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团体标准

T/GXAS XXXX—XXXX

核医学科放射性废水衰变池设计技术规范

Technical specification for design of radioactive waste water decay pond in nuclear medicine department

XXXX - XX - XX发布

XXXX - XX - XX实施

广西标准化协会  发布

1. 前言

本文件按照GB/T 1.1—2020《标准化工作导则 第1部分：标准化文件的结构和起草规则》的规定起草。

本文件的某些内容可能涉及专利。本文件的发布机构不承担识别专利的责任。

本文件由广西壮族自治区辐射环境监督管理站提出、归口并宣贯。

本文件起草单位：广西壮族自治区辐射环境监督管理站、广西居里安检测技术有限公司、杭州湘亭科技有限公司。

本文件主要起草人：

核医学科放射性废水衰变池设计技术规范

* 1. 范围

本文件界定了核医学科放射性废水衰变池设计技术涉及的术语和定义，规定了污染物与排放限值、总体要求、工艺设计等技术要求。

本文件适用于核医学科放射性废水衰变池新建、改建、扩建的设计、施工、验收和运行管理。

* 1. 规范性引用文件

下列文件中的内容通过文中的规范性引用而构成本文件必不可少的条款。其中，注日期的引用文件，仅该日期对应的版本适用于本文件；不注日期的引用文件，其最新版本（包括所有的修改单）适用于本文件。

HJ 61 辐射环境监测技术规范

HJ 1188 核医学辐射防护与安全要求

* 1. 术语和定义

HJ 61、HJ 1188界定的以及下列术语和定义适用于本文件。

核医学 nuclear medicine

应用放射性核素或放射性药物进行诊断、治疗疾病以及进行医学研究的学科。

[来源：HJ 1188-2021，3.1]

放射性废水 radioactive waste water

在核医学活动中产生的含有放射性核素或被放射性核素污染的液态废物。

衰变池 decay pool

用于收集、贮存、排放放射性废液的容器，放射性废液在该容器中自然衰变。

[来源：HJ 1188-2021，3.4]

槽式衰变池 intermittent decay pool

也称“间歇式衰变池”。用于轮流接纳和贮存放射性废水的2组或2组以上池体。

推流式衰变池 continuous decay pool

也称“连续式衰变池”。利用水力学推移流的原理，用于连续接纳和贮存放射性肥水的3～5级分隔式衰变池。

导流墙 guide wall

建在放射性废水衰变池内部，用于导引污水水流流向的墙体。

检测池 detection cell

用于放射性废水衰变池中水体监测的池体。

检查口 check hole

带有可开启检查盖的配件，装设在池体上方，作为检查和清通之用。

[来源：GB 50015—2019，2.1.47，有修改]

* 1. 污染物与排放限值
     1. 污染物

核医学科放射性废水中含有的主要放射性污染物包括碘-131、锝-99m、氟-18等。

* + 1. 排放限值

核医学科放射性废水经过处理后排放的，应符合表1的规定。

1. 衰变池中水放射性污染物排放限值

|  |  |  |  |
| --- | --- | --- | --- |
| 类别 | 半衰期 | 暂存时间 | 排放限值 |
| 槽式衰变池 | 小于24h | 暂存时间大于30d后可直接排放 | — |
| 大于24h | 含I-131的暂存时间180d；不含I-131的暂存时间超过10倍最长半衰期 | 总α≤1Bq/L |
| 总β≤10Bq/L |
| I-131≤10Bq/L |
| 推流式衰变池 | 大于24h | — | 符合附录A的要求 |

* 1. 总体要求
     1. 基本要求

核医学科产生的放射性废水应单独收集，经槽式衰变池或推流式衰变池或专用容器贮存至满足排放要求后方能排放。

放射性废水衰变池的建设规模，应考虑核医学科的整体发展筹划规划，近、远期结合，以近期为主，预留远期空间。

应根据核医学科建设规模、放射性污水量和污水排放去向，兼顾实际情况，合理确定核医学科污水处理技术路线。

废水衰变池从规划时应遵守防护最优化的原则，做好前瞻性设计，减少池体运行期间的人工介入，提高后期维护的便利性和安全性。

核医学科规划时，做好污水管道排放规划，尽可能控制产生的放射性废水的排放量，避免非放射性废液排入池中。可采取的措施如核素治疗病房内，淋浴、清洁衣物等用水可排入普通污水管道，厕所、盥洗设施用水应排入放射性污水管道。

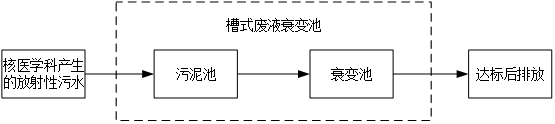
* + 1. 选址要求

在核医学科放射性废水衰变池的设计中，应根据拟建场址及周围建筑的整体规划，留有余地，方便今后扩建。

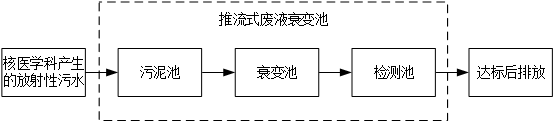
放射性废水衰变池与病房、居民区等建筑物之间应设绿化防护带或隔离带。

放射性废水衰变池应远离地下取水构筑物，宜设置在绿化地、室外空地的地下。

* + 1. 衰变池组成
       1. 槽式衰变池

含碘131治疗病房的核医学科工作场所应设置槽式废液衰变池。槽式衰变池至少由污泥池、2组或以上槽式池体、其他配套及辅助工程组成。主要组成部分见图1。

1. 核医学科槽式放射性废水衰变池主要组成部分
   * + 1. 推流式衰变池

核医学诊断（使用锝-99m、氟-18等）和门诊碘-131治疗场所，可设置推流式放射性废液衰变池。推流式衰变池槽式衰变池一般至少由污泥池、3～5级分隔连续式池体、检测池、其他配套及辅助工程组成。主要组成部分见图2。

1. 核医学科推流放射性废水衰变池主要组成部分
   1. 工艺设计
      1. 基本要求

污泥池、检测池、衰变池的布局应合理。池体可采用混凝土浇筑，并在池体内部刷防水防渗涂料，池底和池壁应光滑坚固、耐酸碱腐蚀、防渗漏。

* + 1. 污泥池

放射性试验冲洗废水可直接排入衰变池，粪便生活污水应经过污泥池处理净化后再排入衰变池。

污泥池池底应设置有防止和去除污泥硬化淤积的措施。

污泥池附近应设置有当心电离辐射标志和中文警示说明。

* + 1. 检测池

检测池上方应设置有检查口，检查口盖板与检测池边缘部分有搭接。

在进行检测操作的时间外，检查口应处于密闭状态，宜设置有锁定装置。

检测池附近应设置有电离辐射标志。

* + 1. 衰变池
       1. 基本要求

应符合以下要求：

1. 衰变池的容积除满足日常研究或使用预期产生放射性废水的最短停留时间，还应为事故应急时的清洗需要留有余量，确保排放的废水满足表1的要求。碘-131核素治疗项目建设的衰变池容积推荐值参见附录B；
2. 衰变池顶部应设有检修口，盖板与池体边缘可设置橡胶圈密封、隔震；盖板与废水液面的距离不小于20cm；
3. 衰变池的外壁与检修盖板应具有一定的辐射防护能力，外表面0.3m处的周围剂量当量率宜不大于2.5μSv/h；
4. 衰变池附近应设置有电离辐射标志。
   * + 1. 槽式衰变池

应符合以下要求：

1. 衰变池上方应预设取样口；
2. 衰变池应设有防止废液溢出的措施，如衰变池内设置有液面计等；
3. 衰变池应设有防止污泥硬化淤积的措施，如衰变池底部设有一定的坡度便于污泥的排放，池内配置高压水枪冲洗装置防止淤泥硬化淤积等；
4. 衰变池应设有防止堵塞进出水口的措施，如衰变池前采取一定的措施减小大体积固形物等；
5. 衰变池应设有防止超压的措施。例如池体内部设置排气管（口），用于废水储存过程中产生的气体排出，气体排放口可安装活性炭或其他专用的过滤装置。
   * + 1. 推流式衰变池

应符合以下要求：

1. 衰变池内部应设置导流墙，引导水体在池体内进行水平和竖向的立体性流动；
2. 衰变池底部应设置有防止和去除污泥硬化淤积的措施。
   * 1. 放射性废水排放管道

管道应采用耐腐蚀的特种管道，宜为不锈钢或塑料管。

管道宜具有一定的埋地深度，尽可能避免暴露在地面；如有暴露在地面的部分，需要做好防护和标记。

如果管道需要在控制区内穿行时，管道外表面0.3m处的周围剂量当量率宜不大于10μSv/h；如果管道需要在控制区外人员可达区域穿行时，管道外表面0.3m处的周围剂量当量率宜不大于2.5μSv/h。

管道应尽可能短，不准许带有存水弯且需带有大于0.2％的坡度。

管道的走向、阀门和管道的连接处应设置有明显的标记，便于检测和检修

1. （资料性）  
   放射性废水中放射性核素豁免活度浓度

表A.1给出了放射性废水中放射性核素豁免活度浓度。

* 1. 放射性废水中放射性核素豁免活度浓度

|  |  |  |  |
| --- | --- | --- | --- |
| 核素 | 活度浓度（Bq/g） | 核素 | 活度浓度（Bq/g） |
| C-14 | 1E+04 | Sr-90 | 1E+02 |
| O-15 | 1E+02 | Mo-99 | 1E+02 |
| F-18 | 1E+01 | Tc-99m | 1E+02 |
| Na-22 | 1E+01 | In-111 | 1E+02 |
| P-32 | 1E+03 | I-125 | 1E+03 |
| Cr-51 | 1E+03 | I-131 | 1E+02 |
| Ni-63 | 1E+05 | Sm-153 | 1E+02 |
| Sr-89 | 1E+03 | Tl-201 | 1E+02 |

2. （资料性）  
   各级（组）衰变池最小容积

表B.1～B.35给出了各级（组）衰变池最小容积。

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 24 | 13 | 9 | 7 |
| 3 | 34.5 | 19.5 | 13.5 | 10.5 |
| 4 | 46 | 24 | 18 | 14 |
| 5 | 55 | 30 | 22.5 | 17.5 |
| 6 | 66 | 36 | 24 | 21 |
| 7 | 77 | 45.5 | 28 | 21 |
| 8 | 84 | 48 | 32 | 24 |
| 9 | 94.5 | 54 | 36 | 27 |
| 10 | 105 | 55 | 40 | 30 |
| 11 | 115.5 | 60.5 | 44 | 33 |
| 12 | 126 | 66 | 48 | 36 |
| 13 | 130 | 71 | 52 | 39 |
| 14 | 140 | 77 | 56 | 42 |
| 15 | 150 | 82.5 | 60 | 45 |
| 16 | 160 | 88 | 64 | 48 |
| 17 | 170 | 93.5 | 68 | 51 |
| 18 | 180 | 99 | 72 | 54 |
| 19 | 190 | 104.5 | 76 | 57 |
| 20 | 190 | 110 | 80 | 60 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量120L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 31.2 | 15.6 | 10.8 | 8.4 |
| 3 | 41.4 | 21.6 | 16.2 | 12.6 |
| 4 | 52.8 | 28.8 | 21.6 | 16.8 |
| 5 | 66 | 36 | 24 | 21 |
| 6 | 79.2 | 43.2 | 28.8 | 21.6 |
| 7 | 88.2 | 50.4 | 33.6 | 25.2 |
| 8 | 100.8 | 52.8 | 38.4 | 28.8 |
| 9 | 113.4 | 59.4 | 43.2 | 32.4 |
| 10 | 126 | 66 | 48 | 36 |
| 11 | 132 | 72.6 | 52.8 | 39.6 |
| 12 | 144 | 79.2 | 57.6 | 43.2 |
| 13 | 156 | 85.8 | 62.4 | 46.8 |
| 14 | 168 | 92.4 | 67.2 | 50.4 |
| 15 | 180 | 99 | 72 | 54 |
| 16 | 192 | 105.6 | 76.8 | 57.6 |
| 17 | 193.8 | 112.2 | 81.6 | 61.2 |
| 18 | 205.2 | 118.8 | 75.6 | 64.8 |
| 19 | 216.6 | 125.4 | 79.8 | 68.4 |
| 20 | 228 | 120 | 84 | 72 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 33.6 | 18.3 | 12.7 | 9.8 |
| 3 | 48.4 | 25.3 | 19 | 14.8 |
| 4 | 61.7 | 33.6 | 22.5 | 19.6 |
| 5 | 77.1 | 42.1 | 28.1 | 21.1 |
| 6 | 88.2 | 50.5 | 33.6 | 25.3 |
| 7 | 102.9 | 54 | 39.2 | 29.5 |
| 8 | 117.7 | 61.7 | 44.9 | 33.6 |
| 9 | 126.1 | 69.4 | 50.5 | 37.9 |
| 10 | 140.0 | 77.1 | 56.1 | 42.1 |
| 11 | 154.1 | 84.7 | 61.7 | 46.2 |
| 12 | 168.1 | 92.4 | 67.2 | 50.5 |
| 13 | 182.1 | 100.2 | 72.9 | 54.7 |
| 14 | 186.3 | 107.9 | 78.4 | 58.9 |
| 15 | 199.6 | 115.6 | 84.1 | 63.1 |
| 16 | 212.8 | 123.3 | 78.4 | 67.2 |
| 17 | 226.2 | 119.1 | 83.4 | 71.4 |
| 18 | 239.5 | 126.1 | 88.2 | 75.7 |
| 19 | 252.8 | 133.0 | 93.2 | 79.9 |
| 20 | 266.0 | 140.0 | 98.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量160L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 36.9 | 20.8 | 14.4 | 11.3 |
| 3 | 52.9 | 28.8 | 24.0 | 16.8 |
| 4 | 70.4 | 38.4 | 25.6 | 22.5 |
| 5 | 84.0 | 48.0 | 32.0 | 24.0 |
| 6 | 100.8 | 52.9 | 38.4 | 28.8 |
| 7 | 117.7 | 61.6 | 44.9 | 33.6 |
| 8 | 128.0 | 70.4 | 51.2 | 38.4 |
| 9 | 144.0 | 79.2 | 57.6 | 43.2 |
| 10 | 160.0 | 88.0 | 64.0 | 48.0 |
| 11 | 176.0 | 96.8 | 70.4 | 52.9 |
| 12 | 192.0 | 105.7 | 76.8 | 57.6 |
| 13 | 197.6 | 114.4 | 83.2 | 62.4 |
| 14 | 212.8 | 123.2 | 78.4 | 67.2 |
| 15 | 228.0 | 120.0 | 84.0 | 72.0 |
| 16 | 243.3 | 128.0 | 89.7 | 76.8 |
| 17 | 258.4 | 136.0 | 95.2 | 81.7 |
| 18 | 273.6 | 144.0 | 100.8 | 86.4 |
| 19 | 288.8 | 152.0 | 106.4 | 91.2 |
| 20 | 288.0 | 160.0 | 112.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 41.4 | 21.6 | 16.2 | 12.6 |
| 3 | 59.4 | 32.4 | 21.6 | 18.9 |
| 4 | 79.2 | 43.2 | 28.8 | 21.6 |
| 5 | 94.5 | 54.0 | 36.0 | 27.0 |
| 6 | 113.4 | 59.4 | 43.2 | 32.4 |
| 7 | 126.0 | 69.3 | 50.4 | 37.8 |
| 8 | 144.0 | 79.2 | 57.6 | 43.2 |
| 9 | 162.0 | 89.1 | 64.8 | 48.6 |
| 10 | 180.0 | 99.0 | 72.0 | 54.0 |
| 11 | 188.1 | 108.9 | 79.2 | 59.4 |
| 12 | 205.2 | 118.8 | 75.6 | 64.8 |
| 13 | 222.3 | 128.7 | 81.9 | 70.2 |
| 14 | 239.4 | 126.0 | 88.2 | 75.6 |
| 15 | 256.5 | 135.0 | 94.5 | 81.0 |
| 16 | 273.6 | 144.0 | 100.8 | 86.4 |
| 17 | 290.7 | 153.0 | 107.1 | 91.8 |
| 18 | 291.6 | 162.0 | 113.4 | 97.2 |
| 19 | 307.8 | 188.1 | 119.7 | 102.6 |
| 20 | 324.0 | 180.0 | 126.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量100mCi、废水量200L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 46.0 | 24.0 | 18.0 | 14.0 |
| 3 | 66.0 | 36.0 | 24.0 | 21.0 |
| 4 | 84.0 | 48.0 | 32.0 | 24.0 |
| 5 | 105.0 | 55.0 | 40.0 | 30.0 |
| 6 | 126.0 | 66.0 | 48.0 | 36.0 |
| 7 | 140.0 | 77.0 | 56.0 | 42.0 |
| 8 | 160.0 | 88.0 | 64.0 | 48.0 |
| 9 | 180.0 | 99.0 | 72.0 | 54.0 |
| 10 | 190.0 | 110.0 | 80.0 | 60.0 |
| 11 | 209.0 | 121.0 | 77.0 | 66.0 |
| 12 | 228.0 | 120.0 | 84.0 | 72.0 |
| 13 | 247.0 | 130.0 | 91.0 | 78.0 |
| 14 | 266.0 | 140.0 | 98.0 | 84.0 |
| 15 | 285.0 | 150.0 | 105.0 | 90.0 |
| 16 | 288.0 | 160.0 | 112.0 | 96.0 |
| 17 | 306.0 | 170.0 | 119.0 | 102.0 |
| 18 | 324.0 | 180.0 | 126.0 | 108.0 |
| 19 | 342.0 | 190.0 | 133.0 | 114.0 |
| 20 | 360.0 | 200.0 | 140.0 | 120.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 25.0 | 13.0 | 9.0 | 7.0 |
| 3 | 36.0 | 19.5 | 13.5 | 10.5 |
| 4 | 46.0 | 26.0 | 18.0 | 14.0 |
| 5 | 57.5 | 30.0 | 22.5 | 17.5 |
| 6 | 66.0 | 36.0 | 27.0 | 21.0 |
| 7 | 77.0 | 42.0 | 28.0 | 24.5 |
| 8 | 88.0 | 48.0 | 32.0 | 24.0 |
| 9 | 94.5 | 54.0 | 36.0 | 27.0 |
| 10 | 105.0 | 60.0 | 40.0 | 30.0 |
| 11 | 115.5 | 60.5 | 44.0 | 33.0 |
| 12 | 126.0 | 66.0 | 48.0 | 36.0 |
| 13 | 136.5 | 71.5 | 52.0 | 39.0 |
| 14 | 147.0 | 77.0 | 56.0 | 42.0 |
| 15 | 150.0 | 82.5 | 60.0 | 45.0 |
| 16 | 160.0 | 88.0 | 64.0 | 48.0 |
| 17 | 170.0 | 93.5 | 68.0 | 51.0 |
| 18 | 180.0 | 99.0 | 72.0 | 54.0 |
| 19 | 190.0 | 104.5 | 76.0 | 57.0 |
| 20 | 200.0 | 110.0 | 80.0 | 60.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量120L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 28.8 | 15.6 | 10.8 | 8.4 |
| 3 | 41.4 | 23.4 | 16.2 | 12.6 |
| 4 | 55.2 | 28.8 | 21.6 | 16.8 |
| 5 | 66.0 | 36.0 | 27.0 | 21.0 |
| 6 | 79.2 | 43.2 | 28.8 | 25.2 |
| 7 | 92.4 | 50.4 | 33.6 | 25.2 |
| 8 | 100.8 | 57.6 | 38.4 | 28.8 |
| 9 | 113.4 | 64.8 | 43.2 | 32.4 |
| 10 | 126.0 | 66.0 | 48.0 | 36.0 |
| 11 | 138.6 | 72.6 | 52.8 | 39.6 |
| 12 | 151.2 | 79.2 | 57.6 | 43.2 |
| 13 | 156.0 | 93.6 | 62.4 | 46.8 |
| 14 | 168.0 | 92.4 | 67.2 | 50.4 |
| 15 | 180.0 | 99.0 | 72.0 | 54.0 |
| 16 | 192.0 | 105.6 | 76.8 | 57.6 |
| 17 | 204.0 | 112.2 | 81.6 | 61.2 |
| 18 | 216.0 | 118.8 | 86.4 | 64.8 |
| 19 | 228.0 | 125.4 | 91.2 | 68.4 |
| 20 | 228.0 | 132.0 | 96.0 | 72.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 33.6 | 18.3 | 12.7 | 9.8 |
| 3 | 48.4 | 27.4 | 18.9 | 14.8 |
| 4 | 61.7 | 33.6 | 25.3 | 19.6 |
| 5 | 77.1 | 42.1 | 28.1 | 24.6 |
| 6 | 92.4 | 50.5 | 33.6 | 25.3 |
| 7 | 102.9 | 58.9 | 39.2 | 29.5 |
| 8 | 117.7 | 61.7 | 44.9 | 33.6 |
| 9 | 132.3 | 69.4 | 50.5 | 37.9 |
| 10 | 147.0 | 77.1 | 56.1 | 42.1 |
| 11 | 154.1 | 84.7 | 61.7 | 46.2 |
| 12 | 168.1 | 92.4 | 67.2 | 50.5 |
| 13 | 182.1 | 100.2 | 72.9 | 54.7 |
| 14 | 196.1 | 107.9 | 78.4 | 58.9 |
| 15 | 210.1 | 115.6 | 84.1 | 63.1 |
| 16 | 224.1 | 123.3 | 89.1 | 67.2 |
| 17 | 226.2 | 130.9 | 95.2 | 71.4 |
| 18 | 239.5 | 138.7 | 100.9 | 75.7 |
| 19 | 252.8 | 146.3 | 93.2 | 79.9 |
| 20 | 266.0 | 154.1 | 98.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量160L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 38.4 | 20.8 | 14.4 | 11.3 |
| 3 | 55.2 | 28.8 | 21.6 | 16.8 |
| 4 | 70.4 | 38.4 | 25.6 | 22.5 |
| 5 | 88.0 | 48.0 | 32.0 | 24.0 |
| 6 | 100.8 | 57.6 | 38.4 | 28.8 |
| 7 | 117.7 | 61.6 | 44.9 | 33.6 |
| 8 | 134.4 | 70.4 | 51.2 | 38.4 |
| 9 | 151.3 | 79.2 | 57.6 | 43.2 |
| 10 | 160.0 | 88.0 | 64.0 | 48.0 |
| 11 | 176.0 | 96.8 | 70.4 | 52.9 |
| 12 | 192.0 | 105.7 | 76.8 | 57.6 |
| 13 | 208.0 | 114.4 | 83.2 | 62.4 |
| 14 | 224.0 | 123.2 | 89.7 | 67.2 |
| 15 | 228.0 | 132.0 | 96.0 | 72.0 |
| 16 | 243.3 | 140.8 | 89.7 | 76.8 |
| 17 | 258.4 | 149.6 | 95.2 | 81.7 |
| 18 | 273.6 | 144.0 | 100.8 | 86.4 |
| 19 | 288.8 | 152.0 | 106.4 | 91.2 |
| 20 | 304.0 | 160.0 | 112.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 41.4 | 23.4 | 16.2 | 12.6 |
| 3 | 62.1 | 32.4 | 24.3 | 18.9 |
| 4 | 79.2 | 43.2 | 28.8 | 25.2 |
| 5 | 94.5 | 54.0 | 36.0 | 27.0 |
| 6 | 113.4 | 64.8 | 43.2 | 32.4 |
| 7 | 132.3 | 69.3 | 50.4 | 37.8 |
| 8 | 151.2 | 79.2 | 57.6 | 43.2 |
| 9 | 162.0 | 89.1 | 64.8 | 48.6 |
| 10 | 180.0 | 99.0 | 72.0 | 54.0 |
| 11 | 198.0 | 108.9 | 79.2 | 59.4 |
| 12 | 216.0 | 118.8 | 86.4 | 64.8 |
| 13 | 222.3 | 128.7 | 93.6 | 70.2 |
| 14 | 239.4 | 138.6 | 100.8 | 75.6 |
| 15 | 256.5 | 148.5 | 94.5 | 81.0 |
| 16 | 273.6 | 144.0 | 100.8 | 86.4 |
| 17 | 290.7 | 153.0 | 107.1 | 91.8 |
| 18 | 307.8 | 162.0 | 113.4 | 97.2 |
| 19 | 324.9 | 171.0 | 119.7 | 102.6 |
| 20 | 342.0 | 180.0 | 126.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量120mCi、废水量200L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 46.0 | 26.0 | 18.0 | 14.0 |
| 3 | 66.0 | 36.0 | 27.0 | 21.0 |
| 4 | 88.0 | 48.0 | 32.0 | 24.0 |
| 5 | 105.0 | 60.0 | 40.0 | 30.0 |
| 6 | 126.0 | 66.0 | 48.0 | 36.0 |
| 7 | 147.0 | 77.0 | 56.0 | 42.0 |
| 8 | 160.0 | 88.0 | 64.0 | 48.0 |
| 9 | 180.0 | 99.0 | 72.0 | 54.0 |
| 10 | 200.0 | 110.0 | 80.0 | 60.0 |
| 11 | 220.0 | 121.0 | 88.0 | 66.0 |
| 12 | 228.0 | 132.0 | 96.0 | 72.0 |
| 13 | 247.0 | 143.0 | 91.0 | 78.0 |
| 14 | 266.0 | 154.0 | 98.0 | 84.0 |
| 15 | 285.0 | 150.0 | 105.0 | 90.0 |
| 16 | 304.0 | 160.0 | 112.0 | 96.0 |
| 17 | 323.0 | 170.0 | 119.0 | 102.0 |
| 18 | 342.0 | 180.0 | 126.0 | 108.0 |
| 19 | 342.0 | 190.0 | 133.0 | 114.0 |
| 20 | 360.0 | 200.0 | 140.0 | 120.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 25.0 | 13.0 | 9.0 | 7.0 |
| 3 | 36.0 | 19.5 | 13.5 | 10.5 |
| 4 | 48.0 | 26.0 | 18.0 | 14.0 |
| 5 | 57.5 | 30.0 | 22.5 | 17.5 |
| 6 | 69.0 | 36.0 | 27.0 | 21.0 |
| 7 | 77.0 | 42.0 | 31.5 | 24.5 |
| 8 | 88.0 | 48.0 | 32.0 | 28.0 |
| 9 | 99.0 | 54.0 | 36.0 | 31.5 |
| 10 | 110.0 | 60.0 | 40.0 | 30.0 |
| 11 | 115.5 | 66.0 | 44.0 | 33.0 |
| 12 | 126.0 | 72.0 | 48.0 | 36.0 |
| 13 | 136.5 | 71.5 | 52.0 | 39.0 |
| 14 | 147.0 | 77.0 | 56.0 | 42.0 |
| 15 | 157.5 | 82.5 | 60.0 | 45.0 |
| 16 | 168.0 | 88.0 | 64.0 | 48.0 |
| 17 | 170.0 | 93.5 | 68.0 | 51.0 |
| 18 | 180.0 | 99.0 | 72.0 | 54.0 |
| 19 | 190.0 | 104.5 | 76.0 | 57.0 |
| 20 | 200.0 | 110.0 | 80.0 | 60.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量120L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 30.0 | 15.6 | 10.8 | 8.4 |
| 3 | 43.2 | 23.4 | 16.2 | 12.6 |
| 4 | 55.2 | 31.2 | 21.6 | 16.8 |
| 5 | 69.0 | 36.0 | 27.0 | 21.0 |
| 6 | 79.2 | 43.2 | 32.4 | 25.2 |
| 7 | 92.4 | 50.4 | 33.6 | 29.4 |
| 8 | 105.6 | 57.6 | 38.4 | 28.8 |
| 9 | 113.4 | 64.8 | 43.2 | 32.4 |
| 10 | 126.0 | 72.0 | 48.0 | 36.0 |
| 11 | 138.6 | 72.6 | 52.8 | 39.6 |
| 12 | 151.2 | 79.2 | 57.6 | 43.2 |
| 13 | 163.8 | 85.8 | 62.4 | 46.8 |
| 14 | 176.4 | 92.4 | 67.2 | 50.4 |
| 15 | 180.0 | 99.0 | 72.0 | 54.0 |
| 16 | 192.0 | 105.6 | 76.8 | 57.6 |
| 17 | 204.0 | 112.2 | 81.6 | 61.2 |
| 18 | 216.0 | 118.8 | 86.4 | 64.8 |
| 19 | 228.0 | 125.4 | 91.2 | 68.4 |
| 20 | 240.0 | 132.0 | 96.0 | 72.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 33.6 | 18.3 | 12.7 | 9.8 |
| 3 | 48.4 | 27.4 | 18.9 | 14.7 |
| 4 | 64.4 | 33.6 | 25.3 | 19.6 |
| 5 | 77.1 | 45.6 | 31.5 | 24.5 |
| 6 | 92.4 | 50.5 | 33.6 | 29.4 |
| 7 | 107.9 | 58.9 | 39.2 | 29.4 |
| 8 | 117.7 | 67.2 | 44.8 | 33.6 |
| 9 | 132.3 | 75.7 | 50.4 | 37.8 |
| 10 | 147.0 | 77.1 | 56.1 | 42.1 |
| 11 | 161.8 | 84.7 | 61.6 | 46.2 |
| 12 | 176.4 | 92.4 | 67.2 | 50.4 |
| 13 | 182.1 | 100.2 | 72.8 | 54.6 |
| 14 | 196.1 | 107.9 | 78.4 | 58.8 |
| 15 | 210.1 | 115.6 | 84. | 63.1 |
| 16 | 224.1 | 123.3 | 89.6 | 67.2 |
| 17 | 238.1 | 130.9 | 95.2 | 71.4 |
| 18 | 252.1 | 138.7 | 100.8 | 75.6 |
| 19 | 266.0 | 146.3 | 106.4 | 79.8 |
| 20 | 266.0 | 154.1 | 112.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量160L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 38.4 | 20.8 | 14.4 | 11.2 |
| 3 | 55.2 | 31.2 | 21.6 | 16.8 |
| 4 | 73.6 | 38.4 | 28.8 | 22.4 |
| 5 | 88.0 | 48.0 | 32.0 | 28.0 |
| 6 | 105.6 | 57.6 | 38.4 | 28.8 |
| 7 | 117.6 | 67.2 | 44.8 | 33.6 |
| 8 | 134.4 | 76.8 | 51.2 | 38.4 |
| 9 | 151.2 | 79.2 | 57.6 | 43.2 |
| 10 | 168.0 | 88.0 | 64.0 | 48.0 |
| 11 | 176.0 | 96.8 | 70.4 | 52.8 |
| 12 | 192.0 | 105.6 | 76.8 | 57.6 |
| 13 | 208.0 | 114.4 | 83.2 | 62.4 |
| 14 | 224.0 | 123.2 | 89.6 | 67.2 |
| 15 | 240.0 | 132.0 | 96.0 | 72.0 |
| 16 | 256.0 | 140.8 | 102.4 | 76.8 |
| 17 | 272.0 | 149.6 | 108.8 | 81.6 |
| 18 | 273.6 | 158.4 | 115.2 | 86.4 |
| 19 | 288.8 | 167.2 | 106.4 | 91.2 |
| 20 | 304.0 | 176.0 | 112.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 43.2 | 23.4 | 16.2 | 12.6 |
| 3 | 62.1 | 32.4 | 24.3 | 18.9 |
| 4 | 79.2 | 43.2 | 32.4 | 25.2 |
| 5 | 99.0 | 54.0 | 36.0 | 31.5 |
| 6 | 113.4 | 64.8 | 43.2 | 32.4 |
| 7 | 132.3 | 75.6 | 50.4 | 37.8 |
| 8 | 151.2 | 79.2 | 57.6 | 43.2 |
| 9 | 170.1 | 89.1 | 64.8 | 48.6 |
| 10 | 180.0 | 99.0 | 72.0 | 54.0 |
| 11 | 198.0 | 108.9 | 79.2 | 59.4 |
| 12 | 216.0 | 118.8 | 86.4 | 64.8 |
| 13 | 234.0 | 128.7 | 93.6 | 70.2 |
| 14 | 252.0 | 138.6 | 100.8 | 75.6 |
| 15 | 270.0 | 148.5 | 108.0 | 81.0 |
| 16 | 273.6 | 158.4 | 115.2 | 86.4 |
| 17 | 290.7 | 168.3 | 107.1 | 91.8 |
| 18 | 307.8 | 178.2 | 113.4 | 97.2 |
| 19 | 324.9 | 171.0 | 119.7 | 102.6 |
| 20 | 342.0 | 180.0 | 126.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量140mCi、废水量200L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 48.0 | 26.0 | 18.0 | 14.0 |
| 3 | 69.0 | 36.0 | 27.0 | 21.0 |
| 4 | 88.0 | 48.0 | 32.0 | 28.0 |
| 5 | 110.0 | 60.0 | 40.0 | 30.0 |
| 6 | 126.0 | 72.0 | 48.0 | 36.0 |
| 7 | 147.0 | 77.0 | 56.0 | 42.0 |
| 8 | 168.0 | 88.0 | 64.0 | 48.0 |
| 9 | 180.0 | 99.0 | 72.0 | 54.0 |
| 10 | 200.0 | 110.0 | 80.0 | 60.0 |
| 11 | 220.0 | 121.0 | 88.0 | 66.0 |
| 12 | 240.0 | 132.0 | 96.0 | 72.0 |
| 13 | 260.0 | 143.0 | 104.0 | 78.0 |
| 14 | 266.0 | 154.0 | 112.0 | 84.0 |
| 15 | 285.0 | 165.0 | 105.0 | 90.0 |
| 16 | 304.0 | 176.0 | 112.0 | 96.0 |
| 17 | 323.0 | 170.0 | 119.0 | 102.0 |
| 18 | 342.0 | 180.0 | 126.0 | 108.0 |
| 19 | 361.0 | 190.0 | 133.0 | 114.0 |
| 20 | 380.0 | 200.0 | 140.0 | 120.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 25.0 | 14.0 | 10.0 | 7.0 |
| 3 | 36.0 | 19.5 | 13.5 | 10.5 |
| 4 | 48.0 | 26.0 | 18.0 | 14.0 |
| 5 | 57.5 | 32.5 | 22.5 | 17.5 |
| 6 | 69.0 | 36.0 | 27.0 | 21.0 |
| 7 | 80.5 | 42.0 | 31.5 | 24.5 |
| 8 | 88.0 | 48.0 | 36.0 | 28.0 |
| 9 | 99.0 | 54.0 | 36.0 | 31.5 |
| 10 | 110.0 | 60.0 | 40.0 | 35.0 |
| 11 | 121.0 | 66.0 | 44.0 | 33.0 |
| 12 | 126.0 | 72.0 | 48.0 | 36.0 |
| 13 | 136.5 | 78.0 | 52.0 | 39.0 |
| 14 | 147.0 | 84.0 | 56.0 | 42.0 |
| 15 | 157.5 | 82.5 | 60.0 | 45.0 |
| 16 | 168.0 | 88.0 | 64.0 | 48.0 |
| 17 | 178.5 | 93.5 | 68.0 | 51.0 |
| 18 | 189.0 | 99.0 | 72.0 | 54.0 |
| 19 | 199.5 | 104.5 | 76.0 | 57.0 |
| 20 | 200.0 | 110.0 | 80.0 | 60.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量120L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 30.0 | 15.6 | 10.8 | 8.4 |
| 3 | 43.2 | 23.4 | 16.2 | 12.6 |
| 4 | 55.2 | 31.2 | 21.6 | 16.8 |
| 5 | 69.0 | 36.0 | 27.0 | 21.0 |
| 6 | 82.8 | 43.2 | 32.4 | 25.2 |
| 7 | 92.4 | 50.4 | 33.6 | 29.4 |
| 8 | 105.6 | 57.6 | 38.4 | 33.6 |
| 9 | 118.8 | 64.8 | 43.2 | 32.4 |
| 10 | 126.0 | 72.0 | 48.0 | 36.0 |
| 11 | 138.6 | 79.2 | 52.8 | 39.6 |
| 12 | 151.2 | 86.4 | 57.6 | 43.2 |
| 13 | 163.8 | 85.8 | 62.4 | 46.8 |
| 14 | 176.4 | 92.4 | 67.2 | 50.4 |
| 15 | 189.0 | 99.0 | 72.0 | 54.0 |
| 16 | 201.6 | 105.6 | 76.8 | 57.6 |
| 17 | 204.0 | 112.2 | 81.6 | 61.2 |
| 18 | 216.0 | 118.8 | 86.4 | 64.8 |
| 19 | 228.0 | 125.4 | 91.2 | 68.4 |
| 20 | 240.0 | 132.0 | 96.0 | 72.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 35.0 | 18.3 | 12.6 | 9.8 |
| 3 | 50.4 | 27.4 | 18.9 | 14.7 |
| 4 | 64.4 | 36.5 | 25.3 | 19.6 |
| 5 | 80.5 | 42.1 | 31.5 | 24.5 |
| 6 | 92.4 | 50.5 | 33.6 | 29.4 |
| 7 | 107.8 | 58.8 | 39.2 | 34.3 |
| 8 | 123.2 | 67.2 | 44.8 | 33.6 |
| 9 | 132.3 | 75.6 | 50.4 | 37.8 |
| 10 | 147.0 | 84.1 | 56.1 | 42.1 |
| 11 | 161.7 | 84.7 | 61.6 | 46.2 |
| 12 | 176.4 | 92.4 | 67.2 | 50.4 |
| 13 | 191.1 | 100.1 | 72.8 | 54.6 |
| 14 | 196.0 | 107.8 | 78.4 | 58.8 |
| 15 | 210.0 | 115.5 | 84.1 | 63.1 |
| 16 | 224.0 | 123.2 | 89.6 | 67.2 |
| 17 | 238.0 | 130.9 | 95.2 | 71.4 |
| 18 | 252.0 | 138.6 | 100.8 | 75.6 |
| 19 | 266.0 | 146.3 | 106.4 | 79.8 |
| 20 | 280.0 | 154.1 | 112.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量160L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 38.4 | 20.8 | 14.4 | 11.2 |
| 3 | 55.2 | 31.2 | 21.6 | 16.8 |
| 4 | 73.6 | 38.4 | 28.8 | 22.4 |
| 5 | 88.0 | 48.0 | 36.0 | 28.0 |
| 6 | 105.6 | 57.6 | 38.4 | 33.6 |
| 7 | 123.2 | 67.2 | 44.8 | 33.6 |
| 8 | 134.4 | 76.8 | 51.2 | 38.4 |
| 9 | 151.2 | 86.4 | 57.6 | 43.2 |
| 10 | 168.0 | 88.0 | 64.0 | 48.0 |
| 11 | 184.8 | 96.8 | 70.4 | 52.8 |
| 12 | 201.6 | 105.6 | 76.8 | 57.6 |
| 13 | 208.0 | 114.4 | 83.2 | 62.4 |
| 14 | 224.0 | 123.2 | 89.6 | 67.2 |
| 15 | 240.0 | 132.0 | 96.0 | 72.0 |
| 16 | 256.0 | 140.8 | 102.4 | 76.8 |
| 17 | 272.0 | 149.6 | 108.8 | 81.6 |
| 18 | 288.0 | 158.4 | 115.2 | 86.4 |
| 19 | 304.0 | 167.2 | 121.6 | 91.2 |
| 20 | 304.0 | 176.0 | 128.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 43.2 | 23.4 | 16.2 | 12.6 |
| 3 | 62.1 | 35.1 | 24.3 | 18.9 |
| 4 | 82.8 | 43.2 | 32.4 | 25.2 |
| 5 | 99.0 | 54.0 | 36.0 | 31.5 |
| 6 | 118.8 | 64.8 | 43.2 | 32.4 |
| 7 | 132.3 | 75.6 | 50.4 | 37.8 |
| 8 | 151.2 | 86.4 | 57.6 | 43.2 |
| 9 | 170.1 | 89.1 | 64.8 | 48.6 |
| 10 | 189.0 | 99.0 | 72.0 | 54.0 |
| 11 | 198.0 | 108.9 | 79.2 | 59.4 |
| 12 | 216.0 | 118.8 | 86.4 | 64.8 |
| 13 | 234.0 | 128.7 | 93.6 | 70.2 |
| 14 | 252.0 | 138.6 | 100.8 | 75.6 |
| 15 | 270.0 | 148.5 | 108.0 | 81.0 |
| 16 | 288.0 | 158.4 | 115.2 | 86.4 |
| 17 | 306.0 | 168.3 | 122.4 | 91.8 |
| 18 | 307.8 | 178.2 | 129.6 | 97.2 |
| 19 | 324.9 | 188.1 | 119.7 | 102.6 |
| 20 | 342.0 | 198.0 | 126.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量160mCi、废水量200L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 48.0 | 26.0 | 18.0 | 14.0 |
| 3 | 69.0 | 36.0 | 27.0 | 21.0 |
| 4 | 88.0 | 48.0 | 36.0 | 28.0 |
| 5 | 110.0 | 60.0 | 40.0 | 35.0 |
| 6 | 126.0 | 72.0 | 48.0 | 36.0 |
| 7 | 147.0 | 84.0 | 56.0 | 42.0 |
| 8 | 168.0 | 88.0 | 64.0 | 48.0 |
| 9 | 189.0 | 99.0 | 72.0 | 54.0 |
| 10 | 200.0 | 110.0 | 80.0 | 60.0 |
| 11 | 220.0 | 121.0 | 88.0 | 66.0 |
| 12 | 240.0 | 132.0 | 96.0 | 72.0 |
| 13 | 260.0 | 143.0 | 104.0 | 78.0 |
| 14 | 280.0 | 154.0 | 112.0 | 84.0 |
| 15 | 300.0 | 165.0 | 120.0 | 90.0 |
| 16 | 304.0 | 176.0 | 128.0 | 96.0 |
| 17 | 340.0 | 187.0 | 119.0 | 102.0 |
| 18 | 342.0 | 198.0 | 126.0 | 108.0 |
| 19 | 361.0 | 190.0 | 133.0 | 114.0 |
| 20 | 380.0 | 200.0 | 140.0 | 120.0 |

* 1. 衰变池的各级（组）衰变池最小容积（疗剂量180mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 26.0 | 14.0 | 10.0 | 7.0 |
| 3 | 37.5 | 19.5 | 13.5 | 10.5 |
| 4 | 48.0 | 26.0 | 18.0 | 14.0 |
| 5 | 60.0 | 32.5 | 22.5 | 17.5 |
| 6 | 69.0 | 39.0 | 27.0 | 21.0 |
| 7 | 80.5 | 42.0 | 31.5 | 24.5 |
| 8 | 92.0 | 48.0 | 36.0 | 28.0 |
| 9 | 99.0 | 54.0 | 40.5 | 31.5 |
| 10 | 110.0 | 60.0 | 40.0 | 35.0 |
| 11 | 121.0 | 66.0 | 44.0 | 38.5 |
| 12 | 132.0 | 72.0 | 48.0 | 36.0 |
| 13 | 143.0 | 78.0 | 52.0 | 39.0 |
| 14 | 147.0 | 84.0 | 56.0 | 42.0 |
| 15 | 157.5 | 90.0 | 60.0 | 45.0 |
| 16 | 168.0 | 96.0 | 64.0 | 48.0 |
| 17 | 178.5 | 93.5 | 68.0 | 51.0 |
| 18 | 189.0 | 99.0 | 72.0 | 54.0 |
| 19 | 199.5 | 104.5 | 76.0 | 57.0 |
| 20 | 210.0 | 110.0 | 80.0 | 60.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量180mCi、废水量120L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 30.0 | 16.8 | 10.8 | 8.4 |
| 3 | 43.2 | 23.4 | 16.2 | 12.6 |
| 4 | 57.6 | 31.2 | 21.6 | 16.8 |
| 5 | 69.0 | 39.0 | 27.0 | 21.0 |
| 6 | 82.8 | 43.2 | 32.4 | 25.2 |
| 7 | 92.4 | 50.4 | 37.8 | 29.4 |
| 8 | 105.6 | 57.6 | 38.4 | 33.6 |
| 9 | 118.8 | 64.8 | 43.2 | 37.8 |
| 10 | 132.0 | 72.0 | 48.0 | 36.0 |
| 11 | 145.2 | 79.2 | 52.8 | 39.6 |
| 12 | 151.2 | 86.4 | 57.6 | 43.2 |
| 13 | 163.8 | 93.6 | 62.4 | 46.8 |
| 14 | 176.4 | 92.4 | 67.2 | 50.4 |
| 15 | 189.0 | 99.0 | 72.0 | 54.0 |
| 16 | 201.6 | 105.6 | 76.8 | 57.6 |
| 17 | 214.2 | 112.2 | 81.6 | 61.2 |
| 18 | 226.8 | 118.8 | 86.4 | 64.8 |
| 19 | 228.0 | 125.4 | 91.2 | 68.4 |
| 20 | 240.0 | 132.0 | 96.0 | 72.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量180mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 35.0 | 18.2 | 12.6 | 9.8 |
| 3 | 50.4 | 27.3 | 18.9 | 14.7 |
| 4 | 64.4 | 36.4 | 25.2 | 19.6 |
| 5 | 80.5 | 42.1 | 31.5 | 24.5 |
| 6 | 92.4 | 50.4 | 37.8 | 29.4 |
| 7 | 107.8 | 58.8 | 39.2 | 34.3 |
| 8 | 123.2 | 67.2 | 44.8 | 39.2 |
| 9 | 138.6 | 75.6 | 50.4 | 37.8 |
| 10 | 147.0 | 84.1 | 56.1 | 42.1 |
| 11 | 161.7 | 92.4 | 61.6 | 46.2 |
| 12 | 176.4 | 92.4 | 67.2 | 50.4 |
| 13 | 191.1 | 100.1 | 72.8 | 54.6 |
| 14 | 205.8 | 107.8 | 78.4 | 58.8 |
| 15 | 220.5 | 115.5 | 84.1 | 63.1 |
| 16 | 224.1 | 123.2 | 89.6 | 67.2 |
| 17 | 238.1 | 130.9 | 95.2 | 71.4 |
| 18 | 252.1 | 138.6 | 100.8 | 75.6 |
| 19 | 266.0 | 146.3 | 106.4 | 79.8 |
| 20 | 280.0 | 154.1 | 112.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量180mCi、废水量160L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 40.0 | 20.8 | 14.4 | 11.2 |
| 3 | 57.6 | 31.2 | 21.6 | 16.8 |
| 4 | 73.6 | 38.4 | 28.8 | 22.4 |
| 5 | 92.0 | 48.0 | 36.0 | 28.0 |
| 6 | 105.6 | 57.6 | 38.4 | 33.6 |
| 7 | 123.2 | 67.2 | 44.8 | 39.2 |
| 8 | 140.8 | 76.8 | 51.2 | 38.4 |
| 9 | 151.2 | 86.4 | 57.6 | 43.2 |
| 10 | 168.0 | 96.0 | 64.0 | 48.0 |
| 11 | 184.8 | 96.8 | 70.4 | 52.8 |
| 12 | 201.6 | 105.6 | 76.8 | 57.6 |
| 13 | 218.4 | 114.4 | 83.2 | 62.4 |
| 14 | 224.0 | 123.2 | 89.6 | 67.2 |
| 15 | 240.0 | 132.0 | 96.0 | 72.0 |
| 16 | 256.0 | 140.8 | 102.4 | 76.8 |
| 17 | 272.0 | 149.6 | 108.8 | 81.6 |
| 18 | 288.0 | 158.4 | 115.2 | 86.4 |
| 19 | 304.0 | 167.2 | 121.6 | 91.2 |
| 20 | 320.0 | 176.0 | 128.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量180mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 43.2 | 23.4 | 16.2 | 12.6 |
| 3 | 62.1 | 35.1 | 24.3 | 18.9 |
| 4 | 82.8 | 43.2 | 32.4 | 25.2 |
| 5 | 99.0 | 54.0 | 40.5 | 31.5 |
| 6 | 118.8 | 64.8 | 43.2 | 37.8 |
| 7 | 138.6 | 75.6 | 50.4 | 37.8 |
| 8 | 151.2 | 86.4 | 57.6 | 43.2 |
| 9 | 170.1 | 97.2 | 64.8 | 48.6 |
| 10 | 189.0 | 99.0 | 72.0 | 54.0 |
| 11 | 207.9 | 108.9 | 79.2 | 59.4 |
| 12 | 226.8 | 118.8 | 86.4 | 64.8 |
| 13 | 234.0 | 128.7 | 93.6 | 70.2 |
| 14 | 252.0 | 138.6 | 100.8 | 75.6 |
| 15 | 270.0 | 148.5 | 108.0 | 81.0 |
| 16 | 288.0 | 158.4 | 115.2 | 86.4 |
| 17 | 306.0 | 168.3 | 122.4 | 91.8 |
| 18 | 324.0 | 178.2 | 129.6 | 97.2 |
| 19 | 342.0 | 188.1 | 136.8 | 102.6 |
| 20 | 342.0 | 198.0 | 144.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量180mCi、废水量200L/床·天）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 48.0 | 26.0 | 18.0 | 14.0 |
| 3 | 69.0 | 39.0 | 27.0 | 21.0 |
| 4 | 92.0 | 48.0 | 36.0 | 28.0 |
| 5 | 110.0 | 60.0 | 40.0 | 35.0 |
| 6 | 132.0 | 72.0 | 48.0 | 36.0 |
| 7 | 147.0 | 84.0 | 56.0 | 42.0 |
| 8 | 168.0 | 96.0 | 64.0 | 48.0 |
| 9 | 189.0 | 99.0 | 72.0 | 54.0 |
| 10 | 210.0 | 110.0 | 80.0 | 60.0 |
| 11 | 220.0 | 121.0 | 88.0 | 66.0 |
| 12 | 240.0 | 132.0 | 96.0 | 72.0 |
| 13 | 260.0 | 143.0 | 104.0 | 78.0 |
| 14 | 280.0 | 154.0 | 112.0 | 84.0 |
| 15 | 300.0 | 165.0 | 120.0 | 90.0 |
| 16 | 320.0 | 176.0 | 128.0 | 96.0 |
| 17 | 340.0 | 187.0 | 136.0 | 102.0 |
| 18 | 342.0 | 198.0 | 144.0 | 108.0 |
| 19 | 361.0 | 209.0 | 152.0 | 114.0 |
| 20 | 380.0 | 220.0 | 140.0 | 120.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量100L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 26.0 | 14.0 | 10.0 | 8.0 |
| 3 | 37.5 | 19.5 | 13.5 | 10.5 |
| 4 | 48.0 | 26.0 | 18.0 | 14.0 |
| 5 | 60.0 | 32.5 | 22.5 | 17.5 |
| 6 | 69.0 | 39.0 | 27.0 | 21.0 |
| 7 | 80.5 | 45.5 | 31.5 | 24.5 |
| 8 | 92.0 | 48.0 | 36.0 | 28.0 |
| 9 | 103.5 | 54.0 | 40.5 | 31.5 |
| 10 | 110.0 | 60.0 | 45.0 | 35.0 |
| 11 | 121.0 | 66.0 | 44.0 | 38.5 |
| 12 | 132.0 | 72.0 | 48.0 | 42.0 |
| 13 | 143.0 | 78.0 | 52.0 | 45.5 |
| 14 | 168.0 | 84.0 | 56.0 | 42.0 |
| 15 | 157.5 | 90.0 | 60.0 | 45.0 |
| 16 | 168.0 | 96.0 | 64.0 | 48.0 |
| 17 | 178.5 | 102.0 | 68.0 | 51.0 |
| 18 | 189.0 | 108.0 | 72.0 | 54.0 |
| 19 | 199.5 | 104.5 | 76.0 | 57.0 |
| 20 | 210.0 | 110.0 | 80.0 | 60.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量120L/床·天）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 30.0 | 16.8 | 12.0 | 8.4 |
| 3 | 43.2 | 23.4 | 16.2 | 12.6 |
| 4 | 57.6 | 31.2 | 21.6 | 16.8 |
| 5 | 69.0 | 39.0 | 27.0 | 21.0 |
| 6 | 82.8 | 43.2 | 32.4 | 25.2 |
| 7 | 96.6 | 50.4 | 37.8 | 29.4 |
| 8 | 105.6 | 57.6 | 43.2 | 33.6 |
| 9 | 118.8 | 64.8 | 43.2 | 37.8 |
| 10 | 132.0 | 72.0 | 48.0 | 42.0 |
| 11 | 145.2 | 79.2 | 52.8 | 46.2 |
| 12 | 165.6 | 86.4 | 57.6 | 43.2 |
| 13 | 163.8 | 93.6 | 62.4 | 46.8 |
| 14 | 176.4 | 100.8 | 67.2 | 50.4 |
| 15 | 189.0 | 108.0 | 72.0 | 54.0 |
| 16 | 201.6 | 105.6 | 76.8 | 57.6 |
| 17 | 214.2 | 112.2 | 81.6 | 61.2 |
| 18 | 226.8 | 118.8 | 86.4 | 64.8 |
| 19 | 239.4 | 125.4 | 91.2 | 68.4 |
| 20 | 252.0 | 132.0 | 96.0 | 72.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量140L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 35.0 | 18.3 | 12.7 | 9.8 |
| 3 | 50.5 | 27.4 | 18.9 | 14.8 |
| 4 | 67.2 | 36.5 | 25.3 | 19.6 |
| 5 | 80.6 | 45.6 | 31.6 | 24.6 |
| 6 | 96.7 | 50.5 | 37.9 | 29.5 |
| 7 | 107.9 | 58.9 | 44.1 | 34.4 |
| 8 | 123.3 | 67.2 | 44.9 | 39.2 |
| 9 | 138.7 | 75.7 | 50.5 | 44.1 |
| 10 | 154.1 | 84.1 | 56.1 | 42.1 |
| 11 | 161.8 | 92.4 | 61.7 | 46.2 |
| 12 | 176.4 | 100.9 | 67.2 | 50.5 |
| 13 | 191.2 | 109.3 | 72.9 | 54.7 |
| 14 | 205.8 | 107.9 | 78.4 | 58.9 |
| 15 | 220.6 | 115.6 | 84.1 | 63.1 |
| 16 | 235.3 | 123.3 | 89.7 | 67.2 |
| 17 | 249.9 | 130.9 | 95.2 | 71.4 |
| 18 | 252.1 | 138.7 | 100.9 | 75.7 |
| 19 | 266.0 | 146.3 | 106.4 | 79.9 |
| 20 | 280.0 | 154.1 | 112.1 | 84.1 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量160L/床·天）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 41.6 | 20.8 | 14.4 | 11.3 |
| 3 | 57.6 | 31.2 | 21.6 | 16.8 |
| 4 | 73.6 | 41.6 | 28.8 | 22.5 |
| 5 | 92.0 | 48.0 | 36.0 | 28.0 |
| 6 | 105.6 | 57.6 | 43.2 | 33.6 |
| 7 | 123.2 | 67.2 | 44.9 | 39.2 |
| 8 | 140.8 | 76.8 | 51.2 | 44.9 |
| 9 | 158.4 | 86.4 | 57.6 | 43.2 |
| 10 | 168.0 | 96.0 | 64.0 | 48.0 |
| 11 | 184.8 | 105.7 | 70.4 | 52.9 |
| 12 | 201.6 | 105.7 | 76.8 | 57.6 |
| 13 | 218.4 | 114.4 | 83.2 | 62.4 |
| 14 | 235.3 | 123.2 | 89.7 | 67.2 |
| 15 | 252.0 | 132.0 | 96.0 | 72.0 |
| 16 | 256.0 | 140.8 | 102.4 | 76.8 |
| 17 | 272.0 | 149.6 | 108.8 | 81.7 |
| 18 | 288.0 | 158.4 | 115.2 | 86.4 |
| 19 | 304.0 | 167.3 | 121.7 | 91.2 |
| 20 | 320.0 | 176.0 | 128.0 | 96.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量180L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 43.2 | 23.4 | 16.2 | 12.6 |
| 3 | 64.8 | 35.1 | 24.3 | 18.9 |
| 4 | 82.8 | 43.2 | 32.4 | 25.2 |
| 5 | 103.5 | 54.0 | 40.5 | 31.5 |
| 6 | 118.8 | 64.8 | 43.2 | 37.8 |
| 7 | 138.6 | 75.6 | 50.4 | 44.1 |
| 8 | 158.4 | 86.4 | 57.6 | 43.2 |
| 9 | 170.1 | 97.2 | 64.8 | 48.6 |
| 10 | 189.0 | 108.0 | 72.0 | 54.0 |
| 11 | 207.9 | 108.9 | 79.2 | 59.4 |
| 12 | 226.8 | 118.8 | 86.4 | 64.8 |
| 13 | 245.7 | 128.7 | 93.6 | 70.2 |
| 14 | 252.0 | 138.6 | 100.8 | 75.6 |
| 15 | 270.0 | 148.5 | 108.0 | 81.0 |
| 16 | 288.0 | 158.4 | 115.2 | 86.4 |
| 17 | 306.0 | 168.3 | 122.4 | 91.8 |
| 18 | 324.0 | 178.2 | 129.6 | 97.2 |
| 19 | 342.0 | 188.1 | 136.8 | 102.6 |
| 20 | 360.0 | 198.0 | 144.0 | 108.0 |

* 1. 衰变池的各级（组）衰变池最小容积（治疗剂量200mCi、废水量200L/床·d）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 床位数量  （满员） | 各级（组）衰变池的最小容积（m3） | | | |
| m=2 | m=3 | m=4 | m=5 |
| 2 | 48.0 | 26.0 | 18.0 | 14.0 |
| 3 | 69.0 | 39.0 | 27.0 | 21.0 |
| 4 | 92.0 | 48.0 | 36.0 | 28.0 |
| 5 | 110.0 | 60.0 | 45.0 | 35.0 |
| 6 | 132.0 | 72.0 | 48.0 | 42.0 |
| 7 | 154.0 | 84.0 | 56.0 | 42.0 |
| 8 | 168.0 | 96.0 | 64.0 | 48.0 |
| 9 | 189.0 | 108.0 | 72.0 | 54.0 |
| 10 | 210.0 | 110.0 | 80.0 | 60.0 |
| 11 | 231.0 | 121.0 | 88.0 | 66.0 |
| 12 | 252.0 | 132.0 | 96.0 | 72.0 |
| 13 | 260.0 | 143.0 | 104.0 | 78.0 |
| 14 | 280.0 | 154.0 | 112.0 | 84.0 |

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