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# APPENDIX 2B

# 242-A EVAPORATOR PROCESS FLOW DATA

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# 2B.0 PROCESS FLOW DATA

The process flow sheet allows people to model the 242-A Evaporator plant by entering different values in place of the values used in this flow sheet. A majority of the assumed flow conditions, which are variable or subject to change, are located in one area of the flow sheet. Changing any of these flows or values results in an immediate adjustment in the flow sheet and a recalculation of new values. The partition coefficients and the activity coefficients, located in two columns of the spreadsheet, can be changed easily when data support new values for these constants. Also, the equations in the spreadsheet can be changed, if desired, to accommodate changes in the 242-A Evaporator plant or new assumption about the stream flow relationships.

The ability to change the flow sheet increases the opportunity for many groups to use the flow sheet for their own purposes. For example, process engineering can use the flow sheet to estimate concentration of radionuclides in the effluent streams. Advanced engineering can use the flow sheet to predict the effect of changing the partition and activity coefficients. Using feed, product, and effluent data, the activity and partition coefficients can be adjusted to match operating conditions. Health Physics personnel can use the flow sheet to estimate effluent concentrations when plant conditions change. The decontamination coefficients provide a measure of the efficiency of the process in containing radioactivity and preventing releases to the environs.

## 2B.1 DESCRIPTION OF FLOW SHEETS

The following are specifics on the flow sheets presented in Tables 2B-1 through 2B-4 of this appendix. The assumptions evolved during development of the flow sheet. References are made to the design calculation sheets, which provide examples of the equations and formulas used in calculating the values on the flow sheet.

Each column is identified separately, giving a brief description of the flow and the methodology and assumptions used in calculating the values. Reference to an example calculation is noted to clarify how the values were derived.

The first two columns describe the radionuclide, inorganic or organic chemicals and the units. Two values are used for each chemical to simplify construction of the Symphony spreadsheet. The space allowed for the equation for each cell is limited in size, which limits the number of mathematical operations that can be performed for each cell. Also, two cells allow for a quick scan of the values to determine if the input and output from a vessel is balanced. The other cell has values in units that can be compared to environmental release limits.

**Table 2B-1, Sheet 1**

<u>Column 3, Stream 1, Feed</u>: The feed stream enters the C-A-1 vessel recirculating loop from feed tank TK-241-AW-102. A flow rate of 340 L/min (90 gal/min) was selected as an average flow rate. The temperature value comes from the previous flow sheet FDM-T-600-00001 (H-2-69320). Feed density (Sp. Gr.) is calculated using the primary inorganic chemical

composition values and the PREDICT computer equations (note slurry sp. gr calculation example on page 8 of the design calculation sheets). Pump pressure for the feed was assumed to be 340 kpa- (50 lbf/in$^2$-) gauge.

The individual values for the chemicals (mg/L and FCi/mL) are an average of samples from three double-shell tanks, 241-AW-101, 241-AW-103, and 241-AW-106 (not the appropriate columns in Table 2B-2. These three tanks contain a near double-shell slurry feed (DSSF) product. The values for each tank were averaged (labeled TI-355 Values). A standard deviation for the sample values is also shown. The next column is entitled "Adjusted Feed to C-A-1." The "Average TI-355 Values" values were multiplied by 70% and entered in the "Adjusted Feed to C-A-1" column as the "best guess" of the feed concentration. The values were then adjusted upward so that the slurry values of the Stream 2 column matched the average of the sample date. The "Adjusted Feed to C-A-1" values are identical to the "Stream 1" values and the column labeled "Typical Feed to C-A-1" in Table 2B-3. The feed values required adjustment based on the partition coefficient values and the activity coefficient values. For example, the "$^3$H" (tritium) concentration value from the tanks sampled was 1.0 E-02 FCi/mL. The value for the feed input is higher (1.8 E-02 FCi/mL) to account for the low $^3$H partition coefficient (6.6 E+03). The low partition coefficient means that a larger fraction of the tritium is evaporated overhead with the condensate stream, the expected path for tritium because tritium is part of the water molecule.

The column next to "Average TI-355 Values" in Table 2B-2 is labeled "Std. Dev. +/-." The "values" in this column is the calculated standard deviation for the values used to calculate the average values. The standard deviation is a little misleading because each tank result is an average of four samples for the tank. Therefore, the standard deviation values, in most cases, are nearly equal to the average value. This suggests that the variation in values is wider than if the values were selected from the same statistical population of values. The wide variation in values is expected for double-shell tank sample analysis because each tank contains a mixture of waste from a variety of sources. The sample analysis values from these tanks, when compared to other typical feed for the 242-A Evaporator, are higher. This comparison shows that the waste in the three tanks is concentrated waste.

<u>Stream 2, Slurry</u>: Slurry flow for this flow sheet is based on a 30% waste volume reduction factor. The inorganic and radionuclide concentrations are calculated using the partition factor. The partition factor is a measure of the equilibrium concentrations of a substance in the gas and liquid phase when steady state can be assumed. For example, the partition coefficient for "$^3$H" is 6.6 x 10$^3$ (Table 2B-3, Column entitled "C-A-1 Vapor Space Part. Coeff.") The partition coefficient means FCi/mL $^3$H in the liquid phase divided by FCi/mL $^3$H in the aqueous phase, assuming equilibrium conditions. An example of the calculation equations is shown on pages 2 through 4 of the design calculation sheets.

Organic concentrations are calculated using the pure vapor pressure of the compound and the activity coefficient for that compound. These values are used instead of partition coefficients because the vapor concentrations of organics are temperature dependent. As the temperature increases, the organic concentrations in the vapor phase also increase. For an ideal organic vapor, the activity coefficient would be 1.0, meaning that the vapor phase mole fraction equals the liquid phase mole fraction. The activity coefficient, therefore, is a measure of how close the organic vapor concentrations correspond to an ideal gas. Activity coefficients near 1.0 mean that

the gas and liquid phase concentrations behave like and ideal gas (Raoult's Law). Activity coefficients further from 1.0 are a measure of the non-ideal behavior of the gas. Example calculations using acetone are shown on pages 6 and 7.

All water entering the C-A-1 evaporator vessel [{-B-1 and P-B-2 pumps seal leakage (Streams 30 and 31), humidity in the air purges (an input value on the Table of Constants, Table 2B-4), deentrainer pad flushes (Stream 2)] and 30% of the feed stream water is evaporated overhead. The remaining water flows through the slurry pump as part of Stream 2. The density calculation is similar to the density calculation of Stream 1. Vessel C-A-1 temperature is calculated using the equation of the PREDICT program. An example of the calculation is presented on page 8 of the design calculation sheets.

The radionuclide, inorganic, and organic concentrations in the P-B-2 pump seal water leakage flow (Stream 31) are assumed to flow with the slurry flow. This assumption is opposite for the P-B-2 pump seal leakage-water flow (Stream 31), which is assumed to flow with the overhead vapors. This means that the pump P-B-2 seal water leakage rate does not dilute the slurry flow but merely adds a minor amount of chemicals to the slurry flow.

The calculated specific gravity for the slurry (**Table 2-15**) of 1.4 is an indication that this flow sheet is near the maximum expected concentrations for future 242-A Evaporator campaigns. In the past and evaporator product has been considered a DSSF product if the density is in the 1.4 to 1.5 range.

Stream 3, Filtered Raw Water: Filtered raw water flows into C-A-1 vessel as a spray on the deentrainment pads to wash the overhead vapors. All water entering through Stream 3 is assumed to be evaporated overhead with the vapor flow. Any organic, inorganic, and radionuclide compounds are assumed to be in equilibrium with the other C-A-1 vessel compounds and either exit with the slurry flow or the overhead vapor flow. The density of the water flow is calculated by suing a regression equation developed for pure water (page 8 of the design calculations). The raw water temperature in an input value. The temperature comes from the raw water samples taken for the Part B Permit.

Stream 4, Vessel C-A-1 Overhead Vapor Flow: Column 8 contains all other compounds that enter C-A-1 vessel and do not flow with the slurry flow. The vacuum for this flow is a value selected for the flow sheet (i.e., 50 torr as shown in Table 2B-4). The gas temperature is also a value selected for the flow sheet (Table 2B-4). The vacuum and temperature values are used to determine the volume flow rate of gases for this stream. The vapor flow rate, the slurry flow rate, the partition coefficient values, and the activity coefficients are used in the equations to calculate the slurry and overhead flow rates of the stream components.

Stream 5, E-C-1 Condensate Flow: Vapors condensed in the primary condenser are assumed to be in equilibrium with the vapor flow exiting from the condenser. Different partition coefficients are used for these calculations because data collected for partition coefficients show the pure water partition coefficient (steam condensate is considered to be pure water) to be lower than that for liquids containing dissolved salts (Bendixsen 1989). An assumed water leakage rate [note constant in Table 2B-4 of 0.01 g/m ($2.2 \times 10^{-5}$ lb/m)]. for the condenser also adds organic, inorganic and radionuclide concentrations to both the condensate and vapor flows from E-C-1.

Stream 6, E-C-1 Vapor Flow: The E-C-1 vapor flow vacuum is calculate using an input value for the E-C-1 pressure differential (20 torr), not value in the Table of Constants, Table 2B-4. The vapor flow also includes ambient air and water vapor flows (Stream 27). Both the vapor temperature and humidity are calculated using equations that assume saturated steam for the E-C-1 vapor flow. Heat transferred to the raw water flowing through the condenser assumes a 10% heat loss to the room. and the remaining heat raises the cooling water temperature. Examples of heat transfer calculations are shown on pages 9 and 10 of the design calculation pages.

Stream 7, E-C-2 Condensate Flow: Vapors condensed in the E-C-2 intercondenser also include the steam condensate flow (Stream 25) from the steam eductor J-LC1-1. The steam flow contains minor concentrations on inorganic and radionuclides that contribute to the condensate concentrations. The calculation methods for the components of the condensate flow are identical with the equations used for the E-C-1 condensate flow.

Stream 8, E-C-2 Vapor Flow: Vapors exiting E-C-2 contain the airflow rate from E-C-1 (Stream 6). The pressure in the E-C-2 condenser is an input value on the constant table, Table 2B-4. As with the E-C-1 condenser, both the temperature and humidity values are calculated using the saturated steam equations. The radionuclide, inorganic and organic concentrations are calculated using the same equations, partition coefficients , and activity coefficients used for the E-C-1 vapor flow.

Stream 9, E-C-3 Condensate Flow: This stream contains the steam condensate flow and radionuclides and inorganic concentrations from Stream 26. As with E-C-1 and E-C-2, the radionuclide, inorganic, and organic concentrations are assumed to be in equilibrium with the E-C-3 vapor flow (Stream 16) concentrations. The vapor partition coefficients for inorganics and radionuclides are used to calculate the fraction of components entering from Streams 8 and 26 that are used in Stream 9. The pure component vapor pressure and activity coefficients for the organic components at the temperature of the offgases determine the concentrations of organic components in the condensate flow. The equations for these calculations are identical to the equations for E-C-1 and E-C-2. The E-C-3 vacuum in an input value shown in Table 2B-4.

Stream 10, Condensate Flow from Tank C-100: The water flow rate for this stream is the sum of condensate flows from Streams 5, 7, and 9 minus a small vapor loss to Stream 32, the air exhaust flow from C-100. The condensate concentrations for radionuclides, inorganics, and organics are assumed to be in equilibrium with the concentrations in the exhaust airflow, Stream 32. The equations for calculating these concentrations are identical to the equations used for E-C-2, E-C-2, and E-C-3. Similarly, the pure water partition coefficients are used for radionuclide and inorganic components. As before, the organic concentrations in the condensate flow use the pure component vapor pressure and activity coefficients to calculate the concentrations. A heat transfer calculation for tank TK-C-100 is not done because the tank temperature is assumed to be near room temperature. There are no cooling or steam coils for tank TK-C-100.

**Table 2B-1, Sheet 7**

Stream 11, Condensate Flow to Liquid Effluent Retention Facility (LERF): All flow values for this stream are identical with the flow values of Stream 10 except for the total dissolved solid,

$^{90}Sr$, $^{134}Cs$, $^{135}Cs$, and $^{137}Cs$ values. The filter efficiency of the F-C-1 filter, a constant from page C-1 (95%), removes part of the total dissolved solids from Stream 10.

Stream 12, Organic Flow to Tank TK-241-AW-102: No flow values are placed in this column because the organic overflow back to TK-241-AW-102 is unknown and variable. Periodic overflow from tank TK-C-100 to tank TK-241-AW-102 is requested by engineering when an organic layer is suspected or detected in tank TK-C-100.

Streams 13 and 14, Regeneration Eluant Flows for IX-D-1: Ion exchange column IX-D-1 is not used and its removal from the 242-A Evaporator is planned.

Stream 15, Inlet Airflow for the Vessel Ventilation System: A damper controls airflow into the vessel ventilation system to control vacuum downstream of the E-C-3 condenser. This airflow contains ambient water vapor. The average air temperature and humidity values from the Hanford Meteorological measurement for the 46-year period prior to development of the flow sheet were used as the values for this flow: 10 EC (50 EF) and 50% relative humidity. The flow rate is an input value (500 std/ft$^3$/min) on the constant table, Table 2B-4.

Stream 16, Vapor Flow Upstream from the H-C-1 Heater: This gas flow is the sum of gas flows from the E-C-3 condenser and Streams 15 and 32.

Stream 17, AirFlow to F-C-5 High-Efficiency Particulate Air (HEPA) Filters: Stream 16 is heated by the Electric Heater, H-C-1, to 66 EC (150 EF). This value was copied from the previous flow sheet, H-2-39620. The pressure differential for the heater is an input value, 3 in. $H_2O$, shown on the Table of Constants. The concentration of radionuclide, inorganic or organic components for Stream 17 are identical to the values for Stream 16.

Stream 18, Stack Airflow: The values of this flow are identical to Stream 17 flow rates. The concentrations of most of the radionuclides and organics are lower than Stream 17 because the F-C-5 filter efficiency and differential pressure values are constants input on the Table of Constants. The assumed F-C-5 filter efficiency of 99% removes 99% of the radioactive and inorganic particulates flowing in the combined vapor flows. Only the volatile and semivolatile inorganic and radionuclide components and the organic components are assumed to flow through the filter without being captured. The volatile and semivolatile inorganic and radionuclide components passing through the F-C-5 filter have been identified as $^{3}H$, $^{113}Sn$, $^{124}Sb$, $^{125}Sb$, $^{126}Sn$, $^{129}I$, and $NH_4^+$.

Stream 19, Steam Flow to the E-A-1 Reboiler: The steam flow rate is an input value from the previous flow sheet H-2-69320 [12,300 Kg/h (27,000 lb steam/hr)]. The steam pressure is also from the previous flow sheet [21 kPa (3 lbf/in$^2$)] (gauge). The concentrations of radionuclide and inorganic components are input values from an average of samples of the steam condensate (**Loll 1990c**).

Stream 20, Steam Condensate from the E-A-1 Reboiler: The steam condensate flow rates match the Stream 19 values. This assumes no leaks from the system to either the process streams or the atmosphere.

**Table 2B-1, Sheet 13**

Stream 21, Raw Water to E-C-1: This flow rate is an input value from the previous flow sheet, H-2-69320 [13,000 L/min (3,500 gal/min)]. The water temperature and components concentration values are input values from an average of samples of the used raw-water flow **(Loll 1990a)**. Heat transfer calculations for the condensate flow (Stream 5) and the vapor flow (Stream 6) are used to estimate the temperature of the used cooling water flowing into Stream 24.

Stream 22, Raw Water to E-C-2: This flow rate is also an input value from the previous flow sheet, H-2-69320 [303 L/min (80 gal/min)]. The temperature and components concentration values are also input values from an average of samples of the used raw-water flow as explained for Stream 21. Heat transfer calculations also estimate the temperature rise of the water exiting E-C-2 to be 11 EC (52 EF) (value below the Joules/min heat transfer rate).

Stream 23, Raw Water to E-C-3: This flow rate is identical to E-C-2 because water flows directly from the E-C-2 raw-water outlet pipe to the E-C-3 inlet raw-water pipe. Heat transferred to the raw water flowing through E-C-3 raises the water temperature above the inlet water temperature approximately 12 EC (54 EF) (value below the Joules/min heat transfer rate).

Stream 24, Used Raw Water to Treated Effluent Disposal Facility (TEDF): This flow is a summation of Streams 21 and 23 subtracting the water leakage rate into E-C-1. The water temperature is calculated using the combined flow rates and temperatures of Streams 21 and 23. The heat transfer value is also the sum of Streams 21 and 23. The component concentrations for this flow are calculated using the concentrations and flow rates of Streams 21 and 23.

Stream 25, J-EC1-1 Steam Jet Stream Flow: The stream flow rate is identical to the steam flow rate on the previous flow sheet, H-2-69320, [309.09 kg/h (680 lb/h)]. Steam pressure is $7.2 \times 20^5$ kPa [$1 \times 10^5$ lbf/in$^2$ (gauge)]. The radionuclide, inorganic, and organic concentrations are identical to Stream 19.

Stream 26, J-EC2-1 Steam Jet Steam Flow: The steam flow rate is identical to the steam flow rate on the previous flow sheet, H-2-69320, 341 Kg/h (750 lb/h). Stream flow properties are similar to Stream 25.

Stream 27, Air Leakage into E-C-1: Air added to control C-A-1 vessel vacuum flows into E-C-1 and is estimated be 708 L/min (25 std. ft$^3$/min). The temperature and humidity of the vacuum are the same as Stream 16.

Streams 28 and 29, Steam Flow through H-C-1: These streams no longer have values because the prior vessel ventilation steam heater has been replaced with an electric heater.

Stream 30, Pump P-B-1 Seal Water Leakage Flow: Filtered raw water leaks through the P-B-1 shaft seals at an estimated rate of 0.57 L/min (0.15 gal/min). This value is an input value on the Table of Constants, Table 2B-4. The radionuclide, inorganic and organic concentrations are data from the used raw water samples (Loll 1990a).

**Table 2B-1, Sheet 19**

Stream 31, Tank P-B-2 Seal Water Leakage Flow: Filtered raw water leaks through the P-B-2 pump shaft seals at an estimated flow rate of 0.38 L/min (0.1 gal/min). This value is also in the Table of Constants and the component concentrations are identical to Stream 30.

Stream 32, Tank TK-C-100 Exhaust Air Flow: The exhaust vapor flow rate from tank TK-C-100 has been estimated to be 708 L/min (25 std. $ft^3$/min) and the value is in the Table of Constants. The radionuclide, inorganic, and organic components for this stream are in equilibrium with Stream 10. As with E-C-1, E-C-2, and E-C-3, the pure water partition coefficients and activity coefficients are used to calculate the equilibrium concentrations in the gas and liquid flows. The vapor temperature is assumed to be the same as the water temperature in tank TK-C-100.

Table 2B-2, Columns 1 and 2: These two columns contain the component and unit information for the flow sheet. These columns contain similar information found in columns 1 and 2 in Table 2B-1.

Columns 3, 4, 5, 6, and 7: These columns contain the most recent information on component concentrations for the 242-A Evaporator. The column headed "WHC-SD-WM-PSE-008" is from the hazard classification source term document identifying the maximum concentrations to be used for the 242-A Evaporator accident analysis calculations. The column headed "65959-87-720 Starr" was an earlier attempt by J. C. Starr to estimate the source term for the accident analysis calculations. The next three columns are sample averages of three double-shell tanks that contain soluble-shell slurry (DSS) and DSSF product from the 242-A Evaporator (**Hendrickson 1990**).

Column 8: This column is a repeat of column 9 in Table 2B-3 showing the raw water component concentrations.

Column 9: Blank.

Column 10: This column is an arithmetic average of columns 5, 6, and 7, which have values. A blank space in columns 5, 6, or 7 is not averaged with the other values. If only one value is shown in columns 5, 6, or 7, the value is transferred to column 10.

Column 11: This column is the standard deviation calculated for columns 5, 6, and 7. This value represents a measure of dispersion of the sample data from tanks TK-AN-103, TK-AN-106, and TK-AW-103. Column 11 is blank if columns 5, 6, or 7 have no values or only one value appears in columns 5, 6, or 7.

Column 12: The data in column 11 was multiplied by 70% providing feed stream concentrations for the flow sheet assuming a 242-A Evaporator campaign with a waste volume reduction (WVR) of 30%. The flow sheet, therefore, represents current operation of the 242-A Evaporator producing a DSSF product. For some components, the 70% value was adjusted upward slightly to compensate for part of the components being discharged from the 242-A Evaporator with the stack gas and process condensate flows. The adjustment was necessary so that the slurry flow concentrations match the values in column 10. The values in this column were transferred to column 3 in Table 2B-3 providing the feed input data for the flow sheets.

Table 2B-3: The first two columns of these pages contain Nuclide/Chemical and Units columns identical to those in Table 2B-1. The third column is the feed stream data used by column 3 in Table 2B-1. The flow sheet was designed so that this column could be replaced with another feed stream composition, and the spreadsheet would recalculate all o the streams using the information in this column.

Column 4: The "Mole Weight" column contains the molecular weight values of the components. The Mole Weight column is used to calculate molarity of the inorganics in the feed and slurry streams. Stream molarity values are also used to calculate the boiling point of the slurry flow and the density of the feed and slurry streams.

Column 5: The "Ion Charge" column contains the plus or minus ionic charge of the inorganic species in solution. This column was originally placed in the flow sheet to determine total ionic strength of the ions in solution. The information in this column is no longer being used by the flow sheet.

Columns 6 and 7: "C-A-1 Vapor Space Partition Coefficient" and "Condensate Partition Coefficient" are the values used in the equilibrium equations to calculate the vapor space and liquid concentrations of the radionuclides and inorganic components. These values were derived from sample analyses of the 702-A Ventilation System Flowsheet (Bendixsen 1990). More recent data have been used to further refine the numbers (**DOE-RL 1990**).

Table 2B-3, Sheet 3, Columns 5, 6, and 7: Titles for these columns for organic compounds are "Gamma," "A," and "B." Gamma is the activity coefficient calculated using the equations for organic components in a water system (**Pierotti et al. 1959**). The activity coefficient is used to calculate the mole fraction of the organic in equilibrium with the mole fraction of organic in the liquid phase. "A" and "B" are the factors used in the regression equation for calculating the pure component vapor pressure. The equation is an exponential equation of the form: Vapor Pressure (mm Hg) = $\mathrm{Exp}^{(A*C=B)}$ where C is the temperature in EC. For some low boiling point organics, C is EC + 273.12 (EK). The pure component vapor pressure equation is derived by selecting vapor pressure data in the 30 to 50 EC range (**Perry 1973**) and calculating the regression equation.

Table 2B-3, Sheet 1, Column 8: The "242-A Stack and Process Condensate Decontamination Factors" column calculates the decontamination factor by dividing the feed concentration by the effluent concentration. The evaporation stack decontamination values are generally very high because the gas flow exiting from the C-A-1 vessel passes through three condensers, a demister, and double HEPA filters before discharging from the stack. A majority of the components are removed from the stack gas flow by the vessel ventilation process.

On the flow sheet, the lower number for each pair of values is the decontamination factor for the process condensate product flow. The decontamination factor for the process condensate is influenced by the scrubbing efficiency of the C-A-1 vessel demister pads.

Columns 9 and 10: These columns contain the concentrations of radionuclides, inorganic, and organic components in the raw water and stream flows entering the 242-A Evaporator. This data is an average of sample analysis when the 242-A Evaporator facility was operating in 1985 through 1987 and 1989 through 1990 respectively (**Loll 1990a and Loll 1990c**).

Table 2B-4: This page contains the Table of Constants used by the flow sheet. These values can be changed by the user when new information concerning the process becomes available. Changing one of these values changes the value of every place the value is used in the flow sheet.

## 2B.2 REFERENCES

Bendixsen, 1989

DOE-RL 1990

Hendrickson 1990

Loll 1990a

Loll 1990c

Perry 1973

Pierotti et al. 1959

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1 Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Form | | Liquid | Liquid | Liquid | Gas | Liquid | Gas | Liquid | Gas | Liquid | Liquid |
| L/min | Total | 3.4E+02 | 2.4E+02 | 7.6E+00 | 2.4E+06 | 1.1E+02 | 2.1E+04 | 5.2E+00 | 1.6E+04 | 5.6E+00 | 1.2E+02 |
| Batch | L/Batch | | | | | | | | | | |
| Temperature | C | 4.3E+01 | 5.2E+01 | 2.2E+01 | 3.8E+01 | 2.5E+01 | 2.9E+01 | 3.9E+01 | 3.5E+01 | 6.6E+01 | 2.8E+01 |
| Sp. Gr. | unitless | 1.3E+00 | 1.4E+00 | 1.0E+00 | 5.8E-02 | 1.0E+00 | 3.6E-02 | 9.9E-01 | 4.8E-02 | 9.8E-01 | 1.0E+00 |
| Abs. Pressure | Torr | 2.6E+03 | 2.6E+03 | 7.6E+02 | 5.0E+01 | 7.6E+02 | 3.0E+01 | 7.6E+02 | 4.1E+01 | 7.6E+02 | 7.6E+02 |
| Abs. Pressure | Pa | 3.4E+05 | 3.4E+05 | 1.0E+05 | 6.7E+03 | 1.0E+05 | 4.0E+03 | 1.0E+05 | 5.5E+03 | 1.0E+05 | 1.0E+05 |
| pH | | 1.3E+01 | 1.3E+01 | 7.0E+00 | | 1.0E+01 | | 1.0E+01 | | 1.0E+01 | 1.0E+01 |
| TOC | mg/L | 3.3E+03 | 4.6E+03 | 1.7E+00 | 1.3E-02 | 2.9E+02 | 2.9E-03 | 1.3E+01 | 1.3E-04 | 1.5E+00 | 2.6E+02 |
| TOC | mg/min | 1.1E+06 | 1.1E+06 | 1.3E+01 | 3.2E+04 | 3.2E+04 | 6.2E+01 | 6.6E+01 | 2.1E+00 | 8.3E+00 | 3.2E+04 |
| TDS | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 7.3E+01 | 7.3E-04 | 7.9E+01 | 6.7E+00 |
| TDS | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.8E+02 | 1.2E+01 | 4.4E+02 | 8.2E+02 |
| H2O | L/min | 3.5E+02 | 2.4E+02 | 7.6E+00 | 2.4E+06 | 1.1E+02 | 8.5E+02 | 5.2E+00 | 9.1E+02 | 5.6E+00 | 1.2E+02 |
| H2O | kg/min | 3.4E+02 | 2.4E+02 | 7.6E+00 | 1.1E+02 | 1.1E+02 | 2.4E-02 | 5.1E+00 | 3.5E-02 | 5.5E+00 | 1.2E+02 |
| Air | L/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 4.9E+02 | 0.0E+00 | 2.1E+04 | 0.0E+00 | 1.5E+04 | 0.0E+00 | 0.0E+00 |
| Air | kg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.7E-02 | 0.0E+00 | 9.5E-01 | 0.0E+00 | 9.5E-01 | 0.0E+00 | 0.0E+00 |
| Heat | Joules/min | | 1.0E+07 | | 2.7E+08 | 2.7E+08 | 1.7E+04 | 1.6E+07 | 3.0E+04 | 1.6E+07 | |
| Alpha | uCi/ml | 0.0E+00 | 2.9E-11 | 8.1E-10 | 2.8E-18 | 6.0E-14 | 6.0E-19 | 6.2E-10 | 6.2E-15 | 6.7E-10 | 5.7E-11 |
| Alpha | uCi/min | 0.0E+00 | 6.9E-06 | 6.2E-06 | 6.6E-09 | 6.7E-09 | 1.3E-11 | 3.2E-06 | 1.0E-07 | 3.8E-06 | 7.0E-06 |
| Beta | uCi/ml | 0.0E+00 | 3.6E-10 | 1.0E-08 | 3.5E-17 | 7.5E-13 | 7.5E-18 | 3.0E-14 | 3.0E-19 | 8.6E-16 | 6.8E-13 |
| Beta | uCi/min | 0.0E+00 | 8.6E-05 | 7.7E-05 | 8.3E-08 | 8.3E-08 | 1.6E-10 | 1.6E-10 | 4.9E-12 | 4.8E-12 | 8.3E-08 |
| 3H | uCi/ml | 1.8E-02 | 1.0E-02 | 0.0E+00 | 1.5E-06 | 3.2E-02 | 2.9E-06 | 9.5E-03 | 8.6E-07 | 2.4E-03 | 3.0E-02 |
| 3H | uCi/min | 6.0E+03 | 2.4E+03 | 0.0E+00 | 3.6E+03 | 3.6E+03 | 6.3E+01 | 4.9E+01 | 1.4E+01 | 1.3E+01 | 3.6E+03 |
| 14C | uCi/ml | 9.7E-04 | 1.4E-03 | 0.0E+00 | 1.4E-10 | 3.0E-06 | 3.0E-11 | 1.2E-07 | 1.2E-12 | 7.6E-09 | 2.7E-06 |
| 14C | uCi/min | 3.3E+02 | 3.3E+02 | 0.0E+00 | 3.3E-01 | 3.3E-01 | 6.4E-04 | 6.4E-04 | 2.0E-05 | 4.3E-05 | 3.3E-01 |
| 60Co | uCi/ml | 2.3E-02 | 3.3E-02 | 0.0E+00 | 3.3E-09 | 7.1E-05 | 7.1E-10 | 2.8E-06 | 2.8E-11 | 8.2E-08 | 6.4E-05 |
| 60Co | uCi/min | 7.8E+03 | 7.8E+03 | 0.0E+00 | 7.9E+00 | 7.8E+00 | 1.5E-02 | 1.5E-02 | 4.6E-04 | 4.6E-04 | 7.9E+00 |
| 63Ni | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 63Ni | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 79Se | uCi/ml | 1.0E-02 | 1.5E-02 | 0.0E+00 | 1.5E-09 | 3.2E-05 | 3.2E-10 | 1.3E-06 | 1.3E-11 | 3.7E-08 | 2.9E-05 |
| 79Se | uCi/min | 3.5E+03 | 3.5E+03 | 0.0E+00 | 3.5E+00 | 3.5E+00 | 6.8E-03 | 6.6E-03 | 2.1E-04 | 2.0E-04 | 3.5E+00 |
| 90Sr | uCi/ml | 7.6E+00 | 1.1E+01 | 0.0E+00 | 4.7E-09 | 1.0E-04 | 5.6E-11 | 2.3E-07 | 1.3E-13 | 8.8E-10 | 9.2E-05 |
| 90Sr | uCi/min | 2.6E+06 | 2.6E+06 | 0.0E+00 | 1.1E+01 | 1.1E+01 | 1.2E-03 | 1.2E-03 | 2.1E-06 | 4.9E-06 | 1.1E+01 |
| 93Zr | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 93Zr | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 94Nb | uCi/ml | 1.7E-02 | 2.5E-02 | 0.0E+00 | 2.5E-09 | 5.3E-05 | 5.3E-10 | 2.1E-06 | 2.1E-11 | 6.1E-08 | 4.8E-05 |
| 94Nb | uCi/min | 5.9E+03 | 5.8E+03 | 0.0E+00 | 5.9E+00 | 5.9E+00 | 1.1E-02 | 1.1E-02 | 3.4E-04 | 3.4E-04 | 5.9E+00 |
| 99Tc | uCi/ml | 8.5E-02 | 1.2E-01 | 0.0E+00 | 1.2E-08 | 2.6E-04 | 2.6E-09 | 1.1E-05 | 1.1E-10 | 3.0E-07 | 2.4E-04 |
| 99Tc | uCi/min | 2.9E+04 | 2.9E+04 | 0.0E+00 | 2.9E+01 | 2.9E+01 | 5.6E-02 | 5.4E-02 | 1.7E-03 | 1.7E-03 | 2.9E+01 |
| 106Ru | uCi/ml | 7.0E+00 | 1.0E+01 | 0.0E+00 | 1.3E-09 | 2.5E-05 | 1.7E-11 | 7.2E-08 | 4.5E-14 | 1.3E-10 | 2.5E-05 |
| 106Ru | uCi/min | 2.4E+06 | 2.4E+06 | 0.0E+00 | 3.1E+00 | 3.1E+00 | 3.7E-04 | 3.7E-04 | 7.2E-07 | 7.2E-07 | 3.1E+00 |
| 113Sn | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 113Sn | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 129I | uCi/ml | 2.7E-04 | 2.8E-04 | 0.0E+00 | 1.0E-08 | 2.2E-04 | 1.6E-09 | 6.3E-06 | 4.5E-11 | 1.3E-07 | 2.0E-04 |
| 129I | uCi/min | 9.2E+01 | 6.8E+01 | 0.0E+00 | 2.4E+01 | 2.4E+01 | 3.3E-02 | 3.3E-02 | 7.3E-04 | 7.3E-04 | 2.4E+01 |
| 134Cs | uCi/ml | 2.0E+00 | 2.9E+00 | 0.0E+00 | 8.2E-08 | 1.8E-03 | 4.1E-10 | 1.7E-06 | 3.9E-13 | 1.1E-09 | 1.6E-03 |
| 134Cs | uCi/min | 6.8E+05 | 6.8E+05 | 0.0E+00 | 2.0E+02 | 2.0E+02 | 8.8E-03 | 8.8E-03 | 6.4E-06 | 6.4E-06 | 2.0E+02 |
| 135Cs | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 135Cs | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 137Cs | uCi/ml | 3.5E+02 | 5.1E+02 | 0.0E+00 | 5.5E-10 | 1.2E-05 | 3.3E-12 | 1.4E-08 | 3.8E-15 | 1.1E-11 | 1.1E-05 |
| 137Cs | uCi/min | 1.2E+08 | 1.2E+08 | 0.0E+00 | 1.3E+00 | 1.3E+00 | 7.0E-05 | 7.0E-05 | 6.1E-08 | 6.1E-08 | 1.3E+00 |
| 144Ce | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 144Ce | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 155Eu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 155Eu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 226Ra | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |

2

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 226Ra | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 233U | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 233U | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 234U | uCi/ml | 2.6E-05 | 3.6E-05 | 0.0E+00 | 3.7E-12 | 7.8E-08 | 7.8E-13 | 3.3E-09 | 3.3E-14 | 2.9E-10 | 7.2E-08 |
| 234U | uCi/min | 8.7E+00 | 8.7E+00 | 0.0E+00 | 8.7E-03 | 8.7E-03 | 1.7E-05 | 1.7E-05 | 5.4E-07 | 1.6E-06 | 8.7E-03 |
| 235U | uCi/ml | 1.3E-06 | 1.8E-06 | 0.0E+00 | 1.8E-13 | 3.9E-09 | 3.9E-14 | 1.6E-10 | 1.6E-15 | 4.5E-12 | 3.5E-09 |
| 235U | uCi/min | 4.3E-01 | 4.3E-01 | 0.0E+00 | 4.3E-04 | 4.3E-04 | 8.3E-07 | 8.1E-07 | 2.5E-08 | 2.5E-08 | 4.3E-04 |
| 238U | uCi/ml | 9.3E-06 | 1.3E-05 | 0.0E+00 | 1.3E-12 | 2.9E-08 | 2.9E-13 | 1.3E-09 | 1.3E-14 | 2.1E-10 | 2.6E-08 |
| 238U | uCi/min | 3.2E+00 | 3.2E+00 | 0.0E+00 | 3.2E-03 | 3.2E-03 | 6.1E-06 | 6.8E-06 | 2.1E-07 | 1.2E-06 | 3.2E-03 |
| 237Np | uCi/ml | 4.4E-05 | 6.3E-05 | 0.0E+00 | 6.3E-12 | 1.4E-07 | 1.4E-12 | 5.5E-09 | 5.5E-14 | 1.6E-10 | 1.2E-07 |
| 237Np | uCi/min | 1.5E+01 | 1.5E+01 | 0.0E+00 | 1.5E-02 | 1.5E-02 | 2.9E-05 | 2.8E-05 | 8.8E-07 | 8.8E-07 | 1.5E-02 |
| 238Pu | uCi/ml | 5.1E-04 | 7.3E-04 | 0.0E+00 | 2.0E-14 | 4.3E-10 | 8.9E-16 | 3.6E-12 | 7.6E-18 | 2.2E-14 | 3.9E-10 |
| 238Pu | uCi/min | 1.7E+02 | 1.7E+02 | 0.0E+00 | 4.7E-05 | 4.7E-05 | 1.9E-08 | 1.9E-08 | 1.2E-10 | 1.2E-10 | 4.7E-05 |
| 239Pu | uCi/ml | 1.1E-03 | 1.5E-03 | 0.0E+00 | 4.1E-14 | 8.8E-10 | 1.8E-15 | 7.6E-12 | 1.6E-17 | 4.6E-14 | 8.0E-10 |
| 239Pu | uCi/min | 3.6E+02 | 3.6E+02 | 0.0E+00 | 9.8E-05 | 9.8E-05 | 3.9E-08 | 3.9E-08 | 2.5E-10 | 2.5E-10 | 9.8E-05 |
| 240Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 240Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Am | uCi/ml | 1.5E-03 | 2.2E-03 | 0.0E+00 | 1.6E-13 | 3.3E-09 | 6.8E-15 | 2.8E-11 | 5.7E-17 | 1.7E-13 | 3.0E-09 |
| 241Am | uCi/min | 5.2E+02 | 5.2E+02 | 0.0E+00 | 3.7E-04 | 3.7E-04 | 1.5E-07 | 1.5E-07 | 9.3E-10 | 9.2E-10 | 3.7E-04 |
| 243Am | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 243Am | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 244Cm | uCi/ml | 1.7E-04 | 2.4E-04 | 0.0E+00 | 2.4E-11 | 5.2E-07 | 5.2E-12 | 2.1E-08 | 2.1E-13 | 6.0E-10 | 4.8E-07 |
| 244Cm | uCi/min | 5.8E+01 | 5.8E+01 | 0.0E+00 | 5.8E-02 | 5.8E-02 | 1.1E-04 | 1.1E-04 | 3.4E-06 | 3.4E-06 | 5.8E-02 |
| AlO2- | mg/L | 2.2E+04 | 3.2E+04 | 0.0E+00 | 2.1E-03 | 4.5E+01 | 4.5E-04 | 1.8E+00 | 1.8E-05 | 5.3E-02 | 4.1E+01 |
| AlO2- | mg/min | 7.6E+06 | 7.5E+06 | 0.0E+00 | 5.1E+03 | 5.0E+03 | 9.8E+00 | 9.5E+00 | 3.0E-01 | 2.9E-01 | 5.1E+03 |
| NH4+ | mg/L | 9.3E+02 | 1.3E+02 | 0.0E+00 | 1.2E-01 | 2.3E+03 | 1.1E+00 | 1.9E+03 | 9.1E-01 | 2.1E+03 | 2.3E+03 |
| NH4+ | mg/min | 3.2E+05 | 3.2E+04 | 0.0E+00 | 2.8E+05 | 2.6E+05 | 2.4E+04 | 9.7E+03 | 1.5E+04 | 1.2E+04 | 2.8E+05 |
| Sb | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Sb | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| As | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| As | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ba | mg/L | 9.8E+00 | 1.4E+01 | 3.0E-02 | 1.4E-06 | 3.0E-02 | 3.0E-07 | 3.1E-02 | 3.1E-07 | 3.2E-02 | 3.0E-02 |
| Ba | mg/min | 3.3E+03 | 3.3E+03 | 2.3E-01 | 3.3E+00 | 3.3E+00 | 6.5E-03 | 1.6E-01 | 5.1E-03 | 1.8E-01 | 3.7E+00 |
| Be | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Be | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bi | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bi | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| B | mg/L | 1.2E+01 | 1.7E+01 | 0.0E+00 | 1.7E-06 | 3.7E-02 | 3.7E-07 | 1.9E-02 | 1.9E-07 | 1.9E-02 | 3.5E-02 |
| B | mg/min | 4.1E+03 | 4.0E+03 | 0.0E+00 | 4.1E+00 | 4.1E+00 | 7.9E-03 | 1.0E-01 | 3.1E-03 | 1.1E-01 | 4.3E+00 |
| Ca | mg/L | 5.1E+01 | 7.3E+01 | 1.9E+01 | 7.3E-06 | 1.6E-01 | 1.6E-06 | 1.9E+01 | 1.9E-04 | 2.0E+01 | 1.9E+00 |
| Ca | mg/min | 1.7E+04 | 1.7E+04 | 1.5E+02 | 1.8E+01 | 1.8E+01 | 3.5E-02 | 9.6E+01 | 3.0E+00 | 1.1E+02 | 2.3E+02 |
| Cd | mg/L | 1.1E+01 | 1.6E+01 | 2.0E-03 | 1.6E-06 | 3.4E-02 | 3.4E-07 | 1.4E-03 | 1.4E-08 | 4.0E-05 | 3.1E-02 |
| Cd | mg/min | 3.8E+03 | 3.8E+03 | 1.5E-02 | 3.8E+00 | 3.8E+00 | 7.4E-03 | 7.2E-03 | 2.2E-04 | 2.2E-04 | 3.8E+00 |
| CO3= | mg/L | 8.7E+03 | 1.2E+04 | 0.0E+00 | 1.2E-03 | 2.7E+01 | 2.7E-04 | 1.1E+00 | 1.1E-05 | 3.1E-02 | 2.4E+01 |
| CO3= | mg/min | 2.9E+06 | 2.9E+06 | 0.0E+00 | 3.0E+03 | 3.0E+03 | 5.7E+00 | 5.5E+00 | 1.7E-01 | 1.7E-01 | 3.0E+03 |
| Cl- | mg/L | 4.5E+03 | 6.4E+03 | 7.8E-01 | 1.2E-03 | 2.7E+01 | 2.2E-05 | 1.2E+00 | 9.9E-07 | 1.1E+00 | 2.4E+01 |
| Cl- | mg/min | 1.5E+06 | 1.5E+06 | 6.0E+00 | 3.0E+03 | 3.0E+03 | 4.8E-01 | 6.1E+00 | 1.6E-02 | 6.3E+00 | 3.0E+03 |
| Cr | mg/L | 4.2E+02 | 6.0E+02 | 1.0E-02 | 1.7E-06 | 3.7E-02 | 4.5E-08 | 1.9E-04 | 2.3E-10 | 6.6E-07 | 3.4E-02 |
| Cr | mg/min | 1.4E+05 | 1.4E+05 | 7.9E-02 | 4.1E+00 | 4.1E+00 | 9.7E-04 | 9.7E-04 | 3.7E-06 | 3.7E-06 | 4.1E+00 |
| Cu | mg/L | 4.8E+00 | 6.9E+00 | 7.4E-02 | 6.9E-07 | 1.5E-02 | 1.5E-07 | 1.1E-02 | 1.1E-07 | 1.1E-02 | 1.5E-02 |
| Cu | mg/min | 1.6E+03 | 1.6E+03 | 5.6E-01 | 1.7E+00 | 1.7E+00 | 3.2E-03 | 5.8E-02 | 1.8E-03 | 6.4E-02 | 1.8E+00 |
| CN- | mg/L | 3.4E+01 | 4.8E+01 | 0.0E+00 | 4.8E-06 | 1.0E-01 | 1.0E-06 | 4.2E-03 | 4.2E-08 | 1.2E-04 | 9.5E-02 |
| CN- | mg/min | 1.2E+04 | 1.2E+04 | 0.0E+00 | 1.2E+01 | 1.2E+01 | 2.2E-02 | 2.2E-02 | 6.8E-04 | 6.7E-04 | 1.2E+01 |
| F- | mg/L | 2.7E+02 | 3.9E+02 | 0.0E+00 | 1.6E-06 | 3.5E-02 | 5.7E-08 | 1.3E-01 | 2.1E-07 | 1.3E-01 | 4.3E-02 |
| F- | mg/min | 9.2E+04 | 9.2E+04 | 0.0E+00 | 3.9E+00 | 3.9E+00 | 1.2E-03 | 6.6E-01 | 3.4E-03 | 7.4E-01 | 5.3E+00 |
| Fe | mg/L | 2.8E+01 | 3.9E+01 | 1.0E-01 | 3.9E-06 | 8.5E-02 | 8.5E-07 | 8.4E-02 | 8.4E-07 | 8.7E-02 | 8.5E-02 |
| Fe | mg/min | 9.4E+03 | 9.4E+03 | 7.9E-01 | 9.4E+00 | 9.4E+00 | 1.8E-02 | 4.4E-01 | 1.4E-02 | 4.9E-01 | 1.0E+01 |
| H2 | mg/L | 1.6E-11 | 1.7E-11 | 0.0E+00 | 9.1E-06 | 1.9E-09 | 1.0E-07 | 2.5E-09 | 1.3E-07 | 2.1E-08 | 2.0E-11 |
| H2 | mg/min | 5.3E-09 | 4.0E-09 | 0.0E+00 | 2.2E-03 | 2.1E-07 | 2.2E-03 | 1.3E-08 | 2.2E-03 | 1.2E-07 | 2.4E-09 |
| OH- | mg/L | 4.9E+04 | 7.0E+04 | 0.0E+00 | 7.0E-03 | 1.5E+02 | 1.5E-03 | 6.0E+00 | 6.0E-05 | 1.7E-01 | 1.4E+02 |
| OH- | mg/min | 1.7E+07 | 1.7E+07 | 0.0E+00 | 1.7E+04 | 1.7E+04 | 3.2E+01 | 3.1E+01 | 9.7E-01 | 9.7E-01 | 1.7E+04 |
| Pb | mg/L | 5.1E+01 | 7.0E+01 | 1.3E-02 | 2.4E-04 | 5.1E+00 | 1.2E-06 | 1.0E-02 | 2.4E-09 | 5.6E-03 | 4.6E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Pb | mg/min | 1.7E+04 | 1.7E+04 | 9.6E-02 | 5.6E+02 | 5.6E+02 | 2.5E-02 | 5.4E-02 | 3.9E-05 | 3.1E-02 | 5.6E+02 |
| Mg | mg/L | 2.0E+01 | 2.9E+01 | 4.3E+00 | 2.9E-06 | 6.4E-02 | 6.4E-07 | 4.4E+00 | 4.4E-05 | 4.7E+00 | 4.6E-01 |
| Mg | mg/min | 6.9E+03 | 6.9E+03 | 3.3E+01 | 7.0E+00 | 7.1E+00 | 1.4E-02 | 2.3E+01 | 7.1E-01 | 2.6E+01 | 5.6E+01 |
| Mn | mg/L | 2.0E+01 | 2.9E+01 | 1.1E-02 | 2.9E-06 | 6.2E-02 | 6.2E-07 | 1.6E-02 | 1.6E-07 | 1.5E-02 | 5.8E-02 |
| Mn | mg/min | 6.9E+03 | 6.9E+03 | 8.1E-02 | 6.9E+00 | 6.9E+00 | 1.3E-02 | 8.4E-02 | 2.6E-03 | 8.3E-02 | 7.1E+00 |
| Hg | mg/L | 5.6E+00 | 8.0E+00 | 0.0E+00 | 8.0E-07 | 1.7E-02 | 1.7E-07 | 7.9E-04 | 7.9E-09 | 1.3E-04 | 1.6E-02 |
| Hg | mg/min | 1.9E+03 | 1.9E+03 | 0.0E+00 | 1.9E+00 | 1.9E+00 | 3.7E-03 | 4.1E-03 | 1.3E-04 | 7.2E-04 | 1.9E+00 |
| Mo | mg/L | 4.2E+01 | 6.0E+01 | 0.0E+00 | 6.0E-06 | 1.3E-01 | 1.3E-06 | 5.2E-03 | 5.2E-08 | 1.5E-04 | 1.2E-01 |
| Mo | mg/min | 1.4E+04 | 1.4E+04 | 0.0E+00 | 1.4E+01 | 1.4E+01 | 2.8E-02 | 2.7E-02 | 8.4E-04 | 8.3E-04 | 1.4E+01 |
| Ni | mg/L | 2.8E+01 | 4.0E+01 | 1.1E-02 | 4.0E-06 | 8.6E-02 | 8.6E-07 | 3.5E-03 | 3.5E-08 | 1.0E-04 | 7.9E-02 |
| Ni | mg/min | 9.5E+03 | 9.5E+03 | 8.5E-02 | 9.6E+00 | 9.5E+00 | 1.8E-02 | 1.8E-02 | 5.6E-04 | 5.6E-04 | 9.6E+00 |
| NO3- | mg/L | 1.2E+05 | 1.8E+05 | 1.2E+00 | 3.1E-02 | 6.7E+02 | 4.2E-04 | 2.3E+00 | 1.4E-06 | 5.6E-01 | 6.1E+02 |
| NO3- | mg/min | 4.2E+07 | 4.2E+07 | 9.0E+00 | 7.4E+04 | 7.4E+04 | 8.9E+00 | 1.2E+01 | 2.3E-02 | 3.1E+00 | 7.4E+04 |
| NO2- | mg/L | 6.0E+04 | 8.6E+04 | 0.0E+00 | 3.6E-03 | 7.7E+01 | 4.8E-05 | 2.0E-01 | 1.2E-07 | 3.6E-04 | 7.0E+01 |
| NO2- | mg/min | 2.1E+07 | 2.0E+07 | 0.0E+00 | 8.6E+03 | 8.6E+03 | 1.0E+00 | 1.0E+00 | 2.0E-03 | 2.0E-03 | 8.6E+03 |
| PO4 | mg/L | 3.7E+03 | 5.3E+03 | 0.0E+00 | 5.3E-04 | 1.1E+01 | 1.1E-04 | 4.6E-01 | 4.6E-06 | 1.3E-02 | 1.0E+01 |
| PO4 | mg/min | 1.3E+06 | 1.3E+06 | 0.0E+00 | 1.3E+03 | 1.3E+03 | 2.4E+00 | 2.4E+00 | 7.4E-02 | 7.3E-02 | 1.3E+03 |
| P | mg/L | 3.4E+03 | 4.9E+03 | 0.0E+00 | 4.9E-04 | 1.1E+01 | 1.1E-04 | 4.2E-01 | 4.2E-06 | 1.2E-02 | 9.6E+00 |
| P | mg/min | 1.2E+06 | 1.2E+06 | 0.0E+00 | 1.2E+03 | 1.2E+03 | 2.3E+00 | 2.2E+00 | 6.8E-02 | 6.8E-02 | 1.2E+03 |
| K | mg/L | 1.3E+04 | 1.8E+04 | 8.0E-01 | 5.1E-04 | 1.1E+01 | 1.1E-04 | 1.2E+00 | 1.2E-05 | 7.9E-01 | 1.0E+01 |
| K | mg/min | 4.3E+06 | 4.3E+06 | 6.1E+00 | 1.2E+03 | 1.2E+03 | 2.4E+00 | 6.1E+00 | 1.9E-01 | 4.4E+00 | 1.2E+03 |
| Se | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Se | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Si | mg/L | 1.3E+02 | 1.9E+02 | 0.0E+00 | 1.9E-05 | 4.1E-01 | 4.1E-06 | 2.4E+00 | 2.4E-05 | 2.6E+00 | 5.9E-01 |
| Si | mg/min | 4.5E+04 | 4.5E+04 | 0.0E+00 | 4.5E+01 | 4.5E+01 | 8.8E-02 | 1.3E+01 | 3.9E-01 | 1.5E+01 | 7.2E+01 |
| Ag | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ag | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Na | mg/L | 1.7E+05 | 2.4E+05 | 2.4E+00 | 8.0E-04 | 1.7E+01 | 1.7E-04 | 2.8E+00 | 2.8E-05 | 2.3E+00 | 1.6E+01 |
| Na | mg/min | 5.7E+07 | 5.7E+07 | 1.8E+01 | 1.9E+03 | 1.9E+03 | 3.7E+00 | 1.5E+01 | 4.5E-01 | 1.3E+01 | 1.9E+03 |
| SO4= | mg/L | 2.0E+03 | 2.9E+03 | 1.0E+01 | 2.1E-04 | 4.5E+00 | 4.1E-06 | 1.0E+01 | 9.5E-06 | 1.1E+01 | 5.0E+00 |
| SO4= | mg/min | 6.9E+05 | 6.9E+05 | 7.8E+01 | 5.0E+02 | 5.0E+02 | 8.7E-02 | 5.4E+01 | 1.5E-01 | 6.0E+01 | 6.1E+02 |
| S- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| S- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ti | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ti | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| W | mg/L | 1.5E+02 | 2.1E+02 | 0.0E+00 | 2.1E-05 | 4.5E-01 | 4.5E-06 | 1.8E-02 | 1.8E-07 | 5.2E-04 | 4.1E-01 |
| W | mg/min | 5.0E+04 | 5.0E+04 | 0.0E+00 | 5.0E+01 | 5.0E+01 | 9.7E-02 | 9.4E-02 | 2.9E-03 | 2.9E-03 | 5.0E+01 |
| U | mg/L | 5.3E+01 | 7.5E+01 | 6.4E-04 | 7.5E-06 | 1.6E-01 | 1.6E-06 | 7.0E-03 | 7.0E-08 | 7.3E-04 | 1.5E-01 |
| U | mg/min | 1.8E+04 | 1.8E+04 | 4.9E-03 | 1.8E+01 | 1.8E+01 | 3.5E-02 | 3.6E-02 | 1.1E-03 | 4.1E-03 | 1.8E+01 |
| V | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| V | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Zn | mg/L | 3.4E+01 | 4.8E+01 | 4.8E-02 | 4.8E-06 | 1.0E-01 | 1.0E-06 | 2.2E-02 | 2.2E-07 | 2.0E-02 | 9.6E-02 |
| Zn | mg/min | 1.1E+04 | 1.1E+04 | 3.6E-01 | 1.1E+01 | 1.1E+01 | 2.2E-02 | 1.1E-01 | 3.6E-03 | 1.1E-01 | 1.2E+01 |
| Zr | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Zr | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Acetone | mg/L | 4.5E-01 | 1.2E-02 | 0.0E+00 | 6.5E-05 | 1.0E+00 | 1.7E-03 | 6.7E-01 | 2.0E-03 | 7.1E-01 | 1.0E+00 |
| Acetone | mg/min | 1.5E+02 | 2.8E+00 | 0.0E+00 | 1.5E+02 | 1.1E+02 | 3.7E+01 | 3.5E+00 | 3.3E+01 | 5.1E+00 | 1.2E+02 |
| Alkyl. hydroxy- | mg/L | 1.3E+00 | 1.8E+00 | 0.0E+00 | 5.8E-06 | 1.3E-01 | 9.8E-08 | 4.1E-04 | 6.7E-10 | 1.9E-06 | 1.1E-01 |
| methyl benzene | mg/min | 4.4E+02 | 4.3E+02 | 0.0E+00 | 1.4E+01 | 1.4E+01 | 2.1E-03 | 2.1E-03 | 1.1E-05 | 1.1E-05 | 1.4E+01 |
| Benzyl alcohol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Benzyl alcohol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Benzaldehyde | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Benzaldehyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Benzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bromodichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| methane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bromoform | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bromoform | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Butanedioic | mg/L | 3.0E+02 | 4.2E+02 | 0.0E+00 | 1.8E-03 | 3.9E+01 | 6.8E-05 | 2.8E-01 | 7.9E-07 | 2.3E-03 | 3.6E+01 |
| Acid | mg/min | 1.0E+05 | 9.9E+04 | 0.0E+00 | 4.3E+03 | 4.3E+03 | 1.5E+00 | 1.5E+00 | 1.3E-02 | 1.3E-02 | 4.3E+03 |
| 1-Butanol | mg/L | 0.0E+00 | 2.1E-04 | 1.1E-02 | 1.9E-08 | 4.1E-04 | 8.0E-09 | 2.9E-05 | 1.3E-09 | 3.4E-06 | 3.7E-04 |
| 1-Butanol | mg/min | 0.0E+00 | 4.9E-02 | 8.4E-02 | 4.5E-02 | 4.5E-02 | 1.7E-04 | 1.5E-04 | 2.2E-05 | 1.9E-05 | 4.5E-02 |
| 2-Butanone | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 2-Butanone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| diglycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 2-Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethanol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Butoxytri-- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethyleneglycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Butraldehyde | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Butraldehyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| C3-Alkylbenzene | mg/L | 3.9E+02 | 3.2E+02 | 0.0E+00 | 2.3E-02 | 4.9E+02 | 8.5E-03 | 3.2E+01 | 1.2E-03 | 3.1E+00 | 4.5E+02 |
| C3-Alkylbenzene | mg/min | 1.3E+05 | 7.7E+04 | 0.0E+00 | 5.5E+04 | 5.5E+04 | 1.8E+02 | 1.6E+02 | 1.9E+01 | 1.7E+01 | 5.5E+04 |
| Caproic acid | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Caproic acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Carbon | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Tetrachloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Chlorodibromo- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Chloroethyl. 2- | mg/L | 1.3E+01 | 1.3E+01 | 0.0E+00 | 5.4E-04 | 1.2E+01 | 1.1E-04 | 4.2E-01 | 8.6E-06 | 2.4E-02 | 1.1E+01 |
| hydroxymethyl. | BA | 4.4E+03 | 3.1E+03 | 0.0E+00 | 1.3E+03 | 1.3E+03 | 2.3E+00 | 2.2E+00 | 1.4E-01 | 1.3E-01 | 1.3E+03 |
| Chloroform | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Chloroform | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 2-Chloromethyl- | mg/L | 1.4E+01 | 1.2E+01 | 0.0E+00 | 8.2E-04 | 1.8E+01 | 2.6E-04 | 9.8E-01 | 3.2E-05 | 8.6E-02 | 1.6E+01 |
| hydroxymethylbenzene | | 4.8E+03 | 2.9E+03 | 0.0E+00 | 2.0E+03 | 1.9E+03 | 5.6E+00 | 5.1E+00 | 5.2E-01 | 4.8E-01 | 2.0E+03 |
| 2-Chloromethyl- | mg/L | 1.5E+01 | 6.6E+00 | 0.0E+00 | 1.5E-03 | 3.1E+01 | 1.6E-03 | 4.9E+00 | 5.4E-04 | 1.2E+00 | 2.9E+01 |
| -o-xylene | mg/min | 5.1E+03 | 1.6E+03 | 0.0E+00 | 3.5E+03 | 3.5E+03 | 3.4E+01 | 2.5E+01 | 8.7E+00 | 6.8E+00 | 3.5E+03 |
| Citric Acid | mg/L | 2.8E+01 | 3.4E+01 | 0.0E+00 | 6.4E-04 | 1.4E+01 | 5.0E-05 | 2.0E-01 | 1.8E-06 | 5.0E-03 | 1.3E+01 |
| Citric Acid | mg/min | 9.6E+03 | 8.1E+03 | 0.0E+00 | 1.5E+03 | 1.5E+03 | 1.1E+00 | 1.1E+00 | 2.9E-02 | 2.8E-02 | 1.5E+03 |
| 1.2 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 1.1 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Diethyl- | mg/L | 4.6E+00 | 6.6E+00 | 0.0E+00 | 2.3E-06 | 4.8E-02 | 4.5E-09 | 1.9E-05 | 3.4E-12 | 9.9E-09 | 4.4E-02 |
| phthalates | mg/min | 1.6E+03 | 1.6E+03 | 0.0E+00 | 5.4E+00 | 5.4E+00 | 9.6E-05 | 9.6E-05 | 5.5E-08 | 5.5E-08 | 5.4E+00 |
| Difluorodi- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| chloromethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 3.5-Dimethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| pyridine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Dimethylnitro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| samine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Dimethyltoluidine | mg/L | 1.0E+01 | 1.2E+01 | 0.0E+00 | 2.4E-04 | 5.1E+00 | 2.0E-05 | 8.2E-02 | 7.6E-07 | 2.2E-03 | 4.7E+00 |
| Dimethyltoluidine | mg/min | 3.4E+03 | 2.8E+03 | 0.0E+00 | 5.7E+02 | 5.7E+02 | 4.4E-01 | 4.2E-01 | 1.2E-02 | 1.2E-02 | 5.7E+02 |
| Dioctylphthalate | mg/L | 9.0E+00 | 1.3E+01 | 0.0E+00 | 3.9E-06 | 8.4E-02 | 6.6E-09 | 2.7E-05 | 4.4E-12 | 1.3E-08 | 7.7E-02 |
| Dioctylphthalate | mg/min | 3.1E+03 | 3.1E+03 | 0.0E+00 | 9.4E+00 | 9.4E+00 | 1.4E-04 | 1.4E-04 | 7.1E-08 | 7.1E-08 | 9.4E+00 |
| Dodecane | mg/L | 2.2E+00 | 2.9E+00 | 0.0E+00 | 2.8E-05 | 6.1E-01 | 1.3E-06 | 5.5E-03 | 2.7E-08 | 7.6E-05 | 5.5E-01 |
| Dodecane | mg/min | 7.5E+02 | 6.8E+02 | 0.0E+00 | 6.7E+01 | 6.7E+01 | 2.9E-02 | 2.8E-02 | 4.3E-04 | 4.2E-04 | 6.7E+01 |
| Dodecanoic | mg/L | 6.6E-01 | 9.5E-01 | 0.0E+00 | 1.3E-07 | 2.9E-03 | 9.9E-11 | 4.1E-07 | 3.0E-14 | 8.6E-11 | 2.6E-03 |
| Acid | mg/min | 2.3E+02 | 2.3E+02 | 0.0E+00 | 3.2E-01 | 3.2E-01 | 2.1E-06 | 2.1E-06 | 4.8E-10 | 4.8E-10 | 3.2E-01 |
| Ethanedioic Acid | mg/L | 2.9E+03 | 4.2E+03 | 0.0E+00 | 1.8E-03 | 3.8E+01 | 3.4E-06 | 1.4E-02 | 2.8E-09 | 8.2E-06 | 3.5E+01 |
| Ethanedioic Acid | mg/min | 1.0E+06 | 1.0E+06 | 0.0E+00 | 4.3E+03 | 4.3E+03 | 7.3E-02 | 7.3E-02 | 4.6E-05 | 4.6E-05 | 4.3E+03 |
| Ethoxytri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethylene glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ethyl.2-methyl- | mg/L | 3.3E+01 | 4.6E+01 | 0.0E+00 | 6.8E-05 | 1.5E+00 | 5.1E-07 | 2.1E-03 | 1.6E-09 | 4.5E-06 | 1.3E+00 |
| hydroxymethylbenzenes | | 1.1E+04 | 1.1E+04 | 0.0E+00 | 1.6E+02 | 1.6E+02 | 1.1E-02 | 1.1E-02 | 2.5E-05 | 2.5E-05 | 1.6E+02 |
| Ethyl alcohol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ethyl alcohol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ethyl Benzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ethyl Benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ethylbenz- | mg/L | 5.2E+02 | 6.9E+02 | 0.0E+00 | 4.9E-03 | 1.1E+02 | 1.7E-04 | 6.9E-01 | 2.4E-06 | 6.9E-03 | 9.6E+01 |
| aldahyde | mg/min | 1.8E+05 | 1.6E+05 | 0.0E+00 | 1.2E+04 | 1.2E+04 | 3.6E+00 | 3.6E+00 | 3.9E-02 | 3.9E-02 | 1.2E+04 |
| ED3A | mg/L | 8.0E+00 | 1.1E+01 | 0.0E+00 | 6.9E-08 | 1.5E-03 | 2.4E-12 | 9.8E-09 | 3.2E-17 | 9.2E-14 | 1.4E-03 |
| ED3A | mg/min | 2.7E+03 | 2.7E+03 | 0.0E+00 | 1.7E-01 | 1.7E-01 | 5.1E-08 | 5.1E-08 | 5.1E-13 | 5.1E-13 | 1.7E-01 |
| EDTA | mg/L | 2.4E+01 | 3.4E+01 | 0.0E+00 | 2.0E-07 | 4.4E-03 | 7.0E-12 | 2.9E-08 | 9.3E-17 | 2.7E-13 | 4.0E-03 |
| EDTA | mg/min | 8.0E+03 | 8.0E+03 | 0.0E+00 | 4.9E-01 | 4.9E-01 | 1.5E-07 | 1.5E-07 | 1.5E-12 | 1.5E-12 | 4.9E-01 |
| Ethylxylene | mg/L | 2.7E-01 | 3.2E-01 | 0.0E+00 | 7.0E-06 | 1.5E-01 | 6.7E-07 | 2.7E-03 | 2.8E-08 | 7.9E-05 | 1.4E-01 |
| Ethylxylene | mg/min | 9.2E+01 | 7.5E+01 | 0.0E+00 | 1.7E+01 | 1.7E+01 | 1.4E-02 | 1.4E-02 | 4.6E-04 | 4.4E-04 | 1.7E+01 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Heptadecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Heptadecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Heptadecanoic | mg/L | 1.7E+00 | 2.4E+00 | 0.0E+00 | 9.0E-07 | 1.9E-02 | 1.8E-09 | 7.5E-06 | 1.5E-12 | 4.3E-09 | 1.8E-02 |
| Acid | mg/min | 5.7E+02 | 5.7E+02 | 0.0E+00 | 2.2E+00 | 2.2E+00 | 3.9E-05 | 3.9E-05 | 2.4E-08 | 2.4E-08 | 2.2E+00 |
| Heptanedioic | mg/L | 1.9E+01 | 2.7E+01 | 0.0E+00 | 1.4E-05 | 3.0E-01 | 2.6E-08 | 1.1E-04 | 2.4E-11 | 7.0E-08 | 2.8E-01 |
| Acid | mg/min | 6.4E+03 | 6.4E+03 | 0.0E+00 | 3.4E+01 | 3.4E+01 | 5.6E-04 | 5.6E-04 | 3.9E-07 | 3.9E-07 | 3.4E+01 |
| Hexadecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Hexadecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Hexadecanoic | mg/L | 5.9E-01 | 8.3E-01 | 0.0E+00 | 4.8E-07 | 1.0E-02 | 1.5E-09 | 6.0E-06 | 1.8E-12 | 5.2E-09 | 9.4E-03 |
| Acid | mg/min | 2.0E+02 | 2.0E+02 | 0.0E+00 | 1.1E+00 | 1.1E+00 | 3.1E-05 | 3.1E-05 | 2.9E-08 | 2.9E-08 | 1.1E+00 |
| Hexanedioic | mg/L | 2.5E+01 | 3.6E+01 | 0.0E+00 | 3.8E-07 | 8.2E-03 | 2.3E-11 | 9.6E-08 | 5.5E-16 | 1.6E-12 | 7.5E-03 |
| Acid | mg/min | 8.5E+03 | 8.5E+03 | 0.0E+00 | 9.1E-01 | 9.1E-01 | 5.0E-07 | 5.0E-07 | 8.9E-12 | 8.9E-12 | 9.1E-01 |
| Hexanoic | mg/L | 3.0E+01 | 4.3E+01 | 0.0E+00 | 2.0E-05 | 4.3E-01 | 1.9E-08 | 7.9E-05 | 1.2E-11 | 3.5E-08 | 3.9E-01 |
| Acid | mg/min | 1.0E+04 | 1.0E+04 | 0.0E+00 | 4.7E+01 | 4.7E+01 | 4.1E-04 | 4.1E-04 | 2.0E-07 | 2.0E-07 | 4.7E+01 |
| Hydroxyacetic | mg/L | 6.8E+01 | 4.6E+01 | 0.0E+00 | 5.1E-03 | 1.1E+02 | 3.0E-03 | 1.1E+01 | 6.0E-04 | 1.5E+00 | 1.0E+02 |
| Acid | mg/min | 2.3E+04 | 1.1E+04 | 0.0E+00 | 1.2E+04 | 1.2E+04 | 6.4E+01 | 5.4E+01 | 9.7E+00 | 8.6E+00 | 1.2E+04 |
| 2-Hydroxymethyl- | mg/L | 2.0E+01 | 2.7E+01 | 0.0E+00 | 1.2E-04 | 2.6E+00 | 2.4E-06 | 9.8E-03 | 2.1E-08 | 5.9E-05 | 2.4E+00 |
| benzoic Acid | mg/min | 6.8E+03 | 6.5E+03 | 0.0E+00 | 2.9E+02 | 2.9E+02 | 5.1E-02 | 5.1E-02 | 3.3E-04 | 3.3E-04 | 2.9E+02 |
| Methoxydi- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Methosytri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| Methylbenz- | mg/L | 5.0E+02 | 6.9E+02 | 0.0E+00 | 3.2E-03 | 6.9E+01 | 6.6E-05 | 2.7E-01 | 6.0E-07 | 1.7E-03 | [illegible] |
| aldahyde | mg/min | 1.7E+05 | 1.6E+05 | 0.0E+00 | 7.7E+03 | 7.7E+03 | 1.4E+00 | 1.4E+00 | 9.7E-03 | 9.6E-03 | [illegible] |
| 2-Methylbenzoic | mg/L | 1.4E+01 | 1.8E+01 | 0.0E+00 | 1.5E-04 | 3.3E+00 | 5.2E-06 | 2.1E-02 | 8.0E-08 | 2.3E-04 | [illegible] |
| Acid | mg/min | 4.8E+03 | 4.4E+03 | 0.0E+00 | 3.6E+02 | 3.6E+02 | 1.1E-01 | 1.1E-01 | 1.3E-03 | 1.3E-03 | [illegible] |
| Methylene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| chloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| 2-Methyl.hydroxy- | mg/L | 2.6E+02 | 3.5E+02 | 0.0E+00 | 2.9E-03 | 6.2E+01 | 9.7E-05 | 4.0E-01 | 1.5E-06 | 4.3E-03 | [illegible] |
| methyl benzene | mg/min | 9.0E+04 | 8.3E+04 | 0.0E+00 | 6.8E+03 | 6.8E+03 | 2.1E+00 | 2.1E+00 | 2.4E-02 | 2.4E-02 | [illegible] |
| Methyl n-propyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| ketone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| Methyl n-butyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| ketone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| MIBK | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| (Hexone) | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| 2-Methyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| nonane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| Methyl- | mg/L | 2.5E+00 | 3.5E+00 | 0.0E+00 | 9.2E-06 | 2.0E-01 | 1.2E-07 | 5.1E-04 | 6.9E-10 | 2.0E-06 | [illegible] |
| toluidine | mg/min | 8.5E+02 | 8.3E+02 | 0.0E+00 | 2.2E+01 | 2.2E+01 | 2.7E-03 | 2.7E-03 | 1.1E-05 | 1.1E-05 | [illegible] |
| n-C22H46 - | mg/L | 1.3E+01 | 1.8E+01 | 0.0E+00 | 1.8E-06 | 4.0E-02 | 1.3E-09 | 5.3E-06 | 3.1E-13 | 9.1E-10 | [illegible] |
| C40H82 | mg/min | 4.3E+03 | 4.3E+03 | 0.0E+00 | 4.4E+00 | 4.4E+00 | 2.7E-05 | 2.7E-05 | 5.1E-09 | 5.1E-09 | [illegible] |
| HEDTA | mg/L | 1.5E+01 | 2.1E+01 | 0.0E+00 | 8.5E-05 | 1.8E+00 | 1.7E-06 | 7.0E-03 | 1.4E-08 | 4.1E-05 | [illegible] |
| HEDTA | mg/min | 5.1E+03 | 4.9E+03 | 0.0E+00 | 2.0E+02 | 2.0E+02 | 3.6E-02 | 3.6E-02 | 2.3E-04 | 2.3E-04 | [illegible] |
| MAIDA | mg/L | 4.1E+02 | 5.8E+02 | 0.0E+00 | 5.3E-04 | 1.1E+01 | 2.1E-06 | 8.5E-03 | 3.6E-09 | 1.0E-05 | [illegible] |
| MAIDA | mg/min | 1.4E+05 | 1.4E+05 | 0.0E+00 | 1.3E+03 | 1.3E+03 | 4.4E-02 | 4.4E-02 | 5.8E-05 | 5.8E-05 | [illegible] |
| MICEDA | mg/L | 2.1E+01 | 3.0E+01 | 0.0E+00 | 2.7E-05 | 5.9E-01 | 1.1E-07 | 4.4E-04 | 1.8E-10 | 5.3E-07 | [illegible] |
| MICEDA | mg/min | 7.2E+03 | 7.1E+03 | 0.0E+00 | 6.5E+01 | 6.5E+01 | 2.3E-03 | 2.3E-03 | 3.0E-06 | 3.0E-06 | [illegible] |
| Nitrilotri- | mg/L | 4.2E+00 | 6.0E+00 | 0.0E+00 | 5.5E-06 | 1.2E-01 | 2.1E-08 | 8.8E-05 | 3.7E-11 | 1.1E-07 | [illegible] |
| acetic Acid | mg/min | 1.4E+03 | 1.4E+03 | 0.0E+00 | 1.3E+01 | 1.3E+01 | 4.6E-04 | 4.5E-04 | 6.0E-07 | 6.0E-07 | [illegible] |
| Octodecanoic | mg/L | 2.9E-01 | 4.1E-01 | 0.0E+00 | 1.6E-07 | 3.5E-03 | 3.4E-10 | 1.4E-06 | 2.9E-13 | 8.3E-10 | [illegible] |
| Acid | mg/min | 9.8E+01 | 9.7E+01 | 0.0E+00 | 3.8E-01 | 3.8E-01 | 7.3E-06 | 7.3E-06 | 4.7E-09 | 4.7E-09 | [illegible] |
| o-Xylene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| o-Xylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| p-Chlorotoluene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| p-Chlorotoluene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| p-Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | [illegible] |
| Pentadecane | mg/L | 1.6E+00 | 2.2E+00 | 0.0E+00 | 2.4E-06 | 5.2E-02 | 1.4E-08 | 5.7E-05 | 3.2E-11 | 9.1E-08 | 4.8E-02 |
| Pentadecane | mg/min | 5.4E+02 | 5.3E+02 | 0.0E+00 | 5.8E+00 | 5.8E+00 | 2.9E-04 | 2.9E-04 | 5.1E-07 | 5.1E-07 | 5.8E+00 |
| Pentadecanoic | mg/L | 2.5E+01 | 3.5E+01 | 0.0E+00 | 3.1E-05 | 6.6E-01 | 1.4E-07 | 5.8E-04 | 2.6E-10 | 7.6E-07 | 6.0E-01 |
| Acid | mg/min | 8.3E+03 | 8.3E+03 | 0.0E+00 | 7.3E+01 | 7.3E+01 | 3.0E-03 | 3.0E-03 | 4.2E-06 | 4.2E-06 | 7.3E+01 |
| Pentanedioic | mg/L | 4.9E+01 | 7.0E+01 | 0.0E+00 | 4.0E-07 | 8.5E-03 | 1.1E-11 | 4.6E-08 | 1.3E-16 | 3.7E-13 | 7.8E-03 |
| Acid | mg/min | 1.7E+04 | 1.7E+04 | 0.0E+00 | 9.5E-01 | 9.5E-01 | 2.4E-07 | 2.4E-07 | 2.1E-12 | 2.1E-12 | 9.5E-01 |
| Phenol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Phenol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | Feed | Slurry | FRW | C-A-1 Vapor | E-C-1 Cond. | E-C-1 Vapor | E-C-2 Cond. | E-C-2 Vapor | E-C-3 Cond. | Process Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2-Propanol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 2-Propanol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Propylbenzene | mg/L | 2.4E+00 | 1.8E+00 | 0.0E+00 | 1.7E-04 | 3.5E+00 | 8.0E-05 | 2.9E-01 | 1.4E-05 | 3.6E-02 | 3.2E+00 |
| Propylbenzene | mg/min | 8.2E+02 | 4.2E+02 | 0.0E+00 | 3.9E+02 | 3.9E+02 | 1.7E+00 | 1.5E+00 | 2.2E-01 | 2.0E-01 | 3.9E+02 |
| Pyridine | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Pyridine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Tetrachloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Tetradecane | mg/L | 5.9E+00 | 8.2E+00 | 0.0E+00 | 2.0E-05 | 4.2E-01 | 2.4E-07 | 1.0E-03 | 1.2E-09 | 3.5E-06 | 3.8E-01 |
| Tetradecane | mg/min | 2.0E+03 | 2.0E+03 | 0.0E+00 | 4.7E+01 | 4.7E+01 | 5.2E-03 | 5.2E-03 | 2.0E-05 | 2.0E-05 | 4.7E+01 |
| Tetrahydro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| furan | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Tributyl | mg/L | 1.6E+01 | 2.2E+01 | 0.0E+00 | 5.7E-05 | 1.2E+00 | 6.9E-07 | 2.9E-03 | 3.6E-09 | 1.0E-05 | 1.1E+00 |
| phosphate | mg/min | 5.4E+03 | 5.2E+03 | 0.0E+00 | 1.4E+02 | 1.4E+02 | 1.5E-02 | 1.5E-02 | 5.9E-05 | 5.9E-05 | 1.4E+02 |
| Tri-n-butyl- | mg/L | 7.7E+00 | 1.1E+01 | 0.0E+00 | 2.8E-05 | 6.0E-01 | 3.4E-07 | 1.4E-03 | 1.8E-09 | 5.1E-06 | 5.4E-01 |
| (di-ol)-phosphate | | 2.6E+03 | 2.6E+03 | 0.0E+00 | 6.6E+01 | 6.6E+01 | 7.3E-03 | 7.3E-03 | 2.9E-05 | 2.9E-05 | 6.6E+01 |
| 1.1.1-Tri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| chlorethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Trichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Trichloromethane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Trichloromethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Tridecane | mg/L | 1.1E+01 | 1.5E+01 | 0.0E+00 | 9.1E-05 | 2.0E+00 | 4.1E-06 | 1.7E-02 | 6.3E-08 | 1.8E-04 | 1.8E+00 |
| Tridecane | mg/min | 3.7E+03 | 3.5E+03 | 0.0E+00 | 2.2E+02 | 2.2E+02 | 8.9E-02 | 8.8E-02 | 1.0E-03 | 1.0E-03 | 2.2E+02 |
| Triglyme | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Triglyme | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 1.3.5 Trimethyl | mg/L | 1.2E+02 | 7.8E+01 | 0.0E+00 | 9.9E-03 | 2.1E+02 | 6.8E-03 | 2.3E+01 | 1.6E-03 | 3.9E+00 | 1.9E+02 |
| benzene | mg/min | 4.2E+04 | 1.9E+04 | 0.0E+00 | 2.4E+04 | 2.4E+04 | 1.5E+02 | 1.2E+02 | 2.5E+01 | 2.2E+01 | 2.4E+04 |
| Toluene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Toluene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Vinyl Chloride | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Vinyl Chloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Undecane | mg/L | 1.6E-00 | 1.9E+00 | 0.0E+00 | 4.2E-05 | 9.1E-01 | 4.3E-06 | 1.7E-02 | 1.9E-07 | 5.3E-04 | 8.3E-01 |
| Undecane | mg/min | 5.5E+02 | 4.4E+02 | 0.0E+00 | 1.0E+02 | 1.0E+02 | 9.3E-02 | 9.0E-02 | 3.0E-03 | 3.0E-03 | 1.0E+02 |
| Unknown | mg/L | 9.2E+00 | 1.3E+01 | 0.0E+00 | 4.5E-06 | 9.7E-02 | 8.9E-09 | 3.7E-05 | 6.8E-12 | 2.0E-08 | 8.8E-02 |
| phthalates | mg/min | 3.1E+03 | 3.1E+03 | 0.0E+00 | 1.1E+01 | 1.1E+01 | 1.9E-04 | 1.9E-04 | 1.1E-07 | 1.1E-07 | 1.1E+01 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | Eluted IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Form | | Liquid | Liquid | Liquid | Liquid | Gas | Gas | Gas | Gas | Steam | Liquid |
| L/min | Total | 1.2E+02 | | | | 1.5E+04 | 1.8E+04 | 1.8E+04 | 1.8E+04 | 2.9E+05 | 2.1E+02 |
| Batch | L/Batch | | | 1.3E+04 | 1.3E+04 | | | | | | |
| Temperature | C | 2.8E+01 | 2.8E+01 | 7.0E+01 | 7.0E+01 | 1.0E+01 | 3.8E+01 | 6.6E+01 | 6.6E+01 | 1.1E+02 | 3.8E+01 |
| Sp. Gr. | unitless | 1.0E+00 | 9.0E-01 | 1.0E+00 | 1.0E+00 | 9.6E-01 | 8.6E-01 | 7.9E-01 | 8.0E-01 | 8.7E-01 | 9.9E-01 |
| Abs. Pressure | Torr | 7.6E+02 | 7.6E+02 | | | 7.6E+02 | 7.4E+02 | 7.5E+02 | 7.5E+02 | 9.2E+02 | 7.6E+02 |
| Abs. Pressure | Pa | 1.0E+05 | 1.0E+05 | | | 1.0E+05 | 9.9E+04 | 1.0E+05 | 1.0E+05 | 1.2E+05 | 1.0E+05 |
| pH | | 1.0E+01 | 7.0E+00 | | | | | | | | 8.0E+00 |
| TOC | mg/L | 2.6E+02 | | | | 0.0E+00 | 5.0E-05 | 5.0E-05 | 5.0E-05 | 7.7E-04 | 1.1E+00 |
| TOC | mg/min | 3.2E+04 | | | | 0.0E+00 | 9.0E-01 | 9.0E-01 | 9.0E-01 | 2.3E+02 | 2.3E+02 |
| TDS | mg/L | 3.4E-01 | | | | 0.0E+00 | 1.3E-04 | 1.3E-04 | 1.3E-06 | 5.4E-02 | 7.6E+01 |
| TDS | mg/min | 4.1E+01 | | | | 0.0E+00 | 2.4E+00 | 2.4E+00 | 2.4E-02 | 1.6E+04 | 1.6E+04 |
| H2O | L/min | 1.2E+02 | | | | 9.0E+01 | 4.4E+02 | 4.4E+02 | 4.4E+02 | 2.9E+05 | 2.1E+02 |
| H2O | kg/min | 1.2E+02 | | | | 7.0E-02 | 3.0E-01 | 3.0E-01 | 3.0E-01 | 2.0E+02 | 2.0E+02 |
| Air | L/min | 0.0E+00 | | | | 1.5E+04 | 1.8E+04 | 1.8E+04 | 1.8E+04 | 0.0E+00 | 0.0E+00 |
| Air | kg/min | 0.0E+00 | | | | 1.8E+01 | 2.0E+01 | 2.0E+01 | 2.0E+01 | 0.0E+00 | 0.0E+00 |
| Heat | Joules/min | | | 2.4E+09 | | | 4.7E+05 | 5.6E+05 | | 5.2E+08 | |
| Alpha | uCi/ml | 5.7E-11 | | | | | 1.1E-15 | 1.1E-15 | 1.1E-17 | 4.6E-13 | 6.5E-10 |
| Alpha | uCi/min | 7.0E-06 | | | | | 2.1E-08 | 2.1E-08 | 2.1E-10 | 1.3E-04 | 1.3E-04 |
| Beta | uCi/ml | 6.8E-13 | | | | | 1.2E-19 | 1.2E-19 | 1.2E-21 | 0.0E+00 | 0.0E+00 |
| Beta | uCi/min | 8.3E-08 | | | | | 2.2E-12 | 2.2E-12 | 2.2E-14 | 0.0E+00 | 0.0E+00 |
| 3H | uCi/ml | 3.0E-02 | | | | | 8.5E-08 | 8.5E-08 | 8.5E-08 | 0.0E+00 | 0.0E+00 |
| 3H | uCi/min | 3.6E+03 | | | | | 1.5E+00 | 1.5E+00 | 1.5E+00 | 0.0E+00 | 0.0E+00 |
| 14C | uCi/ml | 2.7E-06 | | | | | 5.0E-13 | 5.0E-13 | 5.0E-15 | 2.8E-12 | 4.0E-09 |
| 14C | uCi/min | 3.3E-01 | | | | | 9.0E-06 | 9.0E-06 | 9.0E-08 | 8.3E-04 | 8.3E-04 |
| 60Co | uCi/ml | 6.4E-05 | | | | | 1.2E-11 | 1.2E-11 | 1.2E-13 | 0.0E+00 | 0.0E+00 |
| 60Co | uCi/min | 7.9E+00 | | | | | 2.1E-04 | 2.1E-04 | 2.1E-06 | 0.0E+00 | 0.0E+00 |
| 63Ni | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 63Ni | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 79Se | uCi/ml | 2.9E-05 | | | | | 5.2E-12 | 5.2E-12 | 5.2E-12 | 0.0E+00 | 0.0E+00 |
| 79Se | uCi/min | 3.5E+00 | | | | | 9.4E-05 | 9.4E-05 | 9.4E-05 | 0.0E+00 | 0.0E+00 |
| 90Sr | uCi/ml | 4.6E-06 | | | | | 9.1E-13 | 9.1E-13 | 9.1E-15 | 3.5E-13 | 5.0E-10 |
| 90Sr | uCi/min | 5.6E-01 | | | | | 1.7E-05 | 1.7E-05 | 1.7E-07 | 1.0E-04 | 1.0E-04 |
| 93Zr | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 93Zr | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 94Nb | uCi/ml | 4.8E-05 | | | | | 8.7E-12 | 8.7E-12 | 8.7E-14 | 0.0E+00 | 0.0E+00 |
| 94Nb | uCi/min | 5.9E+00 | | | | | 1.6E-04 | 1.6E-04 | 1.6E-06 | 0.0E+00 | 0.0E+00 |
| 99Tc | uCi/ml | 2.4E-04 | | | | | 4.3E-11 | 4.3E-11 | 4.3E-13 | 0.0E+00 | 0.0E+00 |
| 99Tc | uCi/min | 2.9E+01 | | | | | 7.8E-04 | 7.8E-04 | 7.8E-06 | 0.0E+00 | 0.0E+00 |
| 106Ru | uCi/ml | 2.5E-05 | | | | | 2.8E-13 | 2.8E-13 | 2.8E-13 | 0.0E+00 | 0.0E+00 |
| 106Ru | uCi/min | 3.1E+00 | | | | | 5.1E-06 | 5.1E-06 | 5.1E-06 | 0.0E+00 | 0.0E+00 |
| 113Sn | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 113Sn | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 129I | uCi/ml | 2.0E-04 | | | | | 2.6E-11 | 2.6E-11 | 2.6E-11 | 0.0E+00 | 0.0E+00 |
| 129I | uCi/min | 2.4E+01 | | | | | 4.6E-04 | 4.6E-04 | 4.6E-04 | 0.0E+00 | 0.0E+00 |
| 134Cs | uCi/ml | 8.0E-05 | | | | | 6.6E-12 | 6.6E-12 | 6.6E-14 | 0.0E+00 | 0.0E+00 |
| 134Cs | uCi/min | 9.8E+00 | | | | | 1.2E-04 | 1.2E-04 | 1.2E-06 | 0.0E+00 | 0.0E+00 |
| 135Cs | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 135Cs | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 137Cs | uCi/ml | 5.4E-07 | | | | | 5.3E-14 | 5.3E-14 | 5.3E-16 | 0.0E+00 | 0.0E+00 |
| 137Cs | uCi/min | 6.6E-02 | | | | | 9.7E-07 | 9.7E-07 | 9.7E-09 | 0.0E+00 | 0.0E+00 |
| 144Ce | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 144Ce | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 155Eu | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 155Eu | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | Eluted IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 226Ra | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 226Ra | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 233U | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 233U | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 234U | uCi/ml | 7.2E-08 | | | | | 1.3E-14 | 1.3E-14 | 1.3E-16 | 1.4E-13 | 1.9E-10 |
| 234U | uCi/min | 8.7E-03 | | | | | 2.4E-07 | 2.4E-07 | 2.4E-09 | 4.0E-05 | 4.0E-05 |
| 235U | uCi/ml | 3.5E-09 | | | | | 6.4E-16 | 6.4E-16 | 6.4E-18 | 0.0E+00 | 0.0E+00 |
| 235U | uCi/min | 4.3E-04 | | | | | 1.2E-08 | 1.2E-08 | 1.2E-10 | 0.0E+00 | 0.0E+00 |
| 238U | uCi/ml | 2.6E-08 | | | | | 5.0E-15 | 5.0E-15 | 5.0E-17 | 1.2E-13 | 1.7E-10 |
| 238U | uCi/min | 3.2E-03 | | | | | 9.1E-08 | 9.1E-08 | 9.1E-10 | 3.5E-05 | 3.5E-05 |
| 237Np | uCi/ml | 1.2E-07 | | | | | 2.2E-14 | 2.2E-14 | 2.2E-16 | 0.0E+00 | 0.0E+00 |
| 237Np | uCi/min | 1.5E-02 | | | | | 4.1E-07 | 4.1E-07 | 4.1E-09 | 0.0E+00 | 0.0E+00 |
| 238Pu | uCi/ml | 3.9E-10 | | | | | 1.4E-17 | 1.4E-17 | 1.4E-19 | 0.0E+00 | 0.0E+00 |
| 238Pu | uCi/min | 4.7E-05 | | | | | 2.6E-10 | 2.6E-10 | 2.6E-12 | 0.0E+00 | 0.0E+00 |
| 239Pu | uCi/ml | 8.0E-10 | | | | | 3.0E-17 | 3.0E-17 | 3.0E-19 | 0.0E+00 | 0.0E+00 |
| 239Pu | uCi/min | 9.8E-05 | | | | | 5.4E-10 | 5.4E-10 | 5.4E-12 | 0.0E+00 | 0.0E+00 |
| 240Pu | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 240Pu | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 241Am | uCi/ml | 3.0E-09 | | | | | 1.1E-16 | 1.1E-16 | 1.1E-18 | 0.0E+00 | 0.0E+00 |
| 241Am | uCi/min | 3.7E-04 | | | | | 2.0E-09 | 2.0E-09 | 2.0E-11 | 0.0E+00 | 0.0E+00 |
| 243Am | uCi/ml | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 243Am | uCi/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| 244Cm | uCi/ml | 4.8E-07 | | | | | 8.6E-14 | 8.6E-14 | 8.6E-16 | 0.0E+00 | 0.0E+00 |
| 244Cm | uCi/min | 5.8E-02 | | | | | 1.6E-06 | 1.6E-06 | 1.6E-08 | 0.0E+00 | 0.0E+00 |
| AlO2- | mg/L | 4.1E+01 | | | | | 7.5E-06 | 7.5E-06 | 7.5E-08 | 0.0E+00 | 0.0E+00 |
| AlO2- | mg/min | 5.1E+03 | | | | | 1.4E-01 | 1.4E-01 | 1.4E-03 | 0.0E+00 | 0.0E+00 |
| NH4+ | mg/L | 2.3E+03 | | | | | 1.9E-01 | 1.9E-01 | 1.9E-01 | 4.4E-05 | 6.3E-02 |
| NH4+ | mg/min | 2.8E+05 | | | | | 3.4E+03 | 3.4E+03 | 3.4E+03 | 1.3E+01 | 1.3E+01 |
| Sb | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Sb | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| As | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| As | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ba | mg/L | 3.0E-02 | | | | | 6.0E-08 | 6.0E-08 | 6.0E-10 | 2.2E-05 | 3.1E-02 |
| Ba | mg/min | 3.7E+00 | | | | | 1.1E-03 | 1.1E-03 | 1.1E-05 | 6.4E+00 | 6.4E+00 |
| Be | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Be | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bi | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Bi | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| B | mg/L | 3.5E-02 | | | | | 3.9E-08 | 3.9E-08 | 3.9E-10 | 1.3E-05 | 1.8E-02 |
| B | mg/min | 4.3E+00 | | | | | 7.0E-04 | 7.0E-04 | 7.0E-06 | 3.8E+00 | 3.8E+00 |
| Ca | mg/L | 1.9E+00 | | | | | 3.4E-05 | 3.4E-05 | 3.4E-07 | 1.4E-02 | 1.9E+01 |
| Ca | mg/min | 2.3E+02 | | | | | 6.2E-01 | 6.2E-01 | 6.2E-03 | 4.0E+03 | 4.0E+03 |
| Cd | mg/L | 3.1E-02 | | | | | 5.7E-09 | 5.7E-09 | 5.7E-11 | 0.0E+00 | 0.0E+00 |
| Cd | mg/min | 3.8E+00 | | | | | 1.0E-04 | 1.0E-04 | 1.0E-06 | 0.0E+00 | 0.0E+00 |
| CO3= | mg/L | 2.4E+01 | | | | | 4.4E-06 | 4.4E-06 | 4.4E-08 | 0.0E+00 | 0.0E+00 |
| CO3= | mg/min | 3.0E+03 | | | | | 8.0E-02 | 8.0E-02 | 8.0E-04 | 0.0E+00 | 0.0E+00 |
| Cl- | mg/L | 2.4E+01 | | | | | 5.2E-07 | 5.2E-07 | 5.2E-09 | 7.7E-04 | 1.1E+00 |
| Cl- | mg/min | 3.0E+03 | | | | | 9.4E-03 | 9.4E-03 | 9.4E-05 | 2.3E+02 | 2.3E+02 |
| Cr | mg/L | 3.4E-02 | | | | | 7.4E-10 | 7.4E-10 | 7.4E-12 | 0.0E+00 | 0.0E+00 |
| Cr | mg/min | 4.1E+00 | | | | | 1.3E-05 | 1.3E-05 | 1.3E-07 | 0.0E+00 | 0.0E+00 |
| Cu | mg/L | 1.5E-02 | | | | | 2.2E-08 | 2.2E-08 | 2.2E-10 | 7.7E-06 | 1.1E-02 |
| Cu | mg/min | 1.8E+00 | | | | | 4.0E-04 | 4.0E-04 | 4.0E-06 | 2.3E+00 | 2.3E+00 |
| CN- | mg/L | 9.5E-02 | | | | | 1.7E-08 | 1.7E-08 | 1.7E-10 | 0.0E+00 | 0.0E+00 |
| CN- | mg/min | 1.2E+01 | | | | | 3.1E-04 | 3.1E-04 | 3.1E-06 | 0.0E+00 | 0.0E+00 |
| F- | mg/L | 4.3E-02 | | | | | 3.8E-08 | 3.8E-08 | 3.8E-10 | 9.1E-05 | 1.3E-01 |
| F- | mg/min | 5.3E+00 | | | | | 6.8E-04 | 6.8E-04 | 6.8E-06 | 2.7E+01 | 2.7E+01 |
| Fe | mg/L | 8.5E-02 | | | | | 1.6E-07 | 1.6E-07 | 1.6E-09 | 5.9E-05 | 8.4E-02 |
| Fe | mg/min | 1.0E+01 | | | | | 3.0E-03 | 3.0E-03 | 3.0E-05 | 1.7E+01 | 1.7E+01 |
| H2 | mg/L | 2.0E-11 | | | | | 1.2E-07 | 1.2E-07 | 1.2E-07 | 0.0E+00 | 0.0E+00 |
| H2 | mg/min | 2.4E-09 | | | | | 2.2E-03 | 2.2E-03 | 2.2E-03 | 0.0E+00 | 0.0E+00 |
| OH- | mg/L | 1.4E+02 | | | | | 2.5E-05 | 2.5E-05 | 2.5E-07 | 0.0E+00 | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| OH- | mg/min | 1.7E+04 | | | | | 4.5E-01 | 4.5E-01 | 4.5E-03 | 0.0E+00 | 0.0E+00 |
| Pb | mg/L | 4.6E+00 | | | | | 1.9E-08 | 1.9E-08 | 1.9E-10 | 3.9E-06 | 5.5E-03 |
| Pb | mg/min | 5.6E+02 | | | | | 3.5E-04 | 3.5E-04 | 3.5E-06 | 1.1E+00 | 1.1E+00 |
| Mg | mg/L | 4.6E-01 | | | | | 8.0E-06 | 8.0E-06 | 8.0E-08 | 3.2E-03 | 4.5E+00 |
| Mg | mg/min | 5.6E+01 | | | | | 1.5E-01 | 1.5E-01 | 1.5E-03 | 9.4E+02 | 9.4E+02 |
| Mn | mg/L | 5.8E-02 | | | | | 3.5E-08 | 3.5E-08 | 3.5E-10 | 1.0E-05 | 1.4E-02 |
| Mn | mg/min | 7.1E+00 | | | | | 6.4E-04 | 6.4E-04 | 6.4E-06 | 2.9E+00 | 2.9E+00 |
| Hg | mg/L | 1.6E-02 | | | | | 3.0E-09 | 3.0E-09 | 3.0E-11 | 7.4E-08 | 1.1E-04 |
| Hg | mg/min | 1.9E+00 | | | | | 5.5E-05 | 5.5E-05 | 5.5E-07 | 2.2E-02 | 2.2E-02 |
| Mo | mg/L | 1.2E-01 | | | | | 2.1E-08 | 2.1E-08 | 2.1E-10 | 0.0E+00 | 0.0E+00 |
| Mo | mg/min | 1.4E+01 | | | | | 3.9E-04 | 3.9E-04 | 3.9E-06 | 0.0E+00 | 0.0E+00 |
| Ni | mg/L | 7.9E-02 | | | | | 1.4E-08 | 1.4E-08 | 1.4E-10 | 0.0E+00 | 0.0E+00 |
| Ni | mg/min | 9.6E+00 | | | | | 2.6E-04 | 2.6E-04 | 2.6E-06 | 0.0E+00 | 0.0E+00 |
| NO3- | mg/L | 6.1E+02 | | | | | 6.8E-06 | 6.8E-06 | 6.8E-08 | 3.9E-04 | 5.5E-01 |
| NO3- | mg/min | 7.4E+04 | | | | | 1.2E-01 | 1.2E-01 | 1.2E-03 | 1.1E+02 | 1.1E+02 |
| NO2- | mg/L | 7.0E+01 | | | | | 7.8E-07 | 7.8E-07 | 7.8E-09 | 0.0E+00 | 0.0E+00 |
| NO2- | mg/min | 8.6E+03 | | | | | 1.4E-02 | 1.4E-02 | 1.4E-04 | 0.0E+00 | 0.0E+00 |
| PO4 | mg/L | 1.0E+01 | | | | | 1.9E-06 | 1.9E-06 | 1.9E-08 | 0.0E+00 | 0.0E+00 |
| PO4 | mg/min | 1.3E+03 | | | | | 3.4E-02 | 3.4E-02 | 3.4E-04 | 0.0E+00 | 0.0E+00 |
| P | mg/L | 9.6E+00 | | | | | 1.7E-06 | 1.7E-06 | 1.7E-08 | 0.0E+00 | 0.0E+00 |
| P | mg/min | 1.2E+03 | | | | | 3.2E-02 | 3.2E-02 | 3.2E-04 | 0.0E+00 | 0.0E+00 |
| K | mg/L | 1.0E+01 | | | | | 3.2E-06 | 3.2E-06 | 3.2E-08 | 5.3E-04 | 7.5E-01 |
| K | mg/min | 1.2E+03 | | | | | 5.7E-02 | 5.7E-02 | 5.7E-04 | 1.5E+02 | 1.5E+02 |
| Se | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Se | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Si | mg/L | 5.9E-01 | | | | | 4.5E-06 | 4.5E-06 | 4.5E-08 | 1.8E-03 | 2.5E+00 |
| Si | mg/min | 7.2E+01 | | | | | 8.2E-02 | 8.2E-02 | 8.2E-04 | 5.2E+02 | 5.2E+02 |
| Ag | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ag | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Na | mg/L | 1.6E+01 | | | | | 6.7E-06 | 6.7E-06 | 6.7E-08 | 1.5E-03 | 2.2E+00 |
| Na | mg/min | 1.9E+03 | | | | | 1.2E-01 | 1.2E-01 | 1.2E-03 | 4.5E+02 | 4.5E+02 |
| SO4= | mg/L | 5.0E+00 | | | | | 1.7E-06 | 1.7E-06 | 1.7E-08 | 7.4E-03 | 1.0E+01 |
| SO4= | mg/min | 6.1E+02 | | | | | 3.1E-02 | 3.1E-02 | 3.1E-04 | 2.2E+03 | 2.2E+03 |
| S- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| S- | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ti | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Ti | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| W | mg/L | 4.1E-01 | | | | | 7.4E-08 | 7.4E-08 | 7.4E-10 | 0.0E+00 | 0.0E+00 |
| W | mg/min | 5.0E+01 | | | | | 1.4E-03 | 1.4E-03 | 1.4E-05 | 0.0E+00 | 0.0E+00 |
| U | mg/L | 1.5E-01 | | | | | 2.8E-08 | 2.8E-08 | 2.8E-10 | 3.7E-07 | 5.2E-04 |
| U | mg/min | 1.8E+01 | | | | | 5.0E-04 | 5.0E-04 | 5.0E-06 | 1.1E-01 | 1.1E-01 |
| V | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| V | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Zn | mg/L | 9.6E-02 | | | | | 5.0E-08 | 5.0E-08 | 5.0E-10 | 1.3E-05 | 1.9E-02 |
| Zn | mg/min | 1.2E+01 | | | | | 9.1E-04 | 9.1E-04 | 9.1E-06 | 3.9E+00 | 3.9E+00 |
| Zr | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Zr | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Acetone | mg/L | 1.0E+00 | | | | | 1.6E-03 | 1.6E-03 | 1.6E-03 | | |
| Acetone | mg/min | 1.2E+02 | | | | | 2.9E+01 | 2.9E+01 | 2.9E+01 | | |
| Alkyl. hydroxy- | mg/L | 1.1E-01 | | | | | 1.8E-09 | 1.8E-09 | 1.8E-09 | | |
| methyl benzene | mg/min | 1.4E+01 | | | | | 3.3E-05 | 3.3E-05 | 3.3E-05 | | |
| Benzyl alcohol | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Benzyl alcohol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Benzaldehyde | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Benzaldehyde | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Benzene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Benzene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Bromodichloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| methane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Bromoform | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Bromoform | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butanedioic | mg/L | 3.6E+01 | | | | | 1.2E-06 | 1.2E-06 | 1.2E-06 | | |
| Acid | mg/min | 4.3E+03 | | | | | 2.2E-02 | 2.2E-02 | 2.2E-02 | | |
| 1-Butanol | mg/L | 3.7E-04 | | | | | 2.9E-10 | 2.9E-10 | 2.9E-10 | | |
| 1-Butanol | mg/min | 4.5E-02 | | | | | 5.3E-06 | 5.3E-06 | 5.3E-06 | | |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | Eluted IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| 2-Butanone | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Butanone | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butoxy- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| diglycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Butoxy- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethanol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butoxy- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| glycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butoxytri- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethyleneglycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butraldehyde | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Butraldehyde | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| C3-Alkylbenzene | mg/L | 4.5E+02 | | | | | 2.4E-04 | 2.4E-04 | 2.4E-04 | | |
| C3-Alkylbenzene | mg/min | 5.5E+04 | | | | | 4.4E+00 | 4.4E+00 | 4.4E+00 | | |
| Caproic acid | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Caproic acid | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Carbon | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Tetrachloride | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Chlorodibromo- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Chloroethyl, 2- | mg/L | 1.1E+01 | | | | | 2.4E-06 | 2.4E-06 | 2.4E-06 | | |
| hydroxymethyl, BA | | 1.3E+03 | | | | | 4.4E-02 | 4.4E-02 | 4.4E-02 | | |
| Chloroform | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Chloroform | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Chloromethyl- | mg/L | 1.6E+01 | | | | | 7.2E-06 | 7.2E-06 | 7.2E-06 | | |
| hydroxymethylbenzene | | 2.0E+03 | | | | | 1.3E-01 | 1.3E-01 | 1.3E-01 | | |
| 2-Chloromethyl- | mg/L | 2.9E+01 | | | | | 1.3E-04 | 1.3E-04 | 1.3E-04 | | |
| -o-xylene | mg/min | 3.5E+03 | | | | | 2.4E+00 | 2.4E+00 | 2.4E+00 | | |
| Citric Acid | mg/L | 1.3E+01 | | | | | 1.0E-06 | 1.0E-06 | 1.0E-06 | | |
| Citric Acid | mg/min | 1.5E+03 | | | | | 1.8E-02 | 1.8E-02 | 1.8E-02 | | |
| 1.2 Dichloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 1.1 Dichloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethylene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Diethyl- | mg/L | 4.4E-02 | | | | | 8.3E-11 | 8.3E-11 | 8.3E-11 | | |
| phthalates | mg/min | 5.4E+00 | | | | | 1.5E-06 | 1.5E-06 | 1.5E-06 | | |
| Difluorodi- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| chloromethane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 3.5-Dimethyl- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| pyridine | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Dimethylnitro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| samine | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Dimethyltoluidine | mg/L | 4.7E+00 | | | | | 4.0E-07 | 4.0E-07 | 4.0E-07 | | |
| Dimethyltoluidine | mg/min | 5.7E+02 | | | | | 7.3E-03 | 7.3E-03 | 7.3E-03 | | |
| Dioctylphthalate | mg/L | 7.7E-02 | | | | | 1.2E-10 | 1.2E-10 | 1.2E-10 | | |
| Dioctylphthalate | mg/min | 9.4E+00 | | | | | 2.2E-06 | 2.2E-06 | 2.2E-06 | | |
| Dodecane | mg/L | 5.5E-01 | | | | | 2.5E-08 | 2.5E-08 | 2.5E-08 | | |
| Dodecane | mg/min | 6.7E+01 | | | | | 4.6E-04 | 4.6E-04 | 4.6E-04 | | |
| Dodecanoic | mg/L | 2.6E-03 | | | | | 1.8E-12 | 1.8E-12 | 1.8E-12 | | |
| Acid | mg/min | 3.2E-01 | | | | | 3.3E-08 | 3.3E-08 | 3.3E-08 | | |
| Ethanedioic Acid | mg/L | 3.5E+01 | | | | | 6.4E-08 | 6.4E-08 | 6.4E-08 | | |
| Ethanedioic Acid | mg/min | 4.3E+03 | | | | | 1.2E-03 | 1.2E-03 | 1.2E-03 | | |
| Ethoxytri- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethylene glycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Ethyl.2-methyl- | mg/L | 1.3E+00 | | | | | 9.5E-09 | 9.5E-09 | 9.5E-09 | | |
| hydroxymethylbenzenes | | 1.6E+02 | | | | | 1.7E-04 | 1.7E-04 | 1.7E-04 | | |
| Ethyl alcohol | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Ethyl alcohol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Ethyl Benzene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Ethyl Benzene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Ethylbenz- | mg/L | 9.6E+01 | | | | | 3.2E-06 | 3.2E-06 | 3.2E-06 | | |
| aldahyde | mg/min | 1.2E+04 | | | | | 5.8E-02 | 5.8E-02 | 5.8E-02 | | |
| ED3A | mg/L | 1.4E-03 | | | | | 4.4E-14 | 4.4E-14 | 4.4E-14 | | |
| ED3A | mg/min | 1.7E-01 | | | | | 8.0E-10 | 8.0E-10 | 8.0E-10 | | |
| EDTA | mg/L | 4.0E-03 | | | | | 1.3E-13 | 1.3E-13 | 1.3E-13 | | |
| EDTA | mg/min | 4.9E-01 | | | | | 2.3E-09 | 2.3E-09 | 2.3E-09 | | |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | Eluted IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Ethylxylene | mg/L | 1.4E-01 | | | | | 1.3E-08 | 1.3E-08 | 1.3E-08 | | |
| Ethylxylene | mg/min | 1.7E+01 | | | | | 2.4E-04 | 2.4E-04 | 2.4E-04 | | |
| Heptadecane | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Heptadecane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Heptadecanoic | mg/L | 1.8E-02 | | | | | 3.4E-11 | 3.4E-11 | 3.4E-11 | | |
| Acid | mg/min | 2.2E+00 | | | | | 6.1E-07 | 6.1E-07 | 6.1E-07 | | |
| Heptanedioic | mg/L | 2.8E-01 | | | | | 5.1E-10 | 5.1E-10 | 5.1E-10 | | |
| Acid | mg/min | 3.4E+01 | | | | | 9.2E-06 | 9.2E-06 | 9.2E-06 | | |
| Hexadecane | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Hexadecane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Hexadecanoic | mg/L | 9.4E-03 | | | | | 2.7E-11 | 2.7E-11 | 2.7E-11 | | |
| Acid | mg/min | 1.1E+00 | | | | | 4.9E-07 | 4.9E-07 | 4.9E-07 | | |
| Hexanedioic | mg/L | 7.5E-03 | | | | | 4.3E-13 | 4.3E-13 | 4.3E-13 | | |
| Acid | mg/min | 9.1E-01 | | | | | 7.8E-09 | 7.8E-09 | 7.8E-09 | | |
| Hexanoic | mg/L | 3.9E-01 | | | | | 3.9E-10 | 3.9E-10 | 3.9E-10 | | |
| Acid | mg/min | 4.7E+01 | | | | | 7.0E-06 | 7.0E-06 | 7.0E-06 | | |
| Hydroxyacetic | mg/L | 1.0E+02 | | | | | 1.2E-04 | 1.2E-04 | 1.2E-04 | | |
| Acid | mg/min | 1.2E+04 | | | | | 2.1E+00 | 2.1E+00 | 2.1E+00 | | |
| 2-Hydroxymethyl- | mg/L | 2.4E+00 | | | | | 4.5E-08 | 4.5E-08 | 4.5E-08 | | |
| benzoic Acid | mg/min | 2.9E+02 | | | | | 8.2E-04 | 8.2E-04 | 8.2E-04 | | |
| Methoxydi- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| glycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Methosytri- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| glycol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Methylbenz- | mg/L | 6.3E+01 | | | | | 1.3E-06 | 1.3E-06 | 1.3E-06 | | |
| aldahyde | mg/min | 7.7E+03 | | | | | 2.3E-02 | 2.3E-02 | 2.3E-02 | | |
| 2-Methylbenzoic | mg/L | 3.0E+00 | | | | | 9.9E-08 | 9.9E-08 | 9.9E-08 | | |
| Acid | mg/min | 3.6E+02 | | | | | 1.8E-03 | 1.8E-03 | 1.8E-03 | | |
| Methylene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| chloride | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Methyl hydroxy- | mg/L | 5.6E+01 | | | | | 1.9E-06 | 1.9E-06 | 1.9E-06 | | |
| methyl benzene | mg/min | 6.8E+03 | | | | | 3.4E-02 | 3.4E-02 | 3.4E-02 | | |
| Methyl n-propyl | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ketone | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Methyl n-butyl | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ketone | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| MIBK | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| (Hexone) | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Methyl- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| nonane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Methyl- | mg/L | 1.8E-01 | | | | | 2.3E-09 | 2.3E-09 | 2.3E-09 | | |
| toluidine | mg/min | 2.2E+01 | | | | | 4.2E-05 | 4.2E-05 | 4.2E-05 | | |
| n-C22H46 - | mg/L | 3.6E-02 | | | | | 2.3E-11 | 2.3E-11 | 2.3E-11 | | |
| C40H82 | mg/min | 4.4E+00 | | | | | 4.2E-07 | 4.2E-07 | 4.2E-07 | | |
| HEDTA | mg/L | 1.7E+00 | | | | | 3.2E-08 | 3.2E-08 | 3.2E-08 | | |
| HEDTA | mg/min | 2.0E+02 | | | | | 5.8E-04 | 5.8E-04 | 5.8E-04 | | |
| MAIDA | mg/L | 1.0E+01 | | | | | 3.9E-08 | 3.9E-08 | 3.9E-08 | | |
| MAIDA | mg/min | 1.3E+03 | | | | | 7.1E-04 | 7.1E-04 | 7.1E-04 | | |
| MICEDA | mg/L | 5.4E-01 | | | | | 2.0E-09 | 2.0E-09 | 2.0E-09 | | |
| MICEDA | mg/min | 6.5E+01 | | | | | 3.6E-05 | 3.6E-05 | 3.6E-05 | | |
| Nitrilotri- | mg/L | 1.1E-01 | | | | | 4.0E-10 | 4.0E-10 | 4.0E-10 | | |
| acetic Acid | mg/min | 1.3E+01 | | | | | 7.3E-06 | 7.3E-06 | 7.3E-06 | | |
| Octodecanoic | mg/L | 3.2E+03 | | | | | 6.3E-12 | 6.3E-12 | 6.3E-12 | | |
| Acid | mg/min | 3.8E-01 | | | | | 1.1E-07 | 1.1E-07 | 1.1E-07 | | |
| o-Xylene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| o-Xylene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| p-Chlorotoluene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| p-Chlorotoluene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| p-Dichloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| benzene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Pentadecane | mg/L | 4.8E-02 | | | | | 2.6E-10 | 2.6E-10 | 2.6E-10 | | |
| Pentadecane | mg/min | 5.8E+00 | | | | | 4.6E-06 | 4.6E-06 | 4.6E-06 | | |
| Pentadecanoic | mg/L | 6.0E-01 | | | | | 2.6E-09 | 2.6E-09 | 2.6E-09 | | |
| Acid | mg/min | 7.3E+01 | | | | | 4.8E-05 | 4.8E-05 | 4.8E-05 | | |
| Pentanedioic | mg/L | 7.8E-03 | | | | | 2.1E-13 | 2.1E-13 | 2.1E-13 | | |
| Acid | mg/min | 9.5E-01 | | | | | 3.7E-09 | 3.7E-09 | 3.7E-09 | | |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | PC to LERF | C100 to 102AW | E-101 to IX | Eluted IX to 102-AW | Inlet Air | Air to H-C-1 | Air to F-C-5 | Stack Air | E-A-1 Steam | E-A-1 Cond. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| Phenol | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Phenol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Propanol | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 2-Propanol | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Propylbenzene | mg/L | 3.2E+00 | | | | | 2.7E-06 | 2.7E-06 | 2.7E-06 | | |
| Propylbenzene | mg/min | 3.9E+02 | | | | | 4.9E-02 | 4.9E-02 | 4.9E-02 | | |
| Pyridine | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Pyridine | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Tetrachloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethylene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Tetradecane | mg/L | 3.8E-01 | | | | | 4.5E-09 | 4.5E-09 | 4.5E-09 | | |
| Tetradecane | mg/min | 4.7E+01 | | | | | 8.2E-05 | 8.2E-05 | 8.2E-05 | | |
| Tetrahydro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| furan | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Tributyl | mg/L | 1.1E+00 | | | | | 1.3E-08 | 1.3E-08 | 1.3E-08 | | |
| phosphate | mg/min | 1.4E+02 | | | | | 2.4E-04 | 2.4E-04 | 2.4E-04 | | |
| Tri-n-butyl- | mg/L | 5.4E-01 | | | | | 6.4E-09 | 6.4E-09 | 6.4E-09 | | |
| (di-ol)-phosphate | | 6.6E+01 | | | | | 1.2E-04 | 1.2E-04 | 1.2E-04 | | |
| 1.1.1-Tri- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| chlorethane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Trichloro- | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| ethylene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Trichloromethane | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Trichloromethane | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Tridecane | mg/L | 1.8E+00 | | | | | 7.5E-08 | 7.5E-08 | 7.5E-08 | | |
| Tridecane | mg/min | 2.2E+02 | | | | | 1.4E-03 | 1.4E-03 | 1.4E-03 | | |
| Triglyme | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Triglyme | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| 1.3.5 Trimethyl | mg/L | 1.9E+02 | | | | | 3.1E-04 | 3.1E-04 | 3.1E-04 | | |
| benzene | mg/min | 2.4E+04 | | | | | 5.5E+00 | 5.5E+00 | 5.5E+00 | | |
| Toluene | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Toluene | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Vinyl Chloride | mg/L | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Vinyl Chloride | mg/min | 0.0E+00 | | | | | 0.0E+00 | 0.0E+00 | 0.0E+00 | | |
| Undecane | mg/L | 8.3E-01 | | | | | 8.7E-08 | 8.7E-08 | 8.7E-08 | | |
| Undecane | mg/min | 1.0E+02 | | | | | 1.6E-03 | 1.6E-03 | 1.6E-03 | | |
| Unknown | mg/L | 8.8E-02 | | | | | 1.7E-10 | 1.7E-10 | 1.7E-10 | | |
| phthalates | mg/min | 1.1E+01 | | | | | 3.0E-06 | 3.0E-06 | 3.0E-06 | | |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air in-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Form | | Liquid | Liquid | Liquid | Liquid | Steam | Steam | Gas | Steam | Liquid | Liquid |
| L/min | Total | 1.3E+04 | 3.0E+02 | 3.0E+02 | 1.4E+04 | 2.8E+04 | 3.1E+04 | 7.4E+02 | 0.0E+00 | 0.0E+00 | 5.7E-01 |
| Batch | L/Batch | | | | | | | | | | |
| Temperature | C | 2.2E+01 | 2.2E+01 | 3.4E+01 | 2.7E+01 | 1.7E+02 | 1.7E+02 | 1.0E+01 | 1.2E+02 | 3.8E+01 | 2.2E+01 |
| Sp. Gr. | unitless | 1.0E+00 | 1.0E+00 | 9.9E-01 | 1.0E+00 | 4.4E+00 | 4.4E+00 | 9.6E-01 | 1.2E+00 | 9.9E-01 | 1.0E+00 |
| Abs. Pressure | Torr | 5.2E+03 | 5.2E+03 | 4.7E+03 | 4.7E+03 | 5.4E+03 | 5.4E+03 | 7.6E+02 | 1.3E+03 | 7.6E+02 | 7.6E+02 |
| Abs. Pressure | Pa | 6.9E+05 | 6.9E+05 | 6.2E+05 | 6.2E+05 | 7.2E+05 | 7.2E+05 | 1.0E+05 | 1.7E+05 | 1.0E+05 | 1.0E+05 |
| pH | | 6.2E+00 | 6.2E+00 | 6.2E+00 | 6.2E+00 | | | | | 8.0E+00 | 6.2E+00 |
| TOC | mg/L | 1.7E+00 | 1.7E+00 | 1.7E+00 | 1.7E+00 | 2.0E-04 | 2.0E-04 | 0.0E+00 | ERR | 1.1E+00 | 1.7E+00 |
| TOC | mg/min | 2.2E+04 | 5.1E+02 | 5.1E+02 | 2.3E+04 | 5.7E+00 | 6.2E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 9.7E-01 |
| TDS | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 1.4E-02 | 1.4E-02 | 0.0E+00 | ERR | 7.6E+01 | 0.0E+00 |
| TDS | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.9E+02 | 4.3E+02 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| H2O | L/min | 1.3E+04 | 3.0E+02 | 3.0E+02 | 1.4E+04 | 2.8E+04 | 3.1E+04 | 4.5E+00 | 0.0E+00 | 0.0E+00 | 5.7E-01 |
| H2O | kg/min | 1.3E+04 | 3.0E+02 | 3.0E+02 | 1.4E+04 | 5.2E+00 | 5.7E+00 | 3.5E-03 | 0.0E+00 | 0.0E+00 | 5.7E-01 |
| Air | L/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 7.3E+02 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Air | kg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 9.2E-01 | 0.0E+00 | 0.0E+00 | 0.0E+00 |
| Heat | Joules/min | 2.5E+08 | 1.6E+07 | 1.5E+07 | 2.8E+08 | 1.3E+07 | 1.4E+07 | | 0.0E+00 | | |
| | | 4.5E+00 | 1.1E+01 | 1.1E+01 | | | | | | | |
| Alpha | uCi/ml | 8.1E-10 | 8.1E-10 | 8.1E-10 | 8.1E-10 | 1.2E-10 | 1.2E-10 | | | | 8.1E-10 |
| Alpha | uCi/min | 1.1E-02 | 2.5E-04 | 2.5E-04 | 1.1E-02 | 3.3E-06 | 3.7E-06 | | | | 4.6E-07 |
| Beta | uCi/ml | 1.0E-08 | 1.0E-08 | 1.0E-08 | 1.0E-08 | 0.0E+00 | 0.0E+00 | | | | 1.0E-08 |
| Beta | uCi/min | 1.3E-01 | 3.1E-03 | 3.1E-03 | 1.4E-01 | 0.0E+00 | 0.0E+00 | | | | 5.7E-06 |
| 3H | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 3H | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 14C | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 7.3E-10 | 7.3E-10 | | | | 0.0E+00 |
| 14C | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 2.1E-05 | 2.3E-05 | | | | 0.0E+00 |
| 60Co | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 60Co | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 63Ni | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 63Ni | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 79Se | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 79Se | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 90Sr | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 9.0E-11 | 9.0E-11 | | | | 0.0E+00 |
| 90Sr | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 2.6E-06 | 2.8E-06 | | | | 0.0E+00 |
| 93Zr | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 93Zr | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 94Nb | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 94Nb | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 99Tc | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 99Tc | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 106Ru | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 106Ru | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 113Sn | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 113Sn | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 124Sb | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 124Sb | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 125Sb | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 125Sb | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 126Sn | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 126Sn | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 129I | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 129I | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 134Cs | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 134Cs | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 135Cs | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 135Cs | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 137Cs | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 137Cs | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 144Ce | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 144Ce | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 147Pm | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 147Pm | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 151Sm | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 151Sm | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 155Eu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air in-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 155Eu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 226Ra | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 226Ra | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 230Th | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 230Th | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 233U | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 233U | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 234U | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.5E-11 | 3.5E-11 | | | | 0.0E+00 |
| 234U | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 9.9E-07 | 1.1E-06 | | | | 0.0E+00 |
| 235U | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 235U | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 238U | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.1E-11 | 3.1E-11 | | | | 0.0E+00 |
| 238U | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 8.7E-07 | 9.6E-07 | | | | 0.0E+00 |
| 237Np | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 237Np | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 238Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 238Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 239Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 239Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 240Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 240Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 241Pu | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 241Pu | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 241Am | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 241Am | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 243Am | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 243Am | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 244Cm | uCi/ml | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| 244Cm | uCi/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| AlO2- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| AlO2- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| NH4+ | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 1.1E-05 | 1.1E-05 | | | | 0.0E+00 |
| NH4+ | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.2E-01 | 3.6E-01 | | | | 0.0E+00 |
| Sb | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Sb | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| As | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| As | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Ba | mg/L | 3.0E-02 | 3.0E-02 | 3.0E-02 | 3.0E-02 | 5.7E-06 | 5.7E-06 | | | | 3.0E-02 |
| Ba | mg/min | 4.0E+02 | 9.2E+00 | 9.2E+00 | 4.1E+02 | 1.6E-01 | 1.8E-01 | | | | 1.7E-02 |
| Be | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Be | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Bi | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Bi | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| B | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 3.4E-06 | 3.4E-06 | | | | 0.0E+00 |
| B | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 9.5E-02 | 1.1E-01 | | | | 0.0E+00 |
| Ca | mg/L | 1.9E+01 | 1.9E+01 | 1.9E+01 | 1.9E+01 | 3.5E-03 | 3.5E-03 | | | | 1.9E+01 |
| Ca | mg/min | 2.6E+05 | 5.8E+03 | 5.8E+03 | 2.6E+05 | 9.9E+01 | 1.1E+02 | | | | 1.1E+01 |
| Cd | mg/L | 2.0E-03 | 2.0E-03 | 2.0E-03 | 2.0E-03 | 0.0E+00 | 0.0E+00 | | | | 2.0E-03 |
| Cd | mg/min | 2.6E+01 | 6.0E-01 | 6.0E-01 | 2.7E+01 | 0.0E+00 | 0.0E+00 | | | | 1.1E-03 |
| CO3= | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| CO3= | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Cl- | mg/L | 7.8E-01 | 7.8E-01 | 7.8E-01 | 7.8E-01 | 2.0E-04 | 2.0E-04 | | | | 7.8E-01 |
| Cl- | mg/min | 1.0E+04 | 2.4E+02 | 2.4E+02 | 1.1E+04 | 5.7E+00 | 6.2E+00 | | | | 4.5E-01 |
| Cr | mg/L | 1.0E-02 | 1.0E-02 | 1.0E-02 | 1.0E-02 | 0.0E+00 | 0.0E+00 | | | | 1.0E-02 |
| Cr | mg/min | 1.4E+02 | 3.1E+00 | 3.1E+00 | 1.4E+02 | 0.0E+00 | 0.0E+00 | | | | 5.9E-03 |
| Cu | mg/L | 7.4E-02 | 7.4E-02 | 7.4E-02 | 7.3E-02 | 2.0E-06 | 2.0E-06 | | | | 7.4E-02 |
| Cu | mg/min | 9.7E+02 | 2.2E+01 | 2.2E+01 | 1.0E+03 | 5.7E-02 | 6.2E-02 | | | | 4.2E-02 |
| CN- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| CN- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| F- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 2.3E-05 | 2.3E-05 | | | | 0.0E+00 |
| F- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 6.6E-01 | 7.3E-01 | | | | 0.0E+00 |
| Fe | mg/L | 1.0E-01 | 1.0E-01 | 1.0E-01 | 1.0E-01 | 1.5E-05 | 1.5E-05 | | | | 1.0E-01 |
| Fe | mg/min | 1.4E+03 | 3.1E+01 | 3.1E+01 | 1.4E+03 | 4.3E-01 | 4.8E-01 | | | | 5.9E-02 |
| H2 | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air In-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| H2 | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| OH- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| OH- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Pb | mg/L | 1.3E-02 | 1.3E-02 | 1.3E-02 | 1.3E-02 | 1.0E-06 | 1.0E-06 | | | | 1.3E-02 |
| Pb | mg/min | 1.7E+02 | 3.8E+00 | 3.8E+00 | 1.7E+02 | 2.8E-02 | 3.1E-02 | | | | 7.2E-03 |
| Mg | mg/L | 4.3E+00 | 4.3E+00 | 4.3E+00 | 4.3E+00 | 8.2E-04 | 8.2E-04 | | | | 4.3E+00 |
| Mg | mg/min | 5.7E+04 | 1.3E+03 | 1.3E+03 | 5.9E+04 | 2.3E+01 | 2.6E+01 | | | | 2.5E+00 |
| Mn | mg/L | 1.1E-02 | 1.1E-02 | 1.1E-02 | 1.1E-02 | 2.6E-06 | 2.6E-06 | | | | 1.1E-02 |
| Mn | mg/min | 1.4E+02 | 3.2E+00 | 3.2E+00 | 1.4E+02 | 7.3E-02 | 8.1E-02 | | | | 6.1E-03 |
| Hg | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 1.9E-08 | 1.9E-08 | | | | 0.0E+00 |
| Hg | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 5.4E-04 | 6.0E-04 | | | | 0.0E+00 |
| Mo | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Mo | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Ni | mg/L | 1.1E-02 | 1.1E-02 | 1.1E-02 | 1.1E-02 | 0.0E+00 | 0.0E+00 | | | | 1.1E-02 |
| Ni | mg/min | 1.5E+02 | 3.4E+00 | 3.4E+00 | 1.5E+02 | 0.0E+00 | 0.0E+00 | | | | 6.4E-03 |
| NO3- | mg/L | 1.2E+00 | 1.2E+00 | 1.2E+00 | 1.2E+00 | 1.0E-04 | 1.0E-04 | | | | 1.2E+00 |
| NO3- | mg/min | 1.6E+04 | 3.6E+02 | 3.6E+02 | 1.6E+04 | 2.8E+00 | 3.1E+00 | | | | 6.8E-01 |
| NO2- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| NO2- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| PO4 | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| PO4 | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| P | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| P | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| K | mg/L | 8.0E-01 | 8.0E-01 | 8.0E-01 | 8.0E-01 | 1.4E-04 | 1.4E-04 | | | | 8.0E-01 |
| K | mg/min | 1.1E+04 | 2.4E+02 | 2.4E+02 | 1.1E+04 | 3.9E+00 | 4.3E+00 | | | | 4.5E-01 |
| Se | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Se | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Si | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 4.5E-04 | 4.5E-04 | | | | 0.0E+00 |
| Si | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 1.3E+01 | 1.4E+01 | | | | 0.0E+00 |
| Ag | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Ag | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Na | mg/L | 2.4E+00 | 2.4E+00 | 2.4E+00 | 2.3E+00 | 4.0E-04 | 4.0E-04 | | | | 2.4E+00 |
| Na | mg/min | 3.1E+04 | 7.1E+02 | 7.1E+02 | 3.2E+04 | 1.1E+01 | 1.3E+01 | | | | 1.3E+00 |
| SO4= | mg/L | 1.0E+01 | 1.0E+01 | 1.0E+01 | 1.0E+01 | 1.9E-03 | 1.9E-03 | | | | 1.0E+01 |
| SO4= | mg/min | 1.4E+05 | 3.1E+03 | 3.1E+03 | 1.4E+05 | 5.4E+01 | 6.0E+01 | | | | 5.8E+00 |
| S- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| S- | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Ti | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Ti | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| W | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| W | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| U | mg/L | 6.4E-04 | 6.4E-04 | 6.4E-04 | 6.4E-04 | 9.4E-08 | 9.4E-08 | | | | 6.4E-04 |
| U | mg/min | 8.5E+00 | 1.9E-01 | 1.9E-01 | 8.7E+00 | 2.7E-03 | 3.0E-03 | | | | 3.7E-04 |
| V | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| V | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Zn | mg/L | 4.8E-02 | 4.8E-02 | 4.8E-02 | 4.8E-02 | 3.4E-06 | 3.4E-06 | | | | 4.8E-02 |
| Zn | mg/min | 6.3E+02 | 1.4E+01 | 1.4E+01 | 6.5E+02 | 9.6E-02 | 1.1E-01 | | | | 2.7E-02 |
| Zr | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Zr | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | 0.0E+00 |
| Acetone | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acetone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Alkyl. hydroxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| methyl benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzyl alcohol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzyl alcohol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzaldehyde | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzaldehyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Bromodichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| methane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Bromoform | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Bromoform | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butanedioic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air in-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 1-Butanol | mg/L | 1.1E-02 | 1.1E-02 | 1.1E-02 | 1.1E-02 | | | | | | 1.1E-02 |
| 1-Butanol | mg/min | 1.5E+02 | 3.3E+00 | 3.3E+00 | 1.5E+02 | | | | | | 6.2E-03 |
| 2-Butanone | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Butanone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| diglycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethanol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butoxytri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethyleneglycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butraldehyde | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Butraldehyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| C3-Alkylbenzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| C3-Alkylbenzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Caproic acid | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Caproic acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Carbon | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tetrachloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Chlorodibromo- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Chloroethyl. 2- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| hydroxymethyl. | BA | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Chloroform | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Chloroform | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Chloromethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| hydroxymethylbenzene | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Chloromethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| -o-xylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Citric Acid | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Citric Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 1.2 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 1.1 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Diethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| phthalates | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Difluorodi- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| chloromethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 3.5-Dimethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| pyridine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dimethylnitro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| samine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dimethyltoluidine | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dimethyltoluidine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dioctylphthalate | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dioctylphthalate | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dodecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dodecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Dodecanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethanedioic Acid | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethanedioic Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethoxytri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethylene glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethyl.2-methyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| hydroxymethylbenzenes | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethyl alcohol. | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethyl alcohol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethyl Benzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethyl Benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethylbenz- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| aldehyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air in-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| ED3A | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ED3A | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| EDTA | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| EDTA | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethylxylene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Ethylxylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Heptadecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Heptadecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Heptadecanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Heptanedioic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hexadecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hexadecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hexadecanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hexanedioic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hexanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Hydroxyacetic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Hydroxymethyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| benzoic Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methoxydi- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methosytri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methylbenz- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| aldahyde | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Methylbenzoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methylene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| chloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Methyl.hydroxy- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| methyl benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methyl n-propyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ketone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methyl n-butyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ketone | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| MIBK | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| (Hexone) | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Methyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| nonane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Methyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| toluidine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| n-C22H46 - | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| C40HB2 | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| HEDTA | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| HEDTA | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| MAIDA | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| MAIDA | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| MICEDA | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| MICEDA | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Nitrilotri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| acetic Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Octodecanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| o-Xylene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| o-Xylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| p-Chlorotoluene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| p-Chlorotoluene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| p-Dichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Pentadecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | RW To E-C-1 | RW To E-C-2 | RW To E-C-3 | RW To B Pond | J-EC1-1 Steam | J-EC1-2 Steam | Air in-leaks | H-C-1 Steam | H-C-1 Cond. | P-B-1 Seal Water |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Stream Number | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Pentadecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Pentadecanoic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Pentanedioic | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Acid | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Phenol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Phenol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Propanol | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 2-Propanol | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Propylbenzene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Propylbenzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Pyridine | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Pyridine | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tetrachloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tetradecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tetradecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tetrahydro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| furan | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tributyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| phosphate | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tri-n-butyl- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| (di-ol)-phosphate | | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 1,1,1-Tri- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| chlorethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Trichloro- | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| etnylene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Trichloromethane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Trichloromethane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tridecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Tridecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Triglyme | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Triglyme | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| 1,3,5 Trimethyl | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| benzene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Toluene | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Toluene | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Vinyl Chloride | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Vinyl Chloride | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Undecane | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Undecane | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| Unknown | mg/L | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |
| phthalates | mg/min | 0.0E+00 | 0.0E+00 | 0.0E+00 | 0.0E+00 | | | | | | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | P-B-2 Seal Water | C-100 Air Flow |
|---|---|---|---|
| Stream Number | | 31 | 32 |
| Form | | Liquid | Gas |
| L/min | Total | 3.8E-01 | 3.2E+02 |
| Batch | L/Batch | | |
| Temperature | C | 2.2E+01 | 2.8E+01 |
| Sp. Gr. | unitless | 1.0E+00 | 9.1E-01 |
| Abs. Pressure | Torr | 7.6E+02 | 7.6E+02 |
| Abs. Pressure | Pa | 1.0E+05 | 1.0E+05 |
| pH | | 6.2E+00 | |
| TOC | mg/L | 1.7E+00 | 2.6E-03 |
| TOC | mg/min | 6.4E-01 | 8.6E-01 |
| TDS | mg/L | 0.0E+00 | 6.7E-05 |
| TDS | mg/min | 0.0E+00 | 2.2E-02 |
| H2O | L/min | 3.8E-01 | 1.2E+01 |
| H2O | kg/min | 3.8E-01 | 8.6E-03 |
| Air | L/min | 0.0E+00 | 3.1E+02 |
| Air | kg/min | 0.0E+00 | 3.7E-01 |
| Heat | Joules/min | | |
| Alpha | uCi/ml | 8.1E-10 | 5.7E-16 |
| Alpha | uCi/min | 3.1E-07 | 1.9E-10 |
| Beta | uCi/ml | 1.0E-08 | 6.8E-18 |
| Beta | uCi/min | 3.8E-06 | 2.2E-12 |
| 3H | uCi/ml | 0.0E+00 | 2.7E-06 |
| 3H | uCi/min | 0.0E+00 | 8.8E-01 |
| 14C | uCi/ml | 0.0E+00 | 2.7E-11 |
| 14C | uCi/min | 0.0E+00 | 8.8E-06 |
| 60Co | uCi/ml | 0.0E+00 | 6.4E-10 |
| 60Co | uCi/min | 0.0E+00 | 2.1E-04 |
| 63Ni | uCi/ml | 0.0E+00 | 0.0E+00 |
| 63Ni | uCi/min | 0.0E+00 | 0.0E+00 |
| 79Se | uCi/ml | 0.0E+00 | 2.9E-10 |
| 79Se | uCi/min | 0.0E+00 | 9.3E-05 |
| 90Sr | uCi/ml | 0.0E+00 | 5.1E-11 |
| 90Sr | uCi/min | 0.0E+00 | 1.7E-05 |
| 93Zr | uCi/ml | 0.0E+00 | 0.0E+00 |
| 93Zr | uCi/min | 0.0E+00 | 0.0E+00 |
| 94Nb | uCi/ml | 0.0E+00 | 4.8E-10 |
| 94Nb | uCi/min | 0.0E+00 | 1.6E-04 |
| 99Tc | uCi/ml | 0.0E+00 | 2.4E-09 |
| 99Tc | uCi/min | 0.0E+00 | 7.7E-04 |
| 106Ru | uCi/ml | 0.0E+00 | 1.6E-11 |
| 106Ru | uCi/min | 0.0E+00 | 5.1E-06 |
| 113Sn | uCi/ml | 0.0E+00 | 0.0E+00 |
| 113Sn | uCi/min | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/ml | 0.0E+00 | 0.0E+00 |
| 124Sb | uCi/min | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/ml | 0.0E+00 | 0.0E+00 |
| 125Sb | uCi/min | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/ml | 0.0E+00 | 0.0E+00 |
| 126Sn | uCi/min | 0.0E+00 | 0.0E+00 |
| 129I | uCi/ml | 0.0E+00 | 1.4E-09 |
| 129I | uCi/min | 0.0E+00 | 4.6E-04 |
| 134Cs | uCi/ml | 0.0E+00 | 3.7E-10 |
| 134Cs | uCi/min | 0.0E+00 | 1.2E-04 |
| 135Cs | uCi/ml | 0.0E+00 | 0.0E+00 |
| 135Cs | uCi/min | 0.0E+00 | 0.0E+00 |
| 137Cs | uCi/ml | 0.0E+00 | 3.0E-12 |
| 137Cs | uCi/min | 0.0E+00 | 9.7E-07 |
| 144Ce | uCi/ml | 0.0E+00 | 0.0E+00 |
| 144Ce | uCi/min | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/ml | 0.0E+00 | 0.0E+00 |
| 147Pm | uCi/min | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/ml | 0.0E+00 | 0.0E+00 |
| 151Sm | uCi/min | 0.0E+00 | 0.0E+00 |
| 155Eu | uCi/ml | 0.0E+00 | 0.0E+00 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | P-B-2 Seal Water | C-100 Air Flow |
|---|---|---|---|
| Stream Number | | 31 | 32 |
| 155Eu | uCi/min | 0.0E+00 | 0.0E+00 |
| 226Ra | uCi/ml | 0.0E+00 | 0.0E+00 |
| 226Ra | uCi/min | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/ml | 0.0E+00 | 0.0E+00 |
| 230Th | uCi/min | 0.0E+00 | 0.0E+00 |
| 233U | uCi/ml | 0.0E+00 | 0.0E+00 |
| 233U | uCi/min | 0.0E+00 | 0.0E+00 |
| 234U | uCi/ml | 0.0E+00 | 7.2E-13 |
| 234U | uCi/min | 0.0E+00 | 2.3E-07 |
| 235U | uCi/ml | 0.0E+00 | 3.5E-14 |
| 235U | uCi/min | 0.0E+00 | 1.1E-08 |
| 238U | uCi/ml | 0.0E+00 | 2.6E-13 |
| 238U | uCi/min | 0.0E+00 | 8.4E-08 |
| 237Np | uCi/ml | 0.0E+00 | 1.2E-12 |
| 237Np | uCi/min | 0.0E+00 | 4.0E-07 |
| 238Pu | uCi/ml | 0.0E+00 | 8.1E-16 |
| 238Pu | uCi/min | 0.0E+00 | 2.6E-10 |
| 239Pu | uCi/ml | 0.0E+00 | 1.7E-15 |
| 239Pu | uCi/min | 0.0E+00 | 5.4E-10 |
| 240Pu | uCi/ml | 0.0E+00 | 0.0E+00 |
| 240Pu | uCi/min | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/ml | 0.0E+00 | 0.0E+00 |
| 241Pu | uCi/min | 0.0E+00 | 0.0E+00 |
| 241Am | uCi/ml | 0.0E+00 | 6.2E-15 |
| 241Am | uCi/min | 0.0E+00 | 2.0E-09 |
| 243Am | uCi/ml | 0.0E+00 | 0.0E+00 |
| 243Am | uCi/min | 0.0E+00 | 0.0E+00 |
| 244Cm | uCi/ml | 0.0E+00 | 4.8E-12 |
| 244Cm | uCi/min | 0.0E+00 | 1.5E-06 |
| AlO2- | mg/L | 0.0E+00 | 4.1E-04 |
| AlO2- | mg/min | 0.0E+00 | 1.3E-01 |
| NH4+ | mg/L | 0.0E+00 | 1.1E+00 |
| NH4+ | mg/min | 0.0E+00 | 3.6E+02 |
| Sb | mg/L | 0.0E+00 | 0.0E+00 |
| Sb | mg/min | 0.0E+00 | 0.0E+00 |
| As | mg/L | 0.0E+00 | 0.0E+00 |
| As | mg/min | 0.0E+00 | 0.0E+00 |
| Ba | mg/L | 3.0E-02 | 3.0E-07 |
| Ba | mg/min | 1.2E-02 | 9.8E-05 |
| Be | mg/L | 0.0E+00 | 0.0E+00 |
| Be | mg/min | 0.0E+00 | 0.0E+00 |
| Bi | mg/L | 0.0E+00 | 0.0E+00 |
| Bi | mg/min | 0.0E+00 | 0.0E+00 |
| B | mg/L | 0.0E+00 | 3.5E-07 |
| B | mg/min | 0.0E+00 | 1.1E-04 |
| Ca | mg/L | 1.9E+01 | 1.9E-05 |
| Ca | mg/min | 7.3E+00 | 6.0E-03 |
| Cd | mg/L | 2.0E-03 | 3.1E-07 |
| Cd | mg/min | 7.6E-04 | 1.0E-04 |
| CO3= | mg/L | 0.0E+00 | 2.4E-04 |
| CO3= | mg/min | 0.0E+00 | 7.9E-02 |
| Cl- | mg/L | 7.8E-01 | 2.0E-05 |
| Cl- | mg/min | 3.0E-01 | 6.6E-03 |
| Cr | mg/L | 1.0E-02 | 4.1E-08 |
| Cr | mg/min | 3.9E-03 | 1.3E-05 |
| Cu | mg/L | 7.4E-02 | 1.5E-07 |
| Cu | mg/min | 2.8E-02 | 4.7E-05 |
| CN- | mg/L | 0.0E+00 | 9.5E-07 |
| CN- | mg/min | 0.0E+00 | 3.1E-04 |
| F- | mg/L | 0.0E+00 | 7.1E-08 |
| F- | mg/min | 0.0E+00 | 2.3E-05 |
| Fe | mg/L | 1.0E-01 | 8.5E-07 |
| Fe | mg/min | 3.9E-02 | 2.8E-04 |
| H2 | mg/L | 0.0E+00 | 1.0E-09 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | P-B-2 Seal Water | C-100 Air Flow |
|---|---|---|---|
| Stream Number | | 31 | 32 |
| H2 | mg/min | 0.0E+00 | 3.4E-07 |
| OH- | mg/L | 0.0E+00 | 1.4E-03 |
| OH- | mg/min | 0.0E+00 | 4.4E-01 |
| Pb | mg/L | 1.3E-02 | 1.1E-06 |
| Pb | mg/min | 4.8E-03 | 3.5E-04 |
| Mg | mg/L | 4.3E+00 | 4.6E-06 |
| Mg | mg/min | 1.6E+00 | 1.5E-03 |
| Mn | mg/L | 1.1E-02 | 5.8E-07 |
| Mn | mg/min | 4.0E-03 | 1.9E-04 |
| Hg | mg/L | 0.0E+00 | 1.6E-07 |
| Hg | mg/min | 0.0E+00 | 5.1E-05 |
| Mo | mg/L | 0.0E+00 | 1.2E-06 |
| Mo | mg/min | 0.0E+00 | 3.8E-04 |
| Ni | mg/L | 1.1E-02 | 7.9E-07 |
| Ni | mg/min | 4.2E-03 | 2.5E-04 |
| NO3- | mg/L | 1.2E+00 | 3.8E-04 |
| NO3- | mg/min | 4.5E-01 | 1.2E-01 |
| NO2- | mg/L | 0.0E+00 | 4.4E-05 |
| NO2- | mg/min | 0.0E+00 | 1.4E-02 |
| PO4 | mg/L | 0.0E+00 | 1.0E-04 |
| PO4 | mg/min | 0.0E+00 | 3.4E-02 |
| P | mg/L | 0.0E+00 | 9.6E-05 |
| P | mg/min | 0.0E+00 | 3.1E-02 |
| K | mg/L | 8.0E-01 | 1.0E-04 |
| K | mg/min | 3.0E-01 | 3.3E-02 |
| Se | mg/L | 0.0E+00 | 0.0E+00 |
| Se | mg/min | 0.0E+00 | 0.0E+00 |
| Si | mg/L | 0.0E+00 | 5.9E-06 |
| Si | mg/min | 0.0E+00 | 1.9E-03 |
| Ag | mg/L | 0.0E+00 | 0.0E+00 |
| Ag | mg/min | 0.0E+00 | 0.0E+00 |
| Na | mg/L | 2.4E+00 | 1.6E-04 |
| Na | mg/min | 8.9E-01 | 5.2E-02 |
| SO4= | mg/L | 1.0E+01 | 4.5E-06 |
| SO4= | mg/min | 3.9E+00 | 1.5E-03 |
| S- | mg/L | 0.0E+00 | 0.0E+00 |
| S- | mg/min | 0.0E+00 | 0.0E+00 |
| Ti | mg/L | 0.0E+00 | 0.0E+00 |
| Ti | mg/min | 0.0E+00 | 0.0E+00 |
| W | mg/L | 0.0E+00 | 4.1E-06 |
| W | mg/min | 0.0E+00 | 1.3E-03 |
| U | mg/L | 6.4E-04 | 1.5E-06 |
| U | mg/min | 2.4E-04 | 4.8E-04 |
| V | mg/L | 0.0E+00 | 0.0E+00 |
| V | mg/min | 0.0E+00 | 0.0E+00 |
| Zn | mg/L | 4.8E-02 | 9.6E-07 |
| Zn | mg/min | 1.8E-02 | 3.1E-04 |
| Zr | mg/L | 0.0E+00 | 0.0E+00 |
| Zr | mg/min | 0.0E+00 | 0.0E+00 |
| Acetone | mg/L | 0.0E+00 | 1.9E-03 |
| Acetone | mg/min | 0.0E+00 | 6.0E-01 |
| Alkyl. hydroxy- | mg/L | 0.0E+00 | 1.0E-07 |
| methyl benzene | mg/min | 0.0E+00 | 3.3E-05 |
| Benzyl alcohol | mg/L | 0.0E+00 | 0.0E+00 |
| Benzyl alcohol | mg/min | 0.0E+00 | 0.0E+00 |
| Benzaldehyde | mg/L | 0.0E+00 | 0.0E+00 |
| Benzaldehyde | mg/min | 0.0E+00 | 0.0E+00 |
| Benzene | mg/L | 0.0E+00 | 0.0E+00 |
| Benzene | mg/min | 0.0E+00 | 0.0E+00 |
| Bromodichloro- | mg/L | 0.0E+00 | 0.0E+00 |
| methane | mg/min | 0.0E+00 | 0.0E+00 |
| Bromoform | mg/L | 0.0E+00 | 0.0E+00 |
| Bromoform | mg/min | 0.0E+00 | 0.0E+00 |
| Butanedioic | mg/L | 0.0E+00 | 6.8E-05 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | P-B-2 Seal Water | C-100 Air Flow |
|---|---|---|---|
| Stream Number | | 31 | 32 |
| Acid | mg/min | 0.0E+00 | 2.2E-02 |
| 1-Butanol | mg/L | 1.1E-02 | 8.6E-09 |
| 1-Butanol | mg/min | 4.2E-03 | 2.8E-06 |
| 2-Butanone | mg/L | 0.0E+00 | 0.0E+00 |
| 2-Butanone | mg/min | 0.0E+00 | 0.0E+00 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 |
| diglycol | mg/min | 0.0E+00 | 0.0E+00 |
| 2-Butoxy- | mg/L | 0.0E+00 | 0.0E+00 |
| ethanol | mg/min | 0.0E+00 | 0.0E+00 |
| Butoxy- | mg/L | 0.0E+00 | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 |
| Butoxytri- | mg/L | 0.0E+00 | 0.0E+00 |
| ethyleneglycol | mg/min | 0.0E+00 | 0.0E+00 |
| Butraldehyde | mg/L | 0.0E+00 | 0.0E+00 |
| Butraldehyde | mg/min | 0.0E+00 | 0.0E+00 |
| C3-Alkylbenzene | mg/L | 0.0E+00 | 9.0E-03 |
| C3-Alkylbenzene | mg/min | 0.0E+00 | 2.9E+00 |
| Caproic acid | mg/L | 0.0E+00 | 0.0E+00 |
| Caproic acid | mg/min | 0.0E+00 | 0.0E+00 |
| Carbon | mg/L | 0.0E+00 | 0.0E+00 |
| Tetrachloride | mg/min | 0.0E+00 | 0.0E+00 |
| Chlorodibromo- | mg/L | 0.0E+00 | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 |
| Chloroethyl, 2- | mg/L | 0.0E+00 | 1.1E-04 |
| hydroxymethyl, | BA | 0.0E+00 | 3.7E-02 |
| Chloroform | mg/L | 0.0E+00 | 0.0E+00 |
| Chloroform | mg/min | 0.0E+00 | 0.0E+00 |
| 2-Chloromethyl- | mg/L | 0.0E+00 | 2.8E-04 |
| hydroxymethylbenzene | | 0.0E+00 | 8.9E-02 |
| 2-Chloromethyl- | mg/L | 0.0E+00 | 1.7E-03 |
| -o-xylene | mg/min | 0.0E+00 | 5.4E-01 |
| Citric Acid | mg/L | 0.0E+00 | 5.4E-05 |
| Citric Acid | mg/min | 0.0E+00 | 1.7E-02 |
| 1,2 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 |
| ethane | mg/min | 0.0E+00 | 0.0E+00 |
| 1,1 Dichloro- | mg/L | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 |
| Diethyl- | mg/L | 0.0E+00 | 4.6E-09 |
| phthalates | mg/min | 0.0E+00 | 1.5E-06 |
| Difluorodi- | mg/L | 0.0E+00 | 0.0E+00 |
| chloromethane | mg/min | 0.0E+00 | 0.0E+00 |
| 3,5-Dimethyl- | mg/L | 0.0E+00 | 0.0E+00 |
| pyridine | mg/min | 0.0E+00 | 0.0E+00 |
| Dimethylnitro- | mg/L | 0.0E+00 | 0.0E+00 |
| samine | mg/min | 0.0E+00 | 0.0E+00 |
| Dimethyltoluidine | mg/L | 0.0E+00 | 2.2E-05 |
| Dimethyltoluidine | mg/min | 0.0E+00 | 7.0E-03 |
| Dioctylphthalate | mg/L | 0.0E+00 | 6.9E-09 |
| Dioctylphthalate | mg/min | 0.0E+00 | 2.2E-06 |
| Dodecane | mg/L | 0.0E+00 | 1.4E-06 |
| Dodecane | mg/min | 0.0E+00 | 4.6E-04 |
| Dodecanoic | mg/L | 0.0E+00 | 1.0E-10 |
| Acid | mg/min | 0.0E+00 | 3.3E-08 |
| Ethanedioic Acid | mg/L | 0.0E+00 | 3.6E-06 |
| Ethanedioic Acid | mg/min | 0.0E+00 | 1.2E-03 |
| Ethoxytri- | mg/L | 0.0E+00 | 0.0E+00 |
| ethylene glycol | mg/min | 0.0E+00 | 0.0E+00 |
| Ethyl,2-methyl- | mg/L | 0.0E+00 | 5.3E-07 |
| hydroxymethylbenzenes | | 0.0E+00 | 1.7E-04 |
| Ethyl alcohol | mg/L | 0.0E+00 | 0.0E+00 |
| Ethyl alcohol | mg/min | 0.0E+00 | 0.0E+00 |
| Ethyl Benzene | mg/L | 0.0E+00 | 0.0E+00 |
| Ethyl Benzene | mg/min | 0.0E+00 | 0.0E+00 |
| Ethylbenz- | mg/L | 0.0E+00 | 1.8E-04 |
| aldehyde | mg/min | 0.0E+00 | 5.7E-02 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| Description | Units | P-B-2 Seal Water | C-100 Air Flow |
|---|---|---|---|
| Stream Number | | 31 | 32 |
| ED3A | mg/L | 0.0E+00 | 2.5E-12 |
| ED3A | mg/min | 0.0E+00 | 8.0E-10 |
| EDTA | mg/L | 0.0E+00 | 7.2E-12 |
| EDTA | mg/min | 0.0E+00 | 2.3E-09 |
| Ethylxylene | mg/L | 0.0E+00 | 7.2E-07 |
| Ethylxylene | mg/min | 0.0E+00 | 2.3E-04 |
| Heptadecane | mg/L | 0.0E+00 | 0.0E+00 |
| Heptadecane | mg/min | 0.0E+00 | 0.0E+00 |
| Heptadecanoic | mg/L | 0.0E+00 | 1.9E-09 |
| Acid | mg/min | 0.0E+00 | 6.1E-07 |
| Heptanedioic | mg/L | 0.0E+00 | 2.8E-08 |
| Acid | mg/min | 0.0E+00 | 9.2E-06 |
| Hexadecane | mg/L | 0.0E+00 | 0.0E+00 |
| Hexadecane | mg/min | 0.0E+00 | 0.0E+00 |
| Hexadecanoic | mg/L | 0.0E+00 | 1.5E-09 |
| Acid | mg/min | 0.0E+00 | 4.9E-07 |
| Hexanedioic | mg/L | 0.0E+00 | 2.4E-11 |
| Acid | mg/min | 0.0E+00 | 7.8E-09 |
| Hexanoic | mg/L | 0.0E+00 | 2.2E-08 |
| Acid | mg/min | 0.0E+00 | 7.0E-06 |
| Hydroxyacetic | mg/L | 0.0E+00 | 3.1E-03 |
| Acid | mg/min | 0.0E+00 | 1.0E+00 |
| 2-Hydroxymethyl- | mg/L | 0.0E+00 | 2.5E-06 |
| benzoic Acid | mg/min | 0.0E+00 | 8.2E-04 |
| Methoxydi- | mg/L | 0.0E+00 | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 |
| Methosytri- | mg/L | 0.0E+00 | 0.0E+00 |
| glycol | mg/min | 0.0E+00 | 0.0E+00 |
| Methylbenz- | mg/L | 0.0E+00 | 7.0E-05 |
| aldahyde | mg/min | 0.0E+00 | 2.3E-02 |
| 2-Methylbenzoic | mg/L | 0.0E+00 | 5.5E-06 |
| Acid | mg/min | 0.0E+00 | 1.8E-03 |
| Methylene | mg/L | 0.0E+00 | 0.0E+00 |
| chloride | mg/min | 0.0E+00 | 0.0E+00 |
| 2-Methyl.hydroxy- | mg/L | 0.0E+00 | 1.0E-04 |
| methyl benzene | mg/min | 0.0E+00 | 3.4E-02 |
| Methyl n-propyl | mg/L | 0.0E+00 | 0.0E+00 |
| ketone | mg/min | 0.0E+00 | 0.0E+00 |
| Methyl n-butyl | mg/L | 0.0E+00 | 0.0E+00 |
| ketone | mg/min | 0.0E+00 | 0.0E+00 |
| MIBK | mg/L | 0.0E+00 | 0.0E+00 |
| (Hexone) | mg/min | 0.0E+00 | 0.0E+00 |
| 2-Methyl- | mg/L | 0.0E+00 | 0.0E+00 |
| nonane | mg/min | 0.0E+00 | 0.0E+00 |
| Methyl- | mg/L | 0.0E+00 | 1.3E-07 |
| toluidine | mg/min | 0.0E+00 | 4.2E-05 |
| n-C22H46 - | mg/L | 0.0E+00 | 1.3E-09 |
| C40H82 | mg/min | 0.0E+00 | 4.2E-07 |
| HEDTA | mg/L | 0.0E+00 | 1.8E-06 |
| HEDTA | mg/min | 0.0E+00 | 5.8E-04 |
| MAIDA | mg/L | 0.0E+00 | 2.2E-06 |
| MAIDA | mg/min | 0.0E+00 | 7.1E-04 |
| MICEDA | mg/L | 0.0E+00 | 1.1E-07 |
| MICEDA | mg/min | 0.0E+00 | 3.6E-05 |
| Nitrilotri- | mg/L | 0.0E+00 | 2.3E-08 |
| acetic Acid | mg/min | 0.0E+00 | 7.3E-06 |
| Octodecanoic | mg/L | 0.0E+00 | 3.5E-10 |
| Acid | mg/min | 0.0E+00 | 1.1E-07 |
| o-Xylene | mg/L | 0.0E+00 | 0.0E+00 |
| o-Xylene | mg/min | 0.0E+00 | 0.0E+00 |
| p-Chlorotoluene | mg/L | 0.0E+00 | 0.0E+00 |
| p-Chlorotoluene | mg/min | 0.0E+00 | 0.0E+00 |
| p-Dichloro- | mg/L | 0.0E+00 | 0.0E+00 |
| benzene | mg/min | 0.0E+00 | 0.0E+00 |
| Pentadecane | mg/L | 0.0E+00 | 1.4E-08 |

Table 2B-1. Process Flow Sheet for 242-A Evaporator. (24 sheets)

| | | | |
|---|---|---|---|
| Pentadecane | mg/min | 0.0E+00 | 4.6E-06 |
| Pentadecanoic | mg/L | 0.0E+00 | 1.5E-07 |
| Acid | mg/min | 0.0E+00 | 4.8E-05 |
| Pentanedioic | mg/L | 0.0E+00 | 1.2E-11 |
| Acid | mg/min | 0.0E+00 | 3.7E-09 |
| Phenol | mg/L | 0.0E+00 | 0.0E+00 |
| Phenol | mg/min | 0.0E+00 | 0.0E+00 |
| 2-Propanol | mg/L | 0.0E+00 | 0.0E+00 |
| 2-Propanol | mg/min | 0.0E+00 | 0.0E+00 |
| Propylbenzene | mg/L | 0.0E+00 | 8.4E-05 |
| Propylbenzene | mg/min | 0.0E+00 | 2.7E-02 |
| Pyridine | mg/L | 0.0E+00 | 0.0E+00 |
| Pyridine | mg/min | 0.0E+00 | 0.0E+00 |
| Tetrachloro- | mg/L | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 |
| Tetradecane | mg/L | 0.0E+00 | 2.5E-07 |
| Tetradecane | mg/min | 0.0E+00 | 8.2E-05 |
| Tetrahydro- | mg/L | 0.0E+00 | 0.0E+00 |
| furan | mg/min | 0.0E+00 | 0.0E+00 |
| Tributyl | mg/L | 0.0E+00 | 7.3E-07 |
| phosphate | mg/min | 0.0E+00 | 2.4E-04 |
| Tri-n-buty)- | mg/L | 0.0E+00 | 3.6E-07 |
| (di-ol)-phosphate | | 0.0E+00 | 1.2E-04 |
| 1.1.1-Tri- | mg/L | 0.0E+00 | 0.0E+00 |
| chlorethane | mg/min | 0.0E+00 | 0.0E+00 |
| Trichloro- | mg/L | 0.0E+00 | 0.0E+00 |
| ethylene | mg/min | 0.0E+00 | 0.0E+00 |
| Trichloromethane | mg/L | 0.0E+00 | 0.0E+00 |
| Trichloromethane | mg/min | 0.0E+00 | 0.0E+00 |
| Tridecane | mg/L | 0.0E+00 | 4.2E-06 |
| Tridecane | mg/min | 0.0E+00 | 1.4E-03 |
| Triglyme | mg/L | 0.0E+00 | 0.0E+00 |
| Triglyme | mg/min | 0.0E+00 | 0.0E+00 |
| 1.3.5 Trimethyl | mg/L | 0.0E+00 | 7.1E-03 |
| benzene | mg/min | 0.0E+00 | 2.3E-00 |
| Toluene | mg/L | 0.0E+00 | 0.0E+00 |
| Toluene | mg/min | 0.0E+00 | 0.0E+00 |
| Vinyl Chloride | mg/L | 0.0E+00 | 0.0E+00 |
| Vinyl Chloride | mg/min | 0.0E+00 | 0.0E+00 |
| Undecane | mg/L | 0.0E+00 | 4.6E-06 |
| Undecane | mg/min | 0.0E+00 | 1.5E-03 |
| Unknown | mg/L | 0.0E+00 | 9.3E-09 |
| phthalates | mg/min | 0.0E+00 | 3.0E-06 |

Table 2B-2. 242-A Evaporator Feed to C-A-1. (4 sheets)

| Nuclide/Chemical | Units | SD-WM -PSE-008 DSSF | 65959-87 -720Starr DSS | AN-103 SD-WM -TI-355 DSS | AN-106 SD-WM -TI-355 DSSF | AW-101 SD-WM -TI-355 DSSF | Raw Water | Average TI-355 Values | Std. Dev. +/- | Adjusted Feed to C-A-1 |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1.7E+01 | | | |
| Sp. Gr. | unitless | | | 1.6E+00 | 1.2E+00 | 1.5E+00 | | 1.4E+00 | 1.7E-01 | |
| | | | | | | | 6.2E+00 | | | |
| TOC | mg/L | | 1.0E+04 | 7.4E+03 | 5.3E+03 | 1.1E+03 | 1.7E+00 | 4.6E+03 | 2.6E+03 | 3.3E+03 |
| TOC | mg/min | | | | | | | | | |
| TDS | mg/L | | | | | | | | | |
| TDS | mg/min | | | | | | | | | |
| Alpha | uCi/ml | | | | | | 8.1E-01 | | | |
| Beta | uCi/ml | | | | | | 1.0E+01 | | | |
| 3H | uCi/ml | | | 4.0E-03 | 7.0E-03 | 1.9E-02 | | 1.0E-02 | 6.5E-03 | 1.8E-02 |
| 14C | uCi/ml | 2.6E-01 | 3.7E-01 | 2.0E-03 | 6.5E-04 | 1.5E-03 | | 1.4E-03 | 5.6E-04 | 9.7E-04 |
| 60Co | uCi/ml | | | 3.8E-02 | | 2.7E-02 | | 3.3E-02 | 5.5E-03 | 2.3E-02 |
| 63Ni | uCi/ml | 2.6E+00 | 3.7E+00 | | | | | | | |
| 79Se | uCi/ml | | | 4.3E-02 | 5.2E-04 | 4.9E-04 | | 1.5E-02 | 2.0E-02 | 1.0E-02 |
| 90Sr | uCi/ml | 1.8E+02 | 2.6E+02 | 1.3E+01 | 4.4E+00 | 1.5E+01 | | 1.1E+01 | 4.6E+00 | 7.6E+00 |
| 93Zr | uCi/ml | 1.3E-02 | 1.8E-02 | | | | | | | |
| 94Nb | uCi/ml | | | 7.1E-03 | | 4.2E-02 | | 2.5E-02 | 1.7E-02 | 1.7E-02 |
| 99Tc | uCi/ml | 2.0E+00 | 2.9E+00 | 1.7E-01 | 8.5E-02 | 1.1E-01 | | 1.2E-01 | 3.6E-02 | 8.5E-02 |
| 106Ru | uCi/ml | 5.3E+01 | 6.6E+01 | 6.8E-02 | | 2.0E+01 | | 1.0E+01 | 1.0E+01 | 7.0E+00 |
| 113Sn | uCi/ml | | | | | | | | | |
| 124Sb | uCi/ml | 1.4E+00 | 2.0E+00 | | | | | | | |
| 125Sb | uCi/ml | 4.0E+00 | 5.5E+00 | | | | | | | |
| 126Sn | uCi/ml | 2.0E-02 | 2.9E-03 | | | | | | | |
| 129I | uCi/ml | 2.6E-03 | 3.7E-03 | 5.2E-04 | 2.0E-04 | 1.3E-04 | | 2.8E-04 | 1.7E-04 | 2.7E-04 |
| 134Cs | uCi/ml | | | 1.1E-01 | | 5.6E+00 | | 2.9E+00 | 2.7E+00 | 2.0E+00 |
| 135Cs | uCi/ml | 6.6E-03 | 9.2E-03 | | | | | | | |
| 137Cs | uCi/ml | 1.3E+03 | 1.8E+03 | 7.5E+02 | 2.7E+02 | 5.0E+02 | | 5.1E+02 | 2.0E+02 | 3.5E+02 |
| 144Ce | uCi/ml | 8.5E-01 | 1.2E+00 | | | | | | | |
| 147Pm | uCi/ml | | | | | | | | | |
| 151Sm | uCi/ml | 2.6E+01 | 2.9E+01 | | | | | | | |
| 155Eu | uCi/ml | | | | | | | | | |
| 226Ra | uCi/ml | 1.3E-12 | 1.8E-12 | | | | | | | |
| 230Th | uCi/ml | 6.6E-11 | 9.2E-11 | | | | | | | |
| 233U | uCi/ml | 2.9E-08 | 4.8E-08 | | | | | | | |
| 234U | uCi/ml | 2.6E-07 | 3.7E-07 | 5.3E-05 | | 2.0E-05 | | 3.6E-05 | 1.7E-05 | 2.6E-05 |
| 235U | uCi/ml | 1.3E-04 | 1.8E-04 | 1.1E-06 | | 2.5E-06 | | 1.8E-06 | 7.0E-07 | 1.3E-06 |
| 238U | uCi/ml | 2.6E-03 | 3.7E-03 | 1.4E-05 | 4.8E-06 | 2.1E-05 | | 1.3E-05 | 6.6E-06 | 9.3E-06 |
| 237Np | uCi/ml | 4.0E-03 | 5.5E-03 | 2.0E-05 | 1.6E-04 | 9.4E-06 | | 6.3E-05 | 6.9E-05 | 4.4E-05 |
| 238Pu | uCi/ml | 6.6E-04 | 9.2E-04 | 9.8E-04 | 2.1E-04 | 1.0E-03 | | 7.3E-04 | 3.7E-04 | 5.1E-04 |
| 239Pu | uCi/ml | 1.0E-01 | 1.4E-01 | 1.9E-03 | 4.4E-04 | 2.2E-03 | | 1.5E-03 | 7.7E-04 | 1.1E-03 |
| 240Pu | uCi/ml | 1.3E-03 | 1.8E-03 | | | | | | | |
| 241Pu | uCi/ml | 3.4E-02 | 4.8E-02 | | | | | | | |
| 241Am | uCi/ml | 1.5E-03 | 2.9E+00 | 2.3E-03 | 1.5E-03 | 2.7E-03 | | 2.2E-03 | 5.0E-04 | 1.5E-03 |
| 243Am | uCi/ml | 2.0E-03 | 2.9E-03 | | | | | | | |
| 244Cm | uCi/ml | 1.3E-02 | 1.8E-02 | 4.2E-04 | | 6.6E-05 | | 2.4E-04 | 1.8E-04 | 1.7E-04 |
| AlO2- | mg/L | 1.5E+05 | 2.2E+05 | 5.8E+04 | 1.1E+04 | 2.6E+04 | | 3.2E+04 | 2.0E+04 | 2.2E+04 |
| NH4+ | mg/L | 1.7E+03 | | | | | | 3.2E+02 | | 3.2E+02 |
| Sb | mg/L | | | | | | | | | |
| As | mg/L | | | | | | | | | |
| Ba | mg/L | | | | | 1.4E+01 | 3.0E-02 | 1.4E+01 | | 9.8E+00 |
| Be | mg/L | | | | | | | | | |
| Bi | mg/L | | | | | | | | | |
| B | mg/L | | | | 1.7E+01 | | | 1.7E+01 | | 1.2E+01 |
| Ca | mg/L | | | 8.6E+01 | 6.7E+01 | 6.5E+01 | 1.9E+01 | 7.3E+01 | 9.5E+00 | 5.1E+01 |
| Cd | mg/L | | | 1.6E+01 | | | 2.0E-03 | 1.6E+01 | | 1.1E+01 |
| CO3= | mg/L | 2.4E+05 | 6.0E+04 | 9.0E+03 | 2.3E+04 | 5.1E+03 | | 1.2E+04 | 7.7E+03 | 8.7E+03 |
| Cl- | mg/L | | | 9.6E+03 | 2.9E+03 | 6.8E+03 | 7.8E-01 | 6.4E+03 | 2.7E+03 | 4.5E+03 |
| Cr | mg/L | | | 8.5E+02 | 6.1E+02 | 3.5E+02 | 1.0E-02 | 6.0E+02 | 2.0E+02 | 4.2E+02 |
| Cu | mg/L | | | 1.2E+01 | 1.8E+00 | | 7.4E-02 | 6.9E+00 | 5.1E+00 | 4.8E+00 |
| CN- | mg/L | | | 3.4E+01 | 1.3E+01 | 9.8E+01 | | 4.8E+01 | 3.6E+01 | 3.4E+01 |
| F- | mg/L | 5.7E+04 | | 7.4E+02 | 3.4E+01 | | | 3.9E+02 | 3.5E+02 | 2.7E+02 |
| Fe | mg/L | | | 7.0E+01 | 9.4E+00 | 3.9E+01 | 1.0E-01 | 3.9E+01 | 2.5E+01 | 2.8E+01 |
| H2 | mg/L | | | | | | | | | |
| OH- | mg/L | 1.1E+05 | 1.0E+05 | 9.8E+04 | 1.2E+04 | 9.9E+04 | | 7.0E+04 | 4.1E+04 | 4.9E+04 |
| Pb | mg/L | | | 7.2E+01 | | 6.8E+01 | 1.3E-02 | 7.0E+01 | 2.0E+00 | 5.1E+01 |

Table 2B-2. 242-A Evaporator Feed to C-A-1. (4 sheets)

| Nuclide/Chemical | Units | SD-WM -PSE-008 OSSF | 65959-87 -720Starr DSS | AN-103 SD-WM -TI-355 DSS | AN-106 SD-WM -TI-355 OSSF | AW-101 SD-WM -TI-355 DSSF | Raw Water | Average TI-355 Values | Std. Dev. +/- | Adjusted Feed to C-A-1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Mg | mg/L | | | 2.9E+01 | | | 4.3E+00 | 2.9E+01 | | 2.0E+01 |
| Mn | mg/L | | | 2.9E+01 | | | 1.1E-02 | 2.9E+01 | | 2.0E+01 |
| Hg | mg/L | | | 1.6E+01 | | | T6-1-10 3.5E-02 | 8.0E+00 | | 8.0E+00 |
| 5.6E+00 | | | | | | | | | | |
| Mo | mg/L | | | 8.8E+01 | 3.2E+01 | 6.0E+01 | | 6.0E+01 | 2.3E+01 | 4.2E+01 |
| Ni | mg/L | | | | 5.3E+01 | 2.7E+01 | 1.1E-02 | 4.0E+01 | 1.3E+01 | 2.8E+01 |
| NO3- | mg/L | 2.6E+05 | 5.0E+05 | 1.6E+05 | 7.9E+04 | 2.9E+05 | 1.2E+00 | 1.8E+05 | 8.7E+04 | 1.2E+05 |
| NO2- | mg/L | 2.3E+05 | 3.2E+05 | 1.4E+05 | 3.4E+04 | 8.4E+04 | | 8.6E+04 | 4.3E+04 | 6.0E+04 |
| PO4 | mg/L | 8.2E+04 | 3.8E+04 | 9.3E+02 | 1.4E+04 | 8.9E+02 | | 5.3E+03 | 6.2E+03 | 3.7E+03 |
| P | mg/L | | | | 4.9E+03 | | | 4.9E+03 | 0.0E+00 | 3.4E+03 |
| K | mg/L | | | 1.5E+04 | 1.2E-03 | 3.9E+04 | 8.0E-01 | 1.8E+04 | 1.6E+04 | 1.3E+04 |
| Se | mg/L | | | | | | | | | |
| Si | mg/L | | | 2.7E+02 | | 1.1E+02 | | 1.9E+02 | 8.0E+01 | 1.3E+02 |
| Ag | mg/L | | | | | | | | | |
| Na | mg/L | 6.3E+05 | 6.7E+05 | 3.4E+05 | 1.2E+05 | 2.6E+05 | 2.4E+00 | 2.4E+05 | 9.1E+04 | 1.7E+05 |
| SO4= | mg/L | | 3.8E+04 | 1.6E+03 | 2.9E+03 | 4.2E+03 | 1.0E+01 | 2.9E+03 | 1.1E+03 | 2.0E+03 |
| S- | mg/L | | | | | | | | | |
| Ti | mg/L | | | | | | | | | |
| W | mg/L | | | 2.1E+02 | | | | 2.1E+02 | | [illegible] |
| U | mg/L | | | 1.2E+02 | 1.4E+01 | 9.2E+01 | 6.4E-04 | 7.5E+01 | 4.5E+01 | [illegible] |
| V | mg/L | | | | | | | | | |
| Zn | mg/L | | | 4.8E+01 | | | 4.8E-02 | 4.8E+01 | | [illegible] |
| Zr | mg/L | | | | | | | | | |
| Acetone | mg/L | | | | | | | | | [illegible] |
| Alkyl. hydroxy-methyl benzene | mg/L | | | 1.8E+00 | | | | 1.8E+00 | | [illegible] |
| Benzyl alcohol | mg/L | | | | | | | | | |
| Benzaldehyde | mg/L | | | | | | | | | |
| Benzene | mg/L | | | | | | | | | |
| Bromodichloro-methane | mg/L | | | | | | | | | |
| Bromoform | mg/L | | | | | | | | | |
| Butanedioic Acid | mg/L | | | 4.2E+02 | | | | 4.2E+02 | | [illegible] |
| 1-Butanol | mg/L | | | | | | 1.1E-02 | | | |
| 2-Butanone | mg/L | | | | | | | | | |
| Butoxy-diglycol | mg/L | | | | | | | | | |
| 2-Butoxy-ethanol | mg/L | | | | | | | | | |
| Butoxy-glycol | mg/L | | | | | | | | | |
| Butoxytri-ethyleneglycol | mg/L | | | | | | | | | |
| Butraldehyde | mg/L | | | | | | | | | |
| C3-Alkylbenzene | mg/L | | | 3.2E+02 | | | | 3.2E+02 | | [illegible] |
| Caproic acid | mg/L | | | | | | | | | |
| Carbon Tetrachloride | mg/L | | | | | | | | | |
| Chlorodibromo-ethane | mg/L | | | | | | | | | |
| Chloroethyl. 2-hydroxymethyl. BA | mg/L | | | 1.3E+01 | | | | 1.3E+01 | | [illegible] |
| Chloroform | mg/L | | | | | | | | | |
| 2-Chloromethyl-hydroxymethylbenzene | mg/L | | | 1.2E+01 | | | | 1.2E+01 | | 1.4E+01 |
| 2-Chloromethyl--o-xylene | mg/L | | | 6.6E+00 | | | | 6.6E+00 | | 1.5E+01 |
| Citric Acid | mg/L | | | 1.8E+01 | 3.2E+01 | 5.3E+01 | | 3.4E+01 | 1.4E+01 | 2.8E+01 |
| 1.2 Dichloro-ethane | mg/L | | | | | | | | | |
| 1.1 Dichloro-ethylene | mg/L | | | | | | | | | |

Table 2B-2. 242-A Evaporator Feed to C-A-1. (4 sheets)

| Nuclide/Chemical | Units | SD-WM -PSE-008 DSSF | 65959-87 -720Starr DSS | AN-103 SD-WM -TI-355 DSS | AN-106 SD-WM -TI-355 DSSF | AW-101 SD-WM -TI-355 DSSF | Raw Water | Average TI-355 Values | Std. Dev. +/- | Adjusted Feed to C-A-1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Diethyl-phthalates | mg/L | | | | | 6.6E+00 | | 6.6E+00 | | 4.6E+00 |
| Difluorodi-chloromethane | mg/L | | | | | | | | | |
| 3.5-Dimethyl-pyridine | mg/L | | | | | | | | | |
| Dimethylnitro-samine | mg/L | | | | | | | | | |
| Dimethyltoluidine | mg/L | | | 1.2E+01 | | | | 1.2E+01 | | 1.0E+01 |
| Dioctylphthalate | mg/L | | | 2.4E+01 | | 1.8E+00 | | 1.3E+01 | 1.1E+01 | 9.0E+00 |
| Dodecane | mg/L | | | 4.0E+00 | | 1.7E+00 | | 2.9E+00 | 1.1E+00 | 2.2E+00 |
| Dodecanoic Acid | mg/L | | | | | 9.5E-01 | | 9.5E-01 | | 6.6E-01 |
| Ethanedioic Acid | mg/L | | | 4.2E+03 | | | | 4.2E+03 | | 2.9E+03 |
| Ethoxytri-ethylene glycol | mg/L | | | | | | | | | |
| Ethyl.2-methyl-hydroxymethylbenzenes | mg/L | | | 4.6E+01 | | | | 4.6E+01 | | 3.3E+01 |
| Ethyl alcohol | mg/L | | | | | | | | | |
| Ethyl Benzene | mg/L | | | | | | | | | |
| Ethylbenz-aldahyde | mg/L | | | 6.9E+02 | | | | 6.9E+02 | | 5.2E+02 |
| ED3A | mg/L | | | 4.8E+00 | | 1.8E+01 | | 1.1E+01 | 6.6E+00 | 8.0E+00 |
| EDTA | mg/L | | | 8.5E+01 | 4.8E+00 | 1.1E+01 | | 3.4E+01 | 3.6E+01 | 2.4E+01 |
| Ethylxylene | mg/L | | | 3.2E-01 | | | | 3.2E-01 | | 2.7E-01 |
| Heptadecane | mg/L | | | | | | | | | |
| Heptadecanoic Acid | mg/L | | | 2.4E+00 | | | | 2.4E+00 | | 1.7E+00 |
| Heptanedioic Acid | mg/L | | | 2.7E+01 | | | | 2.7E+01 | | 1.9E+01 |
| Hexadecane | mg/L | | | | | | | | | |
| Hexadecanoic Acid | mg/L | | | | | 8.3E-01 | | 8.3E-01 | | 5.9E-01 |
| Hexanedioic Acid | mg/L | | | 6.4E+01 | | 7.1E+00 | | 3.6E+01 | 2.8E+01 | 2.5E+01 |
| Hexanoic Acid | mg/L | | | 4.3E+01 | | | | 4.3E+01 | | 3.0E+01 |
| Hydroxyacetic Acid | mg/L | | | | 4.6E+01 | | | 4.6E+01 | | 6.8E+01 |
| 2-Hydroxymethyl-benzoic Acid | mg/L | | | 2.7E+01 | | | | 2.7E+01 | | 2.0E+01 |
| Methoxydi-glycol | mg/L | | | | | | | | | |
| Methosytri-glycol | mg/L | | | | | | | | | |
| Methylbenz-aldahyde | mg/L | | | 6.9E+02 | | | | 6.9E+02 | | 5.0E+02 |
| 2-Methylbenzoic Acid | mg/L | | | 1.8E+01 | | | | 1.8E+01 | | 1.4E+01 |
| Methylene chloride | mg/L | | | | | | | | | |
| 2-Methyl.hydroxy-methyl benzene | mg/L | | | 3.5E+02 | | | | 3.5E+02 | | 2.6E+02 |
| Methyl n-propyl ketone | mg/L | | | | | | | | | |
| Methyl n-butyl ketone | mg/L | | | | | | | | | |
| MIBK (Hexone) | mg/L | | | | | | | | | |
| 2-Methyl-nonane | mg/L | | | | | | | | | |
| Methyl-toluidine | mg/L | | | 3.5E+00 | | | | 3.5E+00 | | 2.5E+00 |
| n-C22H46 - C40H82 | mg/L | | | 1.5E+01 | | 2.0E+01 | | 1.8E+01 | 2.5E+00 | 1.3E+01 |
| HEDTA | mg/L | | | | 2.0E+01 | | | 2.0E+01 | | 1.5E+01 |

Table 2B-2. 242-A Evaporator Feed to C-A-1. (4 sheets)

| Nuclide/Chemical | Units | SD-WM -PSE-008 DSSF | 65959-87 -720Starr DSS | AN-103 SD-WM -TI-355 DSS | AN-106 SD-WM -TI-355 DSSF | AW-101 SD-WM -TI-355 DSSF | Raw Water | Average TI-355 Values | Std. Dev. +/- | Adjusted Feed to C-A-1 |
|---|---|---|---|---|---|---|---|---|---|---|
| MAIDA | mg/L | | | 5.8E+02 | | | | 5.8E+02 | | 4.1E+02 |
| MICEDA | mg/L | | | 3.0E+01 | | | | 3.0E+01 | | 2.1E+01 |
| Nitrilotri-acetic Acid | mg/L | | | 4.6E+00 | | 7.5E+00 | | 6.0E+00 | 1.5E+00 | 4.2E+00 |
| Octodecanoic Acid | mg/L | | | | | 4.1E-01 | | 4.1E-01 | | 2.9E-01 |
| o-Xylene | mg/L | | | | | | | | | |
| p-Chlorotoluene | mg/L | | | | | | | | | |
| p-Dichloro-benzene | mg/L | | | | | | | | | |
| Pentadecane | mg/L | | | 3.7E+00 | | 8.0E-01 | | 2.2E+00 | 1.5E+00 | 1.6E+00 |
| Pentadecanoic Acid | mg/L | | | 3.5E+01 | | | | 3.5E+01 | | 2.5E+01 |
| Pentanedioic Acid | mg/L | | | 7.0E+01 | | | | 7.0E+01 | | 4.9E+01 |
| Phenol | mg/L | | | | | | | | | |
| 2-Propanol | mg/L | | | | | | | | | |
| Propylbenzene | mg/L | | | 1.8E+00 | | | | 1.8E+00 | | 2.4E+00 |
| Pyridine | mg/L | | | | | | | | | |
| Tetrachloro-ethylene | mg/L | | | | | | | | | |
| Tetradecane | mg/L | | | 9.0E+00 | | 7.4E+00 | | 8.2E+00 | 8.0E-01 | 5.9E+00 |
| Tetrahydro-furan | mg/L | | | | | | | | | |
| Tributyl phosphate | mg/L | | | 1.8E+01 | | 2.7E+01 | | 2.3E+01 | 4.5E+00 | 1.6E+01 |
| Tri-n-butyl-(di-ol)-phosphate | mg/L | | | 1.1E+01 | | | | 1.1E+01 | | 7.7E+00 |
| 1.1.1-Tri-chlorethane | mg/L | | | | | | | | | |
| Trichloro-ethylene | mg/L | | | | | | | | | |
| Trichloromethane | mg/L | | | | | | | | | |
| Tridecane | mg/L | | | 1.5E+01 | | 1.4E+01 | | 1.5E+01 | 5.0E-01 | 1.1E+01 |
| Triglyme | mg/L | | | | | | | | | |
| 1.3.5 Trimethyl benzene | mg/L | | | 7.8E+01 | | | | 7.8E+01 | | 1.2E+02 |
| Toluene | mg/L | | | | | | | | | |
| Vinyl Chloride | mg/L | | | | | | | | | |
| Undecane | mg/L | | | 5.8E-01 | | 3.3E+00 | | 1.9E+00 | 1.4E+00 | 1.6E+00 |
| Unknown phthalates | mg/L | | | 2.1E+01 | | 5.4E+00 | | 1.3E+01 | 7.8E+00 | 9.2E+00 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| TOC | mg/L | 3.3E+03 | 3.6E+02 | 2.0E+00 | 3.4E+05 | 1.0E+05 | 9.2E+0 |
| TOC | mg/min | | | | | | 1.7E+01 |
| TDS | mg/L | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| TDS | mg/min | | | | | | 0.0E+00 |
| Alpha | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 2.5E+06 |
| | | | | | | | 5.1E-01 |
| Beta | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 2.9E+11 |
| | | | | | | | 5.3E+02 |
| 3H | uCi/ml | 1.8E-02 | | | 6.6E+03 | 1.1E+04 | 1.2E+05 |
| | | | | | | | 3.4E-01 |
| 14C | uCi/ml | 9.7E-04 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| 60Co | uCi/ml | 2.3E-02 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| 63Ni | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 79Se | uCi/ml | 1.0E-02 | | | 1.0E+07 | 1.0E+05 | 2.8E+09 |
| | | | | | | | 5.1E+02 |
| 90Sr | uCi/ml | 7.6E+00 | | | 2.3E+09 | 1.8E+06 | 1.2E+15 |
| | | | | | | | 2.3E+06 |
| 93Zr | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 94Nb | uCi/ml | 1.7E-02 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| 99Tc | uCi/ml | 8.5E-02 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| 106Ru | uCi/ml | 7.0E+00 | | | 6.7E+07 | 1.6E+06 | 3.1E+11 |
| | | | | | | | 3.4E+03 |
| 113Sn | uCi/ml | | | | 2.9E+05 | 5.2E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 124Sb | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 125Sb | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 126Sn | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 129I | uCi/ml | 2.7E-04 | | | 2.8E+04 | 1.4E+05 | 1.1E+07 |
| | | | | | | | 1.4E+00 |
| 134Cs | uCi/ml | 2.0E+00 | | | 3.5E+07 | 4.3E+06 | 4.3E+13 |
| | | | | | | | 3.6E+04 |
| 135Cs | uCi/ml | | | | 3.5E+07 | 4.3E+06 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 137Cs | uCi/ml | 3.5E+02 | | | 9.3E+11 | 3.6E+06 | 9.5E+17 |
| | | | | | | | 9.4E+08 |
| 144Ce | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 147Pm | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 151Sm | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 155Eu | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 226Ra | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 230Th | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 233U | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 234U | uCi/ml | 2.6E-05 | | | 1.0E+07 | 1.0E+05 | 2.7E+11 |
| | | | | | | | 5.1E+02 |
| 235U | uCi/ml | 1.3E-06 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| 238U | uCi/ml | 9.3E-06 | | | 1.0E+07 | 1.0E+05 | 2.7E+11 |
| | | | | | | | 5.1E+02 |
| 237Np | uCi/ml | 4.4E-05 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| 238Pu | uCi/ml | 5.1E-04 | | | 3.7E+10 | 4.8E+05 | 5.1E+15 |
| | | | | | | | 1.9E+06 |
| 239Pu | uCi/ml | 1.1E-03 | | | 3.7E+10 | 4.8E+05 | 5.1E+15 |
| | | | | | | | 1.9E+06 |
| 240Pu | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 241Pu | uCi/ml | | | | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 241Am | uCi/ml | 1.5E-03 | | | 1.4E+10 | 4.9E+05 | 2.0E+15 |
| | | | | | | | 7.1E+05 |
| 243Am | uCi/ml | | | | 1.4E+10 | 4.9E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 244Cm | uCi/ml | 1.7E-04 | | | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| AlO2- | mg/L | 2.2E+04 | 5.9E+01 | 1.0E+00 | 1.5E+07 | 1.0E+05 | 4.2E+11 |
| | | | | | | | 7.6E+02 |
| NH4+ | mg/L | 9.3E+02 | 1.8E+01 | 1.0E+00 | 1.1E+03 | 2.1E+03 | 7.0E+02 |
| | | | | | | | 5.7E-02 |
| Sb | mg/L | | 1.2E+02 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| As | mg/L | | 7.5E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Ba | mg/L | 9.8E+00 | 1.4E+02 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.3E+10 |
| | | | | | | | 4.6E+02 |
| Be | mg/L | | 9.0E+00 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Bi | mg/L | | 2.1E+02 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| B | mg/L | 1.2E+01 | 1.1E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 4.4E+10 |
| | | | | | | | 4.9E+02 |
| Ca | mg/L | 5.1E+01 | 4.0E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.1E+08 |
| | | | | | | | 3.9E+01 |
| Cd | mg/L | 1.1E+01 | 1.1E+02 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| CO3= | mg/L | 8.7E+03 | 6.0E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| Cl- | mg/L | 4.5E+03 | 3.5E+01 | 1.0E+00 | 5.2E+06 | 1.2E+06 | 1.2E+12 |
| | | | | | | | 2.6E+02 |
| Cr | mg/L | 4.2E+02 | 5.2E+01 | 2.0E+00 | 3.5E+08 | 8.2E+05 | 8.2E+13 |
| | | | | | | | 1.8E+04 |
| Cu | mg/L | 4.8E+00 | 6.4E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 3.1E+10 |
| | | | | | | | 4.7E+02 |
| CN- | mg/L | 3.4E+01 | 2.6E+01 | 1.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| F- | mg/L | 2.7E+02 | 1.9E+01 | 1.0E+00 | 2.4E+08 | 6.1E+05 | 1.0E+12 |
| | | | | | | | 9.0E+03 |
| Fe | mg/L | 2.8E+01 | 5.6E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 2.4E+10 |
| | | | | | | | 4.6E+02 |
| H2 | mg/L | 0.0E+00 | 2.0E+00 | 0.0E+00 | 8.3E-01 | 4.5E+00 | 1.4E-04 |
| | | | | | A | B | 8.4E-01 |
| OH- | mg/L | 4.9E+04 | 1.7E+01 | 1.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| Pb | mg/L | 5.1E+01 | 2.1E+02 | 2.0E+00 | 3.0E+05 | 4.3E+06 | 3.6E+11 |
| | | | | | | | 1.5E+01 |
| Mg | mg/L | 2.0E+01 | 2.4E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 3.6E+08 |
| | | | | | | | 6.3E+01 |
| Mn | mg/L | 2.0E+01 | 5.5E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 8.2E+10 |
| | | | | | | | 5.0E+02 |
| Hg | mg/L | 5.6E+00 | 2.0E+02 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.6E+11 |
| | | | | | | | 5.1E+02 |
| Mo | mg/L | 4.2E+01 | 9.6E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| Ni | mg/L | 2.8E+01 | 5.9E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | Ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| NO3- | mg/L | 1.2E+05 | 6.2E+01 | 1.0E+00 | 5.7E+06 | 1.6E+06 | 2.6E+12 |
| | | | | | | | 2.9E+02 |
| NO2- | mg/L | 6.0E+04 | 4.6E+01 | 1.0E+00 | 2.4E+07 | 1.6E+06 | 1.1E+13 |
| | | | | | | | 1.2E+03 |
| PO4 | mg/L | 3.7E+03 | 9.5E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| P | mg/L | 3.4E+03 | 3.1E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| K | mg/L | 1.3E+04 | 3.9E+01 | 1.0E+00 | 3.5E+07 | 1.0E+05 | 5.7E+11 |
| | | | | | | | 1.8E+03 |
| Se | mg/L | | 7.9E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Si | mg/L | 1.3E+02 | 2.8E+01 | 4.0E+00 | 1.0E+07 | 1.0E+05 | 4.2E+09 |
| | | | | | | | 3.2E+02 |
| Ag | mg/L | | 1.1E+02 | 1.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Na | mg/L | 1.7E+05 | 2.3E+01 | 1.0E+00 | 3.0E+08 | 1.0E+05 | 3.6E+12 |
| | | | | | | | 1.5E+04 |
| SO4= | mg/L | 2.0E+03 | 9.6E+01 | 2.0E+00 | 1.4E+07 | 1.1E+06 | 1.7E+11 |
| | | | | | | | 5.8E+02 |
| S- | mg/L | | 3.2E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Ti | mg/L | | 4.8E+01 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| W | mg/L | 1.5E+02 | 1.8E+02 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 2.8E+11 |
| | | | | | | | 5.1E+02 |
| U | mg/L | 5.3E+01 | 2.4E+02 | 3.0E+00 | 1.0E+07 | 1.0E+05 | 2.7E+11 |
| | | | | | | | 5.1E+02 |
| V | mg/L | | 5.1E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Zn | mg/L | 3.4E+01 | 6.5E+01 | 2.0E+00 | 1.0E+07 | 1.0E+05 | 9.6E+10 |
| | | | | | | | 5.0E+02 |
| Zr | mg/L | | 9.1E+01 | 4.0E+00 | 1.0E+07 | 1.0E+05 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| | | | | Gamma | A | B | |
| Acetone | mg/L | 4.5E-01 | | 7.8E+00 | 4.5E-02 | -8.0E+00 | 7.5E+00 |
| | | | | | | | 1.2E-02 |
| Alkyl, hydroxy-methyl benzene | mg/L | 1.3E+00 | | 5.3E+00 | 5.4E-02 | -3.2E+00 | 9.8E+08 |
| | | | | | | | 1.6E+01 |
| Benzyl alcohol | mg/L | | | 3.4E+00 | 7.1E-02 | -4.1E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Benzaldehyde | mg/L | | | 3.6E+00 | 6.5E-02 | -1.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Benzene | mg/L | | | 9.1E+00 | 4.5E-02 | 3.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Bromodichloro-methane | mg/L | | | 2.0E+00 | 4.3E-02 | 3.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Bromoform | mg/L | | | 2.0E+00 | 5.3E-02 | 4.6E-01 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Butanedioic Acid | mg/L | 3.0E+02 | | 1.6E+00 | 3.6E-02 | -7.9E-01 | 3.4E+08 |
| | | | | | | | 1.2E+01 |
| 1-Butanol | mg/L | | | 1.6E+00 | 6.2E-02 | 9.7E-01 | 7.1E+05 |
| | | | | | | | 5.6E-01 |
| 2-Butanone | mg/L | | | 1.7E+00 | 4.3E-02 | 3.5E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Butoxy-diglycol | mg/L | | | 2.7E+00 | 6.1E-02 | -1.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 2-Butoxy-ethanol | mg/L | | | 2.7E+00 | 6.1E-02 | -1.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Butoxy-glycol | mg/L | | | 2.7E+00 | 6.1E-02 | -1.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Butoxytri-ethyleneglycol | mg/L | | | 2.7E+00 | 6.1E-02 | -1.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Butraldehyde | mg/L | | | 1.6E+00 | 6.2E-02 | 9.7E-01 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| C3-Alkylbenzene | mg/L | 3.9E+02 | | 5.0E+00 | 5.4E-02 | -7.8E-02 | 1.3E+06 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| | | | | | | | 7.1E-01 |
| Caproic acid | mg/L | | | 2.8E+00 | 8.9E-02 | -6.3E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Carbon Tetrachloride | mg/L | | | 2.0E+00 | 4.0E-02 | 3.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Chlorodibromo-ethane | mg/L | | | 2.6E+00 | 4.7E-02 | 1.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Chloroethyl. 2-hydroxymethyl. BA | mg/L | 1.3E+01 | | 6.4E+00 | 5.9E-02 | -1.1E+00 | 5.3E+06 |
| | | | | | | | 1.2E+00 |
| Chloroform | mg/L | | | 2.0E+00 | 4.3E-02 | 4.2E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 2-Chloromethyl-hydroxymethylbenzene | mg/L | 1.4E+01 | | 1.0E+01 | 5.9E-02 | -1.1E+00 | 1.7E+06 |
| | | | | | | | 7.5E-01 |
| 2-Chloromethyl--o-xylene | mg/L | 1.5E+01 | | 6.4E+00 | 5.7E-02 | 6.6E-01 | 5.0E+04 |
| | | | | | | | 2.3E-01 |
| Citric Acid | mg/L | 2.8E+01 | | 2.8E+00 | 6.2E-02 | -1.3E+00 | 3.4E+07 |
| | | | | | | | 2.7E+00 |
| 1.2 Dichloro-ethane | mg/L | | | 2.6E+00 | 4.0E-02 | 3.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 1.1 Dichloro-ethylene | mg/L | | | 2.6E+00 | 3.8E-02 | 5.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Diethyl-phthalates | mg/L | 4.6E+00 | | 6.5E+00 | 5.0E-02 | -5.5E+00 | 8.0E+10 |
| | | | | | | | 1.5E+02 |
| Difluorodi-chloromethane | mg/L | | | 2.0E+00 | 4.6E-02 | -4.4E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| 3.5-Dimethyl-pyridine | mg/L | | | 3.9E+00 | 6.2E-02 | -1.8E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Dimethylnitro-samine | mg/L | | | 2.1E+00 | 3.9E-02 | 4.5E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Dimethyltoluidine | mg/L | 1.0E+01 | | 5.1E+00 | 6.2E-02 | -1.8E+00 | 2.9E+07 |
| | | | | | | | 2.6E+00 |
| Dioctylphthalate | mg/L | 9.0E+00 | | 9.0E+00 | 5.2E-02 | -6.0E+00 | 1.1E+11 |
| | | | | | | | 1.7E+02 |
| Dodecane | mg/L | 2.2E+00 | | 8.4E+00 | 5.7E-02 | -2.7E+00 | 1.1E+08 |
| | | | | | | | 5.2E+00 |
| Dodecanoic Acid | mg/L | 6.6E-01 | | 6.5E+00 | 5.4E-02 | -6.6E+00 | 5.2E+11 |
| | | | | | | | 3.6E+02 |
| Ethanedioic Acid | mg/L | 2.9E+03 | | 4.9E-01 | 6.0E-02 | -3.2E+00 | 6.5E+10 |
| | | | | | | | 1.2E+02 |
| Ethoxytri-ethylene glycol | mg/L | | | 2.2E+00 | 4.1E-02 | 2.5E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Ethyl.2-methyl-hydroxymethylbenzenes | mg/L | 3.3E+01 | | 5.3E+00 | 5.5E-02 | -4.0E+00 | 4.9E+09 |
| | | | | | | | 3.5E+01 |
| Ethyl alcohol | mg/L | | | 5.3E-01 | 5.4E-02 | 2.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Ethyl Benzene | mg/L | | | 5.8E+00 | 5.1E-02 | 9.8E-01 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Ethylbenz-aldahyde | mg/L | 5.2E+02 | | 4.9E+00 | 5.7E-02 | -2.5E+00 | 2.2E+08 |
| | | | | | | | 7.2E+00 |
| EDTA | mg/L | 8.0E+00 | | 9.5E+00 | 5.2E-02 | -1.0E+01 | 2.6E+14 |
| | | | | | | | 8.4E+03 |
| EDTA | mg/L | 2.4E+01 | | 9.5E+00 | 5.2E-02 | -1.0E+01 | 2.6E+14 |
| | | | | | | | 8.4E+03 |
| Ethylxylene | mg/L | 2.7E-01 | | 4.8E+00 | 6.1E-02 | -1.6E+00 | 2.3E+07 |
| | | | | | | | 2.3E+00 |
| Heptadecane | mg/L | | | 1.2E+01 | 5.3E-02 | -6.1E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Heptadecanoic Acid | mg/L | 1.7E+00 | | 1.2E+01 | 5.3E-02 | -6.1E+00 | 7.1E+10 |
| | | | | | | | 1.4E+02 |
| Heptanedioic Acid | mg/L | 1.9E+01 | | 3.4E+00 | 6.9E-02 | -5.4E+00 | 5.3E+10 |
| | | | | | | | 9.7E+01 |
| Hexadecane | mg/L | | | 1.1E+01 | 5.4E-02 | -5.7E+00 | 0.0E+00 |
| | | | | | | | 0.0E+00 |
| Hexadecanoic Acid | mg/L | 5.9E-01 | | 1.1E+01 | 5.4E-02 | -5.7E+00 | 3.1E+10 |
| | | | | | | | 8.9E+01 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| Hexanedioic Acid | mg/L | 2.5E+01 | | 2.8E+00 | 5.1E-02 | -8.1E+00 | 8.3E+13<br>4.8E+03 |
| Hexanoic Acid | mg/L | 3.0E+01 | | 2.8E+00 | 8.9E-02 | -6.3E+00 | 1.1E+11<br>1.1E+02 |
| Hydroxyacetic Acid | mg/L | 6.8E+01 | | 4.9E-01 | 5.4E-02 | 2.7E+00 | 3.9E+05<br>4.6E-01 |
| 2-Hydroxymethyl-benzoic Acid | mg/L | 2.0E+01 | | 4.0E+00 | 6.1E-02 | -3.0E+00 | 6.0E+08<br>1.1E+01 |
| Methoxydi-glycol | mg/L | | | 2.3E+00 | 5.7E-02 | -5.2E+00 | 0.0E+00<br>0.0E+00 |
| Methosytri-glycol | mg/L | | | 2.2E+00 | 6.2E-02 | -2.4E+00 | 0.0E+00<br>0.0E+00 |
| Methylbenz-aldahyde | mg/L | 5.0E+02 | | 4.2E+00 | 6.1E-02 | -3.0E+00 | 5.5E+08<br>1.1E+01 |
| 2-Methylbenzoic Acid | mg/L | 1.4E+01 | | 3.9E+00 | 6.3E-02 | -2.5E+00 | 1.9E+08<br>6.2E+00 |
| Methylene chloride | mg/L | | | 2.0E+00 | 3.9E-02 | 5.1E+00 | 0.0E+00<br>0.0E+00 |
| 2-Methyl.hydroxy-methyl benzene | mg/L | 2.6E+02 | | 3.9E+00 | 6.3E-02 | -2.5E+00 | 1.9E+08<br>6.2E+00 |
| Methyl n-propyl ketone | mg/L | | | 2.1E+00 | 5.9E-02 | 1.3E+00 | 0.0E+00<br>0.0E+00 |
| Methyl n-butyl ketone | mg/L | | | 2.6E+00 | 6.5E-02 | -2.6E-01 | 0.0E+00<br>0.0E+00 |
| MIBK (Hexone) | mg/L | | | 2.6E+00 | 6.1E-02 | 4.9E-01 | 0.0E+00<br>0.0E+00 |
| 2-Methyl-nonane | mg/L | | | 7.1E+00 | 5.9E-02 | -4.0E+00 | 0.0E+00<br>0.0E+00 |
| Methyl-toluidine | mg/L | 2.5E+00 | | 4.5E+00 | 5.6E-02 | -3.3E+00 | 1.5E+09<br>1.9E+01 |
| n-C22H46 - C40H82 | mg/L | 1.3E+01 | | 2.1E+01 | 4.4E-02 | -7.5E+00 | 7.8E+11<br>5.0E+02 |
| HEDTA | mg/L | 1.5E+01 | | 4.5E+00 | 5.7E-02 | -3.0E+00 | 6.4E+08<br>1.2E+01 |
| MAIDA | mg/L | 4.1E+02 | | 2.7E+00 | 6.3E-02 | -4.2E+00 | 1.5E+10<br>5.6E+01 |
| MICEDA | mg/L | 2.1E+01 | | 2.7E+00 | 6.3E-02 | -4.2E+00 | 1.5E+10<br>5.6E+01 |
| Nitrilotri-acetic Acid | mg/L | 4.2E+00 | | 2.7E+00 | 6.3E-02 | -4.2E+00 | 1.5E+10<br>5.6E+01 |
| Octodecanoic Acid | mg/L | 2.9E-01 | | 1.2E+01 | 5.3E-02 | -6.1E+00 | 6.5E+10<br>1.3E+02 |
| o-Xylene | mg/L | | | 5.8E+00 | 5.1E-02 | 8.6E-01 | 0.0E+00<br>0.0E+00 |
| p-Chlorotoluene | mg/L | | | 5.8E+00 | 5.1E-02 | 7.2E-02 | 0.0E+00<br>0.0E+00 |
| p-Dichloro-benzene | mg/L | | | 5.1E+00 | 4.8E-02 | -3.4E-01 | 0.0E+00<br>0.0E+00 |
| Pentadecane | mg/L | 1.6E+00 | | 1.0E+01 | 5.5E-02 | -5.0E+00 | 8.7E+09<br>4.7E+01 |
| Pentadecanoic Acid | mg/L | 2.5E+01 | | 8.4E+00 | 5.5E-02 | -5.0E+00 | 1.3E+10<br>5.8E+01 |
| Pentanedioic Acid | mg/L | 4.9E+01 | | 2.2E+00 | 5.7E-02 | -8.8E+00 | 3.4E+14<br>9.0E+03 |
| Phenol | mg/L | | | 2.6E+00 | 7.2E-02 | -2.9E+00 | 0.0E+00<br>0.0E+00 |
| 2-Propanol | mg/L | | | 1.1E+00 | 5.5E-02 | 2.4E+00 | 0.0E+00<br>0.0E+00 |
| Propylbenzene | mg/L | 2.4E+00 | | 6.5E+00 | 5.4E-02 | -7.8E-02 | 6.5E+05<br>5.5E-01 |
| Pyridine | mg/L | | | 2.7E+00 | 5.0E-02 | 1.8E+00 | 0.0E+00<br>0.0E+00 |
| Tetrachloro-ethylene | mg/L | | | 9.5E+00 | 4.8E-02 | 1.7E+00 | 0.0E+00<br>0.0E+00 |
| Tetradecane | mg/L | 5.9E+00 | | 9.7E+00 | 5.4E-02 | -4.2E+00 | 1.8E+09<br>2.1E+01 |

Table 2B-3. Partition Coefficients and Activity Coefficients. (6 sheets)

| Nuclide/Chemical | Units | Typical Feed To C-A-1 | Mole Weight | ion Charge | C-A-1 Vapor Space Part. Coeff. | Cond. Part. Coeff. | 242-A Stack & Condens. Decon. Factors |
|---|---|---|---|---|---|---|---|
| Tetrahydro-furan | mg/L | | | 2.0E+00 | 4.3E-02 | 3.5E+00 | 0.0E+00<br>0.0E+00 |
| Tributyl phosphate | mg/L | 1.6E+01 | | 8.4E+00 | 5.8E-02 | -4.1E+00 | 1.7E+09<br>2.0E+01 |
| Tri-n-butyl-(di-ol)-phosphate | mg/L | 7.7E+00 | | 8.4E+00 | 5.8E-02 | -4.1E+00 | 1.7E+09<br>2.0E+01 |
| 1.1.1-Tri-chlorethane | mg/L | | | 2.6E+00 | 4.5E-02 | 2.1E+00 | 0.0E+00<br>0.0E+00 |
| Trichloro-ethylene | mg/L | | | 2.6E+00 | 4.3E-02 | 3.2E+00 | 0.0E+00<br>0.0E+00 |
| Trichloromethane | mg/L | | | 2.0E+00 | 3.8E-02 | 5.7E+00 | 0.0E+00<br>0.0E+00 |
| Tridecane | mg/L | 1.1E+01 | | 9.0E+00 | 4.1E-02 | -2.5E+00 | 2.0E+08<br>8.3E+00 |
| Triglyme | mg/L | | | 3.3E+00 | 4.6E-02 | 2.3E+00 | 0.0E+00<br>0.0E+00 |
| 1.3.5 Trimethyl benzene | mg/L | 1.2E+02 | | 1.1E+01 | 5.3E-02 | -2.1E-01 | 2.5E+05<br>4.0E-01 |
| Toluene | mg/L | | | 5.2E+00 | 5.0E-02 | 2.1E+00 | 0.0E+00<br>0.0E+00 |
| Vinyl Chloride | mg/L | | | 2.6E+00 | 4.5E-02 | -5.1E+00 | 0.0E+00<br>0.0E+00 |
| Undecane | mg/L | 1.6E+00 | | 7.8E+00 | 6.0E-02 | -1.9E+00 | 2.2E+07<br>2.3E+00 |
| Unknown phthalates | mg/L | 9.2E+00 | | 6.5E+00 | 5.0E-02 | -5.5E+00 | 8.0E+10<br>1.5E+02 |