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LOS ALAMOS NATIONAL LABORATORY
CARLSBAD OPERATIONS

INV-PA-22, Revision 0

PERFORMANCE ASSESSMENT INVENTORY REPORT - 2022

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1.0 PURPOSE

This *Performance Assessment Inventory Report - 2022* (PAIR-2022; hereafter referred to as "this report") was prepared by the Los Alamos National Laboratory - Carlsbad Operations (LANL-CO). The inventory information provided in this report will be used by the Sandia National Laboratories – Carlsbad Programs Group (SNL-CPG) to conduct a performance assessment (PA) in support of the Waste Isolation Pilot Plant (WIPP) fifth Compliance Recertification Application (CRA; CRA-2024). This report documents the transuranic (TRU) waste inventory data needs that were requested by SNL-CPG in a letter dated November 8, 2022, from Steve Wagner to Anderson Ward of CBFO (SNL 2022). This letter (hereafter referred to as the "SNL WIPP Inventory Needs Letter") is provided as Attachment 1 to this report.

2.0 SCOPE

The information provided in this report is based on the annual inventory collected from the TRU waste sites and documented in the *Annual Transuranic Waste Inventory Report (ATWIR) - 2022* (ATWIR-2022; DOE 2022). The ATWIR-2022 contains an inventory of defense-related TRU waste information as of December 31, 2021, and segregates the waste streams into the following categories:

- *Emplaced* (already shipped from the TRU waste site to the WIPP or to Waste Control Specialists [WCS], a temporary storage location near Andrews, Texas),
- *WIPP-bound* (likely to be shipped to WIPP), and
- *Potential* (potential future WIPP waste).

For this report, only *Emplaced* and *WIPP-bound* waste streams were considered.

3.0 REFERENCES, ACRONYMS, AND DEFINITIONS

3.1 References

DOE 1996. *Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant*. 21 vols. DOE/CAO-1996-2184. October, 1996. U.S. Department of Energy, Carlsbad Area Office, Carlsbad, NM.

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LANL 2022c. *Estimation of Cellulose, Plastic, and Rubber Emplacement and Operational Materials in the Waste Isolation Pilot Plant*. LANL-CO. INV-SAR-70, Revision 0, October 10, 2022.

ORNL 2009. *SCALE: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation*. Oak Ridge National Laboratory. ORNL/TM-2005/39, Version 6, Vols.I–III January 2009. Oak Ridge, TN. Available from Radiation Safety Information Computational Center at Oak Ridge National Laboratory as CCC-750.

Basabilvazo 2022. *Email from George Basabilvazo (CBFO) to Jerry Young directing the use of an assumption closure date of 2083 for the performance assessment.* September 15, 2022.

SNL 2022. *Sandia's WIPP Inventory Needs for Performance Assessment*, letter dated November 8, 2022 from Steve Wagner (SNL-CPG) to Anderson Ward (DOE-CBFO).

U.S. Congress 1992 and 1996. *Waste Isolation Pilot Plant Land Withdrawal Act*, Public Law 102-579 (1992), as amended by Public Law 104-201, (1996).

3.2 Acronyms

ATWIR	Annual Transuranic Waste Inventory Report
CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
CH	contact-handled
CID	Comprehensive Inventory Database
CRA	Compliance Recertification Application
DOE	[United States] Department of Energy
EPA	[United States] Environmental Protection Agency
LANL-CO	Los Alamos National Laboratory – Carlsbad Operations
ORIGEN-S	Oak Ridge Isotope Generation and Depletion Code (a module of SCALE version 6)
PA	performance assessment
PAIR	Performance Assessment Inventory Report
QA	Quality Assurance
QAPD	[CBFO] Quality Assurance Program Document
RH	remote-handled
SCALE	Standardized Computer Analysis for Licensing Evaluation
SNL-CPG	Sandia National Laboratories – Carlsbad Programs Group
TRU	transuranic
WIPP	Waste Isolation Pilot Plant
WCS	Waste Control Specialists
WDS	[WIPP] Waste Data System

3.3 Definitions

emplaced	Permanently disposed underground at WIPP, stored above ground at WIPP, in temporary storage at WCS, or in transit to WCS/WIPP as of the inventory date (December 31, 2021) for this report.
potential	A designation in the ATWIR for a waste stream that is considered unsuited to be emplaced in the WIPP as of the cutoff date. This designation is not intended to identify whether the waste stream will ultimately be disposed of at the WIPP. Regardless of its designation in the ATWIR, all TRU waste must meet all WIPP requirements before it can be disposed of at the WIPP. Potential waste streams are not included in PAIR results.
projected	Not yet generated; estimated as future generation.
scaled (scaling)	A methodology by which actual inventory values are artificially increased in order to simulate a “full” repository.
stored	Already generated; not yet shipped to the WIPP.
WIPP-bound	A designation within the ATWIR for a waste stream that appears to meet the requirements for emplacement into the WIPP as of the cutoff date. WIPP-bound waste streams are included in PAIR results.

4.0 METHODOLOGY

4.1 Annual Inventory Collection and Publication

Inventory data and projected estimates are collected annually from the TRU waste sites and the WIPP Waste Data System (WDS) in order to maintain an updated inventory estimate of the DOE TRU waste complex. The data are compiled in the Comprehensive Inventory Database (CID; LANL 2022a), which is software developed and qualified under the LANL-CO Quality Assurance (QA) program in accordance with the CBFO *Quality Assurance Program Document* (QAPD; DOE 2017). Additionally, the CID facilitates the decay and buildup correction of radionuclide activities by using Oak Ridge Isotope Generation and Depletion (ORIGEN-S) module of *Standardized Computer Analysis for Licensing Evaluation* (SCALE) Version 6 (ORNL 2009), acquired software also qualified under the LANL-CO QA program in accordance with the QAPD. The CID is then used to generate the data reported in each ATWIR.

The data provided in this report are based upon the inventory collected as of December 31, 2021, which includes future generation estimates through

calendar year (CY) 2083, and served as a basis for the ATWIR-2022 (DOE 2022). Additional decay calculations were performed upon this inventory to support the specific needs of this report, and the resulting data version was labeled D.21.00.83 (LANL 2022a).

Additionally, supplemental analyses were performed in order to completely satisfy the SNL WIPP Inventory Needs Letter requests (see section 4.3 below).

4.2 Scaling to a Full Repository

PA modeling in support of WIPP explicitly assumes that the WIPP is filled to its legislated capacity at time of closure, as required in Title 40 Code of Federal Regulations (CFR) Part 194.24 (EPA 1996). The legislated capacity for WIPP is 175,564 m^3 (6,200,000 ft^3), as set by the *WIPP Land Withdrawal Act* (U.S. Congress 1992 and 1996), with a limit of 7,079 m^3 (250,000 ft^3) for remote-handled (RH)-TRU waste as imposed by the *Consultation and Cooperation Agreement* (DOE and State of New Mexico 1988); therefore, the difference in the full legislated volume capacity and the RH-TRU imposed disposal limit sets the contact-handled (CH)-TRU disposal limit at 168,485 m^3 (5,950,000 ft^3). The volume of anticipated (stored plus projected) and emplaced TRU waste reported by the DOE TRU waste sites for the ATWIR-2022 is less than the legislated volume capacity for WIPP.

Since each of the requests included in the SNL WIPP Inventory Needs Letter (see Attachment 1) specify that the inventory be “scaled to a full repository,” a scaling methodology was implemented through the CID whereby a portion of the inventory was scaled such that the totals reflect a “full” WIPP repository in terms of volume. The approved scaling methodology is to scale only the *projected* (not yet generated) portion of the inventory, since this represents future waste. By contrast, the *stored* (already generated) and *emplaced* (already shipped to WIPP or WCS) waste are fixed, known portions of the inventory that are left intact. This methodology is consistent with scaling previously performed for the initial WIPP Compliance Certification Application (DOE 1996) and CRA’s 2004 (DOE 2004), 2009 (DOE 2009), 2014 (DOE 2014), and 2019 (DOE 2019).

The CID is configured to produce scaled values by only scaling that portion of the waste which is projected. To do so, it has calculated scaling factors (for CH-TRU and RH-TRU waste separately) by which the respective projected volume totals are multiplied such that, when added with the stored and emplaced portions, are equal to the disposal limits (168,485 m^3 for CH-TRU, and 7,079 m^3 for RH-TRU) for the WIPP. These same scaling factors were then also used to scale the projected portion of radionuclide activity and non-radiological material mass estimates provided in this report.

The scaling factors calculated by the CID and used for this report are as follows (rounded to three significant figures):

CH-TRU	1.56
RH-TRU	5.07

4.3 Supplemental Analyses

Two additional analyses were performed to supplement the inventory information that the CID could not readily provide. The two analyses are: *Chemical and Cement Components 2021 Inventory Estimates* (LANL 2022b), and *Estimation of Cellulose, Plastic, and Rubber Emplacement and Operational Materials in the Waste Isolation Pilot Plant* (LANL 2022c).

The *Chemical and Cement Components 2021 Inventory Estimates* (LANL 2022b) analysis was performed to determine the total amount of oxyanions, complexing agents (organic ligands), and cement that would be present in a full WIPP repository. These inventory estimates are only available for that data collected from the TRU waste sites. Data on these components are not available from the WDS, which would represent the already-emplaced portion. Therefore, an analysis was warranted to estimate the total mass for these constituents, including those that have already been emplaced at the WIPP. The results from this analysis report are presented in Table 5-6, Table 5-8, and Table 5-9 below.

The *Estimation of Cellulose, Plastic, and Rubber Emplacement and Operational Materials in the Waste Isolation Pilot Plant* (LANL 2022c) analysis was performed to estimate the amount of emplacement materials (used to facilitate the emplacement of waste, but not including the container packages themselves) and operational materials (used during operational activities and will remain in the repository at closure) in a full WIPP repository. Since the CID only compiles the materials data related to the waste and the packaging containers, this supplemental analysis was warranted. The results from this analysis report are presented in Table 5-7 below.

5.0 RESULTS

5.1 Radionuclides & Volumes

SNL WIPP Inventory Needs Letter Request #1

1. *Waste stream volumes (in m^3) and inventory of radionuclides on a waste stream basis for both CH- and RH-TRU waste, supplied in Curies and decayed to the year 2083, for the following radionuclides (scaled to a full repository): ^{241}Am, ^{243}Am, ^{244}Cm, ^{137}Cs, ^{237}Np, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, ^{242}Pu, ^{244}Pu, ^{90}Sr, ^{229}Th, ^{230}Th, ^{232}Th, ^{233}U, ^{234}U, ^{235}U, ^{236}U, and ^{238}U.*

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
AE	AE-T001	60.23	5.94E+00	5.02E-01	5.60E+00	1.31E+00	2.20E-02	3.67E+00	8.94E+00	5.23E+00	1.66E+00	4.28E-02	1.23E-05	9.86E-01	8.65E-05	7.66E-04	2.77E-04	9.56E-03	1.67E-01	1.26E-04	1.57E-05	4.86E-03
AE	WP-AECHDM	78.33	5.08E+01	1.87E+00	6.33E-03	3.07E-01	1.24E-01	3.51E+01	8.53E+01	6.41E+01	2.29E+00	2.62E-02	1.71E-15	2.83E-01	8.76E-03	6.21E-05	3.01E-13	4.20E-02	8.94E-02	1.50E-03	1.52E-04	4.41E-02
AE	WP-AECHHM	11.55	1.30E+01	5.11E-03	--	2.40E-04	2.05E-03	2.44E+00	4.12E+01	1.63E+01	1.19E-09	2.02E-03	--	2.22E-04	3.19E-04	4.23E-06	7.68E-14	6.53E-07	6.09E-03	1.09E-04	3.89E-05	2.69E-03
AE	WP-MU-W002	1.47	6.20E+00	1.13E-03	--	2.89E-07	4.02E-03	--	2.26E-02	--	--	--	--	2.67E-07	1.09E-03	1.44E-12	--	1.37E-06	3.90E-09	1.79E-09	--	1.73E-05
AW	AW-N027.531	10.13	9.46E+01	3.29E-08	--	2.17E-04	6.41E-03	--	3.30E+00	--	--	--	--	2.11E-04	3.63E-09	1.28E-11	--	1.44E-06	4.56E-08	3.78E-05	--	2.65E-04
AW	AW-T033.1325	60.78	1.06E+02	2.60E-02	3.28E-01	9.32E-01	1.85E-01	7.69E+00	2.11E+01	1.83E+00	--	4.42E-04	--	8.25E-01	1.30E-07	2.42E-06	2.60E-14	4.88E-05	5.09E-03	1.23E-04	1.03E-05	4.95E-03
IN	IN-BN-500	52.69	3.81E+00	--	--	3.43E-06	1.22E-04	1.99E-01	1.29E+01	2.94E+00	1.05E+00	2.96E-04	--	3.44E-06	5.29E-11	4.25E-08	8.55E-15	2.27E-08	9.43E-05	1.34E-05	5.49E-06	2.89E-12
IN	IN-BN-501	1.26	4.24E-02	--	--	--	8.74E-07	1.73E-03	1.08E-01	2.39E-02	5.97E-03	3.15E-06	--	--	2.15E-13	1.20E-10	6.74E-17	1.18E-10	3.90E-07	6.59E-09	4.40E-08	3.03E-14
IN	IN-BN-522	0.42	1.04E-02	--	--	--	7.34E-07	6.76E-04	5.42E-02	1.14E-02	3.53E-03	1.10E-06	--	--	4.63E-13	5.07E-11	3.43E-17	1.74E-10	1.59E-07	3.42E-09	2.17E-08	1.10E-14
IN	IN-BN-599	0.63	1.70E-01	--	--	1.90E-05	3.99E-06	7.36E-03	4.64E-01	1.03E-01	2.45E-02	1.35E-05	--	1.87E-05	1.28E-12	7.05E-10	3.79E-16	6.16E-10	1.98E-06	3.25E-08	2.16E-07	1.48E-13
IN	IN-BN-602	0.42	1.20E+00	--	--	1.11E-06	2.95E-05	1.85E-03	1.17E-01	2.59E-02	6.09E-03	3.41E-06	--	1.09E-06	1.00E-11	1.84E-10	9.83E-17	4.71E-09	5.07E-07	8.30E-09	5.53E-08	3.81E-14
IN	IN-BN-RF003	2.13	3.06E+01	--	--	--	9.81E-04	4.17E-03	2.48E-01	5.48E-02	1.88E-02	7.23E-06	--	--	4.16E-10	1.29E-08	2.54E-07	1.80E-07	2.28E-05	7.08E-06	1.03E-07	7.06E-14
IN	IN-BN-RF290	0.21	7.89E-02	--	--	--	2.91E-06	7.54E-03	3.05E-01	6.95E-02	1.02E-02	5.73E-06	--	--	1.46E-12	6.07E-10	2.22E-16	5.88E-10	1.84E-06	1.99E-08	1.36E-07	5.87E-14
IN	IN-BN-RF311	1.38	3.24E+00	--	--	1.54E-07	1.12E-04	1.28E+00	1.48E+01	1.23E+01	5.29E-01	2.75E-04	--	1.50E-07	6.51E-11	1.54E-07	5.47E-14	2.37E-08	3.90E-04	1.14E-06	2.84E-05	3.33E-12
IN	IN-BN-RF420	1.17	5.59E-01	--	--	--	2.09E-05	7.08E-02	2.55E+00	5.17E-01	1.11E-01	4.09E-05	--	--	1.30E-11	8.25E-09	2.25E-15	4.63E-09	2.12E-05	1.94E-07	1.18E-06	4.88E-13
IN	IN-BN-RF432	5.28	6.99E+01	--	--	--	2.38E-03	5.36E-01	2.96E+01	6.63E+00	1.51E+00	5.68E-04	--	--	1.08E-09	4.01E-08	1.99E-14	4.53E-07	1.26E-04	1.87E-06	1.26E-05	5.64E-12
IN	IN-BN-RF801	3.06	5.61E-01	1.03E-11	--	--	2.10E-05	6.42E-02	2.56E+00	5.79E-01	2.52E-01	5.00E-05	--	--	1.04E-11	5.80E-09	1.74E-15	4.23E-09	1.68E-05	7.04E-07	1.10E-06	4.97E-13
IN	IN-BN-RF990	0.21	2.81E-02	--	--	--	1.19E-06	2.65E-04	1.67E-02	3.68E-03	8.95E-04	4.86E-07	--	--	6.86E-13	6.81E-09	1.29E-17	2.59E-10	1.08E-05	3.19E-06	7.55E-09	1.44E-05
IN	IN-BN004	34.02	6.22E+01	1.57E-09	--	1.94E-07	4.11E-03	2.92E+00	1.16E+02	2.58E+01	6.72E+00	2.68E-03	--	1.93E-07	2.46E-09	5.66E-07	7.52E-14	9.48E-07	1.29E-03	1.89E-04	4.83E-05	2.62E-11
IN	IN-BN222	36.54	6.20E+01	--	--	5.20E-08	8.01E-03	6.01E+00	2.62E+02	5.86E+01	2.17E+01	4.54E-03	--	5.26E-08	5.61E-09	4.62E-07	1.76E-13	2.05E-06	1.43E-03	2.05E-05	1.11E-04	4.51E-11
IN	IN-BN510	0.76	1.31E-01	--	--	--	5.09E-06	9.50E-03	4.83E-01	1.12E-01	1.79E-02	9.56E-06	--	--	3.08E-12	1.00E-09	4.52E-16	1.12E-09	2.69E-06	3.52E-08	2.47E-07	1.10E-13
IN	IN-BN510.1	13.30	2.12E+01	3.60E-03	--	2.18E-04	1.25E-03	1.64E+00	1.34E+01	3.20E+00	6.61E-01	4.49E-04	--	2.15E-04	8.55E-10	3.07E-07	1.15E-14	3.04E-07	6.74E-04	4.22E-05	6.66E-06	1.71E-03
IN	IN-BN510.2	9.12	3.28E+01	5.57E-04	--	3.59E-03	1.92E-03	2.26E+00	3.40E+01	1.35E+01	4.92E+00	1.96E-03	--	3.55E-03	1.32E-09	1.08E-06	4.84E-14	4.69E-07	1.95E-03	2.09E-03	2.80E-05	4.63E-04
IN	IN-BN510.3	278.92	1.76E+02	4.47E-02	1.60E-01	2.18E-02	1.40E-02	1.30E+03	2.93E+02	7.26E+01	1.60E+01	1.13E-02	--	2.16E-02	9.86E-05	1.19E-04	2.53E-13	1.63E-02	3.41E-01	3.01E-03	1.49E-04	3.79E-03
IN	IN-BN510.4	2827.22	4.66E+03	4.81E-01	1.24E-01	9.27E-01	2.65E-01	9.04E+03	7.75E+03	1.81E+03	4.70E+02	3.21E-01	--	9.29E-01	2.84E-02	7.71E-04	9.94E-03	5.21E+00	2.29E+00	6.26E-02	3.34E-03	2.45E+00
IN	IN-BN538	288.21	1.09E+01	--	--	--	2.82E-04	7.24E-01	3.91E+01	8.67E+00	5.19E+00	1.14E-03	--	--	1.06E-10	7.47E-08	2.69E-14	4.77E-08	2.04E-04	1.25E-05	1.67E-05	1.15E-11
IN	IN-BN539	51.73	5.45E+00	2.41E-05	--	--	1.64E-04	1.21E+01	1.20E+01	2.68E+00	1.75E+00	3.52E-04	--	--	6.80E-11	8.75E-07	7.79E-15	2.96E-08	2.79E-03	7.46E-07	5.01E-06	3.44E-12
IN	IN-BN600	662.38	1.55E+01	7.48E-05	--	9.97E-03	6.51E-04	1.32E+00	4.50E+01	9.81E+00	3.19E+00	9.61E-04	--	9.99E-03	6.63E-05	4.50E-07	1.46E-06	1.22E-02	9.27E-04	1.05E-04	1.81E-05	2.48E-03
IN	IN-BN650	2790.45	8.09E+03	4.32E-06	2.01E-02	2.48E-02	3.13E-01	7.68E+01	3.48E+03	7.85E+02	2.06E+02	1.00E-01	--	2.48E-02	2.91E-04	1.67E-04	5.51E-05	5.26E-02	2.97E-01	1.64E-02	1.47E-03	7.40E-01
IN	IN-BN835	15.54	1.66E+00	--	--	3.00E-07	2.37E-04	1.03E+02	2.68E-01	1.73E-01	3.46E-02	1.96E-04	--	3.00E-07	1.57E-10	7.15E-06	4.89E-16	5.92E-08	2.32E-02	1.64E-08	3.19E-07	6.49E-05
IN	IN-BN836	39.90	3.46E-02	--	--	2.44E-07	4.93E-05	4.81E+00	1.22E-02	8.25E-03	4.50E-04	9.54E-06	--	2.44E-07	3.71E-11	3.53E-07	2.40E-17	1.34E-08	1.12E-03	1.51E-06	1.54E-08	9.32E-14
IN	IN-BNINW216	17.64	2.04E+02	--	--	1.62E-07	6.84E-03	4.12E-01	1.00E+01	2.60E+00	1.14E+00	9.12E-04	--	1.62E-07	3.00E-09	4.21E-07	7.57E-15	1.28E-06	7.71E-04	1.45E-04	4.87E-06	3.44E-03
IN	IN-BNINW218	28.14	2.42E+00	--	--	1.51E-08	7.23E-05	3.93E-01	2.03E+00	4.30E-01	1.54E-01	6.44E-05	--	1.51E-08	2.90E-11	3.14E-05	1.27E-06	1.28E-08	5.43E-02	4.03E-03	8.05E-07	2.91E-01
IN	IN-IC-603	4.53	3.02E-01	--	--	1.47E-06	9.92E-06	1.32E-02	6.76E-01	1.67E-01	4.09E-02	1.60E-05	--	1.47E-06	4.51E-12	1.03E-09	5.19E-16	1.89E-09	3.16E-06	4.33E-08	3.23E-07	1.61E-13
IN	IN-ID-SDA-Debris	576.03	3.30E+02	--	--	1.92E-07	1.30E-02	8.91E+00	4.98E+02	1.09E+02	2.41E+01	1.33E-02	--	6.99E-04	1.10E-04	2.01E-04	3.08E-13	2.02E-02	3.53E-01	1.19E-02	2.01E-04	1.82E-01
IN	IN-ID-SDA-Sludge	2770.74	4.38E+03	--	--	7.77E-02	1.80E-01	3.91E+01	1.43E+03	3.16E+02	1.24E+02	6.67E-02	--	7.78E-02	1.38E-04	6.34E-04	8.90E-13	2.54E-02	1.12E+00	4.80E-02	5.81E-04	2.53E+00
IN	IN-ID-SDA-Soil	423.99	2.48E+02	--	--	6.10E-03	1.01E-02	3.64E+00	1.73E+02	3.73E+01	1.09E+01	5.92E-03	--	6.10E-03	2.60E-05	9.65E-05	1.05E-13	4.77E-03	1.70E-01	6.13E-03	6.86E-05	2.09E-01
IN	IN-ID-SRP-S3000	2.34	1.31E-01	--	--	--	5.80E-06	1.01E-03	6.34E-02	1.40E-02	3.50E-03	1.85E-06	--	--	3.15E-12	9.49E-08	4.34E-17	1.24E-09	1.59E-04	4.33E-05	2.70E-08	4.01E-04
IN	IN-IW-603	0.84	3.39E-02	--	--	1.20E-06	1.10E-06	3.77E-04	2.43E-02	5.38E-03	1.10E-03	7.11E-07	--	1.19E-06	5.49E-13	3.74E-11	2.05E-17	2.17E-10	1.03E-07	1.73E-09	1.15E-08	7.94E-15
IN	IN-IW-608	91.21	6.56E+00	2.41E-05	--	--	1.97E-04	3.74E+01	1.56E+01	3.50E+00	2.22E+00	4.59E-04	--	--	8.13E-11	2.70E-06	1.02E-14	3.54E-08	8.61E-03	9.67E-07	6.54E-06	4.49E-12
IN	IN-MD-811	0.42	8.73E-02	--	--	--	4.42E-06	1.63E+01	7.17E-02	3.52E-02	1.99E-02	3.40E-05	--	--	3.35E-12	1.90E-06	1.53E-16	1.11E-09	4.86E-03	5.45E-09	8.06E-08	2.99E-05
IN	IN-RF-750	0.96	9.77E-02	--	--	--	3.52E-06	6.78E-03	4.59E-01	9.99E-02	2.37E-02	1.29E-05	--	--	1.79E-12	5.66E-10	3.29E-16	7.14E-10	1.69E-06	3.03E-08	1.99E-07	1.34E-13
IN	IN-RF-806	0.21	3.41E-01	--	--	--	1.04E-05	2.24E-02	2.17E+00	5.26E-01	8.49E-02	3.67E-05	--	--	4.78E-12	2.01E-09	1.84E-15	1.96E-09	5.81E-06	1.47E-07	1.08E-06	3.93E-13
IN	WA-BN510.3	0.38	9.95E-02	--	--	6.07E-07	8.78E-06	2.74E+01	4.50E-02	3.34E-02	1.85E-02	3.87E-05	--	9.56E-07	6.60E-12	2.45E-06	1.17E-16	2.29E-09	7.08E-03	3.06E-09	6.84E-08	4.14E-13
IN	WA-BN510.4	62.32	6.39E+01	1.23E-02	--	1.48E-03	2.88E-03	5.48E+00	1.73E+02	4.11E+01	9.12E+00	4.79E-03	--	2.59E-03	3.27E-05	1.27E-06	1.27E-13	5.74E-03	2.73E-03	2.56E-04	7.94E-05	9.07E-03
IN	WA-BNINW216	11.20	1.69E+02	--	--	--	6.94E-03	1.35E+00	1.66E+01	4.87E+00	2.60E+00	3.62E-03	--	--	3.69E-09	2.18E-07	1.56E-14	1.45E-06	5.10E-04	3.29E-05	9.54E-06	7.27E-04
IN	WA-ID-SDA-SLUDGE	1.47	3.37E-01	--	--	2.12E-08	1.28E-05	7.73E-03	4.35E-01	9.69E-02	2.42E-02	1.51E-05	--	2.11E-08	6.82E-12	2.16E-07	3.29E-16	2.66E-09	3.47E-04	9.20E-06	1.96E-07	1.22E-03
IN	WA-ID-SRP-S3000	0.63	2.08E-01	--	--	--	8.93E-06	6.15E-03	1.66E-01	3.34E-02	1.21E-02	7.54E-06	--	--	5.20E-12	6.99E-08	1.17E-16	1.96E-09	1.11E-04	2.90E-06	6.85E-08	1.01E-04
IN	WP-BN004	189.55	4.65E+02	--	1.15E-01	4.90E-04	1.90E-01	3.28E+01	1.38E+03	3.11E+02	8.52E+01	2.91E-02	--	7.43E-04	1.53E-03	1.09E-05	1.18E-12	2.43E-01	2.05E-02	2.69E-03	6.65E-04	3.13E-03
IN	WP-BN161	27.30	5.40E+01	--	--	--	1.93E-03	5.41E+00	2.33E+02	5.30E+01	9.82E+00	4.31E-03	--	--	1.15E-09	6.45E-07	2.31E-13	4.16E-07	1.64E-03	2.04E-05	1.21E-04	5.14E-11
IN	WP-BN211	243.18	5.21E+02	5.09E-06	--	2.41E-07	3.83E-02	4.86E+01	2.06E+03	4.74E+02	8.45E+01	3.99E-02	--	3.63E-07	2.05E-04	7.69E-06	2.06E-12	3.04E-02	1.74E-02	7.84E-04	1.08E-03	4.60E-06
IN	WP-BN222	50.82	9.10E+01	--	--	--	2.24E-01	9.36E+00	4.06E+02	9.16E+01	1.87E+01	7.32E-03	--	--	2.52E-07	1.17E-06	3.99E-13	7.46E-05	2.91E-03	5.19E-05	2.10E-04	8.74E-11
IN	WP-BN243	71.40	4.16E+01	--	7.12E-02	2.45E-08	3.67E-03	3.11E+00	1.18E+02	2.64E+01	5.03E+00	2.65E-03	--	3.69E-08	3.35E-09	1.00E-06	1.15E-13	1.05E-06	1.84E-03	2.50E-04	6.04E-05	3.17E-11
IN	WP-BN252	88.20	2.25E+02	--	--	7.71E-08	6.67E-02	2.20E+01	1.13E+03	2.42E+02	5.96E+01	2.65E-02	--	1.09E-07	7.12E-08	2.91E-06	1.06E-12	2.14E-05	7.06E-03	3.20E-04	5.55E-04	3.17E-10
IN	WP-BN296	237.09	6.89E+02	--	6.75E-02	1.61E-06	5.67E-02	4.71E+01	1.78E+03	3.93E+02	7.13E+01	4.00E-02	--	2.57E-06	3.81E-05	6.16E-06	1.71E-12	5.65E-03	1.50E-02	4.84E-04	8.99E-04	6.75E-04
IN	WP-BN304	143.01	5.50E+01	--	--	7.31E-05	3.78E-03	8.50E+03	3.04E+01	2.28E+01	6.66E+00	1.94E-02	--	1.32E-04	3.22E-09	9.92E-04	9.92E-14	1.03E-06	2.54E+00	4.55E-05	5.21E-05	2.39E-02
IN	WP-BN510	9631.04	3.95E+03	9.52E-04	2.00E-01	2.27E-04	2.40E-01	2.77E+03	1.36E+04	2.94E+03	6.80E+02	2.79E-01	--	3.63E-04	5.54E-03	3.50E-04	1.15E-11	8.66E-01	8.71E-01	1.74E-02	6.37E-03	3.98E-02
IN	WP-BN510.1	3417.08	3.32E+03	8.16E-02	5.08E-01	1.71E-02	1.59E-01	3.57E+03	6.19E+03	1.45E+03	3.83E+02	2.13E-01	--	2.80E-02	3.03E-04	3.56E-04	5.21E-12	4.93E-02	9.81E-01	7.33E-03	3.01E-03	6.38E-02
IN	WP-BN510.2	79.32	1.74E+02	2.44E-03	--	9.09E-03	1.81E-02	2.89E+02	1.13E+02	4.25E+01	1.42E+01	1.05E-02	--	1.54E-02	1.44E-08	3.21E-05	1.53E-13	4.90E-06	8.46E-02	5.02E-03	8.83E-05	1.43E-02

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
IN	WP-BN510.3	120.46	1.53E+02	1.64E-05	--	3.59E-03	1.37E-02	9.68E+02	1.62E+02	4.42E+01	1.16E+01	8.36E-03	--	5.80E-03	6.43E-05	8.82E-05	1.54E-13	1.06E-02	2.53E-01	1.60E-03	9.06E-05	1.38E-03
IN	WP-BN510.4	335.16	5.49E+02	4.70E-02	--	1.20E-02	3.72E-02	1.20E+02	1.93E+03	4.43E+02	9.52E+01	5.45E-02	--	1.99E-02	4.28E-04	1.62E-05	4.03E-06	7.63E-02	4.05E-02	3.99E-03	8.42E-04	3.26E-02
IN	WP-BN600	2.31	1.23E-02	--	--	--	9.31E-07	4.21E-03	4.70E-02	1.07E-02	2.50E-03	1.26E-06	--	--	7.29E-13	4.17E-10	4.09E-17	2.46E-10	1.15E-06	3.34E-09	2.30E-08	1.40E-14
IN	WP-BN835	516.81	3.98E+01	--	--	1.78E-05	7.62E-03	1.03E+03	3.56E+00	2.28E+00	1.24E+00	2.33E-03	--	2.78E-05	7.27E-09	1.09E-04	9.14E-15	2.29E-06	2.92E-01	3.93E-07	5.00E-06	2.54E-04
IN	WP-BN836	821.73	2.41E+00	--	--	9.26E-05	2.30E-03	1.04E+03	2.79E+00	1.88E+00	3.04E-01	2.16E-03	--	1.37E-04	2.23E-09	1.03E-04	7.14E-15	7.10E-07	2.84E-01	3.51E-05	4.01E-06	1.34E-05
IN	WP-BNINW216	3468.96	4.22E+04	--	--	2.14E-05	1.47E+00	2.06E+02	3.17E+03	8.26E+02	4.67E+02	4.72E-01	--	3.16E-05	6.24E-04	1.75E-04	2.56E-12	1.10E-01	3.15E-01	4.41E-02	1.59E-03	1.25E+00
IN	WP-BNINW218	272.16	5.10E+01	--	--	2.22E-06	2.68E-01	1.70E+00	5.89E+01	1.23E+01	4.84E+00	1.88E-03	--	3.27E-06	2.43E-07	7.46E-05	4.29E-14	8.03E-05	1.18E-01	9.92E-03	2.52E-05	1.13E+00
IN	WP-ID-AECHDM	16.38	1.34E+01	2.70E-04	--	4.22E-03	1.51E-02	2.77E+00	1.79E+01	5.61E+00	1.45E+00	3.53E-04	--	3.79E-03	1.40E-08	1.15E-06	2.02E-14	4.56E-06	2.12E-03	1.54E-05	1.17E-05	2.71E-03
IN	WP-ID-AECHHM	6.30	7.33E+00	3.12E-10	--	7.46E-03	2.17E-03	2.02E-01	5.41E+00	8.69E-01	2.93E-01	3.67E-05	--	6.68E-03	2.02E-09	6.20E-07	3.30E-15	6.50E-07	9.61E-04	2.38E-05	1.86E-06	4.71E-04
IN	WP-ID-GEVNC-02	1.26	3.41E-02	--	--	8.04E-03	8.52E-07	2.54E-04	3.14E-03	1.46E-03	4.99E-04	8.67E-07	--	1.99E-03	1.57E-10	4.10E-09	3.68E-16	2.47E-08	6.14E-06	2.18E-07	1.04E-07	1.11E-07
IN	WP-ID-LBNL-S5400	0.21	9.61E-02	--	--	--	1.29E-03	--	--	--	--	--	--	--	1.27E-09	--	--	4.02E-07	--	--	--	--
IN	WP-ID-LL-M001-S5400	40.32	8.48E+01	2.04E-05	3.63E-01	2.67E-05	3.39E-03	6.28E+01	1.74E+02	4.37E+01	2.03E+01	6.64E-03	--	2.37E-05	1.43E-04	1.64E-05	1.71E-13	2.24E-02	3.24E-02	4.47E-04	9.48E-05	1.83E-04
IN	WP-ID-LL-T004-S3141	1.05	1.90E+01	--	--	3.50E-07	6.03E-04	1.69E-01	6.95E+00	1.68E+00	8.03E-01	2.50E-04	--	1.22E-07	2.96E-10	1.74E-08	6.57E-15	1.17E-07	4.72E-05	5.00E-07	3.64E-06	2.84E-12
IN	WP-ID-LL-W019-S3900	3.57	7.75E+00	--	--	4.71E-08	2.62E-04	4.02E-01	7.09E+00	1.98E+00	1.40E+00	3.58E-04	--	3.05E-08	7.13E-05	1.60E-07	7.73E-15	1.11E-02	2.89E-04	5.50E-06	4.29E-06	4.05E-12
IN	WP-ID-NRD.1	18.27	5.39E+02	--	--	1.06E-05	1.85E-02	--	--	6.35E-01	--	--	--	1.04E-05	9.61E-09	--	2.41E-15	3.73E-06	--	--	1.36E-06	--
IN	WP-ID-NT-RF-DECON	0.42	1.97E-01	--	--	4.74E-07	1.97E-05	4.53E-02	3.67E-01	7.39E-02	2.39E-02	2.30E-05	--	4.66E-07	1.72E-11	4.80E-09	2.97E-16	5.57E-09	1.29E-05	2.68E-08	1.63E-07	2.64E-13
IN	WP-ID-NTLBL-S3900	0.21	2.20E-01	--	--	1.25E-06	2.72E-05	5.81E-02	5.88E-01	1.36E-01	4.71E-02	4.12E-05	--	1.23E-06	2.47E-11	6.15E-09	5.45E-16	7.88E-09	1.65E-05	4.29E-08	2.98E-07	4.73E-13
IN	WP-ID-NTLBL-S5400	2.09	1.84E+00	--	--	1.13E-07	3.73E-04	1.89E-01	5.79E-02	6.02E-02	3.67E-01	2.14E-04	--	1.11E-07	3.59E-10	2.00E-08	2.42E-16	1.13E-07	5.37E-05	4.22E-09	1.32E-07	2.46E-12
IN	WP-ID-NTLLLBL-S5400	1.88	1.00E-01	2.94E-05	--	--	2.40E-06	4.75E-03	2.17E-01	4.59E-02	2.04E-02	8.66E-06	--	--	8.16E-13	5.03E-10	1.84E-16	3.81E-10	1.35E-06	1.58E-08	1.01E-07	9.95E-14
IN	WP-ID-NTLLNL-S3900	12.60	2.00E+01	--	6.44E-03	1.46E-04	9.49E-04	7.51E-01	5.47E+00	1.33E+00	3.75E-01	1.89E-04	--	1.43E-04	1.24E-04	3.87E-07	5.36E-15	1.91E-02	6.65E-04	2.09E-05	2.93E-06	5.42E-05
IN	WP-ID-NTLLNL-S5400	136.42	4.25E+01	2.65E-04	8.23E-01	1.63E-06	2.09E-03	5.82E+00	4.02E+01	1.13E+01	1.94E+01	5.04E-03	--	1.60E-06	3.10E-04	1.06E-06	4.52E-14	4.77E-02	2.31E-03	3.32E-05	2.48E-05	5.79E-11
IN	WP-ID-NTLRC-S5400	0.21	3.26E-01	--	--	--	7.45E-05	3.19E-02	1.49E+00	3.24E-01	5.57E-02	2.76E-05	--	--	7.22E-11	1.27E-07	1.30E-15	2.27E-08	1.90E-04	6.34E-06	7.13E-07	1.07E-05
IN	WP-ID-NTS-EGG-HET	0.21	1.53E-01	--	--	--	4.99E-06	3.89E-02	1.42E+00	2.78E-01	3.21E-02	4.37E-05	--	--	2.64E-12	4.12E-09	1.12E-15	1.01E-09	1.10E-05	1.04E-07	6.10E-07	5.02E-13
IN	WP-ID-NTS-ITRI-S5310	0.21	1.33E-04	--	--	--	3.44E-08	5.15E-02	9.58E-03	2.56E-04	8.13E-05	4.26E-07	--	--	3.38E-14	5.46E-09	1.03E-18	1.06E-11	1.46E-05	6.99E-10	5.63E-10	4.90E-15
IN	WP-ID-NTS-TTR-HET	0.21	4.71E-03	--	--	9.14E-08	3.56E-07	5.84E-04	7.51E-02	5.82E-03	1.17E-03	1.61E-07	--	8.99E-08	2.92E-13	6.18E-11	2.34E-17	9.61E-11	1.66E-07	5.48E-09	1.28E-08	1.84E-15
IN	WP-ID-NTVERB-S5400	3.76	7.88E+00	1.68E-04	9.67E-02	--	2.32E-04	3.71E-01	2.67E+00	1.20E+00	3.29E+00	1.75E-04	--	--	1.14E-10	3.93E-08	4.80E-15	4.48E-08	1.05E-04	1.95E-07	2.63E-06	2.01E-12
IN	WP-ID-RF-BNL-ASH	0.21	1.59E-01	--	--	--	5.83E-06	1.34E-02	7.31E-01	1.67E-01	2.65E-02	1.34E-05	--	--	3.61E-12	1.61E-09	7.45E-16	1.28E-09	4.09E-06	5.62E-08	3.87E-07	1.63E-13
IN	WP-ID-RF-S3114	2277.84	9.29E+01	5.59E-06	--	3.97E-06	3.85E-03	7.56E+00	2.70E+02	5.73E+01	1.76E+01	6.49E-03	--	2.07E-05	2.17E-09	1.65E-05	1.94E-13	8.30E-07	2.72E-02	6.90E-04	1.16E-04	3.90E-02
IN	WP-ID-RF-S3150-A	159.39	4.62E+01	--	--	3.77E-06	2.92E-03	4.51E+00	1.71E+02	3.71E+01	1.22E+01	3.16E-03	--	5.74E-06	2.17E-09	2.93E-06	1.41E-13	7.44E-07	4.98E-03	1.19E-04	7.93E-05	3.03E-04
IN	WP-ID-RF-S5100-A	386.61	1.63E+02	--	--	2.59E-06	5.63E-03	1.17E+01	6.31E+02	1.33E+02	2.26E+01	1.15E-02	--	3.47E-06	1.89E-05	2.72E-06	5.64E-13	2.83E-03	5.44E-03	1.35E-04	3.00E-04	4.50E-06
IN	WP-ID-RF-S5126	159.81	1.89E+02	--	--	2.19E-06	7.28E-03	1.76E+01	8.72E+02	2.02E+02	4.09E+01	1.85E-02	--	3.19E-06	1.45E-03	1.36E-05	8.56E-13	2.18E-01	2.18E-02	7.76E-05	4.56E-04	1.60E-03
IN	WP-ID-RF-S5300-A	1299.06	8.94E+01	1.71E-08	3.50E-02	4.87E-06	6.17E-03	4.76E+00	2.49E+02	5.56E+01	1.27E+01	5.41E-03	--	5.79E-06	1.85E-03	1.54E-05	2.06E-13	2.98E-01	2.41E-02	6.18E-04	1.17E-04	8.79E-04
IN	WP-ID-SA-T001	5.88	5.76E+00	3.01E-02	3.18E-01	5.13E-08	7.72E-04	4.64E+00	4.51E+00	3.68E-01	9.17E-02	4.23E-05	--	4.60E-08	6.71E-10	1.74E-02	1.38E-15	2.20E-07	1.75E-03	1.09E-05	7.80E-07	7.99E-04
IN	WP-ID-SDA-DEBRIS	528.14	4.01E+02	--	--	1.67E-04	1.55E-02	1.96E+01	9.28E+02	2.06E+02	4.17E+01	2.85E-02	--	1.66E-04	3.10E-05	1.39E-04	7.00E-13	5.21E-03	2.25E-01	5.74E-03	4.17E-04	3.13E-01
IN	WP-ID-SDA-SLUDGE	5189.16	8.09E+03	--	1.11E-02	1.54E-02	3.20E-01	7.29E+01	2.87E+03	6.39E+02	2.02E+02	1.13E-01	--	1.23E+00	6.03E-04	1.33E-03	2.17E-12	1.01E-01	2.14E+00	5.63E-02	1.29E-03	7.69E+00
IN	WP-ID-SDA-SOIL	781.62	6.72E+02	--	--	2.66E-03	2.63E-02	1.21E+01	5.31E+02	1.17E+02	3.00E+01	1.71E-02	--	2.64E-03	1.42E-05	1.59E-04	3.98E-13	2.38E-03	2.55E-01	6.62E-03	2.37E-04	7.58E-01
IN	WP-ID-SNL-HCF-S5400	1.68	4.59E-01	--	2.42E-04	5.61E-03	2.82E-03	1.25E-01	5.68E-01	1.56E-02	2.40E-02	1.33E-03	--	4.01E-03	2.71E-07	8.74E-06	6.18E-13	4.33E-05	1.32E-02	4.28E-04	1.74E-04	1.54E-04
IN	WP-ID-SNL-SOURCES-S5400	0.63	1.23E-01	4.80E-08	--	5.11E-08	4.27E-06	8.77E-04	2.12E-03	2.72E-03	4.01E-04	2.07E-06	--	--	2.25E-12	8.70E-11	1.03E-17	8.69E-10	2.40E-07	1.50E-10	5.81E-09	2.31E-14
IN	WP-ID-SRP-S3000	1097.07	2.42E+02	--	--	1.26E-06	9.96E-03	2.13E+00	7.69E+01	1.72E+01	4.90E+00	3.33E-03	--	1.24E-06	5.63E-09	1.10E-04	6.01E-14	2.14E-06	1.74E-01	4.58E-03	3.52E-05	1.33E-01
IN	WP-INW161.001	19.32	3.14E+01	--	--	--	7.99E-04	2.89E+00	1.57E+02	3.53E+01	7.93E+00	3.52E-03	--	--	3.12E-10	6.08E-07	1.70E-13	1.36E-07	1.23E-03	1.00E-04	8.49E-05	5.56E-06
IN	WP-INW169.001	19.32	5.40E+00	--	--	--	1.40E-04	3.60E-01	1.96E+01	4.36E+00	1.11E+00	5.91E-04	--	--	5.58E-11	2.69E-07	2.10E-14	2.40E-08	4.13E-04	7.38E-05	1.05E-05	4.37E-06

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
IN	WP-INW198.001	49.56	7.63E+00	--	--	--	1.94E-04	6.51E-01	3.77E+01	8.38E+00	1.93E+00	8.87E-04	--	--	1.85E-06	1.91E-07	4.04E-14	2.60E-04	3.50E-04	3.86E-05	2.02E-05	5.90E-05
IN	WP-INW211.001	304.08	9.35E+02	--	--	--	2.38E-02	7.23E+01	3.63E+03	8.04E+02	2.36E+02	1.40E-01	--	--	9.20E-05	1.23E-05	3.88E-12	1.30E-02	2.69E-02	1.23E-03	1.94E-03	1.47E-03
IN	WP-INW216.001	1252.17	5.07E+04	--	--	--	1.42E+00	6.15E+01	3.26E+03	7.26E+02	2.07E+02	1.18E-01	--	--	2.38E-04	4.71E-04	3.50E-12	3.37E-02	6.41E-01	1.03E-01	1.75E-03	3.89E+00
IN	WP-INW218.001	1115.95	7.69E+02	--	--	--	2.12E-02	9.17E+00	4.96E+02	1.10E+02	3.11E+01	1.70E-02	--	--	7.91E-05	6.90E-04	5.32E-13	1.11E-02	9.29E-01	1.02E-01	2.66E-04	8.75E+00
IN	WP-INW222.001	65.73	6.59E+01	--	--	--	1.68E-03	5.41E+00	2.83E+02	6.33E+01	1.58E+01	7.40E-03	--	--	6.62E-10	1.35E-06	3.05E-13	2.87E-07	2.59E-03	1.27E-04	1.52E-04	7.02E-03
IN	WP-INW243.001	75.60	8.24E+01	--	--	--	2.16E-03	5.63E+00	2.36E+02	5.25E+01	1.46E+01	6.81E-03	--	--	1.76E-05	2.11E-06	2.53E-13	2.47E-03	3.64E-03	4.66E-04	1.26E-04	3.18E-04
IN	WP-INW247.001R1	118.02	1.07E+02	--	--	--	2.71E-03	1.34E+01	4.14E+02	9.39E+01	2.67E+01	7.92E-03	--	--	5.35E-05	1.78E-06	4.53E-13	7.54E-03	4.31E-03	3.91E-05	2.26E-04	9.95E-11
IN	WP-INW252.001	61.53	7.77E+01	--	--	--	1.91E-03	6.55E+00	3.01E+02	6.79E+01	2.56E+01	6.81E-03	--	--	7.22E-10	1.44E-06	3.27E-13	3.18E-07	2.87E-03	2.49E-04	1.64E-04	8.56E-11
IN	WP-INW276.001	10.29	7.19E+00	--	--	--	1.86E-04	1.26E+00	3.17E+01	7.19E+00	2.06E+00	6.54E-04	--	--	7.69E-11	1.87E-07	3.82E-14	3.24E-08	4.32E-04	2.92E-06	1.82E-05	8.63E-12
IN	WP-INW276.002	16.17	1.13E+01	--	--	--	2.94E-04	1.89E+00	4.77E+01	1.08E+01	3.08E+00	9.82E-04	--	--	5.44E-06	2.83E-07	5.72E-14	7.30E-04	6.50E-04	4.75E-06	2.72E-05	1.29E-11
IN	WP-INW276.003	188.37	4.31E+02	--	--	--	1.07E-02	7.12E+01	1.72E+03	3.90E+02	1.37E+02	3.66E-02	--	--	3.70E-04	9.51E-06	1.88E-12	5.21E-02	2.30E-02	1.77E-04	9.40E-04	1.12E-06
IN	WP-INW276.004	47.25	1.00E+02	--	--	--	2.50E-03	1.49E+01	3.66E+02	8.30E+01	2.87E+01	7.64E-03	--	--	3.22E-04	2.07E-06	4.00E-13	4.53E-02	4.91E-03	5.76E-05	2.00E-04	9.61E-11
IN	WP-INW296.001	98.70	1.73E+02	--	--	--	4.51E-03	1.58E+01	5.12E+02	1.15E+02	3.33E+01	1.10E-02	--	--	7.20E-05	2.58E-06	5.56E-13	1.01E-02	5.72E-03	1.93E-04	2.78E-04	3.96E-04
KA	KA-T003	0.06	1.28E-01	--	--	--	9.91E-04	6.62E-01	1.25E-01	--	--	--	--	--	4.46E-04	1.33E-07	3.91E-09	5.31E-02	2.68E-04	1.30E-07	--	--
KN	KN-B234TRU	43.26	3.67E-01	--	--	--	9.09E-06	2.38E-02	1.29E+00	1.28E+00	5.12E-02	--	--	--	3.04E-05	7.20E-04	2.39E-04	4.63E-03	4.64E-03	8.77E-04	8.80E-04	1.13E-04
LA	LA-CIN01.001	861.83	2.86E+04	1.64E+00	--	4.40E-04	9.16E-01	2.45E+03	5.41E+03	1.49E+03	1.60E+03	1.73E+00	5.44E-07	3.87E-04	5.63E-04	5.12E-04	4.58E-12	1.04E-01	1.15E+00	7.54E-03	2.87E-03	2.58E-01
LA	LA-CIN02.001	120.41	2.71E+02	1.71E-03	--	2.49E-05	7.79E-03	1.76E+01	3.73E+02	2.08E+01	7.24E+00	2.95E-03	--	1.99E-05	2.96E-09	3.13E-06	2.40E-05	1.34E-06	7.32E-03	8.04E-04	3.83E-05	1.45E-04
LA	LA-CIN03.001	1.89	9.10E-02	6.70E-05	--	6.01E-05	3.95E-05	7.89E-01	4.99E-01	7.43E-02	5.38E-02	5.66E-05	--	5.46E-05	5.93E-07	4.32E-07	2.16E-16	1.06E-08	8.30E-04	1.61E-05	1.39E-07	1.11E-03
LA	LA-LA225D	4.62	4.03E-01	3.51E-04	--	6.49E-06	4.43E-05	1.87E-01	8.73E-01	1.68E-01	5.57E-02	1.18E-05	--	5.85E-06	1.79E-06	6.27E-08	8.42E-16	1.19E-08	1.21E-04	7.12E-07	4.19E-07	5.10E-09
LA	LA-LANHD01	29.82	2.32E+00	--	--	--	4.76E-05	4.81E-01	2.33E+01	1.93E+00	1.40E+00	1.14E-02	--	--	1.31E-11	9.41E-08	6.75E-15	6.73E-09	2.05E-04	1.88E-06	3.96E-06	1.22E-10
LA	LA-MHD01-Pits	7742.61	2.26E+04	2.50E+00	2.09E+01	1.03E-02	4.56E+00	7.68E+04	5.39E+04	1.43E+04	1.21E+04	7.02E+00	1.08E-04	1.01E-02	3.03E-06	1.37E-02	1.24E-10	1.15E-03	3.22E+01	1.71E-02	5.42E-02	1.23E+00
LA	LA-MHD01.001	6943.81	2.38E+04	3.03E-01	4.71E-02	3.28E-04	6.36E-01	2.21E+05	5.40E+04	1.39E+04	1.14E+04	4.82E+00	1.84E-06	2.98E-04	2.35E-07	3.90E-02	4.18E-11	1.07E-04	9.13E+01	8.00E-03	2.64E-02	4.34E-02
LA	LA-MHD03.001	2028.23	1.49E+03	1.36E+01	2.65E+02	8.92E+00	7.11E-01	2.29E+03	5.97E+03	1.38E+03	1.07E+03	1.20E-01	--	7.83E+00	4.34E-04	7.26E-04	1.69E-03	3.96E-02	1.51E+00	2.12E-02	3.57E-03	1.11E-03
LA	LA-MHD04.001	24.27	8.38E-01	4.80E-05	--	3.23E-07	5.00E-05	1.16E+02	3.09E+00	6.71E-01	1.32E-01	1.82E-04	--	2.91E-07	3.38E-11	2.92E-05	2.34E-15	1.21E-08	5.97E-02	2.20E-07	1.38E-06	1.94E-12
LA	LA-MHD05-ITRI.001	4.61	1.72E+01	7.73E-02	3.39E-01	1.33E-07	4.88E-04	2.24E-02	7.74E-01	1.58E-01	7.27E-02	8.72E-06	--	1.21E-07	1.86E-10	1.62E-09	4.48E-16	8.39E-08	5.17E-06	4.80E-08	2.91E-07	8.52E-14
LA	LA-MHD08.001	4.02	7.82E-01	2.45E-02	--	2.14E-05	8.27E-05	2.36E-02	3.21E-02	1.73E-02	1.77E-02	5.03E-04	--	1.93E-05	6.42E-11	4.07E-09	6.05E-17	2.21E-08	9.19E-06	2.18E-09	3.55E-08	5.39E-12
LA	LA-MHD09.001	19.44	3.14E+00	3.05E-05	--	1.98E-06	1.36E-04	2.23E+00	1.12E+00	4.99E-01	4.85E-01	5.69E-04	--	1.80E-06	6.79E-11	4.68E-07	1.92E-15	2.79E-08	1.05E-03	4.32E-06	1.09E-06	1.14E-08
LA	LA-MIN02-V.001	8.79	2.05E+01	7.77E-03	--	2.21E-07	8.35E-04	2.93E+01	2.96E+01	7.13E+00	3.07E+00	4.90E-04	--	2.01E-07	4.18E-10	7.24E-06	2.08E-14	1.70E-07	1.56E-02	3.92E-05	1.33E-05	1.05E-05
LA	LA-MIN03-NC.001	65.24	3.07E+01	1.15E-03	--	5.99E-04	9.17E-04	5.15E+00	1.82E+01	1.97E+00	9.55E-01	4.69E-04	--	5.41E-04	1.28E-06	1.98E-06	5.56E-15	1.62E-07	4.01E-03	9.66E-05	3.63E-06	8.45E-05
LA	LA-MIN04-S.001	3.76	4.85E+01	2.36E-02	--	3.45E-06	1.65E-03	1.22E+00	6.44E+01	1.58E+01	6.96E+00	1.17E-03	--	3.14E-06	7.25E-10	1.89E-07	4.46E-14	3.11E-07	4.59E-04	9.02E-06	2.91E-05	1.12E-11
LA	LA-MIN05-V.001	5.02	1.93E+00	1.47E-05	--	2.41E-06	1.18E-02	2.51E-01	9.68E+00	2.22E+00	1.36E+00	1.41E-04	--	2.25E-06	2.50E-05	2.89E-07	6.27E-15	4.60E-03	5.32E-04	1.25E-05	4.10E-06	1.36E-12
LA	LA-MIN06-NS.001	4.04	4.64E+01	4.20E-03	--	7.66E-07	1.54E-03	2.69E-01	1.31E+01	2.79E+00	1.37E+00	2.77E-04	--	6.97E-07	6.55E-10	1.39E-07	7.87E-15	2.84E-07	2.72E-04	4.60E-06	5.14E-06	1.66E-04
LA	LA-MSG04.001	28.66	--	--	--	--	--	--	1.33E+00	--	--	--	--	--	--	--	--	--	--	1.38E-07	--	--
LA	LA-OS-00-01.001	22.16	9.44E+03	--	--	4.99E+00	2.06E-01	2.75E+03	4.86E+03	1.16E+03	1.16E+02	1.07E-01	--	5.25E-04	6.83E-08	5.17E-04	3.48E-12	3.14E-05	1.18E+00	3.07E-04	2.20E-03	2.56E-08
LA	LA-OS-00-04	0.01	1.90E-01	--	--	--	4.55E-06	--	2.89E-05	1.83E-05	1.53E-06	--	--	--	2.80E-12	--	6.57E-20	9.23E-10	--	3.07E-12	3.80E-11	--
LA	LA-TA-00-01	81.72	3.37E+00	--	--	--	1.43E-02	4.53E+00	7.48E+00	2.80E-01	2.45E-02	1.64E-05	--	--	3.11E-08	1.20E-06	2.36E-15	6.64E-06	2.15E-03	7.89E-07	8.93E-07	2.72E-13
LA	LA-TA-03-14	9.40	--	--	--	--	--	4.37E+00	1.74E-02	--	--	--	--	--	--	1.22E-06	--	--	2.13E-03	1.87E-09	--	--
LA	LA-TA-03-28	1.05	--	--	--	--	--	3.73E+00	--	--	--	--	--	--	--	1.06E-06	--	--	1.84E-03	--	--	--
LA	LA-TA-03-29	7.97	1.10E+01	2.15E-05	--	--	4.10E-01	6.37E-01	3.15E+01	7.53E+00	5.90E+00	5.85E-04	--	--	3.12E-07	1.36E-06	4.99E-14	1.12E-04	2.41E-03	8.34E-05	2.31E-05	2.18E-05
LA	LA-TA-03-30	0.21	--	--	--	--	--	2.90E-02	--	--	--	--	--	--	--	8.08E-09	--	--	1.41E-05	--	--	--
LA	LA-TA-21-05	0.42	2.22E-01	--	--	--	7.69E-06	1.38E-02	1.05E+00	2.48E-01	2.04E-02	1.69E-05	--	--	5.36E-12	6.35E-09	2.17E-15	1.75E-09	9.23E-06	1.96E-05	8.06E-07	2.86E-13
LA	LA-TA-21-06	329.28	9.75E+01	--	--	--	3.29E-03	7.85E+03	2.59E+02	7.79E+01	1.02E+01	1.44E-02	--	--	2.19E-09	2.40E-03	6.56E-13	7.30E-07	4.04E+00	1.20E-03	2.48E-04	2.39E-10
LA	LA-TA-21-07	635.99	5.38E+01	--	--	--	1.82E-03	6.52E+03	3.21E+02	5.71E+01	5.46E+00	4.71E-03	--	--	1.22E-09	1.77E-03	4.81E-13	4.06E-07	3.13E+00	4.26E-05	1.82E-04	7.81E-11
LA	LA-TA-21-08	4.20	9.59E-01	--	--	--	3.27E-05	5.04E+01	2.99E+00	8.35E-01	9.50E-02	1.25E-04	--	--	2.23E-11	1.37E-05	7.17E-15	7.34E-09	2.43E-02	4.29E-07	2.69E-06	2.10E-12
LA	LA-TA-21-09	14.28	7.21E-02	--	--	--	2.50E-06	8.22E+02	3.58E-01	8.31E-02	6.59E-03	4.86E-06	--	--	1.74E-12	2.29E-04	7.26E-16	5.68E-10	4.01E-01	5.18E-08	2.70E-07	8.22E-14
LA	LA-TA-21-12	346.25	1.53E+02	--	--	--	5.13E-03	2.46E+04	2.88E+02	9.67E+01	1.63E+01	2.62E-02	--	--	3.85E-01	8.53E-03	7.99E-13	4.15E+01	1.37E+01	2.11E-03	3.05E-04	4.31E-10
LA	LA-TA-21-13	459.01	9.36E+03	--	--	3.81E-02	2.35E-01	1.79E+01	6.62E+01	4.74E-04	1.63E-03	2.75E-08	--	2.40E-02	8.20E-08	5.70E-06	2.99E-13	3.80E-05	1.08E-02	2.14E-02	8.29E-05	1.08E-02
LA	LA-TA-21-15	3.36	8.00E-01	--	--	--	2.74E-05	4.99E-02	5.39E+00	9.20E-01	7.66E-02	5.38E-05	--	--	1.88E-11	2.20E-08	7.90E-15	6.17E-09	3.25E-05	7.22E-07	2.96E-06	9.02E-13
LA	LA-TA-21-16	55.02	1.53E+02	4.37E-06	--	1.17E-07	2.81E-03	1.70E+01	6.63E+02	1.58E+02	1.24E+02	1.30E-02	--	1.06E-07	6.26E-10	2.50E-06	4.59E-13	3.58E-07	6.11E-03	3.46E-03	2.95E-04	1.28E-10
LA	LA-TA-21-17	0.63	7.01E-03	--	--	--	2.43E-07	4.34E-04	3.48E-02	8.08E-03	6.41E-04	4.73E-07	--	--	1.70E-13	1.96E-10	7.06E-17	5.52E-11	2.87E-07	5.04E-09	2.62E-08	8.00E-15
LA	LA-TA-50-18	0.42	2.65E-01	--	--	--	1.02E-05	--	5.69E-03	--	--	--	--	--	8.08E-12	--	--	2.50E-09	--	6.12E-10	--	--
LA	LA-TA-50-19	63.00	1.93E+01	--	--	--	7.14E-04	8.41E-01	1.39E+00	--	--	--	--	--	5.22E-10	2.13E-07	--	1.68E-07	3.88E-04	1.44E-07	--	--
LA	LA-TA-55-04	92.73	7.31E+01	5.45E-06	--	--	1.56E-03	3.95E+03	1.78E+02	4.26E+01	3.96E+01	8.36E-02	8.82E-08	--	4.47E-10	7.11E-04	1.43E-13	2.27E-07	1.64E+00	7.46E-05	8.59E-05	9.02E-05
LA	LA-TA-55-19	56.57	2.99E+02	--	--	--	1.15E-02	9.79E+01	3.13E+02	1.55E+02	3.75E+01	8.97E-02	--	--	9.76E-09	2.77E-04	6.51E-12	2.90E-06	3.09E-01	7.66E-03	1.51E-03	1.78E-03
LA	LA-TA-55-21	2.31	3.93E-01	--	--	--	1.28E-05	1.70E+01	7.08E-01	2.52E-01	4.78E-02	6.73E-05	--	--	8.03E-12	8.37E-06	2.00E-15	2.76E-09	1.21E-02	9.89E-08	7.79E-07	2.47E-06
LA	LA-TA-55-30	199.80	3.91E+02	1.25E-04	--	--	7.74E-03	1.90E+02	2.41E+02	1.48E+02	2.68E+02	2.51E-01	2.85E-08	--	1.99E-09	4.84E-05	6.01E-13	1.06E-06	1.00E-01	8.45E-04	3.29E-04	1.20E-02
LA	LA-TA-55-38	0.84	3.67E-02	--	--	--	1.16E-06	1.29E+01	1.71E-02	8.54E-03	5.03E-03	7.09E-06	--	--	6.85E-13	5.97E-06	6.40E-17	2.42E-10	8.88E-03	2.57E-09	2.57E-08	1.11E-13
LA	LA-TRU-Empty-110	1.88	1.13E-02	4.35E-08	--	--	4.03E-07	--	4.52E-05	1.05E-05	6.74E-06	--	--	--	2.73E-13	--	7.11E-20	9.11E-11	--	4.28E-12	3.00E-11	--
LA	LA-TRU-Empty-55	1.88	9.29E-02	6.98E-06	--	1.89E-08	3.03E-06	5.49E-03	1.93E-02	1.19E-03	4.97E-03	3.94E-09	--	1.72E-08	1.31E-12	1.21E-09	3.45E-18	5.62E-10	2.67E-06	1.20E-09	2.22E-09	3.85E-17

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
LA	LA-TRU-Empty-85	90.24	2.14E+02	2.20E-02	--	3.16E-04	8.94E-03	1.34E+01	4.71E+01	1.02E+01	1.09E+01	3.80E-04	--	2.87E-04	2.79E-06	3.78E-06	3.14E-14	1.81E-06	8.02E-03	1.77E-05	1.97E-05	4.17E-04
LA	LA-TRU-Empty-SWB	15.04	3.35E-01	1.03E-05	--	2.46E-07	1.22E-05	1.13E+01	3.89E-01	9.14E-02	3.27E-02	4.30E-06	--	2.20E-07	7.04E-12	3.45E-06	3.77E-16	2.60E-09	6.48E-03	2.39E-07	2.04E-07	5.00E-14
LA	WA-LA-CIN01.001	2.94	8.36E+01	6.54E-03	--	7.35E-06	2.89E-03	6.50E-01	1.84E+01	4.43E+00	2.05E+00	1.68E-02	--	6.69E-06	1.27E-09	4.52E-08	1.25E-14	5.45E-07	1.47E-04	1.13E-06	8.15E-06	1.62E-10
LA	WA-LA-MHD01.001	11.60	1.01E+02	2.88E-04	--	5.44E-07	2.70E-03	3.15E+02	2.17E+02	5.58E+01	2.27E+01	8.70E-03	--	4.95E-07	7.18E-05	7.12E-05	1.57E-13	1.32E-02	1.58E-01	2.36E-04	1.03E-04	8.37E-11
LA	WA-LA-MHD03.001	1.68	4.37E-01	1.99E-04	--	1.24E-07	1.08E-03	6.73E+00	3.76E+00	8.35E-01	2.26E-01	5.95E-05	--	1.13E-07	7.86E-10	1.51E-06	2.35E-15	2.89E-07	3.35E-03	1.04E-05	1.54E-06	5.72E-13
LA	WA-LA-MHD04.001	4.50	2.44E-01	--	--	--	8.44E-06	1.22E-01	1.01E+00	2.35E-01	4.06E-02	1.88E-05	--	--	4.31E-12	1.10E-08	8.20E-16	1.70E-09	3.17E-05	6.90E-08	4.81E-07	2.01E-13
LA	WA-LA-MHD08.001	0.05	--	6.31E-03	--	3.80E-07	1.78E-06	--	1.25E-05	--	--	--	--	3.42E-07	1.62E-12	--	--	5.35E-10	--	4.27E-13	--	--
LA	WA-LA-MHD09.001	4.50	2.42E-02	--	--	1.35E-07	5.20E-06	1.05E-02	6.68E-02	1.44E-02	2.86E-03	1.37E-06	--	1.21E-07	4.51E-12	9.72E-10	5.16E-17	1.50E-09	2.77E-06	4.61E-09	2.99E-08	1.48E-14
LA	WA-LA-MIN02-V.001	0.21	1.11E-02	1.38E-06	--	--	8.01E-07	1.68E-02	1.29E-01	3.12E-02	6.20E-03	2.25E-06	--	--	5.38E-13	1.35E-09	9.96E-17	1.97E-10	4.10E-06	8.36E-09	6.11E-08	2.30E-14
LA	WA-LA-MIN06-NS.001	0.21	6.02E+00	1.02E-05	--	--	2.07E-04	4.49E-03	2.87E-01	7.34E-02	2.43E-02	5.92E-06	--	--	9.44E-11	3.37E-10	2.21E-16	3.97E-08	1.06E-06	1.81E-08	1.40E-07	5.88E-14
LA	WA-LA-OS-00-01.001	0.01	6.37E+01	--	--	2.24E-07	1.51E-03	4.30E-04	4.43E-03	3.24E-03	1.18E-03	1.22E-06	--	1.76E-07	7.37E-10	7.86E-11	1.13E-17	2.74E-07	1.75E-07	4.22E-10	6.65E-09	5.31E-12
LA	WC-LA-CIN01.001	15.33	1.08E+03	6.77E-02	--	1.06E-05	3.96E-02	1.05E+01	1.75E+02	5.00E+01	2.44E+01	1.92E-01	--	9.56E-06	2.08E-08	6.75E-06	1.75E-13	8.13E-06	1.19E-02	2.39E-04	1.03E-04	9.64E-03
LA	WC-LA-CIN02.001	0.21	1.66E-01	--	--	--	9.80E-06	7.08E-02	9.78E-02	1.44E-02	4.15E-03	5.39E-06	--	--	6.57E-12	3.01E-08	5.05E-17	2.36E-09	5.57E-05	9.34E-07	2.96E-08	5.77E-14
LA	WC-LA-MHD01.001	7.56	1.27E+02	2.04E-02	--	2.63E-05	4.60E-03	4.10E+00	9.74E+01	3.00E+01	8.72E+00	4.82E-02	--	2.37E-05	2.40E-09	2.47E-06	1.05E-13	9.40E-07	4.37E-03	8.87E-05	6.15E-05	4.05E-04
LA	WC-LA-MHD03.001	0.63	3.28E+00	3.21E-06	--	1.57E-06	1.15E-04	1.52E+01	1.05E+00	5.78E-01	6.09E-02	9.18E-05	--	1.41E-06	5.79E-11	3.93E-06	2.02E-15	2.30E-08	7.99E-03	7.12E-08	1.19E-06	9.83E-13
LA	WC-LA-MHD08.001	0.21	1.26E+00	1.78E-04	--	--	4.43E-05	5.61E-02	7.11E-01	3.40E-01	2.62E-01	1.14E-04	--	--	2.29E-11	5.02E-09	1.19E-15	9.00E-09	1.45E-05	4.83E-08	6.97E-07	1.22E-12
LA	WC-LA-MHD09.001	0.84	8.11E-02	5.74E-11	--	8.37E-08	3.62E-06	1.38E-03	8.80E-02	2.06E-02	6.36E-03	1.21E-06	--	7.53E-08	2.15E-12	1.23E-10	7.21E-17	8.05E-10	3.56E-07	5.99E-09	4.23E-08	1.29E-14
LA	WC-LA-MIN02-V.001	26.45	9.95E+02	9.18E-02	--	1.02E-05	3.51E-02	9.16E+00	4.21E+02	1.08E+02	3.67E+01	2.19E-02	--	9.17E-06	8.45E-05	5.08E-06	3.76E-13	1.40E-02	9.08E-03	1.95E-04	2.20E-04	2.56E-03
LA	WC-LA-MIN03-NC.001	3.99	1.10E+00	3.29E-05	--	3.73E-05	3.86E-05	4.80E-02	1.15E+00	1.62E-01	3.60E-02	2.86E-05	--	3.36E-05	1.97E-11	1.52E-07	5.65E-16	7.77E-09	2.46E-04	5.86E-06	3.31E-07	3.06E-13
LA	WC-LA-MIN04-S.001	0.21	1.66E+00	--	--	--	5.32E-05	1.29E-01	3.16E+00	8.99E-01	1.19E-01	1.21E-04	--	--	2.55E-11	1.20E-08	3.23E-15	1.03E-08	3.41E-05	2.18E-07	1.87E-06	1.31E-12
LA	WC-LA-MIN05-V.001	0.42	3.35E-02	--	--	4.32E-07	3.79E-04	8.57E-02	9.03E-02	2.35E-02	6.18E-03	1.41E-05	--	3.88E-07	3.53E-10	7.94E-09	8.46E-17	1.15E-07	2.26E-05	6.23E-09	4.89E-08	1.54E-13
LA	WP-LA-CIN01.001	340.68	2.29E+04	1.42E+00	--	9.11E-04	8.40E-01	4.51E+02	5.55E+03	1.49E+03	7.41E+02	2.34E+00	--	8.26E-04	4.02E-07	1.42E-04	4.47E-12	1.66E-04	2.90E-01	3.78E-03	2.83E-03	1.96E-01
LA	WP-LA-CIN02.001	107.39	4.39E+02	8.40E-02	--	1.58E-02	2.49E-02	4.01E+01	3.55E+02	9.48E+01	2.83E+01	2.30E-02	--	1.42E-02	2.41E-05	1.79E-05	3.31E-13	3.99E-03	3.30E-02	5.83E-04	1.94E-04	2.48E-04
LA	WP-LA-CIN03.001	0.84	3.73E-02	--	--	1.88E-06	6.89E-06	2.82E-03	1.78E-01	4.17E-02	1.38E-02	2.42E-06	--	1.69E-06	5.76E-12	1.05E-07	1.46E-16	1.94E-09	1.66E-04	4.10E-06	8.54E-08	2.59E-14
LA	WP-LA-MHD01.001	3391.36	2.54E+04	1.09E+00	7.00E+00	1.98E-03	1.09E+00	6.52E+04	5.19E+04	1.36E+04	6.53E+03	1.64E+01	--	1.80E-03	1.11E-02	2.22E-02	4.52E-06	2.04E+00	3.09E+01	1.46E-02	2.50E-02	7.62E-02
LA	WP-LA-MHD02-PTX.001	0.63	4.86E-02	--	--	2.69E-08	1.61E-06	7.14E-03	1.31E-01	2.76E-02	5.21E-03	3.21E-06	--	2.41E-08	8.22E-13	7.07E-10	1.05E-16	3.21E-10	1.95E-06	9.27E-09	5.90E-08	3.58E-14
LA	WP-LA-MHD02.001	13.65	1.78E+00	3.98E-05	--	4.12E-07	1.29E-04	9.70E+02	1.38E+00	6.96E-01	1.65E-01	7.17E-04	--	3.66E-07	1.74E-08	3.48E-04	3.03E-15	2.59E-06	6.21E-01	7.37E-07	1.59E-06	8.57E-12
LA	WP-LA-MHD03.001	756.49	5.31E+02	1.07E-01	4.85E-01	2.77E-02	1.41E-01	2.35E+03	1.75E+03	4.19E+02	1.67E+02	2.82E-01	--	2.52E-02	2.43E-03	5.10E-04	1.18E-12	4.47E-01	1.14E+00	2.07E-03	7.72E-04	1.14E-02
LA	WP-LA-MHD04.001	602.10	1.79E+02	5.22E-03	--	6.51E-04	8.71E-03	1.01E+03	3.61E+02	1.26E+02	4.05E+01	2.69E-02	--	5.89E-04	2.45E-05	2.37E-04	4.03E-13	4.24E-03	5.04E-01	1.98E-04	2.47E-04	3.82E-04
LA	WP-LA-MHD05-ITRI.001	11.43	3.84E+00	8.25E-02	6.19E-01	1.07E-06	2.60E-04	2.11E+01	1.03E+01	1.40E+00	4.96E-01	1.94E-04	--	9.68E-07	1.83E-10	5.15E-06	4.85E-15	6.49E-08	1.06E-02	9.11E-07	2.85E-06	2.08E-12
LA	WP-LA-MHD08.001	9.34	1.86E+00	2.16E-02	6.07E-01	6.70E-05	4.59E-04	2.32E-01	2.69E+00	1.12E+00	2.44E-01	1.11E-03	--	6.03E-05	3.92E-10	2.15E-08	3.89E-15	1.31E-07	6.13E-05	1.83E-07	2.29E-06	1.19E-11
LA	WP-LA-MHD09.001	103.76	4.73E+02	2.26E-02	--	1.15E-02	2.23E-02	9.51E+01	2.85E+01	1.01E+01	4.45E+00	4.59E-03	--	1.04E-02	1.36E-08	2.39E-05	3.54E-14	5.05E-06	4.89E-02	1.32E-05	2.08E-05	1.11E-04
LA	WP-LA-MHD10.001	65.80	3.24E+00	8.26E-07	--	2.35E-07	7.71E-05	1.49E+00	1.26E+01	3.38E+00	7.45E-01	6.95E-04	--	2.12E-07	2.58E-11	1.38E-07	1.22E-14	1.22E-08	3.92E-04	8.67E-07	7.04E-06	7.55E-12
LA	WP-LA-MIN02-V.001	86.65	2.71E+03	1.80E-01	--	1.34E-05	9.37E-02	3.40E+01	1.05E+03	2.81E+02	1.06E+02	1.61E-01	--	1.21E-05	4.71E-08	1.95E-05	9.80E-13	1.87E-05	3.48E-02	7.15E-04	5.75E-04	3.68E-02
LA	WP-LA-MIN03-NC.001	786.45	3.75E+02	4.83E-03	--	1.46E-02	1.29E-02	9.27E+00	2.45E+02	3.33E+01	2.14E+01	1.93E-02	--	1.18E-02	7.66E-09	2.98E-05	1.16E-13	2.78E-06	4.80E-02	1.16E-03	6.83E-05	1.06E-03
LA	WP-LA-MIN04-S.001	17.64	7.29E+02	1.42E-02	3.86E-02	1.45E-05	2.38E-02	2.33E+01	7.36E+02	1.96E+02	6.06E+01	1.22E-01	--	1.30E-05	1.14E-08	3.04E-06	6.86E-13	4.61E-06	7.53E-03	8.73E-05	4.03E-04	1.31E-09
LA	WP-LA-MIN05-V.001	0.84	1.65E-01	1.36E-11	--	9.20E-07	5.78E-05	4.27E-01	1.68E-01	3.97E-02	1.23E-02	2.55E-06	--	8.28E-07	5.02E-11	1.10E-07	1.39E-16	1.68E-08	2.24E-04	1.15E-08	8.14E-08	2.73E-14
LA	WP-LA-MIN06-NS.001	52.92	9.19E+02	9.83E-02	--	1.85E-05	3.35E-02	4.70E+00	2.03E+02	5.01E+01	1.87E+01	6.92E-03	--	1.68E-05	1.59E-08	5.81E-06	1.50E-13	6.59E-06	1.04E-02	2.43E-04	9.52E-05	2.34E-03
LA	WP-LA-MSG04.001	35.94	1.90E+00	2.92E-05	--	4.02E-07	5.73E-05	1.18E-01	9.12E+00	1.53E+00	7.00E-01	8.96E-05	--	3.62E-07	2.65E-11	1.93E-06	5.34E-15	1.08E-08	3.05E-03	7.55E-05	3.13E-06	5.88E-04
LA	WP-LA-OS-00-01	0.10	2.49E+00	--	--	4.44E-05	8.01E-05	9.50E-01	4.77E+00	4.82E+00	1.42E-01	9.65E-05	--	3.68E-05	4.37E-11	9.32E-02	2.32E-14	1.63E-08	3.04E-04	3.81E-07	1.16E-05	1.21E-12
LA	WP-LA-OS-00-01.001	21.16	1.62E+04	--	--	2.03E+00	3.53E-01	6.48E+03	1.14E+03	3.41E+02	5.28E+01	9.27E-02	--	4.09E-01	1.67E-07	1.07E-03	1.02E-12	6.30E-05	2.51E+00	1.21E-04	6.48E-04	2.89E-06
LA	WP-LA-OS-00-03	14.70	2.16E+01	--	--	7.34E-08	5.66E-04	1.42E-04	1.43E-03	1.05E-03	3.86E-04	3.94E-07	--	5.76E-08	2.47E-10	2.53E-11	4.44E-18	1.00E-07	5.50E-08	1.31E-10	2.37E-09	1.69E-12
LA	WP-LA-OS-00-04	0.00	2.56E-01	--	--	4.37E-05	6.09E-06	3.71E-02	1.67E+00	4.42E-01	2.63E-02	6.10E-05	--	3.32E-05	3.52E-12	1.05E-08	1.63E-15	1.19E-09	2.07E-05	1.96E-07	9.32E-07	1.81E-09
LA	WP-LA-TA-55-19.01	81.08	7.58E+01	4.34E-03	--	1.58E-07	5.83E-03	1.11E+01	2.49E+02	6.10E+01	1.55E+01	1.67E-01	--	--	5.74E-09	1.18E-04	3.01E-13	1.71E-06	1.22E-01	2.46E-04	1.49E-04	3.87E-04

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
LA	WP-LA-TA-55-19.02	213.29	4.25E+02	7.69E-02	--	9.57E-05	3.21E-02	1.12E+02	8.15E+02	2.26E+02	8.09E+01	1.24E+00	--	7.89E-05	3.19E-05	2.28E-03	2.06E-05	4.55E-03	8.39E-01	1.02E-03	5.38E-04	1.53E-03
LA	WP-LA-TA-55-30	91.98	1.27E+02	6.47E-03	--	1.45E-03	1.10E-02	2.50E+01	2.47E+02	6.91E+01	2.20E+01	5.98E-02	--	1.29E-03	6.65E-05	1.03E-05	3.28E-05	9.49E-03	1.75E-02	2.35E-04	1.64E-04	5.58E-04
LA	WP-LA-TA-55-43.01	189.88	6.17E-01	1.43E-05	--	--	5.38E-05	2.94E+02	4.65E-01	7.58E-01	1.39E-01	5.33E-04	--	--	5.73E-11	6.82E-05	4.58E-06	1.66E-08	1.32E-01	3.85E-08	1.89E-06	6.95E-12
LB	LB-T001	0.54	1.24E-02	2.28E-03	1.60E-04	4.61E-08	2.21E-05	5.04E-03	7.90E-04	2.97E-05	3.04E-05	2.40E-14	1.06E-13	--	1.61E-11	3.51E-10	1.43E-06	5.92E-09	1.14E-06	4.82E-11	5.21E-11	9.97E-10
LB	LB-T002	0.54	2.34E-05	3.05E-08	--	--	1.49E-07	--	1.40E-04	--	5.59E-06	--	--	--	1.09E-13	--	--	4.00E-11	--	8.58E-12	--	--
LL	LL-M001	897.26	7.76E+03	3.92E-01	4.18E-01	4.21E-01	3.27E-01	3.29E+03	1.12E+04	2.83E+03	9.32E+02	4.61E-01	3.15E-07	3.83E-01	8.99E-03	9.81E-04	1.02E-03	1.07E+00	9.41E-01	2.71E-02	5.21E-03	3.85E-02
LL	LL-T004	5.79	1.89E+02	--	1.85E-03	--	4.79E-03	1.32E+02	2.99E+02	6.04E+01	1.99E+01	7.96E-03	--	--	1.62E-09	9.53E-06	1.76E-13	7.68E-07	3.04E-02	1.86E-05	1.13E-04	7.78E-11
LL	LL-W018-S5100	184.75	5.31E+00	--	4.03E-04	--	1.28E-04	2.14E-01	6.94E+00	1.73E+00	1.36E+00	3.21E-04	--	--	4.51E-11	2.42E-08	7.33E-15	2.07E-08	6.29E-05	5.20E-07	3.91E-06	3.78E-12
LL	LL-W018-SS	4.20	7.01E+01	1.03E-05	4.95E-05	2.76E-03	1.84E-03	7.20E+00	5.99E-01	1.91E-03	2.64E-02	--	5.62E-21	7.69E-03	7.04E-10	8.12E-07	8.08E-18	3.12E-07	2.11E-03	4.73E-07	4.31E-09	--
LL	LL-W019	76.72	1.36E+02	3.29E-03	2.43E-03	4.11E-05	1.14E-02	3.03E+02	3.20E+02	8.28E+01	4.23E+01	1.53E-02	--	4.00E-05	2.43E-02	6.76E-03	8.41E-05	4.47E+00	7.53E-02	9.48E-04	1.52E-04	1.53E-02
LL	WP-BLCHDN.001	1.68	9.69E-02	2.22E-03	1.07E-02	--	8.97E-04	4.78E-02	9.28E-06	5.73E-04	3.47E-04	--	--	--	1.07E-09	5.93E-09	1.51E-18	3.08E-07	1.48E-05	4.11E-13	9.67E-10	--
LL	WP-LL-M001-S5400	141.54	3.20E+02	1.35E-02	1.66E+00	3.55E-06	8.11E-02	1.95E+02	5.97E+02	1.67E+02	5.23E+01	3.17E-02	--	3.10E-06	8.99E-08	3.78E-05	7.64E-13	2.64E-05	7.92E-02	5.42E-04	3.92E-04	3.54E-03
LL	WP-LL-M001-S5400-002	149.05	4.23E+02	3.39E-02	1.06E+00	1.35E-03	3.71E-02	3.18E+02	8.08E+02	2.12E+02	6.85E+01	2.69E-02	1.12E-06	1.23E-03	3.69E-04	7.15E-05	4.46E-05	6.44E-02	1.57E-01	1.85E-03	3.97E-04	1.79E-03
LL	WP-LL-T004-S3141-002	0.98	8.29E+01	8.90E-06	--	1.40E-07	2.02E-03	6.01E+01	4.65E+01	1.09E+01	3.72E+00	3.39E-03	--	1.27E-07	6.50E-10	4.34E-06	3.18E-14	3.16E-07	1.38E-02	2.89E-06	2.04E-05	3.32E-11
ND	ND-T001	0.42	2.65E+01	--	--	--	6.54E-04	--	--	--	--	--	--	--	2.22E-10	--	--	1.04E-07	--	--	--	--
ND	ND-T002	1.68	3.36E+00	--	--	--	8.54E-05	--	--	--	--	--	--	--	3.07E-11	--	--	1.40E-08	--	--	--	--
NT	NT-JAS-01	213.74	1.82E+01	--	--	--	5.40E-04	1.39E+01	2.01E+02	4.54E+01	8.43E+00	2.56E-03	--	--	2.92E-10	1.78E-06	2.13E-13	1.08E-07	4.39E-03	1.59E-05	1.08E-04	3.18E-11
NT	NT-W021	15.04	2.01E+00	--	--	--	3.69E-05	7.66E-01	5.09E+01	1.16E+01	2.00E+00	1.04E-03	--	--	2.22E-11	4.77E-06	4.55E-14	6.93E-09	7.21E-03	5.17E-05	2.52E-05	2.48E-03
NT	WP-NT-RF-BERYLLIUM	29.61	4.67E+00	9.11E-07	--	--	1.54E-04	5.21E-01	2.42E+01	5.47E+00	1.09E+00	4.31E-04	--	--	4.06E-05	7.09E-07	2.44E-14	5.94E-03	1.06E-03	1.97E-05	1.27E-05	2.31E-04
NT	WP-NT-RF-GRAPHITE	3.78	4.88E+00	--	--	--	1.47E-04	6.56E-01	3.87E+01	7.15E+00	1.64E+00	5.25E-04	--	--	7.67E-11	1.20E-07	3.19E-14	2.92E-08	2.57E-04	2.98E-06	1.66E-05	2.84E-05
NT	WP-NT-RF-METAL	6.09	1.07E+00	2.70E-06	--	--	3.64E-05	1.17E-01	6.72E+00	1.66E+00	3.87E-01	1.35E-04	--	--	2.17E-11	3.20E-05	7.40E-15	7.82E-09	4.46E-02	2.79E-05	3.84E-06	2.23E-02
NT	WP-NTLBL-S5400	1.68	1.03E+00	5.76E-03	4.89E-02	8.94E-06	7.02E-04	8.02E-02	6.71E-01	1.53E-01	8.57E-02	2.12E-05	--	7.94E-06	7.95E-10	9.64E-09	6.81E-16	2.34E-07	2.44E-05	5.16E-08	3.54E-07	2.56E-13
NT	WP-NTLRC-S5400	3.15	5.24E+00	3.49E-05	--	1.94E-07	3.76E-04	3.15E-01	7.18E+00	2.62E+00	8.48E-01	2.93E-04	--	1.72E-07	3.32E-10	3.22E-06	1.17E-14	1.05E-07	4.53E-03	1.48E-04	6.07E-06	1.05E-04
NT	WP-NTS54332R0	296.31	1.39E+02	1.29E-02	1.66E-01	4.21E-05	1.77E-02	1.38E+01	3.68E+02	9.58E+01	2.82E+01	1.04E-02	--	3.81E-05	1.49E-03	2.16E-05	4.28E-13	2.17E-01	3.20E-02	3.59E-04	2.22E-04	1.01E-02
NT	WP-NTS54COMR0	49.56	3.39E+01	2.08E-02	1.40E+00	1.46E-05	5.72E-03	1.18E+01	5.11E+01	1.22E+01	3.21E+00	1.84E-03	--	1.30E-05	1.78E-03	2.87E-06	5.42E-14	2.61E-01	5.62E-03	1.70E-05	2.82E-05	8.79E-04
NT	WP-NTS54MIX1R0	0.42	3.69E-03	9.50E-05	--	1.27E-05	8.84E-07	2.21E-04	2.89E-02	6.91E-03	5.74E-04	6.82E-07	--	--	1.02E-12	2.91E-11	3.33E-17	2.94E-10	7.07E-08	2.31E-09	1.66E-08	8.58E-15
OR	OR-CHEM-CH-HET	37.40	3.19E+01	2.89E-02	9.06E-01	1.38E+00	8.96E-04	9.90E+00	6.21E+00	2.85E+00	1.66E+00	4.23E-03	1.36E-15	1.29E+00	1.39E-02	8.75E-06	2.04E-06	2.55E+00	1.64E-02	2.73E-04	5.24E-06	1.23E-02
OR	OR-CRF-CH-HET	3.57	1.36E-01	8.55E-03	1.82E-01	1.21E-02	1.27E-05	3.02E-01	7.67E-03	4.04E-02	4.67E-02	2.51E-04	4.30E-13	7.96E-03	1.21E-05	2.47E-08	3.88E-16	2.22E-03	7.46E-05	1.14E-07	1.63E-07	3.09E-08
OR	OR-GENR-CH-HET	32.40	8.10E+00	6.53E-01	1.05E+00	6.55E-04	1.29E-01	2.26E+00	3.36E+00	2.94E+00	2.34E+00	7.38E-01	5.86E-01	9.04E-04	1.10E-05	4.03E-07	6.96E-06	3.92E-04	9.41E-04	1.08E-04	1.11E-04	1.02E-03
OR	OR-IFEL-CH-HET	7.98	3.86E-01	2.07E-03	1.07E-01	1.30E-01	1.12E-04	1.43E-01	1.84E-01	7.98E-02	9.54E-02	1.38E-04	--	4.33E-02	1.74E-05	4.85E-07	2.21E-16	3.21E-03	8.66E-04	2.22E-05	1.45E-07	4.89E-05
OR	OR-ISTP-CH-HET	68.41	2.95E+02	7.07E-01	9.77E+01	1.75E-02	9.88E-02	1.79E+02	1.39E+01	1.95E+01	2.53E+01	5.75E-01	6.78E-04	8.86E-03	8.24E-03	4.16E-05	1.26E-05	1.43E+00	9.00E-02	4.33E-04	2.26E-04	7.26E-04
OR	OR-LWT-CH-HET	5.46	3.96E-01	7.19E-04	2.16E-03	4.37E-01	1.57E-04	7.03E-02	1.00E+00	6.01E-03	4.93E-03	1.73E-05	--	8.85E-02	1.08E-04	4.52E-05	6.84E-05	3.77E-03	2.44E-03	3.59E-05	3.20E-05	1.23E-04
OR	OR-MRF-CH-HET	8.82	8.17E-01	1.41E-03	1.08E-02	3.88E-01	6.92E-05	7.39E-02	1.62E+00	3.34E-01	3.47E-02	1.18E-04	--	2.30E+00	4.78E-06	2.24E-08	1.00E-15	8.52E-04	4.60E-05	1.06E-06	6.35E-07	1.93E-05
OR	OR-NBL-CH-HET	12.39	1.82E+00	5.60E-04	4.76E-03	1.96E-04	1.23E-04	1.97E-01	2.97E+00	1.19E+00	4.75E-01	2.96E-04	--	1.78E-04	2.81E-05	1.32E-06	2.94E-05	5.16E-03	2.34E-03	7.53E-05	2.19E-06	2.53E-04
OR	OR-NFS-CH-HET-A	54.32	1.90E+01	1.12E-04	2.66E-02	8.79E-05	7.16E-04	3.86E+00	4.95E+01	1.61E+01	5.86E+00	2.74E-03	--	8.00E-05	6.07E-04	4.39E-07	5.58E-05	1.03E-01	1.17E-03	4.14E-05	2.97E-05	2.01E-03
OR	OR-NFS-CH-HOM-A	5.14	3.72E+01	3.01E-03	--	3.63E-05	1.08E-03	5.16E+00	5.35E+01	1.84E+01	8.16E+00	4.55E-03	--	3.30E-05	6.04E-05	4.07E-07	2.03E-05	4.52E-03	1.25E-03	7.39E-06	3.39E-05	2.06E-04
OR	OR-NFS-CH-SOIL	0.84	2.02E-02	1.78E-06	--	4.82E-07	1.97E-06	2.81E-03	5.60E-02	1.77E-02	3.98E-03	2.78E-06	--	4.39E-07	3.73E-08	1.06E-05	2.22E-07	6.85E-06	4.72E-06	1.54E-07	3.25E-08	1.12E-06
OR	OR-OXIDE-CH-HET	0.65	2.08E+03	1.57E-03	--	7.24E-06	5.96E-02	3.53E+02	2.17E+02	5.58E+02	5.10E+02	2.53E+00	--	6.57E-06	1.17E-02	7.84E-05	4.09E-12	2.09E+00	1.51E-01	7.39E-05	1.65E-03	1.11E-03
OR	OR-PGDP-CH-HET	6.51	2.91E-01	2.54E-05	--	4.04E-05	1.14E-01	7.77E-02	9.50E-01	1.98E-01	1.24E-01	2.04E-05	--	3.67E-05	3.54E-05	2.22E-06	5.58E-16	6.52E-03	3.91E-03	6.75E-04	3.65E-07	1.68E-02
OR	OR-PUBE-CH-HOM	0.05	5.64E-01	2.71E-05	--	1.75E-04	2.53E-05	1.21E+00	2.19E-03	1.44E-03	6.75E-04	8.73E-07	--	4.78E-04	1.28E-11	3.00E-07	4.06E-18	5.24E-09	6.51E-04	1.34E-10	2.65E-09	8.40E-15
OR	OR-RADP-CH-HET	22.48	9.69E+00	1.35E+00	7.09E-01	2.83E+00	1.30E-03	1.85E+00	8.02E+00	4.51E+00	2.11E+00	8.04E-04	5.80E-04	3.62E-01	3.14E-03	1.51E-06	1.79E-05	5.69E-01	2.53E-03	6.04E-05	8.34E-06	1.59E-04
OR	OR-REDC-CH-HET	1124.09	3.76E+02	1.20E+01	1.13E+03	5.78E+00	1.04E+01	1.03E+04	1.14E+02	1.91E+02	4.83E+01	1.82E+00	4.10E-02	5.24E+01	1.18E-02	3.35E-02	3.89E-07	4.40E-01	4.88E+00	7.05E-04	4.69E-04	8.26E-04
OR	OR-RF-CH-HET	59.72	5.37E+01	1.82E-02	5.37E-01	1.70E-01	2.05E-03	2.60E+01	7.56E+01	3.61E+01	2.02E+01	1.15E-02	--	1.44E-02	1.95E-01	2.05E-04	1.38E-04	3.31E+01	3.62E-01	5.26E-04	7.23E-05	5.93E-04
OR	OR-SOURCE-CH-HET	7.98	5.81E+01	3.29E-04	1.01E-07	2.26E-03	8.62E-03	1.28E+01	4.88E+00	1.26E+00	5.75E-01	2.18E-04	--	5.27E-05	8.21E-05	3.39E-06	1.27E-14	1.51E-02	7.27E-03	1.77E-04	5.30E-06	3.26E-03
OR	OR-SWSA-CH-HET	0.63	1.73E-01	1.89E-04	2.25E-02	2.75E-05	8.28E-05	4.22E-03	1.99E-03	1.24E-03	1.15E-04	4.62E-08	--	2.48E-05	1.02E-04	8.55E-08	2.95E-18	1.71E-02	1.39E-04	1.31E-10	2.01E-09	4.80E-16
OR	OR-SWSA-CH-SOIL	2.73	1.59E-01	1.63E-04	1.96E+00	3.41E-06	1.11E-05	6.99E-02	7.05E-02	8.79E-02	1.11E-02	3.56E-05	--	3.08E-06	1.22E-06	1.32E-08	1.01E-06	2.72E-09	2.94E-05	2.64E-07	1.35E-07	2.44E-13
OR	OR-TBD-CH-HET	28.98	7.86E+01	1.45E-03	2.78E-03	1.42E+01	3.90E-02	1.33E+02	2.91E+01	2.45E+01	1.26E+00	1.35E-02	1.38E-03	1.15E+01	1.63E-01	8.63E-04	6.22E-04	1.56E+01	4.17E-01	1.47E-03	5.65E-04	2.92E-03
OR	OR-W1A-CH-SOIL	9.03	4.63E+00	6.69E-04	1.83E-03	5.64E+00	2.35E-03	2.55E-01	1.07E+00	3.82E-03	2.68E-01	5.91E-04	--	4.82E-02	4.55E+00	2.76E-03	6.32E-02	5.95E+00	2.06E-01	3.51E-03	5.35E-03	6.17E-02
OR	OR-Y12-CH-HET	0.63	--	--	--	--	6.34E-03	1.56E-04	3.09E-02	1.29E-05	--	--	--	--	5.43E-09	3.38E-07	4.25E-20	1.85E-06	5.49E-04	7.47E-05	2.57E-11	6.14E-04

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
OR	WP-OR-CHEM-CH-HET	12.18	1.75E+00	6.43E-03	3.83E-01	8.17E-03	6.62E-04	7.05E+00	1.46E+00	6.01E-01	3.66E-01	8.26E-04	--	6.74E-03	1.64E-03	1.84E-06	1.96E-15	2.66E-01	3.79E-03	7.51E-06	1.19E-06	2.22E-06
OR	WP-OR-GENR-CH-HET	4.20	1.15E-01	3.60E-02	6.97E-02	5.67E-06	4.33E-04	1.06E+00	7.18E-02	3.00E-01	1.99E-03	5.65E-06	--	5.07E-06	4.38E-10	1.13E-06	1.17E-15	1.37E-07	1.82E-03	3.30E-05	6.50E-07	3.85E-05
OR	WP-OR-ISTP-CH-HET	84.84	1.56E+02	4.23E-01	4.83E+01	1.53E-03	2.99E-02	1.84E+02	2.51E+01	2.19E+01	1.18E+01	4.99E-01	--	1.39E-03	1.01E-04	5.26E-05	3.17E-08	1.76E-02	1.08E-01	3.33E-04	4.14E-05	5.37E-04
OR	WP-OR-NBL-CH-HET	2.73	8.29E-02	1.98E-04	--	4.81E-05	4.04E-06	1.23E-02	1.26E-01	3.65E-02	3.35E-02	5.86E-06	--	4.31E-05	1.39E-05	2.13E-08	1.39E-16	2.19E-03	3.37E-05	6.66E-07	7.82E-08	6.55E-14
OR	WP-OR-NFS-CH-HET	23.52	2.54E+00	4.11E-11	--	1.93E-07	7.77E-05	1.95E-01	4.40E+00	1.33E+00	3.16E-01	2.06E-04	--	1.72E-07	1.91E-06	4.79E-08	5.48E-15	2.90E-04	9.49E-05	1.84E-06	2.96E-06	9.27E-04
OR	WP-OR-NFS-CH-HET-A	98.91	4.70E+01	3.83E-04	3.99E-02	2.57E-02	1.59E-03	8.09E+00	1.29E+02	4.09E+01	1.12E+01	7.96E-03	--	2.72E-04	6.11E-04	9.89E-07	8.24E-06	1.00E-01	2.52E-03	5.90E-05	8.27E-05	2.15E-03
OR	WP-OR-NFS-CH-SOIL	333.06	1.55E+02	4.62E-05	--	3.32E-04	4.40E-03	1.09E+01	3.32E+02	1.10E+02	3.45E+01	1.18E-02	--	3.02E-04	2.39E-04	9.31E-07	9.26E-05	1.53E-02	2.76E-03	4.77E-05	2.02E-04	1.48E-03
OR	WP-OR-RADP-CH-HET	60.27	1.80E+01	2.83E-01	4.01E+00	5.82E-03	2.37E-02	1.22E+01	1.32E+01	2.61E+00	1.25E+00	1.43E-03	--	5.28E-03	1.20E-03	2.63E-06	1.36E-06	1.39E-01	5.79E-03	4.31E-05	4.89E-06	2.22E-04
OR	WP-OR-REDC-CH-HET	549.99	1.01E+02	2.15E+00	3.86E+02	1.46E+00	5.11E-02	3.17E+01	2.83E+01	7.06E+01	1.54E+01	7.15E-02	1.60E-10	2.27E+01	1.09E-03	8.79E-06	2.90E-06	1.75E-01	1.83E-02	1.52E-04	1.27E-04	2.53E-03
OR	WP-OR-RF-CH-HET	47.04	3.98E+01	6.42E-03	3.94E-01	1.85E-03	1.31E-03	5.08E+00	4.56E+01	2.07E+01	1.76E+01	3.95E-03	--	1.68E-03	3.20E-03	2.78E-04	2.75E-04	4.12E-01	4.66E-01	3.93E-04	4.00E-05	5.03E-04
RF	WP-RF001.01	951.82	1.66E+03	1.17E-03	--	--	9.32E-02	8.27E+01	3.36E+03	7.76E+02	3.55E+02	1.18E-01	--	--	5.15E-04	1.53E-04	3.47E-12	7.53E-02	2.24E-01	9.82E-03	1.80E-03	2.21E-03
RF	WP-RF002.01	1426.82	1.65E+03	1.05E-03	--	5.90E-05	4.95E-02	1.22E+02	4.40E+03	1.03E+03	5.49E+02	1.23E-01	--	--	1.49E-04	1.07E-04	4.60E-12	2.19E-02	1.66E-01	7.34E-03	2.39E-03	2.83E-01
RF	WP-RF003.01	133.17	3.03E+03	--	--	--	7.75E-02	2.94E+02	1.27E+04	3.04E+03	1.07E+03	2.93E-01	--	--	6.98E-05	4.75E-05	1.40E-11	1.01E-02	1.06E-01	1.48E-03	7.15E-03	1.31E-03
RF	WP-RF004.01	278.36	2.73E+02	8.77E-07	--	--	7.78E-03	1.82E+01	6.85E+02	1.58E+02	8.79E+01	1.91E-02	--	--	3.75E-09	1.69E-05	7.05E-13	1.47E-06	2.60E-02	7.13E-04	3.66E-04	7.54E-04
RF	WP-RF005.01	28.01	4.92E+03	--	--	--	1.44E-01	1.13E+02	4.77E+03	1.22E+03	2.05E+02	1.01E-01	--	--	6.79E-08	1.63E-05	6.32E-12	2.70E-05	3.80E-02	4.77E-04	3.05E-03	1.32E-09
RF	WP-RF005.02	18.40	5.86E+03	--	--	--	1.67E-01	6.74E+01	2.89E+03	7.57E+02	1.19E+02	6.46E-02	--	--	7.54E-08	9.60E-06	3.74E-12	3.07E-05	2.25E-02	2.53E-04	1.85E-03	1.72E-07
RF	WP-RF006.01	57.39	2.43E+03	--	--	--	5.84E-02	2.75E+02	9.20E+03	2.21E+03	1.31E+03	2.97E-01	--	--	2.28E-08	3.76E-05	1.01E-11	9.81E-06	8.99E-02	9.07E-04	5.19E-03	1.39E-06
RF	WP-RF008.01	26.11	1.16E+03	--	--	--	4.18E-02	1.12E+02	3.39E+03	9.24E+02	3.31E+02	1.36E-01	--	--	2.63E-08	1.40E-05	4.23E-12	9.27E-06	3.48E-02	2.91E-04	2.17E-03	7.69E-08
RF	WP-RF009.01	320.03	6.25E+04	--	--	--	2.01E+00	1.11E+03	5.49E+04	1.35E+04	2.94E+03	1.37E+00	--	--	1.06E-06	1.40E-04	6.05E-11	4.03E-04	3.47E-01	4.53E-03	3.14E-02	2.73E-06
RF	WP-RF010.01	562.87	1.80E+03	4.08E-05	--	--	4.92E-02	1.41E+02	6.25E+03	1.45E+03	5.48E+02	1.59E-01	--	--	2.21E-08	1.06E-04	6.48E-12	8.98E-06	1.67E-01	4.47E-03	3.36E-03	3.58E-03
RF	WP-RF011.01	54.81	3.10E+02	--	--	--	7.76E-03	3.48E+01	1.48E+03	3.55E+02	1.05E+02	3.06E-02	--	--	3.04E-09	4.82E-06	1.63E-12	1.31E-06	1.15E-02	1.38E-04	8.33E-04	4.21E-06
RF	WP-RF015.01	1.68	5.86E+00	--	--	--	2.20E-04	5.18E-01	1.87E+01	4.35E+00	2.36E+00	5.82E-04	--	--	1.51E-10	6.82E-08	2.09E-14	5.08E-08	1.66E-04	1.49E-06	1.05E-05	7.31E-12
RF	WP-RF029.01	4313.96	2.96E+03	1.44E-03	--	4.72E-06	9.29E-02	2.05E+02	6.84E+03	1.64E+03	1.03E+03	2.21E-01	8.60E-16	2.87E-08	5.09E-08	8.29E-05	7.31E-12	1.89E-05	1.44E-01	3.16E-03	3.79E-03	1.26E-03
RF	WP-RF031.01	20.47	1.48E+01	--	--	--	3.95E-04	1.27E+00	4.80E+01	1.11E+01	5.84E+00	1.32E-03	--	--	1.77E-10	8.07E-07	5.07E-14	7.17E-08	1.29E-03	3.29E-05	2.60E-05	4.10E-05
RF	WP-RF032.01	51.51	2.59E+03	--	--	--	8.67E-02	1.75E+02	8.60E+03	2.01E+03	5.31E+02	1.51E-01	--	--	5.02E-08	2.29E-05	9.20E-12	1.83E-05	5.58E-02	7.27E-04	4.71E-03	5.06E-07
RF	WP-RF033.01	16.64	1.85E+02	--	--	--	4.95E-03	1.92E+01	7.98E+02	1.85E+02	7.83E+01	1.84E-02	--	--	2.26E-09	2.61E-06	8.47E-13	9.06E-07	6.26E-03	7.28E-05	4.34E-04	6.00E-05
RF	WP-RF036.01	44.52	8.18E+01	8.08E-05	--	--	2.22E-03	7.38E+00	2.64E+02	6.13E+01	3.65E+01	8.18E-03	--	--	1.04E-09	2.70E-06	2.81E-13	4.11E-07	4.74E-03	1.31E-04	1.44E-04	2.98E-03
RF	WP-RF101.01	156.95	5.08E+02	1.05E-03	--	--	1.38E-02	4.52E+01	1.68E+03	3.92E+02	1.99E+02	4.61E-02	--	--	6.27E-09	3.53E-05	1.75E-12	2.52E-06	5.53E-02	1.48E-03	9.09E-04	8.53E-04
RF	WP-RF101.29	30.65	4.51E+01	--	--	--	1.20E-03	4.34E+00	1.56E+02	3.61E+01	1.81E+01	4.24E-03	--	--	5.28E-10	4.47E-06	1.61E-13	2.16E-07	6.83E-03	1.91E-04	8.37E-05	2.04E-04
RF	WP-RF101.30	93.64	4.11E+02	3.12E-04	--	--	1.24E-02	2.17E+01	8.77E+02	2.05E+02	8.69E+01	2.54E-02	--	--	6.34E-09	1.46E-05	9.40E-13	2.43E-06	2.31E-02	5.98E-04	4.82E-04	1.85E-04
RF	WP-RF101.31	60.64	8.42E+01	1.36E-05	--	--	2.26E-03	5.99E+00	2.33E+02	5.51E+01	2.43E+01	8.25E-03	--	--	9.86E-10	4.76E-06	2.46E-13	4.06E-07	7.45E-03	2.00E-04	1.28E-04	8.29E-05
RF	WP-RF101.35	73.69	2.87E+02	--	--	--	8.69E-03	1.67E+01	6.37E+02	1.48E+02	7.63E+01	2.08E-02	--	--	4.49E-09	6.26E-05	6.61E-13	1.72E-06	8.96E-02	2.76E-03	3.43E-04	2.19E-04
RF	WP-RF102.01	221.46	2.17E+02	1.98E-04	--	1.82E-03	6.38E-03	1.66E+01	5.72E+02	1.35E+02	8.29E+01	1.77E-02	--	--	3.26E-09	4.94E-06	6.05E-13	1.25E-06	9.15E-03	1.80E-04	3.14E-04	3.99E-04
RF	WP-RF102.31	120.18	1.62E+02	1.92E-05	--	--	4.97E-03	7.61E+00	2.74E+02	6.45E+01	3.50E+01	8.46E-03	--	--	2.60E-09	6.70E-06	2.96E-13	9.88E-07	1.03E-02	2.96E-04	1.51E-04	2.14E-03
RF	WP-RF104.01	45.46	1.46E+02	2.27E-04	--	--	4.47E-03	8.96E+00	4.08E+02	9.56E+01	3.59E+01	9.38E-03	--	--	2.33E-09	1.68E-06	4.27E-13	8.87E-07	3.57E-03	5.98E-05	2.22E-04	1.40E-04
RF	WP-RF107.01	64.05	2.35E+03	--	--	--	7.79E-02	5.19E+00	1.90E+02	4.39E+01	2.58E+01	5.79E-03	--	--	4.28E-08	1.31E-05	2.01E-13	1.60E-05	1.88E-02	1.12E-03	1.03E-04	5.98E-02
RF	WP-RF107.03	61.53	1.64E+01	--	--	--	5.27E-04	6.35E-01	2.31E+01	5.34E+00	3.15E+00	7.07E-04	--	--	2.91E-10	5.63E-05	2.45E-14	1.08E-07	7.77E-02	9.13E-03	1.25E-05	6.86E-01
RF	WP-RF107.04	104.79	6.50E+01	--	--	--	2.09E-03	2.28E+00	8.31E+01	1.92E+01	1.18E+01	2.53E-03	--	--	1.14E-09	1.79E-06	8.56E-14	4.26E-07	2.80E-03	2.17E-04	4.44E-05	1.54E-02
RF	WP-RF107.05	4.41	7.36E+00	--	--	--	1.98E-04	5.58E-01	2.04E+01	4.70E+00	2.77E+00	6.22E-04	--	--	8.92E-11	7.22E-06	2.16E-14	3.60E-08	1.00E-02	3.19E-04	1.10E-05	2.81E-06
RF	WP-RF107.06	14.49	8.47E-01	--	--	--	1.98E-05	8.30E-02	3.05E+00	7.03E-01	4.13E-01	9.27E-05	--	--	7.10E-12	1.69E-06	3.22E-15	3.19E-09	2.34E-03	2.64E-04	1.65E-06	2.01E-02
RF	WP-RF107.07	57.75	3.67E+02	1.69E-03	--	--	1.11E-02	2.03E+01	7.23E+02	1.68E+02	1.05E+02	2.23E-02	--	--	5.79E-09	1.00E-04	7.49E-13	2.21E-06	1.43E-01	4.47E-03	3.89E-04	2.20E-03
RF	WP-RF110.01	9.08	7.29E+01	1.71E-03	--	--	1.97E-03	3.48E+00	1.25E+02	2.90E+01	1.48E+01	6.56E-03	--	--	8.48E-10	1.04E-06	1.30E-13	3.53E-07	1.93E-03	3.95E-05	6.73E-05	1.94E-04
RF	WP-RF110.05	19.95	1.05E+02	--	--	--	2.62E-03	1.14E+01	4.61E+02	1.06E+02	3.38E+01	1.03E-02	--	--	1.02E-09	5.00E-06	4.85E-13	4.43E-07	8.48E-03	1.95E-04	2.48E-04	1.67E-05
RF	WP-RF113.01	0.42	1.05E-01	--	--	--	3.36E-06	1.00E-02	3.70E-01	8.54E-02	4.79E-02	1.13E-05	--	--	1.97E-12	1.28E-09	4.01E-16	7.07E-10	3.16E-06	2.92E-08	2.03E-07	1.40E-13
RF	WP-RF115.01	40.30	5.71E+02	--	--	--	1.53E-02	5.79E+01	2.52E+03	5.85E+02	1.40E+02	4.93E-02	--	--	6.59E-09	7.77E-06	2.68E-12	2.73E-06	1.87E-02	2.28E-04	1.37E-03	6.25E-04
RF	WP-RF116.01	0.93	2.28E+01	--	--	--	7.06E-04	1.41E+00	9.78E+01	2.25E+01	3.33E+00	1.52E-03	--	--	3.71E-10	1.80E-07	1.06E-13	1.41E-07	4.43E-04	7.71E-06	5.36E-05	1.88E-11
RF	WP-RF117.01	1.89	7.89E+00	--	--	--	2.21E-04	6.76E-01	2.44E+01	5.65E+00	3.24E+00	7.30E-04	--	--	1.07E-10	1.14E-06	2.59E-14	4.18E-08	1.67E-03	4.89E-05	1.33E-05	4.15E-07
RF	WP-RF118.01	336.84	1.75E+04	1.24E-03	--	--	4.76E-01	2.35E+03	6.65E+04	1.78E+04	6.04E+03	2.18E+00	--	--	2.17E-07	4.91E-04	8.17E-11	8.73E-05	1.00E+00	1.41E-02	4.19E-02	2.00E-04
RF	WP-RF119.01	23.55	5.36E+01	--	--	--	1.53E-03	4.06E+00	1.47E+02	3.44E+01	1.92E+01	4.46E-03	--	--	7.54E-10	8.45E-07	1.57E-13	2.93E-07	1.73E-03	2.86E-05	8.07E-05	2.13E-04
RF	WP-RF121.01	10.78	3.03E+02	--	--	--	7.53E-03	3.53E+01	1.97E+03	4.68E+02	8.34E+01	3.05E-02	--	--	2.83E-09	4.84E-06	2.15E-12	1.25E-06	1.16E-02	1.74E-04	1.10E-03	1.81E-07
RF	WP-RF122.01	9.63	2.96E+02	--	--	--	6.36E-02	3.48E+01	1.37E+03	3.28E+02	7.69E+01	3.48E-02	--	--	6.97E-08	4.31E-06	1.50E-12	2.05E-05	1.08E-02	1.07E-04	7.69E-04	4.27E-10

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
RF	WP-RF122.03	4.41	3.17E+01	--	--	--	1.22E-03	3.85E-01	1.42E+01	3.27E+00	1.92E+00	4.30E-04	--	--	7.86E-10	6.60E-06	1.50E-14	2.75E-07	9.15E-03	6.07E-04	7.67E-06	3.39E-02
RF	WP-RF122.04	54.60	2.99E+02	--	--	--	1.14E-02	4.39E+00	1.61E+02	3.71E+01	2.18E+01	4.90E-03	--	--	7.27E-09	2.46E-05	1.70E-13	2.55E-06	3.45E-02	3.51E-03	8.72E-05	2.34E-01
RF	WP-RF122.05	16.38	3.46E+00	--	--	--	9.82E-05	1.50E-01	5.45E+00	1.26E+00	7.45E-01	1.67E-04	--	--	4.61E-11	1.46E-05	5.78E-15	1.84E-08	2.01E-02	1.05E-03	2.96E-06	3.90E-02
RF	WP-RF122.06	2.03	6.51E+01	--	--	--	1.97E-03	5.54E+00	2.52E+02	5.92E+01	1.39E+01	6.37E-03	--	--	1.01E-09	9.20E-07	2.71E-13	3.87E-07	2.04E-03	3.26E-05	1.39E-04	2.81E-04
RF	WP-RF123.01	1.97	7.43E+01	--	--	--	1.93E-03	5.61E+00	3.02E+02	6.99E+01	1.73E+01	4.97E-03	--	--	7.86E-10	9.46E-07	3.20E-13	3.35E-07	2.08E-03	3.68E-05	1.64E-04	9.91E-08
RF	WP-RF123.02	0.84	2.62E-02	--	--	--	6.08E-07	2.30E-03	8.29E-02	1.92E-02	1.14E-02	2.55E-06	--	--	2.10E-13	1.70E-07	8.80E-17	9.67E-11	2.35E-04	2.70E-05	4.51E-08	2.10E-03
RF	WP-RF123.03	12.18	2.97E+02	--	--	--	1.01E-02	5.68E+00	2.05E+02	4.75E+01	2.81E+01	6.31E-03	--	--	5.77E-09	8.24E-07	2.18E-13	2.11E-06	1.92E-03	3.50E-05	1.12E-04	1.47E-03
RF	WP-RF123.04	44.94	2.45E+02	--	--	--	6.42E-03	2.26E+01	8.05E+02	1.87E+02	1.16E+02	2.49E-02	--	--	2.83E-09	3.29E-06	8.34E-13	1.15E-06	7.67E-03	9.00E-05	4.33E-04	2.61E-04
RF	WP-RF124.01	95.12	7.35E+01	4.47E-06	--	--	3.08E-03	6.36E+00	2.47E+02	5.64E+01	3.15E+01	6.59E-03	--	--	2.19E-09	5.78E-06	2.52E-13	7.37E-07	8.93E-03	1.43E-04	1.31E-04	1.42E-04
RF	WP-RF124.02	13.44	1.95E+01	--	--	--	5.77E-04	1.79E+00	6.65E+01	1.52E+01	8.32E+00	1.84E-03	--	--	3.04E-10	4.45E-07	6.94E-14	1.15E-07	8.60E-04	1.51E-05	3.56E-05	8.78E-08
RF	WP-RF125.01	6.29	2.28E+02	--	--	--	1.03E-02	8.55E+00	3.86E+02	8.87E+01	2.85E+01	7.66E-03	--	--	7.46E-09	7.40E-06	4.07E-13	2.50E-06	1.14E-02	3.16E-04	2.08E-04	6.28E-04
RF	WP-RF126.01	0.24	6.44E+00	--	--	--	1.57E-04	8.26E-01	3.87E+01	8.61E+00	2.15E+00	5.44E-04	--	--	5.81E-11	1.35E-07	4.05E-14	2.59E-08	3.00E-04	4.34E-06	2.05E-05	1.14E-08
RF	WP-RF126.04	0.49	1.42E+01	--	--	--	3.56E-04	1.37E+00	7.06E+01	1.62E+01	3.65E+00	1.27E-03	--	--	1.36E-10	2.70E-07	7.61E-14	5.98E-08	5.59E-04	8.96E-06	3.85E-05	3.15E-08
RF	WP-RF128.01	46.51	1.39E+03	--	--	--	3.57E-02	2.09E+02	8.49E+03	2.05E+03	4.98E+02	1.51E-01	--	--	1.49E-08	2.68E-05	9.61E-12	6.24E-06	6.58E-02	6.73E-04	4.86E-03	3.08E-08
RF	WP-RF129.01	462.89	3.62E+02	1.02E-04	--	1.84E-05	1.06E-02	2.50E+01	8.66E+02	2.06E+02	1.19E+02	2.72E-02	3.62E-19	--	5.42E-09	3.13E-05	9.45E-13	2.08E-06	4.66E-02	1.43E-03	4.84E-04	6.21E-04
RF	WP-RF129.05	445.99	4.23E+02	3.40E-04	--	--	2.02E-02	2.26E+01	7.50E+02	1.80E+02	1.10E+02	2.47E-02	--	--	1.55E-08	6.96E-06	8.24E-13	5.08E-06	1.27E-02	2.44E-04	4.22E-04	6.31E-05
RF	WP-RF130.01	28.77	3.24E+02	--	7.89E-09	1.22E-04	1.59E-02	1.39E+01	4.94E+02	1.15E+02	7.14E+01	1.53E-02	5.26E-15	5.26E-03	1.21E-08	3.44E-05	4.56E-09	4.00E-06	4.45E-02	1.62E-03	2.66E-04	2.29E-03
RF	WP-RF134.02	11.28	3.27E-01	--	--	--	7.87E-06	2.52E-02	9.23E-01	2.13E-01	1.20E-01	2.82E-05	--	--	2.86E-12	3.22E-09	1.00E-15	1.28E-09	7.92E-06	7.29E-08	5.07E-07	3.50E-13
RF	WP-RF135.01	2.31	4.93E+00	--	--	--	1.76E-04	8.95E-02	3.31E+00	7.61E-01	4.47E-01	1.00E-04	--	--	1.06E-10	2.45E-07	3.49E-15	3.80E-08	3.50E-04	3.74E-05	1.79E-06	2.89E-03
RF	WP-RF135.02	10.50	2.18E+00	--	--	--	6.37E-05	1.68E-01	6.16E+00	1.42E+00	8.36E-01	1.88E-04	--	--	3.26E-11	3.01E-06	6.51E-15	1.24E-08	4.17E-03	1.33E-04	3.34E-06	1.17E-06
RF	WP-RF137.01	0.42	3.33E-01	--	--	--	1.16E-05	1.81E-02	6.80E-01	1.56E-01	8.69E-02	2.05E-05	--	--	7.12E-12	2.31E-09	7.35E-16	2.52E-09	5.69E-06	5.37E-08	3.72E-07	2.54E-13
RF	WP-RF139.01	11.76	3.28E+02	--	--	--	1.19E-02	9.03E-01	3.34E+01	7.69E+00	4.50E+00	1.01E-03	--	--	7.18E-09	1.89E-06	3.52E-14	2.58E-06	2.72E-03	2.02E-04	1.81E-05	1.30E-02
RF	WP-RF140.01	171.31	8.43E+01	1.35E-05	--	--	2.32E-03	7.43E+00	2.47E+02	5.96E+01	3.63E+01	8.12E-03	--	--	1.11E-09	1.01E-06	2.73E-13	4.36E-07	2.42E-03	2.32E-05	1.40E-04	3.51E-08
RF	WP-RF141.01	10.69	2.79E+02	--	--	--	6.66E-03	3.91E+01	1.82E+03	4.23E+02	1.09E+02	2.81E-02	--	--	2.40E-09	2.01E-04	1.99E-12	1.08E-06	2.78E-01	8.71E-03	1.01E-03	7.58E-05
RF	WP-RF141.02	41.28	1.90E+03	--	--	--	2.91E-01	1.53E+02	7.41E+03	1.76E+03	3.98E+02	1.52E-01	--	--	3.15E-07	2.34E-04	8.27E-12	9.27E-05	3.40E-01	9.99E-03	4.18E-03	8.32E-05
RL	RL105-01	55.56	2.41E+00	--	--	4.51E-02	5.51E-05	2.11E-01	1.86E+00	8.87E-01	8.82E-01	4.03E-05	--	7.73E-02	1.78E-11	3.13E-08	3.56E-15	8.50E-09	7.31E-05	4.65E-07	1.95E-06	7.04E-06
RL	RL105-03	68.67	4.71E+01	--	--	2.09E+01	1.68E-03	2.61E+00	2.31E+01	1.26E+01	1.62E+01	6.05E-03	--	9.36E+01	9.97E-10	2.84E-05	3.78E-13	3.64E-07	4.16E-02	1.54E-03	1.16E-04	3.29E-02
RL	RL200-01	1386.47	6.51E+01	--	--	3.02E-02	1.61E-03	3.13E+00	2.17E+02	4.91E+01	1.41E+01	4.23E-03	--	2.02E-03	5.86E-10	3.84E-07	2.14E-13	2.64E-07	9.64E-04	1.71E-05	1.12E-04	1.47E-05
RL	RL200-02	11876.59	4.65E+03	--	--	2.33E+00	1.31E-01	8.89E+01	2.57E+03	7.66E+02	1.87E+02	6.10E-02	--	3.18E+01	6.97E-07	2.68E-04	1.09E-04	1.24E-04	3.84E-02	8.26E-04	2.37E-03	1.34E-02
RL	RL201-03	13.65	2.53E+01	--	--	5.11E-01	6.26E-04	5.26E-04	1.88E+00	4.60E-01	1.46E-03	6.76E-07	--	1.19E+01	2.13E-10	5.22E-10	1.75E-15	9.98E-08	1.56E-06	1.33E-07	9.85E-07	7.00E-03
RL	RL202S-01	1.26	4.82E-02	--	--	2.18E-08	3.09E-06	6.37E-03	6.53E-02	2.43E-02	4.89E-03	2.81E-06	--	1.77E-08	2.34E-12	6.53E-10	9.50E-17	7.94E-10	1.78E-06	4.70E-09	5.27E-08	3.18E-14
RL	RL209E-01	102.64	2.76E+03	--	--	1.02E-06	8.66E-02	3.06E+02	3.82E+03	1.39E+03	5.02E+02	2.05E-01	--	8.33E-07	4.24E-08	8.15E-05	5.28E-12	1.68E-05	1.61E-01	3.10E-03	2.97E-03	7.24E-03
RL	RL216Z-02	342.30	1.64E+03	--	--	--	3.78E-02	2.13E+02	4.48E+03	1.05E+03	5.14E+02	6.32E-02	--	--	1.22E-08	2.11E-05	3.99E-12	5.82E-06	5.84E-02	3.18E-04	2.25E-03	7.06E-10
RL	RL221U-03	0.42	1.31E-04	--	--	5.91E-05	3.05E-09	9.11E-06	6.78E-04	1.54E-04	2.99E-05	1.32E-08	--	4.82E-05	9.80E-16	9.03E-13	5.85E-19	4.71E-13	2.49E-09	4.81E-11	3.29E-10	1.47E-16
RL	RL222S-01	74.10	1.42E+01	2.43E-05	--	1.83E-02	2.13E-03	6.26E-01	6.32E+00	2.68E+00	2.29E+00	1.85E-04	--	1.47E-02	1.18E-04	7.08E-08	1.05E-14	1.85E-02	1.85E-04	7.80E-07	5.82E-06	8.07E-03
RL	RL231Z-01	573.29	3.70E+02	5.29E-05	--	4.45E-03	1.45E-02	3.41E+01	4.70E+02	1.49E+02	1.03E+02	1.28E-02	--	3.57E-03	8.77E-09	4.17E-05	9.06E-05	3.20E-06	6.64E-02	1.12E-03	3.23E-04	4.59E-02
RL	RL231Z-03	0.63	1.07E-01	--	--	--	3.77E-06	4.70E-05	3.08E-01	1.06E-01	4.02E-03	9.52E-06	--	--	2.61E-12	1.16E-11	8.42E-16	8.58E-10	2.14E-08	3.16E-08	3.28E-07	1.54E-13
RL	RL233S-01	44.13	1.53E+01	--	--	5.53E-04	3.37E-03	1.31E+00	1.59E+01	7.09E+00	3.71E+00	1.46E-03	--	4.50E-04	3.18E-09	1.55E-07	2.77E-14	1.01E-06	3.97E-04	2.17E-06	1.54E-05	1.53E-05
RL	RL233S-03	5.25	3.66E-01	--	--	1.14E-06	3.21E-04	5.21E-02	3.64E-01	1.46E-01	2.48E-02	9.33E-05	--	8.53E-07	3.29E-10	5.52E-09	5.87E-16	1.02E-07	1.48E-05	2.66E-08	3.21E-07	1.07E-12
RL	RL300-01	48.62	3.70E+02	3.33E-02	2.71E-01	3.83E+01	1.16E-02	3.40E+01	1.82E+02	1.55E+02	1.36E+02	1.09E-01	--	3.99E-03	4.77E-04	3.89E-05	6.39E-03	7.56E-02	5.74E-02	1.90E-03	3.31E-04	3.71E-02
RL	RL300-03	5.46	1.42E+01	--	--	4.11E-04	3.98E-04	1.62E+00	1.50E+01	7.62E+00	3.77E+00	1.27E-03	--	4.58E-04	1.75E-10	2.79E-07	2.90E-14	7.26E-08	6.23E-04	7.35E-06	1.63E-05	1.09E-04
RL	RL308-01	375.35	2.14E+04	1.84E-03	--	3.61E-02	5.07E-01	3.39E+03	9.45E+03	6.09E+03	4.12E+03	5.80E+00	--	2.93E-02	4.72E-04	4.30E-04	5.30E-04	7.49E-02	1.07E+00	1.47E-02	1.30E-02	2.03E-01
RL	RL308-03	0.42	2.45E-01	--	--	--	7.77E-06	2.72E-02	3.33E-01	1.26E-01	2.03E-02	1.53E-05	--	--	4.46E-12	5.47E-09	8.53E-16	1.61E-09	1.10E-05	3.15E-08	3.60E-07	2.28E-13
RL	RL325-01	1196.65	8.57E+02	1.60E-01	3.19E+00	2.54E+00	7.68E-02	5.08E+02	7.10E+02	3.07E+02	3.49E+02	4.53E-02	6.31E-11	6.93E+00	1.17E-03	6.99E-04	1.02E-02	1.99E-01	1.21E+00	3.16E-02	6.07E-04	6.69E-01
RL	RL325-03	42.13	7.85E+01	3.33E-01	1.08E+01	7.16E-02	1.32E-02	1.49E+01	6.79E+01	2.66E+01	3.05E+01	7.46E-03	--	6.55E-02	1.18E-08	2.08E-06	1.01E-13	3.84E-06	5.00E-03	5.14E-05	5.67E-05	6.11E-04
RL	RL618-01	1.47	3.23E+00	4.32E-04	--	2.23E-02	4.51E-04	7.13E-01	6.53E+00	2.51E+00	8.28E-01	2.90E-04	--	2.36E-02	3.46E-10	5.96E-08	8.25E-15	1.21E-07	1.78E-04	9.67E-05	4.99E-06	7.64E-04
RL	RLALE-02	0.63	2.86E-04	--	--	6.55E-08	5.99E-09	1.49E-05	5.29E-02	1.70E-03	1.68E-04	1.68E-07	2.27E-11	5.35E-08	1.72E-15	1.47E-12	6.48E-18	8.67E-13	4.07E-09	3.75E-09	3.64E-09	1.87E-15
RL	RLARG-01	13.86	6.15E+01	--	--	1.60E-07	1.95E-03	1.31E+02	4.55E+01	2.31E+01	7.09E+00	8.11E-04	--	1.28E-07	1.14E-09	4.89E-05	1.45E-05	4.06E-07	7.81E-02	1.08E-03	6.73E-05	1.51E-03
RL	RLBAT-01	28.30	1.77E+01	--	--	--	1.47E-03	5.20E+01	1.49E+01	6.64E+00	6.17E+00	3.22E-04	--	--	1.22E-09	1.85E-05	4.04E-06	4.02E-07	3.40E-02	6.83E-04	1.44E-05	3.52E-03
RL	RLBW-01	134.36	3.27E+02	--	--	4.22E-02	7.88E-03	2.96E+01	2.50E+02	1.24E+02	1.05E+02	1.12E-02	--	3.44E-02	2.78E-09	9.45E-06	4.73E-13	1.27E-06	1.79E-02	2.78E-04	2.66E-04	1.15E-02
RL	RLBW-03	9.45	4.39E+01	--	--	6.46E-07	1.16E-03	4.38E+00	4.27E+01	2.15E+01	1.11E+01	2.90E-03	--	5.28E-07	4.68E-10	9.84E-07	8.41E-14	2.01E-07	2.02E-03	3.20E-05	4.66E-05	4.79E-04
RL	RLCFF-01	3.36	5.37E+00	--	--	--	1.23E-04	9.97E+00	4.11E+00	2.15E+00	1.76E+00	2.41E-04	--	--	3.96E-11	1.03E-06	8.41E-15	1.90E-08	2.79E-03	5.30E-07	4.67E-06	3.50E-06
RL	RLCFF-03	5.04	6.50E+00	--	--	--	1.53E-04	6.31E-01	7.15E+00	3.49E+00	1.48E+00	4.45E-04	--	--	5.04E-11	9.96E-08	1.37E-14	2.39E-08	2.28E-04	2.80E-06	7.58E-06	4.90E-05
RL	RLCH2-01	4.46	1.56E-01	--	--	2.20E-01	3.86E-06	8.85E-03	1.17E-01	2.97E-02	8.43E-03	--	--	1.79E-01	1.33E-12	9.06E-10	1.16E-16	6.20E-10	2.46E-06	8.39E-09	6.44E-08	--
RL	RLESG-01	17.01	2.50E+01	--	--	4.06E-01	5.88E-04	2.67E+00	2.62E+01	1.27E+01	1.04E+01	3.22E-03	--	3.53E-01	7.96E-07	1.83E-05	4.85E-14	1.26E-04	2.80E-02	5.20E-04	2.73E-05	3.59E-04
RL	RLESG-03	1.26	4.05E-02	--	--	7.35E-04	8.63E-07	5.02E-03	1.82E-01	4.88E-02	2.19E-02	5.39E-05	--	5.99E-04	2.52E-13	1.41E-08	1.85E-16	1.26E-10	2.20E-05	7.70E-07	1.04E-07	8.01E-09
RL	RLEXX-01	55.02	3.19E+02	--	--	--	8.35E-03	6.97E+01	7.68E+01	6.52E+01	6.28E+01	8.00E-02	--	--	3.28E-09	1.19E-05	2.48E-13	1.43E-06	2.66E-02	1.04E-04	1.40E-04	3.94E-03
RL	RLFFTF-01	1.05	1.35E-02	--	--	2.20E-03	3.15E-07	2.05E-03	1.10E-02	9.45E-03	3.00E-03	--	--	1.34E-03	1.01E-13	2.03E-10	3.59E-17	4.86E-11	5.62E-07	7.83E-10	2.02E-08	--
RL	RLGEV-01	104.15	1.27E+02	--	--	5.82E-06	3.38E-03	1.52E+01	1.41E+02	6.13E+01	3.23E+01	9.74E-03	--	4.74E-06	1.38E-09	4.57E-05	2.33E-13	5.91E-07	7.09E-02	1.43E-03	1.31E-04	4.85E-02
RL	RLGEV-03	2.10	1.17E+01	--	--	1.40E-08	2.62E-04	1.04E+00	7.00E+00	3.94E+00	4.48E+00	1.60E-04	--	1.17E-08	8.25E-11	5.17E-07	1.54E-14	3.99E-08	9.01E-04	2.09E-05	8.54E-06	3.06E-04

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
RL	RLHAN-01	499.58	5.07E+02	6.94E-03	6.78E-02	6.25E-01	2.25E-02	5.04E+01	3.83E+02	1.77E+02	1.62E+02	1.31E-02	--	5.01E-01	1.43E-03	2.21E-05	7.62E-05	2.15E-01	3.92E-02	9.22E-04	3.83E-04	1.36E-02
RL	RLHAN-03	0.21	3.73E-02	--	--	--	8.58E-07	2.24E-03	1.50E-02	8.41E-03	1.00E-02	--	--	--	2.73E-13	2.22E-10	3.20E-17	1.32E-10	6.12E-07	1.06E-09	1.80E-08	--
RL	RLIAEA-03	0.42	7.51E-01	--	--	3.33E-06	1.85E-05	2.39E-01	2.21E-01	2.82E-01	5.47E-02	4.19E-04	--	2.72E-06	6.33E-12	2.45E-08	1.10E-15	2.96E-09	6.67E-05	1.59E-08	6.11E-07	4.75E-12
RL	RLMLL-01	1.05	2.32E-01	--	--	--	8.31E-06	1.54E-02	4.57E-01	1.38E-01	1.58E-02	9.27E-06	--	--	6.09E-12	4.89E-07	1.23E-15	1.94E-09	4.87E-04	2.20E-05	4.52E-07	6.76E-04
RL	RLP11-01	7.52	2.55E-01	--	--	4.09E-07	6.13E-06	2.15E-02	2.48E-01	1.01E-01	9.40E-02	3.92E-06	--	--	2.20E-12	2.21E-09	3.94E-16	9.96E-10	6.00E-06	1.79E-08	2.18E-07	4.44E-14
RL	RLPFP-01	6339.19	7.15E+03	8.22E-02	--	8.86E-02	2.85E+00	7.80E+02	8.72E+03	3.32E+03	2.83E+03	5.52E-01	--	7.46E-02	3.32E-03	1.71E-04	1.68E-04	5.74E-01	3.69E-01	6.59E-03	6.52E-03	8.93E-02
RL	RLPFP-01A	9.24	2.16E+03	--	--	--	5.15E-02	2.57E+02	8.11E+02	6.26E+02	3.12E+02	5.63E-01	--	--	1.69E-08	2.54E-05	2.38E-12	8.06E-06	7.02E-02	5.34E-04	1.34E-03	4.99E-04
RL	RLPFP-03	15.75	1.34E+02	--	--	1.04E-05	3.65E-03	1.64E+01	2.13E+02	6.80E+01	2.98E+01	1.36E-02	--	8.46E-06	1.53E-09	1.16E-05	2.59E-13	6.50E-07	1.95E-02	9.79E-05	1.45E-04	7.22E-04
RL	RLPFP-04	74.55	6.14E+02	--	--	5.99E-04	1.58E-02	5.91E+01	1.05E+03	3.39E+02	1.90E+02	4.09E-02	--	4.89E-04	6.18E-09	8.39E-06	1.29E-12	2.69E-06	2.00E-02	2.13E-04	7.25E-04	1.95E-03
RL	RLPURX-01	489.37	4.99E+03	4.48E-04	--	2.10E+00	1.12E-01	7.70E+02	6.99E+03	2.65E+03	2.70E+03	6.27E-01	--	1.71E+00	1.05E-02	7.88E-05	1.01E-11	1.66E+00	2.14E-01	6.24E-04	5.67E-03	2.10E-03
RL	RLRFET-01	255.57	9.47E+01	--	--	--	3.20E-03	1.98E+00	1.27E+02	3.01E+01	3.51E+00	2.49E-03	--	--	2.02E-09	2.87E-03	2.17E-13	6.95E-07	3.16E+00	1.44E-01	8.87E-05	4.41E+00
RL	RLSAN-01	4.20	5.32E+01	--	--	--	1.71E-03	3.94E+00	3.29E+01	1.85E+01	5.73E+00	7.46E-04	--	--	1.03E-09	6.22E-06	1.36E-13	3.62E-07	7.50E-03	2.56E-04	5.50E-05	6.24E-04
RL	RLSWO-01	269.40	3.07E+02	2.88E-06	--	1.17E-01	7.30E-03	3.54E+01	2.25E+02	1.14E+02	1.52E+02	1.52E-01	--	1.44E-04	3.29E-05	3.01E-06	3.89E-08	5.69E-03	8.91E-03	2.42E-05	2.24E-04	4.98E-05
RL	RLWAR-01	162.50	7.01E+01	--	--	3.73E-08	1.26E-02	7.62E+00	4.58E+01	2.37E+01	2.11E+01	4.82E-03	--	3.06E-08	1.14E-08	1.26E-05	9.02E-14	3.69E-06	2.00E-02	6.42E-04	5.07E-05	2.90E-03
RL	RLWAR-03	33.67	1.31E+02	--	--	1.43E-07	3.18E-03	1.43E+01	5.89E+01	3.87E+01	2.67E+01	3.16E-02	--	--	1.12E-09	2.10E-06	1.60E-13	5.13E-07	4.91E-03	4.23E-05	8.62E-05	3.64E-05
RL	WP-RLBWD.001	91.98	2.61E+02	--	--	5.82E-04	7.69E-03	3.12E+01	3.12E+02	1.51E+02	5.46E+01	3.21E-02	--	5.74E-04	3.54E-09	1.39E-05	5.75E-13	1.44E-06	2.48E-02	9.07E-05	3.23E-04	5.87E-03
RL	WP-RLCBWD.001	158.97	3.71E+02	2.04E-05	--	2.16E-03	1.10E-02	4.26E+01	4.31E+02	2.04E+02	8.04E+01	3.63E-02	--	1.76E-03	2.25E-04	1.10E-05	8.43E-13	3.42E-02	2.14E-02	2.75E-04	4.55E-04	5.25E-03
RL	WP-RLCCP300D1	17.01	4.10E+01	7.06E-05	4.58E-02	4.79E-05	1.59E-03	6.67E+00	3.64E+01	1.84E+01	7.29E+00	5.84E-03	--	4.72E-05	3.83E-05	1.03E-05	6.99E-14	6.06E-03	1.63E-02	3.45E-04	3.93E-05	1.20E-03
RL	WP-RLCCP308D1	37.60	1.63E+01	1.34E-05	--	5.73E-06	5.30E-04	9.75E-01	1.94E+01	4.15E+00	2.34E+00	2.63E-04	--	5.65E-06	2.68E-10	8.57E-06	1.58E-14	1.05E-07	1.31E-02	4.28E-04	8.88E-06	2.94E-12
RL	WP-RLCFFD.001	251.16	5.68E+02	--	--	4.26E-06	1.39E-02	5.56E+01	6.06E+02	3.05E+02	1.21E+02	4.73E-02	--	3.46E-06	4.90E-09	8.93E-06	1.31E-06	2.24E-06	2.02E-02	1.81E-04	6.80E-04	3.04E-03
RL	WP-RLETECD.001	16.17	1.75E+01	--	--	1.24E-02	5.64E-04	1.35E+00	1.47E+01	6.64E+00	2.93E+00	1.23E-03	--	1.01E-02	2.96E-10	1.58E-05	5.86E-06	1.13E-07	2.32E-02	5.95E-04	1.48E-05	5.90E-04
RL	WP-RLEXXOD.001	6.93	5.75E+01	--	--	--	1.56E-03	1.23E+01	1.39E+01	1.18E+01	9.83E+00	1.44E-02	--	--	6.60E-10	2.30E-06	4.87E-14	2.78E-07	4.94E-03	1.88E-05	2.63E-05	7.31E-04
RL	WP-RLHMOX.001	45.48	9.72E+03	4.27E-04	--	1.09E-04	6.52E-01	9.29E+02	7.74E+03	3.90E+03	1.59E+03	1.96E+00	--	8.75E-05	5.75E-07	6.61E-04	1.79E-11	1.80E-04	1.04E+00	4.90E-02	9.16E-03	5.96E-01
RL	WP-RLM209ED.001	11.34	8.18E+01	--	--	3.23E-08	2.68E-03	8.76E+00	1.13E+02	4.17E+01	1.29E+01	6.10E-03	--	2.61E-08	1.43E-09	2.71E-06	1.72E-13	5.44E-07	5.06E-03	1.01E-04	9.30E-05	1.83E-04
RL	WP-RLM231ZD.001	18.27	2.21E+01	2.65E-05	--	2.68E-04	1.49E-02	1.88E+00	6.21E+01	1.51E+01	3.40E+00	1.53E-03	--	2.54E-04	1.44E-08	2.52E-06	5.75E-14	4.58E-06	4.05E-03	4.22E-05	3.24E-05	9.78E-04
RL	WP-RLM233SD.001	45.43	2.95E+01	--	--	5.24E-04	1.35E-02	3.35E+00	4.38E+01	1.31E+01	3.81E+00	1.01E-02	--	4.26E-04	1.40E-08	5.32E-07	5.40E-14	4.28E-06	1.21E-03	1.13E-05	2.92E-05	1.20E-04
RL	WP-RLM300D.001	14.07	3.58E+01	6.72E-04	--	1.30E-05	1.69E-03	4.78E+00	4.16E+01	1.94E+01	7.97E+00	3.87E-03	--	1.05E-05	1.18E-09	7.39E-06	4.59E-05	4.06E-07	1.13E-02	4.62E-04	4.33E-05	1.14E-02
RL	WP-RLM308D.001	43.82	2.09E+03	1.41E-03	--	7.83E-03	7.02E-02	3.24E+02	1.01E+03	6.28E+02	3.61E+02	5.82E-01	--	6.35E-03	1.01E-04	7.47E-05	1.97E-04	1.54E-02	1.50E-01	2.06E-03	1.40E-03	2.61E-02
RL	WP-RLM325D.001	205.58	8.42E+02	6.56E-02	6.62E-01	1.82E-02	3.73E-02	9.98E+01	3.78E+02	1.73E+02	8.25E+01	5.97E-01	--	1.50E-02	7.69E-05	7.86E-05	2.35E-04	1.22E-02	1.31E-01	2.81E-03	3.69E-04	1.78E-02
RL	WP-RLMGEVALD.001	11.34	8.88E+00	--	--	4.42E-07	2.54E-04	1.07E+00	1.00E+01	4.23E+00	1.94E+00	7.04E-04	--	3.58E-07	1.17E-10	1.50E-06	1.75E-14	4.72E-08	2.32E-03	1.12E-04	9.43E-06	1.39E-03
RL	WP-RLMHASH.001	14.59	7.70E+02	--	--	6.62E-07	2.04E-02	4.30E+01	2.44E+03	6.00E+02	9.42E+01	8.17E-02	--	2.78E-07	1.22E-05	5.50E-06	2.82E-12	1.73E-03	1.35E-02	1.93E-04	1.43E-03	1.01E-09
RL	WP-RLMPDT.001	1658.62	5.54E+03	3.86E-03	--	5.01E-03	3.13E-01	7.31E+02	9.05E+03	3.01E+03	1.28E+03	5.71E-01	--	4.06E-03	3.75E-03	1.16E-04	8.97E-05	5.70E-01	2.63E-01	2.36E-03	6.70E-03	1.83E-02
RL	WP-RLMPFPDD	451.49	8.65E+02	1.59E-04	--	2.89E-03	2.92E-02	9.82E+01	1.43E+03	5.03E+02	1.55E+02	3.52E+00	--	1.57E-04	2.26E-04	2.37E-05	1.91E-12	3.58E-02	4.80E-02	2.01E-04	1.08E-03	7.28E-03
RL	WP-RLMPURX.001	102.89	8.95E+02	1.15E-04	--	5.82E-01	2.19E-02	1.33E+02	1.30E+03	4.81E+02	4.07E+02	1.10E-01	--	4.73E-01	2.44E-03	1.49E-05	1.99E-12	3.70E-01	3.88E-02	1.14E-04	1.07E-03	2.65E-04
RL	WP-RLMSSC.001	15.18	9.05E+02	--	--	--	2.23E-02	1.17E+02	2.78E+03	6.15E+02	2.87E+02	7.24E-02	--	--	8.42E-09	1.51E-05	2.89E-12	3.72E-06	3.71E-02	2.26E-04	1.46E-03	3.93E-04
RL	WP-RLMWARD.001	102.06	1.16E+02	1.89E-11	--	1.11E-06	3.40E-03	2.15E+01	4.76E+01	3.02E+01	2.19E+01	2.37E-02	--	9.01E-07	1.60E-09	1.55E-05	1.92E-06	6.41E-07	2.53E-02	7.40E-04	6.74E-05	3.92E-03
RL	WP-RLNPDT.002	383.88	7.49E+02	3.46E-03	--	2.66E-04	2.00E-02	1.13E+02	2.01E+03	4.76E+02	2.16E+02	8.38E-02	--	1.63E-04	8.64E-09	1.67E-05	6.21E-08	3.57E-06	3.87E-02	3.12E-04	1.10E-03	4.35E-04
RL	WP-RLNPURX.001	36.75	3.60E+02	4.11E-05	--	3.49E-04	8.18E-03	5.53E+01	4.11E+02	1.59E+02	1.77E+02	5.02E-02	--	1.99E-04	2.75E-09	6.85E-06	7.28E-13	1.28E-06	1.71E-02	3.20E-05	3.73E-04	6.15E-10
RL	WP-RLRFETS.001	14.98	6.39E+02	--	--	3.44E-06	1.63E-02	4.47E+01	3.80E+03	6.28E+02	1.40E+02	6.53E-02	--	3.12E-07	5.26E-05	9.36E-06	2.95E-12	7.51E-03	1.90E-02	4.75E-04	1.49E-03	8.11E-10
RL	WP-RLSWOCD.001	32.13	2.07E+01	5.53E-06	--	2.68E-04	7.14E-04	2.80E+00	3.81E+01	1.24E+01	5.12E+00	1.89E-03	--	2.17E-04	4.05E-10	5.12E-07	5.12E-14	1.50E-07	1.11E-03	1.38E-05	2.77E-05	7.92E-06
RL	WP-RLVIPAC.001	154.16	3.62E+02	1.69E-05	--	3.36E-04	1.23E-02	8.50E+01	9.75E+02	2.97E+02	3.83E+01	8.82E-02	--	2.72E-04	1.05E-04	3.79E-04	1.29E-12	1.55E-02	5.47E-01	1.37E-02	6.79E-04	2.62E-01
SA	SA-W134	1.47	3.35E-02	--	--	7.42E-02	7.19E-07	7.07E-03	5.81E-02	3.26E-02	1.19E-02	8.45E-06	--	3.00E-03	1.88E-11	9.44E-08	2.42E-05	3.22E-09	1.52E-04	5.05E-06	6.58E-08	1.84E-06
SA	SA-W136	101.13	1.14E+00	--	--	--	2.44E-05	2.38E-01	1.13E+01	2.65E+00	4.58E-01	2.09E-04	--	--	6.95E-12	2.13E-08	9.26E-15	3.53E-09	6.16E-05	7.68E-07	5.43E-06	2.24E-12
SA	SA-W137	0.84	3.34E-01	--	--	1.41E-03	7.84E-06	1.03E-01	4.90E-01	2.15E-01	6.39E-02	2.02E-04	--	--	2.54E-12	1.63E-08	8.19E-16	1.22E-09	3.74E-05	4.58E-07	4.61E-07	9.11E-06
SA	SA-W138M	0.21	1.23E+00	--	--	3.79E-08	3.04E-05	4.87E-08	6.12E-02	--	--	--	--	--	1.03E-11	4.83E-15	--	4.84E-09	1.33E-11	4.34E-09	--	--
SP	SP-CHHD	6.27	2.61E-02	--	--	6.76E-01	6.01E-07	1.66E-03	2.58E-01	--	1.31E-03	6.86E-04	--	2.42E-02	1.80E-13	1.31E-06	--	8.99E-11	2.09E-03	1.31E-04	--	2.26E-03
SR	SR-221H-EUOx	1.46	6.90E-03	1.46E-08	1.32E-04	3.83E-04	1.93E-03	4.44E-03	5.05E-01	4.93E-06	--	1.93E-03	--	3.44E-04	7.34E-02	1.26E-02	1.93E-03	7.27E+00	1.06E+01	8.48E-01	7.18E-12	2.51E-02
SR	SR-AGNS-HOM	1.26	8.73E-01	--	--	--	6.89E-04	4.58E-01	1.34E+00	3.15E-01	4.70E-01	5.52E-05	--	--	6.51E-10	1.01E-07	1.16E-15	2.10E-07	2.10E-04	4.42E-06	6.64E-07	9.27E-05
SR	SR-BCLDP-HET	3.76	1.15E-01	--	--	--	2.54E-06	1.71E+01	9.99E-02	4.60E-02	3.64E-02	1.43E-05	--	--	7.59E-13	1.58E-06	1.66E-16	3.78E-10	4.50E-03	6.89E-09	9.58E-08	1.55E-13
SR	SR-BCLDP.004.004	0.21	9.06E-03	2.73E-05	--	2.17E-04	4.13E-06	2.80E-02	8.22E-04	1.35E-03	--	1.61E-08	--	1.92E-04	7.31E-12	1.05E-08	6.32E-18	1.75E-09	1.82E-05	1.69E-07	3.20E-09	3.26E-06
SR	SR-CH-PP	35711.95	2.02E+05	6.91E+00	2.64E+02	4.46E-02	6.54E+00	4.33E+05	4.28E+05	1.42E+05	1.93E+05	4.01E+01	--	4.40E-02	1.16E+00	9.75E-02	4.98E-09	2.65E+02	2.47E+02	5.06E-01	2.13E+00	7.43E+01
SR	SR-DWPF-HET	0.21	8.71E-02	--	--	5.84E-04	3.03E-06	1.13E-02	3.09E-03	4.85E-02	2.54E-03	--	--	5.19E-04	2.00E-05	1.32E-09	2.11E-16	2.96E-03	3.39E-06	4.10E-07	1.11E-07	1.16E-05
SR	SR-HBL-235F-HET	2.51	8.33E-04	--	--	--	1.72E-04	7.83E-01	9.40E-04	5.12E-04	9.60E-04	6.13E-07	--	--	1.61E-10	7.26E-08	1.84E-18	5.24E-08	2.07E-04	6.49E-11	1.06E-09	6.66E-15
SR	SR-KAC-HET	609.22	4.98E+02	--	--	--	1.32E-02	8.91E+01	1.22E+03	3.14E+02	1.54E+02	1.04E-01	--	--	4.89E-09	6.68E-06	9.44E-13	2.22E-06	2.09E-02	2.40E-03	5.98E-04	8.17E-05
SR	SR-KAC-HET-A	0.21	1.70E-01	--	--	--	4.87E-06	2.93E-02	4.20E-01	1.08E-01	3.96E-02	3.60E-05	--	--	2.12E-12	2.71E-09	3.89E-16	8.86E-10	7.73E-06	8.28E-07	2.25E-07	2.81E-08

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
SR	SR-KAC-PuOx	929.40	6.84E+05	--	--	--	1.39E+01	9.67E+04	1.15E+06	3.87E+05	1.59E+05	1.35E+02	--	--	3.36E-06	6.72E-03	1.09E-09	1.86E-03	2.18E+01	7.05E-02	7.13E-01	1.30E-06
SR	SR-LA-PAD1	4.62	4.67E+00	1.73E-06	--	2.44E-06	3.16E-04	1.10E+03	2.16E+00	3.40E+00	1.24E+00	4.34E-03	--	2.63E-06	4.09E-06	3.19E-04	2.98E-07	6.66E-04	6.27E-01	5.30E-06	7.06E-06	4.72E-11
SR	SR-MD-HET	14.63	5.72E-01	1.19E-06	4.23E-06	1.96E-05	1.13E-04	5.03E+01	1.22E+00	1.87E-01	1.84E-01	1.19E-04	--	1.76E-05	1.54E-04	4.85E-05	3.64E-06	2.54E-02	2.79E-02	6.87E-06	3.82E-07	1.22E-04
SR	SR-MD-PAD1	30.44	1.95E+01	6.02E-05	2.66E-03	1.78E-02	2.20E-03	5.15E+03	1.05E+01	1.43E+01	5.38E+00	1.75E-02	--	1.60E-02	1.73E-09	1.47E-03	5.17E-05	5.94E-07	2.92E+00	3.39E-05	2.92E-05	1.22E-04
SR	SR-MD-SOIL	2.10	1.54E-02	--	--	9.46E-07	2.50E-06	6.27E-01	2.60E-02	3.74E-03	1.71E-03	5.02E-06	--	8.51E-07	2.11E-12	1.77E-07	1.35E-17	7.05E-10	3.50E-04	1.79E-09	7.78E-09	5.45E-14
SR	SR-NIST-HET	0.21	6.39E+00	--	--	--	1.50E-04	4.78E+00	2.57E+00	6.06E-01	9.06E-01	1.09E-04	--	--	4.80E-11	7.40E-07	2.78E-13	2.32E-08	1.72E-03	6.44E-06	7.99E-05	2.50E-07
SR	SR-SDD-HET-A	5.65	2.24E-02	3.00E-06	2.22E-05	2.77E-05	4.28E-05	2.02E+00	1.91E-01	2.66E-02	1.84E-02	2.37E-05	--	6.11E-03	1.81E-08	1.95E-07	1.23E-15	3.00E-06	5.46E-04	5.78E-08	3.87E-07	9.58E-07
SR	SR-SDD-HOM-A	3.99	1.64E-01	6.11E-04	--	--	8.10E-02	5.69E+00	8.67E-01	1.64E-01	8.92E-02	3.77E-01	--	--	2.23E-03	5.28E-04	8.43E-12	3.69E-01	8.34E-01	6.60E-04	2.48E-03	4.01E-02
SR	SR-SDD-HOM-B	10.70	3.16E+00	6.17E-04	2.31E-03	1.01E-03	6.30E-03	2.95E+02	2.81E+01	3.91E+00	2.52E+00	1.36E-02	--	3.95E-04	5.85E-09	2.95E-05	1.89E-13	1.91E-06	8.12E-02	2.91E-05	5.88E-05	8.03E-04
SR	SR-SWMF-HET-A	70.64	5.72E+00	3.89E-04	1.01E-02	9.23E-04	5.03E-03	3.13E+02	1.07E+01	3.01E+00	1.63E+00	7.83E-03	--	8.30E-04	2.62E-06	7.10E-05	1.24E-07	4.27E-04	1.48E-01	1.07E-05	6.26E-06	3.70E-04
SR	SR-SWMF-HET-B	1.05	3.31E-01	4.41E-01	3.03E+00	1.22E-06	7.88E-06	4.15E-01	1.79E-03	2.64E-01	1.46E-02	1.41E-04	8.70E-14	1.09E-06	2.51E-12	3.83E-08	7.68E-16	1.22E-09	1.09E-04	9.27E-11	4.79E-07	1.53E-12
SR	SR-W026-221F-HEPA	0.84	2.68E-01	6.68E-14	--	3.71E-08	7.20E-06	3.61E-02	7.82E-01	2.09E-01	8.99E-02	2.66E-05	--	3.34E-08	1.21E-06	2.07E-08	7.52E-16	1.97E-04	3.66E-05	6.40E-07	4.35E-07	4.28E-08
SR	SR-W026-221F-HET	2.72	1.42E+00	2.17E-06	1.07E-03	5.15E-05	4.22E-05	6.48E-01	4.29E+00	1.18E+00	7.00E-01	7.32E-04	--	4.64E-05	1.96E-11	3.57E-07	1.35E-07	7.97E-09	6.39E-04	6.57E-06	2.41E-06	4.19E-05
SR	SR-W026-221F-HET-A	4.62	5.44E-01	--	8.16E-04	6.47E-02	1.49E-05	3.06E-02	9.30E-01	2.33E-01	2.57E-01	4.07E-05	--	1.64E-02	7.46E-08	1.93E-07	5.47E-15	1.22E-05	3.04E-04	9.45E-06	1.83E-06	3.57E-06
SR	SR-W026-221F-HOM	1.47	7.70E-01	1.69E-07	--	7.23E-03	3.81E-05	3.08E-01	2.68E+00	6.00E-01	2.30E-01	8.54E-05	--	3.41E-06	2.53E-11	5.76E-08	2.22E-15	9.03E-09	1.26E-04	2.19E-07	1.27E-06	4.53E-07
SR	SR-W026-772F-HET	90.59	2.38E+01	1.91E-04	2.11E-02	1.75E-02	2.23E-02	4.69E+02	3.55E+01	8.81E+00	6.77E+00	4.07E-03	--	1.57E-02	4.23E-05	1.27E-04	4.65E-05	6.92E-03	2.56E-01	1.43E-04	1.81E-05	1.18E-04
SR	SR-W027-221F-HET-A	7.74	1.74E+00	1.52E-06	1.62E-05	7.75E-07	5.07E-05	2.42E-01	4.93E+00	1.24E+00	5.40E-01	1.18E-04	--	6.97E-07	4.38E-07	1.50E-07	4.45E-15	7.14E-05	2.62E-04	1.14E-06	2.57E-06	2.48E-06
SR	SR-W027-221H-HEPA	63.23	1.20E+00	7.81E-06	--	2.01E-02	2.65E-03	3.61E+02	2.36E+00	6.58E-01	5.17E-01	1.19E-03	--	1.81E-02	2.47E-09	1.04E-04	2.37E-15	8.04E-07	2.04E-01	7.42E-06	1.37E-06	1.29E-11
SR	SR-W027-221H-HET	50.36	1.49E+01	9.27E-05	1.10E-02	1.60E-04	7.80E-02	2.38E+03	1.30E+01	3.65E+00	1.17E+01	8.33E-03	--	1.43E-04	1.12E-04	6.72E-04	1.18E-04	1.85E-02	1.34E+00	1.20E-04	7.49E-06	1.25E-04
SR	SR-W027-221H-HET-C	77.46	2.01E+01	5.52E-04	--	5.14E-04	1.84E-01	8.21E+01	6.70E+01	1.60E+01	4.93E+00	9.15E-03	--	4.63E-04	8.44E-06	3.00E-05	5.60E-14	1.42E-03	5.69E-02	5.64E-04	3.28E-05	3.42E-05
SR	SR-W027-221H-HOM	0.84	3.08E-01	9.63E-08	--	9.43E-04	1.23E-04	3.75E-01	6.69E-01	1.81E-01	7.82E-02	6.51E-05	--	8.47E-04	2.88E-08	8.45E-07	1.89E-14	4.71E-06	1.36E-03	2.42E-05	5.67E-06	1.27E-06
SR	SR-W027-235F-HEPA	9.82	1.13E-01	1.94E-12	--	1.51E-07	1.75E-03	5.86E+00	6.64E-02	2.86E-02	1.78E-02	5.09E-05	--	1.36E-07	1.59E-09	2.39E-06	1.00E-16	5.24E-07	4.45E-03	2.57E-05	5.87E-08	5.45E-13
SR	SR-W027-235F-HET	24.57	9.10E+00	3.68E-05	6.29E-04	1.31E-05	1.08E-01	1.81E+03	4.07E+00	1.74E+00	5.34E+00	3.36E-03	--	1.18E-05	3.37E-05	6.51E-04	3.79E-05	5.59E-03	1.24E+00	8.01E-05	3.57E-06	3.63E-05
SR	SR-W027-235F-HOM	0.21	5.11E-02	--	--	--	1.03E-06	3.02E+01	3.66E-02	1.99E-02	3.56E-02	2.38E-05	--	--	2.79E-13	2.90E-06	7.36E-17	1.44E-10	8.12E-03	2.56E-09	4.20E-08	2.63E-13
SR	SR-W027-321-322M-HET	1.26	6.31E+00	--	--	--	7.39E-04	1.81E-02	5.25E-02	1.23E-02	6.44E+00	2.16E-06	--	--	6.10E-10	1.68E-09	4.44E-17	2.05E-07	4.77E-06	3.62E-09	2.57E-08	2.35E-14
SR	SR-W027-773A-HET	468.78	9.34E+01	5.01E-01	3.41E+00	7.96E-02	1.15E-01	2.83E+03	2.02E+02	4.64E+01	3.18E+01	1.00E-02	2.35E-11	7.17E-02	1.32E-04	8.01E-04	2.52E-04	2.18E-02	1.60E+00	5.38E-04	9.50E-05	4.98E-03
SR	SR-W027-773A-HOM	1.05	5.74E-04	--	--	1.49E-03	1.41E-05	4.05E+01	4.36E-05	2.21E-05	1.72E-05	2.14E-05	--	1.34E-03	1.32E-11	1.17E-05	7.96E-20	4.29E-09	2.31E-02	3.01E-12	4.60E-11	2.32E-13
SR	SR-W027-FB-Pre86-C	61.79	6.42E+01	8.09E-05	1.46E-02	6.22E-05	4.39E-03	1.37E+01	1.58E+02	4.52E+01	2.31E+01	8.35E-03	--	5.60E-05	4.62E-06	3.63E-06	4.44E-06	7.52E-04	7.28E-03	2.18E-05	9.39E-05	4.82E-05
SR	SR-W027-HBL-Box	47.44	3.47E-01	2.39E-08	2.26E-04	2.24E-04	2.06E-03	7.53E+01	6.65E-01	1.97E-01	1.35E-01	3.86E-04	--	2.01E-04	1.87E-09	2.06E-05	6.89E-16	6.16E-07	4.13E-02	2.59E-07	4.04E-07	4.13E-12
SR	WA-SR-W027-HBL-BOX	14.78	1.26E+01	--	--	5.56E-06	1.61E-03	5.72E+03	9.18E+00	7.17E+00	3.29E+00	1.83E-02	--	5.00E-06	1.33E-09	1.66E-03	2.58E-14	4.47E-07	3.27E+00	1.66E-05	1.49E-05	1.99E-10
SR	WP-SR-221H-PUOX	33.34	9.27E+02	--	--	3.27E-04	2.79E-02	1.34E+02	4.39E+03	1.06E+03	2.35E+02	3.05E-01	--	2.95E-04	1.27E-08	1.41E-05	3.69E-12	5.24E-06	3.80E-02	3.70E-04	2.17E-03	6.34E-06
SR	WP-SR-AGNS-HET	35.07	4.52E+00	4.60E-05	1.30E-04	4.88E-05	2.32E-03	7.42E+00	3.08E+00	1.91E+00	1.24E+00	9.15E-04	--	4.36E-05	2.66E-06	2.27E-06	2.86E-06	4.11E-04	4.29E-03	2.45E-05	4.20E-06	4.95E-04
SR	WP-SR-AGNS-HOM	2.52	2.97E+00	--	--	6.72E-05	9.95E-04	9.45E-01	2.39E+00	8.85E-01	5.76E-01	2.05E-04	--	6.02E-05	9.64E-10	3.87E-07	1.52E-07	3.05E-07	6.96E-04	3.22E-05	1.92E-06	1.22E-03
SR	WP-SR-BCLDP-HET	7.32	8.75E-02	--	--	9.03E-07	5.09E-06	3.52E+00	1.85E-01	5.12E-02	1.47E-02	1.13E-05	--	8.11E-07	3.58E-12	8.48E-07	1.89E-16	1.26E-09	1.73E-03	2.89E-06	1.08E-07	1.24E-13
SR	WP-SR-BCLDP.003.001	0.42	9.10E-02	--	--	3.40E-03	2.01E-06	3.64E-02	8.20E-03	1.33E-02	3.48E-02	4.00E-05	--	3.05E-03	6.03E-13	1.09E-08	4.92E-17	2.98E-10	2.11E-05	5.74E-10	2.80E-08	4.41E-13
SR	WP-SR-HBL-235F-HET	44.47	5.40E+00	--	--	3.77E-06	5.70E-02	2.05E+01	3.34E+00	1.73E+00	7.47E-01	5.97E-04	--	3.39E-06	5.47E-08	5.57E-06	6.38E-15	1.76E-05	1.10E-02	1.47E-05	3.64E-06	6.58E-12
SR	WP-SR-KAC-HET	0.21	2.39E-02	--	--	8.48E-08	8.54E-07	4.00E-03	9.21E-02	2.02E-02	5.34E-03	1.74E-06	--	7.61E-08	4.65E-13	4.85E-09	7.47E-17	1.78E-10	7.91E-06	1.54E-07	4.26E-08	1.92E-14
SR	WP-SR-LA-PAD1	69.93	8.70E+01	3.21E-05	--	4.47E-05	5.67E-03	2.02E+04	1.66E+02	6.15E+01	2.20E+01	8.15E-02	--	4.72E-05	7.92E-05	6.05E-03	5.21E-06	1.27E-02	1.17E+01	1.04E-04	1.30E-04	8.97E-10
SR	WP-SR-MD-HET	269.77	8.61E+00	1.58E-05	5.59E-05	2.79E-04	1.60E-03	7.06E+02	1.94E+01	3.56E+00	2.65E+00	1.68E-03	--	2.51E-04	2.33E-03	6.97E-04	5.36E-05	3.54E-01	3.95E-01	1.02E-04	7.41E-06	1.82E-03

Table 5-1. CH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
SR	WP-SR-MD-HOM-A	2.31	7.77E-01	--	--	1.10E-08	5.00E-04	9.34E+01	3.05E-01	1.26E-02	1.62E-01	5.22E-05	--	9.79E-09	7.79E-06	3.06E-05	5.22E-17	1.18E-03	5.65E-02	1.63E-06	2.82E-08	4.47E-04
SR	WP-SR-MD-HOM-C	0.63	1.30E-02	--	--	6.23E-07	9.37E-06	1.22E+00	2.78E-02	--	--	6.65E-07	--	5.58E-07	9.31E-12	3.80E-07	--	2.92E-09	7.20E-04	5.76E-07	--	7.53E-15
SR	WP-SR-MD-PAD1	494.13	2.49E+02	7.26E-04	3.27E-02	1.87E-01	2.61E-02	6.49E+04	1.35E+02	1.73E+02	6.52E+01	2.25E-01	--	1.68E-01	2.09E-08	1.89E-02	5.90E-04	7.08E-06	3.71E+01	3.99E-04	3.60E-04	1.41E-03
SR	WP-SR-MD-SOIL	21.03	1.12E-01	--	--	8.04E-06	1.74E-05	5.70E+00	1.86E-01	2.76E-02	1.23E-02	3.76E-05	--	7.22E-06	1.50E-11	1.61E-06	1.02E-16	4.96E-09	3.17E-03	1.30E-08	5.82E-08	4.14E-13
SR	WP-SR-SDD-HET-A	3.76	7.22E-03	--	--	7.05E-05	2.31E-05	2.97E-03	1.38E-01	3.18E-02	7.93E-03	5.22E-06	--	6.33E-05	2.21E-11	2.84E-10	1.18E-16	7.11E-09	7.97E-07	9.69E-09	6.71E-08	5.75E-14
SR	WP-SR-SDD-HOM-A	1.47	1.17E-01	1.08E-05	--	7.61E-04	1.45E-05	5.57E-02	7.77E-01	1.78E-01	1.11E-01	2.34E-05	--	6.82E-04	1.27E-11	1.36E-07	6.79E-16	4.14E-09	2.12E-04	2.06E-05	3.82E-07	8.82E-04
SR	WP-SR-SDD-HOM-B	14.03	4.81E-01	7.05E-05	--	2.31E-03	3.51E-04	6.02E+00	2.58E+00	7.70E-01	2.57E-01	2.69E-04	--	2.07E-03	3.30E-10	1.78E-06	2.85E-15	1.07E-07	3.46E-03	4.24E-05	1.63E-06	1.67E-03
SR	WP-SR-SWMF-HET-A	270.22	2.33E+01	1.58E-03	3.97E-02	4.06E-03	1.95E-02	1.27E+03	4.22E+01	1.19E+01	6.88E+00	3.07E-02	--	3.65E-03	1.14E-05	2.91E-04	5.03E-07	1.85E-03	6.05E-01	4.73E-05	2.48E-05	1.49E-03
SR	WP-SR-W026-221F-HEPA	409.84	1.53E+02	3.73E-11	--	2.08E-05	4.11E-03	1.99E+01	4.47E+02	1.18E+02	4.75E+01	1.51E-02	--	1.87E-05	7.00E-04	1.10E-05	4.37E-13	1.12E-01	1.93E-02	3.34E-04	2.49E-04	2.26E-05
SR	WP-SR-W026-221F-HET	840.05	4.93E+02	6.40E-04	2.94E-01	1.40E-02	1.65E-02	2.05E+02	1.40E+03	3.89E+02	2.14E+02	2.37E-01	--	1.26E-02	8.70E-09	1.24E-04	4.37E-05	3.35E-06	2.15E-01	2.11E-03	8.21E-04	1.31E-02
SR	WP-SR-W026-221F-HET-A	8.44	7.28E-02	--	--	1.35E-02	2.31E-06	1.88E-02	3.38E-01	8.41E-02	1.85E-02	1.20E-05	--	1.21E-02	1.12E-12	1.74E-09	3.03E-16	4.50E-10	4.96E-06	2.33E-08	1.75E-07	1.30E-13
SR	WP-SR-W026-221F-HOM	10.71	6.92E+00	1.74E-06	--	3.06E-05	3.57E-04	2.78E+00	2.42E+01	5.39E+00	1.91E+00	7.48E-04	--	2.74E-05	2.52E-10	5.55E-07	2.11E-14	8.74E-08	1.18E-03	2.04E-06	1.17E-05	5.03E-06
SR	WP-SR-W026-772F-HET	884.01	2.80E+02	2.31E-03	2.16E-01	1.73E-01	2.51E-01	5.28E+03	4.11E+02	1.05E+02	7.39E+01	4.71E-02	--	1.54E-01	4.99E-04	1.51E-03	5.53E-04	7.94E-02	2.95E+00	1.68E-03	2.22E-04	1.36E-03
SR	WP-SR-W027-221F-HET-A	104.19	2.75E+01	--	--	1.20E-05	8.24E-04	3.93E+00	7.51E+01	1.93E+01	8.17E+00	1.91E-03	--	1.08E-05	1.73E-05	4.88E-06	7.13E-14	2.77E-03	7.95E-03	1.76E-05	4.07E-05	9.65E-05
SR	WP-SR-W027-221F-HETA	1157.49	1.11E+03	1.06E-04	4.40E-04	1.50E-04	3.41E-02	1.80E+02	2.53E+03	7.82E+02	5.20E+02	1.27E-01	--	1.27E-04	9.89E-04	1.84E-04	1.25E-04	1.57E-01	3.00E-01	3.21E-04	1.67E-03	2.26E-03
SR	WP-SR-W027-221H-HEPA	408.49	8.28E+00	4.01E-05	--	4.50E-01	1.40E-02	2.62E+03	1.27E+01	3.86E+00	3.56E+00	7.10E-03	--	4.04E-01	1.30E-08	7.53E-04	1.39E-14	4.23E-06	1.48E+00	4.29E-05	8.03E-06	7.71E-11
SR	WP-SR-W027-221H-HET	1664.87	6.08E+02	2.63E-02	3.75E-01	5.83E-03	2.96E+00	9.28E+04	5.20E+02	1.51E+02	4.58E+02	3.30E-01	--	5.23E-03	4.57E-03	2.68E-02	5.23E-03	7.45E-01	5.28E+01	4.68E-03	3.14E-04	5.08E-03
SR	WP-SR-W027-221H-HET-C	61.09	1.67E+01	4.73E-04	--	1.86E-03	1.44E-01	6.96E+01	5.39E+01	1.30E+01	4.04E+00	7.86E-03	--	1.67E-03	6.63E-06	2.54E-05	4.53E-14	1.12E-03	4.83E-02	4.62E-04	2.66E-05	5.07E-05
SR	WP-SR-W027-221H-HET-D	7.56	3.07E-01	--	--	3.98E-07	5.63E-03	1.44E+00	6.02E-01	1.70E-01	5.31E-02	7.19E-05	--	3.56E-07	5.72E-09	2.36E-05	6.65E-16	1.79E-06	3.54E-02	4.73E-03	3.69E-07	1.09E-04
SR	WP-SR-W027-221H-HOM	2.10	1.91E+00	--	--	1.09E-06	2.56E-04	6.09E-01	8.61E+00	2.07E+00	6.87E-01	3.62E-04	--	9.77E-07	2.24E-10	3.40E-07	7.88E-15	7.32E-08	5.89E-04	1.05E-05	4.43E-06	4.05E-12
SR	WP-SR-W027-235F-HEPA	80.84	1.27E+00	1.67E-11	--	1.39E-06	1.48E-02	1.25E+02	6.99E-01	3.56E-01	2.05E-01	8.37E-04	--	1.24E-06	1.42E-08	4.32E-05	1.32E-15	4.56E-06	8.13E-02	2.17E-04	7.51E-07	9.22E-12
SR	WP-SR-W027-235F-HET	447.38	2.16E+02	8.80E-04	1.31E-02	2.89E-04	2.37E+00	4.15E+04	9.62E+01	4.15E+01	1.17E+02	8.48E-02	--	2.59E-04	9.41E-04	1.51E-02	9.09E-04	1.51E-01	2.81E+01	1.82E-03	8.76E-05	8.63E-04
SR	WP-SR-W027-235F-HOM	4.20	1.94E-01	1.41E-06	--	3.93E-06	8.45E-03	2.57E+00	3.84E-02	1.01E-02	1.94E-01	1.93E-05	--	3.52E-06	8.36E-09	7.80E-07	3.85E-17	2.65E-06	1.50E-03	2.73E-09	2.17E-08	2.16E-13
SR	WP-SR-W027-321-322M-HET	3.15	9.09E-02	1.88E-10	--	6.39E-08	7.56E-04	2.44E-02	6.74E-02	5.11E-02	2.18E-02	1.02E-04	--	5.74E-08	7.26E-10	4.85E-09	1.89E-16	2.33E-07	1.04E-05	4.72E-09	1.08E-07	1.12E-12
SR	WP-SR-W027-321M-HOM	0.21	--	--	--	2.07E-07	3.75E-06	2.54E-02	1.26E-03	--	--	1.36E-08	--	1.86E-07	3.61E-12	7.57E-09	--	1.16E-09	1.47E-05	8.84E-11	--	1.50E-16
SR	WP-SR-W027-773A-HET	607.54	1.20E+02	5.86E-01	6.35E+00	2.23E-01	2.33E-01	3.67E+03	2.47E+02	5.92E+01	3.94E+01	4.78E-01	4.39E-14	2.00E-01	1.75E-04	1.03E-03	3.01E-04	2.90E-02	2.06E+00	8.20E-04	1.21E-04	1.08E-02
SR	WP-SR-W027-773A-HOM	0.63	3.44E-04	--	--	8.75E-04	8.46E-06	2.41E+01	2.61E-05	1.33E-05	9.83E-06	1.29E-05	--	7.85E-04	8.14E-12	7.17E-06	4.92E-20	2.61E-09	1.39E-02	1.83E-12	2.80E-11	1.42E-13
SR	WP-SR-W027-FB-PRE86-C	1598.50	2.03E+03	2.49E-03	4.57E-01	1.80E-03	1.35E-01	4.29E+02	4.87E+03	1.41E+03	7.02E+02	2.55E-01	--	1.61E-03	1.51E-04	1.41E-04	1.33E-04	2.42E-02	2.68E-01	6.71E-04	2.96E-03	1.46E-03
SR	WP-SR-W027-HBL-BOX	1329.61	1.36E+01	1.32E-06	4.73E-03	5.82E-03	2.25E-01	5.04E+03	2.08E+01	7.18E+00	5.77E+00	5.22E-01	--	5.23E-03	2.10E-07	1.39E-03	3.16E-06	6.84E-05	2.77E+00	2.75E-05	1.49E-05	4.85E-05
SR	WP-SR2001.001.00	61.74	1.49E+00	--	--	8.65E-07	3.48E-05	5.88E-01	9.64E+00	1.90E+00	6.90E-01	1.93E-04	--	--	1.24E-11	7.99E-08	9.40E-15	5.60E-09	1.92E-04	7.79E-07	4.64E-06	2.46E-12
SR	WP-SR2002.002.00	70.56	4.94E+00	--	--	2.96E-06	1.21E-04	2.56E-01	1.13E+01	2.60E+00	1.64E+00	3.57E-04	--	2.22E-07	6.29E-04	3.37E-08	1.25E-14	8.85E-02	8.18E-05	9.04E-07	6.26E-06	4.49E-12
Grand Total		**1.68E+05**	**1.41E+06**	**5.20E+01**	**2.28E+03**	**1.24E+02**	**6.48E+01**	**1.28E+06**	**2.17E+06**	**6.89E+05**	**4.32E+05**	**2.45E+02**	**6.29E-01**	**2.53E+02**	**6.74E+00**	**4.66E-01**	**1.07E-01**	**4.00E+02**	**6.58E+02**	**2.53E+00**	**3.22E+00**	**1.15E+02**

Table 5-2. RH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
AE	AE-T009	102.67	2.22E+02	4.04E+00	1.08E+01	8.06E+02	6.83E-03	1.62E+02	2.21E+02	1.31E+02	7.95E+01	1.03E-01	6.88E-15	5.21E+02	1.03E-02	8.31E-05	1.50E-05	1.14E-04	9.73E-02	1.71E-02	2.53E-04	1.13E-01
AE	WP-AERHDM	70.52	5.81E+02	2.36E-01	1.16E+02	1.96E+03	1.40E-02	4.90E+02	1.83E+02	1.49E+02	3.33E+02	3.50E-01	--	1.08E+03	2.65E-04	3.81E-04	4.44E-13	4.71E-02	7.00E-01	1.30E-02	2.82E-04	3.03E-02
AW	AW-T031.1322	203.17	5.59E+02	9.40E-02	2.13E+00	1.87E+03	5.49E-01	9.43E+01	1.49E+02	9.82E+00	6.24E+00	5.66E-02	7.62E-08	2.65E+03	4.44E-06	2.44E-04	2.75E-11	8.66E-04	4.25E-01	6.16E-03	8.73E-03	2.88E-03
AW	AW-W020.13	72.20	3.04E+02	--	--	4.89E+03	4.36E-02	6.95E+01	2.21E+02	5.14E+01	4.00E+01	1.62E-02	--	3.11E+03	7.67E-07	7.71E-04	5.90E-11	1.38E-04	1.28E+00	2.27E-02	1.82E-02	2.25E-02
BT	BT-T001	7.56	3.14E-02	1.12E-04	--	1.19E+01	1.62E-04	7.48E-01	1.03E-03	--	7.27E-03	1.85E-05	--	1.07E+01	9.74E-05	2.31E-07	1.47E-13	9.86E-03	4.69E-04	3.79E-06	4.57E-05	1.82E-08
BT	WP-BT-T001	3.15	8.98E-02	--	3.30E-03	2.51E+00	2.16E-06	6.87E-01	1.10E-02	1.55E-02	1.19E-02	6.56E-03	--	3.29E+00	4.66E-05	1.58E-06	5.87E-17	7.38E-03	2.47E-03	5.08E-05	3.30E-08	6.45E-06
IN	IN-AE-AGHC-02	104.58	4.90E+02	--	7.95E-01	4.66E+02	1.03E-02	5.69E+01	4.23E+02	2.27E+02	9.28E+01	1.38E-01	--	3.51E+02	6.81E-06	8.92E-04	6.82E-13	1.21E-03	1.52E+00	5.24E-02	4.31E-04	2.62E-02
IN	IN-AW-T031.1322	1.26	1.03E+01	--	--	6.03E+01	2.08E-04	3.64E+00	4.32E+00	2.44E+00	4.85E+00	--	--	8.96E+00	5.25E-11	1.87E-05	7.57E-15	2.83E-08	3.16E-02	6.16E-04	4.71E-06	3.49E-04
IN	IN-ID-ANLE-BIN	0.63	5.42E-02	--	--	1.31E-02	1.23E-06	4.40E-03	2.21E-02	1.30E-02	2.82E-03	4.21E-04	--	1.06E-02	3.03E-06	4.77E-08	4.27E-17	5.15E-04	7.80E-05	2.44E-06	2.58E-08	4.40E-07
IN	IN-ID-ANLW-W269-RH	0.63	3.00E+00	--	--	4.67E-02	7.09E-05	1.92E-01	1.76E+01	3.67E+00	--	4.06E-02	--	1.10E-02	2.53E-09	4.36E-08	1.28E-14	4.25E-07	9.14E-05	1.88E-06	7.53E-06	1.43E-08
IN	IN-ID-Bettis-Pu8Li14B	0.63	3.77E-01	--	--	2.68E-05	8.37E-06	9.78E+01	1.71E-01	1.01E-01	5.77E-02	1.56E-04	--	2.05E-05	2.39E-12	2.34E-05	3.34E-16	1.22E-09	4.91E-02	1.87E-08	2.02E-07	9.75E-10
IN	IN-ID-BTO-030	1.26	1.37E-02	--	--	2.55E+00	3.23E-07	2.15E-01	1.98E-01	4.16E-03	--	7.19E-04	--	3.76E+00	1.41E-05	1.30E-06	1.45E-17	2.33E-03	2.08E-03	4.57E-05	8.52E-09	3.16E-05
IN	IN-ID-EBR-S5000	4.41	5.44E-06	--	--	2.78E+01	1.25E-10	4.53E-04	1.46E+01	5.31E-03	6.61E-07	2.60E-13	--	2.32E+00	4.85E-10	1.94E-07	1.85E-17	8.02E-08	4.27E-04	5.81E-02	1.09E-08	1.25E+00
IN	IN-ID-HFEF-S3000-RP	3.78	1.61E+01	--	4.38E-03	1.18E+01	3.27E-04	4.37E+00	1.32E+01	9.45E+00	5.72E+00	6.10E-03	--	1.08E+01	4.25E-09	1.16E-05	2.84E-14	7.87E-07	2.02E-02	5.42E-05	1.80E-05	7.11E-03
IN	IN-ID-HFEF-S5000-RP	20.16	4.98E+01	--	1.20E-02	2.69E+01	1.03E-03	1.55E+01	8.67E+01	4.13E+01	1.45E+01	1.46E-02	--	3.27E+01	1.32E-08	8.94E-05	1.24E-13	2.45E-06	1.54E-01	5.76E-03	7.85E-05	4.48E-03
IN	IN-ID-INL-152M	18.27	4.91E-01	--	--	1.73E+02	1.15E-05	2.01E-01	6.50E+01	5.25E+01	7.84E-02	7.82E-03	--	6.95E+01	7.83E-04	6.42E-04	1.83E-13	1.29E-01	1.01E+00	1.07E-01	1.08E-04	2.21E-01
IN	IN-ID-MFC-SOLID	1.26	8.77E-02	--	--	3.50E+00	2.01E-06	1.79E-02	1.71E-01	4.37E-02	--	8.19E-04	--	3.51E+00	8.15E-08	1.09E-05	1.44E-16	1.39E-05	1.77E-02	1.00E-03	8.70E-08	1.35E-04
IN	IN-ID-MISC-RH	0.63	3.75E-02	--	--	2.63E-02	8.60E-07	1.59E-03	2.39E-02	3.40E-03	--	2.21E-03	--	7.22E-02	7.95E-07	8.35E-08	1.12E-17	1.35E-04	1.36E-04	7.50E-06	6.77E-09	5.34E-07
IN	IN-ID-RF-S5000-RH	1.26	9.11E+01	--	--	1.78E-02	2.15E-03	1.94E-02	1.61E+00	3.54E-01	--	7.03E-04	--	9.86E-04	1.86E-06	1.10E-06	1.23E-15	3.07E-04	1.73E-03	5.70E-04	7.25E-07	4.23E-04
IN	IN-ID-Sample Fuel	2.52	9.13E+00	--	--	2.63E+00	2.11E-04	5.71E-01	3.25E+01	1.08E+01	8.54E-01	2.31E-02	--	4.86E+00	1.13E-03	1.43E-05	3.79E-14	1.87E-01	2.26E-02	8.88E-04	2.22E-05	1.35E-02
IN	IN-ID-Source Material	0.63	1.59E+01	--	--	3.53E-05	3.65E-04	2.26E-02	1.20E+00	3.05E-01	2.99E-02	2.97E-05	--	2.75E-05	1.07E-10	5.04E-09	1.00E-15	5.40E-08	1.07E-05	1.26E-07	6.07E-07	1.18E-09
IN	IN-ID-TRA-W345-RH	0.63	4.97E-03	--	1.67E+01	--	4.55E-08	--	--	3.73E+00	6.36E-02	--	--	--	5.10E-15	--	1.21E-14	3.86E-12	--	--	7.28E-06	--
IN	IN-MO-545	0.39	6.54E+01	2.40E-12	--	--	1.45E-03	7.32E+01	9.82E-02	5.40E-03	1.95E-03	3.04E-05	1.15E-15	--	4.01E-10	5.69E-06	1.67E-17	2.09E-07	1.76E-02	6.29E-09	1.04E-08	3.07E-13
IN	IN-NRF-SPC-103	46.62	9.58E+01	--	1.04E-01	2.24E+03	2.05E-03	2.57E+02	8.50E+00	8.50E+00	1.01E+01	2.92E-02	--	1.87E+03	2.06E-02	1.06E-03	2.55E-14	3.68E+00	1.84E+00	4.33E-02	1.61E-05	6.12E-03
IN	WP-ID-ANLE-S5000	118.74	1.21E+02	--	1.32E-01	1.13E+03	2.73E-03	1.97E+01	1.97E+02	9.02E+01	2.97E+01	5.20E-02	--	1.70E+02	9.87E-04	4.34E-04	3.24E-13	1.61E-01	6.77E-01	2.42E-02	1.88E-04	1.17E-02
IN	WP-ID-HFEF-S5400-RH	34.44	1.26E+01	--	2.47E-02	1.50E+02	2.74E-04	4.92E+00	2.15E+01	8.47E+00	5.32E+00	3.49E-03	--	1.16E+02	3.45E-04	4.58E-05	2.00E-12	5.55E-02	7.08E-02	6.86E-03	5.79E-04	9.17E-04
IN	WP-ID-INTEC-RH	0.42	1.19E+00	--	--	5.31E-01	2.81E-05	4.50E-01	1.31E-01	2.11E-01	2.66E-01	1.08E-03	--	2.78E-01	9.28E-12	4.57E-07	8.24E-16	4.40E-09	7.37E-04	7.41E-06	4.57E-07	1.66E-04
IN	WP-ID-MFC-S5400-RH	1.68	1.55E-01	--	--	1.45E+00	3.49E-06	1.34E-02	5.39E-01	1.57E-01	6.41E-02	2.53E-05	--	1.01E+00	4.49E-05	7.20E-07	6.29E-16	6.92E-03	1.06E-03	4.03E-05	3.44E-07	1.48E-05
IN	WP-ID-RTC-S3000	0.84	3.84E-02	--	--	3.31E-01	9.29E-07	8.29E-03	9.81E-03	7.09E-03	5.12E-03	1.08E-05	--	1.27E-01	7.91E-07	2.38E-07	2.77E-17	1.24E-04	3.55E-04	2.23E-05	1.54E-08	4.84E-05
IN	WP-IN-ID-NRF-153	3.36	2.56E-03	--	--	1.31E+00	6.14E-08	8.21E-02	4.59E-04	2.22E-04	5.20E-04	6.58E-07	--	3.01E-01	4.37E-06	1.35E-07	8.91E-19	6.74E-04	2.08E-04	6.56E-06	4.87E-10	4.38E-08
IN	WP-IN-ID-NRF-SPC	17.43	2.93E+00	--	--	2.16E+01	6.80E-05	1.53E+01	4.86E-01	6.32E-01	5.41E-01	1.51E-03	--	5.60E+01	7.54E-04	2.21E-05	2.34E-15	1.21E-01	3.57E-02	1.95E-03	1.33E-06	1.55E-04
KA	KA-T001	63.91	8.01E-02	8.40E-06	2.20E-03	2.83E+01	4.36E-04	1.41E+00	3.86E-03	3.18E-03	3.08E-02	1.96E-05	2.75E-13	2.54E+01	9.67E-10	2.26E-06	8.69E-12	1.98E-07	3.26E-03	6.04E-05	5.83E-04	2.32E-07
KA	KA-T002	3.20	2.08E-01	1.08E-07	8.58E-04	2.50E+01	5.08E-06	2.21E+00	6.26E-02	6.23E-02	1.86E-02	--	--	1.76E+01	5.90E-05	2.41E-03	1.21E-03	9.21E-03	9.83E-03	2.10E-03	2.10E-03	--
KA	KA-W016	3.20	1.35E-03	4.16E-06	3.73E-05	4.80E-01	7.39E-06	2.39E-02	6.53E-05	5.39E-05	5.21E-04	3.33E-07	1.36E-13	4.31E-01	2.73E-10	1.41E-07	3.31E-12	3.29E-08	5.52E-05	1.02E-06	9.84E-06	3.93E-09
LA	LA-TA-00-03	2.67	--	--	--	--	--	--	1.24E+01	--	--	--	--	--	--	--	--	--	--	1.26E-06	--	--
LA	LA-TA-03-27	77.43	4.96E+00	--	--	3.19E+02	1.01E-04	9.13E-01	8.00E+01	2.49E+00	3.18E+00	1.52E-03	--	2.03E+02	2.74E-11	1.17E-06	2.83E-14	1.42E-08	1.95E-03	8.25E-03	1.09E-05	4.07E-05
LA	WP-LA-MHD03.002	14.24	4.05E+01	--	--	9.86E+01	9.79E-04	1.16E+01	4.87E+01	2.82E+01	1.03E+01	1.75E-02	--	6.07E+01	7.40E-04	8.60E-05	1.20E-13	1.11E-01	1.25E-01	4.34E-03	6.37E-05	4.96E-04
OR	OR-CHEM-RH-HET	4.41	1.21E+00	3.70E-08	1.11E+00	5.20E-01	2.59E-05	2.40E+00	4.76E-02	2.66E-01	3.56E-03	3.15E-03	1.73E-08	6.84E-01	3.98E-05	2.27E-06	7.31E-16	7.19E-03	4.17E-03	1.39E-04	4.78E-07	2.59E-03
OR	OR-GENR-RH-HET	0.63	4.30E-02	2.73E-03	1.68E-06	2.36E-06	1.64E-04	--	1.36E-02	5.09E-08	2.13E-05	1.11E-10	4.91E-16	2.14E-06	1.32E-10	3.05E-27	8.45E-23	4.64E-08	2.35E-23	8.72E-10	6.75E-14	4.54E-19
OR	OR-GRSC-RH-HOM	1.26	1.41E-01	--	4.42E-03	2.40E+00	2.94E-06	4.85E-02	3.15E-01	2.51E-02	1.17E-02	2.10E-05	--	3.47E-01	3.80E-06	3.15E-06	7.05E-17	6.99E-04	5.53E-03	2.39E-04	4.61E-08	5.50E-03
OR	OR-ISTP-RH-HET	4.74	2.61E+01	5.62E-03	1.63E+01	6.03E-05	1.20E-03	6.31E-01	2.55E+00	5.23E+00	2.50E-02	--	1.74E-14	5.49E-05	6.12E-10	1.28E-05	1.00E-03	2.49E-07	1.53E-03	3.02E-05	9.38E-06	--
OR	OR-MRF-RH-HET	1.89	5.75E-02	--	9.12E-04	4.78E-01	1.15E-06	2.27E-02	3.70E-01	4.64E-02	1.89E-02	4.07E-06	--	6.97E-01	7.61E-08	2.16E-06	1.31E-16	1.40E-05	3.80E-03	1.80E-04	8.54E-08	3.82E-03
OR	OR-RADP-RH-HET	2.22	9.83E-02	--	4.84E-02	5.70E+00	1.78E-06	4.28E-01	1.25E-02	1.90E-02	8.19E-02	1.04E-04	--	1.02E+00	3.56E-05	1.79E-07	3.46E-05	6.55E-03	3.58E-04	6.43E-06	3.42E-08	1.85E-04
OR	OR-REDC-RH-HET	1654.35	3.06E+03	4.60E+02	6.48E+03	5.51E+02	5.78E+00	1.21E+04	2.83E+02	1.31E+03	6.41E+02	1.43E+01	6.15E-06	8.54E+03	4.98E-03	1.31E-03	5.13E-12	9.16E-01	3.56E+00	6.31E-03	2.85E-03	1.48E-01
OR	OR-RF-RH-HET	1194.20	4.53E+03	2.10E+01	3.78E+02	1.53E+04	1.88E-01	1.57E+03	3.37E+02	6.40E+02	3.92E+03	2.40E+00	1.68E-07	7.22E+03	6.82E-01	1.05E-03	6.90E-04	1.08E+02	1.96E+00	1.64E-02	5.72E-02	1.68E-01
OR	OR-TBD-RH-HET	369.98	4.55E+01	3.18E-03	7.34E+00	2.31E+04	4.68E-02	1.83E+03	8.44E-01	1.13E+00	1.02E+01	1.62E-03	2.17E-04	1.29E+04	1.37E-01	2.26E-03	2.77E-10	1.52E+01	2.19E+00	3.57E-02	5.74E-02	1.79E-04
OR	OR-W1A-RH-SOIL	10.08	8.24E+00	--	2.96E-02	1.69E+00	1.56E-04	7.70E-02	1.42E+00	7.94E-01	6.21E+00	7.61E-04	--	4.58E-01	3.53E-03	1.22E-05	2.46E-15	6.20E-01	2.04E-02	3.42E-04	1.53E-06	1.00E-02
OR	OR-WC14-RH-HET	1.89	2.14E-01	--	3.40E-03	1.64E-01	4.45E-06	1.72E-02	2.33E-01	1.24E-01	3.53E-02	4.33E-04	--	5.56E-02	3.82E-04	6.55E-07	3.59E-16	6.92E-02	1.13E-03	3.98E-05	2.31E-07	2.09E-03

Table 5-2. RH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
OR	WP-OR-REDC-RH-HET	45.99	1.71E+02	8.26E+00	4.82E+02	4.19E+00	4.05E-03	3.59E+01	5.75E+01	1.14E+02	2.74E+01	1.80E-01	--	7.08E+01	1.02E-08	2.88E-05	4.02E-13	2.04E-06	4.80E-02	5.71E-04	2.32E-04	8.79E-03
RL	RL100D-08	0.55	2.47E-02	1.33E-05	--	8.82E-02	2.69E-06	3.45E-03	8.35E-03	1.07E-02	2.71E-02	4.21E-06	--	5.69E-02	2.26E-12	3.31E-10	3.97E-17	7.50E-10	9.30E-07	2.19E-06	2.26E-08	1.62E-05
RL	RL105-08	199.08	1.75E+01	--	1.98E-03	5.93E+01	4.29E-04	2.18E+00	1.34E+01	7.13E+00	4.63E+00	2.00E-04	--	2.58E+01	1.57E-10	5.41E-07	3.18E-14	7.05E-08	1.05E-03	3.72E-05	1.65E-05	7.73E-04
RL	RL105-09	687.50	7.39E+02	--	--	6.96E+02	7.68E-02	4.77E+01	4.06E+02	2.34E+02	1.14E+02	9.85E-02	--	8.73E+02	7.26E-08	8.62E-04	5.89E-10	2.25E-05	1.22E+00	4.92E-02	1.55E-01	1.07E+00
RL	RL170-08	0.33	1.14E-02	--	--	7.37E-04	2.63E-07	9.72E-04	6.88E-03	3.86E-03	3.38E-03	1.56E-07	--	6.00E-04	8.50E-14	9.95E-11	1.51E-17	4.07E-11	2.71E-07	4.95E-10	8.37E-09	1.77E-15
RL	RL200-10	0.22	3.37E-04	--	--	2.58E-05	7.85E-09	--	1.70E-03	1.69E-03	--	--	--	9.37E-05	2.37E-15	1.21E-10	1.94E-17	1.18E-12	1.94E-07	7.99E-09	7.49E-09	1.90E-07
RL	RL209E-08	0.22	2.66E+00	--	--	--	8.48E-05	2.97E-01	3.48E+00	1.21E+00	3.82E-01	1.52E-04	--	--	4.42E-11	3.35E-08	5.14E-15	1.70E-08	8.72E-05	2.61E-07	2.74E-06	1.79E-12
RL	RL221U-08	30.25	3.36E+01	6.09E-06	4.64E-02	9.92E+01	6.36E-02	3.72E+00	4.85E+01	1.37E+01	2.07E+01	1.40E-03	--	6.83E+01	7.11E-08	1.72E-04	9.46E-06	2.11E-05	2.53E-01	2.67E-04	3.02E-05	4.94E-03
RL	RL222S-08	1.32	5.23E-01	1.88E-02	--	3.81E-02	2.08E-03	2.44E-02	4.66E+00	1.19E-01	3.52E-01	4.17E-04	1.73E-06	5.64E-02	2.20E-03	2.87E-09	5.18E-16	3.26E-01	7.37E-06	8.22E-06	2.72E-07	2.92E-04
RL	RL300-08	383.06	1.05E+03	3.40E+00	4.18E+01	3.66E+04	4.82E-02	1.53E+02	6.77E+01	7.88E+01	2.11E+02	2.66E-01	3.05E-11	1.94E+04	1.14E-03	6.28E-05	5.69E-11	1.77E-01	1.13E-01	1.44E-03	1.59E-02	4.48E-02
RL	RL308-08	2.20	5.24E-03	--	1.04E-05	6.81E-01	1.19E-07	2.00E-03	2.37E-03	2.53E-03	2.00E-03	7.74E-07	--	1.09E+00	3.83E-14	2.11E-10	1.02E-17	1.83E-11	5.67E-07	3.14E-09	5.56E-09	1.01E-06
RL	RL325-08	941.17	5.69E+02	1.82E+00	8.35E+00	2.48E+02	3.62E-01	1.29E+03	2.06E+02	1.17E+02	2.70E+02	1.17E-01	--	1.36E+03	4.57E-03	1.94E-04	3.65E-03	7.55E-01	4.58E-01	6.38E-03	6.67E-04	1.34E-02
RL	RL325-09	2.42	9.62E-01	8.80E-03	3.96E-02	1.71E+01	8.70E-05	3.91E-01	6.95E-02	1.24E-01	2.64E-01	5.98E-04	--	1.61E+02	8.61E-11	1.86E-07	1.71E-13	2.62E-08	3.39E-04	2.73E-06	5.03E-05	7.78E-05
RL	RL618-08	18.70	1.35E+00	--	--	7.23E+01	3.02E-05	1.33E-01	1.22E+00	4.69E-01	1.37E-01	--	--	7.65E+01	8.70E-12	1.13E-08	1.55E-15	4.43E-09	3.39E-05	1.84E-04	9.34E-07	3.50E-03
RL	RLBART-07	0.33	3.98E-01	--	--	--	1.43E-05	2.42E-07	3.37E-06	1.62E-06	1.36E-07	4.72E-10	--	--	9.84E-12	5.69E-14	1.24E-20	3.25E-09	1.07E-10	3.39E-13	4.92E-12	7.48E-18
RL	RLBAT-08	7.15	4.62E+00	2.51E-02	1.23E-01	1.05E+01	1.18E-04	1.73E+00	4.21E-01	6.89E-01	1.10E+00	1.83E-03	--	6.07E+00	1.26E-10	4.96E-07	2.81E-13	3.13E-08	9.13E-04	1.67E-05	7.11E-05	3.23E-04
RL	RLBET-08	0.22	6.49E-03	--	--	1.80E-05	1.49E-07	1.18E-03	9.81E-03	5.50E-03	1.82E-03	2.20E-07	--	1.47E-05	4.72E-14	1.07E-07	2.09E-17	2.28E-11	1.61E-04	5.91E-06	1.18E-08	6.25E-08
RL	RLBW-08	0.44	1.26E+00	--	--	--	2.97E-05	1.10E-01	7.58E-01	4.26E-01	4.20E-01	1.73E-05	--	--	1.02E-11	1.24E-08	1.81E-15	4.71E-09	3.22E-05	5.68E-08	9.62E-07	2.04E-13
RL	RLCH2-09	0.22	1.39E-03	--	--	2.18E-02	3.32E-08	1.31E-05	7.18E-04	1.53E-04	--	--	--	1.86E-01	1.07E-14	1.21E-12	5.50E-19	5.15E-12	3.44E-09	4.95E-11	3.18E-10	--
RL	RLESG-08	22.77	4.02E+00	--	--	3.57E-01	9.14E-05	3.16E-01	2.52E+00	1.33E+00	1.24E+00	5.01E-05	--	9.20E-02	2.87E-11	3.14E-08	5.05E-15	1.39E-08	8.66E-05	1.79E-07	2.84E-06	5.60E-13
RL	RLESG-09	17.38	1.10E+00	--	--	5.89E-03	2.44E-05	9.73E-02	6.56E-01	3.69E-01	4.27E-01	1.50E-05	--	4.81E-03	7.48E-12	9.64E-09	1.40E-15	3.66E-09	2.66E-05	4.66E-08	7.89E-07	1.67E-13
RL	RLFFTF-08	0.33	3.44E-03	1.02E-10	--	1.01E-01	7.93E-08	4.41E-04	2.35E-03	2.00E-03	1.16E-03	--	--	9.73E-05	2.59E-14	4.66E-11	8.06E-18	1.23E-11	1.25E-07	1.71E-10	4.41E-09	--
RL	RLGEV-08	6.49	1.23E+01	--	--	1.78E+00	3.94E-04	7.74E-01	6.46E+01	1.46E+01	1.38E+00	1.26E-03	--	1.20E+00	2.36E-10	8.87E-07	1.07E-13	8.29E-08	1.11E-03	4.19E-05	4.34E-05	1.10E-03
RL	RLHAN-08	17.60	1.59E+01	6.27E-05	--	4.44E-01	4.33E-04	1.03E+00	9.51E+00	3.66E+00	4.38E+00	1.48E-04	--	3.26E-01	1.26E-05	1.02E-07	1.39E-14	2.00E-03	2.82E-04	6.75E-07	7.84E-06	1.66E-12
RL	RLMLB-08	0.22	8.38E-02	--	8.38E-01	--	2.73E-06	6.17E-03	5.19E-02	1.37E-01	8.61E-03	1.19E-06	--	--	1.68E-12	1.41E-09	7.23E-16	5.82E-10	2.69E-06	5.17E-09	3.33E-07	1.86E-14
RL	RLPFP-08	29.81	6.42E+02	1.92E-11	--	9.95E-05	1.98E-02	7.03E+01	3.11E+02	1.51E+02	1.16E+02	4.47E-02	--	8.11E-05	9.53E-09	7.30E-06	5.74E-13	3.81E-06	1.97E-02	4.00E-05	3.23E-04	1.18E-04
RL	RLPFP-09	7.48	1.23E+01	--	--	--	3.24E-04	9.51E-01	1.44E+01	5.09E+00	2.46E+00	6.78E-04	--	--	1.29E-10	3.25E-07	1.94E-14	5.58E-08	6.08E-04	1.38E-05	1.09E-05	1.35E-07
RL	RLPURX-08	45.10	1.89E+01	--	--	--	6.85E-04	7.11E-01	5.24E+01	1.49E+01	4.62E-01	1.56E-03	--	--	4.89E-10	1.80E-07	1.21E-13	1.59E-07	3.28E-04	5.43E-06	4.67E-05	2.54E-11
RL	RLWTP-08	242.72	1.51E+00	--	--	1.83E+02	1.73E-03	8.21E-01	5.66E-01	1.20E-01	3.54E-02	--	--	1.92E+02	6.82E-05	1.24E-06	1.28E-13	1.59E-02	2.82E-03	1.06E-04	5.31E-05	2.38E-03
SA	SA-W135	3.15	1.63E+01	--	--	3.28E+01	3.50E-04	4.02E+00	1.76E+01	1.13E+01	5.97E+00	5.48E-03	--	2.22E+01	6.20E-09	3.84E-05	3.82E-14	1.07E-06	6.20E-02	1.96E-03	2.28E-05	6.90E-04
SA	SA-W139	3.35	8.69E+01	--	--	2.44E+02	1.42E-03	2.37E+01	9.52E+01	6.05E+01	6.43E+01	2.86E-02	--	1.69E+02	2.62E-08	1.65E-04	1.25E-13	5.74E-06	3.40E-01	1.08E-02	9.52E-05	3.61E-03
SA	WP-SNL-HCF-S5400-RH	5.83	1.80E+00	--	--	8.87E+00	3.97E-05	5.44E-01	2.12E+00	1.23E+00	4.61E-01	2.85E-03	--	4.78E+00	1.78E-06	2.61E-05	4.17E-15	2.98E-04	4.18E-02	1.37E-03	2.48E-06	2.03E-04
SP	SP-RHHD	1.89	2.80E-01	--	--	1.91E+00	6.51E-06	6.84E-03	6.92E-01	--	2.97E-03	2.80E-03	--	5.25E-01	1.96E-12	5.48E-06	1.58E-14	9.78E-10	8.77E-03	8.54E-04	4.70E-06	9.59E-03
SP	SP-RHIN	0.63	4.41E-02	--	--	2.72E+00	1.00E-06	3.76E-03	5.53E-01	--	4.71E-03	4.27E-03	--	5.47E-02	2.97E-13	2.54E-06	--	1.49E-10	4.06E-03	3.12E-04	--	6.27E-03
SR	SR-BCLDP.003	0.21	3.59E-02	2.27E-05	1.37E-04	1.66E-03	1.06E-06	1.44E-02	3.24E-03	5.27E-03	1.44E-02	1.58E-05	--	1.49E-03	6.94E-13	4.20E-09	7.32E-16	2.33E-10	8.24E-06	7.76E-08	2.18E-07	4.58E-07
SR	SR-RH-221H.01	3.90	1.02E+00	--	--	--	2.44E+00	8.79E+02	1.19E+00	6.12E-01	1.17E+00	7.11E-04	--	--	2.22E-06	8.96E-05	5.91E-14	7.31E-04	2.45E-01	6.07E-05	1.80E-05	5.32E-08
SR	SR-RH-221H.02	3.15	--	--	--	--	9.04E-04	1.28E+00	1.92E-02	1.30E-02	--	2.26E-04	--	--	8.45E-10	2.64E-07	4.68E-17	2.75E-07	5.64E-04	1.32E-09	2.71E-08	2.45E-12
SR	SR-RH-235F.01	1.05	2.53E+02	--	--	--	4.02E-02	2.26E+02	2.99E+00	7.87E-01	2.02E+02	2.88E-04	--	--	3.43E-08	2.10E-05	2.83E-15	1.14E-05	5.96E-02	2.06E-07	1.64E-06	3.13E-12
SR	SR-RH-772F.01	0.42	9.34E-03	--	--	1.37E-01	4.19E-06	1.94E-02	2.67E-02	8.10E-03	1.74E-03	1.33E-06	--	1.21E-01	5.03E-12	4.13E-09	6.88E-16	1.43E-09	8.32E-06	2.03E-08	1.82E-07	1.68E-14
SR	SR-RH-773A.01	36.83	5.75E+00	1.93E+00	1.13E+01	7.07E+00	2.76E-04	5.91E+01	2.75E+00	1.95E+00	7.47E-01	7.75E-04	7.33E-12	4.68E+00	2.10E-10	7.33E-06	7.73E-15	6.91E-08	1.83E-02	2.14E-07	4.17E-06	9.47E-12
SR	SR-RH-FBL.01	0.84	4.15E+00	--	--	1.19E-06	1.06E-04	1.07E+00	1.83E+00	1.80E+00	5.97E-01	8.96E-05	--	1.06E-06	8.97E-05	2.64E-07	8.02E-15	1.31E-02	5.13E-04	3.85E-06	4.16E-06	2.61E-05
SR	SR-RH-FBL.02	1.89	2.08E-03	--	--	--	6.20E-05	2.94E-05	1.89E-03	1.37E-03	4.02E-04	5.16E-01	--	--	7.20E-11	8.29E-05	3.50E-14	2.10E-08	1.16E-01	1.47E+00	9.09E-06	7.38E-02
SR	SR-RH-MNDPAD1.01	2.94	1.47E+00	--	--	--	2.69E-05	1.34E+03	1.65E+00	8.99E-01	1.46E+00	1.08E-03	--	--	6.43E-12	1.38E-04	3.52E-15	3.52E-09	3.75E-01	1.19E-07	1.95E-06	1.22E-11
SR	SR-RH-SDD.01	0.33	6.30E+00	--	--	--	1.55E-04	5.22E+01	1.42E+00	8.51E-01	1.25E+00	1.43E-03	--	--	5.55E-11	5.89E-06	3.61E-15	2.53E-08	1.53E-02	1.06E-07	1.92E-06	1.69E-11
SR	SR-RH-SWD.01	0.21	4.13E-02	1.84E-02	1.26E-01	1.07E-03	1.35E-04	4.40E-02	8.61E-02	3.12E-02	3.23E-02	9.43E-06	3.13E-15	6.81E-04	1.25E-10	4.06E-09	1.05E-16	4.09E-08	1.16E-05	5.94E-09	6.19E-08	1.02E-13
SR	WP-SR-BCLDP.001.001	1.05	6.68E-01	--	1.18E-02	1.39E+00	1.61E-05	1.94E-01	5.57E-02	8.99E-02	1.45E-01	3.30E-04	--	8.42E-01	5.21E-06	2.14E-07	3.70E-16	7.92E-04	3.36E-04	4.21E-06	2.00E-07	5.68E-05
SR	WP-SR-BCLDP.001.002	0.84	3.98E-01	--	1.44E-02	1.03E-01	9.53E-06	7.31E-02	1.60E-02	2.65E-02	9.80E-02	2.11E-04	--	6.20E-01	4.11E-06	1.45E-07	1.08E-16	6.25E-04	2.20E-04	3.01E-06	5.86E-08	4.10E-05
SR	WP-SR-BCLDP.002	0.21	3.67E+00	--	6.50E-02	7.65E+00	8.87E-05	1.07E+00	3.06E-01	4.94E-01	8.01E-01	1.82E-03	--	4.62E+00	2.87E-05	1.18E-06	2.03E-15	4.36E-03	1.85E-03	2.31E-05	1.10E-06	3.12E-04
SR	WP-SR-BCLDP.003	1.47	9.88E-02	--	1.75E-03	2.06E-01	2.39E-06	2.87E-02	8.24E-03	1.33E-02	2.15E-02	4.89E-05	--	1.24E-01	7.71E-07	3.18E-08	5.49E-17	1.17E-04	4.98E-05	6.23E-07	2.97E-08	8.40E-06
SR	WP-SR-BCLDP.004.002	1.05	8.89E-02	--	3.25E-03	2.29E-02	2.13E-06	1.63E-02	3.58E-03	5.92E-03	2.22E-02	4.71E-05	--	1.38E-01	9.19E-07	3.23E-08	2.42E-17	1.40E-04	4.90E-05	6.71E-07	1.31E-08	9.14E-06
SR	WP-SR-BCLDP.004.003	0.42	1.32E-01	--	2.59E-03	9.75E-02	3.15E-06	4.37E-02	1.36E-02	2.11E-02	3.37E-02	7.28E-05	--	2.10E-01	1.22E-06	5.27E-08	8.70E-17	1.86E-04	8.21E-05	1.06E-06	4.70E-08	1.41E-05
SR	WP-SR-RH-FBL.01	1.68	4.68E+01	--	--	5.13E-05	1.10E-03	1.33E+01	2.16E+01	2.16E+01	9.44E+00	3.43E-03	--	4.59E-05	1.09E-03	3.18E-06	8.22E-14	1.72E-01	6.46E-03	5.56E-05	4.62E-05	3.66E-04
SR	WP-SR-RL-BCLDP.001	18.42	6.26E+01	--	1.14E+00	1.37E+02	1.49E-03	1.84E+01	5.27E+00	8.51E+00	1.45E+01	4.91E-01	--	8.28E+01	4.68E-04	1.97E-05	3.41E-14	7.22E-02	3.14E-02	3.90E-04	1.87E-05	5.37E-03

Table 5-2. RH Volume (m^3) and Activity (Ci) By Waste Stream and Radionuclide Decayed thru 2083
(Continued)

Site	Waste Stream ID	Scaled Vol (m^3)	Am-241	Am-243	Cm-244	Cs-137	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Pu-244	Sr-90	Th-229	Th-230	Th-232	U-233	U-234	U-235	U-236	U-238
SR	WP-SR-RL-BCLDP.002	0.21	6.37E+01	--	3.52E-01	1.15E+02	1.78E-03	4.24E-02	1.89E-02	4.95E-02	2.97E-02	8.89E-05	--	7.03E+01	7.80E-10	3.35E-08	1.97E-16	3.22E-07	5.11E-05	8.21E-07	1.06E-07	3.79E-05
VN	WP-GEVNC.01	19.74	6.46E+01	--	--	1.17E+01	1.64E-03	4.16E-01	5.28E+00	2.43E+00	7.86E-01	1.44E-03	--	3.20E+00	2.92E-07	7.06E-06	9.78E-15	4.52E-05	1.04E-02	3.74E-04	5.35E-06	1.89E-04
Grand Total		**7.08E+03**	**1.43E+04**	**5.01E+02**	**7.57E+03**	**9.19E+04**	**9.72E+00**	**2.11E+04**	**3.86E+03**	**3.66E+03**	**6.30E+03**	**1.94E+01**	**2.25E-04**	**6.17E+04**	**8.74E-01**	**1.39E-02**	**6.61E-03**	**1.31E+02**	**1.93E+01**	**1.98E+00**	**3.22E-01**	**3.30E+00**

SNL WIPP Inventory Needs Letter Request #2

2. *Total CH- and RH-TRU inventories of all radionuclides (scaled to a full repository), supplied in Curies and decayed through the years; 2083, 2183, 2433, 3083, 7083, and 12083.*

Table 5-3. CH Radionuclide Activities (Ci) Decayed thru Specified Years

Radionuclide	2083	2183	2433	3083	7083	12083
Ac-225	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Ac-227	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Ac-228	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
Ag-108	7.65E-04	4.43E-04	1.13E-04	3.26E-06	1.08E-15	1.51E-27
Ag-108m	8.79E-03	5.09E-03	1.30E-03	3.75E-05	1.24E-14	1.74E-26
Ag-109m	9.61E-20	--	--	--	--	--
Am-241	1.41E+06	1.21E+06	8.12E+05	2.87E+05	4.76E+02	3.09E+00
Am-242	1.75E-01	1.07E-01	3.12E-02	1.28E-03	3.69E-12	7.81E-23
Am-242m	1.75E-01	1.07E-01	3.14E-02	1.29E-03	3.71E-12	7.84E-23
Am-243	5.20E+01	5.16E+01	5.05E+01	4.79E+01	3.49E+01	2.43E+01
Am-245	9.68E-25	--	--	--	--	--
Am-246	1.84E-07	1.83E-07	1.81E-07	1.77E-07	1.51E-07	1.23E-07
At-217	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Ba-133	8.09E-05	1.11E-07	7.80E-15	1.96E-33	--	--
Ba-137m	1.17E+02	1.16E+01	3.59E-02	1.08E-08	--	--
Bi-210	3.15E+00	3.40E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Bi-211	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Bi-212	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Bi-213	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Bi-214	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Bk-249	6.67E-20	--	--	--	--	--
Bk-250	1.03E-07	1.02E-07	1.01E-07	9.89E-08	8.43E-08	6.91E-08
C-14	4.41E-01	4.36E-01	4.23E-01	3.91E-01	2.41E-01	1.32E-01
Cd-109	9.61E-20	--	--	--	--	--
Cd-113	1.82E-22	1.90E-22	1.90E-22	1.90E-22	1.90E-22	1.90E-22
Cd-113m	4.03E-06	2.95E-08	1.36E-13	1.79E-27	--	--
Cf-249	1.03E+01	8.46E+00	5.16E+00	1.43E+00	5.23E-04	2.65E-08
Cf-250	1.81E+00	9.03E-03	1.17E-07	9.89E-08	8.43E-08	6.91E-08
Cf-251	5.98E-01	5.53E-01	4.56E-01	2.76E-01	1.26E-02	2.66E-04
Cf-252	1.05E-05	4.35E-17	--	--	--	--
Cl-36	2.36E-07	2.36E-07	2.36E-07	2.36E-07	2.33E-07	2.31E-07
Cm-242	1.44E-01	8.83E-02	2.58E-02	1.06E-03	3.06E-12	6.48E-23
Cm-243	1.76E+00	1.55E-01	3.54E-04	4.82E-11	--	--
Cm-244	2.28E+03	4.94E+01	3.43E-03	5.30E-14	--	--
Cm-245	6.17E+00	6.19E+00	6.20E+00	6.03E+00	4.40E+00	2.92E+00
Cm-246	1.43E+02	1.41E+02	1.36E+02	1.24E+02	6.89E+01	3.31E+01
Cm-247	6.53E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00
Cm-248	1.82E+00	1.82E+00	1.82E+00	1.82E+00	1.80E+00	1.78E+00
Cm-250	7.35E-07	7.32E-07	7.25E-07	7.06E-07	6.02E-07	4.93E-07
Co-60	4.90E-04	9.49E-10	4.96E-24	--	--	--
Cs-134	7.81E-10	1.96E-24	--	--	--	--
Cs-135	3.79E-07	3.79E-07	3.79E-07	3.79E-07	3.79E-07	3.78E-07
Cs-137	1.24E+02	1.23E+01	3.81E-02	1.14E-08	--	--
Eu-152	1.06E+00	5.82E-03	1.31E-08	2.73E-23	--	--

Table 5-3. CH Radionuclide Activities (Ci) Decayed thru Specified Years
(Continued)

Radionuclide	2083	2183	2433	3083	7083	12083
Eu-154	5.83E-02	1.82E-05	3.16E-14	--	--	--
Eu-155	4.48E-04	1.65E-10	1.37E-26	--	--	--
Fe-55	2.47E-07	2.31E-18	--	--	--	--
Fr-221	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Fr-223	1.91E+00	1.31E+00	1.28E+00	1.26E+00	1.17E+00	1.07E+00
Gd-152	8.91E-13	9.27E-13	9.28E-13	9.28E-13	9.28E-13	9.28E-13
H-3	2.01E+03	7.28E+00	5.73E-06	7.71E-22	--	--
Ho-166m	1.95E-03	1.84E-03	1.59E-03	1.09E-03	1.09E-04	6.04E-06
I-129	2.24E-03	2.24E-03	2.24E-03	2.24E-03	2.24E-03	2.24E-03
K-40	8.91E-02	8.91E-02	8.91E-02	8.91E-02	8.91E-02	8.91E-02
Kr-85	6.00E-03	9.33E-06	8.89E-13	4.95E-31	--	--
Mn-54	1.03E-24	--	--	--	--	--
Na-22	4.12E-07	1.11E-18	--	--	--	--
Nb-93m	3.71E-02	3.77E-02	3.77E-02	3.77E-02	3.76E-02	3.75E-02
Nb-94	1.62E-03	1.61E-03	1.60E-03	1.56E-03	1.36E-03	1.15E-03
Nd-144	5.66E-16	5.66E-16	5.66E-16	5.66E-16	5.66E-16	5.66E-16
Ni-59	1.11E-09	1.11E-09	1.11E-09	1.10E-09	1.06E-09	1.01E-09
Ni-63	4.51E+00	2.25E+00	3.99E-01	4.43E-03	4.14E-15	3.80E-30
Np-237	6.48E+01	1.07E+02	1.88E+02	2.94E+02	3.52E+02	3.51E+02
Np-238	7.89E-04	4.83E-04	1.41E-04	5.78E-06	1.67E-14	3.53E-25
Np-239	5.20E+01	5.16E+01	5.05E+01	4.79E+01	3.49E+01	2.43E+01
Np-240	7.54E-04	7.54E-04	7.54E-04	7.54E-04	7.55E-04	7.55E-04
Np-240m	6.29E-01	6.29E-01	6.29E-01	6.29E-01	6.29E-01	6.29E-01
Pa-231	9.32E+01	9.30E+01	9.25E+01	9.13E+01	8.46E+01	7.78E+01
Pa-233	6.48E+01	1.07E+02	1.88E+02	2.94E+02	3.52E+02	3.51E+02
Pa-234	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01	1.50E-01
Pa-234m	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02
Pb-209	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Pb-210	3.15E+00	3.40E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Pb-211	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Pb-212	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Pb-214	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Pd-107	1.02E-06	1.02E-06	1.02E-06	1.02E-06	1.02E-06	1.02E-06
Pm-146	1.20E-09	4.31E-15	1.06E-28	--	--	--
Pm-147	2.98E-07	9.98E-19	--	--	--	--
Po-210	3.15E+00	3.40E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Po-211	3.80E-01	2.61E-01	2.55E-01	2.51E-01	2.33E-01	2.14E-01
Po-212	1.29E+04	4.77E+03	3.98E+02	6.95E-01	6.83E-02	6.83E-02
Po-213	6.60E+00	9.96E+00	1.82E+01	3.89E+01	1.43E+02	2.30E+02
Po-214	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Po-215	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Po-216	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Po-218	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Pu-236	5.80E-16	2.41E-26	--	--	--	--
Pu-238	1.28E+06	5.80E+05	8.04E+04	4.73E+02	1.70E-11	1.72E-22
Pu-239	2.17E+06	2.16E+06	2.15E+06	2.11E+06	1.88E+06	1.63E+06
Pu-240	6.89E+05	6.82E+05	6.64E+05	6.20E+05	4.06E+05	2.40E+05
Pu-241	4.32E+05	3.45E+03	6.23E+00	6.04E+00	4.40E+00	2.93E+00
Pu-242	2.45E+02	2.45E+02	2.45E+02	2.45E+02	2.44E+02	2.42E+02
Pu-243	6.53E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00	6.53E+00
Pu-244	6.29E-01	6.29E-01	6.29E-01	6.29E-01	6.30E-01	6.30E-01

Table 5-3. CH Radionuclide Activities (Ci) Decayed thru Specified Years
(Continued)

Radionuclide	2083	2183	2433	3083	7083	12083
Pu-246	1.84E-07	1.83E-07	1.81E-07	1.77E-07	1.51E-07	1.23E-07
Ra-223	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Ra-224	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Ra-225	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Ra-226	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Ra-228	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
Rb-87	2.16E-10	2.16E-10	2.16E-10	2.16E-10	2.16E-10	2.16E-10
Rh-106	3.42E-18	--	--	--	--	--
Rn-219	1.38E+02	9.49E+01	9.26E+01	9.13E+01	8.46E+01	7.78E+01
Rn-220	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Rn-222	3.49E+00	3.38E+00	3.28E+00	4.19E+00	3.00E+01	7.54E+01
Ru-106	3.42E-18	--	--	--	--	--
Sb-125	6.88E-08	6.45E-19	--	--	--	--
Sb-126	1.04E-06	1.03E-06	1.03E-06	1.03E-06	1.00E-06	9.66E-07
Sb-126m	1.26E-05	1.26E-05	1.25E-05	1.25E-05	1.22E-05	1.17E-05
Se-79	1.48E-04	1.48E-04	1.48E-04	1.48E-04	1.47E-04	1.45E-04
Sm-146	1.81E-13	1.81E-13	1.81E-13	1.81E-13	1.81E-13	1.81E-13
Sm-147	2.58E-10	2.58E-10	2.58E-10	2.58E-10	2.58E-10	2.58E-10
Sm-148	3.57E-27	1.16E-26	3.19E-26	8.47E-26	4.09E-25	8.15E-25
Sm-151	1.16E+01	5.35E+00	7.81E-01	5.22E-03	2.17E-16	4.08E-33
Sn-121	3.99E-05	1.13E-05	4.85E-07	1.34E-10	--	--
Sn-121m	5.15E-05	1.46E-05	6.25E-07	1.73E-10	--	--
Sn-126	1.26E-05	1.26E-05	1.25E-05	1.25E-05	1.22E-05	1.17E-05
Sr-90	2.53E+02	2.16E+01	4.57E-02	5.11E-09	--	--
Tc-99	1.98E+01	1.98E+01	1.98E+01	1.98E+01	1.95E+01	1.92E+01
Te-123	6.98E-22	6.98E-22	6.98E-22	6.98E-22	6.98E-22	6.98E-22
Te-125m	1.68E-08	1.58E-19	--	--	--	--
Th-227	1.36E+02	9.36E+01	9.13E+01	9.01E+01	8.35E+01	7.68E+01
Th-228	2.01E+04	7.44E+03	6.22E+02	1.08E+00	1.07E-01	1.07E-01
Th-229	6.74E+00	1.02E+01	1.86E+01	3.98E+01	1.46E+02	2.35E+02
Th-230	4.66E-01	1.20E+00	3.55E+00	1.01E+01	4.97E+01	9.67E+01
Th-231	2.53E+00	2.74E+00	3.28E+00	4.64E+00	1.25E+01	2.11E+01
Th-232	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
Th-234	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02
Tl-204	1.37E-12	1.49E-20	1.33E-40	--	--	--
Tl-206	4.15E-06	4.48E-06	4.33E-06	5.53E-06	3.96E-05	9.95E-05
Tl-207	1.38E+02	9.46E+01	9.23E+01	9.11E+01	8.44E+01	7.76E+01
Tl-208	7.22E+03	2.67E+03	2.23E+02	3.90E-01	3.83E-02	3.83E-02
Tl-209	1.41E-01	2.14E-01	3.91E-01	8.35E-01	3.07E+00	4.94E+00
U-232	1.95E+04	7.24E+03	6.04E+02	9.51E-01	5.35E-18	1.45E-39
U-233	4.00E+02	3.99E+02	3.99E+02	3.99E+02	3.98E+02	3.97E+02
U-234	6.58E+02	9.08E+02	1.09E+03	1.11E+03	1.10E+03	1.09E+03
U-235	2.53E+00	2.74E+00	3.28E+00	4.64E+00	1.25E+01	2.11E+01
U-236	3.22E+00	5.25E+00	1.02E+01	2.26E+01	8.25E+01	1.29E+02
U-237	1.03E+01	8.26E-02	1.49E-04	1.44E-04	1.05E-04	7.00E-05
U-238	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02	1.15E+02
U-240	6.29E-01	6.29E-01	6.29E-01	6.29E-01	6.29E-01	6.29E-01
Y-90	2.53E+02	2.16E+01	4.57E-02	5.11E-09	--	--
Zr-93	3.77E-02	3.77E-02	3.77E-02	3.77E-02	3.76E-02	3.75E-02
Grand Total	**6.15E+06**	**4.71E+06**	**3.71E+06**	**3.02E+06**	**2.29E+06**	**1.87E+06**

Table 5-4. RH Radionuclide Activities (Ci) Decayed thru Specified Years

Radionuclide	2083	2183	2433	3083	7083	12083
Ac-225	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Ac-227	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Ac-228	6.64E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03
Ag-108	1.55E-03	9.01E-04	2.30E-04	6.63E-06	2.19E-15	3.07E-27
Ag-108m	1.79E-02	1.04E-02	2.65E-03	7.62E-05	2.51E-14	3.53E-26
Ag-109m	9.83E-16	--	--	--	--	--
Am-241	1.43E+04	1.24E+04	8.28E+03	2.93E+03	1.74E+01	8.07E+00
Am-242	2.98E+00	1.83E+00	5.34E-01	2.19E-02	6.31E-11	1.33E-21
Am-242m	3.00E+00	1.83E+00	5.37E-01	2.20E-02	6.34E-11	1.34E-21
Am-243	5.01E+02	4.96E+02	4.85E+02	4.56E+02	3.13E+02	1.96E+02
Am-245	2.90E-31	--	--	--	--	--
Am-246	2.12E-13	2.11E-13	2.09E-13	2.03E-13	1.73E-13	1.42E-13
Ar-39	1.77E-02	1.37E-02	7.18E-03	1.34E-03	4.49E-08	1.14E-13
Ar-42	1.23E-02	1.50E-03	7.71E-06	8.66E-12	--	--
At-217	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Ba-133	6.10E-02	8.39E-05	5.88E-12	1.48E-30	--	--
Ba-137m	8.68E+04	8.61E+03	2.67E+01	8.00E-06	--	--
Be-10	7.32E-05	7.32E-05	7.32E-05	7.31E-05	7.30E-05	7.29E-05
Bi-210	3.77E+00	3.76E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Bi-211	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Bi-212	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Bi-213	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Bi-214	3.88E+00	3.72E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Bk-249	2.00E-26	--	--	--	--	--
Bk-250	1.19E-13	1.18E-13	1.17E-13	1.14E-13	9.71E-14	7.96E-14
C-14	1.02E+00	1.01E+00	9.82E-01	9.08E-01	5.60E-01	3.06E-01
Cd-109	9.83E-16	--	--	--	--	--
Cd-113	8.20E-18	8.49E-18	8.49E-18	8.49E-18	8.49E-18	8.49E-18
Cd-113m	1.37E-01	1.00E-03	4.60E-09	6.08E-23	--	--
Cf-249	7.12E+01	5.84E+01	3.56E+01	9.85E+00	3.61E-03	1.83E-07
Cf-250	2.00E+01	9.97E-02	1.76E-07	1.14E-13	9.71E-14	7.96E-14
Cf-251	2.37E+01	2.20E+01	1.81E+01	1.10E+01	5.00E-01	1.05E-02
Cf-252	2.76E-05	1.15E-16	--	--	--	--
Cm-242	2.47E+00	1.51E+00	4.42E-01	1.81E-02	5.24E-11	1.11E-21
Cm-243	2.23E+01	1.96E+00	4.47E-03	6.09E-10	--	--
Cm-244	7.57E+03	1.64E+02	1.14E-02	1.76E-13	--	--
Cm-245	1.51E+01	1.55E+01	1.61E+01	1.63E+01	1.21E+01	8.05E+00
Cm-246	6.13E+02	6.04E+02	5.82E+02	5.29E+02	2.95E+02	1.42E+02
Cm-247	7.35E-04	8.34E-04	1.05E-03	1.45E-03	2.04E-03	2.07E-03
Cm-248	2.78E+00	2.78E+00	2.78E+00	2.78E+00	2.75E+00	2.73E+00
Cm-250	8.47E-13	8.43E-13	8.35E-13	8.14E-13	6.94E-13	5.68E-13
Co-60	6.94E-01	1.34E-06	7.02E-21	--	--	--
Cs-134	1.75E-06	4.38E-21	--	--	--	--
Cs-135	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Cs-137	9.19E+04	9.12E+03	2.83E+01	8.47E-06	--	--
Eu-152	6.16E+01	3.39E-01	7.65E-07	1.59E-21	--	--
Eu-154	3.96E+01	1.24E-02	2.15E-11	--	--	--
Eu-155	7.36E-02	2.72E-08	2.26E-24	--	--	--
Fe-55	3.14E-05	2.95E-16	--	--	--	--

Table 5-4. RH Radionuclide Activities (Ci) Decayed thru Specified Years
(Continued)

Radionuclide	2083	2183	2433	3083	7083	12083
Fr-221	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Fr-223	5.50E-02	6.16E-02	6.18E-02	6.13E-02	5.86E-02	5.55E-02
Gd-152	5.13E-11	5.34E-11	5.35E-11	5.35E-11	5.35E-11	5.35E-11
H-3	6.48E+01	2.34E-01	1.84E-07	2.48E-23	--	--
I-129	5.28E-01	5.28E-01	5.28E-01	5.28E-01	5.28E-01	5.28E-01
In-115	5.26E-17	5.26E-17	5.26E-17	5.26E-17	5.26E-17	5.26E-17
Ir-194	1.40E-05	1.34E-10	3.80E-23	--	--	--
K-42	1.23E-02	1.50E-03	7.71E-06	8.66E-12	--	--
Kr-85	2.79E+01	4.34E-02	4.14E-09	2.31E-27	--	--
La-137	2.28E-06	2.28E-06	2.27E-06	2.25E-06	2.15E-06	2.03E-06
Mo-93	2.63E-01	2.58E-01	2.45E-01	2.16E-01	9.76E-02	3.62E-02
Na-22	2.17E-09	5.82E-21	--	--	--	--
Nb-91	2.68E-02	2.42E-02	1.87E-02	9.66E-03	1.64E-04	1.00E-06
Nb-92	6.38E-09	6.38E-09	6.38E-09	6.38E-09	6.38E-09	6.38E-09
Nb-93m	2.47E+00	1.01E+00	9.80E-01	9.56E-01	8.57E-01	8.05E-01
Nb-94	5.64E+00	5.62E+00	5.58E+00	5.45E+00	4.76E+00	4.01E+00
Nd-144	1.26E-12	1.26E-12	1.26E-12	1.26E-12	1.26E-12	1.26E-12
Ni-59	2.47E+00	2.47E+00	2.46E+00	2.45E+00	2.36E+00	2.25E+00
Ni-63	2.60E+02	1.30E+02	2.31E+01	2.56E-01	2.39E-13	2.19E-28
Np-235	2.55E-18	--	--	--	--	--
Np-237	9.72E+00	1.02E+01	1.10E+01	1.21E+01	1.26E+01	1.26E+01
Np-238	1.35E-02	8.25E-03	2.41E-03	9.89E-05	2.85E-13	6.03E-24
Np-239	5.01E+02	4.96E+02	4.85E+02	4.56E+02	3.13E+02	1.96E+02
Np-240	2.69E-07	2.72E-07	2.79E-07	2.96E-07	4.01E-07	5.32E-07
Np-240m	2.25E-04	2.27E-04	2.32E-04	2.47E-04	3.34E-04	4.43E-04
Os-194	1.40E-05	1.34E-10	3.80E-23	--	--	--
Pa-231	4.49E+00	4.49E+00	4.47E+00	4.44E+00	4.24E+00	4.02E+00
Pa-233	9.72E+00	1.02E+01	1.10E+01	1.21E+01	1.26E+01	1.26E+01
Pa-234	4.30E-03	4.30E-03	4.30E-03	4.30E-03	4.30E-03	4.30E-03
Pa-234m	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.31E+00
Pb-209	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Pb-210	3.77E+00	3.76E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Pb-211	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Pb-212	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Pb-214	3.88E+00	3.72E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Pd-107	5.51E-02	5.51E-02	5.51E-02	5.51E-02	5.51E-02	5.50E-02
Pm-145	9.58E-02	1.91E-03	1.07E-07	9.41E-19	--	--
Pm-146	4.51E-04	1.62E-09	3.98E-23	--	--	--
Pm-147	4.15E-05	1.39E-16	--	--	--	--
Po-210	3.77E+00	3.76E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Po-211	1.10E-02	1.23E-02	1.23E-02	1.22E-02	1.17E-02	1.11E-02
Po-212	3.57E+00	1.33E+00	1.15E-01	4.41E-03	4.24E-03	4.24E-03
Po-213	8.55E-01	1.97E+00	4.71E+00	1.15E+01	4.56E+01	7.35E+01
Po-214	3.88E+00	3.71E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Po-215	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Po-216	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Po-218	3.88E+00	3.72E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Pu-236	2.09E-07	8.69E-18	--	--	--	--
Pu-238	2.11E+04	9.59E+03	1.33E+03	7.86E+00	1.39E-10	2.95E-21
Pu-239	3.86E+03	3.85E+03	3.82E+03	3.76E+03	3.39E+03	2.97E+03
Pu-240	3.66E+03	3.64E+03	3.55E+03	3.31E+03	2.17E+03	1.28E+03

Table 5-4. RH Radionuclide Activities (Ci) Decayed thru Specified Years
(Continued)

Radionuclide	2083	2183	2433	3083	7083	12083
Pu-241	6.30E+03	6.56E+01	1.62E+01	1.64E+01	1.21E+01	8.06E+00
Pu-242	1.94E+01	1.95E+01	1.98E+01	2.04E+01	2.32E+01	2.49E+01
Pu-243	7.35E-04	8.34E-04	1.05E-03	1.45E-03	2.04E-03	2.07E-03
Pu-244	2.25E-04	2.27E-04	2.33E-04	2.47E-04	3.35E-04	4.44E-04
Pu-246	2.12E-13	2.11E-13	2.09E-13	2.03E-13	1.73E-13	1.42E-13
Ra-223	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Ra-224	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Ra-225	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Ra-226	3.88E+00	3.72E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Ra-228	6.64E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03
Rb-87	6.00E-06	6.00E-06	6.00E-06	6.00E-06	6.00E-06	6.00E-06
Rh-106	1.60E-16	--	--	--	--	--
Rn-219	3.99E+00	4.47E+00	4.48E+00	4.44E+00	4.24E+00	4.02E+00
Rn-220	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Rn-222	3.88E+00	3.72E+00	3.34E+00	2.56E+00	1.16E+00	1.87E+00
Ru-106	1.60E-16	--	--	--	--	--
Sb-125	2.17E-05	2.04E-16	--	--	--	--
Sb-126	7.92E-03	7.91E-03	7.90E-03	7.86E-03	7.65E-03	7.39E-03
Sb-126m	2.81E-01	2.81E-01	2.80E-01	2.79E-01	2.71E-01	2.62E-01
Se-79	1.71E-01	1.71E-01	1.71E-01	1.71E-01	1.69E-01	1.67E-01
Sm-145	6.11E-22	--	--	--	--	--
Sm-146	2.83E-08	2.83E-08	2.83E-08	2.83E-08	2.83E-08	2.83E-08
Sm-147	5.86E-08	5.86E-08	5.86E-08	5.86E-08	5.86E-08	5.86E-08
Sm-148	6.53E-16	6.53E-16	6.53E-16	6.53E-16	6.53E-16	6.53E-16
Sm-151	1.36E+02	6.30E+01	9.19E+00	6.15E-02	2.56E-15	4.80E-32
Sn-121	2.13E+00	6.04E-01	2.59E-02	7.17E-06	--	--
Sn-121m	2.74E+00	7.78E-01	3.33E-02	9.24E-06	--	--
Sn-126	2.81E-01	2.81E-01	2.80E-01	2.79E-01	2.71E-01	2.62E-01
Sr-90	6.17E+04	5.26E+03	1.11E+01	1.24E-06	--	--
Tb-157	5.81E-02	3.66E-02	1.15E-02	5.72E-04	5.37E-12	4.96E-22
Tc-97	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.03E-07	2.02E-07
Tc-98	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.63E-06	2.62E-06
Tc-99	4.22E+02	4.22E+02	4.22E+02	4.21E+02	4.15E+02	4.09E+02
Te-123	1.35E-14	1.35E-14	1.35E-14	1.35E-14	1.35E-14	1.35E-14
Te-125m	5.30E-06	4.97E-17	--	--	--	--
Th-227	3.93E+00	4.41E+00	4.42E+00	4.38E+00	4.19E+00	3.96E+00
Th-228	5.58E+00	2.07E+00	1.79E-01	6.88E-03	6.61E-03	6.61E-03
Th-229	8.74E-01	2.01E+00	4.81E+00	1.18E+01	4.66E+01	7.51E+01
Th-230	1.39E-02	3.38E-02	9.19E-02	2.51E-01	1.20E+00	2.34E+00
Th-231	1.98E+00	1.98E+00	1.98E+00	1.99E+00	2.00E+00	2.02E+00
Th-232	6.61E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03	6.61E-03
Th-234	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.31E+00
Tl-206	4.98E-06	4.96E-06	4.41E-06	3.38E-06	1.54E-06	2.47E-06
Tl-207	3.98E+00	4.46E+00	4.47E+00	4.43E+00	4.23E+00	4.01E+00
Tl-208	2.01E+00	7.44E-01	6.44E-02	2.47E-03	2.38E-03	2.38E-03
Tl-209	1.83E-02	4.22E-02	1.01E-01	2.47E-01	9.78E-01	1.58E+00
Tm-171	6.06E-11	1.27E-26	--	--	--	--
U-232	5.42E+00	2.01E+00	1.68E-01	2.64E-04	1.48E-21	--
U-233	1.31E+02	1.31E+02	1.31E+02	1.30E+02	1.28E+02	1.26E+02
U-234	1.93E+01	2.34E+01	2.64E+01	2.68E+01	2.65E+01	2.62E+01
U-235	1.98E+00	1.98E+00	1.98E+00	1.99E+00	2.00E+00	2.02E+00

Table 5-4. RH Radionuclide Activities (Ci) Decayed thru Specified Years
(Continued)

Radionuclide	2083	2183	2433	3083	7083	12083
U-236	3.22E-01	3.33E-01	3.59E-01	4.25E-01	7.45E-01	9.95E-01
U-237	1.51E-01	1.57E-03	3.87E-04	3.91E-04	2.90E-04	1.93E-04
U-238	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.30E+00	3.31E+00
U-240	2.25E-04	2.27E-04	2.32E-04	2.47E-04	3.34E-04	4.43E-04
V-49	5.68E-21	--	--	--	--	--
Y-90	6.17E+04	5.26E+03	1.11E+01	1.24E-06	--	--
Zr-93	7.78E-01	7.78E-01	7.78E-01	7.78E-01	7.77E-01	7.75E-01
Grand Total	**3.62E+05**	**6.06E+04**	**1.95E+04**	**1.23E+04**	**7.60E+03**	**6.10E+03**

5.2 Waste, Packaging, Emplacement, and Operational Materials

SNL WIPP Inventory Needs Letter Request #'s 3 & 4

3. *Total inventory (scaled to a full repository) of all nonradiological waste material parameters reported in masses (in kg) for both CH- and RH-TRU waste. Nonradiological waste material parameters include: cellulosic, plastic and rubber (CPR) materials; iron-based metal/alloys; aluminum-based metal/alloys; other metals; solidified inorganic materials; solidified organic materials; vitrified materials; cements; soils; and other inorganic materials. These components may affect actinide solubility or gas generation rates.*

   Include only Portland cement (and concrete or other cements containing CaO or $Ca(OH)_2$) in the inventory of cement. Specify whether the partial mass density of cement is based on unreacted (dry) cement, reacted (hydrated) cement, or a combination. Do not include Portland cement under other waste material parameters.

4. *Total inventory (scaled to a full repository) of steel, lead, CPR and any other materials used to facilitate packaging of waste in the WIPP, reported as masses (in kg) for both CH- and RH-TRU waste. These materials may affect gas generation rates.*

Table 5-5. Waste and Packaging Materials

Waste Materials	CH Mass (kg)	RH Mass (kg)
Iron-based Metal/Alloys	1.98E+07	9.70E+05
Aluminum-based Metal/Alloys	4.56E+05	9.24E+04
Other Metal/Alloys	1.15E+06	1.54E+05
Other Inorganic Materials	1.17E+07	9.41E+05
Cellulose	4.13E+06	2.10E+05
Rubber	1.16E+06	5.29E+04
Plastic	5.70E+06	3.13E+05
Cement*	1.51E+06	2.89E+03
Solidified Inorganic Material	1.24E+07	5.03E+04
Solidified Organic Material	3.88E+06	1.32E+04
Soil	7.97E+06	1.15E+04
Vitrified	--	--
Packaging Materials		
Cellulose	2.58E+06	--
Plastic	3.68E+06	9.42E+05
Rubber	9.92E+04	5.20E+03
Steel	3.92E+07	1.47E+07
Lead	--	1.04E+07
Grand Total	**1.15E+08**	**2.89E+07**

** The Cement totals here reflect only those reported by the TRU waste sites. The emplaced portion is accounted for in the Solidified Inorganic Material, Solidified Organic Material, and Other Inorganic Materials categories. For an estimate of total cements, see Table 5-6 below.*

Table 5-6. Cements

Type	CH Mass (kg)	RH Mass (kg)
Reacted Only	2.19E+06	4.16E+03
Combination Reacted / Unreacted	6.55E+06	1.47E+02
Grand Total	**8.74E+06**	**4.30E+03**

NOTE: These estimates taken from LANL 2022b. For more information, see section 4.3. These values account for the emplaced amounts and the estimated amounts reported by the sites.

SNL WIPP Inventory Needs Letter Request #5

5. *Total inventory (scaled to a full repository) of any non-containerized CPR materials and other biodegradable materials that will be disposed of in WIPP, reported as masses (in kg). This includes any CPR materials used in general WIPP operations or to directly facilitate emplacement of waste and MgO in the WIPP. These materials may affect gas generation rates.*

Table 5-7. Emplacement and Operational Materials

Material	Emplacement Material Mass (kg)	Operational Material Mass (kg)	Total Mass (kg)
Cellulose	2.54E+05	4.50E+01	2.54E+05
Plastic	2.22E+06	4.89E+03	2.22E+06
Rubber	--	4.79E+03	4.79E+03
Grand Total	**2.47E+06**	**9.72E+03**	**2.48E+06**

NOTE: These estimates taken from LANL 2022c. For more information, see section 4.3.

5.3 Other Chemical Constituents

SNL WIPP Inventory Needs Letter Request #6

6. *Total inventory (scaled to a full repository) of organic ligands (acetic acid, sodium acetate, citric acid, sodium citrate, oxalic acid, sodium oxalate and sodium EDTA) and oxyanions (sulfates, nitrates and phosphates), reported as masses (in kg). These components may affect actinide solubility or gas generation rates.*

Table 5-8. Oxyanions

Oxyanion	Total Mass (kg)
Nitrate	1.77E+06
Phosphate	3.87E+05
Sulfate	4.93E+05
Grand Total	**2.65E+06**

NOTE: These estimates taken from LANL 2022b. For more information, see section 4.3.

Table 5-9. Organic Ligands

Organic Ligand	Total Mass (kg)
Acetate	1.72E+04
Acetic Acid	1.76E+04
Citrate	2.78E+03
Citric Acid	8.82E+03
EDTA	4.17E+02
Oxalate	7.78E+02
Oxalic Acid	1.68E+04
Grand Total	**6.44E+04**

NOTE: These estimates taken from LANL 2022b. For more information, see section 4.3.

6.0 ATTACHMENTS

Attachment 1: SNL WIPP Inventory Needs Letter (11/8/2022)

ATTACHMENT 1. SNL WIPP INVENTORY NEEDS LETTER (11/8/2022)

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November 8, 2022

Dr. Anderson L. Ward
Compliance Recertification Manager
Environmental Regulatory Compliance
U.S. Department of Energy
Carlsbad Field Office
P.O. Box 3090
Carlsbad, NM 88221

Subject: ***Sandia's WIPP Inventory Needs for Compliance Recertification Application 2024 Performance Assessment***

This letter details Sandia's WIPP inventory data needs for Performance Assessment. The data needs are largely the same as Zeitler (2018). The inventory needs to report waste volumes using the new LWA volumes methodology, waste that is emplaced, stored at WCS and is identified as WIPP-bound in the latest ATWIR. In accordance with the direction provided by George Basabilvazo, please only consider inventory data reported to the end of the calendar year 2083.

In order to conduct performance assessments of the WIPP that account for revisions to the inventory and account for both currently emplaced waste and to-be-emplaced waste (WIPP-bound), we will need an update to the following:

1. Waste stream volumes (in m^3) and inventory of radionuclides on a waste stream basis for both CH- and RH-TRU waste, supplied in Curies and decayed to the year 2083, for the following radionuclides (scaled to a full repository):

   ^{241}Am, ^{243}Am, ^{244}Cm, ^{137}Cs, ^{237}Np, ^{238}Pu, ^{239}Pu, ^{240}Pu, ^{241}Pu, ^{242}Pu, ^{244}Pu, ^{90}Sr, ^{229}Th, ^{230}Th, ^{232}Th, ^{233}U, ^{234}U, ^{235}U, ^{236}U, and ^{238}U.
2. Total CH- and RH-TRU inventories of all radionuclides (scaled to a full repository), supplied in Curies and decayed through the years: 2083, 2183, 2433, 3083, 7083, and 12083.

NNSA

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3. Total inventory (scaled to a full repository) of all nonradiological waste material parameters reported as masses (in kg) for both CH- and RH-TRU waste. Nonradiological waste material parameters include: cellulosic, plastic and rubber (CPR) materials; iron-based metal/alloys; aluminum-based metal/alloys; other metals; solidified inorganic materials; solidified organic materials; vitrified materials; cements; soils; and other inorganic materials. These components may affect actinide solubility or gas generation rates.

   Include only Portland cement (and concrete or other cements containing CaO or $Ca(OH)_2$) in the inventory of cement. Specify whether the partial mass density of cement is based on unreacted (dry) cement, reacted (hydrated) cement, or a combination. Do not include Portland cement under other waste material parameters.

4. Total inventory (scaled to a full repository) of steel, lead, CPR and any other materials used to facilitate packaging of waste in the WIPP, reported as masses (in kg) for both CH- and RH-TRU waste. These materials may affect gas generation rates

5. Total inventory (scaled to a full repository) of any non-containerized CPR materials and other biodegradable materials that will be disposed of in WIPP, reported as masses (in kg). This includes any CPR materials used in general WIPP operations or to directly facilitate emplacement of waste and MgO in the WIPP. These materials may affect gas generation rates.

6. Total inventory (scaled to a full repository) of organic ligands (acetic acid, sodium acetate, citric acid, sodium citrate, oxalic acid, sodium oxalate and sodium EDTA) and oxyanions (sulfates, nitrates and phosphates), reported as masses (in kg). These components may affect actinide solubility or gas generation rates.

In order for the update to be incorporated into performance assessment calculations, the data must be collected and analyzed in accordance with a Quality Assurance program approved by the Carlsbad Field Office.

Sincerely,



Steve Wagner

References:

WIPP 4.2.1:PA:QA-I:574937

Zeitler, T.R. 2018. "Sandia's WIPP Inventory Data Needs for Performance Assessment" Correspondence. October 2018. Carlsbad, NM: Sandia National Laboratories.

CC:
George Basabilvazo, DOE
Jerry Young, LANL
Greg Van Soest, LANL
Paul Shoemaker, SNL
Department 8881 Day File

WIPP 4.2.1:PA:QA-l:574937