0
MNOHION	4.2874E-10	0.0	0.0	0.0
NAION	6.2911E-05	0.0	0.0	0.0
NDION	1.2310E-14	0.0	0.0	0.0
NIION	4.6868E-14	0.0	0.0	0.0
NINO3ION	4.1618E-23	0.0	0.0	0.0
NIOH3ION	3.9203E-08	0.0	0.0	0.0
NIOHION	4.7535E-12	0.0	0.0	0.0
NO3ION	2.4899E-12	0.0	0.0	0.0
ALION	1.1375E-31	0.0	0.0	0.0
P2O7ION	1.7824E-17	0.0	0.0	0.0
PBION	4.3985E-29	0.0	0.0	0.0
PBNO33ION	4.9993E-38	0.0	0.0	0.0
PBNO3ION	2.6199E-37	0.0	0.0	0.0
PBOHION	7.9807E-25	0.0	0.0	0.0
PO4ION	1.4390E-08	0.0	0.0	0.0
PUIVION	4.9993E-38	0.0	0.0	0.0
PUIVNO32ION	4.9993E-38	0.0	0.0	0.0
PUIVNO33ION	4.9993E-38	0.0	0.0	0.0
PUIVNO3ION	4.9993E-38	0.0	0.0	0.0
PUIVOH2ION	2.5549E-29	0.0	0.0	0.0
PUIVOH3ION	2.0925E-20	0.0	0.0	0.0
PUIVOHION	4.9993E-38	0.0	0.0	0.0
SRION	4.8854E-08	0.0	0.0	0.0
SRNO3ION	8.5531E-17	0.0	0.0	0.0
SROHION	2.3026E-09	0.0	0.0	0.0
SRPO4ION	1.8221E-09	0.0	0.0	0.0
UO22OH2ION	1.2019E-22	0.0	0.0	0.0
UO23OH5ION	8.7277E-16	0.0	0.0	0.0
UO2ION	6.4019E-22	0.0	0.0	0.0
UO2OHION	2.8741E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.27750	0.0	0.0	0.0
Total g/hr	4.9997	0.0	0.0	0.0
Volume, L/hr	5.0126E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8956E+04	0.0	0.0	0.0
Density, g/L	997.43			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LCH/WSH1 SLUDGE

TO : MIX STREAMS BEFORE 2ND LCH/WSH

FROM : LEACH/WASH1

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.020			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.3286E-03	0.0	0.0	0.0
HNO3	5.0195E-28	0.0	0.0	0.0
BIOH3	6.9015E-17	0.0	0.0	0.0
CROH3	3.9001E-13	0.0	0.0	0.0
FEIIIOH3	5.9899E-15	7.1687E-05	0.0	0.0
ALOH3	5.7377E-14	2.2002E-04	0.0	0.0
MNNO32	3.1474E-32	0.0	0.0	0.0
MNOH2	2.1419E-12	4.2702E-06	0.0	0.0
NIOH2	1.5543E-11	7.9858E-05	0.0	0.0
PBHPO4	4.2352E-34	0.0	0.0	0.0
PBNO32	2.3946E-40	0.0	0.0	0.0
PBO	1.4118E-24	7.1422E-06	0.0	0.0
PUIVNO34	2.3946E-40	0.0	0.0	0.0
PUIVOH4	5.5397E-15	6.5498E-09	0.0	0.0
SIO2	9.6773E-18	0.0	0.0	0.0
SRHPO4	5.3966E-15	0.0	0.0	0.0
SRNO32	2.3800E-28	0.0	0.0	0.0
UO2OH2	7.9809E-13	1.3362E-05	0.0	0.0
OHION	2.8426E-07	0.0	0.0	0.0
ALOH2ION	1.1277E-20	0.0	0.0	0.0
ALOH4ION	1.6933E-08	0.0	0.0	0.0
ALOHION	3.2797E-27	0.0	0.0	0.0
BIION	2.3946E-40	0.0	0.0	0.0
BINO32ION	2.3946E-40	0.0	0.0	0.0
BINO3ION	2.3946E-40	0.0	0.0	0.0
BIOH2ION	5.3707E-24	0.0	0.0	0.0
BIOH4ION	9.3797E-18	0.0	0.0	0.0
BIOHION	5.8544E-33	0.0	0.0	0.0
CAION	9.0157E-11	0.0	0.0	0.0
CAOHION	1.1412E-11	0.0	0.0	0.0
CAPO4ION	2.4370E-10	0.0	0.0	0.0
CRIIHPO4ION	2.3486E-25	0.0	0.0	0.0
CRIIION	9.6479E-31	0.0	0.0	0.0
CRIIINO3ION	5.9791E-38	0.0	0.0	0.0
CROH2ION	1.2331E-19	0.0	0.0	0.0
CROH4ION	5.3095E-12	0.0	0.0	0.0
CROHION	6.1018E-23	0.0	0.0	0.0
FEIII2OH2ION	2.3946E-40	0.0	0.0	0.0
FEIIHPO4ION	5.9192E-36	0.0	0.0	0.0
FEIIION	1.4476E-38	0.0	0.0	0.0
FEIIINO3ION	2.3946E-40	0.0	0.0	0.0
FEIIIOH2ION	8.3207E-22	0.0	0.0	0.0

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FEIIIOH4ION	1.7659E-12	0.0	0.0	0.0
FEIIIOHION	5.5907E-29	0.0	0.0	0.0
H3SIO4ION	1.6535E-15	0.0	0.0	0.0
HION	2.5754E-17	0.0	0.0	0.0
HP2O7ION	7.5297E-23	0.0	0.0	0.0
HPBO2ION	1.8675E-23	0.0	0.0	0.0
HPO4ION	7.7999E-11	0.0	0.0	0.0
LAION	1.2517E-34	0.0	0.0	0.0
LAOHION	2.4039E-31	0.0	0.0	0.0
MNION	4.9462E-14	0.0	0.0	0.0
MNNO3ION	2.7629E-23	0.0	0.0	0.0
MNOH3ION	6.4939E-13	0.0	0.0	0.0
MNOH4ION	3.0693E-14	0.0	0.0	0.0
MNOHION	2.0536E-12	0.0	0.0	0.0
NAION	3.0133E-07	0.0	0.0	0.0
NDION	5.8963E-17	0.0	0.0	0.0
NIION	2.2449E-16	0.0	0.0	0.0
NINO3ION	1.9934E-25	0.0	0.0	0.0
NIOH3ION	1.8778E-10	0.0	0.0	0.0
NIOHION	2.2768E-14	0.0	0.0	0.0
NO3ION	1.1926E-14	0.0	0.0	0.0
ALION	5.4482E-34	0.0	0.0	0.0
P2O7ION	8.5372E-20	0.0	0.0	0.0
PBION	2.1068E-31	0.0	0.0	0.0
PBNO33ION	2.3946E-40	0.0	0.0	0.0
PBNO3ION	1.2549E-39	0.0	0.0	0.0
PBOHION	3.8226E-27	0.0	0.0	0.0
PO4ION	6.8926E-11	0.0	0.0	0.0
PUIVION	2.3946E-40	0.0	0.0	0.0
PUIVNO32ION	2.3946E-40	0.0	0.0	0.0
PUIVNO33ION	2.3946E-40	0.0	0.0	0.0
PUIVNO3ION	2.3946E-40	0.0	0.0	0.0
PUIVOH2ION	1.2238E-31	0.0	0.0	0.0
PUIVOH3ION	1.0022E-22	0.0	0.0	0.0
PUIVOHION	2.3946E-40	0.0	0.0	0.0
SRION	2.3400E-10	0.0	0.0	0.0
SRNO3ION	4.0968E-19	0.0	0.0	0.0
SROHION	1.1029E-11	0.0	0.0	0.0
SRPO4ION	8.7273E-12	0.0	0.0	0.0
UO22OH2ION	5.7567E-25	0.0	0.0	0.0
UO23OH5ION	4.1804E-18	0.0	0.0	0.0
UO2ION	3.0664E-24	0.0	0.0	0.0
UO2OHION	1.3766E-17	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.8932E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	4.1979E-09	0.0	0.0

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Total mol/hr	1.3292E-03	4.2771E-04	0.0	0.0
Total g/hr	2.3948E-02	4.7896E-02	0.0	0.0
Volume, L/hr	2.4010E-05	1.4010E-05	0.0	0.0
Enthalpy, cal/hr	-90.80	-128.4	0.0	0.0
Density, g/L	997.43	3418.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: H2O TO LCH/WSH2

TO : MIX STREAMS BEFORE 2ND LCH/WSH

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	0.0	0.0	0.0	0.0
PUIVOH4	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
OHION	1.0075E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIIHPO4ION	0.0	0.0	0.0	0.0
CRIIIION	0.0	0.0	0.0	0.0
CRIIIINO3ION	0.0	0.0	0.0	0.0
CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIION	0.0	0.0	0.0	0.0
FEIIIINO3ION	0.0	0.0	0.0	0.0
FEIIIIOH2ION	0.0	0.0	0.0	0.0

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FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	1.0075E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
PUIVION	0.0	0.0	0.0	0.0
PUIVNO32ION	0.0	0.0	0.0	0.0
PUIVNO33ION	0.0	0.0	0.0	0.0
PUIVNO3ION	0.0	0.0	0.0	0.0
PUIVOH2ION	0.0	0.0	0.0	0.0
PUIVOH3ION	0.0	0.0	0.0	0.0
PUIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0
UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	5.5508E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0032E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: INLET TO SPLIT

TO : SAMPLE SPLIT (LEACHED SOLIDS)

FROM : MIX STREAMS BEFORE 2ND LCH/WSH

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.455			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.6837E-02	0.0	0.0	0.0
HNO3	1.9763E-26	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	4.2671E-12	0.0	0.0	0.0
FEIIIIOH3	2.5712E-13	7.1687E-05	0.0	0.0
ALOH3	2.4629E-12	2.2002E-04	0.0	0.0
MNNO32	1.1357E-30	0.0	0.0	0.0
MNOH2	9.1943E-11	4.2653E-06	0.0	0.0
NIOH2	6.6717E-10	7.9858E-05	0.0	0.0
PBHPO4	1.3749E-28	0.0	0.0	0.0
PENO32	1.0244E-38	0.0	0.0	0.0
PBO	6.0602E-23	7.1422E-06	0.0	0.0
PUIVNO34	1.0244E-38	0.0	0.0	0.0
PUIVOH4	2.3779E-13	6.5496E-09	0.0	0.0
SiO2	3.1893E-16	0.0	0.0	0.0
SRHPO4	2.4177E-12	0.0	0.0	0.0
SRNO32	1.1857E-29	0.0	0.0	0.0
UO2OH2	3.4258E-11	1.3362E-05	0.0	0.0
OHION	3.0270E-07	0.0	0.0	0.0
ALOH2ION	1.6151E-17	0.0	0.0	0.0
ALOH4ION	1.7966E-08	0.0	0.0	0.0
ALOHION	1.3174E-22	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	9.2288E-09	0.0	0.0	0.0
CAOHION	4.2433E-11	0.0	0.0	0.0
CAPO4ION	5.0616E-09	0.0	0.0	0.0
CRIIHPO4ION	6.4797E-19	0.0	0.0	0.0
CRIIION	2.3129E-25	0.0	0.0	0.0
CRIIINO3ION	5.6046E-34	0.0	0.0	0.0
CROH2ION	4.5002E-17	0.0	0.0	0.0
CROH4ION	1.4323E-12	0.0	0.0	0.0
CROHION	6.2381E-19	0.0	0.0	0.0
FEIII2OH2ION	1.0244E-38	0.0	0.0	0.0
FEIIHPO4ION	6.4073E-29	0.0	0.0	0.0
FEIIION	1.3616E-32	0.0	0.0	0.0
FEIIINO3ION	1.0244E-38	0.0	0.0	0.0
FEIIIOH2ION	1.1914E-18	0.0	0.0	0.0

FEIIIOH4ION	1.8691E-12	0.0	0.0	0.0
FEIIIOHION	2.2425E-24	0.0	0.0	0.0
H3SIO4ION	1.3443E-15	0.0	0.0	0.0
HION	3.6744E-14	0.0	0.0	0.0
HP2O7ION	1.5991E-18	0.0	0.0	0.0
HPBO2ION	1.9766E-23	0.0	0.0	0.0
HPO4ION	1.2766E-08	0.0	0.0	0.0
LAION	1.5566E-32	0.0	0.0	0.0
LAOHION	1.2749E-30	0.0	0.0	0.0
MNION	1.9237E-09	0.0	0.0	0.0
MNNO3ION	3.6271E-20	0.0	0.0	0.0
MNOH3ION	6.8731E-13	0.0	0.0	0.0
MNOH4ION	6.6266E-16	0.0	0.0	0.0
MNOHION	2.9404E-09	0.0	0.0	0.0
NAION	3.0133E-07	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	8.7534E-12	0.0	0.0	0.0
NINO3ION	2.6170E-22	0.0	0.0	0.0
NIOH3ION	1.9874E-10	0.0	0.0	0.0
NIOHION	3.2600E-11	0.0	0.0	0.0
NO3ION	1.1596E-14	0.0	0.0	0.0
ALION	5.1421E-28	0.0	0.0	0.0
P2O7ION	2.5531E-17	0.0	0.0	0.0
PBION	8.0061E-27	0.0	0.0	0.0
PBNO33ION	1.0244E-38	0.0	0.0	0.0
PBNO3ION	1.6481E-36	0.0	0.0	0.0
PBOHION	5.4756E-24	0.0	0.0	0.0
PO4ION	1.9364E-10	0.0	0.0	0.0
PUIVION	1.0244E-38	0.0	0.0	0.0
PUIVNO32ION	1.0244E-38	0.0	0.0	0.0
PUIVNO33ION	1.0244E-38	0.0	0.0	0.0
PUIVNO3ION	1.0244E-38	0.0	0.0	0.0
PUIVOH2ION	4.9085E-27	0.0	0.0	0.0
PUIVOH3ION	1.4290E-19	0.0	0.0	0.0
PUIVOHION	1.2761E-35	0.0	0.0	0.0
SRION	1.2727E-08	0.0	0.0	0.0
SRNO3ION	7.3935E-19	0.0	0.0	0.0
SROHION	2.1802E-11	0.0	0.0	0.0
SRPO4ION	9.6365E-11	0.0	0.0	0.0
UO22OH2ION	2.3090E-20	0.0	0.0	0.0
UO23OH5ION	5.9856E-15	0.0	0.0	0.0
UO2ION	1.2299E-19	0.0	0.0	0.0
UO2OHION	1.9711E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.8928E-05	0.0	0.0
LAP04.2H2O	0.0	2.4301E-06	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	5.6837E-02	4.2770E-04	0.0	0.0
Total g/hr	1.0240	4.7892E-02	0.0	0.0
Volume, L/hr	1.0272E-03	1.4009E-05	0.0	0.0
Enthalpy, cal/hr	-3883.	-128.4	0.0	0.0
Density, g/L	996.87	3418.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: SLURRY SMPLE LCH

TO :

FROM : SAMPLE SPLIT (LEACHED SOLIDS)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.455			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	3.1816E-03	0.0	0.0	0.0
HNO3	1.1063E-27	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	2.3886E-13	0.0	0.0	0.0
FEIIIIOH3	1.4393E-14	4.0129E-06	0.0	0.0
ALOH3	1.3787E-13	1.2316E-05	0.0	0.0
MNNO32	6.3576E-32	0.0	0.0	0.0
MNOH2	5.1468E-12	2.3876E-07	0.0	0.0
NIOH2	3.7347E-11	4.4703E-06	0.0	0.0
PBHP04	7.6967E-30	0.0	0.0	0.0
PBNO32	5.7345E-40	0.0	0.0	0.0
PBO	3.3924E-24	3.9981E-07	0.0	0.0
PUIVNO34	5.7345E-40	0.0	0.0	0.0
PUIVOH4	1.3311E-14	3.6663E-10	0.0	0.0
SIO2	1.7853E-17	0.0	0.0	0.0
SRHP04	1.3534E-13	0.0	0.0	0.0
SRNO32	6.6371E-31	0.0	0.0	0.0
UO2OH2	1.9177E-12	7.4796E-07	0.0	0.0
OHION	1.6945E-08	0.0	0.0	0.0
ALOH2ION	9.0408E-19	0.0	0.0	0.0
ALOH4ION	1.0057E-09	0.0	0.0	0.0
ALOHION	7.3743E-24	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	5.1661E-10	0.0	0.0	0.0
CAOHION	2.3753E-12	0.0	0.0	0.0
CAPO4ION	2.8334E-10	0.0	0.0	0.0
CRIIHPO4ION	3.6272E-20	0.0	0.0	0.0
CRIIION	1.2947E-26	0.0	0.0	0.0
CRIIINO3ION	3.1374E-35	0.0	0.0	0.0
CROH2ION	2.5192E-18	0.0	0.0	0.0
CROH4ION	8.0180E-14	0.0	0.0	0.0
CROHION	3.4920E-20	0.0	0.0	0.0
FEIII2OH2ION	5.7345E-40	0.0	0.0	0.0
FEIIHPO4ION	3.5867E-30	0.0	0.0	0.0
FEIIION	7.6218E-34	0.0	0.0	0.0
FEIIINO3ION	5.7345E-40	0.0	0.0	0.0
FEIIIOH2ION	6.6691E-20	0.0	0.0	0.0

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FEIIIOH4ION	1.0463E-13	0.0	0.0	0.0
FEIIIOHION	1.2553E-25	0.0	0.0	0.0
H3SIO4ION	7.5249E-17	0.0	0.0	0.0
HION	2.0568E-15	0.0	0.0	0.0
HP2O7ION	8.9516E-20	0.0	0.0	0.0
HPBO2ION	1.1065E-24	0.0	0.0	0.0
HPO4ION	7.1463E-10	0.0	0.0	0.0
LAION	8.7135E-34	0.0	0.0	0.0
LAOHION	7.1368E-32	0.0	0.0	0.0
MNION	1.0768E-10	0.0	0.0	0.0
MNNO3ION	2.0304E-21	0.0	0.0	0.0
MNOH3ION	3.8475E-14	0.0	0.0	0.0
MNOH4ION	3.7094E-17	0.0	0.0	0.0
MNOHION	1.6460E-10	0.0	0.0	0.0
NAION	1.6868E-08	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	4.9000E-13	0.0	0.0	0.0
NINO3ION	1.4649E-23	0.0	0.0	0.0
NIOH3ION	1.1125E-11	0.0	0.0	0.0
NIOHION	1.8249E-12	0.0	0.0	0.0
NO3ION	6.4914E-16	0.0	0.0	0.0
ALION	2.8784E-29	0.0	0.0	0.0
P2O7ION	1.4292E-18	0.0	0.0	0.0
PBION	4.4817E-28	0.0	0.0	0.0
PBNO33ION	5.7345E-40	0.0	0.0	0.0
PBNO3ION	9.2260E-38	0.0	0.0	0.0
PBOHION	3.0652E-25	0.0	0.0	0.0
PO4ION	1.0840E-11	0.0	0.0	0.0
PUIVION	5.7345E-40	0.0	0.0	0.0
PUIVNO32ION	5.7345E-40	0.0	0.0	0.0
PUIVNO33ION	5.7345E-40	0.0	0.0	0.0
PUIVNO3ION	5.7345E-40	0.0	0.0	0.0
PUIVOH2ION	2.7477E-28	0.0	0.0	0.0
PUIVOH3ION	7.9991E-21	0.0	0.0	0.0
PUIVOHION	7.1433E-37	0.0	0.0	0.0
SRION	7.1244E-10	0.0	0.0	0.0
SRNO3ION	4.1388E-20	0.0	0.0	0.0
SROHION	1.2204E-12	0.0	0.0	0.0
SRPO4ION	5.3944E-12	0.0	0.0	0.0
UO22OH2ION	1.2926E-21	0.0	0.0	0.0
UO23OH5ION	3.3507E-16	0.0	0.0	0.0
UO2ION	6.8849E-21	0.0	0.0	0.0
UO2OHION	1.1034E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	1.6193E-06	0.0	0.0
LAP04.2H2O	0.0	1.3604E-07	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	3.1817E-03	2.3942E-05	0.0	0.0
Total g/hr	5.7319E-02	2.6809E-03	0.0	0.0
Volume, L/hr	5.7499E-05	7.8422E-07	0.0	0.0
Enthalpy, cal/hr	-217.3	-7.185	0.0	0.0
Density, g/L	996.87	3418.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

ESP V-4.0

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STREAM: INLET TO L/W2

TO : LEACH/WASH2 (1 ML H2O)

FROM : SAMPLE SPLIT (LEACHED SOLIDS)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.455			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.3655E-02	0.0	0.0	0.0
HNO3	1.8657E-26	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	4.0282E-12	0.0	0.0	0.0
FEIIIIOH3	2.4272E-13	6.7674E-05	0.0	0.0
ALOH3	2.3250E-12	2.0770E-04	0.0	0.0
MNNO32	1.0721E-30	0.0	0.0	0.0
MNOH2	8.6796E-11	4.0265E-06	0.0	0.0
NIOH2	6.2983E-10	7.5388E-05	0.0	0.0
PBHPO4	1.2980E-28	0.0	0.0	0.0
PBNO32	9.6707E-39	0.0	0.0	0.0
PBO	5.7210E-23	6.7424E-06	0.0	0.0
PUIVNO34	9.6707E-39	0.0	0.0	0.0
PUIVOH4	2.2448E-13	6.1829E-09	0.0	0.0
SIO2	3.0108E-16	0.0	0.0	0.0
SRHPO4	2.2823E-12	0.0	0.0	0.0
SRNO32	1.1193E-29	0.0	0.0	0.0
UO2OH2	3.2340E-11	1.2614E-05	0.0	0.0
OHION	2.8576E-07	0.0	0.0	0.0
ALOH2ION	1.5247E-17	0.0	0.0	0.0
ALOH4ION	1.6961E-08	0.0	0.0	0.0
ALOHION	1.2436E-22	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	8.7121E-09	0.0	0.0	0.0
CAOHION	4.0058E-11	0.0	0.0	0.0
CAPO4ION	4.7782E-09	0.0	0.0	0.0
CRIIHPO4ION	6.1169E-19	0.0	0.0	0.0
CRIIION	2.1835E-25	0.0	0.0	0.0
CRIIINO3ION	5.2909E-34	0.0	0.0	0.0
CROH2ION	4.2483E-17	0.0	0.0	0.0
CROH4ION	1.3522E-12	0.0	0.0	0.0
CROHION	5.8889E-19	0.0	0.0	0.0
FEIII2OH2ION	9.6707E-39	0.0	0.0	0.0
FEIIHPO4ION	6.0486E-29	0.0	0.0	0.0
FEIIION	1.2854E-32	0.0	0.0	0.0
FEIIINO3ION	9.6707E-39	0.0	0.0	0.0
FEIIIOH2ION	1.1247E-18	0.0	0.0	0.0

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FEIIIOH4ION	1.7644E-12	0.0	0.0	0.0
FEIIIOHION	2.1169E-24	0.0	0.0	0.0
H3SIO4ION	1.2690E-15	0.0	0.0	0.0
HION	3.4687E-14	0.0	0.0	0.0
HP2O7ION	1.5096E-18	0.0	0.0	0.0
HPBO2ION	1.8660E-23	0.0	0.0	0.0
HPO4ION	1.2052E-08	0.0	0.0	0.0
LAION	1.4695E-32	0.0	0.0	0.0
LAOHION	1.2036E-30	0.0	0.0	0.0
MNION	1.8160E-09	0.0	0.0	0.0
MNNO3ION	3.4241E-20	0.0	0.0	0.0
MNOH3ION	6.4884E-13	0.0	0.0	0.0
MNOH4ION	6.2556E-16	0.0	0.0	0.0
MNOHION	2.7758E-09	0.0	0.0	0.0
NAION	2.8446E-07	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	8.2634E-12	0.0	0.0	0.0
NINO3ION	2.4705E-22	0.0	0.0	0.0
NIOH3ION	1.8762E-10	0.0	0.0	0.0
NIOHION	3.0775E-11	0.0	0.0	0.0
NO3ION	1.0947E-14	0.0	0.0	0.0
ALION	4.8542E-28	0.0	0.0	0.0
P2O7ION	2.4101E-17	0.0	0.0	0.0
PBION	7.5579E-27	0.0	0.0	0.0
PBNO33ION	9.6707E-39	0.0	0.0	0.0
PBNO3ION	1.5559E-36	0.0	0.0	0.0
PBOHION	5.1691E-24	0.0	0.0	0.0
PO4ION	1.8280E-10	0.0	0.0	0.0
PUIVION	9.6707E-39	0.0	0.0	0.0
PUIVNO32ION	9.6707E-39	0.0	0.0	0.0
PUIVNO33ION	9.6707E-39	0.0	0.0	0.0
PUIVNO3ION	9.6707E-39	0.0	0.0	0.0
PUIVOH2ION	4.6337E-27	0.0	0.0	0.0
PUIVOH3ION	1.3490E-19	0.0	0.0	0.0
PUIVOHION	1.2047E-35	0.0	0.0	0.0
SRION	1.2015E-08	0.0	0.0	0.0
SRNO3ION	6.9796E-19	0.0	0.0	0.0
SROHION	2.0581E-11	0.0	0.0	0.0
SRPO4ION	9.0971E-11	0.0	0.0	0.0
UO22OH2ION	2.1798E-20	0.0	0.0	0.0
UO23OH5ION	5.6506E-15	0.0	0.0	0.0
UO2ION	1.1611E-19	0.0	0.0	0.0
UO2OHION	1.8607E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.7308E-05	0.0	0.0
LAP04.2H2O	0.0	2.2941E-06	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	5.3656E-02	4.0376E-04	0.0	0.0
Total g/hr	0.96663	4.5211E-02	0.0	0.0
Volume, L/hr	9.6967E-04	1.3225E-05	0.0	0.0
Enthalpy, cal/hr	-3665.	-121.2	0.0	0.0
Density, g/L	996.87	3418.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LCH/WSH2 LIQUID

TO : LEACH LIQUID MIX (C109-1-5)

FROM : LEACH/WASH2 (1 ML H2O)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.455			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.2400E-02	0.0	0.0	0.0
HNO3	1.8221E-26	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	3.9340E-12	0.0	0.0	0.0
FEIIIOH3	2.3705E-13	0.0	0.0	0.0
ALOH3	2.2707E-12	0.0	0.0	0.0
MNNO32	1.0471E-30	0.0	0.0	0.0
MNOH2	8.4766E-11	0.0	0.0	0.0
NIOH2	6.1510E-10	0.0	0.0	0.0
PBHP04	1.2676E-28	0.0	0.0	0.0
PBNO32	9.4446E-39	0.0	0.0	0.0
PBO	5.5872E-23	0.0	0.0	0.0
PUIVNO34	9.4446E-39	0.0	0.0	0.0
PUIVOH4	2.1923E-13	0.0	0.0	0.0
SIO2	2.9404E-16	0.0	0.0	0.0
SRHP04	2.2290E-12	0.0	0.0	0.0
SRNO32	1.0931E-29	0.0	0.0	0.0
UO2OH2	3.1584E-11	0.0	0.0	0.0
OHION	2.7908E-07	0.0	0.0	0.0
ALOH2ION	1.4890E-17	0.0	0.0	0.0
ALOH4ION	1.6564E-08	0.0	0.0	0.0
ALOHION	1.2145E-22	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	8.5084E-09	0.0	0.0	0.0
CAOHION	3.9121E-11	0.0	0.0	0.0
CAPO4ION	4.6665E-09	0.0	0.0	0.0
CRIIHPO4ION	5.9739E-19	0.0	0.0	0.0
CRIIION	2.1324E-25	0.0	0.0	0.0
CRIIINO3ION	5.1671E-34	0.0	0.0	0.0
CROH2ION	4.1490E-17	0.0	0.0	0.0
CROH4ION	1.3205E-12	0.0	0.0	0.0
CROHION	5.7512E-19	0.0	0.0	0.0
FEIII2OH2ION	9.4446E-39	0.0	0.0	0.0
FEIIHPO4ION	5.9072E-29	0.0	0.0	0.0
FEIIION	1.2553E-32	0.0	0.0	0.0
FEIIINO3ION	9.4446E-39	0.0	0.0	0.0
FEIIIOH2ION	1.0984E-18	0.0	0.0	0.0

FEIII OH4 ION	1.7232E-12	0.0	0.0	0.0
FEIII OH ION	2.0674E-24	0.0	0.0	0.0
H3SIO4 ION	1.2393E-15	0.0	0.0	0.0
HION	3.3876E-14	0.0	0.0	0.0
HP2O7 ION	1.4743E-18	0.0	0.0	0.0
HPBO2 ION	1.8223E-23	0.0	0.0	0.0
HPO4 ION	1.1770E-08	0.0	0.0	0.0
LAION	1.4351E-32	0.0	0.0	0.0
LAOHION	1.1754E-30	0.0	0.0	0.0
MNION	1.7735E-09	0.0	0.0	0.0
MNNO3 ION	3.3440E-20	0.0	0.0	0.0
MNOH3 ION	6.3367E-13	0.0	0.0	0.0
MNOH4 ION	6.1093E-16	0.0	0.0	0.0
MNOHION	2.7109E-09	0.0	0.0	0.0
NAION	2.7781E-07	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	8.0702E-12	0.0	0.0	0.0
NINO3 ION	2.4127E-22	0.0	0.0	0.0
NIOH3 ION	1.8323E-10	0.0	0.0	0.0
NIOHION	3.0056E-11	0.0	0.0	0.0
NO3 ION	1.0691E-14	0.0	0.0	0.0
ALION	4.7407E-28	0.0	0.0	0.0
P2O7 ION	2.3538E-17	0.0	0.0	0.0
PBION	7.3811E-27	0.0	0.0	0.0
PBNO33 ION	9.4446E-39	0.0	0.0	0.0
PBNO3 ION	1.5195E-36	0.0	0.0	0.0
PBOHION	5.0482E-24	0.0	0.0	0.0
PO4 ION	1.7852E-10	0.0	0.0	0.0
PUIVION	9.4446E-39	0.0	0.0	0.0
PUIVNO32 ION	9.4446E-39	0.0	0.0	0.0
PUIVNO33 ION	9.4446E-39	0.0	0.0	0.0
PUIVNO3 ION	9.4446E-39	0.0	0.0	0.0
PUIVOH2 ION	4.5253E-27	0.0	0.0	0.0
PUIVOH3 ION	1.3174E-19	0.0	0.0	0.0
PUIVOHION	1.1765E-35	0.0	0.0	0.0
SRION	1.1734E-08	0.0	0.0	0.0
SRNO3 ION	6.8164E-19	0.0	0.0	0.0
SROHION	2.0100E-11	0.0	0.0	0.0
SRPO4 ION	8.8843E-11	0.0	0.0	0.0
UO22OH2 ION	2.1288E-20	0.0	0.0	0.0
UO23OH5 ION	5.5184E-15	0.0	0.0	0.0
UO2 ION	1.1339E-19	0.0	0.0	0.0
UO2OHION	1.8172E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	5.2401E-02	0.0	0.0	0.0
Total g/hr	0.94403	0.0	0.0	0.0
Volume, L/hr	9.4700E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-3580.	0.0	0.0	0.0
Density, g/L	996.87			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

WHC-SD-WM-ES-312
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STREAM: LCH/WSH2 SLUDGE

TO :

FROM : LEACH/WASH2 (1 ML H2O)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.455			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.2548E-03	0.0	0.0	0.0
HNO3	4.3631E-28	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
CROH3	9.4203E-14	0.0	0.0	0.0
FEIIIIOH3	5.6762E-15	6.7674E-05	0.0	0.0
ALOH3	5.4372E-14	2.0770E-04	0.0	0.0
MNNO32	2.5073E-32	0.0	0.0	0.0
MNOH2	2.0298E-12	4.0265E-06	0.0	0.0
NIOH2	1.4729E-11	7.5388E-05	0.0	0.0
PBHP04	3.0354E-30	0.0	0.0	0.0
PBNO32	2.2616E-40	0.0	0.0	0.0
PBO	1.3379E-24	6.7424E-06	0.0	0.0
PUIVNO34	2.2616E-40	0.0	0.0	0.0
PUIVOH4	5.2496E-15	6.1829E-09	0.0	0.0
SIO2	7.0410E-18	0.0	0.0	0.0
SRHP04	5.3374E-14	0.0	0.0	0.0
SRNO32	2.6175E-31	0.0	0.0	0.0
UO2OH2	7.5630E-13	1.2614E-05	0.0	0.0
OHION	6.6827E-09	0.0	0.0	0.0
ALOH2ION	3.5655E-19	0.0	0.0	0.0
ALOH4ION	3.9664E-10	0.0	0.0	0.0
ALOHION	2.9083E-24	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
CAION	2.0374E-10	0.0	0.0	0.0
CAOHION	9.3678E-13	0.0	0.0	0.0
CAPO4ION	1.1174E-10	0.0	0.0	0.0
CRIIIHPO4ION	1.4305E-20	0.0	0.0	0.0
CRIIION	5.1062E-27	0.0	0.0	0.0
CRIIINO3ION	1.2373E-35	0.0	0.0	0.0
CROH2ION	9.9350E-19	0.0	0.0	0.0
CROH4ION	3.1621E-14	0.0	0.0	0.0
CROHION	1.3772E-20	0.0	0.0	0.0
FEIII2OH2ION	2.2616E-40	0.0	0.0	0.0
FEIIIHPO4ION	1.4145E-30	0.0	0.0	0.0
FEIIION	3.0059E-34	0.0	0.0	0.0
FEIIINO3ION	2.2616E-40	0.0	0.0	0.0
FEIIIOH2ION	2.6302E-20	0.0	0.0	0.0

FEIII OH4 ION	4.1262E-14	0.0	0.0	0.0
FEIII OH ION	4.9506E-26	0.0	0.0	0.0
H3SiO4 ION	2.9677E-17	0.0	0.0	0.0
H ION	8.1117E-16	0.0	0.0	0.0
HP2O7 ION	3.5303E-20	0.0	0.0	0.0
HPBO2 ION	4.3637E-25	0.0	0.0	0.0
HPO4 ION	2.8184E-10	0.0	0.0	0.0
LA ION	3.4364E-34	0.0	0.0	0.0
LAOH ION	2.8146E-32	0.0	0.0	0.0
MN ION	4.2468E-11	0.0	0.0	0.0
MNNO3 ION	8.0074E-22	0.0	0.0	0.0
MNOH3 ION	1.5174E-14	0.0	0.0	0.0
MNOH4 ION	1.4629E-17	0.0	0.0	0.0
MNOH ION	6.4914E-11	0.0	0.0	0.0
NA ION	6.6524E-09	0.0	0.0	0.0
ND ION	0.0	0.0	0.0	0.0
NI ION	1.9325E-13	0.0	0.0	0.0
NINO3 ION	5.7774E-24	0.0	0.0	0.0
NIOH3 ION	4.3876E-12	0.0	0.0	0.0
NIOH ION	7.1971E-13	0.0	0.0	0.0
NO3 ION	2.5601E-16	0.0	0.0	0.0
AL ION	1.1352E-29	0.0	0.0	0.0
P2O7 ION	5.6363E-19	0.0	0.0	0.0
PB ION	1.7675E-28	0.0	0.0	0.0
PBNO33 ION	2.2616E-40	0.0	0.0	0.0
PBNO3 ION	3.6385E-38	0.0	0.0	0.0
PBOH ION	1.2088E-25	0.0	0.0	0.0
PO4 ION	4.2749E-12	0.0	0.0	0.0
PUIV ION	2.2616E-40	0.0	0.0	0.0
PUIVNO32 ION	2.2616E-40	0.0	0.0	0.0
PUIVNO33 ION	2.2616E-40	0.0	0.0	0.0
PUIVNO3 ION	2.2616E-40	0.0	0.0	0.0
PUIVOH2 ION	1.0836E-28	0.0	0.0	0.0
PUIVOH3 ION	3.1547E-21	0.0	0.0	0.0
PUIVOH ION	2.8172E-37	0.0	0.0	0.0
SR ION	2.8097E-10	0.0	0.0	0.0
SRNO3 ION	1.6322E-20	0.0	0.0	0.0
SROH ION	4.8130E-13	0.0	0.0	0.0
SRPO4 ION	2.1274E-12	0.0	0.0	0.0
UO22OH2 ION	5.0975E-22	0.0	0.0	0.0
UO23OH5 ION	1.3214E-16	0.0	0.0	0.0
UO2 ION	2.7153E-21	0.0	0.0	0.0
UO2OH ION	4.3515E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	2.7308E-05	0.0	0.0
LAPO4.2H2O	0.0	2.2941E-06	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

WHC-SD-WM-ES-312

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Total mol/hr	1.2548E-03	4.0376E-04	0.0	0.0
Total g/hr	2.2605E-02	4.5211E-02	0.0	0.0
Volume, L/hr	2.2677E-05	1.3225E-05	0.0	0.0
Enthalpy, cal/hr	-85.72	-121.2	0.0	0.0
Density, g/L	996.87	3418.6		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: LEACH LIQUID MIX

TO :

FROM : LEACH LIQUID MIX (C109-1-5)

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	13.760			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.45361	0.0	0.0	0.0
HNO3	2.3286E-24	0.0	0.0	0.0
BIOH3	2.1907E-12	0.0	0.0	0.0
CROH3	1.7008E-09	0.0	0.0	0.0
FEIIIOH3	1.6320E-12	2.6559E-08	0.0	0.0
ALOH3	1.5633E-11	1.8575E-04	0.0	0.0
MNNO32	2.6338E-27	0.0	0.0	0.0
MNOH2	5.8358E-10	2.0148E-06	0.0	0.0
NIOH2	4.2347E-09	2.8245E-06	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
PUIVNO34	8.1759E-38	0.0	0.0	0.0
PUIVOH4	1.5093E-12	9.5800E-14	0.0	0.0
SIO2	4.0728E-14	0.0	0.0	0.0
SRHP04	2.6584E-14	0.0	0.0	0.0
SRNO32	5.0527E-20	0.0	0.0	0.0
UO2OH2	2.1744E-10	1.3836E-11	0.0	0.0
OHION	6.4258E-03	0.0	0.0	0.0
ALOH2ION	9.6151E-20	0.0	0.0	0.0
ALOH4ION	4.5349E-04	0.0	0.0	0.0
ALOHION	8.8576E-28	0.0	0.0	0.0
BIION	8.1759E-38	0.0	0.0	0.0
BINO32ION	8.1759E-38	0.0	0.0	0.0
BINO3ION	8.1759E-38	0.0	0.0	0.0
BIOH2ION	5.3904E-21	0.0	0.0	0.0
BIOH4ION	3.1110E-11	0.0	0.0	0.0
BIOHION	1.9636E-31	0.0	0.0	0.0
CAION	1.4424E-07	0.0	0.0	0.0
CAOHION	2.5461E-07	0.0	0.0	0.0
CAPO4ION	1.3182E-07	0.0	0.0	0.0
CRIIHPO4ION	2.3075E-28	0.0	0.0	0.0
CRIIION	1.7421E-31	0.0	0.0	0.0
CRIIINO3ION	4.8267E-36	0.0	0.0	0.0
CROH2ION	1.7000E-17	0.0	0.0	0.0
CROH4ION	2.4194E-06	0.0	0.0	0.0
CROHION	2.8103E-22	0.0	0.0	0.0
FEIII2OH2ION	8.1759E-38	0.0	0.0	0.0
FEIIHPO4ION	8.1759E-38	0.0	0.0	0.0
FEIIION	8.1759E-38	0.0	0.0	0.0
FEIIINO3ION	8.1759E-38	0.0	0.0	0.0
FEIIIOH2ION	7.1673E-21	0.0	0.0	0.0

FEIIIOH4ION	5.0274E-08	0.0	0.0	0.0
FEIIIOHION	1.6094E-29	0.0	0.0	0.0
H3SIO4ION	7.0646E-10	0.0	0.0	0.0
HION	2.4666E-16	0.0	0.0	0.0
HP2O7ION	4.8563E-24	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	3.2663E-09	0.0	0.0	0.0
LAION	0.0	0.0	0.0	0.0
LAOHION	0.0	0.0	0.0	0.0
MNION	5.4773E-14	0.0	0.0	0.0
MNNO3ION	4.1714E-21	0.0	0.0	0.0
MNOH3ION	1.8487E-08	0.0	0.0	0.0
MNOH4ION	1.7727E-07	0.0	0.0	0.0
MNOHION	1.7689E-11	0.0	0.0	0.0
NAION	6.8880E-03	0.0	0.0	0.0
NDION	2.5047E-11	0.0	0.0	0.0
NIION	2.2250E-16	0.0	0.0	0.0
NINO3ION	3.0097E-23	0.0	0.0	0.0
NIOH3ION	5.3458E-06	0.0	0.0	0.0
NIOHION	1.9610E-13	0.0	0.0	0.0
NO3ION	5.7324E-09	0.0	0.0	0.0
ALION	5.1967E-36	0.0	0.0	0.0
P2O7ION	3.3462E-18	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	6.2871E-07	0.0	0.0	0.0
PUIVION	8.1759E-38	0.0	0.0	0.0
PUIVNO32ION	8.1759E-38	0.0	0.0	0.0
PUIVNO33ION	8.1759E-38	0.0	0.0	0.0
PUIVNO3ION	8.1759E-38	0.0	0.0	0.0
PUIVOH2ION	3.5233E-32	0.0	0.0	0.0
PUIVOH3ION	9.9847E-22	0.0	0.0	0.0
PUIVOHION	8.1759E-38	0.0	0.0	0.0
SRION	3.7575E-07	0.0	0.0	0.0
SRNO3ION	1.8148E-13	0.0	0.0	0.0
SROHION	2.4102E-07	0.0	0.0	0.0
SRPO4ION	4.6236E-09	0.0	0.0	0.0
UO22OH2ION	1.6574E-25	0.0	0.0	0.0
UO23OH5ION	3.6009E-17	0.0	0.0	0.0
UO2ION	8.8269E-25	0.0	0.0	0.0
UO2OHION	1.1858E-16	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
LAOH3	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
ALOOH	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
LAP04.2H2O	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0

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Total mol/hr	0.46739	1.9062E-04	0.0	0.0
Total g/hr	8.4838	1.4933E-02	0.0	0.0
Volume, L/hr	8.2330E-03	6.0555E-06	0.0	0.0
Enthalpy, cal/hr	-3.1899E+04	-58.12	0.0	0.0
Density, g/L	1030.5	2466.0		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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ENVIRONMENTAL SIMULATION PROGRAM

V - 4.0 May 1, 1994

PROCESS: C-112

CHEMISTRY MODEL: C-112

DATE: 09/02/94

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PROCESS BLOCKS

<u>BLOCK NAME</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
First Wash	Separate	C-112	Wash 1 Liquid Wash 1 Sludge
Second Wash	Separate	Wash 1 Sludge .1 M NaOH	Wash 2 Liquid Wash 2 Sludge
Third Wash	Separate	Wash 2 Sludge Third Wash Water	Wash 3 Liquid Wash 3 Sludge
Wash Liquids Mix	Mix	Wash 1 Liquid Wash 3 Liquid Wash 2 Liquid	Wash Liquids
Sludge Slurry Make-up	Mix	Wash 3 Sludge Slurry Water	Sludge Slurry
Sludge Slurry Split	Split	Sludge Slurry	Slurry Sample Slurry to Leach
Leach Mix	Mix	Slurry to Leach 10 M NaOH	Leach Mix Slurry
First Leach	Separate	Leach Mix Slurry	Leach 1 Liquid Leach 1 Sludge
Second Leach	Separate	Leach 1 Sludge 3 M NaOH	Leach 2 Liquid Leach 2 Sludge
Leach Wash	Separate	Leach 2 Sludge Leach Wash Water	Leach Wash Liq. Leach Wash Slud.
Final Wash	Separate	Leach Wash Slud. Final Wash Water	Final Wash Liq. Final Wash Slud.

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<u>BLOCK ID</u>	<u>BLOCK TYPE</u>	<u>INLET STREAM(s)</u>	<u>OUTLET STREAM(s)</u>
Leach Liquids Mix	Mix	Leach 1 Liquid Final Wash Liq. Leach 2 Liquid Leach Wash Liq.	Leach Liquids

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STREAM: C-112

TO : First Wash

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.827			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11385	0.0	0.0	0.0
HNO3	2.4822E-20	0.0	0.0	0.0
BIOH3	6.3630E-07	0.0	0.0	0.0
BOH3	2.0253E-09	0.0	0.0	0.0
CROH3	1.6227E-09	2.3800E-06	0.0	0.0
FEIIIOH3	3.9632E-13	1.7135E-04	0.0	0.0
ALOH3	3.7965E-12	7.2157E-05	0.0	0.0
MGHPO4	6.3422E-13	0.0	0.0	0.0
MNNO32	1.2032E-18	0.0	0.0	0.0
MNOH2	1.4175E-10	1.5244E-06	0.0	0.0
NIOH2	1.0284E-09	6.4452E-05	0.0	0.0
PBHP04	1.1622E-31	0.0	0.0	0.0
PBNO32	1.8092E-35	0.0	0.0	0.0
PBO	9.3410E-23	1.9424E-06	0.0	0.0
SIO2	7.4315E-08	0.0	0.0	0.0
SNIVOH4	4.7575E-11	0.0	0.0	0.0
SRHPO4	5.7057E-13	0.0	0.0	0.0
SRNO32	3.4465E-15	0.0	0.0	0.0
UO2OH2	5.2795E-11	2.1519E-04	0.0	0.0
ZNHPO4	2.3375E-17	0.0	0.0	0.0
ZNNO32	1.0965E-22	0.0	0.0	0.0
ZNOH2	7.9578E-09	0.0	0.0	0.0
OHION	2.1018E-04	0.0	0.0	0.0
ALOH2ION	2.6799E-19	0.0	0.0	0.0
ALOH4ION	1.5322E-05	0.0	0.0	0.0
ALOHION	4.2085E-26	0.0	0.0	0.0
BIION	8.2648E-34	0.0	0.0	0.0
BINO32ION	2.0520E-38	0.0	0.0	0.0
BINO3ION	3.1807E-36	0.0	0.0	0.0
BIOH2ION	1.7813E-14	0.0	0.0	0.0
BIOH4ION	1.2495E-06	0.0	0.0	0.0
BIOHION	1.6200E-23	0.0	0.0	0.0
BO2ION	2.0401E-05	0.0	0.0	0.0
BOH4ION	1.9946E-05	0.0	0.0	0.0
CAH2PO4ION	2.0427E-18	0.0	0.0	0.0
CAION	5.4731E-10	0.0	0.0	0.0
CAOHION	7.7682E-11	0.0	0.0	0.0
CAPO4ION	3.7879E-07	0.0	0.0	0.0
CRIIH2PO4ION	1.2967E-33	0.0	0.0	0.0
CRIIHPO4ION	1.1208E-21	0.0	0.0	0.0
CRIIION	7.9647E-28	0.0	0.0	0.0
CRIIINO3ION	5.6743E-29	0.0	0.0	0.0

CROH2ION	1.3939E-16	0.0	0.0	0.0
CROH4ION	3.1946E-07	0.0	0.0	0.0
CROHION	5.3897E-20	0.0	0.0	0.0
FEIII2OH2ION	2.0520E-38	0.0	0.0	0.0
FEIIIH2PO4ION	2.0520E-38	0.0	0.0	0.0
FEIIIHPO4ION	4.4865E-34	0.0	0.0	0.0
FEIIIIION	3.8374E-37	0.0	0.0	0.0
FEIIINO3ION	2.0520E-38	0.0	0.0	0.0
FEIIIOH2ION	1.4945E-20	0.0	0.0	0.0
FEIIIOH4ION	1.6912E-09	0.0	0.0	0.0
FEIIIOHION	9.2261E-28	0.0	0.0	0.0
H2P2O7ION	9.7139E-23	0.0	0.0	0.0
H2PO4ION	3.6809E-12	0.0	0.0	0.0
H3P2O7ION	3.4430E-34	0.0	0.0	0.0
H3SIO4ION	1.8059E-04	0.0	0.0	0.0
HION	4.5239E-16	0.0	0.0	0.0
HP2O7ION	2.7746E-15	0.0	0.0	0.0
HPBO2ION	1.7868E-20	0.0	0.0	0.0
HPO4ION	1.2350E-05	0.0	0.0	0.0
MGH2PO4ION	1.1551E-19	0.0	0.0	0.0
MGION	2.6329E-11	0.0	0.0	0.0
MGOHION	3.2759E-11	0.0	0.0	0.0
MGPO4ION	2.3719E-08	0.0	0.0	0.0
MNION	1.6097E-12	0.0	0.0	0.0
MNNO3ION	4.9954E-16	0.0	0.0	0.0
MNOH3ION	6.2144E-10	0.0	0.0	0.0
MNOH4ION	1.0293E-09	0.0	0.0	0.0
MNOHION	3.6909E-11	0.0	0.0	0.0
NAION	2.2594E-03	0.0	0.0	0.0
NDION	1.0231E-05	0.0	0.0	0.0
NIION	5.7225E-15	0.0	0.0	0.0
NINO3ION	3.6040E-18	0.0	0.0	0.0
NIOH3ION	1.7967E-07	0.0	0.0	0.0
NIOHION	4.0920E-13	0.0	0.0	0.0
NO3ION	8.4383E-06	0.0	0.0	0.0
ALION	6.7181E-33	0.0	0.0	0.0
P2O7ION	6.2311E-10	0.0	0.0	0.0
PBH2PO4ION	2.0520E-38	0.0	0.0	0.0
PBION	4.4629E-29	0.0	0.0	0.0
PBNO33ION	2.0520E-38	0.0	0.0	0.0
PBNO3ION	2.2308E-32	0.0	0.0	0.0
PBOHION	6.7559E-26	0.0	0.0	0.0
PO4ION	6.0061E-04	0.0	0.0	0.0
SNIVION	2.0520E-38	0.0	0.0	0.0
SNIVOH2ION	2.3567E-36	0.0	0.0	0.0
SNIVOH3ION	1.0745E-23	0.0	0.0	0.0
SNIVOH5ION	5.0736E-09	0.0	0.0	0.0
SNIVOH6ION	2.5906E-06	0.0	0.0	0.0
SNIVOHION	2.0520E-38	0.0	0.0	0.0
SRION	1.5246E-09	0.0	0.0	0.0
SRNO3ION	2.8415E-12	0.0	0.0	0.0
SROHION	7.5151E-11	0.0	0.0	0.0
SRPO4ION	1.3570E-08	0.0	0.0	0.0
UO22OH2ION	1.6268E-23	0.0	0.0	0.0
UO23OH5ION	7.5099E-17	0.0	0.0	0.0

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UO2ION	4.9917E-23	0.0	0.0	0.0
UO2OHION	2.4738E-16	0.0	0.0	0.0
ZNH2PO4ION	2.2112E-24	0.0	0.0	0.0
ZNION	2.3135E-16	0.0	0.0	0.0
ZNNO3ION	5.7308E-19	0.0	0.0	0.0
ZNOH3ION	1.3384E-06	0.0	0.0	0.0
ZNOHION	5.6777E-13	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.6848E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5500E-05	0.0	0.0
SR3PO42	0.0	7.3657E-07	0.0	0.0
<hr/>				
Total mol/hr	0.11719	5.7891E-04	0.0	0.0
Total g/hr	2.1892	0.11082	0.0	0.0
Volume, L/hr	2.0662E-03	1.3775E-05	0.0	0.0
Enthalpy, cal/hr	-8185.	-190.8	0.0	0.0
Density, g/L	1059.5	8044.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 1 Liquid
TO : Wash Liquids Mix
FROM : First Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.827			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.10808	0.0	0.0	0.0
HNO3	2.3565E-20	0.0	0.0	0.0
BIOH3	6.0409E-07	0.0	0.0	0.0
BOH3	1.9228E-09	0.0	0.0	0.0
CROH3	1.5406E-09	0.0	0.0	0.0
FEIIIOH3	3.7626E-13	0.0	0.0	0.0
ALOH3	3.6044E-12	0.0	0.0	0.0
MGHPO4	6.0212E-13	0.0	0.0	0.0
MNNO32	1.1423E-18	0.0	0.0	0.0
MNOH2	1.3457E-10	0.0	0.0	0.0
NIOH2	9.7636E-10	0.0	0.0	0.0
PBHP04	1.1034E-31	0.0	0.0	0.0
PBNO32	1.7176E-35	0.0	0.0	0.0
PBO	8.8682E-23	0.0	0.0	0.0
SIO2	7.0553E-08	0.0	0.0	0.0
SNIVOH4	4.5167E-11	0.0	0.0	0.0
SRHPO4	5.4169E-13	0.0	0.0	0.0
SRNO32	3.2720E-15	0.0	0.0	0.0
UO2OH2	5.0123E-11	0.0	0.0	0.0
ZNHPO4	2.2192E-17	0.0	0.0	0.0
ZNNO32	1.0410E-22	0.0	0.0	0.0
ZNOH2	7.5550E-09	0.0	0.0	0.0
OHION	1.9955E-04	0.0	0.0	0.0
ALOH2ION	2.5443E-19	0.0	0.0	0.0
ALOH4ION	1.4546E-05	0.0	0.0	0.0
ALOHION	3.9954E-26	0.0	0.0	0.0
BIION	7.8464E-34	0.0	0.0	0.0
BINO32ION	1.9481E-38	0.0	0.0	0.0
BINO3ION	3.0197E-36	0.0	0.0	0.0
BIOH2ION	1.6911E-14	0.0	0.0	0.0
BIOH4ION	1.1863E-06	0.0	0.0	0.0
BIOHION	1.5380E-23	0.0	0.0	0.0
BO2ION	1.9368E-05	0.0	0.0	0.0
BOH4ION	1.8937E-05	0.0	0.0	0.0
CAH2PO4ION	1.9393E-18	0.0	0.0	0.0
CAION	5.1960E-10	0.0	0.0	0.0
CAOHION	7.3750E-11	0.0	0.0	0.0
CAPO4ION	3.5962E-07	0.0	0.0	0.0
CRIIH2PO4ION	1.2311E-33	0.0	0.0	0.0
CRIIHPO4ION	1.0640E-21	0.0	0.0	0.0
CRIIION	7.5615E-28	0.0	0.0	0.0
CRIIINO3ION	5.3871E-29	0.0	0.0	0.0

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CROH2ION	1.3234E-16	0.0	0.0	0.0
CROH4ION	3.0329E-07	0.0	0.0	0.0
CROHION	5.1168E-20	0.0	0.0	0.0
FEIII2OH2ION	1.9481E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.9481E-38	0.0	0.0	0.0
FEIIIHPO4ION	4.2594E-34	0.0	0.0	0.0
FEIIIIION	3.6432E-37	0.0	0.0	0.0
FEIIINO3ION	1.9481E-38	0.0	0.0	0.0
FEIIIOH2ION	1.4188E-20	0.0	0.0	0.0
FEIIIOH4ION	1.6056E-09	0.0	0.0	0.0
FEIIIOHION	8.7590E-28	0.0	0.0	0.0
H2P2O7ION	9.2222E-23	0.0	0.0	0.0
H2PO4ION	3.4946E-12	0.0	0.0	0.0
H3P2O7ION	3.2687E-34	0.0	0.0	0.0
H3SIO4ION	1.7145E-04	0.0	0.0	0.0
HION	4.2949E-16	0.0	0.0	0.0
HP2O7ION	2.6342E-15	0.0	0.0	0.0
HPBO2ION	1.6964E-20	0.0	0.0	0.0
HPO4ION	1.1725E-05	0.0	0.0	0.0
MGH2PO4ION	1.0967E-19	0.0	0.0	0.0
MGION	2.4997E-11	0.0	0.0	0.0
MGOHION	3.1101E-11	0.0	0.0	0.0
MGPO4ION	2.2518E-08	0.0	0.0	0.0
MNION	1.5282E-12	0.0	0.0	0.0
MNNO3ION	4.7425E-16	0.0	0.0	0.0
MNOH3ION	5.8998E-10	0.0	0.0	0.0
MNOH4ION	9.7716E-10	0.0	0.0	0.0
MNOHION	3.5041E-11	0.0	0.0	0.0
NAION	2.1450E-03	0.0	0.0	0.0
NDION	9.7132E-06	0.0	0.0	0.0
NIION	5.4328E-15	0.0	0.0	0.0
NINO3ION	3.4215E-18	0.0	0.0	0.0
NIOH3ION	1.7058E-07	0.0	0.0	0.0
NIOHION	3.8849E-13	0.0	0.0	0.0
NO3ION	8.0111E-06	0.0	0.0	0.0
ALION	6.3780E-33	0.0	0.0	0.0
P2O7ION	5.9157E-10	0.0	0.0	0.0
PBH2PO4ION	1.9481E-38	0.0	0.0	0.0
PBION	4.2370E-29	0.0	0.0	0.0
PBNO33ION	1.9481E-38	0.0	0.0	0.0
PBNO3ION	2.1179E-32	0.0	0.0	0.0
PBOHION	6.4139E-26	0.0	0.0	0.0
PO4ION	5.7021E-04	0.0	0.0	0.0
SNIVION	1.9481E-38	0.0	0.0	0.0
SNIVOH2ION	2.2374E-36	0.0	0.0	0.0
SNIVOH3ION	1.0201E-23	0.0	0.0	0.0
SNIVOH5ION	4.8168E-09	0.0	0.0	0.0
SNIVOH6ION	2.4595E-06	0.0	0.0	0.0
SNIVOHION	1.9481E-38	0.0	0.0	0.0
SRION	1.4474E-09	0.0	0.0	0.0
SRNO3ION	2.6976E-12	0.0	0.0	0.0
SROHION	7.1347E-11	0.0	0.0	0.0
SRPO4ION	1.2883E-08	0.0	0.0	0.0
UO22OH2ION	1.5444E-23	0.0	0.0	0.0
UO23OH5ION	7.1297E-17	0.0	0.0	0.0

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UO2ION	4.7390E-23	0.0	0.0	0.0
UO2OHION	2.3486E-16	0.0	0.0	0.0
ZNH2PO4ION	2.0992E-24	0.0	0.0	0.0
ZNION	2.1964E-16	0.0	0.0	0.0
ZNNO3ION	5.4407E-19	0.0	0.0	0.0
ZNOH3ION	1.2707E-06	0.0	0.0	0.0
ZNOHION	5.3903E-13	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11126	0.0	0.0	0.0
Total g/hr	2.0784	0.0	0.0	0.0
Volume, L/hr	1.9616E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7771.	0.0	0.0	0.0
Density, g/L	1059.5			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 1 Sludge
TO : Second Wash
FROM : First Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.827			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.7629E-03	0.0	0.0	0.0
HNO3	1.2565E-21	0.0	0.0	0.0
BIOH3	3.2209E-08	0.0	0.0	0.0
BOH3	1.0252E-10	0.0	0.0	0.0
CROH3	8.2140E-11	2.3800E-06	0.0	0.0
FEIIIOH3	2.0061E-14	1.7135E-04	0.0	0.0
ALOH3	1.9218E-13	7.2157E-05	0.0	0.0
MGHPO4	3.2104E-14	0.0	0.0	0.0
MNNO32	6.0907E-20	0.0	0.0	0.0
MNOH2	7.1752E-12	1.5244E-06	0.0	0.0
NIOH2	5.2058E-11	6.4452E-05	0.0	0.0
PBHP04	5.8831E-33	0.0	0.0	0.0
PBNO32	9.1579E-37	0.0	0.0	0.0
PBO	4.7284E-24	1.9424E-06	0.0	0.0
SiO2	3.7618E-09	0.0	0.0	0.0
SNIVOH4	2.4083E-12	0.0	0.0	0.0
SRHP04	2.8882E-14	0.0	0.0	0.0
SRNO32	1.7446E-16	0.0	0.0	0.0
UO2OH2	2.6725E-12	2.1519E-04	0.0	0.0
ZNHPO4	1.1832E-18	0.0	0.0	0.0
ZNN032	5.5507E-24	0.0	0.0	0.0
ZNOH2	4.0282E-10	0.0	0.0	0.0
OHION	1.0639E-05	0.0	0.0	0.0
ALOH2ION	1.3566E-20	0.0	0.0	0.0
ALOH4ION	7.7559E-07	0.0	0.0	0.0
ALOHION	2.1303E-27	0.0	0.0	0.0
BIION	4.1836E-35	0.0	0.0	0.0
BINO32ION	1.0387E-39	0.0	0.0	0.0
BINO3ION	1.6100E-37	0.0	0.0	0.0
BIOH2ION	9.0168E-16	0.0	0.0	0.0
BIOH4ION	6.3250E-08	0.0	0.0	0.0
BIOHION	8.2001E-25	0.0	0.0	0.0
BO2ION	1.0327E-06	0.0	0.0	0.0
BOH4ION	1.0097E-06	0.0	0.0	0.0
CAH2PO4ION	1.0340E-19	0.0	0.0	0.0
CAION	2.7704E-11	0.0	0.0	0.0
CAOHION	3.9322E-12	0.0	0.0	0.0
CAPO4ION	1.9174E-08	0.0	0.0	0.0
CRIIH2PO4ION	6.5639E-35	0.0	0.0	0.0
CRIIHPO4ION	5.6733E-23	0.0	0.0	0.0
CRIIION	4.0317E-29	0.0	0.0	0.0
CRIIINO3ION	2.8723E-30	0.0	0.0	0.0

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CROH2ION	7.0560E-18	0.0	0.0	0.0
CROH4ION	1.6171E-08	0.0	0.0	0.0
CROHION	2.7282E-21	0.0	0.0	0.0
FEIII2OH2ION	1.0387E-39	0.0	0.0	0.0
FEIIIH2PO4ION	1.0387E-39	0.0	0.0	0.0
FEIIIHPO4ION	2.2711E-35	0.0	0.0	0.0
FEIIIIION	1.9425E-38	0.0	0.0	0.0
FEIIINO3ION	1.0387E-39	0.0	0.0	0.0
FEIIIOH2ION	7.5649E-22	0.0	0.0	0.0
FEIIIOH4ION	8.5609E-11	0.0	0.0	0.0
FEIIIOHION	4.6702E-29	0.0	0.0	0.0
H2P2O7ION	4.9172E-24	0.0	0.0	0.0
H2PO4ION	1.8633E-13	0.0	0.0	0.0
H3P2O7ION	1.7428E-35	0.0	0.0	0.0
H3SiO4ION	9.1415E-06	0.0	0.0	0.0
HION	2.2900E-17	0.0	0.0	0.0
HP2O7ION	1.4045E-16	0.0	0.0	0.0
HPBO2ION	9.0449E-22	0.0	0.0	0.0
HPO4ION	6.2515E-07	0.0	0.0	0.0
MGH2PO4ION	5.8472E-21	0.0	0.0	0.0
MGION	1.3328E-12	0.0	0.0	0.0
MGOHION	1.6583E-12	0.0	0.0	0.0
MGPO4ION	1.2007E-09	0.0	0.0	0.0
MNION	8.1483E-14	0.0	0.0	0.0
MNNO3ION	2.5286E-17	0.0	0.0	0.0
MNOH3ION	3.1457E-11	0.0	0.0	0.0
MNOH4ION	5.2101E-11	0.0	0.0	0.0
MNOHION	1.8683E-12	0.0	0.0	0.0
NAION	1.1437E-04	0.0	0.0	0.0
NDION	5.1789E-07	0.0	0.0	0.0
NIION	2.8967E-16	0.0	0.0	0.0
NINO3ION	1.8243E-19	0.0	0.0	0.0
NIOH3ION	9.0948E-09	0.0	0.0	0.0
NIOHION	2.0714E-14	0.0	0.0	0.0
NO3ION	4.2714E-07	0.0	0.0	0.0
ALION	3.4007E-34	0.0	0.0	0.0
P2O7ION	3.1542E-11	0.0	0.0	0.0
PBH2PO4ION	1.0387E-39	0.0	0.0	0.0
PBION	2.2591E-30	0.0	0.0	0.0
PBNO33ION	1.0387E-39	0.0	0.0	0.0
PBNO3ION	1.1292E-33	0.0	0.0	0.0
PBOHION	3.4198E-27	0.0	0.0	0.0
PO4ION	3.0403E-05	0.0	0.0	0.0
SNIVION	1.0387E-39	0.0	0.0	0.0
SNIVOH2ION	1.1930E-37	0.0	0.0	0.0
SNIVOH3ION	5.4392E-25	0.0	0.0	0.0
SNIVOH5ION	2.5682E-10	0.0	0.0	0.0
SNIVOH6ION	1.3114E-07	0.0	0.0	0.0
SNIVOHION	1.0387E-39	0.0	0.0	0.0
SRION	7.7172E-11	0.0	0.0	0.0
SRNO3ION	1.4383E-13	0.0	0.0	0.0
SROHION	3.8041E-12	0.0	0.0	0.0
SRPO4ION	6.8689E-10	0.0	0.0	0.0
UO22OH2ION	8.2346E-25	0.0	0.0	0.0
UO23OH5ION	3.8015E-18	0.0	0.0	0.0

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UO2ION	2.5268E-24	0.0	0.0	0.0
UO2OHION	1.2523E-17	0.0	0.0	0.0
ZNH2PO4ION	1.1193E-25	0.0	0.0	0.0
ZNION	1.1711E-17	0.0	0.0	0.0
ZNNO3ION	2.9009E-20	0.0	0.0	0.0
ZNOH3ION	6.7751E-08	0.0	0.0	0.0
ZNOHION	2.8740E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.6848E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5500E-05	0.0	0.0
SR3PO42	0.0	7.3657E-07	0.0	0.0
<hr/>				
Total mol/hr	5.9322E-03	5.7891E-04	0.0	0.0
Total g/hr	0.11082	0.11082	0.0	0.0
Volume, L/hr	1.0459E-04	1.3775E-05	0.0	0.0
Enthalpy, cal/hr	-414.3	-190.8	0.0	0.0
Density, g/L	1059.5	8044.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: .1 M NaOH
TO : Second Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.893			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11057	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	2.0001E-04	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

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CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SiO4ION	0.0	0.0	0.0	0.0
HION	3.3816E-16	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	2.0001E-04	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

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UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11097	0.0	0.0	0.0
Total g/hr	2.0000	0.0	0.0	0.0
Volume, L/hr	1.9976E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7576.	0.0	0.0	0.0
Density, g/L	1001.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 2 Liquid
TO : Wash Liquids Mix
FROM : Second Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.811	24.811	24.811	24.811
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.697			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.11055	0.0	0.0	0.0
HNO3	2.7690E-21	0.0	0.0	0.0
BIOH3	4.9738E-08	0.0	0.0	0.0
BOH3	2.3096E-10	0.0	0.0	0.0
CROH3	1.9938E-09	0.0	0.0	0.0
FEIIIIOH3	4.7807E-13	0.0	0.0	0.0
ALOH3	3.8774E-11	0.0	0.0	0.0
MGHPO4	1.1944E-12	0.0	0.0	0.0
MNNO32	1.2354E-20	0.0	0.0	0.0
MNOH2	1.7256E-10	0.0	0.0	0.0
NIOH2	1.2584E-09	0.0	0.0	0.0
PBHP04	2.1539E-31	0.0	0.0	0.0
PBNO32	1.8253E-37	0.0	0.0	0.0
PBO	1.1116E-22	0.0	0.0	0.0
SIO2	8.2928E-09	0.0	0.0	0.0
SNIVOH4	1.9631E-11	0.0	0.0	0.0
SRHP04	8.0877E-13	0.0	0.0	0.0
SRNO32	2.6747E-17	0.0	0.0	0.0
UO2OH2	6.3615E-11	0.0	0.0	0.0
ZNHPO4	4.0492E-18	0.0	0.0	0.0
ZNNO32	1.0408E-25	0.0	0.0	0.0
ZNOH2	8.9766E-10	0.0	0.0	0.0
OHION	1.3322E-04	0.0	0.0	0.0
ALOH2ION	2.0841E-18	0.0	0.0	0.0
ALOH4ION	6.9310E-05	0.0	0.0	0.0
ALOHION	2.2505E-25	0.0	0.0	0.0
BIION	5.8625E-36	0.0	0.0	0.0
BINO32ION	1.9926E-38	0.0	0.0	0.0
BINO3ION	1.9926E-38	0.0	0.0	0.0
BIOH2ION	1.0648E-15	0.0	0.0	0.0
BIOH4ION	4.0979E-08	0.0	0.0	0.0
BIOHION	4.7031E-25	0.0	0.0	0.0
BO2ION	9.6828E-07	0.0	0.0	0.0
BOH4ION	9.7248E-07	0.0	0.0	0.0
CAH2PO4ION	2.8639E-18	0.0	0.0	0.0
CAION	2.4386E-10	0.0	0.0	0.0
CAOHION	7.0369E-11	0.0	0.0	0.0
CAPO4ION	2.2656E-07	0.0	0.0	0.0
CRIIH2PO4ION	2.3624E-33	0.0	0.0	0.0
CRIIHPO4ION	1.9970E-21	0.0	0.0	0.0
CRIIION	3.0561E-28	0.0	0.0	0.0
CRIIINO3ION	2.3522E-30	0.0	0.0	0.0

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CROH2ION	1.6724E-16	0.0	0.0	0.0
CROH4ION	1.6674E-07	0.0	0.0	0.0
CROHION	3.3395E-20	0.0	0.0	0.0
FEIII2OH2ION	1.9926E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.9926E-38	0.0	0.0	0.0
FEIIIHPO4ION	8.1826E-34	0.0	0.0	0.0
FEIIIIION	7.5227E-38	0.0	0.0	0.0
FEIIINO3ION	1.9926E-38	0.0	0.0	0.0
FEIIIOH2ION	1.7663E-20	0.0	0.0	0.0
FEIIIOH4ION	8.6007E-10	0.0	0.0	0.0
FEIIIOHION	4.8538E-28	0.0	0.0	0.0
H2P2O7ION	3.1401E-23	0.0	0.0	0.0
H2PO4ION	2.6839E-12	0.0	0.0	0.0
H3P2O7ION	4.7846E-34	0.0	0.0	0.0
H3SIO4ION	8.6827E-06	0.0	0.0	0.0
HION	5.4923E-16	0.0	0.0	0.0
HP2O7ION	1.8845E-16	0.0	0.0	0.0
HPBO2ION	9.0326E-21	0.0	0.0	0.0
HPO4ION	2.3752E-06	0.0	0.0	0.0
MGH2PO4ION	2.1592E-19	0.0	0.0	0.0
MGION	1.4606E-11	0.0	0.0	0.0
MGOHION	3.9390E-11	0.0	0.0	0.0
MGPO4ION	1.8860E-08	0.0	0.0	0.0
MNION	5.1731E-13	0.0	0.0	0.0
MNNO3ION	4.2923E-17	0.0	0.0	0.0
MNOH3ION	3.2131E-10	0.0	0.0	0.0
MNOH4ION	1.4674E-10	0.0	0.0	0.0
MNOHION	4.4173E-11	0.0	0.0	0.0
NAION	2.9877E-04	0.0	0.0	0.0
NDION	4.9217E-07	0.0	0.0	0.0
NIION	2.2853E-15	0.0	0.0	0.0
NINO3ION	3.1044E-19	0.0	0.0	0.0
NIOH3ION	9.3735E-08	0.0	0.0	0.0
NIOHION	4.9079E-13	0.0	0.0	0.0
NO3ION	4.0592E-07	0.0	0.0	0.0
ALION	1.9819E-32	0.0	0.0	0.0
P2O7ION	4.6233E-12	0.0	0.0	0.0
PBH2PO4ION	2.4659E-38	0.0	0.0	0.0
PBION	2.7026E-30	0.0	0.0	0.0
PBNO33ION	1.9926E-38	0.0	0.0	0.0
PBNO3ION	1.8911E-33	0.0	0.0	0.0
PBOHION	7.9998E-26	0.0	0.0	0.0
PO4ION	2.7022E-05	0.0	0.0	0.0
SNIVION	1.9926E-38	0.0	0.0	0.0
SNIVOH2ION	3.5403E-37	0.0	0.0	0.0
SNIVOH3ION	3.3590E-24	0.0	0.0	0.0
SNIVOH5ION	8.7360E-10	0.0	0.0	0.0
SNIVOH6ION	1.2398E-07	0.0	0.0	0.0
SNIVOHION	1.9926E-38	0.0	0.0	0.0
SRION	6.3838E-10	0.0	0.0	0.0
SRNO3ION	1.8532E-13	0.0	0.0	0.0
SROHION	6.7991E-11	0.0	0.0	0.0
SRPO4ION	8.1186E-09	0.0	0.0	0.0
UO22OH2ION	5.2658E-24	0.0	0.0	0.0
UO23OH5ION	9.0693E-17	0.0	0.0	0.0

UO2ION	2.6834E-23	0.0	0.0	0.0
UO2OHION	2.9444E-16	0.0	0.0	0.0
ZNH2PO4ION	3.7934E-25	0.0	0.0	0.0
ZNION	2.7044E-17	0.0	0.0	0.0
ZNNO3ION	4.5537E-21	0.0	0.0	0.0
ZNOH3ION	6.3871E-08	0.0	0.0	0.0
ZNOHION	6.2203E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.11110	0.0	0.0	0.0
Total g/hr	2.0114	0.0	0.0	0.0
Volume, L/hr	2.0010E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-7615.	0.0	0.0	0.0
Density, g/L	1005.2			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 2 Sludge

TO : Third Wash

FROM : Second Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.811	24.811	24.811	24.811
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.697			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.7789E-03	0.0	0.0	0.0
HNO3	1.4474E-22	0.0	0.0	0.0
BIOH3	2.5999E-09	0.0	0.0	0.0
BOH3	1.2073E-11	0.0	0.0	0.0
CROH3	1.0422E-10	2.2187E-06	0.0	0.0
FEIIIIOH3	2.4989E-14	1.7135E-04	0.0	0.0
ALOH3	2.0268E-12	0.0	0.0	0.0
MGHPO4	6.2433E-14	0.0	0.0	0.0
MNNO32	6.4577E-22	0.0	0.0	0.0
MNOH2	9.0202E-12	1.5238E-06	0.0	0.0
NIOH2	6.5776E-11	6.4362E-05	0.0	0.0
PBHP04	1.1259E-32	0.0	0.0	0.0
PBNO32	9.5412E-39	0.0	0.0	0.0
PBO	5.8106E-24	1.9424E-06	0.0	0.0
SIO2	4.3348E-10	0.0	0.0	0.0
SNIVOH4	1.0262E-12	0.0	0.0	0.0
SRHPO4	4.2276E-14	0.0	0.0	0.0
SRNO32	1.3981E-18	0.0	0.0	0.0
UO2OH2	3.3252E-12	2.1519E-04	0.0	0.0
ZNHPO4	2.1166E-19	0.0	0.0	0.0
ZNNO32	5.4402E-27	0.0	0.0	0.0
ZNOH2	4.6922E-11	0.0	0.0	0.0
OHION	6.9636E-06	0.0	0.0	0.0
ALOH2ION	1.0894E-19	0.0	0.0	0.0
ALOH4ION	3.6229E-06	0.0	0.0	0.0
ALOHION	1.1764E-26	0.0	0.0	0.0
BIION	3.0644E-37	0.0	0.0	0.0
BINO32ION	1.0416E-39	0.0	0.0	0.0
BINO3ION	1.0416E-39	0.0	0.0	0.0
BIOH2ION	5.5656E-17	0.0	0.0	0.0
BIOH4ION	2.1421E-09	0.0	0.0	0.0
BIOHION	2.4584E-26	0.0	0.0	0.0
BO2ION	5.0614E-08	0.0	0.0	0.0
BOH4ION	5.0833E-08	0.0	0.0	0.0
CAH2PO4ION	1.4970E-19	0.0	0.0	0.0
CAION	1.2747E-11	0.0	0.0	0.0
CAOHION	3.6783E-12	0.0	0.0	0.0
CAPO4ION	1.1843E-08	0.0	0.0	0.0
CRIIH2PO4ION	1.2349E-34	0.0	0.0	0.0
CRIIHPO4ION	1.0439E-22	0.0	0.0	0.0
CRIIION	1.5975E-29	0.0	0.0	0.0
CRIIINO3ION	1.2295E-31	0.0	0.0	0.0

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CROH2ION	8.7420E-18	0.0	0.0	0.0
CROH4ION	8.7158E-09	0.0	0.0	0.0
CROHION	1.7456E-21	0.0	0.0	0.0
FEIII2OH2ION	1.0416E-39	0.0	0.0	0.0
FEIIIH2PO4ION	1.0416E-39	0.0	0.0	0.0
FEIIIHPO4ION	4.2772E-35	0.0	0.0	0.0
FEIIIIION	3.9322E-39	0.0	0.0	0.0
FEIIINO3ION	1.0416E-39	0.0	0.0	0.0
FEIIIOH2ION	9.2326E-22	0.0	0.0	0.0
FEIIIOH4ION	4.4957E-11	0.0	0.0	0.0
FEIIIOHION	2.5372E-29	0.0	0.0	0.0
H2P2O7ION	1.6414E-24	0.0	0.0	0.0
H2PO4ION	1.4029E-13	0.0	0.0	0.0
H3P2O7ION	2.5010E-35	0.0	0.0	0.0
H3SIO4ION	4.5386E-07	0.0	0.0	0.0
HION	2.8709E-17	0.0	0.0	0.0
HP2O7ION	9.8506E-18	0.0	0.0	0.0
HPBO2ION	4.7215E-22	0.0	0.0	0.0
HPO4ION	1.2415E-07	0.0	0.0	0.0
MGH2PO4ION	1.1287E-20	0.0	0.0	0.0
MGION	7.6345E-13	0.0	0.0	0.0
MGOHION	2.0590E-12	0.0	0.0	0.0
MGPO4ION	9.8582E-10	0.0	0.0	0.0
MNION	2.7040E-14	0.0	0.0	0.0
MNNO3ION	2.2437E-18	0.0	0.0	0.0
MNOH3ION	1.6795E-11	0.0	0.0	0.0
MNOH4ION	7.6703E-12	0.0	0.0	0.0
MNOHION	2.3090E-12	0.0	0.0	0.0
NAION	1.5617E-05	0.0	0.0	0.0
NDION	2.5726E-08	0.0	0.0	0.0
NIION	1.1946E-16	0.0	0.0	0.0
NINO3ION	1.6227E-20	0.0	0.0	0.0
NIOH3ION	4.8997E-09	0.0	0.0	0.0
NIOHION	2.5655E-14	0.0	0.0	0.0
NO3ION	2.1218E-08	0.0	0.0	0.0
ALION	1.0360E-33	0.0	0.0	0.0
P2O7ION	2.4167E-13	0.0	0.0	0.0
PBH2PO4ION	1.2890E-39	0.0	0.0	0.0
PBION	1.4127E-31	0.0	0.0	0.0
PBNO33ION	1.0416E-39	0.0	0.0	0.0
PBNO3ION	9.8852E-35	0.0	0.0	0.0
PBOHION	4.1816E-27	0.0	0.0	0.0
PO4ION	1.4125E-06	0.0	0.0	0.0
SNIVION	1.0416E-39	0.0	0.0	0.0
SNIVOH2ION	1.8506E-38	0.0	0.0	0.0
SNIVOH3ION	1.7558E-25	0.0	0.0	0.0
SNIVOH5ION	4.5664E-11	0.0	0.0	0.0
SNIVOH6ION	6.4804E-09	0.0	0.0	0.0
SNIVOHION	1.0416E-39	0.0	0.0	0.0
SRION	3.3369E-11	0.0	0.0	0.0
SRNO3ION	9.6869E-15	0.0	0.0	0.0
SROHION	3.5540E-12	0.0	0.0	0.0
SRPO4ION	4.2437E-10	0.0	0.0	0.0
UO22OH2ION	2.7525E-25	0.0	0.0	0.0
UO23OH5ION	4.7407E-18	0.0	0.0	0.0

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UO2ION	1.4026E-24	0.0	0.0	0.0
UO2OHION	1.5391E-17	0.0	0.0	0.0
ZNH2PO4ION	1.9829E-26	0.0	0.0	0.0
ZNION	1.4136E-18	0.0	0.0	0.0
ZNNO3ION	2.3803E-22	0.0	0.0	0.0
ZNOH3ION	3.3386E-09	0.0	0.0	0.0
ZNOHION	3.2515E-15	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.6661E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5427E-05	0.0	0.0
SR3PO42	0.0	7.3373E-07	0.0	0.0
<hr/>				
Total mol/hr	5.8072E-03	5.0641E-04	0.0	0.0
Total g/hr	0.10514	0.10514	0.0	0.0
Volume, L/hr	1.0460E-04	1.1454E-05	0.0	0.0
Enthalpy, cal/hr	-398.0	-168.3	0.0	0.0
Density, g/L	1005.2	9178.7		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Third Wash Water
TO : Third Wash
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	5.0374E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	5.0374E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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PROCESS: C-112

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STREAM: Wash 3 Liquid
TO : Wash Liquids Mix
FROM : Third Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.995	24.995	24.995	24.995
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.205			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27749	0.0	0.0	0.0
HNO3	6.0429E-21	0.0	0.0	0.0
BIOH3	4.5550E-09	0.0	0.0	0.0
BOH3	5.0517E-10	0.0	0.0	0.0
CROH3	5.1374E-09	0.0	0.0	0.0
FEIIIIOH3	1.2541E-12	0.0	0.0	0.0
ALOH3	8.3041E-11	0.0	0.0	0.0
MGHPO4	1.3700E-09	0.0	0.0	0.0
MNNO32	2.1794E-20	0.0	0.0	0.0
MNOH2	4.4865E-10	0.0	0.0	0.0
NIOH2	3.2555E-09	0.0	0.0	0.0
PBHP04	2.5517E-28	0.0	0.0	0.0
PBNO32	3.3305E-37	0.0	0.0	0.0
PBO	2.9547E-22	0.0	0.0	0.0
SIO2	1.7314E-08	0.0	0.0	0.0
SNIVOH4	1.5665E-09	0.0	0.0	0.0
SRHPO4	1.6081E-11	0.0	0.0	0.0
SRNO32	8.1459E-19	0.0	0.0	0.0
UO2OH2	1.6706E-10	0.0	0.0	0.0
ZNHPO4	2.4780E-15	0.0	0.0	0.0
ZNNO32	9.7488E-26	0.0	0.0	0.0
ZNOH2	1.2364E-09	0.0	0.0	0.0
OHION	8.6424E-06	0.0	0.0	0.0
ALOH2ION	1.0106E-16	0.0	0.0	0.0
ALOH4ION	3.5483E-06	0.0	0.0	0.0
ALOHION	1.6570E-22	0.0	0.0	0.0
BIION	1.4119E-33	0.0	0.0	0.0
BINO32ION	5.0014E-38	0.0	0.0	0.0
BINO3ION	2.0049E-37	0.0	0.0	0.0
BIOH2ION	2.1964E-15	0.0	0.0	0.0
BIOH4ION	8.9341E-11	0.0	0.0	0.0
BIOHION	1.3499E-23	0.0	0.0	0.0
BO2ION	4.9146E-08	0.0	0.0	0.0
BOH4ION	4.9719E-08	0.0	0.0	0.0
CAH2PO4ION	1.3337E-15	0.0	0.0	0.0
CAION	3.2085E-09	0.0	0.0	0.0
CAOHION	7.3134E-11	0.0	0.0	0.0
CAPO4ION	1.0489E-07	0.0	0.0	0.0
CRIIH2PO4ION	9.2763E-28	0.0	0.0	0.0
CRIIHPO4ION	5.5092E-17	0.0	0.0	0.0
CRIIION	2.2725E-24	0.0	0.0	0.0
CRIIINO3ION	1.5809E-27	0.0	0.0	0.0

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CROH2ION	1.0057E-14	0.0	0.0	0.0
CROH4ION	1.0106E-08	0.0	0.0	0.0
CROHION	2.8057E-17	0.0	0.0	0.0
FEIII2OH2ION	5.0014E-38	0.0	0.0	0.0
FEIIIH2PO4ION	5.0014E-38	0.0	0.0	0.0
FEIIIHPO4ION	2.2068E-29	0.0	0.0	0.0
FEIIIIION	5.4161E-34	0.0	0.0	0.0
FEIIINO3ION	5.0014E-38	0.0	0.0	0.0
FEIIIOH2ION	1.0778E-18	0.0	0.0	0.0
FEIIIOH4ION	5.3460E-11	0.0	0.0	0.0
FEIIIOHION	4.0819E-25	0.0	0.0	0.0
H2P2O7ION	5.5085E-21	0.0	0.0	0.0
H2PO4ION	7.3062E-11	0.0	0.0	0.0
H3P2O7ION	6.2798E-30	0.0	0.0	0.0
H3SIO4ION	4.2763E-07	0.0	0.0	0.0
HION	3.3267E-14	0.0	0.0	0.0
HP2O7ION	2.9051E-16	0.0	0.0	0.0
HPBO2ION	5.6473E-22	0.0	0.0	0.0
HPO4ION	8.8425E-07	0.0	0.0	0.0
MGH2PO4ION	5.7810E-15	0.0	0.0	0.0
MGION	1.0902E-08	0.0	0.0	0.0
MGOHION	2.3637E-09	0.0	0.0	0.0
MGPO4ION	5.0339E-07	0.0	0.0	0.0
MNION	3.5208E-10	0.0	0.0	0.0
MNNO3ION	2.0604E-15	0.0	0.0	0.0
MNOH3ION	1.9653E-11	0.0	0.0	0.0
MNOH4ION	1.2064E-13	0.0	0.0	0.0
MNOHION	2.6628E-09	0.0	0.0	0.0
NAION	1.5296E-05	0.0	0.0	0.0
NDION	2.5197E-08	0.0	0.0	0.0
NIION	1.6021E-12	0.0	0.0	0.0
NINO3ION	1.4866E-17	0.0	0.0	0.0
NIOH3ION	5.6835E-09	0.0	0.0	0.0
NIOHION	2.9524E-11	0.0	0.0	0.0
NO3ION	2.0781E-08	0.0	0.0	0.0
ALION	1.4099E-28	0.0	0.0	0.0
P2O7ION	3.4788E-14	0.0	0.0	0.0
PBH2PO4ION	6.8463E-34	0.0	0.0	0.0
PBION	1.4684E-27	0.0	0.0	0.0
PBNO33ION	5.0014E-38	0.0	0.0	0.0
PBNO3ION	9.3521E-32	0.0	0.0	0.0
PBOHION	4.9545E-24	0.0	0.0	0.0
PO4ION	9.2434E-08	0.0	0.0	0.0
SNIVION	5.0014E-38	0.0	0.0	0.0
SNIVOH2ION	9.0017E-33	0.0	0.0	0.0
SNIVOH3ION	6.0885E-21	0.0	0.0	0.0
SNIVOH5ION	1.6683E-09	0.0	0.0	0.0
SNIVOH6ION	3.1579E-09	0.0	0.0	0.0
SNIVOHION	5.0014E-38	0.0	0.0	0.0
SRION	8.3267E-09	0.0	0.0	0.0
SRNO3ION	1.5048E-13	0.0	0.0	0.0
SROHION	7.0702E-11	0.0	0.0	0.0
SRPO4ION	3.7574E-09	0.0	0.0	0.0
UO22OH2ION	4.2029E-21	0.0	0.0	0.0
UO23OH5ION	5.4194E-15	0.0	0.0	0.0

UO2ION	2.2409E-20	0.0	0.0	0.0
UO2OHION	1.7845E-14	0.0	0.0	0.0
ZNH2PO4ION	5.4312E-21	0.0	0.0	0.0
ZNION	1.2461E-14	0.0	0.0	0.0
ZNNO3ION	1.1603E-19	0.0	0.0	0.0
ZNOH3ION	2.0775E-09	0.0	0.0	0.0
ZNOHION	2.0102E-12	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27752	0.0	0.0	0.0
Total g/hr	5.0001	0.0	0.0	0.0
Volume, L/hr	5.0150E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8959E+04	0.0	0.0	0.0
Density, g/L	997.03			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash 3 Sludge

TO : Sludge Slurry Make-up

FROM : Third Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	24.995	24.995	24.995	24.995
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.205			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.8323E-03	0.0	0.0	0.0
HNO3	1.2701E-22	0.0	0.0	0.0
BIOH3	9.5737E-11	0.0	0.0	0.0
BOH3	1.0618E-11	0.0	0.0	0.0
CROH3	1.0798E-10	2.2119E-06	0.0	0.0
FEIIIOH3	2.6359E-14	1.7135E-04	0.0	0.0
ALOH3	1.7454E-12	0.0	0.0	0.0
MGHPO4	2.8796E-11	0.0	0.0	0.0
MNNO32	4.5808E-22	0.0	0.0	0.0
MNOH2	9.4299E-12	1.5203E-06	0.0	0.0
NIOH2	6.8425E-11	6.4357E-05	0.0	0.0
PBHP04	5.3631E-30	0.0	0.0	0.0
PBNO32	7.0000E-39	0.0	0.0	0.0
PBO	6.2102E-24	1.9424E-06	0.0	0.0
SiO2	3.6390E-10	0.0	0.0	0.0
SNIVOH4	3.2924E-11	0.0	0.0	0.0
SRHP04	3.3799E-13	0.0	0.0	0.0
SRNO32	1.7121E-20	0.0	0.0	0.0
UO2OH2	3.5112E-12	2.1519E-04	0.0	0.0
ZNHPO4	5.2084E-17	0.0	0.0	0.0
ZNNO32	2.0490E-27	0.0	0.0	0.0
ZNOH2	2.5986E-11	0.0	0.0	0.0
OHION	1.8165E-07	0.0	0.0	0.0
ALOH2ION	2.1242E-18	0.0	0.0	0.0
ALOH4ION	7.4578E-08	0.0	0.0	0.0
ALOHION	3.4826E-24	0.0	0.0	0.0
BIION	2.9676E-35	0.0	0.0	0.0
BINO32ION	1.0512E-39	0.0	0.0	0.0
BINO3ION	4.2138E-39	0.0	0.0	0.0
BIOH2ION	4.6164E-17	0.0	0.0	0.0
BIOH4ION	1.8778E-12	0.0	0.0	0.0
BIOHION	2.8373E-25	0.0	0.0	0.0
BO2ION	1.0330E-09	0.0	0.0	0.0
BOH4ION	1.0450E-09	0.0	0.0	0.0
CAH2PO4ION	2.8032E-17	0.0	0.0	0.0
CAION	6.7437E-11	0.0	0.0	0.0
CAOHION	1.5371E-12	0.0	0.0	0.0
CAPO4ION	2.2045E-09	0.0	0.0	0.0
CRIIH2PO4ION	1.9497E-29	0.0	0.0	0.0
CRIIHPO4ION	1.1579E-18	0.0	0.0	0.0
CRIIION	4.7763E-26	0.0	0.0	0.0
CRIIINO3ION	3.3228E-29	0.0	0.0	0.0

CROH2ION	2.1139E-16	0.0	0.0	0.0
CROH4ION	2.1240E-10	0.0	0.0	0.0
CROHION	5.8970E-19	0.0	0.0	0.0
FEIII2OH2ION	1.0512E-39	0.0	0.0	0.0
FEIIIH2PO4ION	1.0512E-39	0.0	0.0	0.0
FEIIIHPO4ION	4.6382E-31	0.0	0.0	0.0
FEIIIIION	1.1384E-35	0.0	0.0	0.0
FEIIINO3ION	1.0512E-39	0.0	0.0	0.0
FEIIIOH2ION	2.2653E-20	0.0	0.0	0.0
FEIIIOH4ION	1.1236E-12	0.0	0.0	0.0
FEIIIOHION	8.5795E-27	0.0	0.0	0.0
H2P2O7ION	1.1578E-22	0.0	0.0	0.0
H2PO4ION	1.5356E-12	0.0	0.0	0.0
H3P2O7ION	1.3199E-31	0.0	0.0	0.0
H3SiO4ION	8.9879E-09	0.0	0.0	0.0
HION	6.9922E-16	0.0	0.0	0.0
HP2O7ION	6.1059E-18	0.0	0.0	0.0
HPBO2ION	1.1870E-23	0.0	0.0	0.0
HPO4ION	1.8585E-08	0.0	0.0	0.0
MGH2PO4ION	1.2151E-16	0.0	0.0	0.0
MGION	2.2915E-10	0.0	0.0	0.0
MGOHION	4.9680E-11	0.0	0.0	0.0
MGPO4ION	1.0580E-08	0.0	0.0	0.0
MNION	7.4001E-12	0.0	0.0	0.0
MNNO3ION	4.3305E-17	0.0	0.0	0.0
MNOH3ION	4.1307E-13	0.0	0.0	0.0
MNOH4ION	2.5357E-15	0.0	0.0	0.0
MNOHION	5.5967E-11	0.0	0.0	0.0
NAION	3.2148E-07	0.0	0.0	0.0
NDION	5.2959E-10	0.0	0.0	0.0
NIION	3.3673E-14	0.0	0.0	0.0
NINO3ION	3.1245E-19	0.0	0.0	0.0
NIOH3ION	1.1946E-10	0.0	0.0	0.0
NIOHION	6.2054E-13	0.0	0.0	0.0
NO3ION	4.3679E-10	0.0	0.0	0.0
ALION	2.9634E-30	0.0	0.0	0.0
P2O7ION	7.3118E-16	0.0	0.0	0.0
PBH2PO4ION	1.4390E-35	0.0	0.0	0.0
PBION	3.0863E-29	0.0	0.0	0.0
PBNO33ION	1.0512E-39	0.0	0.0	0.0
PBNO3ION	1.9656E-33	0.0	0.0	0.0
PBOHION	1.0413E-25	0.0	0.0	0.0
PO4ION	1.9428E-09	0.0	0.0	0.0
SNIVION	1.0512E-39	0.0	0.0	0.0
SNIVOH2ION	1.8920E-34	0.0	0.0	0.0
SNIVOH3ION	1.2797E-22	0.0	0.0	0.0
SNIVOH5ION	3.5065E-11	0.0	0.0	0.0
SNIVOH6ION	6.6374E-11	0.0	0.0	0.0
SNIVOHION	1.0512E-39	0.0	0.0	0.0
SRION	1.7501E-10	0.0	0.0	0.0
SRNO3ION	3.1628E-15	0.0	0.0	0.0
SROHION	1.4860E-12	0.0	0.0	0.0
SRPO4ION	7.8974E-11	0.0	0.0	0.0
UO22OH2ION	8.8337E-23	0.0	0.0	0.0
UO23OH5ION	1.1391E-16	0.0	0.0	0.0

UO2ION	4.7099E-22	0.0	0.0	0.0
UO2OHION	3.7506E-16	0.0	0.0	0.0
ZNH2PO4ION	1.1415E-22	0.0	0.0	0.0
ZNION	2.6190E-16	0.0	0.0	0.0
ZNNO3ION	2.4387E-21	0.0	0.0	0.0
ZNOH3ION	4.3665E-11	0.0	0.0	0.0
ZNOHION	4.2250E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.1382E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5394E-05	0.0	0.0
SR3PO42	0.0	7.2975E-07	0.0	0.0
<hr/>				
Total mol/hr	5.8329E-03	5.0582E-04	0.0	0.0
Total g/hr	0.10509	0.10509	0.0	0.0
Volume, L/hr	1.0541E-04	1.1438E-05	0.0	0.0
Enthalpy, cal/hr	-398.5	-168.2	0.0	0.0
Density, g/L	997.03	9188.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Wash Liquids

TO :

FROM : Wash Liquids Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.511			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.49609	0.0	0.0	0.0
HNO3	7.6165E-20	0.0	0.0	0.0
BIOH3	1.1491E-06	0.0	0.0	0.0
BOH3	6.2816E-09	0.0	0.0	0.0
CROH3	7.4899E-09	0.0	0.0	0.0
FEIIIOH3	1.8087E-12	0.0	0.0	0.0
ALOH3	2.0126E-11	6.0055E-05	0.0	0.0
MGHPO4	3.1819E-11	0.0	0.0	0.0
MNNO32	2.0847E-18	0.0	0.0	0.0
MNOH2	7.5143E-10	3.2923E-09	0.0	0.0
NIOH2	4.7480E-09	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	2.2466E-07	0.0	0.0	0.0
SNIVOH4	5.5516E-10	0.0	0.0	0.0
SRHPO4	4.3432E-12	0.0	0.0	0.0
SRNO32	9.0600E-16	0.0	0.0	0.0
UO2OH2	2.7988E-10	9.4467E-13	0.0	0.0
ZNHPO4	6.6950E-16	0.0	0.0	0.0
ZNNO32	1.0846E-22	0.0	0.0	0.0
ZNOH2	2.4084E-08	0.0	0.0	0.0
OHION	4.3343E-04	0.0	0.0	0.0
ALOH2ION	1.9450E-18	0.0	0.0	0.0
ALOH4ION	2.7350E-05	0.0	0.0	0.0
ALOHION	4.3601E-25	0.0	0.0	0.0
BIION	1.6555E-33	0.0	0.0	0.0
BINO32ION	8.9415E-38	0.0	0.0	0.0
BINO3ION	4.9713E-36	0.0	0.0	0.0
BIOH2ION	4.4024E-14	0.0	0.0	0.0
BIOH4ION	7.3659E-07	0.0	0.0	0.0
BIOHION	4.4289E-23	0.0	0.0	0.0
BO2ION	2.0147E-05	0.0	0.0	0.0
BOH4ION	2.0193E-05	0.0	0.0	0.0
CAH2PO4ION	1.8860E-17	0.0	0.0	0.0
CAION	5.6212E-10	0.0	0.0	0.0
CAOHION	7.4884E-11	0.0	0.0	0.0
CAPO4ION	6.9461E-07	0.0	0.0	0.0
CRIIH2PO4ION	1.6872E-31	0.0	0.0	0.0
CRIIHPO4ION	7.8489E-20	0.0	0.0	0.0
CRIIION	1.0032E-26	0.0	0.0	0.0
CRIIINO3ION	2.2659E-28	0.0	0.0	0.0

CROH2ION	1.0320E-15	0.0	0.0	0.0
CROH4ION	4.8132E-07	0.0	0.0	0.0
CROHION	4.5761E-19	0.0	0.0	0.0
FEIII2OH2ION	8.9415E-38	0.0	0.0	0.0
FEIIIH2PO4ION	8.9415E-38	0.0	0.0	0.0
FEIIIHPO4ION	3.1066E-32	0.0	0.0	0.0
FEIIIIION	2.9141E-36	0.0	0.0	0.0
FEIIINO3ION	8.9415E-38	0.0	0.0	0.0
FEIIIOH2ION	1.0939E-19	0.0	0.0	0.0
FEIIIOH4ION	2.5195E-09	0.0	0.0	0.0
FEIIIOHION	6.9311E-27	0.0	0.0	0.0
H2P2O7ION	3.8303E-21	0.0	0.0	0.0
H2PO4ION	5.6340E-11	0.0	0.0	0.0
H3P2O7ION	6.1550E-32	0.0	0.0	0.0
H3SIO4ION	1.8043E-04	0.0	0.0	0.0
HION	3.9168E-15	0.0	0.0	0.0
HP2O7ION	2.4759E-14	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	4.6654E-05	0.0	0.0	0.0
MGH2PO4ION	9.4068E-18	0.0	0.0	0.0
MGION	2.2653E-10	0.0	0.0	0.0
MGOHION	2.7854E-10	0.0	0.0	0.0
MGPO4ION	3.8365E-07	0.0	0.0	0.0
MNION	9.1099E-12	0.0	0.0	0.0
MNNO3ION	2.0717E-15	0.0	0.0	0.0
MNOH3ION	1.0754E-09	0.0	0.0	0.0
MNOH4ION	4.6490E-10	0.0	0.0	0.0
MNOHION	3.1382E-10	0.0	0.0	0.0
NAION	2.4591E-03	0.0	0.0	0.0
NDION	1.0231E-05	0.0	0.0	0.0
NIION	3.3411E-14	0.0	0.0	0.0
NINO3ION	1.3017E-17	0.0	0.0	0.0
NIOH3ION	2.7077E-07	0.0	0.0	0.0
NIOHION	3.0301E-12	0.0	0.0	0.0
NO3ION	8.4379E-06	0.0	0.0	0.0
ALION	1.0112E-31	0.0	0.0	0.0
P2O7ION	8.4162E-10	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	5.6580E-04	0.0	0.0	0.0
SNIVION	8.9415E-38	0.0	0.0	0.0
SNIVOH2ION	4.1546E-35	0.0	0.0	0.0
SNIVOH3ION	1.7151E-22	0.0	0.0	0.0
SNIVOH5ION	1.9325E-08	0.0	0.0	0.0
SNIVOH6ION	2.5757E-06	0.0	0.0	0.0
SNIVOHION	8.9415E-38	0.0	0.0	0.0
SRION	1.9981E-09	0.0	0.0	0.0
SRNO3ION	1.7777E-12	0.0	0.0	0.0
SROHION	9.6905E-11	0.0	0.0	0.0
SRPO4ION	3.3301E-08	0.0	0.0	0.0
UO22OH2ION	9.8277E-23	0.0	0.0	0.0
UO23OH5ION	6.3853E-16	0.0	0.0	0.0

UO2ION	4.3988E-22	0.0	0.0	0.0
UO2OHION	2.1034E-15	0.0	0.0	0.0
ZNH2PO4ION	1.0281E-22	0.0	0.0	0.0
ZNION	2.1651E-15	0.0	0.0	0.0
ZNNO3ION	1.3569E-18	0.0	0.0	0.0
ZNOH3ION	1.3222E-06	0.0	0.0	0.0
ZNOHION	2.7562E-12	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	1.7534E-07	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.49987	6.0233E-05	0.0	0.0
Total g/hr	9.0851	4.6950E-03	0.0	0.0
Volume, L/hr	8.9674E-03	1.9238E-06	0.0	0.0
Enthalpy, cal/hr	-3.4326E+04	-18.61	0.0	0.0
Density, g/L	1013.1	2440.5		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Slurry Water

TO : Sludge Slurry Make-up

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	4.9957E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIII OH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SiO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHP04	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	9.0674E-11	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	9.0674E-11	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

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UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	4.9957E-02	0.0	0.0	0.0
Total g/hr	0.90000	0.0	0.0	0.0
Volume, L/hr	9.0285E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-3413.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Sludge Slurry
TO : Sludge Slurry Split
FROM : Sludge Slurry Make-up

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.545			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5790E-02	0.0	0.0	0.0
HNO3	6.0228E-22	0.0	0.0	0.0
BIOH3	9.7212E-11	0.0	0.0	0.0
BOH3	4.9420E-11	0.0	0.0	0.0
CROH3	1.0333E-09	2.2108E-06	0.0	0.0
FEIIIOH3	2.5236E-13	1.7135E-04	0.0	0.0
ALOH3	2.4174E-12	5.2784E-08	0.0	0.0
MGHPO4	4.6829E-10	0.0	0.0	0.0
MNNO32	1.0750E-21	0.0	0.0	0.0
MNOH2	9.0258E-11	1.5166E-06	0.0	0.0
NIOH2	6.5484E-10	6.4357E-05	0.0	0.0
PBHP04	8.7297E-29	0.0	0.0	0.0
PBNO32	1.6444E-38	0.0	0.0	0.0
PBO	5.9479E-23	1.9424E-06	0.0	0.0
SiO2	1.5062E-09	0.0	0.0	0.0
SNIVOH4	1.0273E-10	0.0	0.0	0.0
SRHPO4	3.8608E-12	0.0	0.0	0.0
SRNO32	2.8219E-20	0.0	0.0	0.0
UO2OH2	3.3617E-11	2.1519E-04	0.0	0.0
ZNHPO4	1.7432E-16	0.0	0.0	0.0
ZNNO32	9.8955E-28	0.0	0.0	0.0
ZNOH2	5.1179E-11	0.0	0.0	0.0
OHION	3.6717E-07	0.0	0.0	0.0
ALOH2ION	1.2942E-17	0.0	0.0	0.0
ALOH4ION	2.1793E-08	0.0	0.0	0.0
ALOHION	8.6946E-23	0.0	0.0	0.0
BIION	2.0630E-33	0.0	0.0	0.0
BINO32ION	1.0055E-38	0.0	0.0	0.0
BINO3ION	3.8133E-38	0.0	0.0	0.0
BIOH2ION	2.0618E-16	0.0	0.0	0.0
BIOH4ION	4.0225E-13	0.0	0.0	0.0
BIOHION	5.1849E-24	0.0	0.0	0.0
BO2ION	1.0136E-09	0.0	0.0	0.0
BOH4ION	1.0256E-09	0.0	0.0	0.0
CAH2PO4ION	1.4089E-15	0.0	0.0	0.0
CAION	8.1420E-09	0.0	0.0	0.0
CAOHION	4.5449E-11	0.0	0.0	0.0
CAPO4ION	5.3090E-09	0.0	0.0	0.0
CRIIH2PO4ION	5.7091E-27	0.0	0.0	0.0
CRIIHPO4ION	8.2918E-17	0.0	0.0	0.0
CRIIION	3.1302E-23	0.0	0.0	0.0
CRIIINO3ION	2.8343E-27	0.0	0.0	0.0

CROH2ION	8.8993E-15	0.0	0.0	0.0
CROH4ION	4.2863E-10	0.0	0.0	0.0
CROHION	1.0160E-16	0.0	0.0	0.0
FEIII2OH2ION	1.0055E-38	0.0	0.0	0.0
FEIIIH2PO4ION	5.7694E-38	0.0	0.0	0.0
FEIIIHPO4ION	3.3192E-29	0.0	0.0	0.0
FEIIIIION	7.4612E-33	0.0	0.0	0.0
FEIIINO3ION	1.0055E-38	0.0	0.0	0.0
FEIIIOH2ION	9.5409E-19	0.0	0.0	0.0
FEIIIOH4ION	2.2692E-12	0.0	0.0	0.0
FEIIIOHION	1.4788E-24	0.0	0.0	0.0
H2P2O7ION	1.3241E-22	0.0	0.0	0.0
H2PO4ION	5.2680E-12	0.0	0.0	0.0
H3P2O7ION	7.7101E-31	0.0	0.0	0.0
H3SIO4ION	7.8456E-09	0.0	0.0	0.0
HION	2.9444E-14	0.0	0.0	0.0
HP2O7ION	1.2733E-18	0.0	0.0	0.0
HPBO2ION	2.3974E-23	0.0	0.0	0.0
HPO4ION	1.2489E-08	0.0	0.0	0.0
MGH2PO4ION	8.6934E-15	0.0	0.0	0.0
MGION	3.9382E-08	0.0	0.0	0.0
MGOHION	2.0914E-09	0.0	0.0	0.0
MGPO4ION	3.6274E-08	0.0	0.0	0.0
MNION	1.2701E-09	0.0	0.0	0.0
MNNO3ION	9.0262E-16	0.0	0.0	0.0
MNOH3ION	8.3380E-13	0.0	0.0	0.0
MNOH4ION	1.0022E-15	0.0	0.0	0.0
MNOHION	2.3563E-09	0.0	0.0	0.0
NAION	3.2148E-07	0.0	0.0	0.0
NDION	5.2959E-10	0.0	0.0	0.0
NIION	5.7785E-12	0.0	0.0	0.0
NINO3ION	6.5120E-18	0.0	0.0	0.0
NIOH3ION	2.4107E-10	0.0	0.0	0.0
NIOHION	2.6124E-11	0.0	0.0	0.0
NO3ION	4.3674E-10	0.0	0.0	0.0
ALION	2.8199E-28	0.0	0.0	0.0
P2O7ION	2.5799E-17	0.0	0.0	0.0
PBH2PO4ION	1.0306E-33	0.0	0.0	0.0
PBION	5.2852E-27	0.0	0.0	0.0
PBNO33ION	1.0055E-38	0.0	0.0	0.0
PBNO3ION	4.1005E-32	0.0	0.0	0.0
PBOHION	4.3876E-24	0.0	0.0	0.0
PO4ION	2.3831E-10	0.0	0.0	0.0
SNIVION	1.0055E-38	0.0	0.0	0.0
SNIVOH2ION	1.0629E-32	0.0	0.0	0.0
SNIVOH3ION	1.7566E-21	0.0	0.0	0.0
SNIVOH5ION	2.3084E-11	0.0	0.0	0.0
SNIVOH6ION	8.5541E-12	0.0	0.0	0.0
SNIVOHION	1.0055E-38	0.0	0.0	0.0
SRION	2.1127E-08	0.0	0.0	0.0
SRNO3ION	4.6273E-14	0.0	0.0	0.0
SROHION	4.3939E-11	0.0	0.0	0.0
SRPO4ION	1.9018E-10	0.0	0.0	0.0
UO22OH2ION	1.5220E-20	0.0	0.0	0.0
UO23OH5ION	4.7944E-15	0.0	0.0	0.0

UO2ION	8.1161E-20	0.0	0.0	0.0
UO2OHION	1.5793E-14	0.0	0.0	0.0
ZNH2PO4ION	1.6810E-21	0.0	0.0	0.0
ZNION	9.2811E-15	0.0	0.0	0.0
ZNNO3ION	1.0460E-20	0.0	0.0	0.0
ZNOH3ION	1.8138E-11	0.0	0.0	0.0
ZNOHION	3.6615E-13	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.0708E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5391E-05	0.0	0.0
SR3PO42	0.0	7.2271E-07	0.0	0.0
<hr/>				
Total mol/hr	5.5790E-02	5.0579E-04	0.0	0.0
Total g/hr	1.0051	0.10509	0.0	0.0
Volume, L/hr	1.0083E-03	1.1437E-05	0.0	0.0
Enthalpy, cal/hr	-3811.	-168.2	0.0	0.0
Density, g/L	996.88	9188.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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PROCESS: C-112

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STREAM: Slurry Sample
TO :
FROM : Sludge Slurry Split

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.545			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5349E-03	0.0	0.0	0.0
HNO3	5.9752E-23	0.0	0.0	0.0
BIOH3	9.6444E-12	0.0	0.0	0.0
BOH3	4.9030E-12	0.0	0.0	0.0
CROH3	1.0251E-10	2.1933E-07	0.0	0.0
FEIIIOH3	2.5036E-14	1.6999E-05	0.0	0.0
ALOH3	2.3983E-13	5.2367E-09	0.0	0.0
MGHPO4	4.6459E-11	0.0	0.0	0.0
MNNO32	1.0666E-22	0.0	0.0	0.0
MNOH2	8.9545E-12	1.5046E-07	0.0	0.0
NIOH2	6.4967E-11	6.3848E-06	0.0	0.0
PBHPO4	8.6608E-30	0.0	0.0	0.0
PBNO32	1.6314E-39	0.0	0.0	0.0
PBO	5.9009E-24	1.9271E-07	0.0	0.0
SIO2	1.4943E-10	0.0	0.0	0.0
SNIVOH4	1.0191E-11	0.0	0.0	0.0
SRHPO4	3.8303E-13	0.0	0.0	0.0
SRNO32	2.7997E-21	0.0	0.0	0.0
UO2OH2	3.3352E-12	2.1349E-05	0.0	0.0
ZNHPO4	1.7295E-17	0.0	0.0	0.0
ZNNO32	9.8173E-29	0.0	0.0	0.0
ZNOH2	5.0775E-12	0.0	0.0	0.0
OHION	3.6427E-08	0.0	0.0	0.0
ALOH2ION	1.2840E-18	0.0	0.0	0.0
ALOH4ION	2.1621E-09	0.0	0.0	0.0
ALOHION	8.6259E-24	0.0	0.0	0.0
BIION	2.0467E-34	0.0	0.0	0.0
BINO32ION	9.9760E-40	0.0	0.0	0.0
BINO3ION	3.7832E-39	0.0	0.0	0.0
BIOH2ION	2.0455E-17	0.0	0.0	0.0
BIOH4ION	3.9907E-14	0.0	0.0	0.0
BIOHION	5.1439E-25	0.0	0.0	0.0
BO2ION	1.0056E-10	0.0	0.0	0.0
BOH4ION	1.0175E-10	0.0	0.0	0.0
CAH2PO4ION	1.3977E-16	0.0	0.0	0.0
CAION	8.0777E-10	0.0	0.0	0.0
CAOHION	4.5090E-12	0.0	0.0	0.0
CAPO4ION	5.2670E-10	0.0	0.0	0.0
CRIIH2PO4ION	5.6640E-28	0.0	0.0	0.0
CRIIHPO4ION	8.2263E-18	0.0	0.0	0.0
CRIIION	3.1055E-24	0.0	0.0	0.0
CRIIINO3ION	2.8119E-28	0.0	0.0	0.0

CROH2ION	8.8290E-16	0.0	0.0	0.0
CROH4ION	4.2525E-11	0.0	0.0	0.0
CROHION	1.0080E-17	0.0	0.0	0.0
FEIII2OH2ION	9.9760E-40	0.0	0.0	0.0
FEIIIH2PO4ION	5.7238E-39	0.0	0.0	0.0
FEIIIHPO4ION	3.2930E-30	0.0	0.0	0.0
FEIIIIION	7.4023E-34	0.0	0.0	0.0
FEIIINO3ION	9.9760E-40	0.0	0.0	0.0
FEIIIOH2ION	9.4655E-20	0.0	0.0	0.0
FEIIIOH4ION	2.2512E-13	0.0	0.0	0.0
FEIIIOHION	1.4671E-25	0.0	0.0	0.0
H2P2O7ION	1.3137E-23	0.0	0.0	0.0
H2PO4ION	5.2264E-13	0.0	0.0	0.0
H3P2O7ION	7.6492E-32	0.0	0.0	0.0
H3SIO4ION	7.7836E-10	0.0	0.0	0.0
HION	2.9211E-15	0.0	0.0	0.0
HP2O7ION	1.2633E-19	0.0	0.0	0.0
HPBO2ION	2.3785E-24	0.0	0.0	0.0
HPO4ION	1.2391E-09	0.0	0.0	0.0
MGH2PO4ION	8.6247E-16	0.0	0.0	0.0
MGION	3.9071E-09	0.0	0.0	0.0
MGOHION	2.0749E-10	0.0	0.0	0.0
MGPO4ION	3.5987E-09	0.0	0.0	0.0
MNION	1.2601E-10	0.0	0.0	0.0
MNNO3ION	8.9549E-17	0.0	0.0	0.0
MNOH3ION	8.2721E-14	0.0	0.0	0.0
MNOH4ION	9.9431E-17	0.0	0.0	0.0
MNOHION	2.3377E-10	0.0	0.0	0.0
NAION	3.1894E-08	0.0	0.0	0.0
NDION	5.2541E-11	0.0	0.0	0.0
NIION	5.7329E-13	0.0	0.0	0.0
NINO3ION	6.4606E-19	0.0	0.0	0.0
NIOH3ION	2.3916E-11	0.0	0.0	0.0
NIOHION	2.5918E-12	0.0	0.0	0.0
NO3ION	4.3329E-11	0.0	0.0	0.0
ALION	2.7976E-29	0.0	0.0	0.0
P2O7ION	2.5595E-18	0.0	0.0	0.0
PBH2PO4ION	1.0224E-34	0.0	0.0	0.0
PBION	5.2435E-28	0.0	0.0	0.0
PBNO33ION	9.9760E-40	0.0	0.0	0.0
PBNO3ION	4.0681E-33	0.0	0.0	0.0
PBOHION	4.3529E-25	0.0	0.0	0.0
PO4ION	2.3642E-11	0.0	0.0	0.0
SNIVION	9.9760E-40	0.0	0.0	0.0
SNIVOH2ION	1.0545E-33	0.0	0.0	0.0
SNIVOH3ION	1.7427E-22	0.0	0.0	0.0
SNIVOH5ION	2.2901E-12	0.0	0.0	0.0
SNIVOH6ION	8.4865E-13	0.0	0.0	0.0
SNIVOHION	9.9760E-40	0.0	0.0	0.0
SRION	2.0961E-09	0.0	0.0	0.0
SRNO3ION	4.5908E-15	0.0	0.0	0.0
SROHION	4.3592E-12	0.0	0.0	0.0
SRPO4ION	1.8868E-11	0.0	0.0	0.0
UO22OH2ION	1.5099E-21	0.0	0.0	0.0
UO23OH5ION	4.7565E-16	0.0	0.0	0.0

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UO2ION	8.0519E-21	0.0	0.0	0.0
UO2OHION	1.5669E-15	0.0	0.0	0.0
ZNH2PO4ION	1.6677E-22	0.0	0.0	0.0
ZNION	9.2078E-16	0.0	0.0	0.0
ZNNO3ION	1.0377E-21	0.0	0.0	0.0
ZNOH3ION	1.7995E-12	0.0	0.0	0.0
ZNOHION	3.6325E-14	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	3.0466E-07	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.5032E-06	0.0	0.0
SR3PO42	0.0	7.1700E-08	0.0	0.0
<hr/>				
Total mol/hr	5.5350E-03	5.0180E-05	0.0	0.0
Total g/hr	9.9716E-02	1.0426E-02	0.0	0.0
Volume, L/hr	1.0003E-04	1.1347E-06	0.0	0.0
Enthalpy, cal/hr	-378.1	-16.68	0.0	0.0
Density, g/L	996.88	9188.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Slurry to Leach
TO : Leach Mix
FROM : Sludge Slurry Split

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	10.545			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.0255E-02	0.0	0.0	0.0
HNO3	5.4253E-22	0.0	0.0	0.0
BIOH3	8.7568E-11	0.0	0.0	0.0
BOH3	4.4517E-11	0.0	0.0	0.0
CROH3	9.3075E-10	1.9914E-06	0.0	0.0
FEIIIOH3	2.2732E-13	1.5435E-04	0.0	0.0
ALOH3	2.1776E-12	4.7548E-08	0.0	0.0
MGHPO4	4.2183E-10	0.0	0.0	0.0
MNNO32	9.6839E-22	0.0	0.0	0.0
MNOH2	8.1304E-11	1.3662E-06	0.0	0.0
NIOH2	5.8988E-10	5.7972E-05	0.0	0.0
PBHP04	7.8637E-29	0.0	0.0	0.0
PBNO32	1.4812E-38	0.0	0.0	0.0
PBO	5.3578E-23	1.7497E-06	0.0	0.0
SIO2	1.3567E-09	0.0	0.0	0.0
SNIVOH4	9.2534E-11	0.0	0.0	0.0
SRHPO4	3.4778E-12	0.0	0.0	0.0
SRNO32	2.5420E-20	0.0	0.0	0.0
UO2OH2	3.0282E-11	1.9384E-04	0.0	0.0
ZNHPO4	1.5703E-16	0.0	0.0	0.0
ZNNO32	8.9138E-28	0.0	0.0	0.0
ZNOH2	4.6102E-11	0.0	0.0	0.0
OHION	3.3075E-07	0.0	0.0	0.0
ALOH2ION	1.1658E-17	0.0	0.0	0.0
ALOH4ION	1.9631E-08	0.0	0.0	0.0
ALOHION	7.8320E-23	0.0	0.0	0.0
BIION	1.8584E-33	0.0	0.0	0.0
BINO32ION	9.0578E-39	0.0	0.0	0.0
BINO3ION	3.4350E-38	0.0	0.0	0.0
BIOH2ION	1.8573E-16	0.0	0.0	0.0
BIOH4ION	3.6234E-13	0.0	0.0	0.0
BIOHION	4.6705E-24	0.0	0.0	0.0
BO2ION	9.1303E-10	0.0	0.0	0.0
BOH4ION	9.2382E-10	0.0	0.0	0.0
CAH2PO4ION	1.2691E-15	0.0	0.0	0.0
CAION	7.3342E-09	0.0	0.0	0.0
CAOHION	4.0940E-11	0.0	0.0	0.0
CAPO4ION	4.7823E-09	0.0	0.0	0.0
CRIIH2PO4ION	5.1427E-27	0.0	0.0	0.0
CRIIHPO4ION	7.4692E-17	0.0	0.0	0.0
CRIIION	2.8196E-23	0.0	0.0	0.0
CRIIINO3ION	2.5531E-27	0.0	0.0	0.0

CROH2ION	8.0164E-15	0.0	0.0	0.0
CROH4ION	3.8611E-10	0.0	0.0	0.0
CROHION	9.1523E-17	0.0	0.0	0.0
FEIII2OH2ION	9.0578E-39	0.0	0.0	0.0
FEIIIH2PO4ION	5.1970E-38	0.0	0.0	0.0
FEIIIHPO4ION	2.9899E-29	0.0	0.0	0.0
FEIIIIION	6.7210E-33	0.0	0.0	0.0
FEIIINO3ION	9.0578E-39	0.0	0.0	0.0
FEIIIOH2ION	8.5944E-19	0.0	0.0	0.0
FEIIIOH4ION	2.0440E-12	0.0	0.0	0.0
FEIIIOHION	1.3320E-24	0.0	0.0	0.0
H2P2O7ION	1.1927E-22	0.0	0.0	0.0
H2PO4ION	4.7453E-12	0.0	0.0	0.0
H3P2O7ION	6.9452E-31	0.0	0.0	0.0
H3SIO4ION	7.0673E-09	0.0	0.0	0.0
HION	2.6523E-14	0.0	0.0	0.0
HP2O7ION	1.1470E-18	0.0	0.0	0.0
HPBO2ION	2.1596E-23	0.0	0.0	0.0
HPO4ION	1.1250E-08	0.0	0.0	0.0
MGH2PO4ION	7.8309E-15	0.0	0.0	0.0
MGION	3.5475E-08	0.0	0.0	0.0
MGOHION	1.8839E-09	0.0	0.0	0.0
MGPO4ION	3.2675E-08	0.0	0.0	0.0
MNION	1.1441E-09	0.0	0.0	0.0
MNNO3ION	8.1307E-16	0.0	0.0	0.0
MNOH3ION	7.5108E-13	0.0	0.0	0.0
MNOH4ION	9.0280E-16	0.0	0.0	0.0
MNOHION	2.1226E-09	0.0	0.0	0.0
NAION	2.8959E-07	0.0	0.0	0.0
NDION	4.7705E-10	0.0	0.0	0.0
NIION	5.2052E-12	0.0	0.0	0.0
NINO3ION	5.8660E-18	0.0	0.0	0.0
NIOH3ION	2.1715E-10	0.0	0.0	0.0
NIOHION	2.3532E-11	0.0	0.0	0.0
NO3ION	3.9341E-10	0.0	0.0	0.0
ALION	2.5401E-28	0.0	0.0	0.0
P2O7ION	2.3240E-17	0.0	0.0	0.0
PBH2PO4ION	9.2833E-34	0.0	0.0	0.0
PBION	4.7609E-27	0.0	0.0	0.0
PBNO33ION	9.0578E-39	0.0	0.0	0.0
PBNO3ION	3.6937E-32	0.0	0.0	0.0
PBOHION	3.9523E-24	0.0	0.0	0.0
PO4ION	2.1467E-10	0.0	0.0	0.0
SNIVION	9.0578E-39	0.0	0.0	0.0
SNIVOH2ION	9.5740E-33	0.0	0.0	0.0
SNIVOH3ION	1.5823E-21	0.0	0.0	0.0
SNIVOH5ION	2.0794E-11	0.0	0.0	0.0
SNIVOH6ION	7.7054E-12	0.0	0.0	0.0
SNIVOHION	9.0578E-39	0.0	0.0	0.0
SRION	1.9031E-08	0.0	0.0	0.0
SRNO3ION	4.1682E-14	0.0	0.0	0.0
SROHION	3.9580E-11	0.0	0.0	0.0
SRPO4ION	1.7132E-10	0.0	0.0	0.0
UO22OH2ION	1.3710E-20	0.0	0.0	0.0
UO23OH5ION	4.3187E-15	0.0	0.0	0.0

UO2ION	7.3109E-20	0.0	0.0	0.0
UO2OHION	1.4227E-14	0.0	0.0	0.0
ZNH2PO4ION	1.5142E-21	0.0	0.0	0.0
ZNION	8.3604E-15	0.0	0.0	0.0
ZNN03ION	9.4222E-21	0.0	0.0	0.0
ZNOH3ION	1.6339E-11	0.0	0.0	0.0
ZNOHION	3.2982E-13	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.7662E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0887E-05	0.0	0.0
SR3PO42	0.0	6.5101E-07	0.0	0.0
<hr/>				
Total mol/hr	5.0255E-02	4.5562E-04	0.0	0.0
Total g/hr	0.90538	9.4662E-02	0.0	0.0
Volume, L/hr	9.0822E-04	1.0303E-05	0.0	0.0
Enthalpy, cal/hr	-3433.	-151.5	0.0	0.0
Density, g/L	996.88	9188.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 10 M NaOH
TO : Leach Mix
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	15.855			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	1.9927E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	3.9003E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

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CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	1.2378E-19	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	3.9003E-03	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	2.7728E-02	0.0	0.0	0.0
Total g/hr	0.51500	0.0	0.0	0.0
Volume, L/hr	3.9080E-04	0.0	0.0	0.0
Enthalpy, cal/hr	-1789.	0.0	0.0	0.0
Density, g/L	1317.8			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Mix Slurry

TO : First Leach

FROM : Leach Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.518			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	7.0182E-02	0.0	0.0	0.0
HNO3	1.2497E-26	0.0	0.0	0.0
BIOH3	5.1802E-13	0.0	0.0	0.0
BOH3	9.7315E-16	0.0	0.0	0.0
CROH3	1.1779E-10	0.0	0.0	0.0
FEIIIOH3	1.3219E-13	1.5430E-04	0.0	0.0
ALOH3	2.1148E-16	0.0	0.0	0.0
MGHPO4	2.4602E-21	0.0	0.0	0.0
MNNO32	1.0065E-30	0.0	0.0	0.0
MNOH2	4.1437E-11	0.0	0.0	0.0
NIOH2	3.4303E-10	5.2823E-05	0.0	0.0
PBHP04	1.2650E-38	0.0	0.0	0.0
PBNO32	1.2650E-38	0.0	0.0	0.0
PBO	3.1157E-23	1.7497E-06	0.0	0.0
SIO2	4.5208E-14	0.0	0.0	0.0
SNIVOH4	4.9396E-19	0.0	0.0	0.0
SRHPO4	3.9965E-16	0.0	0.0	0.0
SRNO32	5.9396E-22	0.0	0.0	0.0
UO2OH2	1.7610E-11	1.9384E-04	0.0	0.0
ZNHPO4	1.4837E-31	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	4.3434E-15	0.0	0.0	0.0
OHION	3.8901E-03	0.0	0.0	0.0
ALOH2ION	4.3083E-25	0.0	0.0	0.0
ALOH4ION	6.7181E-08	0.0	0.0	0.0
ALOHION	4.7136E-34	0.0	0.0	0.0
BIION	1.2650E-38	0.0	0.0	0.0
BINO32ION	1.2650E-38	0.0	0.0	0.0
BINO3ION	1.2650E-38	0.0	0.0	0.0
BIOH2ION	4.1807E-22	0.0	0.0	0.0
BIOH4ION	8.7412E-11	0.0	0.0	0.0
BIOHION	1.7127E-33	0.0	0.0	0.0
BO2ION	1.0578E-09	0.0	0.0	0.0
BOH4ION	8.2355E-10	0.0	0.0	0.0
CAH2PO4ION	4.8667E-23	0.0	0.0	0.0
CAION	5.0305E-08	0.0	0.0	0.0
CAOHION	1.7846E-07	0.0	0.0	0.0
CAPO4ION	2.5548E-08	0.0	0.0	0.0
CRIIH2PO4ION	1.2650E-38	0.0	0.0	0.0
CRIIHPO4ION	3.6056E-32	0.0	0.0	0.0
CRIIION	4.2775E-35	0.0	0.0	0.0
CRIIINO3ION	1.2650E-38	0.0	0.0	0.0

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CROH2ION	3.8586E-19	0.0	0.0	0.0
CROH4ION	1.9926E-06	0.0	0.0	0.0
CROHION	7.1696E-25	0.0	0.0	0.0
FEIII2OH2ION	1.2650E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.2650E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.2650E-38	0.0	0.0	0.0
FEIIIIION	1.2650E-38	0.0	0.0	0.0
FEIIINO3ION	1.2650E-38	0.0	0.0	0.0
FEIIIOH2ION	1.9013E-22	0.0	0.0	0.0
FEIIIOH4ION	4.8474E-08	0.0	0.0	0.0
FEIIIOHION	4.8012E-32	0.0	0.0	0.0
H2P2O7ION	1.8695E-35	0.0	0.0	0.0
H2PO4ION	1.3084E-18	0.0	0.0	0.0
H3P2O7ION	1.2650E-38	0.0	0.0	0.0
H3SIO4ION	8.4240E-09	0.0	0.0	0.0
HION	8.1207E-18	0.0	0.0	0.0
HP2O7ION	1.8693E-26	0.0	0.0	0.0
HPBO2ION	5.1214E-19	0.0	0.0	0.0
HPO4ION	2.8126E-10	0.0	0.0	0.0
MGH2PO4ION	1.5241E-29	0.0	0.0	0.0
MGION	1.7280E-14	0.0	0.0	0.0
MGOHION	4.1679E-13	0.0	0.0	0.0
MGPO4ION	8.8601E-15	0.0	0.0	0.0
MNION	1.8630E-15	0.0	0.0	0.0
MNNO3ION	7.1204E-24	0.0	0.0	0.0
MNOH3ION	1.5611E-08	0.0	0.0	0.0
MNOH4ION	1.3538E-06	0.0	0.0	0.0
MNOHION	4.1154E-13	0.0	0.0	0.0
NAION	3.9005E-03	0.0	0.0	0.0
NDION	4.7705E-10	0.0	0.0	0.0
NIION	7.0560E-18	0.0	0.0	0.0
NINO3ION	5.8616E-26	0.0	0.0	0.0
NIOH3ION	5.1497E-06	0.0	0.0	0.0
NIOHION	5.2030E-15	0.0	0.0	0.0
NO3ION	3.9344E-10	0.0	0.0	0.0
ALION	1.2650E-38	0.0	0.0	0.0
P2O7ION	1.6891E-19	0.0	0.0	0.0
PBH2PO4ION	1.2650E-38	0.0	0.0	0.0
PBION	2.0922E-31	0.0	0.0	0.0
PBNO33ION	1.2650E-38	0.0	0.0	0.0
PBNO3ION	1.2650E-38	0.0	0.0	0.0
PBOHION	7.6698E-28	0.0	0.0	0.0
PO4ION	3.8046E-07	0.0	0.0	0.0
SNIVION	1.2650E-38	0.0	0.0	0.0
SNIVOH2ION	1.2650E-38	0.0	0.0	0.0
SNIVOH3ION	3.2141E-33	0.0	0.0	0.0
SNIVOH5ION	4.5266E-15	0.0	0.0	0.0
SNIVOH6ION	1.2103E-10	0.0	0.0	0.0
SNIVOHION	1.2650E-38	0.0	0.0	0.0
SRION	1.4016E-07	0.0	0.0	0.0
SRNO3ION	1.2960E-14	0.0	0.0	0.0
SROHION	1.7253E-07	0.0	0.0	0.0
SRPO4ION	9.1519E-10	0.0	0.0	0.0
UO22OH2ION	4.9439E-28	0.0	0.0	0.0
UO23OH5ION	9.5545E-19	0.0	0.0	0.0

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UO2ION	2.6352E-27	0.0	0.0	0.0
UO2OHION	3.1474E-18	0.0	0.0	0.0
ZNH2PO4ION	1.2650E-38	0.0	0.0	0.0
ZNION	8.5599E-26	0.0	0.0	0.0
ZNNO3ION	1.5254E-32	0.0	0.0	0.0
ZNOH3ION	6.2775E-11	0.0	0.0	0.0
ZNOHION	1.1822E-20	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.8366E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0807E-05	0.0	0.0
SR3PO42	0.0	5.5289E-07	0.0	0.0
<hr/>				
Total mol/hr	7.7982E-02	4.4690E-04	0.0	0.0
Total g/hr	1.4213	9.3784E-02	0.0	0.0
Volume, L/hr	1.2901E-03	1.0083E-05	0.0	0.0
Enthalpy, cal/hr	-5231.	-149.9	0.0	0.0
Density, g/L	1101.7	9301.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 1 Liquid
TO : Leach Liquids Mix
FROM : First Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.518			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	6.5551E-02	0.0	0.0	0.0
HNO3	1.1672E-26	0.0	0.0	0.0
BIOH3	4.8384E-13	0.0	0.0	0.0
BOH3	9.0893E-16	0.0	0.0	0.0
CROH3	1.1002E-10	0.0	0.0	0.0
FEIIIIOH3	1.2347E-13	0.0	0.0	0.0
ALOH3	1.9753E-16	0.0	0.0	0.0
MGHPO4	2.2978E-21	0.0	0.0	0.0
MNNO32	9.4004E-31	0.0	0.0	0.0
MNOH2	3.8703E-11	0.0	0.0	0.0
NIOH2	3.2039E-10	0.0	0.0	0.0
PBHP04	1.1815E-38	0.0	0.0	0.0
PBNO32	1.1815E-38	0.0	0.0	0.0
PBO	2.9101E-23	0.0	0.0	0.0
SIO2	4.2225E-14	0.0	0.0	0.0
SNIVOH4	4.6137E-19	0.0	0.0	0.0
SRHPO4	3.7328E-16	0.0	0.0	0.0
SRNO32	5.5477E-22	0.0	0.0	0.0
UO2OH2	1.6448E-11	0.0	0.0	0.0
ZNHPO4	1.3858E-31	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	4.0568E-15	0.0	0.0	0.0
OHION	3.6334E-03	0.0	0.0	0.0
ALOH2ION	4.0240E-25	0.0	0.0	0.0
ALOH4ION	6.2748E-08	0.0	0.0	0.0
ALOHION	4.4026E-34	0.0	0.0	0.0
BIION	1.1815E-38	0.0	0.0	0.0
BINO32ION	1.1815E-38	0.0	0.0	0.0
BINO3ION	1.1815E-38	0.0	0.0	0.0
BIOH2ION	3.9048E-22	0.0	0.0	0.0
BIOH4ION	8.1644E-11	0.0	0.0	0.0
BIOHION	1.5996E-33	0.0	0.0	0.0
BO2ION	9.8802E-10	0.0	0.0	0.0
BOH4ION	7.6920E-10	0.0	0.0	0.0
CAH2PO4ION	4.5456E-23	0.0	0.0	0.0
CAION	4.6985E-08	0.0	0.0	0.0
CAOHION	1.6669E-07	0.0	0.0	0.0
CAPO4ION	2.3863E-08	0.0	0.0	0.0
CRIIIH2PO4ION	1.1815E-38	0.0	0.0	0.0
CRIIIHPO4ION	3.3677E-32	0.0	0.0	0.0
CRIIIION	3.9952E-35	0.0	0.0	0.0
CRIIIINO3ION	1.1815E-38	0.0	0.0	0.0

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CROH2ION	3.6040E-19	0.0	0.0	0.0
CROH4ION	1.8612E-06	0.0	0.0	0.0
CROHION	6.6965E-25	0.0	0.0	0.0
FEIII2OH2ION	1.1815E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.1815E-38	0.0	0.0	0.0
FEIIIHPO4ION	1.1815E-38	0.0	0.0	0.0
FEIIIIION	1.1815E-38	0.0	0.0	0.0
FEIIINO3ION	1.1815E-38	0.0	0.0	0.0
FEIIIOH2ION	1.7759E-22	0.0	0.0	0.0
FEIIIOH4ION	4.5276E-08	0.0	0.0	0.0
FEIIIOHION	4.4844E-32	0.0	0.0	0.0
H2P2O7ION	1.7461E-35	0.0	0.0	0.0
H2PO4ION	1.2221E-18	0.0	0.0	0.0
H3P2O7ION	1.1815E-38	0.0	0.0	0.0
H3SiO4ION	7.8681E-09	0.0	0.0	0.0
HION	7.5849E-18	0.0	0.0	0.0
HP2O7ION	1.7460E-26	0.0	0.0	0.0
HPBO2ION	4.7835E-19	0.0	0.0	0.0
HPO4ION	2.6270E-10	0.0	0.0	0.0
MGH2PO4ION	1.4235E-29	0.0	0.0	0.0
MGION	1.6140E-14	0.0	0.0	0.0
MGOHION	3.8928E-13	0.0	0.0	0.0
MGPO4ION	8.2755E-15	0.0	0.0	0.0
MNION	1.7400E-15	0.0	0.0	0.0
MNNO3ION	6.6505E-24	0.0	0.0	0.0
MNOH3ION	1.4580E-08	0.0	0.0	0.0
MNOH4ION	1.2645E-06	0.0	0.0	0.0
MNOHION	3.8438E-13	0.0	0.0	0.0
NAION	3.6432E-03	0.0	0.0	0.0
NDION	4.4557E-10	0.0	0.0	0.0
NIION	6.5904E-18	0.0	0.0	0.0
NINO3ION	5.4748E-26	0.0	0.0	0.0
NIOH3ION	4.8099E-06	0.0	0.0	0.0
NIOHION	4.8597E-15	0.0	0.0	0.0
NO3ION	3.6748E-10	0.0	0.0	0.0
ALION	1.1815E-38	0.0	0.0	0.0
P2O7ION	1.5777E-19	0.0	0.0	0.0
PBH2PO4ION	1.1815E-38	0.0	0.0	0.0
PBION	1.9542E-31	0.0	0.0	0.0
PBNO33ION	1.1815E-38	0.0	0.0	0.0
PBNO3ION	1.1815E-38	0.0	0.0	0.0
PBOHION	7.1637E-28	0.0	0.0	0.0
PO4ION	3.5536E-07	0.0	0.0	0.0
SNIVION	1.1815E-38	0.0	0.0	0.0
SNIVOH2ION	1.1815E-38	0.0	0.0	0.0
SNIVOH3ION	3.0021E-33	0.0	0.0	0.0
SNIVOH5ION	4.2279E-15	0.0	0.0	0.0
SNIVOH6ION	1.1304E-10	0.0	0.0	0.0
SNIVOHION	1.1815E-38	0.0	0.0	0.0
SRION	1.3091E-07	0.0	0.0	0.0
SRNO3ION	1.2104E-14	0.0	0.0	0.0
SROHION	1.6115E-07	0.0	0.0	0.0
SRPO4ION	8.5480E-10	0.0	0.0	0.0
UO22OH2ION	4.6177E-28	0.0	0.0	0.0
UO23OH5ION	8.9240E-19	0.0	0.0	0.0

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UO2ION	2.4613E-27	0.0	0.0	0.0
UO2OHION	2.9397E-18	0.0	0.0	0.0
ZNH2PO4ION	1.1815E-38	0.0	0.0	0.0
ZNION	7.9950E-26	0.0	0.0	0.0
ZNNO3ION	1.4247E-32	0.0	0.0	0.0
ZNOH3ION	5.8632E-11	0.0	0.0	0.0
ZNOHION	1.1041E-20	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	7.2837E-02	0.0	0.0	0.0
Total g/hr	1.3275	0.0	0.0	0.0
Volume, L/hr	1.2049E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4885.	0.0	0.0	0.0
Density, g/L	1101.7			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 1 Sludge

TO : Second Leach

FROM : First Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.518			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	4.6311E-03	0.0	0.0	0.0
HNO3	8.2464E-28	0.0	0.0	0.0
BIOH3	3.4182E-14	0.0	0.0	0.0
BOH3	6.4215E-17	0.0	0.0	0.0
CROH3	7.7724E-12	0.0	0.0	0.0
FEIIIIOH3	8.7229E-15	1.5430E-04	0.0	0.0
ALOH3	1.3955E-17	0.0	0.0	0.0
MGHPO4	1.6234E-22	0.0	0.0	0.0
MNNO32	6.6412E-32	0.0	0.0	0.0
MNOH2	2.7343E-12	0.0	0.0	0.0
NIOH2	2.2635E-11	5.2823E-05	0.0	0.0
PBHP04	8.3470E-40	0.0	0.0	0.0
PBNO32	8.3470E-40	0.0	0.0	0.0
PBO	2.0559E-24	1.7497E-06	0.0	0.0
SIO2	2.9831E-15	0.0	0.0	0.0
SNIVOH4	3.2595E-20	0.0	0.0	0.0
SRHPO4	2.6372E-17	0.0	0.0	0.0
SRNO32	3.9193E-23	0.0	0.0	0.0
UO2OH2	1.1620E-12	1.9384E-04	0.0	0.0
ZNHPO4	9.7905E-33	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	2.8661E-16	0.0	0.0	0.0
OHION	2.5670E-04	0.0	0.0	0.0
ALOH2ION	2.8429E-26	0.0	0.0	0.0
ALOH4ION	4.4330E-09	0.0	0.0	0.0
ALOHION	3.1103E-35	0.0	0.0	0.0
BIION	8.3470E-40	0.0	0.0	0.0
BINO32ION	8.3470E-40	0.0	0.0	0.0
BINO3ION	8.3470E-40	0.0	0.0	0.0
BIOH2ION	2.7587E-23	0.0	0.0	0.0
BIOH4ION	5.7680E-12	0.0	0.0	0.0
BIOHION	1.1301E-34	0.0	0.0	0.0
BO2ION	6.9802E-11	0.0	0.0	0.0
BOH4ION	5.4343E-11	0.0	0.0	0.0
CAH2PO4ION	3.2114E-24	0.0	0.0	0.0
CAION	3.3194E-09	0.0	0.0	0.0
CAOHION	1.1776E-08	0.0	0.0	0.0
CAPO4ION	1.6859E-09	0.0	0.0	0.0
CRIIIH2PO4ION	8.3470E-40	0.0	0.0	0.0
CRIIIHPO4ION	2.3792E-33	0.0	0.0	0.0
CRIIION	2.8226E-36	0.0	0.0	0.0
CRIIINO3ION	8.3470E-40	0.0	0.0	0.0

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CROH2ION	2.5461E-20	0.0	0.0	0.0
CROH4ION	1.3149E-07	0.0	0.0	0.0
CROHION	4.7310E-26	0.0	0.0	0.0
FEIII2OH2ION	8.3470E-40	0.0	0.0	0.0
FEIIIH2PO4ION	8.3470E-40	0.0	0.0	0.0
FEIIIPHPO4ION	8.3470E-40	0.0	0.0	0.0
FEIIIIION	8.3470E-40	0.0	0.0	0.0
FEIIINO3ION	8.3470E-40	0.0	0.0	0.0
FEIIIOH2ION	1.2546E-23	0.0	0.0	0.0
FEIIIOH4ION	3.1986E-09	0.0	0.0	0.0
FEIIIOHION	3.1682E-33	0.0	0.0	0.0
H2P2O7ION	1.2336E-36	0.0	0.0	0.0
H2PO4ION	8.6340E-20	0.0	0.0	0.0
H3P2O7ION	8.3470E-40	0.0	0.0	0.0
H3SIO4ION	5.5587E-10	0.0	0.0	0.0
HION	5.3586E-19	0.0	0.0	0.0
HP2O7ION	1.2335E-27	0.0	0.0	0.0
HPBO2ION	3.3795E-20	0.0	0.0	0.0
HPO4ION	1.8559E-11	0.0	0.0	0.0
MGH2PO4ION	1.0057E-30	0.0	0.0	0.0
MGION	1.1403E-15	0.0	0.0	0.0
MGOHION	2.7502E-14	0.0	0.0	0.0
MGPO4ION	5.8465E-16	0.0	0.0	0.0
MNION	1.2293E-16	0.0	0.0	0.0
MNNO3ION	4.6985E-25	0.0	0.0	0.0
MNOH3ION	1.0301E-09	0.0	0.0	0.0
MNOH4ION	8.9336E-08	0.0	0.0	0.0
MNOHION	2.7156E-14	0.0	0.0	0.0
NAION	2.5738E-04	0.0	0.0	0.0
NDION	3.1479E-11	0.0	0.0	0.0
NIION	4.6560E-19	0.0	0.0	0.0
NINO3ION	3.8678E-27	0.0	0.0	0.0
NIOH3ION	3.3981E-07	0.0	0.0	0.0
NIOHION	3.4333E-16	0.0	0.0	0.0
NO3ION	2.5962E-11	0.0	0.0	0.0
ALION	8.3470E-40	0.0	0.0	0.0
P2O7ION	1.1146E-20	0.0	0.0	0.0
PBH2PO4ION	8.3470E-40	0.0	0.0	0.0
PBION	1.3806E-32	0.0	0.0	0.0
PBNO33ION	8.3470E-40	0.0	0.0	0.0
PBNO3ION	8.3470E-40	0.0	0.0	0.0
PBOHION	5.0611E-29	0.0	0.0	0.0
PO4ION	2.5105E-08	0.0	0.0	0.0
SNIVION	8.3470E-40	0.0	0.0	0.0
SNIVOH2ION	8.3470E-40	0.0	0.0	0.0
SNIVOH3ION	2.1209E-34	0.0	0.0	0.0
SNIVOH5ION	2.9870E-16	0.0	0.0	0.0
SNIVOH6ION	7.9863E-12	0.0	0.0	0.0
SNIVOHION	8.3470E-40	0.0	0.0	0.0
SRION	9.2487E-09	0.0	0.0	0.0
SRNO3ION	8.5515E-16	0.0	0.0	0.0
SROHION	1.1385E-08	0.0	0.0	0.0
SRPO4ION	6.0391E-11	0.0	0.0	0.0
UO22OH2ION	3.2623E-29	0.0	0.0	0.0
UO23OH5ION	6.3047E-20	0.0	0.0	0.0

UO2ION	1.7389E-28	0.0	0.0	0.0
UO2OHION	2.0768E-19	0.0	0.0	0.0
ZNH2PO4ION	8.3470E-40	0.0	0.0	0.0
ZNION	5.6484E-27	0.0	0.0	0.0
ZNNO3ION	1.0065E-33	0.0	0.0	0.0
ZNOH3ION	4.1423E-12	0.0	0.0	0.0
ZNOHION	7.8006E-22	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.8366E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0807E-05	0.0	0.0
SR3PO42	0.0	5.5289E-07	0.0	0.0
<hr/>				
Total mol/hr	5.1458E-03	4.4690E-04	0.0	0.0
Total g/hr	9.3784E-02	9.3784E-02	0.0	0.0
Volume, L/hr	8.5127E-05	1.0083E-05	0.0	0.0
Enthalpy, cal/hr	-345.1	-149.9	0.0	0.0
Density, g/L	1101.7	9301.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: 3 M NaOH
TO : Second Leach
FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.506			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.4953E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHPO4	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	3.0002E-03	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

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CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEII2OH2ION	0.0	0.0	0.0	0.0
FEIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIINO3ION	0.0	0.0	0.0	0.0
FEIIOH2ION	0.0	0.0	0.0	0.0
FEIIOH4ION	0.0	0.0	0.0	0.0
FEIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SiO4ION	0.0	0.0	0.0	0.0
HION	6.5171E-18	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	3.0002E-03	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

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UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	6.0953E-02	0.0	0.0	0.0
Total g/hr	1.1100	0.0	0.0	0.0
Volume, L/hr	1.0094E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4088.	0.0	0.0	0.0
Density, g/L	1099.7			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 2 Liquid

TO : Leach Liquids Mix

FROM : Second Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.039	25.039	25.039	25.039
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.505			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.4965E-02	0.0	0.0	0.0
HNO3	7.6107E-28	0.0	0.0	0.0
BIOH3	3.2725E-14	0.0	0.0	0.0
BOH3	6.1902E-17	0.0	0.0	0.0
CROH3	7.4616E-12	0.0	0.0	0.0
FEIIIIOH3	1.0520E-13	0.0	0.0	0.0
ALOH3	1.3384E-17	0.0	0.0	0.0
MGHPO4	2.0171E-21	0.0	0.0	0.0
MNNO32	3.8210E-34	0.0	0.0	0.0
MNOH2	2.7069E-12	0.0	0.0	0.0
NIOH2	2.7218E-10	0.0	0.0	0.0
PBHPO4	9.9068E-39	0.0	0.0	0.0
PBNO32	9.9068E-39	0.0	0.0	0.0
PBO	2.4864E-23	0.0	0.0	0.0
SIO2	2.8571E-15	0.0	0.0	0.0
SNIVOH4	3.2216E-20	0.0	0.0	0.0
SRHPO4	3.2150E-16	0.0	0.0	0.0
SRNO32	2.6879E-24	0.0	0.0	0.0
UO2OH2	1.4017E-11	0.0	0.0	0.0
ZNHPO4	9.7080E-33	0.0	0.0	0.0
ZNNO32	9.9068E-39	0.0	0.0	0.0
ZNOH2	2.7491E-16	0.0	0.0	0.0
OHION	3.0005E-03	0.0	0.0	0.0
ALOH2ION	2.7644E-26	0.0	0.0	0.0
ALOH4ION	4.0894E-09	0.0	0.0	0.0
ALOHION	3.1354E-35	0.0	0.0	0.0
BIION	9.9068E-39	0.0	0.0	0.0
BINO32ION	9.9068E-39	0.0	0.0	0.0
BINO3ION	9.9068E-39	0.0	0.0	0.0
BIOH2ION	2.6802E-23	0.0	0.0	0.0
BIOH4ION	5.3197E-12	0.0	0.0	0.0
BIOHION	1.1394E-34	0.0	0.0	0.0
BO2ION	6.4249E-11	0.0	0.0	0.0
BOH4ION	5.0271E-11	0.0	0.0	0.0
CAH2PO4ION	3.9862E-23	0.0	0.0	0.0
CAION	4.0014E-08	0.0	0.0	0.0
CAOHION	1.4091E-07	0.0	0.0	0.0
CAPO4ION	1.9672E-08	0.0	0.0	0.0
CRIIIH2PO4ION	9.9068E-39	0.0	0.0	0.0
CRIIIHPO4ION	2.4149E-33	0.0	0.0	0.0
CRIIIIION	2.9560E-36	0.0	0.0	0.0
CRIIINO3ION	9.9068E-39	0.0	0.0	0.0

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CROH2ION	2.4831E-20	0.0	0.0	0.0
CROH4ION	1.2129E-07	0.0	0.0	0.0
CROHION	4.7907E-26	0.0	0.0	0.0
FEIII2OH2ION	9.9068E-39	0.0	0.0	0.0
FEIIIH2PO4ION	9.9068E-39	0.0	0.0	0.0
FEIIIHPO4ION	9.9068E-39	0.0	0.0	0.0
FEIIIIION	9.9068E-39	0.0	0.0	0.0
FEIIINO3ION	9.9068E-39	0.0	0.0	0.0
FEIIIOH2ION	1.5357E-22	0.0	0.0	0.0
FEIIIOH4ION	3.7125E-08	0.0	0.0	0.0
FEIIIOHION	4.0217E-32	0.0	0.0	0.0
H2P2O7ION	1.4837E-35	0.0	0.0	0.0
H2PO4ION	1.0319E-18	0.0	0.0	0.0
H3P2O7ION	9.9068E-39	0.0	0.0	0.0
H3SIO4ION	5.1277E-10	0.0	0.0	0.0
HION	6.5323E-18	0.0	0.0	0.0
HP2O7ION	1.4322E-26	0.0	0.0	0.0
HPBO2ION	3.9272E-19	0.0	0.0	0.0
HPO4ION	2.1332E-10	0.0	0.0	0.0
MGH2PO4ION	1.2714E-29	0.0	0.0	0.0
MGION	1.3960E-14	0.0	0.0	0.0
MGOHION	3.3544E-13	0.0	0.0	0.0
MGPO4ION	6.9523E-15	0.0	0.0	0.0
MNION	1.2210E-16	0.0	0.0	0.0
MNNO3ION	3.5948E-26	0.0	0.0	0.0
MNOH3ION	9.7994E-10	0.0	0.0	0.0
MNOH4ION	8.2380E-08	0.0	0.0	0.0
MNOHION	2.7268E-14	0.0	0.0	0.0
NAION	3.0050E-03	0.0	0.0	0.0
NDION	2.9038E-11	0.0	0.0	0.0
NIION	5.6402E-18	0.0	0.0	0.0
NINO3ION	3.5963E-27	0.0	0.0	0.0
NIOH3ION	3.9234E-06	0.0	0.0	0.0
NIOHION	4.1898E-15	0.0	0.0	0.0
NO3ION	2.2911E-11	0.0	0.0	0.0
ALION	9.9068E-39	0.0	0.0	0.0
P2O7ION	1.2450E-19	0.0	0.0	0.0
PBH2PO4ION	9.9068E-39	0.0	0.0	0.0
PBION	1.6043E-31	0.0	0.0	0.0
PBNO33ION	9.9068E-39	0.0	0.0	0.0
PBNO3ION	9.9068E-39	0.0	0.0	0.0
PBOHION	6.2251E-28	0.0	0.0	0.0
PO4ION	2.8043E-07	0.0	0.0	0.0
SNIVION	9.9068E-39	0.0	0.0	0.0
SNIVOH2ION	9.9068E-39	0.0	0.0	0.0
SNIVOH3ION	2.1311E-34	0.0	0.0	0.0
SNIVOH5ION	2.8472E-16	0.0	0.0	0.0
SNIVOH6ION	7.3671E-12	0.0	0.0	0.0
SNIVOHION	9.9068E-39	0.0	0.0	0.0
SRION	1.1138E-07	0.0	0.0	0.0
SRNO3ION	7.7491E-16	0.0	0.0	0.0
SROHION	1.3624E-07	0.0	0.0	0.0
SRPO4ION	7.0465E-10	0.0	0.0	0.0
UO22OH2ION	4.1306E-28	0.0	0.0	0.0
UO23OH5ION	7.6829E-19	0.0	0.0	0.0

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UO2ION	2.2036E-27	0.0	0.0	0.0
UO2OHION	2.5384E-18	0.0	0.0	0.0
ZNH2PO4ION	9.9068E-39	0.0	0.0	0.0
ZNION	5.6577E-27	0.0	0.0	0.0
ZNNO3ION	7.4645E-35	0.0	0.0	0.0
ZNOH3ION	3.8211E-12	0.0	0.0	0.0
ZNOHION	7.6078E-22	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	6.0975E-02	0.0	0.0	0.0
Total g/hr	1.1109	0.0	0.0	0.0
Volume, L/hr	1.0098E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-4090.	0.0	0.0	0.0
Density, g/L	1100.1			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach 2 Sludge

TO : Leach Wash

FROM : Second Leach

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.039	25.039	25.039	25.039
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	14.505			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	4.6194E-03	0.0	0.0	0.0
HNO3	6.3962E-29	0.0	0.0	0.0
BIOH3	2.7503E-15	0.0	0.0	0.0
BOH3	5.2024E-18	0.0	0.0	0.0
CROH3	6.2709E-13	0.0	0.0	0.0
FEIIIIOH3	8.8412E-15	1.5426E-04	0.0	0.0
ALOH3	1.1248E-18	0.0	0.0	0.0
MGHPO4	1.6952E-22	0.0	0.0	0.0
MNNO32	3.2113E-35	0.0	0.0	0.0
MNOH2	2.2750E-13	0.0	0.0	0.0
NIOH2	2.2875E-11	4.8909E-05	0.0	0.0
PBHP04	8.3259E-40	0.0	0.0	0.0
PBNO32	8.3259E-40	0.0	0.0	0.0
PBO	2.0896E-24	1.7497E-06	0.0	0.0
SiO2	2.4012E-16	0.0	0.0	0.0
SNIVOH4	2.7075E-21	0.0	0.0	0.0
SRHPO4	2.7020E-17	0.0	0.0	0.0
SRNO32	2.2590E-25	0.0	0.0	0.0
UO2OH2	1.1780E-12	1.9384E-04	0.0	0.0
ZNHPO4	8.1589E-34	0.0	0.0	0.0
ZNNO32	8.3259E-40	0.0	0.0	0.0
ZNOH2	2.3104E-17	0.0	0.0	0.0
OHION	2.5217E-04	0.0	0.0	0.0
ALOH2ION	2.3233E-27	0.0	0.0	0.0
ALOH4ION	3.4368E-10	0.0	0.0	0.0
ALOHION	2.6351E-36	0.0	0.0	0.0
BIION	8.3259E-40	0.0	0.0	0.0
BINO32ION	8.3259E-40	0.0	0.0	0.0
BINO3ION	8.3259E-40	0.0	0.0	0.0
BIOH2ION	2.2525E-24	0.0	0.0	0.0
BIOH4ION	4.4708E-13	0.0	0.0	0.0
BIOHION	9.5760E-36	0.0	0.0	0.0
BO2ION	5.3997E-12	0.0	0.0	0.0
BOH4ION	4.2250E-12	0.0	0.0	0.0
CAH2PO4ION	3.3501E-24	0.0	0.0	0.0
CAION	3.3629E-09	0.0	0.0	0.0
CAOHION	1.1842E-08	0.0	0.0	0.0
CAPO4ION	1.6533E-09	0.0	0.0	0.0
CRIIH2PO4ION	8.3259E-40	0.0	0.0	0.0
CRIIHPO4ION	2.0295E-34	0.0	0.0	0.0
CRIIION	2.4843E-37	0.0	0.0	0.0
CRIIINO3ION	8.3259E-40	0.0	0.0	0.0

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CROH2ION	2.0869E-21	0.0	0.0	0.0
CROH4ION	1.0194E-08	0.0	0.0	0.0
CROHION	4.0262E-27	0.0	0.0	0.0
FEIII2OH2ION	8.3259E-40	0.0	0.0	0.0
FEIIIH2PO4ION	8.3259E-40	0.0	0.0	0.0
FEIIIHPO4ION	8.3259E-40	0.0	0.0	0.0
FEIIIIION	8.3259E-40	0.0	0.0	0.0
FEIIINO3ION	8.3259E-40	0.0	0.0	0.0
FEIIIOH2ION	1.2906E-23	0.0	0.0	0.0
FEIIIOH4ION	3.1201E-09	0.0	0.0	0.0
FEIIIOHION	3.3800E-33	0.0	0.0	0.0
H2P2O7ION	1.2469E-36	0.0	0.0	0.0
H2PO4ION	8.6721E-20	0.0	0.0	0.0
H3P2O7ION	8.3259E-40	0.0	0.0	0.0
H3SIO4ION	4.3095E-11	0.0	0.0	0.0
HION	5.4900E-19	0.0	0.0	0.0
HP2O7ION	1.2036E-27	0.0	0.0	0.0
HPBO2ION	3.3006E-20	0.0	0.0	0.0
HPO4ION	1.7928E-11	0.0	0.0	0.0
MGH2PO4ION	1.0685E-30	0.0	0.0	0.0
MGION	1.1732E-15	0.0	0.0	0.0
MGOHION	2.8192E-14	0.0	0.0	0.0
MGPO4ION	5.8429E-16	0.0	0.0	0.0
MNION	1.0262E-17	0.0	0.0	0.0
MNNO3ION	3.0212E-27	0.0	0.0	0.0
MNOH3ION	8.2357E-11	0.0	0.0	0.0
MNOH4ION	6.9234E-09	0.0	0.0	0.0
MNOHION	2.2916E-15	0.0	0.0	0.0
NAION	2.5255E-04	0.0	0.0	0.0
NDION	2.4405E-12	0.0	0.0	0.0
NIION	4.7402E-19	0.0	0.0	0.0
NINO3ION	3.0225E-28	0.0	0.0	0.0
NIOH3ION	3.2974E-07	0.0	0.0	0.0
NIOHION	3.5212E-16	0.0	0.0	0.0
NO3ION	1.9255E-12	0.0	0.0	0.0
ALION	8.3259E-40	0.0	0.0	0.0
P2O7ION	1.0463E-20	0.0	0.0	0.0
PBH2PO4ION	8.3259E-40	0.0	0.0	0.0
PBION	1.3483E-32	0.0	0.0	0.0
PBNO33ION	8.3259E-40	0.0	0.0	0.0
PBNO3ION	8.3259E-40	0.0	0.0	0.0
PBOHION	5.2317E-29	0.0	0.0	0.0
PO4ION	2.3568E-08	0.0	0.0	0.0
SNIVION	8.3259E-40	0.0	0.0	0.0
SNIVOH2ION	8.3259E-40	0.0	0.0	0.0
SNIVOH3ION	1.7911E-35	0.0	0.0	0.0
SNIVOH5ION	2.3929E-17	0.0	0.0	0.0
SNIVOH6ION	6.1915E-13	0.0	0.0	0.0
SNIVOHION	8.3259E-40	0.0	0.0	0.0
SRION	9.3606E-09	0.0	0.0	0.0
SRNO3ION	6.5126E-17	0.0	0.0	0.0
SROHION	1.1450E-08	0.0	0.0	0.0
SRPO4ION	5.9221E-11	0.0	0.0	0.0
UO22OH2ION	3.4715E-29	0.0	0.0	0.0
UO23OH5ION	6.4569E-20	0.0	0.0	0.0

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UO2ION	1.8520E-28	0.0	0.0	0.0
UO2OHION	2.1334E-19	0.0	0.0	0.0
ZNH2PO4ION	8.3259E-40	0.0	0.0	0.0
ZNION	4.7549E-28	0.0	0.0	0.0
ZNNO3ION	6.2734E-36	0.0	0.0	0.0
ZNOH3ION	3.2114E-13	0.0	0.0	0.0
ZNOHION	6.3938E-23	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.8366E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0740E-05	0.0	0.0
SR3PO42	0.0	4.7006E-07	0.0	0.0
<hr/>				
Total mol/hr	5.1245E-03	4.4280E-04	0.0	0.0
Total g/hr	9.3359E-02	9.3359E-02	0.0	0.0
Volume, L/hr	8.4866E-05	9.9879E-06	0.0	0.0
Enthalpy, cal/hr	-343.8	-149.3	0.0	0.0
Density, g/L	1100.1	9347.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Water

TO : Leach Wash

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27754	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	5.0374E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SIO4ION	0.0	0.0	0.0	0.0
HION	5.0374E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

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UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27754	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0158E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8960E+04	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Liq.
TO : Leach Liquids Mix
FROM : Leach Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.049	25.049	25.049	25.049
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.606			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.27699	0.0	0.0	0.0
HNO3	1.5808E-26	0.0	0.0	0.0
BIOH3	2.7862E-13	0.0	0.0	0.0
BOH3	1.6248E-15	0.0	0.0	0.0
CROH3	1.6833E-10	0.0	0.0	0.0
FEIIIIOH3	1.2392E-12	0.0	0.0	0.0
ALOH3	2.6838E-16	0.0	0.0	0.0
MGHPO4	1.0076E-14	0.0	0.0	0.0
MNNO32	1.5045E-31	0.0	0.0	0.0
MNOH2	4.4217E-10	0.0	0.0	0.0
NIOH2	3.2038E-09	0.0	0.0	0.0
PBHP04	1.8896E-33	0.0	0.0	0.0
PBNO32	4.9924E-38	0.0	0.0	0.0
PBO	2.9310E-22	0.0	0.0	0.0
SIO2	5.7667E-14	0.0	0.0	0.0
SNIVOH4	2.5210E-16	0.0	0.0	0.0
SRHP04	3.0957E-13	0.0	0.0	0.0
SRNO32	1.4702E-26	0.0	0.0	0.0
UO2OH2	1.6513E-10	0.0	0.0	0.0
ZNHPO4	9.2671E-26	0.0	0.0	0.0
ZNNO32	4.9924E-38	0.0	0.0	0.0
ZNOH2	6.1829E-15	0.0	0.0	0.0
OHION	2.4773E-04	0.0	0.0	0.0
ALOH2ION	1.5002E-23	0.0	0.0	0.0
ALOH4ION	3.3738E-10	0.0	0.0	0.0
ALOHION	1.4191E-30	0.0	0.0	0.0
BIION	4.9924E-38	0.0	0.0	0.0
BINO32ION	4.9924E-38	0.0	0.0	0.0
BINO3ION	4.9924E-38	0.0	0.0	0.0
BIOH2ION	6.1771E-21	0.0	0.0	0.0
BIOH4ION	1.6297E-13	0.0	0.0	0.0
BIOHION	2.1901E-30	0.0	0.0	0.0
BO2ION	4.7035E-12	0.0	0.0	0.0
BOH4ION	4.7431E-12	0.0	0.0	0.0
CAH2PO4ION	1.1801E-18	0.0	0.0	0.0
CAION	2.3432E-08	0.0	0.0	0.0
CAOHION	8.6544E-09	0.0	0.0	0.0
CAPO4ION	5.9979E-08	0.0	0.0	0.0
CRIIH2PO4ION	6.0200E-37	0.0	0.0	0.0
CRIIHPO4ION	6.2732E-25	0.0	0.0	0.0
CRIIION	1.4461E-29	0.0	0.0	0.0
CRIIINO3ION	3.6471E-37	0.0	0.0	0.0

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CROH2ION	1.5170E-17	0.0	0.0	0.0
CROH4ION	9.8393E-09	0.0	0.0	0.0
CROHION	2.4410E-21	0.0	0.0	0.0
FEIII2OH2ION	4.9924E-38	0.0	0.0	0.0
FEIIIH2PO4ION	4.9924E-38	0.0	0.0	0.0
FEIIIHPO4ION	7.4877E-36	0.0	0.0	0.0
FEIIIIION	1.0384E-37	0.0	0.0	0.0
FEIIINO3ION	4.9924E-38	0.0	0.0	0.0
FEIIIOH2ION	4.8981E-20	0.0	0.0	0.0
FEIIIOH4ION	1.5732E-09	0.0	0.0	0.0
FEIIIOHION	1.0695E-27	0.0	0.0	0.0
H2P2O7ION	3.5205E-28	0.0	0.0	0.0
H2PO4ION	1.6032E-14	0.0	0.0	0.0
H3P2O7ION	4.9924E-38	0.0	0.0	0.0
H3SIO4ION	4.2248E-11	0.0	0.0	0.0
HION	1.5333E-15	0.0	0.0	0.0
HP2O7ION	9.2865E-22	0.0	0.0	0.0
HPBO2ION	1.6647E-20	0.0	0.0	0.0
HPO4ION	7.5913E-09	0.0	0.0	0.0
MGH2PO4ION	1.9522E-21	0.0	0.0	0.0
MGION	3.0766E-11	0.0	0.0	0.0
MGOHION	1.0689E-10	0.0	0.0	0.0
MGPO4ION	1.0996E-10	0.0	0.0	0.0
MNION	1.0386E-12	0.0	0.0	0.0
MNNO3ION	2.4673E-22	0.0	0.0	0.0
MNOH3ION	5.7559E-10	0.0	0.0	0.0
MNOH4ION	1.3988E-10	0.0	0.0	0.0
MNOHION	1.2058E-10	0.0	0.0	0.0
NAION	2.4792E-04	0.0	0.0	0.0
NDION	2.3957E-12	0.0	0.0	0.0
NIION	4.6759E-15	0.0	0.0	0.0
NINO3ION	1.7789E-24	0.0	0.0	0.0
NIOH3ION	1.6603E-07	0.0	0.0	0.0
NIOHION	1.3360E-12	0.0	0.0	0.0
NO3ION	1.6002E-12	0.0	0.0	0.0
ALION	8.8501E-38	0.0	0.0	0.0
P2O7ION	7.5896E-18	0.0	0.0	0.0
PBH2PO4ION	4.9924E-38	0.0	0.0	0.0
PBION	4.7862E-30	0.0	0.0	0.0
PBNO33ION	4.9924E-38	0.0	0.0	0.0
PBNO3ION	4.9924E-38	0.0	0.0	0.0
PBOHION	2.2555E-25	0.0	0.0	0.0
PO4ION	3.9324E-08	0.0	0.0	0.0
SNIVION	4.9924E-38	0.0	0.0	0.0
SNIVOH2ION	4.9924E-38	0.0	0.0	0.0
SNIVOH3ION	4.5165E-29	0.0	0.0	0.0
SNIVOH5ION	8.0193E-15	0.0	0.0	0.0
SNIVOH6ION	5.9956E-13	0.0	0.0	0.0
SNIVOHION	4.9924E-38	0.0	0.0	0.0
SRION	6.0933E-08	0.0	0.0	0.0
SRNO3ION	4.7868E-17	0.0	0.0	0.0
SROHION	8.3682E-09	0.0	0.0	0.0
SRPO4ION	2.1485E-09	0.0	0.0	0.0
UO22OH2ION	1.0972E-23	0.0	0.0	0.0
UO23OH5ION	2.4476E-16	0.0	0.0	0.0

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UO2ION	5.8573E-23	0.0	0.0	0.0
UO2OHION	8.0932E-16	0.0	0.0	0.0
ZNH2PO4ION	9.3321E-33	0.0	0.0	0.0
ZNION	1.6786E-22	0.0	0.0	0.0
ZNNO3ION	7.0547E-32	0.0	0.0	0.0
ZNOH3ION	3.0909E-13	0.0	0.0	0.0
ZNOHION	4.6351E-19	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.27748	0.0	0.0	0.0
Total g/hr	5.0000	0.0	0.0	0.0
Volume, L/hr	5.0048E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-1.8950E+04	0.0	0.0	0.0
Density, g/L	999.03			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Wash Slud.

TO : Final Wash

FROM : Leach Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.049	25.049	25.049	25.049
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	12.606			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.1718E-03	0.0	0.0	0.0
HNO3	2.9516E-28	0.0	0.0	0.0
BIOH3	5.2022E-15	0.0	0.0	0.0
BOH3	3.0338E-17	0.0	0.0	0.0
CROH3	3.1430E-12	0.0	0.0	0.0
FEIIIIOH3	2.3138E-14	1.5426E-04	0.0	0.0
ALOH3	5.0110E-18	0.0	0.0	0.0
MGHPO4	1.8814E-16	0.0	0.0	0.0
MNNO32	2.8092E-33	0.0	0.0	0.0
MNOH2	8.2560E-12	5.7029E-09	0.0	0.0
NIOH2	5.9820E-11	4.9066E-05	0.0	0.0
PBHP04	3.5281E-35	0.0	0.0	0.0
PBNO32	9.3216E-40	0.0	0.0	0.0
PBO	5.4728E-24	1.7497E-06	0.0	0.0
SIO2	1.0767E-15	0.0	0.0	0.0
SNIVOH4	4.7071E-18	0.0	0.0	0.0
SRHPO4	5.7802E-15	0.0	0.0	0.0
SRNO32	2.7451E-28	0.0	0.0	0.0
UO2OH2	3.0832E-12	1.9384E-04	0.0	0.0
ZNHPO4	1.7303E-27	0.0	0.0	0.0
ZNNO32	9.3216E-40	0.0	0.0	0.0
ZNOH2	1.1545E-16	0.0	0.0	0.0
OHION	4.6256E-06	0.0	0.0	0.0
ALOH2ION	2.8012E-25	0.0	0.0	0.0
ALOH4ION	6.2995E-12	0.0	0.0	0.0
ALOHION	2.6496E-32	0.0	0.0	0.0
BIION	9.3216E-40	0.0	0.0	0.0
BINO32ION	9.3216E-40	0.0	0.0	0.0
BINO3ION	9.3216E-40	0.0	0.0	0.0
BIOH2ION	1.1534E-22	0.0	0.0	0.0
BIOH4ION	3.0429E-15	0.0	0.0	0.0
BIOHION	4.0893E-32	0.0	0.0	0.0
BO2ION	8.7822E-14	0.0	0.0	0.0
BOH4ION	8.8562E-14	0.0	0.0	0.0
CAH2PO4ION	2.2034E-20	0.0	0.0	0.0
CAION	4.3751E-10	0.0	0.0	0.0
CAOHION	1.6159E-10	0.0	0.0	0.0
CAPO4ION	1.1199E-09	0.0	0.0	0.0
CRIIH2PO4ION	1.1240E-38	0.0	0.0	0.0
CRIIHPO4ION	1.1713E-26	0.0	0.0	0.0
CRIIION	2.7001E-31	0.0	0.0	0.0
CRIIINO3ION	6.8098E-39	0.0	0.0	0.0

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CROH2ION	2.8325E-19	0.0	0.0	0.0
CROH4ION	1.8372E-10	0.0	0.0	0.0
CROHION	4.5577E-23	0.0	0.0	0.0
FEIII2OH2ION	9.3216E-40	0.0	0.0	0.0
FEIIIH2PO4ION	9.3216E-40	0.0	0.0	0.0
FEIIIHPO4ION	1.3981E-37	0.0	0.0	0.0
FEIIIIION	1.9389E-39	0.0	0.0	0.0
FEIIINO3ION	9.3216E-40	0.0	0.0	0.0
FEIIIOH2ION	9.1455E-22	0.0	0.0	0.0
FEIIIOH4ION	2.9374E-11	0.0	0.0	0.0
FEIIIOHION	1.9970E-29	0.0	0.0	0.0
H2P2O7ION	6.5734E-30	0.0	0.0	0.0
H2PO4ION	2.9935E-16	0.0	0.0	0.0
H3P2O7ION	9.3216E-40	0.0	0.0	0.0
H3SIO4ION	7.8883E-13	0.0	0.0	0.0
HION	2.8629E-17	0.0	0.0	0.0
HP2O7ION	1.7340E-23	0.0	0.0	0.0
HPBO2ION	3.1083E-22	0.0	0.0	0.0
HPO4ION	1.4174E-10	0.0	0.0	0.0
MGH2PO4ION	3.6451E-23	0.0	0.0	0.0
MGION	5.7444E-13	0.0	0.0	0.0
MGOHION	1.9958E-12	0.0	0.0	0.0
MGPO4ION	2.0531E-12	0.0	0.0	0.0
MNION	1.9392E-14	0.0	0.0	0.0
MNNO3ION	4.6069E-24	0.0	0.0	0.0
MNOH3ION	1.0747E-11	0.0	0.0	0.0
MNOH4ION	2.6117E-12	0.0	0.0	0.0
MNOHION	2.2514E-12	0.0	0.0	0.0
NAION	4.6291E-06	0.0	0.0	0.0
NDION	4.4732E-14	0.0	0.0	0.0
NIION	8.7307E-17	0.0	0.0	0.0
NINO3ION	3.3215E-26	0.0	0.0	0.0
NIOH3ION	3.1000E-09	0.0	0.0	0.0
NIOHION	2.4946E-14	0.0	0.0	0.0
NO3ION	2.9878E-14	0.0	0.0	0.0
ALION	1.6525E-39	0.0	0.0	0.0
P2O7ION	1.4171E-19	0.0	0.0	0.0
PBH2PO4ION	9.3216E-40	0.0	0.0	0.0
PBION	8.9366E-32	0.0	0.0	0.0
PBNO33ION	9.3216E-40	0.0	0.0	0.0
PBNO3ION	9.3216E-40	0.0	0.0	0.0
PBOHION	4.2113E-27	0.0	0.0	0.0
PO4ION	7.3425E-10	0.0	0.0	0.0
SNIVION	9.3216E-40	0.0	0.0	0.0
SNIVOH2ION	9.3216E-40	0.0	0.0	0.0
SNIVOH3ION	8.4331E-31	0.0	0.0	0.0
SNIVOH5ION	1.4974E-16	0.0	0.0	0.0
SNIVOH6ION	1.1195E-14	0.0	0.0	0.0
SNIVOHION	9.3216E-40	0.0	0.0	0.0
SRION	1.1377E-09	0.0	0.0	0.0
SRNO3ION	8.9377E-19	0.0	0.0	0.0
SROHION	1.5625E-10	0.0	0.0	0.0
SRPO4ION	4.0116E-11	0.0	0.0	0.0
UO22OH2ION	2.0487E-25	0.0	0.0	0.0
UO23OH5ION	4.5701E-18	0.0	0.0	0.0

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UO2ION	1.0937E-24	0.0	0.0	0.0
UO2OHION	1.5111E-17	0.0	0.0	0.0
ZNH2PO4ION	1.7425E-34	0.0	0.0	0.0
ZNION	3.1343E-24	0.0	0.0	0.0
ZNNO3ION	1.3172E-33	0.0	0.0	0.0
ZNOH3ION	5.7713E-15	0.0	0.0	0.0
ZNOHION	8.6544E-21	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.8364E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0714E-05	0.0	0.0
SR3PO42	0.0	4.5275E-07	0.0	0.0
<hr/>				
Total mol/hr	5.1811E-03	4.4292E-04	0.0	0.0
Total g/hr	9.3359E-02	9.3359E-02	0.0	0.0
Volume, L/hr	9.3449E-05	9.9891E-06	0.0	0.0
Enthalpy, cal/hr	-353.8	-149.3	0.0	0.0
Density, g/L	999.03	9346.0		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Water

TO : Final Wash

FROM :

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	6.9969			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5508E-02	0.0	0.0	0.0
HNO3	0.0	0.0	0.0	0.0
BIOH3	0.0	0.0	0.0	0.0
BOH3	0.0	0.0	0.0	0.0
CROH3	0.0	0.0	0.0	0.0
FEIIIIOH3	0.0	0.0	0.0	0.0
ALOH3	0.0	0.0	0.0	0.0
MGHPO4	0.0	0.0	0.0	0.0
MNNO32	0.0	0.0	0.0	0.0
MNOH2	0.0	0.0	0.0	0.0
NIOH2	0.0	0.0	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	0.0	0.0	0.0	0.0
SNIVOH4	0.0	0.0	0.0	0.0
SRHPO4	0.0	0.0	0.0	0.0
SRNO32	0.0	0.0	0.0	0.0
UO2OH2	0.0	0.0	0.0	0.0
ZNHPO4	0.0	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	0.0	0.0	0.0	0.0
OHION	1.0075E-10	0.0	0.0	0.0
ALOH2ION	0.0	0.0	0.0	0.0
ALOH4ION	0.0	0.0	0.0	0.0
ALOHION	0.0	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	0.0	0.0	0.0	0.0
BINO3ION	0.0	0.0	0.0	0.0
BIOH2ION	0.0	0.0	0.0	0.0
BIOH4ION	0.0	0.0	0.0	0.0
BIOHION	0.0	0.0	0.0	0.0
BO2ION	0.0	0.0	0.0	0.0
BOH4ION	0.0	0.0	0.0	0.0
CAH2PO4ION	0.0	0.0	0.0	0.0
CAION	0.0	0.0	0.0	0.0
CAOHION	0.0	0.0	0.0	0.0
CAPO4ION	0.0	0.0	0.0	0.0
CRIIH2PO4ION	0.0	0.0	0.0	0.0
CRIIHPO4ION	0.0	0.0	0.0	0.0
CRIIION	0.0	0.0	0.0	0.0
CRIIINO3ION	0.0	0.0	0.0	0.0

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CROH2ION	0.0	0.0	0.0	0.0
CROH4ION	0.0	0.0	0.0	0.0
CROHION	0.0	0.0	0.0	0.0
FEIII2OH2ION	0.0	0.0	0.0	0.0
FEIIIH2PO4ION	0.0	0.0	0.0	0.0
FEIIIHPO4ION	0.0	0.0	0.0	0.0
FEIIIIION	0.0	0.0	0.0	0.0
FEIIINO3ION	0.0	0.0	0.0	0.0
FEIIIOH2ION	0.0	0.0	0.0	0.0
FEIIIOH4ION	0.0	0.0	0.0	0.0
FEIIIOHION	0.0	0.0	0.0	0.0
H2P2O7ION	0.0	0.0	0.0	0.0
H2PO4ION	0.0	0.0	0.0	0.0
H3P2O7ION	0.0	0.0	0.0	0.0
H3SiO4ION	0.0	0.0	0.0	0.0
HION	1.0075E-10	0.0	0.0	0.0
HP2O7ION	0.0	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	0.0	0.0	0.0	0.0
MGH2PO4ION	0.0	0.0	0.0	0.0
MGION	0.0	0.0	0.0	0.0
MGOHION	0.0	0.0	0.0	0.0
MGPO4ION	0.0	0.0	0.0	0.0
MNION	0.0	0.0	0.0	0.0
MNNO3ION	0.0	0.0	0.0	0.0
MNOH3ION	0.0	0.0	0.0	0.0
MNOH4ION	0.0	0.0	0.0	0.0
MNOHION	0.0	0.0	0.0	0.0
NAION	0.0	0.0	0.0	0.0
NDION	0.0	0.0	0.0	0.0
NIION	0.0	0.0	0.0	0.0
NINO3ION	0.0	0.0	0.0	0.0
NIOH3ION	0.0	0.0	0.0	0.0
NIOHION	0.0	0.0	0.0	0.0
NO3ION	0.0	0.0	0.0	0.0
ALION	0.0	0.0	0.0	0.0
P2O7ION	0.0	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	0.0	0.0	0.0	0.0
SNIVION	0.0	0.0	0.0	0.0
SNIVOH2ION	0.0	0.0	0.0	0.0
SNIVOH3ION	0.0	0.0	0.0	0.0
SNIVOH5ION	0.0	0.0	0.0	0.0
SNIVOH6ION	0.0	0.0	0.0	0.0
SNIVOHION	0.0	0.0	0.0	0.0
SRION	0.0	0.0	0.0	0.0
SRNO3ION	0.0	0.0	0.0	0.0
SROHION	0.0	0.0	0.0	0.0
SRPO4ION	0.0	0.0	0.0	0.0
UO22OH2ION	0.0	0.0	0.0	0.0
UO23OH5ION	0.0	0.0	0.0	0.0

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UO2ION	0.0	0.0	0.0	0.0
UO2OHION	0.0	0.0	0.0	0.0
ZNH2PO4ION	0.0	0.0	0.0	0.0
ZNION	0.0	0.0	0.0	0.0
ZNNO3ION	0.0	0.0	0.0	0.0
ZNOH3ION	0.0	0.0	0.0	0.0
ZNOHION	0.0	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	5.5508E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0032E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	996.85			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Liq.
TO : Leach Liquids Mix
FROM : Final Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.005	25.005	25.005	25.005
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.591			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.5499E-02	0.0	0.0	0.0
HNO3	3.2405E-27	0.0	0.0	0.0
BIOH3	7.1946E-15	0.0	0.0	0.0
BOH3	3.3530E-16	0.0	0.0	0.0
CROH3	2.9324E-11	0.0	0.0	0.0
FEIIIIOH3	2.5085E-13	0.0	0.0	0.0
ALOH3	5.4963E-17	0.0	0.0	0.0
MGHPO4	1.2263E-12	0.0	0.0	0.0
MNNO32	3.1297E-32	0.0	0.0	0.0
MNOH2	8.9697E-11	0.0	0.0	0.0
NIOH2	6.5067E-10	0.0	0.0	0.0
PBHP04	2.2875E-31	0.0	0.0	0.0
PBNO32	1.0003E-38	0.0	0.0	0.0
PBO	5.9146E-23	0.0	0.0	0.0
SIO2	1.1725E-14	0.0	0.0	0.0
SNIVOH4	6.5048E-16	0.0	0.0	0.0
SRHPO4	5.2992E-13	0.0	0.0	0.0
SRNO32	4.3057E-29	0.0	0.0	0.0
UO2OH2	3.3418E-11	0.0	0.0	0.0
ZNHPO4	9.4288E-24	0.0	0.0	0.0
ZNNO32	1.0003E-38	0.0	0.0	0.0
ZNOH2	1.0504E-15	0.0	0.0	0.0
OHION	4.2387E-06	0.0	0.0	0.0
ALOH2ION	2.7705E-23	0.0	0.0	0.0
ALOH4ION	5.7616E-12	0.0	0.0	0.0
ALOHION	1.9073E-29	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	1.0003E-38	0.0	0.0	0.0
BINO3ION	1.0003E-38	0.0	0.0	0.0
BIOH2ION	1.4369E-21	0.0	0.0	0.0
BIOH4ION	3.4661E-16	0.0	0.0	0.0
BIOHION	3.7030E-30	0.0	0.0	0.0
BO2ION	8.0046E-14	0.0	0.0	0.0
BOH4ION	8.0970E-14	0.0	0.0	0.0
CAH2PO4ION	1.8208E-17	0.0	0.0	0.0
CAION	4.1149E-09	0.0	0.0	0.0
CAOHION	2.2288E-10	0.0	0.0	0.0
CAPO4ION	8.4807E-09	0.0	0.0	0.0
CRIIH2PO4ION	4.1201E-33	0.0	0.0	0.0
CRIIHPO4ION	5.8459E-22	0.0	0.0	0.0
CRIIION	9.5715E-28	0.0	0.0	0.0
CRIIINO3ION	4.2025E-36	0.0	0.0	0.0

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CROH2ION	2.3784E-17	0.0	0.0	0.0
CROH4ION	1.4158E-10	0.0	0.0	0.0
CROHION	2.7829E-20	0.0	0.0	0.0
FEIII2OH2ION	1.0003E-38	0.0	0.0	0.0
FEIIIH2PO4ION	1.0003E-38	0.0	0.0	0.0
FEIIIHPO4ION	8.1868E-33	0.0	0.0	0.0
FEIIIIION	7.9906E-36	0.0	0.0	0.0
FEIIINO3ION	1.0003E-38	0.0	0.0	0.0
FEIIIOH2ION	8.9305E-20	0.0	0.0	0.0
FEIIIOH4ION	2.6258E-11	0.0	0.0	0.0
FEIIIOHION	1.4184E-26	0.0	0.0	0.0
H2P2O7ION	1.3527E-25	0.0	0.0	0.0
H2PO4ION	1.6063E-13	0.0	0.0	0.0
H3P2O7ION	6.1898E-35	0.0	0.0	0.0
H3SIO4ION	7.1074E-13	0.0	0.0	0.0
HION	2.7593E-15	0.0	0.0	0.0
HP2O7ION	1.8028E-20	0.0	0.0	0.0
HPBO2ION	2.7747E-22	0.0	0.0	0.0
HPO4ION	4.8428E-09	0.0	0.0	0.0
MGH2PO4ION	2.1433E-18	0.0	0.0	0.0
MGION	3.8010E-10	0.0	0.0	0.0
MGOHION	1.9567E-10	0.0	0.0	0.0
MGPO4ION	1.1055E-09	0.0	0.0	0.0
MNION	1.2304E-11	0.0	0.0	0.0
MNNO3ION	4.5709E-22	0.0	0.0	0.0
MNOH3ION	9.6441E-12	0.0	0.0	0.0
MNOH4ION	1.4758E-13	0.0	0.0	0.0
MNOHION	2.2048E-10	0.0	0.0	0.0
NAION	4.2339E-06	0.0	0.0	0.0
NDION	4.0913E-14	0.0	0.0	0.0
NIION	5.5930E-14	0.0	0.0	0.0
NINO3ION	3.2975E-24	0.0	0.0	0.0
NIOH3ION	2.7876E-09	0.0	0.0	0.0
NIOHION	2.4443E-12	0.0	0.0	0.0
NO3ION	2.7326E-14	0.0	0.0	0.0
ALION	6.9063E-36	0.0	0.0	0.0
P2O7ION	5.5498E-18	0.0	0.0	0.0
PBH2PO4ION	2.5428E-37	0.0	0.0	0.0
PBION	5.1636E-29	0.0	0.0	0.0
PBNO33ION	1.0003E-38	0.0	0.0	0.0
PBNO3ION	2.0778E-38	0.0	0.0	0.0
PBOHION	4.1076E-25	0.0	0.0	0.0
PO4ION	1.2796E-09	0.0	0.0	0.0
SNIVION	1.0003E-38	0.0	0.0	0.0
SNIVOH2ION	1.0003E-38	0.0	0.0	0.0
SNIVOH3ION	1.0476E-27	0.0	0.0	0.0
SNIVOH5ION	1.7021E-15	0.0	0.0	0.0
SNIVOH6ION	8.0279E-15	0.0	0.0	0.0
SNIVOHION	1.0003E-38	0.0	0.0	0.0
SRION	1.0680E-08	0.0	0.0	0.0
SRNO3ION	1.2299E-18	0.0	0.0	0.0
SROHION	2.1547E-10	0.0	0.0	0.0
SRPO4ION	3.0381E-10	0.0	0.0	0.0
UO22OH2ION	1.4594E-22	0.0	0.0	0.0
UO23OH5ION	4.4850E-16	0.0	0.0	0.0

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UO2ION	7.7832E-22	0.0	0.0	0.0
UO2OHION	1.4780E-15	0.0	0.0	0.0
ZNH2PO4ION	8.5609E-30	0.0	0.0	0.0
ZNION	1.8404E-21	0.0	0.0	0.0
ZNNO3ION	1.0940E-31	0.0	0.0	0.0
ZNOH3ION	4.3330E-15	0.0	0.0	0.0
ZNOHION	7.0776E-19	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SIO4	0.0	0.0	0.0	0.0
MGOH2	0.0	0.0	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	5.5507E-02	0.0	0.0	0.0
Total g/hr	1.0000	0.0	0.0	0.0
Volume, L/hr	1.0030E-03	0.0	0.0	0.0
Enthalpy, cal/hr	-3792.	0.0	0.0	0.0
Density, g/L	997.04			
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	0.0	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Final Wash Slud.

TO :

FROM : Final Wash

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.005	25.005	25.005	25.005
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	11.591			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	5.1811E-03	0.0	0.0	0.0
HNO3	3.0251E-28	0.0	0.0	0.0
BIOH3	6.7165E-16	0.0	0.0	0.0
BOH3	3.1302E-17	0.0	0.0	0.0
CROH3	2.7375E-12	0.0	0.0	0.0
FEIIIOH3	2.3418E-14	1.5426E-04	0.0	0.0
ALOH3	5.1311E-18	0.0	0.0	0.0
MGHPO4	1.1448E-13	0.0	0.0	0.0
MNNO32	2.9217E-33	0.0	0.0	0.0
MNOH2	8.3736E-12	5.3635E-09	0.0	0.0
NIOH2	6.0744E-11	4.9066E-05	0.0	0.0
PBHPO4	2.1355E-32	0.0	0.0	0.0
PBNO32	9.3383E-40	0.0	0.0	0.0
PBO	5.5216E-24	1.7497E-06	0.0	0.0
SIO2	1.0946E-15	0.0	0.0	0.0
SNIVOH4	6.0725E-17	0.0	0.0	0.0
SRHPO4	4.9471E-14	0.0	0.0	0.0
SRNO32	4.0196E-30	0.0	0.0	0.0
UO2OH2	3.1197E-12	1.9384E-04	0.0	0.0
ZNHPO4	8.8022E-25	0.0	0.0	0.0
ZNNO32	9.3383E-40	0.0	0.0	0.0
ZNOH2	9.8056E-17	0.0	0.0	0.0
OHION	3.9570E-07	0.0	0.0	0.0
ALOH2ION	2.5864E-24	0.0	0.0	0.0
ALOH4ION	5.3787E-13	0.0	0.0	0.0
ALOHION	1.7805E-30	0.0	0.0	0.0
BIION	0.0	0.0	0.0	0.0
BINO32ION	9.3383E-40	0.0	0.0	0.0
BINO3ION	9.3383E-40	0.0	0.0	0.0
BIOH2ION	1.3414E-22	0.0	0.0	0.0
BIOH4ION	3.2357E-17	0.0	0.0	0.0
BIOHION	3.4570E-31	0.0	0.0	0.0
BO2ION	7.4727E-15	0.0	0.0	0.0
BOH4ION	7.5589E-15	0.0	0.0	0.0
CAH2PO4ION	1.6998E-18	0.0	0.0	0.0
CAION	3.8415E-10	0.0	0.0	0.0
CAOHION	2.0807E-11	0.0	0.0	0.0
CAPO4ION	7.9171E-10	0.0	0.0	0.0
CRIIH2PO4ION	3.8463E-34	0.0	0.0	0.0
CRIIHPO4ION	5.4574E-23	0.0	0.0	0.0
CRIIION	8.9355E-29	0.0	0.0	0.0
CRIIINO3ION	3.9233E-37	0.0	0.0	0.0

CROH2ION	2.2204E-18	0.0	0.0	0.0
CROH4ION	1.3217E-11	0.0	0.0	0.0
CROHION	2.5979E-21	0.0	0.0	0.0
FEIII2OH2ION	9.3383E-40	0.0	0.0	0.0
FEIIIH2PO4ION	9.3383E-40	0.0	0.0	0.0
FEIIIHPO4ION	7.6428E-34	0.0	0.0	0.0
FEIIIIION	7.4596E-37	0.0	0.0	0.0
FEIIINO3ION	9.3383E-40	0.0	0.0	0.0
FEIIIOH2ION	8.3371E-21	0.0	0.0	0.0
FEIIIOH4ION	2.4513E-12	0.0	0.0	0.0
FEIIIOHION	1.3242E-27	0.0	0.0	0.0
H2P2O7ION	1.2628E-26	0.0	0.0	0.0
H2PO4ION	1.4995E-14	0.0	0.0	0.0
H3P2O7ION	5.7784E-36	0.0	0.0	0.0
H3SiO4ION	6.6351E-14	0.0	0.0	0.0
HION	2.5760E-16	0.0	0.0	0.0
HP2O7ION	1.6830E-21	0.0	0.0	0.0
HPBO2ION	2.5904E-23	0.0	0.0	0.0
HPO4ION	4.5210E-10	0.0	0.0	0.0
MGH2PO4ION	2.0009E-19	0.0	0.0	0.0
MGION	3.5484E-11	0.0	0.0	0.0
MGOHION	1.8266E-11	0.0	0.0	0.0
MGPO4ION	1.0321E-10	0.0	0.0	0.0
MNION	1.1486E-12	0.0	0.0	0.0
MNNO3ION	4.2672E-23	0.0	0.0	0.0
MNOH3ION	9.0032E-13	0.0	0.0	0.0
MNOH4ION	1.3777E-14	0.0	0.0	0.0
MNOHION	2.0583E-11	0.0	0.0	0.0
NAION	3.9525E-07	0.0	0.0	0.0
NDION	3.8194E-15	0.0	0.0	0.0
NIION	5.2213E-15	0.0	0.0	0.0
NINO3ION	3.0784E-25	0.0	0.0	0.0
NIOH3ION	2.6024E-10	0.0	0.0	0.0
NIOHION	2.2818E-13	0.0	0.0	0.0
NO3ION	2.5510E-15	0.0	0.0	0.0
ALION	6.4474E-37	0.0	0.0	0.0
P2O7ION	5.1810E-19	0.0	0.0	0.0
PBH2PO4ION	2.3738E-38	0.0	0.0	0.0
PBION	4.8205E-30	0.0	0.0	0.0
PBNO33ION	9.3383E-40	0.0	0.0	0.0
PBNO3ION	1.9397E-39	0.0	0.0	0.0
PBOHION	3.8347E-26	0.0	0.0	0.0
PO4ION	1.1946E-10	0.0	0.0	0.0
SNIVION	9.3383E-40	0.0	0.0	0.0
SNIVOH2ION	9.3383E-40	0.0	0.0	0.0
SNIVOH3ION	9.7802E-29	0.0	0.0	0.0
SNIVOH5ION	1.5890E-16	0.0	0.0	0.0
SNIVOH6ION	7.4944E-16	0.0	0.0	0.0
SNIVOHION	9.3383E-40	0.0	0.0	0.0
SRION	9.9699E-10	0.0	0.0	0.0
SRNO3ION	1.1481E-19	0.0	0.0	0.0
SROHION	2.0115E-11	0.0	0.0	0.0
SRPO4ION	2.8362E-11	0.0	0.0	0.0
UO22OH2ION	1.3624E-23	0.0	0.0	0.0
UO23OH5ION	4.1869E-17	0.0	0.0	0.0

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UO2ION	7.2660E-23	0.0	0.0	0.0
UO2OHION	1.3798E-16	0.0	0.0	0.0
ZNH2PO4ION	7.9920E-31	0.0	0.0	0.0
ZNION	1.7181E-22	0.0	0.0	0.0
ZNNO3ION	1.0213E-32	0.0	0.0	0.0
ZNOH3ION	4.0451E-16	0.0	0.0	0.0
ZNOHION	6.6073E-20	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	2.8345E-06	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	4.0710E-05	0.0	0.0
SR3PO42	0.0	4.4911E-07	0.0	0.0
<hr/>				
Total mol/hr	5.1819E-03	4.4291E-04	0.0	0.0
Total g/hr	9.3355E-02	9.3355E-02	0.0	0.0
Volume, L/hr	9.3633E-05	9.9886E-06	0.0	0.0
Enthalpy, cal/hr	-354.0	-149.3	0.0	0.0
Density, g/L	997.04	9346.2		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0

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STREAM: Leach Liquids

TO :

FROM : Leach Liquids Mix

Phases----->	Aqueous	Solid	Vapor	Organic
Temperature, C	25.000	25.000	25.000	25.000
Pressure, atm	1.0000	1.0000	1.0000	1.0000
pH	13.791			
-----	mol/hr-----	mol/hr-----	mol/hr-----	mol/hr-----
H2O	0.45300	0.0	0.0	0.0
HNO3	1.3923E-25	0.0	0.0	0.0
BIOH3	5.3554E-12	0.0	0.0	0.0
BOH3	1.1877E-14	0.0	0.0	0.0
CROH3	1.2883E-09	0.0	0.0	0.0
FEIIIOH3	1.6115E-12	3.0006E-08	0.0	0.0
ALOH3	2.1313E-15	0.0	0.0	0.0
MGHPO4	3.6976E-18	0.0	0.0	0.0
MNNO32	9.5440E-30	0.0	0.0	0.0
MNOH2	5.7636E-10	1.1391E-06	0.0	0.0
NIOH2	4.1816E-09	3.1662E-06	0.0	0.0
PBHP04	0.0	0.0	0.0	0.0
PBNO32	0.0	0.0	0.0	0.0
PBO	0.0	0.0	0.0	0.0
SIO2	4.4698E-13	0.0	0.0	0.0
SNIVOH4	4.5451E-17	0.0	0.0	0.0
SRHP04	2.5304E-14	0.0	0.0	0.0
SRNO32	2.0795E-22	0.0	0.0	0.0
UO2OH2	2.1467E-10	1.4345E-11	0.0	0.0
ZNHPO4	2.0006E-28	0.0	0.0	0.0
ZNNO32	0.0	0.0	0.0	0.0
ZNOH2	4.7501E-14	0.0	0.0	0.0
OHION	6.8915E-03	0.0	0.0	0.0
ALOH2ION	1.2345E-23	0.0	0.0	0.0
ALOH4ION	6.7180E-08	0.0	0.0	0.0
ALOHION	1.0586E-31	0.0	0.0	0.0
BIION	8.1649E-38	0.0	0.0	0.0
BINO32ION	8.1649E-38	0.0	0.0	0.0
BINO3ION	8.1649E-38	0.0	0.0	0.0
BIOH2ION	1.2288E-20	0.0	0.0	0.0
BIOH4ION	8.2574E-11	0.0	0.0	0.0
BIOHION	3.9448E-31	0.0	0.0	0.0
BO2ION	9.6294E-10	0.0	0.0	0.0
BOH4ION	9.1840E-10	0.0	0.0	0.0
CAH2PO4ION	9.9001E-21	0.0	0.0	0.0
CAION	1.4064E-07	0.0	0.0	0.0
CAOHION	2.6604E-07	0.0	0.0	0.0
CAPO4ION	1.3634E-07	0.0	0.0	0.0
CRIIH2PO4ION	8.1649E-38	0.0	0.0	0.0
CRIIHPO4ION	1.3828E-28	0.0	0.0	0.0
CRIIION	9.0623E-32	0.0	0.0	0.0
CRIIINO3ION	1.8193E-37	0.0	0.0	0.0

CROH2ION	1.2002E-17	0.0	0.0	0.0
CROH4ION	1.9915E-06	0.0	0.0	0.0
CROHION	1.7489E-22	0.0	0.0	0.0
FEIII2OH2ION	8.1649E-38	0.0	0.0	0.0
FEIIIH2PO4ION	8.1649E-38	0.0	0.0	0.0
FEIIIHPO4ION	8.1649E-38	0.0	0.0	0.0
FEIIIIION	8.1649E-38	0.0	0.0	0.0
FEIIINO3ION	8.1649E-38	0.0	0.0	0.0
FEIIIOH2ION	6.5904E-21	0.0	0.0	0.0
FEIIIOH4ION	5.3995E-08	0.0	0.0	0.0
FEIIIOHION	1.3041E-29	0.0	0.0	0.0
H2P2O7ION	3.5829E-32	0.0	0.0	0.0
H2PO4ION	1.6166E-16	0.0	0.0	0.0
H3P2O7ION	8.1649E-38	0.0	0.0	0.0
H3SIO4ION	8.4235E-09	0.0	0.0	0.0
HION	2.3182E-16	0.0	0.0	0.0
HP2O7ION	4.3399E-24	0.0	0.0	0.0
HPBO2ION	0.0	0.0	0.0	0.0
HPO4ION	3.1999E-09	0.0	0.0	0.0
MGH2PO4ION	7.2091E-26	0.0	0.0	0.0
MGION	9.1146E-13	0.0	0.0	0.0
MGOHION	1.4446E-11	0.0	0.0	0.0
MGPO4ION	1.0994E-12	0.0	0.0	0.0
MNION	4.9136E-14	0.0	0.0	0.0
MNNO3ION	2.3250E-22	0.0	0.0	0.0
MNOH3ION	1.9840E-08	0.0	0.0	0.0
MNOH4ION	2.0460E-07	0.0	0.0	0.0
MNOHION	1.6276E-11	0.0	0.0	0.0
NAION	6.9003E-03	0.0	0.0	0.0
NDION	4.7704E-10	0.0	0.0	0.0
NIION	1.9793E-16	0.0	0.0	0.0
NINO3ION	1.6774E-24	0.0	0.0	0.0
NIOH3ION	5.7362E-06	0.0	0.0	0.0
NIOHION	1.8043E-13	0.0	0.0	0.0
NO3ION	3.7257E-10	0.0	0.0	0.0
ALION	8.1649E-38	0.0	0.0	0.0
P2O7ION	3.2188E-18	0.0	0.0	0.0
PBH2PO4ION	0.0	0.0	0.0	0.0
PBION	0.0	0.0	0.0	0.0
PBNO33ION	0.0	0.0	0.0	0.0
PBNO3ION	0.0	0.0	0.0	0.0
PBOHION	0.0	0.0	0.0	0.0
PO4ION	6.6220E-07	0.0	0.0	0.0
SNIVION	8.1649E-38	0.0	0.0	0.0
SNIVOH2ION	8.1649E-38	0.0	0.0	0.0
SNIVOH3ION	8.4083E-31	0.0	0.0	0.0
SNIVOH5ION	3.8059E-14	0.0	0.0	0.0
SNIVOH6ION	1.2099E-10	0.0	0.0	0.0
SNIVOHION	8.1649E-38	0.0	0.0	0.0
SRION	3.6718E-07	0.0	0.0	0.0
SRNO3ION	1.1617E-14	0.0	0.0	0.0
SROHION	2.5192E-07	0.0	0.0	0.0
SRPO4ION	4.7839E-09	0.0	0.0	0.0
UO22OH2ION	1.3424E-25	0.0	0.0	0.0
UO23OH5ION	3.3117E-17	0.0	0.0	0.0

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UO2ION	7.1572E-25	0.0	0.0	0.0
UO2OHION	1.0909E-16	0.0	0.0	0.0
ZNH2PO4ION	2.0261E-36	0.0	0.0	0.0
ZNION	1.4610E-23	0.0	0.0	0.0
ZNNO3ION	3.9161E-31	0.0	0.0	0.0
ZNOH3ION	6.2731E-11	0.0	0.0	0.0
ZNOHION	3.6760E-19	0.0	0.0	0.0
CAOH2	0.0	0.0	0.0	0.0
H3PO4	0.0	0.0	0.0	0.0
H4SiO4	0.0	0.0	0.0	0.0
MGOH2	0.0	1.9144E-09	0.0	0.0
NAOH	0.0	0.0	0.0	0.0
NDOH3	0.0	0.0	0.0	0.0
SROH2	0.0	0.0	0.0	0.0
CA3PO42	0.0	0.0	0.0	0.0
SR3PO42	0.0	0.0	0.0	0.0
<hr/>				
Total mol/hr	0.46680	4.3372E-06	0.0	0.0
Total g/hr	8.4379	3.9811E-04	0.0	0.0
Volume, L/hr	8.1974E-03	1.0282E-07	0.0	0.0
Enthalpy, cal/hr	-3.1721E+04	-0.5985	0.0	0.0
Density, g/L	1029.3	3871.9		
Vapor fraction	0.0	0.0	0.0	0.0
Solid fraction	0.0	1.0000	0.0	0.0
Organic fraction	0.0	0.0	0.0	0.0