



DAFTAR PUSTAKA

- [1] Republik Indonesia, *Undang-Undang Republik Indonesia Nomor 10 Tahun 1997 tentang Ketenaganukliran*, no. 1. Indonesia, 1997.
- [2] BAPETEN, *Peraturan Pemerintah Republik Indonesia Nomor 61 Tahun 2013 tentang Pengelolaan Limbah Radioaktif*. Indonesia, 2013.
- [3] T. Marpaung, “Kajian Pengelolaan Limbah Radioaktif Sumber Terbungkus Berdasarkan Rekomendasi Badan Tenaga Atom Internasional (IAEA),” dalam *Prosiding Seminar Nasional Teknologi Pengelolaan Limbah VIII*, 2010, no. 10, hlm. 37–46.
- [4] H. Kodrat, R. Susworo, T. Amalia, dan R. R. Sabariani, “Radioterapi Konformal Tiga Dimensi dengan Pesawat Cobalt-60,” *Radioterapi & Onkologi Indonesia*, vol. 7, no. 1, hlm. 37–42, 2018, doi: 10.32532/jori.v7i1.43.
- [5] D. S. Wisnubroto, H. Zamroni, R. Sumarbagiono, dan G. Nurliati, “Challenges of Implementing the Policy and Strategy for Management of Radioactive Waste and Nuclear Spent Fuel in Indonesia,” *Nuclear Engineering and Technology*, vol. 53, no. 2, hlm. 549–561, 2021, doi: 10.1016/j.net.2020.07.005.
- [6] Y. T. Selim, Y. F. Lasheen, M. A. Hassan, dan T. M. el Zakla, “Removal of Alcyon II, CGR, MeV 60Co Teletherapy Head and Evaluation of Exposure Dose,” *J Environ Prot (Irvine, Calif)*, vol. 04, no. 12, hlm. 1435–1440, 2013, doi: 10.4236/jep.2013.412164.
- [7] IAEA, “Management of Spent High Activity Radioactive Sources (SHARS),” International Atomic Energy Agency, Vienna, 2002.
- [8] Suhartono, Suparno, dan Suryantoro, “Pra Rancangan Kontainer Tempat Penyimpanan Limbah Radioaktif Sumber Terbungkus 192 Ir,” *Penelitian dan Kegiatan PTLR Tahun 2012*, no. 10, hlm. 497–506, 2012.
- [9] C. Brown, A. G. Croff, dan M. J. Haire, “Beneficial Uses of Depleted Uranium Beneficial,” dalam *Beneficial Re-Use '97 Conference*, 1997, hlm. 1–13.
- [10] R. Hadisaputra, A. Muharini, dan S. G. Pinasti, “Analysis of The Utilization of Depleted Uranium as Shielding Material for the Storage Container of Disused Teletherapy Source,” UGM, Yogyakarta, 2022.





- [11] J. P. Kelley, R. O. Gorson, dan A. Raventos, *Structural Shielding Design and Evaluation for Medical Use of X Rays and Gamma the Rays of Energies Up To 10 MeV (NCRP Report No. 49)*. Bethesda: NCRP, 1976.
- [12] A. D. Oliveira dan C. Oliveira, “Comparison of Deterministic and Monte Carlo Methods in Shielding Design,” *Radiat Prot Dosimetry*, hlm. 254–257, 2005, doi: 10.1093/rpd/nci187.
- [13] M. Adams dan S. Smalian, “Shielding Calculations on Waste Packages-The Limits and Possibilities of Different Calculation Methods by The Example of Homogeneous and Inhomogeneous Waste Packages,” *EPJ Web Conf*, 2017, doi: 10.1051/epjconf/201715305023.
- [14] IAEA, “Sealed Radiactive Sources.” <https://www.iaea.org/topics/radiation-sources/sealed-radioactive-sources> (diakses Mar 24, 2022).
- [15] RSUD Bali Mandara, “Mengenal Radioterapi Sebagai Salah Satu Layanan Unggulan Rumah Sakit Bali Mandara,” 2020. <https://rsbm.baliprov.go.id/?p=753> (diakses Mar 29, 2022).
- [16] American Cancer Society, “Getting Internal Radiation Therapy (Brachytherapy),” 2019. <https://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/internal-radiation-therapy-brachytherapy.html> (diakses Mar 31, 2022).
- [17] American Cancer Society, “Getting External Beam Radiation Therapy,” 2019. <https://www.cancer.org/treatment/treatments-and-side-effects/treatment-types/radiation/external-beam-radiation-therapy.html> (diakses Mar 31, 2022).
- [18] A. F. Firmansyah, S. I. Sunaryati, N. Rajagukguk, dan G. Wurdiyanto, “Perkembangan Teknologi pada Pesawat Teleterapi di Indonesia dan Aspek Keselamatannya,” dalam *Seminar Keselamatan Nuklir 2017*, 2017, hlm. 238–242.
- [19] E. B. Podgorsak, *Review of Radiation Oncology Physics: A Handbook for Teachers and Students*, vol. 5, no. 3. Vienna: IAEA, 2005. doi: 10.1120/jacmp.2021.25315.
- [20] M. Beyzadeoglu, G. Ozyigit, dan C. Ebruli, *Basic Radiation Oncology*, 2 ed. Cham: Springer Nature, 2010. doi: 10.1007/978-3-642-11666-7.
- [21] W. B. Santoso, Istofa, B. Santoso, dan B. Rozali, “Desain Dasar Perangkat Radioterapi Eksternal Menggunakan Cobalt-60,” *Jurnal Perangkat Nuklir*, vol. 06, hlm. 51–58, 2012.





- [22] S. Choiriyah, N. Sabrina, dan dan M. I M Arrozaqi, “Pemetaan Laju Dosis Radiasi- γ pada Pesawat Teleterapi 60 Co,” dalam *Seminar Nasional Fisika dan Aplikasinya*, 2020, hlm. 190–194.
- [23] E. A. Preoteasa, E. Preoteasa, dan I. Suciu, *Atomic and Nuclear Surface Analysis Methods: A Novel Perspective for The Characterization of Dental Composites*. New York: Nova Science Publisher, Inc, 2012.
- [24] J. van Dyk, J. J. Battista, dan P. R. Almond, “A Retrospective of Cobalt-60 Radiation Therapy: ‘The Atom Bomb That Saves Lives,’” *Medical Physics International*, hlm. 327–350, 2020.
- [25] Oncology Medical Physics, “Cobalt-60 Teletherapy Machines.” <https://oncologymedicalphysics.com/cobalt-60-teletherapy-machine/> (diakses Apr 04, 2022).
- [26] Oak Ridge Associated Universities, “Teletherapy Source (ca. 1950s).” <https://orau.org/health-physics-museum/collection/radioactive-sources/teletherapy-source.html> (diakses Apr 15, 2022).
- [27] N. Tsoulfanidis dan S. Landsberger, *Measurement Detection of Radiation*, 4 ed. Florida: CRC Press, 2015.
- [28] R. Chandra, *Nuclear Medicine Physics: The Basics*. Philadelphia: Lippincott Williams & Wilkins, 2004. doi: 10.5005/jp/books/12812_25.
- [29] G. F. Knoll, *Radiation Detection and Measurement*, 4 ed. New York: John Wiley & Sons, Inc., 2010.
- [30] BATAN, “Interaksi Radiasi Dengan Materi (Proses Dasar).” <http://www.batan.go.id/ensiklopedi/08/01/02/03/08-01-02-03.html> (diakses Mar 10, 2022).
- [31] H. Cember dan T. E. Jonhson, *Introduction to Health Physics*. New York: McGraw-Hill Companies, Inc., 2009. doi: 10.1097/01.HP.0000602884.89938.cc.
- [32] R. L. Murray dan W. H. Zinn, *Introduction to Nuclear Engineering*. New Jersey: Pentice-Hall, 2001. doi: 10.1119/1.1933896.
- [33] K. O. Kim, G. Roh, dan B. Lee, “Evaluation of Geometric Progression (GP) Buildup Factors Using MCNP Codes (MCNP6.1 and MCNP5-1.60),” *EPJ Web Conf*, 2016, doi: 10.1051/epjconf/201610603009.
- [34] BAPETEN, *Peraturan Pemerintah RI No. 27 Tahun 2002 tentang Pengelolaan Limbah Radioaktif*. Indonesia, 2002.
- [35] Suryantoro dan Suhartono, “Pengelolaan Limbah Radioaktif di Indonesia,” *Seminar Nasional Teknologi Pengelolaan Limbah X*, hlm. 105–112, 2012.



- [36] BAPETEN, *Keputusan Kepala Badan Pengawas Tenaga Nuklir Nomor 01/KA-BAPETEN/V-99 tentang Ketentuan Keselamatan Kerja terhadap Radiasi*. Indonesia, 1999.
- [37] BAPETEN, *Keputusan Kepala Badan Pengawas Tenaga Nuklir Nomor 04/KA-BAPETEN/V-99 tentang Ketentuan Keselamatan Untuk Pengangkutan Zat Radioaktif*. 1999, hlm. 1–108.
- [38] R. Antoni dan L. Bourgois, *Applied Physics of External Radiation Exposure*. Cham: Springer Nature, 2017. doi: 10.1007/978-3-319-48660-4.
- [39] Environmental Health and Safety's Radiation Control Ofice University of Florida, “RSSC Radiation Protection 07/11 3-1,” dalam *Chapter 3 Radiation Protection*, hlm. 1–52. [Daring]. Available: http://webfiles.ehs.ufl.edu/rssc_stdy_chp_3.pdf
- [40] L. B. Shappert, *A Guide for the Design, Fabrication, and Operation of Shipping Casks for Nuclear Applications*. Tennessee: Oak Ridge National Laboratory, 1970.
- [41] E. Kunarsih, “Penetapan Pembatasan Dosis dan Peranannya dalam Upaya Optimisasi Proteksi Radiasi Pekerja Radiasi di Fasilitas Kedokteran Nuklir,” *Seminar Keselamatan Nuklir 2017*, 2017.
- [42] M. K. Marincel, “Microshield Analysis to Calculate External Radiation Dose Rates for Several Spent Fuel Cask,” dalam *WM'07 Conference*, 2007, hlm. 8–14.
- [43] Y. Yin, S. Ding, dan Y. Huang, “Shielding Calculation Research Based on Point-Kernel Integral Method,” dalam *ICONE21*, Jul 2013, hlm. 1–6. doi: 10.1115/ICONE21-16846.
- [44] S. Kang, S. Lee, C. Jung, C. Lee, dan J. K. Lee, “Development of Point Kernel Shielding Analysis Computer Program Implementing Recent Nuclear Data and Graphical User Interface,” *Journal of Radiation Protection*, vol. 26, no. 15, hlm. 215–224, 2001.
- [45] Grove Software, *MicroShield User's Manual*. Lynchburg: Grove Software, Inc., 2016.
- [46] MatWeb, “304 Stainless Steel (UNS S30400); Annealed Plate.” <https://www.matweb.com/search/DataSheet.aspx?MatGUID=ec1666b2959f4746906341d6d91cf29&ckck=1> (diakses Jul 01, 2022).
- [47] J. E. Martin, *Physics for Radiation Protection*, 2 ed. Weinheim: WILEY-VCH Verlag GmbH & Co. KGaA, 2013. doi: 10.1002/9783527667062.





UNIVERSITAS
GADJAH MADA

Analisis Kontainer Berbentuk Kubus Terbuat dari Bahan Depleted Uranium dan SS304 untuk
Penyimpanan
Limbah Radioaktif Cobalt-60 Pesawat Teleterapi dengan Variasi Konfigurasi Penyusunan Sumber
MULAT KAHANAN, Dr.-Ing. Ir. Kusnanto; Sita Gandes Pinasti, S.T., M.Sc.

Universitas Gadjah Mada, 2022 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- [48] D. W. Adams, A. Brandl, T. E. Johnson, dan J. E. Lindsay, “A Comparison of MCNP Modeling Against Empirical Data for the Measurement of Gamma Fields Due To Actinide Oxides in A Glovebox,” Colorado State University, Colorado, 2012.
- [49] H. R. Yoshimura dkk., *Use of Depleted Uranium Metal as Cask Shielding in High-Level Waste Storage, Transport, and Disposal Systems*. New Mexico: Sandia National Laboratories, 1996.
- [50] A. Alhazaa dan N. Haneklaus, “Diffusion Bonding and Transient Liquid Phase (TLP) Bonding of Type 304 and 316 Austenitic Stainless Steel—A Review of Similar and Dissimilar Material Joints,” *Metals (Basel)*, hlm. 1–23, 2020, doi: 10.3390/met10050613.
- [51] F. Ferate, *Evaluation of MDS Nordion Transport Package (1996) B(U) Non-Proprietary Information*, vol. 168. Ottawa: MDS Nordion, 1996.

