**建设项目环境影响报告表**

|  |  |
| --- | --- |
| 项 目 名 称： | 南通赛可特电子有限公司PCB、 |
|  | 封装基板及芯片专用材料扩改项目 |
| 建设单位（盖章）： | 南通赛可特电子有限公司 |

编制日期：2019年4月

江苏省环境保护厅制

**表一 建设项目基本情况**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 项目名称 | 南通赛可特电子有限公司PCB、封装基板及芯片专用材料扩改项目 | | | | | | | | | |
| 建设单位 | 南通赛可特电子有限公司 | | | | | | | | | |
| 法人代表 | 刘政 | | | | 联系人 | | 刘波 | | | |
| 通讯地址 | 南通市通州高新技术开发区金鼎路26号 | | | | | | | | | |
| 联系电话 | 15995651106 | | | 传真 | - | | 邮政编码 | | 226300 | |
| 建设地点 | 南通市通州高新技术开发区金鼎路26号（南通赛可特电子有限公司原厂区内） | | | | | | | | | |
| 立项审批部门 | 南通市通州区行政审批局 | | | | 备案证号 | | 通行审投备[2019]80号 | | | |
| 建设性质 | 扩建 | | | | 行业类别及代码 | | [C3985]电子专用材料制造 | | | |
| 占地面积（m2） | 11995m2 | | | | 绿化面积（m2） | | 1378.5 | | | |
| 总投资（万元） | 2000 | | 环保投资（万元） | | 70 | | 环保投资占  总投资比例 | | | 3.5% |
| 评价经费（万元） | | | - | | 预期投产日期 | | 2019年 10 月 | | | |
| **原辅材料(包括名称、用量)及主要设施规格、数量**  主要原辅材料：详见表1-5。  主要设备：详见表1-7。 | | | | | | | | | | |
| **水及能源消耗量** | | | | | | | | | | |
| 名称 | | 消耗量 | | | | 名称 | | 消耗量 | | |
| 水（吨/年） | | 23878.37469 | | | | 燃油（吨/年） | | - | | |
| 电（万千瓦时/年） | | 20 | | | | 燃气（立方米/年） | | - | | |
| 燃煤（吨/年） | | - | | | | 蒸汽（吨/年） | | - | | |
| **废水排水量及排放去向**  本项目实行“雨污分流、清污分流”制。雨水经雨水管道收集后排入附近河流。项目营运期生产废水（4017.72t/a，经厂内污水处理站预处理）与生活污水（120t/a，经厂区化粪池预处理）预处理达标后接管至南通市通州区益民污水处理有限公司集中处理，达到《城镇污水处理厂污染物排放标准》（GB18918-2002）中表1中一级A标准后排放至通甲河，最终汇入新江海河。 | | | | | | | | | | |
| **放射性同位素和伴有电磁辐射的设施的使用情况**  无 | | | | | | | | | | |
| **1 项目由来**  南通赛可特电子有限公司（以下简称“南通赛可特”）成立于2015年01月，位于南通市高新技术开发区金鼎路26号，主要从事PCB（高端电子电路）产业和相关电子产品用专用及辅助材料的开发、生产及销售。南通赛可特产品种类多样，涉及电子电路生产过程中大多数工序，目前拥有年产10000吨电子元器件专用及辅助材料生产线。  2015年1月，电子元器件专用及辅助材料项目取得了南通市通州区环境保护局的审批意见（通环建[2015]6号），于2018年10月通过了环保竣工验收。  近年来，随着电子产业迅速发展，电子电路企业不断进行产品与技术革新，这就要求其上游供应商能够提供满足新工艺的相关配套电子专用材料。在这种情况下，南通赛可特作为南通高新区高端电子电路企业（例如深南公司、展华电子、生益科技、吴通电子等）的配套供应商，投资2000万元，依托现有厂房对现有产品结构及配方进行调整，建设PCB、封装基板及芯片专用材料扩改项目，项目建成后总产能达13700t/a。  根据《中华人民共和国环境保护法》、《中华人民共和国环境影响评价法》、《建设项目环境保护管理条例》，项目应在工程开工建设前进行环境影响评价。对照《建设项目环境影响评价分类管理名录》（环境保护部44号令）及其修改单（生态环境部1号令），本项目属于“**二十八、计算机、通信和其他电子设备制造业-83-电子元件及电子专用材料制造-印刷电路板；电子专用材料；有分割、焊接、酸洗或有机溶剂清洗工艺的**”，应编制环境影响报告表。为此，南通赛可特委托江苏绿源工程设计研究有限公司开展环境影响评价工作。受委托后，江苏绿源工程设计研究有限公司现场踏勘、调研、收集有关资料，在与建设单位沟通核实基础上，编制了该项目环境影响报告表。  **2 工程内容及规模：**  **2.1 项目概况**  项目名称：南通赛可特电子有限公司PCB、封装基板及芯片专用材料扩改项目；  项目性质：扩建；  建设单位：南通赛可特电子有限公司；  建设地点：南通市通州高新技术开发区金鼎路26号（南通赛可特电子有限公司原厂区内）；  项目投资：总投资2000万元，其中环保投资70万元，占总投资的3.5%；  用地面积：11998m2（不新增用地）；  劳动定员及工作制度：新增10人（总定员80人），单班制（8 h），年工作300天（2400 h）。  **2.2 主体工程及产品方案**  **表1-1 本项目主要建构筑物一览表**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **建构筑物** | **层数** | **高度（m）** | **占地面积（m2）** | **建筑面积（m2）** | **类别** | **备注** | | 1 | 1#厂房 | 2 | 9 | 1081.9 | 2163.8 | 丙类 | 依托现有，1楼为1#车间，2楼为2#车间 | | 2 | 2#厂房 | 2 | 9 | 1229.2 | 2458.4 | 丙类 | 依托现有，1楼设3#车间、4#车间（甲类），2楼设3#仓库、5#车间（甲类） | | 3 | 3#厂房 | 2 | 9 | 1352.2 | 2704.4 | 丙类 | 依托现有，1楼设6#车间（内设污水处理站、一般固废暂存库）、7#车间，2楼设8#车间、9#车间 | | 4 | 4#厂房 | 3 | 16 | 1250 | 3750 | 丙类 | 依托现有，1楼设成品仓库、模拟实验室，2楼为10#车间，3楼设11#车间、实验室1、实验室2、实验室3 | | 5 | 办公楼 | 4 | 16 | 460 | 1840 | 丙类 | 依托现有 | | 6 | 辅楼 | 1 | 3.8 | 138.8 | 138.8 | 丙类 | 依托现有 | | 7 | 配电间 | 1 | 3.8 | 20 | 20 | 丙类 | 依托现有 | | 8 | 危废仓库 | 1 | 3.8 | 140 | 140 | 甲类 | 新建 | | 9 | 1#原料仓库 | 1 | 4.8 | 245.6 | 245.6 | 甲类 | 依托现有 | | 10 | 2#原料仓库 | 1 | 4.8 | 245.6 | 245.6 | 甲类 | 依托现有 | | 11 | 门卫、泵房 | 1 | 3.8 | 67.8 | 67.8 | 丙类 | 依托现有 | | 合 计 | | |  | 6071.1 | 13614.4 | - | - |   **表1-2 项目产品方案**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **产品名称** | **生产区域** | **设计能力（t/a）** | | | **运行时数（h/a）** | **运行时数（h/批）** | **生产规模（t/批）** | | **扩建前** | **扩建后** | **增减量** | | 1 | 高分子导电膜A[1] | 1#厂房2楼 | 1500 | 200 | -1300 | 2400 | 8 | 0.7 | | 2 | 高分子导电膜B[1] | 1500 | 200 | -1300 | 2400 | 8 | 0.7 | | 3 | 化学铜添加剂A[1] | 3#厂房1楼 | 3000 | 1425 | -1575 | 2400 | 8 | 4.8 | | 4 | 化学铜添加剂B[1] | 3000 | 2075 | -925 | 2400 | 8 | 7 | | 5 | 电镀光亮剂[1] | 3#厂房2楼 | 1000 | 500 | -500 | 2400 | 8 | 1.7 | | 6 | 金属保护液 | 1#厂房1楼 | 0 | 800 | +1900 | 2400 | 8 | 2.7 | | 3#厂房2楼 | 0 | 900 | 3 | | 4#厂房2楼 | 0 | 200 | 0.7 | | 7 | 电子用剥离液 | 4#厂房2楼 | 0 | 400 | +2100 | 2400 | 8 | 1.4 | | 1#厂房1楼 | 0 | 1300 | 4.4 | | 2#厂房1楼 | 0 | 400 | 1.4 | | 8 | 蚀刻液 | 3#厂房1楼 | 0 | 1800 | +2500 | 2400 | 8 | 6 | | 1#厂房1楼 | 0 | 200 | 0.7 | | 2#厂房1楼 | 0 | 500 | 1.7 | | 9 | 酸性孔金属化试剂 | 4#厂房2楼 | 0 | 800 | +1400 | 2400 | 8 | 2.7 | | 4#厂房3楼 | 0 | 600 | 2 | | 10 | 碱性孔金属化试剂 | 4#厂房3楼 | 0 | 400 | +400 | 2400 | 8 | 1.4 | | 11 | 高纵横比通孔和填孔镀铜液 | 4#厂房2楼 | 0 | 1000 | +1000 | 2400 | 8 | 3.4 | | 合计 | | | 10000 | 13700 | +3700 | - | - | - |   **注：[1]产能减少的同时对配方进行改动，因此本项目产能以13700t/a计（建成后全厂产能）。**  本项目产品专用于5G通讯产品、半导体等电子设备制造过程，根据国民经济行业分类（GBT4754-2017），本项目类别属于专用电子材料制造【C3985】。对照《2017国民经济行业分类注释》专用电子材料制造【C3985】中的小类别，将本项目产品细分，具体见表1-3。  表1-3 项目产品细分情况   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **序号** | **产品名称** | **状态** | **适用产品** | **行业分类** | | 1 | 高分子导电膜A | 液 | 5G通讯产品，半导体 | 功能湿电子化学品（混剂） | | 2 | 高分子导电膜B | 液 | 新能源汽车/5G通讯 | 功能湿电子化学品（混剂） | | 3 | 化学铜添加剂A | 液 | 新能源汽车/5G通讯 | 功能湿电子化学品（混剂） | | 4 | 化学铜添加剂B | 液 | 5G通讯产品 | 功能湿电子化学品（混剂） | | 5 | 电镀光亮剂 | 液 | 提升PCB制造过程自动化 | TSV-深孔镀铜液 | | 6 | 金属保护液 | 液 | 新能源汽车/5G通讯 | 金属保护液 | | 7 | 电子用剥离液 | 液 | 新能源汽车/5G通讯 | 剥离液 | | 8 | 蚀刻液 | 液 | 5G通讯产品 | 蚀刻液 | | 9 | 酸性孔金属化试剂 | 液 | 新能源汽车/5G通讯 | 功能湿电子化学品（混剂） | | 10 | 碱性孔金属化试剂 | 液 | 5G通讯产品，半导体 | 功能湿电子化学品（混剂） | | 11 | 高纵横比通孔和填孔镀铜液 | 液 | 新能源汽车/5G通讯 | TSV-深孔镀铜液 |   **2.3 公辅助工程**  本项目公辅工程见表1-4。  **表1-4 主体工程及公辅工程**   | **类别** | 建设名称 | | 设计能力 | | | 备注 | | --- | --- | --- | --- | --- | --- | --- | | **扩建前** | **扩建后** | **增减量** | | 贮运工程 | 1#原料仓库（m2） | | 245.55 | 245.55 | 0 | 甲类仓库，依托现有 | | 2#原料仓库（m2） | | 245.55 | 245.55 | 0 | 甲类仓库，依托现有 | | 成品仓库（m2） | | 1081.9 | 800 | 0 | 原有成品仓库（1#厂房1楼）改为生产车间，新成品仓库设在4#厂房1楼部分区域 | | 公用及辅助工程 | 给水(m3/a) | | 27475 | 23878.37469 | -3596.62531 | 市政管网 | | 纯水制备 | | 3套（6t/h） | 2套（4t/h） | -1套（2t/h） | - | | 排水（m3/d） | | 12.8 | 16.6 | +3.8 | 益民污水处理厂 | | 供电（kwh/a） | | 100000 | 300000 | +200000 | 依托现有配电间及园区电网 | | 环保工程 | 废气 | 废气收集系统（套） | 0 | 2 | +2 | 新增 | | 布袋除尘装置（套） | 0 | 2 | +2 | 新增 | | 喷淋吸收装置（套） | 0 | 2 | +2 | 新增 | | 废水 | 污水处理站 | 18m3/d | 18m3/d | 0 | 1套，依托现有 | | 化粪池 | 10m3 | 10m3 | 0 | 1套，依托现有 | | 事故应急池（m3） | 0 | 110 | +110 | 新增 | | 雨水收集池（m3） | 0 | 50 | +50 | 新增 | | 固废 | 一般固废堆场（m2） | 0 | 50 | +50 | 3号厂房生产车间东侧 | | 危险固废堆场（m2） | 0 | 140 | +140 | 厂区东北角 | | 噪声治理 | | 厂房隔声、减振 | | | | | 雨水、污水排口 | | 1套 | 1套 | 0 | 依托现有 |   **2.4 主要原辅材料**  **2.4.1 主要原辅材料**  **表1-5 建设项目主要原辅料情况表**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 名称 | 规格 | 状态 | 包装方式 | 运输方式 | 年用量（t） | 最大储存储量（t） | 储存地点 | | 高分子导电膜A（200t） | | | | | | | | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 20 | 1 | 危险品仓库 | | N-甲基吡咯烷酮 | 99% | 液 | 桶装 | 汽运 | 20 | 1 | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 50 | 3 | | 乙二醇 | 99% | 液 | 桶装 | 汽运 | 20 | 0.5 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 20 | 3 | | 对甲基苯磺酸钠 | 99% | 固 | 袋装 | 汽运 | 3 | 0.1 | | EDOT（3,4-乙烯二氧噻吩） | 99% | 液 | 桶装 | 汽运 | 5 | 0.5 | | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 99% | 液 | 桶装 | 汽运 | 10 | 1 | | 高分子导电膜B（200t） | | | | | | | | | 高锰酸钠 | 40% | 液 | 桶装 | 汽运 | 20 | 2 | 危险品仓库 | | 聚苯乙烯磺酸 | 30% | 液 | 桶装 | 汽运 | 50 | 2 | | 甲基磺酸 | 99% | 液 | 桶装 | 汽运 | 30 | 0.5 | | 硫酸锰 | 99% | 固 | 袋装 | 汽运 | 20 | 1 | | 硼酸 | 99% | 固 | 桶装 | 汽运 | 5 | 0.2 | | 化学铜添加剂A（1425t） | | | | | | | | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 100 | 3 | 危险品仓库 | | 硫酸羟胺 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 二乙烯三胺 | 99% | 液 | 桶装 | 汽运 | 50 | 2 | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 30 | 1 | | 十二烷基三甲基氯化铵 | 50% | 液 | 桶装 | 汽运 | 1 | 0.1 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 20 | 0.5 | | 酒石酸钾钠 | 99% | 固 | 桶装 | 汽运 | 100 | 5 | | 氢氧化钠 | 30% | 液 | 桶装 | 汽运 | 333 | 16 | | 碳酸钾 | 98% | 固 | 袋装 | 汽运 | 100 | 5 | | 化学铜添加剂B（2075t） | | | | | | | | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 43 | 3 | 危险品仓库 | | 氯化亚锡 | 99% | 固 | 桶装 | 汽运 | 10 | 0.5 | | 盐酸 | 37% | 液 | 桶装 | 汽运 | 5 | 0.2 | | 硫酸铜 | 99.50% | 固 | 袋装 | 汽运 | 500 | 10 | | 甲醛 | 37% | 液 | 桶装 | 汽运 | 35 | 10 | | 聚乙二醇1000 | 99.90% | 固 | 袋装 | 汽运 | 0.2 | 0.025 | | 酒石酸钾钠 | 99% | 固 | 袋装 | 汽运 | 150 | 5 | | EDTA-2Na | 99% | 固 | 袋装 | 汽运 | 20 | 0.5 | | 碳酸钠 | 99% | 固 | 袋装 | 汽运 | 100 | 2 | | 电镀光亮剂（500t） | | | | | | | | | 硫酸铜 | 98% | 固 | 袋装 | 汽运 | 5 | 1 | 危险品仓库 | | PEG10000 | 99% | 固 | 袋装 | 汽运 | 35 | 1 | | 50HB-400 | 99% | 液 | 桶装 | 汽运 | 35 | 0.3 | | PAS-5-A | 40% | 液 | 桶装 | 汽运 | 10 | 0.2 | | [聚二硫二丙烷磺酸钠](http://www.pps.net.cn/pro.asp?tid=66&pid=43) | 97% | 固 | 桶装 | 汽运 | 5 | 0.2 | | 壬基酚聚氧乙烯醚 | 99% | 液 | 桶装 | 汽运 | 10 | 0.3 | | 单异壬苯基聚乙二醇 | 99% | 液 | 桶装 | 汽运 | 10 | 0.3 | | 对苯二酚 | 99% | 固 | 袋装 | 汽运 | 1 | 0.05 | | 柠檬酸 | 99% | 固 | 袋装 | 汽运 | 10 | 1 | | 甲酸 | 99% | 液 | 桶装 | 汽运 | 10 | 0.5 | | NP-10（壬基酚聚氧乙烯醚） | 99% | 液 | 桶装 | 汽运 | 5 | 0.3 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 5 | 3 | | 金属保护液（1900t） | | | | | | | | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 100 | 3 | 危险品仓库 | | 硫酸羟胺 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 二乙烯三胺 | 99% | 液 | 桶装 | 汽运 | 50 | 2 | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 30 | 1 | | 十二烷基三甲基氯化铵 | 50% | 液 | 桶装 | 汽运 | 1 | 0.1 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 20 | 0.5 | | 电子用剥离液（2100t） | | | | | | | | | 硝酸 | 68% | 液 | 桶装 | 汽运 | 10 | 0.5 | 危险品仓库 | | 氨基四唑 | 100% | 固 | 袋装 | 汽运 | 1 | 0.1 | | 硫酸 | 60% | 液 | 桶装 | 汽运 | 50 | 2 | | 邻甲酚磺酸 | 98% | 液 | 桶装 | 汽运 | 10 | 2 | | 葡萄糖酸 | 45% | 液 | 桶装 | 汽运 | 10 | 1 | | N-甲基吡咯烷酮 | 99% | 液 | 桶装 | 汽运 | 5 | 0.5 | | 双氧水 | 35% | 液 | 桶装 | 汽运 | 1040 | 6 | | 乙醇 | 98% | 液 | 桶装 | 汽运 | 80 | 2 | | 异丙醇 | 98% | 液 | 桶装 | 汽运 | 12 | 0.4 | | 甲醇 | 98% | 液 | 桶装 | 汽运 | 20 | 0.6 | | 丁醚 | 98% | 液 | 桶装 | 汽运 | 20 | 0.8 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 30 | 1.5 | | 二乙二醇丁醚 | 99% | 液 | 桶装 | 汽运 | 20 | 3 | | 冰乙酸 | 99% | 液 | 桶装 | 汽运 | 50 | 0.3 | | 甲基磺酸 | 99% | 液 | 桶装 | 汽运 | 50 | 0.3 | | 丙骈三氮唑 | 99% | 固 | 桶装 | 汽运 | 2 | 0.025 | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 100 | 3 | | 甲酸 | 99% | 液 | 桶装 | 汽运 | 20 | 2 | | 盐酸 | 37% | 液 | 桶装 | 汽运 | 10 | 0.2 | | 硫酸铜 | 98% | 固 | 袋装 | 汽运 | 5 | 1 | | 硫酸亚锡 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 蚀刻液（2500t） | | | | | | | | | 单乙醇胺 | 98% | 液 | 桶装 | 汽运 | 10 | 0.5 | 危险品仓库 | | 三乙醇胺 | 99% | 液 | 桶装 | 汽运 | 5 | 0.5 | | NP-10 | 99% | 液 | 桶装 | 汽运 | 10 | 1 | | 对甲苯磺酸钠 | 99% | 固 | 袋装 | 汽运 | 3 | 0.1 | | 三乙二醇单乙醚 | 98% | 液 | 桶装 | 汽运 | 1 | 0.1 | | 异丙基苯磺酸钠 | 93% | 固 | 袋装 | 汽运 | 5 | 0.2 | | 二乙二醇乙醚 | 98% | 液 | 桶装 | 汽运 | 1 | 0.1 | | 碳酸钾 | 98% | 固 | 袋装 | 汽运 | 100 | 5 | | DMF | 99% | 液 | 桶装 | 汽运 | 50 | 1 | | 环己胺 | 99% | 液 | 桶装 | 汽运 | 10 | 0.2 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 20 | 0.5 | | 碳酸钠 | 99% | 固 | 袋装 | 汽运 | 100 | 2 | | 聚乙二醇1000 | 99.90% | 固 | 袋装 | 汽运 | 0.2 | 0.025 | | 液碱 | 30% | 液 | 桶装 | 汽运 | 1000 | 16 | | 乙醇 | 98% | 液 | 桶装 | 汽运 | 30 | 2 | | 氨水 | 28% | 液 | 桶装 | 汽运 | 8 | 0.5 | | 酸性孔金属化试剂（1400t） | | | | | | | | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 20 | 1 | 危险品仓库 | | N-甲基吡咯烷酮 | 99% | 液 | 桶装 | 汽运 | 20 | 1 | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 80 | 3 | | 乙二醇 | 99% | 液 | 桶装 | 汽运 | 20 | 0.5 | | 对甲基苯磺酸钠 | 99% | 固 | 袋装 | 汽运 | 3 | 0.1 | | EDOT（3,4-乙烯二氧噻吩） | 99% | 液 | 桶装 | 汽运 | 10 | 0.5 | | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 99% | 液 | 桶装 | 汽运 | 20 | 1 | | 硫酸羟胺 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 氯化亚锡 | 99% | 固 | 桶装 | 汽运 | 10 | 0.5 | | 盐酸 | 37% | 液 | 桶装 | 汽运 | 5 | 0.2 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 3 | 3 | | 甲醛 | 37% | 液 | 桶装 | 汽运 | 80 | 10 | | 聚乙二醇1000 | 99.90% | 固 | 袋装 | 汽运 | 0.2 | 0.025 | | 月桂醇硫酸钠 | 99% | 固 | 袋装 | 汽运 | 2 | 0.05 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 10 | 1 | | 炭黑 | 99% | 固 | 袋装 | 汽运 | 5 | 0.1 | | 五水硫酸铜 | 98% | 固 | 袋装 | 汽运 | 5 | 1 | | 酒石酸钾钠 | 99% | 固 | 桶装 | 汽运 | 100 | 5 | | 硫酸 | 60% | 液 | 桶装 | 汽运 | 500 | 20 | | 硫酸钠 | 99% | 固 | 袋装 | 汽运 | 1 | 0.05 | | 硫酸钯 | 99% | 固 | 袋装 | 汽运 | 0.5 | 0.05 | | 对苯二酚 | 99% | 固 | 袋装 | 汽运 | 1 | 0.05 | | NP-10 | 99% | 液 | 桶装 | 汽运 | 10 | 1 | | 石墨烯 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 5-氨基四唑 | 100% | 固 | 袋装 | 汽运 | 1 | 0.2 | | 硼酸 | 99% | 固 | 桶装 | 汽运 | 5 | 0.2 | | 甲基磺酸 | 99% | 液 | 桶装 | 汽运 | 30 | 0.5 | | 碱性孔金属化试剂（400t） | | | | | | | | | 高锰酸钠 | 40% | 液 | 桶装 | 汽运 | 20 | 2 | 危险品仓库 | | 聚苯乙烯磺酸 | 30% | 液 | 桶装 | 汽运 | 10 | 2 | | 硫酸锰 | 99% | 固 | 袋装 | 汽运 | 10 | 1 | | 大防白（二乙二醇单丁醚） | 99% | 液 | 桶装 | 汽运 | 50 | 3 | | 二乙烯三胺 | 99% | 液 | 桶装 | 汽运 | 30 | 2 | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 30 | 1 | | 十二烷基三甲基氯化铵 | 50% | 液 | 桶装 | 汽运 | 1 | 0.1 | | 酒石酸钾钠 | 99% | 固 | 桶装 | 汽运 | 50 | 5 | | 亚氯酸钠 | 99% | 固 | 桶装 | 汽运 | 10 | 0.2 | | 氢氧化钠 | 30% | 液 | 桶装 | 汽运 | 166 | 16 | | 碳酸钾 | 98% | 固 | 袋装 | 汽运 | 20 | 5 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 10 | 3 | | 碳酸氢钠 | 99% | 固 | 袋装 | 汽运 | 10 | 0.5 | | EDTA-2Na | 99% | 固 | 袋装 | 汽运 | 5 | 0.5 | | 二乙酰胺 | 99% | 固 | 袋装 | 汽运 | 5 | 0.5 | | 碳酸钠 | 99% | 固 | 袋装 | 汽运 | 20 | 2 | | OP-10 | 99% | 液 | 桶装 | 汽运 | 5 | 0.5 | | 高纵横比通孔和填孔镀铜液（1000t） | | | | | | | | | 五水硫酸铜 | 98% | 固 | 袋装 | 汽运 | 5 | 1 | 危险品仓库 | | PEG10000 | 99% | 固 | 袋装 | 汽运 | 100 | 1 | | 50HB-400 | 99% | 液 | 桶装 | 汽运 | 35 | 0.3 | | PAS-5-A | 40% | 液 | 桶装 | 汽运 | 10 | 0.2 | | 聚二硫二丙烷磺酸钠 | 97% | 固 | 桶装 | 汽运 | 5 | 0.2 | | 壬基酚聚氧乙烯醚 | 99% | 液 | 桶装 | 汽运 | 10 | 0.3 | | 单异壬苯基聚乙二醇 | 99% | 液 | 桶装 | 汽运 | 10 | 0.3 | | 对苯二酚 | 99% | 固 | 袋装 | 汽运 | 1 | 0.05 | | 柠檬酸 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 甲酸 | 99% | 液 | 桶装 | 汽运 | 50 | 0.5 | | NP-10 | 99% | 液 | 桶装 | 汽运 | 5 | 0.3 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 5 | 3 |   **2.4.2 主要原辅材料理化性质**  **表1-6 建设项目主要原辅料理化性质一览表**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 序号 | 化学名称 | CAS号 | 理化性质 | 燃烧爆炸性 | 毒性 | | 1 | PVI（季胺化聚乙烯咪唑） | 31855-14-8 | 白色固体 | - | - | | 2 | N-甲基吡咯烷酮 | C5H9NO  872-50-4 | 无色透明油状[液体](https://baike.so.com/doc/5944437-6157371.html)，微有胺的气味，熔点-24℃，沸点203℃，蒸汽压3.2kPa，能与水、醇、醚、酯、酮等互溶 | 闪点91℃ | LD50：3914mg/kg（大鼠经口） | | 3 | 大防白（二乙二醇丁醚） | C8H18O3  112-34-5 | 无色液体，微有丁醇气味，分子量162.23，熔点-68.1℃，沸点230℃，相对密度（水=1）0.9536，溶于水、乙醇、乙醚等多种有机溶剂 | 闪点（开杯）110℃ | LD50：6560mg/kg（大鼠经口） | | 4 | 乙二醇 | C2H6O2  107-21-1 | 无色无味粘稠液体，有甜味，分子量62.07，熔点-13.2℃，沸点197.5℃，相对密度(水=1)1.11，相对密度(空气=1)2.14，饱和蒸气压6.21（20℃），与水混溶，可混溶于乙醇、醚等 | 闪点110℃ | LD50：5900-13400mg/kg（大鼠经口） | | 5 | 氯化钠 | NaCl  7647-14-5 | 白色晶体，分子量58.44，熔点801℃，沸点1465℃，易溶于水、甘油，微溶于乙醇、液氨 | 闪点1413℃ | - | | 6 | 对甲苯磺酸钠 | C7H7NaO3S  657-84-1 | 白色粉状结晶体，分子量194.18，熔点300℃，沸点500℃，易溶于水 | 闪点＞500℃ | LD50：3000mg/kg（经口） | | 7 | EDOT（3,4-乙烯二氧噻吩） | C6H6O2S  126213-50-1 | 无色至微黄色透明液体，分子量142.18，熔点10.5℃，沸点225ºC，相对密度(水=1)1.34， | 闪点110ºC | - | | 8 | 农乳1600  （苯乙烯基苯酚聚氧乙烯醚） | - | 淡黄色油状液体或腊状固体，能溶于水和多种有机溶剂 | - | - | | 9 | 高锰酸钠 | NaMnO4·3H2O  10101-50-5 | 紫色至红紫色结晶或粉末，分子量195.97，熔点170℃（分解），溶于水、乙醇、乙醚、液氨 | - | 急性经口毒性：类别4；危害水生环境：急性危险-类别1 | | 10 | 聚苯乙烯磺酸 | (C8H8O3S)n  28210-41-5 | 浅黄色液体，熔点1℃，沸点100℃，相对密度(水=1)1.11 | - | - | | 11 | 甲基磺酸 | CH4O3S  75-75-2 | 无色液体，熔点20℃，分子量96.10，沸点167℃(1.33kPa)，饱和蒸气压（kPa) 0.13（20℃），相对密度(水=1)1.48，不溶于[烷烃](https://baike.so.com/doc/1378366-1457098.html)、苯、甲苯等 | 闪点＞110℃ | LD50：200mg/kg（大鼠经口） | | 12 | 硫酸锰 | MnSO4  10034-96-5 | 分子量151，其一水合物为微红色斜方晶体，熔点700℃，相对密度(水=1)3.25，溶于水 | - | LD50：2150mg/kg（大鼠经口） | | 13 | 硼酸 | H3BO3  10043-35-3 | 白色粉末状[结晶](https://baike.so.com/doc/5415254-5653399.html)，无[臭味](https://baike.so.com/doc/1559604-1648619.html)，分子量61.84，熔点185℃（分解），沸点300℃，相对密度(水=1)1.44（15℃），溶于水、酒精、[甘油](https://baike.so.com/doc/5364132-7125050.html)、[醚](https://baike.so.com/doc/1396101-1475990.html)类 | - | LD50：5140000mg/kg（大鼠经口） | | 14 | 硫酸铜 | CuSO4  7758-98-7 | [白色](https://baike.so.com/doc/404048-427867.html)或[灰](https://baike.so.com/doc/520143-550712.html)[白色](https://baike.so.com/doc/404048-427867.html)粉末，分子量159.61，熔点560℃，相对密度(水=1)3.606（25℃），蒸气压：7.3mm Hg（25ºC），溶于水、甲醇 | - | LD50：300mg/kg（大鼠经口） | | 15 | 壬基酚聚氧乙烯醚 | C15H24O.(C2H4O)n  9016-45-9 | 无色透明液体，熔点44-46℃，  沸点250℃(lit.)，相对密度(水=1) 1.06（20℃） | 闪点279.4℃ | - | | 16 | 单异壬苯基聚乙二醇 | (C2H4O)nC15H24O  37205-87-1 | - | - | - | | 17 | 对苯二酚 | C6H6O2  123-31-9 | 白色结晶，分子量110.11，熔点170.5℃，沸点285℃，相对密度(水=1) 1.33（20℃），饱和蒸气压（kpa) 0.13（132.4℃）溶于水 | - | LD50：320mg/kg（[大鼠](https://baike.baidu.com/item/%E5%A4%A7%E9%BC%A0)经口） | | 18 | 柠檬酸 | C6H8O7  77-92-9 | 白色粉末，无臭，分子量192.14，熔点153℃，相对密度(水=1) 1.665，溶于水、乙醇、乙醚 | 闪点100℃ | LD50：6730mg/kg（[大鼠](https://baike.baidu.com/item/%E5%A4%A7%E9%BC%A0)经口） | | 19 | 甲酸 | HCOOH 64-18-6 | 无色透明发烟液体，有强烈刺激性酸味，分子量46.03，熔点8.2℃，沸点100.8℃，相对密度（水=1）1.23，饱和蒸气压（kPa）5.33（24℃），溶于水 | 闪点68.9 ℃（开杯）。 | LD50：1100mg/kg（大鼠经口）；LC50：15000mg/m3（大鼠吸入，15min） | | 20 | 硫酸羟胺 | H8N2O6S  10039-54-0 | 无色结晶，分子量164.15，熔点172℃，易溶于水 | - | LD50：102mg/kg (小鼠经口) | | 21 | 二乙烯三胺 | C4H13N3  111-40-0 | 黄色透明粘稠液体，有刺激性氨臭，分子量103.17，熔点-39℃，沸点207℃，溶于水、[丙酮](https://baike.baidu.com/item/%E4%B8%99%E9%85%AE/955883)、苯、乙醇、甲醇等 | 闪点99℃（开杯），98℃（闭杯） | LD50：2080mg/kg (大鼠经口)；1090mg/kg(兔经皮) | | 22 | 十二烷基三甲基氯化铵 | [112-00-5](https://baike.baidu.com/item/112-00-5) | 白色粉末，熔点237℃，可溶于水和乙醇 | - | - | | 23 | 酒石酸钾钠 | - | 白色晶体，熔点75℃，可溶于水，微溶于醇 | - | - | | 24 | 氢氧化钠 | NaOH  1310-73-2 | 白色半透明结晶状固体，熔点318.4℃，沸点1390℃，饱和蒸气压(kPa)0.13（739℃），易溶于乙醇、甘油 | - | - | | 25 | 碳酸钾 | K2CO3  584-08-7 | 白色结晶粉末，分子量138.21，熔点891℃，沸点333.6℃，溶于水，不溶于[乙醇](https://baike.baidu.com/item/%E4%B9%99%E9%86%87/135334)、[丙酮](https://baike.baidu.com/item/%E4%B8%99%E9%85%AE/955883)和[乙醚](https://baike.baidu.com/item/%E4%B9%99%E9%86%9A/316922)， | - | LD50：1870mg/kg（大鼠经口） | | 26 | 亚氯酸钠 | NaClO₂  7758-19-2 | 白色或微带黄绿色粉末或颗粒[晶体](https://baike.baidu.com/item/%E6%99%B6%E4%BD%93)，分子量90.04，在175℃时即分解而发热 | - | LD50：165mg/kg（大鼠经口），350mg/kg（小鼠经口） | | 27 | 氯化亚锡 | SnCl₂  7772-99-8 | 无色单斜棱柱体结晶，分子量189.6，熔点246℃，沸点652℃，易溶于水、醇 | - | LD50：700mg/kg（大鼠经口），1200mg/kg（小鼠经口） | | 28 | 盐酸 | HCl  7647-01-0 | 无色液体，有刺激性气味分子量36.5，熔点-114.8℃，沸点108.6℃（20%），饱和蒸汽压（kPa）30.66（21℃），与水混溶 | - | - | | 29 | 碳酸氢钠 | NaHCO₃  144-55-8 | 白色[晶体](https://baike.baidu.com/item/%E6%99%B6%E4%BD%93/944670)，分子量84，熔点270℃，溶于水 | - | LD50：4220mg/kg（大鼠经口） | | 30 | 氨水 | NH₃·H₂0  1336-21-6 | 无色透明液体，有刺激性气味，熔点-77℃，沸点36℃，易溶于水 | - | LD50：350mg/kg（大鼠经口） | | 31 | 聚乙二醇1000 | HO(CH2CH2O)nH | 白色蜡状固体薄片或颗粒状粉末，略有特臭，易溶于水 | - | - | | 32 | EDTA-2Na | C10H14N2Na2O8  139-33-3 | 白色结晶颗粒或粉末，无臭、无味，分子量336.21，熔点252℃，易溶于水， | - | LD50：2000mg/kg（大鼠经口） | | 33 | 碳酸钠 | Na2CO3  497-19-8 | 白色无气味的粉末或颗粒，分子量105.99，熔点851℃，沸点1600℃，易溶于水 | - | LD50：4090mg/kg（大鼠经口）；LC50：2300mg/m³（2小时，大鼠吸入） | | 34 | 醋酸 | CH3COOH  64-19-7 | 纯的无水乙酸（冰醋酸）是无色的吸湿性固体，分子量60.05，熔点16.6℃，沸点：117.9℃，饱和蒸气压（kPa)1.52（20℃），溶于水 | 闪点39℃ | LD50：3530mg/kg(大鼠经口)，1060mg/kg(兔经皮) | | 35 | 单乙醇胺 | C2H7NO  141-43-5 | 无色或淡黄色液体，微有氨臭，分子量61.08，熔点10.5℃，沸点170.8℃，与水混合 | 闪点93℃ | LD50：2050mg/kg(大鼠经口)，1000mg/kg(兔经皮) | | 36 | 三乙醇胺 | C6H15NO3  102-71-6 | 无色至淡黄色透明粘稠液体，微有氨味，分子量149.188，熔点20℃，沸点335℃，蒸气压（kpa)0.0013（20℃），溶于水 | 闪点（开口）179℃ | LD50：5000-9000 mg/kg(大鼠经口) | | 37 | 三乙二醇单乙醚 | C8H18O4  112-50-5 | 液体，熔点-19℃，沸点256℃，溶于水 | 闪点106.4℃ | LD50：10600 mg/kg(大鼠经口) | | 38 | 异丙基苯磺酸钠 | C9H11NaO3S  32073-22-6 | 固体，完全溶于水，在清洁剂生产和其他工业中可当助溶剂等 | - | - | | 39 | 二乙二醇乙醚 | C6H14O3  111-90-0 | 无色液体，有中等程度令人愉快的气味，分子量134.17，熔点-78℃（成玻璃体）（-25℃），沸点202℃，[蒸气压](https://baike.baidu.com/item/%E8%92%B8%E6%B0%94%E5%8E%8B/6491145)<130Pa（20℃），溶于水 | - | LD50：9005 mg/kg（大鼠经口） | | 40 | 硝酸 | HNO3  7697-37-2 | 纯硝酸为无色透明液体，浓硝酸为淡黄色液体，有刺激气味，熔点-42℃，沸点122℃，饱和蒸气压（kpa)4.4(20℃），与水混溶 | - | - | | 41 | 5-氨基四唑 | CH3N5  5378-49-4 | 板状晶体或柱状晶体，熔点203℃，沸点360.4℃，难深溶于[乙醇](https://baike.baidu.com/item/%E4%B9%99%E9%86%87)，不溶于乙醚 | 闪点199.1 | LD50：2500mg/kg（小鼠腹腔） | | 42 | 硫酸 | H2SO4  7664-93-9 | 无色油状液体，熔点10.371℃，沸点337℃，饱和蒸气压（kpa)0.13(145.8℃），能与水以任意比例互溶 |  | LD50：2140mg/kg(大鼠经口)；LC50：510mg/m³，2小时(大鼠吸入) | | 43 | 邻甲酚磺酸 | C7H8O4S  7134-04-5 | - | - | - | | 44 | 葡萄糖酸 | C6H12O7  526-95-4 | 无色至淡黄色浆状液体，熔点131℃，沸点673.6℃，易溶于水，微溶于酒精， | 闪点375.1℃ | - | | 45 | 双氧水 | H₂O2  7722-84-1 | 无色透明液体，有微弱特殊气味，熔点-2℃，沸点158℃，饱和蒸气压（kpa)0.13(15.3℃），可任意比例与水混溶 | - | LD50：4060mg/kg（大鼠经皮）；LC50：2000mg/m3，4小时（大鼠吸入） | | 46 | 乙醇 | C₂H₆O 64-17-5 | 无色透明液体，有特殊香味，熔点-114.3℃，沸点是78.4℃，饱和蒸气压（kpa)5.33(19℃），能与水以任意比互溶；可混溶于醚、氯仿、甲醇、丙酮、甘油等多数有机溶剂 | 闪 点 12℃ | LD50：7060mg/kg(大鼠经口)，7340mg/kg(兔经皮) | | 47 | 异丙醇 | C3H8O  67-63-0 | 无色透明液体，有似[乙醇](https://baike.baidu.com/item/%E4%B9%99%E9%86%87)和[丙酮](https://baike.baidu.com/item/%E4%B8%99%E9%85%AE)混合物的气味，沸点82.45℃，熔点-87.9℃，相对密度（水=1）0.7863，饱和蒸气压92232 kpa（80℃），能与醇、醚、氯仿和水混溶，不溶于[盐溶液](https://baike.baidu.com/item/%E7%9B%90%E6%BA%B6%E6%B6%B2) | 闪点22℃ | LD50：5800mg/kg(大鼠经口) | | 48 | 甲醇 | CH3OH  67-56-1 | 无色透明液体，有刺激性气味，熔点（-97.8℃，沸点64.7℃，饱和蒸气压（kpa)13.33(21.2℃），溶于水，可混溶于醇类、乙醚等多数有机溶剂 | 闪点11℃ | LD50：5628mg/kg（大鼠经口），15800mg/kg（兔经皮）；LC50：83776mg/cm3，4小时（大鼠吸入） | | 49 | PEG10000 | HO(CH2CH2O)nH | 白色固体粉末，熔点59-63℃，溶于水、甲醇、[苯](https://baike.baidu.com/item/%E8%8B%AF)、[二氯甲烷](https://baike.baidu.com/item/%E4%BA%8C%E6%B0%AF%E7%94%B2%E7%83%B7)，与疏水性分子结合后的产物可用作非离子表面活性剂 | - | - | | 50 | OP-10（烷基酚聚氧乙烯醚） | - | 白色及乳白色糊状物 | - | LD50：1600mg/kg | | 51 | DMF | C3H7NO  68-12-2 | 无色透明液体，有特殊臭味，熔点-61℃，沸点153℃，饱和蒸气压（kpa)3.46(60℃），与水及多数有机溶剂任意混合 | 闪点58℃ | LD50：4000mg/kg（大鼠经口）；4720mg/kg（兔经皮） | | 52 | [聚二硫二丙](http://www.pps.net.cn/pro.asp?tid=66&pid=43"\o"(SPS)聚二硫二丙烷磺酸钠)  [烷磺酸钠](http://www.pps.net.cn/pro.asp?tid=66&pid=43"\o"(SPS)聚二硫二丙烷磺酸钠) | C6H12O6S4Na2  27206-35-5 | 白色或浅黄色粉末，易吸潮，水溶性强，微溶于醇类 | - | - | | 53 | 聚氨酚（PAS-5-A） | - | 白色粉末，溶于水 | - | - | | 54 | 50HB-400  （聚环氧乙烷聚环氧丙烷单丁醚） | C9H24O5  68551-14-4 | 白色粉末，沸点＞200℃，溶于水 | 闪点＞110℃ | - | | 55 | 甲醛 | HCHO  50-00-0 | 无色，有刺激性气味，分子量30.03，熔点-92℃，沸点-19.5℃，易溶于水和乙醇 | 闪点50℃（37℃） | LD50：800mg/kg（大鼠经口），270mg/kg（兔经皮）；LC50：590mg/kg（大鼠吸入） | | 56 | 丁醚 | （C4H9）2O  142-96-1 | 无色液体，微有乙醚气味，熔点-97.9℃，沸点142.2℃，几乎不溶于水 | - | LD50：7400mg/kg（大鼠经口） | | 57 | 苯骈三氮唑 | C6H5N3  95-14-7 | 白色浅褐色针状结晶，分子量119.13，熔点98.5℃，沸点204℃，溶于乙醇、苯、甲苯 | 闪点170℃ | - | | 58 | 硫酸亚锡 | SnSO4  7488-55-3 | 白色或浅黄色结晶粉末，熔点360℃，能溶于水及稀硫酸 | - | - | | 59 | 环己胺 | C6H13N  108-91-8 | 无色液体，有鱼腥胺气味，沸点134.5℃，凝固点-17.7℃，溶于水，可混溶于多数有机溶剂 | 闪点32℃ | LD50：710mg/kg（大鼠经口），227mg/kg（兔经皮） | | 60 | 月桂醇硫酸钠 | C12H25OSO4Na | 淡黄色或白色膏状物，主要用作乳化剂、电镀添加剂 | - | - | | 61 | 硫酸钠 | Na2SO4  7757-82-6 | 无色透明晶体，熔点884℃，沸点1404℃，不溶于乙醇，溶于水，溶于甘油 | - | LD50：5989mg/kg（大鼠经口） | | 62 | 硫酸钯 | PdSO4  13566-03-5 | 红棕色结晶粉末，沸点330ºC，溶于冷水中 | - | - | | 63 | 二乙酰胺 | C4H7NO2  625-77-4 | 白色粉末，熔点75.5-76.55 ºC，沸点222-2236 ºC | - | - | | 64 | 石墨烯 | - | 一种通过氧化石墨得到的层状材料 | - | - | | 65 | 炭黑 | - | 固体 | - | - |   **2.5 主要生产设备**  **表1-7 本项目主要工艺设备清单**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **产品名称** | **设备名称** | **数量（套）** | **规格** | **备注** | | 1 | 高分子导电膜A | 搅拌系统 | 4 | 2t/套，PP | 利旧 | | 2 | 高分子导电膜B | 3 | 2 t/套，PP | | 1 | 1 t/套，PP | 利旧 | | 3 | 化学铜添加剂A | 2 | 2 t/套，PP | 利旧 | | 2 | 4 t/套，PP | 利旧 | | 1 | 4t/套，PP | 新增，原设备（2t/套）淘汰 | | 4 | 化学铜添加剂B | 3 | 4t/套，PP | 新增，原设备（2t/套）淘汰 | | 2 | 4 t/套，PP | 利旧 | | 5 | 电镀光亮剂 | 5 | 2 t/套，不锈钢 | 利旧 | | 6 | 金属保护液 | 4 | 4 t/套，PP | 新增 | | 3 | 2 t/套，不锈钢 | 利旧 | | 4 | 2 t/套，不锈钢 | 利旧 | | 1 | 4t/套，不锈钢 | 新增，原设备（2t/套）淘汰 | | 4 | 2 t/套，不锈钢 | 新增 | | 7 | 电子用剥离液 | 2 | 2 t/套，不锈钢 | 新增 | | 5 | 4 t/套，PP | 新增 | | 3（备3） | 5 t/套，PP | 利旧 | | 8 | 蚀刻液 | 2 | 4t/套，PP | 新增，原设备（2t/套）淘汰 | | 1（备1） | 4 t/套，PP | 利旧 | | 1 | 4 t/套，PP | 新增 | | 2（备4） | 5 t/套，PP | 利旧 | | 9 | 酸性孔金属化 | 4 | 2 t/套，不锈钢 | 新增 | | 4 | 2 t/套，不锈钢 | 新增 | | 3 | 2 t/套，不锈钢 | 新增 | | 7（备4） | 2 t/套，不锈钢 | 新增 | | 10 | 碱性孔金属化 | 6 | 4t/套，不锈钢 | 新增，原设备（2t/套）淘汰 | | 11 | 高纵横比通孔和填孔 | 6 | 2 t/套，不锈钢 | 新增 | | 合计 | | - | 93 | - | 新增33 |  注：本项目搅拌系统与产品一一对应，搅拌系统不切换产品。 **2.6 平面布置及周边环境概况**  本项目利用厂内现有厂房进行建设，主要为设备的布置。厂区北部为1#厂房、3#厂房；东部为1#原料仓库、2#原料仓库；南部为2#厂房、4#厂房、办公楼；西部为辅楼、配电间、门卫；厂区西侧设有出入口；1#厂房顶部设置1#喷淋塔、1#排气筒；3#厂房顶部设置2#喷淋塔、2#排气筒；3#厂房1楼设有污水处理站、一般固废仓库；危废仓库设于厂区西北角，化粪池位于厂区东南角。具体平面布置见附图2。  本项目位于南通市通州高新技术开发区金鼎路26号，项目东侧为南通鸿劲金属铝业有限公司；南侧为南通中明医疗科技有限公司，西侧隔金鼎路为聚丰科技产业园，北侧为江苏金梯氟塑料防腐科技有限公司。本项目周边环境概况图见附图3。  **2.7 分析判定相关情况**  **2.7.1 产业政策相符性**  [C3985]电子专用材料制造项目主要涉及封装添加剂等电子专用材料制造，不属于《产业结构调整指导目录》（2011年本，2013年修正）及《江苏省工业和信息产业结构调整指导目录》（2012年本）中限制类、淘汰类以及落后产品，为允许类项目；不在《江苏省限制用地项目目录》（2013年本）和《江苏省禁止用地项目目录》（2013年本）约束范围内；本项目设备仅涉及搅拌桶，仅涉及常温常压的物理过程，不属于《江苏省工业和信息产业结构调整限制、淘汰目录和能耗限额》中限制、淘汰类项目。符合国家及江苏省产业政策。  对照《南通市工业结构调整指导目录》（通政办发〔2007〕14号），本项目属于鼓励类“一、信息产业”中“24、电子专用材料、电子功能陶瓷材料制造”，符合南通市产业政策。  **2.7.2 规划相符性**  本项目位于南通高新技术开发区，建设地为工业用地，项目建设符合《南通市城市总体规划（2008-2030）》、《南通市通州区土地利用总体规划（2006-2030）》规划要求。  **2.7.3 “三线一单”相符性** 本项目距通吕运河约1200m，距离通吕运河（通州区）清水通道维护区二级管控区北侧约为700m，不属于通吕运河（通州区）清水通道维护区二级管控区范围，满足南通市生态红线的建设要求（附图4）。环境质量底线：南通市2017年SO2、NO2、PM10、PM2.5年均浓度分别为21 ug/m3、38 ug/m3、64 ug/m3、39 ug/m3；CO 24小时平均第95百分位数为1.4mg/m3，O3日最大8小时平均第90百分位数为179 ug/m3；其中PM2.5、O3 超过《环境空气质量标准》（GB3095-2012）中二级标准限值。项目所在区PM2.5、O3超标，因此判定为非达标区。根据大气环境质量达标规划，通过进一步控制二氧化硫排放量，减少氮氧化物的排放量，控制扬尘污染，机动车尾气污染防治等措施，大气环境质量状况可以得到进一步改善。项目地附近通吕运河水质符合《地表水环境质量标准》（GB3838-2002）中Ⅲ类标准。噪声现状监测值均能达到《声环境质量标准》(GB3096-2008)中的3类声环境功能区要求。预测表明，项目废气、废水、噪声排放不会改变周边环境功能现状。 资源利用上线：本项目用电由市政电网供给，用水由市政供水管网提供，不会突破资源利用上限。且本项目不属于“两高一资”项目，所在区域不属于资源、能耗紧缺区域，符合资源利用上线的要求。  对照南通市化学品生产负面清单与控制对策（第一批，试行），本项目使用的原辅材料不属于负面控制清单内禁止使用物质。其中，甲醛为清单中严控物质，在本项目中不可用其他物质替代（相关说明见附件）。  综上，本项目与“三线一单”不矛盾。 2.7.4 与“263”专项行动方案相符性分析 对照《“两减六治三提升”专项行动方案》（通政办发[2017]55号）中提到“强化其他行业VOCs综合治理。”“2019年底前，完成电子信息、纺织、木材加工等其他行业VOCs综合治理。”对照行业分类，本项目为电子专用材料制造类项目，所涉及有机原料基本为水溶性物质，生产过程中产生VOCs经集气罩收集后进入喷淋塔吸收处理，最后通过排气筒达标排放，符合“两减六治三提升”专项行动方案要求。 2.7.5 《江苏省重点行业挥发性有机物污染控制指南》（苏环办［2014］128号）相符性本项目涉及试剂使用的设备均设有集气罩及喷淋装置处理有机废气（收集效率90%，处理效率90%），符合《江苏省重点行业挥发性有机物污染控制指南》（苏环办［2014］128号）中“对应生产单元或设施进行密闭，从源头控制VOCS的产生，减少废气污染物排放”以及“VOCS总收集、净化处理效率均不低于90%”的要求。2.7.6 与 “蓝天保卫战三年行动计划”相符性分析《省政府关于印发江苏省打赢蓝天保卫战三年行动计划实施方案的通知》（苏政发〔2018〕122号）要求：“持续推进工业污染源全面达标排放，加大超标处罚和联合惩戒力度，未达标排放的企业一律依法停产整治。”本项目废气采用集气罩收集后依次经过布袋除尘、喷淋吸收后，可实现达标排放，符合“蓝天计划”文件要求。2.7.7 与 “打好污染防治攻坚战”相符性分析 《中共中央国务院关于全面加强生态环境保护坚决打好污染防治攻坚战的意见》（中发〔2018〕17号）、《关于全面加强生态环境保护坚决打好污染防治攻坚战的实施意见》（苏发〔2018〕24号）提出：“2020年6月底前实现生活垃圾焚烧行业达标排放，鼓励燃气机组实施深度脱氮、燃煤机组实施烟羽水汽回收脱白工程。大型燃煤机组烟气全部实现超低排放，35蒸吨/小时及以上锅炉烟气实施特别排放限值改造，65蒸吨/小时及以上的燃煤锅炉开展超低排放改造。”本项目不使用锅炉，与文件内容不相背。 2.7.8 与 “长江保护修复攻坚战行动计划”相符性分析 关于印发《长江保护修复攻坚战行动计划》的通知（环水体[2018]181号）中提出：“加强固体废物规范化管理。严厉打击固体废物非法转移和倾倒等活动。2020年年底前，有效遏制非法转移、倾倒、处置固体废物案件高发态势。”本项目固废收集后均分类暂存于一般固废仓库与危险废物仓库，一般固废出售给回收公司，危险固废委托资质单位处置，不会发生非法转移、倾倒、处置固体废物情况，符合文件要求。  2.7.9 与《南通市长江经济带生态环境保护实施规划》相符性分析  《南通市长江经济带生态环境保护实施规划》（通政办发〔2018〕42号）中提到“坚持预防、预警为主，构建以企业为主体的环境风险防控体系”，“完善预案体系，实施全过程管控，有效应对突发环境事件”。本项目建立风险管理制度，采取的防范处置措施可实现环境风险有效的预防、监控、响应，符合文件要求。  **2.8 与本项目有关的原有污染情况及主要环境问题**  **2.8.1 现有项目概况**  **2.8.1.1 现有项目环保手续履行情况**  **表1-8 现有项目各项目环评手续履行情况汇总表**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 序号 | 项目名称 | 设计产能 | 环评批复 | 环保验收 | 备注 | | 1 | 电子元器件专用及辅  助材料项目 | 10000t/a | 2015.01，通环建[2015]6 号 | 2018.10 | - |   **2.8.1.2 原辅材料**  表1-9 现有项目原辅材料   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 名称 | 规格 | 状态 | 包装方式 | 运输方式 | 年用量（t） | 最大储存储量（t） | 储存地点 | | 高分子导电膜A（1500t） | | | | | | | | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 100 | 1 | 危险品仓库 | | N-甲基吡咯烷酮 | 99% | 液 | 桶装 | 汽运 | 20 | 1 | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 100 | 3 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 300 | 3 | | 对甲基苯磺酸钠 | 99% | 固 | 袋装 | 汽运 | 30 | 0.1 | | EDOT（3,4-乙烯二氧噻吩） | 99% | 液 | 桶装 | 汽运 | 50 | 0.5 | | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 99% | 液 | 桶装 | 汽运 | 100 | 1 | | 高分子导电膜B（1500t） | | | | | | | | | 高锰酸钠 | 40% | 液 | 桶装 | 汽运 | 40 | 2 | 危险品仓库 | | 聚苯乙烯磺酸 | 30% | 液 | 桶装 | 汽运 | 100 | 2 | | 甲基磺酸 | 99% | 液 | 桶装 | 汽运 | 90 | 0.5 | | 硫酸锰 | 99% | 固 | 袋装 | 汽运 | 50 | 1 | | 硼酸 | 99% | 固 | 桶装 | 汽运 | 50 | 0.2 | | 化学铜添加剂A（3000t） | | | | | | | | | 大防白（二乙二醇丁醚） | 99% | 液 | 桶装 | 汽运 | 100 | 3 | 危险品仓库 | | 硫酸羟胺 | 99% | 固 | 袋装 | 汽运 | 150 | 1 | | 二乙烯三胺 | 99% | 液 | 桶装 | 汽运 | 100 | 2 | | PVI（季胺化聚乙烯咪唑） | 40% | 液 | 桶装 | 汽运 | 300 | 1 | | 十二烷基三甲基氯化铵 | 50% | 液 | 桶装 | 汽运 | 10 | 0.1 | | 酒石酸钾钠 | 99% | 固 | 桶装 | 汽运 | 100 | 5 | | 氢氧化钠 | 99% | 固 | 桶装 | 汽运 | 313 | 16 | | 碳酸钾 | 98% | 固 | 袋装 | 汽运 | 100 | 5 | | 化学铜添加剂B（3000t） | | | | | | | | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 86 | 3 | 危险品仓库 | | 氯化亚锡 | 99% | 固 | 桶装 | 汽运 | 20 | 0.5 | | 硫酸铜 | 99.50% | 固 | 袋装 | 汽运 | 1000 | 10 | | 甲醛 | 37% | 液 | 桶装 | 汽运 | 270 | 10 | | 聚乙二醇1000 | 99.90% | 固 | 袋装 | 汽运 | 0.4 | 0.025 | | 酒石酸钾钠 | 99% | 固 | 袋装 | 汽运 | 300 | 5 | | EDTA-2Na | 99% | 固 | 袋装 | 汽运 | 40 | 0.5 | | 碳酸钠 | 99% | 固 | 袋装 | 汽运 | 200 | 2 | | 电镀光亮剂（1000t） | | | | | | | | | 硫酸铜 | 98% | 固 | 袋装 | 汽运 | 50 | 1 | 危险品仓库 | | PEG10000 | 99% | 固 | 袋装 | 汽运 | 35 | 1 | | 50HB-400 | 99% | 液 | 桶装 | 汽运 | 35 | 0.3 | | PAS-5-A | 40% | 液 | 桶装 | 汽运 | 10 | 0.2 | | [聚二硫二丙烷磺酸钠](http://www.pps.net.cn/pro.asp?tid=66&pid=43) | 97% | 固 | 桶装 | 汽运 | 50 | 0.2 | | 壬基酚聚氧乙烯醚 | 99% | 液 | 桶装 | 汽运 | 120 | 0.3 | | 单异壬苯基聚乙二醇 | 99% | 液 | 桶装 | 汽运 | 100 | 0.3 | | 对苯二酚 | 99% | 固 | 袋装 | 汽运 | 1 | 0.05 | | 柠檬酸 | 99% | 固 | 袋装 | 汽运 | 100 | 1 | | 甲酸 | 99% | 液 | 桶装 | 汽运 | 130 | 0.5 | | 氯化钠 | 99% | 固 | 袋装 | 汽运 | 5 | 3 |   **2.8.1.3 主要生产设备**  **表1-10 本项目主要工艺设备清单**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **序号** | **产品名称** | **设备名称** | **数量（套）** | **规格** | | 1 | 高分子导电膜A | 搅拌系统 | 4 | 2t/套，PP | | 5 | 2 t/套，不锈钢 | | 2 | 高分子导电膜B | 3 | 2 t/套，PP | | 1 | 1 t/套，PP | | 3 | 化学铜添加剂A | 3 | 2 t/套，PP | | 2 | 4 t/套，PP | | 3 | 2 t/套，不锈钢 | | 4 | 化学铜添加剂B | 3 | 2t/套，PP | | 6 | 2t/套，不锈钢 | | 2 | 4 t/套，PP | | 5 | 电镀光亮剂 | 5 | 2 t/套，不锈钢 | | 3（备2） | 5 t/套，PP | | 1（备1） | 4 t/套，PP | | 2（备1） | 5 t/套，PP | | 合计 | | - | 48 | - |  注：搅拌系统与产品一一对应，搅拌系统不切换产品。 **2.8.1.4 生产工艺流程及其说明**    图1-1 现有项目工艺流程图  （1）投料：将纯水泵入搅拌槽中，同时按比例投入（人工投入）其他试剂。该过程仅产生废气。  （2）混合：投料结束后密闭搅拌1.5h，使混合均匀。该过程不加热，无污染物产生。  （3）搅拌：打开设备盖，补加纯水使槽内液位达目标液位，盖上盖子继续搅拌5.5h。该过程仅加水时产生少量废气。  （4）检验包装：打开盖子，取样检测合格后物料经过滤器过滤后装入专用包装桶，密封后作为产品入库。该过程产生废气及滤渣。  本项目产品生产过程仅为物理混合过程，无化学反应。  **2.8.2 现有项目污染防治措施**  **2.8.2.1 水污染防治措施**  **表1-11 现有污水处理站主要构筑物**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **序号** | **处理单元** | **设计参数** | **数量（套）** | **备注** | | 1 | 调节池 | 有效容积10m3 | 2 | 混凝土结构 | | 2 | 曝气池 | 10m3 | 2 | 混凝土结构 | | 3 | 沉淀池 | 有效容积4m3，停留时间6h | 1 | PP结构 | | 4 | 水解酸化池 | 2 m3 | 1 | PP结构 | | 5 | 高效氧化池 | 7 m3 | 1 | PP结构 |   表1-12 废水验收监测结果（单位：mg/L，pH无量纲）   | 监测  位置 | 监测  日期 | 监测  频次 | pH | CODcr | SS | 氨氮 | 铜 | | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 生产废水排口 | 2018年  07月02日 | 第一次 | 7.62 | 30 | / | / | 1.02 | | | 第二次 | 7.53 | 32 | / | / | 1.10 | | | 第三次 | 7.52 | 30 | / | / | 0.843 | | | 第四次 | 7.65 | 34 | / | / | 1.08 | | | **日均值** | **7.58** | **31.5** | / | / | **1.01** | | | 执行标准 | | **6-9** | **500** | **400** | **45\*** | **2.0** | | | 达标情况 | | **达标** | **达标** | **达标** | **达标** | **达标** | | | 2018年  07月03日 | 第一次 | 7.58 | 80 | / | / | 0.173 | | | 第二次 | 7.59 | 78 | / | / | 0.192 | | | 第三次 | 7.61 | 76 | / | / | 0.186 | | | 第四次 | 7.60 | 76 | / | / | 0.196 | | | **日均值** | **7.60** | **77.5** | / | / | **0.187** | | | 执行标准 | | **6-9** | **500** | **400** | **45\*** | **2.0** | | | 达标情况 | | **达标** | **达标** | **达标** | **达标** | **达标** | | | 二日均值 | | | **7.59** | **54.5** | **/** | **/** | **0.599** | | | 总排口 | 2018年  07月02日 | 第一次 | 7.81 | 30 | ND | 1.94 | 2018年  08月09日 | 0.629 | | 第二次 | 7.62 | 31 | ND | 1.82 | 0.631 | | 第三次 | 7.57 | 38 | 5 | 1.93 | 0.570 | | 第四次 | 7.41 | 31 | ND | 1.74 | 0.628 | | **日均值** | **7.60** | **32.5** | **3.13** | **1.86** | **0.615** | | 执行标准 | | **6-9** | **500** | **400** | **45\*** | **2.0** | | | 达标情况 | | **达标** | **达标** | **达标** | **达标** | **达标** | | | 2018年  07月03日 | 第一次 | 7.99 | 42 | ND | 2.30 | 2018年  08月10日 | 0.261 | | 第二次 | 7.89 | 49 | 5 | 2.44 | 0.250 | | 第三次 | 8.06 | 38 | ND | 0.448 | 0.250 | | 第四次 | 8.01 | 43 | 5 | 1.28 | 0.258 | | **日均值** | **7.99** | **43.0** | **3.75** | **1.62** | **0.255** | | 执行标准 | | **6-9** | **500** | **400** | **45\*** | **2.0** | | | 达标情况 | | **达标** | **达标** | **达标** | **达标** | **达标** | | | 二日均值 | | | **7.80** | **37.8** | **3.45** | **1.74** | **0.435** | |   注：1、\*参照执行《污水排入城镇下水道水质标准》（CJ343-2010）；2、“ND”表示检测项目浓度低于检出限，SS的检出限为5mg/L；  验收监测结果表明，废水经处理后能满足污水厂接管要求，可以做到达标排放。  根据验收数据核算现有项目废水产排情况。  **表1-13 现有项目废水产生及排放情况**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **污染源** | **产生量m3/a** | **污染物** | **产生**  **浓度mg/L** | **产生量t/a** | **处理措施** | **污染物** | **排放**  **浓度mg/L** | **排放量t/a** | **排放去向** | | 生产废水 | 3000 | COD | 271 | 0.813 | 污水处理站 | COD | 54.5 | 0.1635 | 通州区益  民水处理  有限公司 | | 总铜 | 2.5 | 0.0075 | 总铜 | 0.599 | 0.0018 | | 生活污水 | 840 | COD | 6 | 0.0051 | 化粪池 | COD | 2.96 | 0.0025 | | SS | 37 | 0.0311 | SS | 15.96 | 0.0134 | | 氨氮 | 39 | 0.0328 | 氨氮 | 7.98 | 0.0067 |   **2.8.2.2 废气污染防治措施**  根据南通赛可特电子有限公司《电子元器件专用及辅助材料项目环境影响报告表》（南通市通州区环境保护局2015年1月审批，批文号为通环建[2015]6号），现有项目排放的废气主要是在生产化学铜添加剂B系列时使用的甲醛在投料、搅拌、包装过程中逸散的少量甲醛气体（0.01t/a），无组织排放。该项目环保验收监测结果（监测结果为“ND”，“ND”表示检测项目浓度低于检出限，甲醛的检出限为0.05mg/m3）表明甲醛气体排放满足《大气污染物综合排放标准》（GB16297-1996）中的二级标准，对周边环境不会产生明显影响。  **2.8.2.3 噪声污染控制措施**  现有项目噪声源主要为搅拌设备和制纯水设备，噪声源强≤100dB(A)。噪声产生及治理情况见表1-14。  **表1-14 噪声产生及治理情况**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **序号** | **设备名称** | **台数** | **厂界最近距离m** | **声级值dB(A)** | **治理措施** | **降噪效果dB(A)** | | 1 | 搅拌设备 | 40 | 10 | 75-80 | 基础减震、建筑隔声 | 20 | | 2 | 制纯水设备 | 3 | 15 | 70-75 | 基础减震、建筑隔声 | 20 |   经采取相应隔声降噪措施进行治理后，厂界噪声可达GB12348-2008《工业企业厂界环境噪声排放标准》表1中3类标准，即昼间≤65dB(A)，夜间≤55dB(A)，经建筑物隔声及距离衰减后，现有项目噪声对周围环境影响较小。  **2.8.2.4 固废污染防治措施**  **表1-15 现有固废产生量及处置情况**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **固废名称** | **属性** | **形态** | **主要成分** | **废物类别** | **废物代码** | **产生量(t/a)** | **处理处置方式** | | 1 | 原材料废包装桶 | 危险固废 | 固 | 物料桶 | HW49 | 900-041-49 | 5 | 交由有资质  单位处理 | | 2 | 原材料废编织袋 | 危险固废 | 固 | 编制物 | HW49 | 900-041-49 | 5 | | 3 | 水处理污泥 | 危险固废 | 固 | 污泥 | HW22 | 397-005-22 | 0.8 | | 4 | 生活垃圾 | 一般固废 | 固 | 纸张等 | - | - | 21 | 环卫清运 |   **2.8.3 现有项目污染物排放量汇总**  根据验收报告，现有项目污染物总排放量见表1-13。  表1-13 现有项目污染物总量控制情况一览表   | **类别** | **污染物名称** | **排放量**  **（t/a）** | **批复量**  **（t/a）** | | --- | --- | --- | --- | | 废气 | 颗粒物 | 0.19[1] | 0 | | 甲醛 | 0.01[3] | 0.01 | | 非甲烷总烃 | 0.45[1] | 0 | | 废水 | 废水量 | 3840 | 5000 | | COD | 0.166[2] | 1.7 | | NH3-N | 0.0067[2] | 0.06 | | SS | 0.0134[2] | 0.6 | | 总铜 | 0.0018[2] | 0.15 | | 固废 | 一般固废 | - | - | | 生活垃圾 | - | - |   注：[1]根据现有项目原辅料核算；[2]根据现有项目验收监测数据核算；[3]现有项目环评核算量。  从上表可见，现有项目颗粒物、非甲烷总烃排放量均超出批复量（批复量为0），甲醛废气及废水排放指标均在相应批复总量范围之内。  **2.8.4 现有项目存在的环保问题**  （1）现有项目废气排放种类识别不完全，且废气未集中收集，均为无组织排放。  （2）厂区未设置初期雨水池及应急池。 | | | | | | | | | | |

**表二 建设项目所在地自然环境社会环境简况**

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| 1 地形、地貌、地质  本项目所在地位于通州区兴仁镇，通州区属长江三角洲冲积平原，地势平坦宽广，从西北略向东南倾斜，西北部地面高程为海拔（黄海标高）4.5-5m。东南部高程约3.2m。地质构造属东部新华夏系第一沉降带，埋深0-65m主要由粘性土及粉砂等冲积物组成；埋深65-120m主要由粉砂及细砂含角砾等冲积、洪积物组成；地下水位埋深一般为1.0-1.2m左右。本区域地震频度低，强度弱，地震烈度在6度以下。  2 气候气象  通州区位于东经120°41′至121°25′与北纬31°52′至32°15′之间，处在中纬度地带，属北亚热带湿润气候区。受季风环流影响明显，四季分明，气候温和，雨水充沛。  通州区区域年平均气温15℃，年平均气压为1016.1hPa，年平均相对湿度为80%，年平均降水量1074.1mm，最大年降水量1393.4mm；年平均风速2.9m/s，瞬时最大风速30.4m/s。全年盛行风向为东风和东南风，夏季盛行风向为东风，频率为13.6%；冬季主导风向为西北风，频率为12.6%。据近几年逐时地面气象预测资料统计，该区域大气稳定度以中性层结为主。  3 水文  3.1 长江  长江流经通州区南缘，岸线长约30km，水量丰富，江面宽阔，年均径流量9793亿m3，平均流量3.1万m3/s。  长江通州江段处于潮流界以内，受长江径流和潮汐的双重影响，水流呈不规则半日潮往复运动，一般每天涨落潮各两次。涨潮和落潮的表面平均流速分别1.03m/s和0.88m/s，涨潮历时约4.25h，落潮历时约8.25h，以落潮流为主，平均潮差2.68m。  根据上游大通水文站水文资料，长江多年平均流量为28100m3/s，最大洪峰流量为92600m3/s，最小枯季流量为4620m3/s。由于水流速快，流量大，不但提供了人民生活、农田灌溉和工业所需的丰富水源，同时对沿江排放的工业废水以及生活污水有较大的稀释和自净能力。  3.2 通吕运河  通吕运河西起南通港，东至吕四镇，全长约69km。通吕运河南与濠河 水系相通，北与通扬运河相通，具有水运、灌溉、排洪等多项功能。通吕运河水位受南 通市节制闸控制，上游通长江，受长江感潮变化的影响，通吕运河每年从长江引水量约8×108m3，汛期5-10月潮位较高，引水次数增多，运河内水位较高。  3.3 通甲河  通甲河西起南通市区东部的龙王桥，东至海门市的四甲镇，流向由西向东。河流水位主要受通吕运河上、下游闸门控制。该河水文特征为：底宽5m、边坡1:2.5~2.8、河底标高-0.5~1.0m、最高水位4.47m、最低水位1.12m。  3.4 新江海河  新江海河属通启水系江海平原区主要河道，北起通吕运河，向南流经通州开发区南区、姜灶镇、川港镇、南通农场、海门江心沙农场等地区汇入长江，全长24.06km，引排水由新江海河闸控制。新江海河底宽为40-60m，底高为-3.0m。  4 土壤、生态  评价区域为长江水缓慢回流淀积所形成的灰泥土，质地良好，土层深厚，无严重障碍层。耕作层土壤有机质含量高，适合各种农作物和林木生长。区域内天然木本植物缺乏，主要为人工种植的水杉、杨树、柳树、龙柏、棕榈、樟树、广玉兰、女贞、银杏等；常见的草本植物有芦苇、芦竹、茅草、葎草、牛筋草、狗尾草、蒲公英、藜、蓼等。农田栽培植被有小麦、油菜、花生、蚕豆、黄豆及瓜果蔬菜类等。野生动物有蛙、鸟、蛇、野兔及黄鼠狼等。长江及内河重要淡水鱼种有刀鲚、凤鲚、河豚、鳜鱼、银鱼、河鳗及其青、草、鲢、鳙、鲤、鲫、鲶等。  由于人类长期经济活动的影响，区域内天然木本植物缺乏，生态环境以人工及半自然生态系统为主。植物资源以人工种植的稻、麦、棉、油及特种经济作物、树木花卉为主，农作栽培植被发达，占总面积的64.6%，植树造林主要分布在江海堤防、河海岸坡、渠路两旁和宅基前后，主要为人工栽培的水杉、构树、桑树、银杏、柳树、桃树、柿树等树木。常见的草本植物有拉拉藤、狗尾草、苍耳、野苋、芦苇、水花生等。野生植被主要是杂草。野生动物有蛙类、鸟类、蛇类、昆虫类及黄鼠狼等。 |

**表三 环境质量状况**

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| **建设项目所在地区域环境质量现状及主要环境问题**  1 大气环境质量状况  根据《2017年度南通市环境状况公报》，南通市2017年SO2、NO2、PM10、PM2.5年均浓度分别为21 ug/m3、38 ug/m3、64 ug/m3、39 ug/m3；CO 24小时平均第95百分位数为1.4mg/m3，O3日最大8小时平均第90百分位数为179 ug/m3；其中PM2.5、O3超过《环境空气质量标准》（GB3095-2012）中二级标准限值。  **表3-1 2017年度南通市环境状况**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **污染物** | **年评价指标** | **标准值（μg/m3）** | **现状浓度（μg/m3）** | **超标倍数** | **达标情况** | | SO2 | 年均值 | 60 | 31 | - | 达标 | | NO2 | 年均值 | 40 | 38 | - | 达标 | | PM10 | 年均值 | 70 | 65 | - | 达标 | | PM2.5 | 年均值 | 35 | 39 | 0.11 | 不达标 | | CO | 日平均第95百分位数 | 10 | 1.4 | - | 达标 | | O3 | 日最大8小时平均第90百分位数 | 160 | 179 | 0.12 | 不达标 |   根据表3-1，项目所在区PM2.5、O3超标，因此判定为不达标区。根据《南通市颗粒物无组织排放深度整改实施方案》（通大气办〔2018〕17号）、《市政府办公室关于印发南通市2018年大气污染防治工作计划的通知》（通政办发〔2018〕35号），通过进一步控制氮氧化物的排放量，控制扬尘污染，机动车尾气污染防治等措施，大气环境质量状况可以得到进一步改善。  2 水环境质量状况  根据《江苏省地表水环境功能区划》（苏政复[2003]29号），项目附近通吕运河水质执行《地表水环境质量标准》（GB3838-2002）Ⅲ类标准。根据南通市通州区2018年第三次水功能区水质监测通报，通吕运河新金西大桥监测断面水质满足Ⅲ类标准，项目区域水环境质量较好。  3 声环境质量  本报告声环境质量数据引用《南通赛可特电子有限公司电子元器件专用及辅助材料项目竣工环境保护验收监测报告》中监测（监测时间2018.07.02-2018.07.03）数据，监测结果见表3-2。  表3-2 拟建项目厂界环境本底噪声测量值   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **测点编号** | **测点位置** | **测量时段** | **等效A声级dB（A）** | | **评价标准** | | **2018.07.02** | **2018.07.03** | | N1 | 北边界1m | 昼间 | 47.9 | 47.9 | 65 | | 夜间 | 43.6 | 43.4 | 55 | | N3 | 东边界1m | 昼间 | 49.2 | 48.9 | 65 | | 夜间 | 44.3 | 42.0 | 55 | | N2 | 南边界1m | 昼间 | 51.8 | 49.6 | 65 | | 夜间 | 41.0 | 42.8 | 55 | | N4 | 西边界1m | 昼间 | 52.0 | 51.0 | 65 | | 夜间 | 41.4 | 43.3 | 55 |   由上表可见，各测点昼夜噪声值均符合《声环境质量标准》（GB3096-2008）中3类标准，说明项目所在地声环境质量较好。 4 主要环境保护目标 本项目周边500m环境保护目标分布见表3-3。  **表3-3 主要环境保护目标**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **环境要素** | **环境保护对象** | **方位** | **最近距离（m）** | **规模** | **环境功能** | | 大气环境 | 无 | - | - | - | 《环境空气质量标准》（GB3095-2012）中二级标准 | | 水环境 | 通吕运河 | S | 1200 | 大河 | 《地表水环境质量标准》（GB3838-2002）Ⅲ类标准 | | 北侧小河 | N | 100 | 小河 | 《地表水环境质量标准》（GB3838-2002）Ⅳ类标准 | | 声环境 | 厂界周边 | - | 200m | - | 《声环境质量标准》（GB3096-2008）3类 | | 生态环境 | 吕运河(通州区)清水通道维护区二级管控区 | S | 约700m | 通州区境内通吕运河及两岸各500米 | 水源水质保护 | |

**表四 评价适用标准**

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| **1 环境质量标准**  **1.1 大气环境**  根据《江苏省环境空气质量功能区划分》，本项目所在区域为环境空气质量功能二类区，SO2、NO2、PM10、PM2.5执行《环境空气质量标准》（GB3095-2012）二级标准，氨、甲醇、甲醛、硫酸雾、氯化氢、非甲烷总烃浓度限值参考《环境影响评价技术导则-大气环境》（HJ2.2-2018）附录D中标准。具体指标见表4-1。  **表4-1 环境空气质量评价标准** （单位：mg/m3）   |  |  |  |  | | --- | --- | --- | --- | | **污染物名称** | **取值时间** | **浓度限值** | **标准来源** | | SO2 | 年平均 | 0.060 | GB3095-2012 | | 日平均 | 0.150 | | 1小时平均 | 0.500 | | NO2 | 年平均 | 0.040 | | 日平均 | 0.080 | | 1小时平均 | 0.200 | | PM10 | 年平均 | 0.070 | | 日平均 | 0.150 | | PM2.5 | 年平均 | 0.035 | | 日平均 | 0.075 | | 氨 | 1小时平均 | 200 | 《环境影响评价技术导则-大气环境》（HJ2.2-2018）附录D | | 甲醇 | 1小时平均 | 3000 | | 日平均 | 1000 | | 甲醛 | 1小时平均 | 50 | | 硫酸 | 1小时平均 | 300 | | 日平均 | 100 | | 氯化氢 | 1小时平均 | 50 | | 日平均 | 15 | | 总挥发性有机物(TVOC) | 8小时平均 | 600 |   **1.2 地表水环境**  根据《江苏省地表水（环境）功能区划》（2003年9月）、《江苏省长江水污染防治条例》（2018年3月28日修正），项目附近长江南通段近岸水体、通吕运河水质执行《地表水环境质量标准》（GB3838-2002）中III类标准，长江南通段中泓水体水质不得低于《地表水环境质量标准》（GB3838-2002）II类标准，北侧小河执行《地表水环境质量标准》（GB3838-2002）Ⅳ类标准。标准限值具体见表4-2。  **表4-2 地表水环境质量评价标准** （单位：mg/L，pH无量纲）   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | **pH** | **COD** | **SS\*** | **NH3-N** | **TP（以P计）** | **DO** | **BOD5** | **Cu** | **石油类** | **阴离子表面活性剂** | | Ⅱ类 | 6-9 | ≤15 | ≤25 | ≤0.5 | ≤0.1 | ≥6 | ≤3 | ≤1.0 | ≤0.05 | ≤0.2 | | Ⅲ类 | 6-9 | ≤20 | ≤30 | ≤1.0 | ≤0.2 | ≥5 | ≤4 | ≤1.0 | ≤0.05 | ≤0.2 | | Ⅳ类 | 6-9 | ≤30 | ≤60 | ≤1.5 | ≤0.3 | ≥3 | ≤6 | ≤1.0 | ≤0.05 | ≤0.3 |   **注：\*参照水利部《地表水资源质量标准》（SL36－94）三级标准。**  **1.3 地下水环境**  地下水环境执行《地下水质量标准》（GB/T14848-2017），具体见表4-3。  **表4-3 地下水质量分类指标** （单位：mg/L，pH无量纲）   | **序号** | **项目** | **标准值 mg/L** | | | | | | | --- | --- | --- | --- | --- | --- | --- | --- | | **Ⅰ类** | **Ⅱ类** | **Ⅲ类** | | **Ⅳ类** | **Ⅴ类** | | **感观性状及一般化学指标** | | | | | | | | | 1 | 色（铂钴色度单位） | ≤5 | ≤5 | | ≤15 | ≤25 | >25 | | 2 | 嗅和味 | 无 | 无 | | 无 | 无 | 有 | | 3 | 浑浊度/NTUa | ≤3 | ≤3 | | ≤3 | ≤10 | >10 | | 4 | 肉眼可见物 | 无 | 无 | | 无 | 无 | 有 | | 5 | pH | 6.5≤pH≤8.5 | | | | 5.5≤pH＜6.5；8.5＜pH≤9.0 | pH<5.5或pH>9 | | 6 | 总硬度 | ≤150 | ≤300 | ≤450 | | ≤650 | >650 | | 7 | 溶解性总固体 | ≤300 | ≤500 | ≤1000 | | ≤2000 | >2000 | | 8 | 硫酸盐 | ≤50 | ≤150 | ≤250 | | ≤350 | >350 | | 9 | 氯化物 | ≤50 | ≤150 | ≤250 | | ≤350 | >350 | | 10 | 铁 | ≤0.1 | ≤0.2 | ≤0.3 | | ≤2.0 | >2.0 | | 11 | 锰 | ≤0.05 | ≤0.05 | ≤0.1 | | ≤1.5 | >1.5 | | 12 | 铜 | ≤0.01 | ≤0.05 | ≤0.1 | | ≤1.5 | >1.5 | | 13 | 锌 | ≤0.05 | ≤0.5 | ≤1.0 | | ≤5.0 | >5.0 | | 14 | 铝 | ≤0.01 | ≤0.05 | ≤0.2 | | ≤0.5 | >0.5 | | 15 | 挥发性酚类（以苯酚计） | ≤0.001 | ≤0.001 | ≤0.002 | | ≤0.01 | >0.01 | | 16 | 阴离子表面活性剂 | 不得检出 | ≤0.1 | ≤0.3 | | ≤0.3 | >0.3 | | 17 | 耗氧量（CODMN法，以O2计） | ≤1.0 | ≤2.0 | ≤3.0 | | ≤10.0 | >10.0 | | 18 | 氨氮（以N计） | ≤0.02 | ≤0.1 | ≤0.5 | | ≤1.5 | >1.5 | | 19 | 硫化物 | ≤0.005 | ≤0.01 | ≤0.02 | | ≤0.1 | >0.1 | | 20 | 钠 | ≤100 | ≤150 | ≤200 | | ≤400 | >400 | | **微生物指标** | | | | | | | | | 21 | 总大肠菌群(MPNb/100mL或CFUc/100ml) | ≤3.0 | ≤3.0 | ≤3.0 | | ≤100 | >100 | | 22 | 菌落总数(CFU/ml) | ≤100 | ≤100 | ≤100 | | ≤1000 | >1000 | | **毒理学指标** | | | | | | | | | 23 | 亚硝酸盐（以N计） | ≤0.01 | ≤0.1 | ≤1.00 | | ≤4.80 | >4.80 | | 24 | 硝酸盐（以N计） | ≤2.0 | ≤5.0 | ≤20.0 | | ≤30.0 | >30.0 | | 25 | 氰化物 | ≤0.001 | ≤0.01 | ≤0.05 | | ≤0.1 | >1.0 | | 26 | 氟化物 | ≤1.0 | ≤1.0 | ≤1.0 | | ≤2.0 | >2.0 | | 27 | 碘化物 | ≤0.04 | ≤0.04 | ≤0.08 | | ≤0.50 | >0.50 | | 28 | 汞 | ≤0.0001 | ≤0.0001 | ≤0.001 | | ≤0.002 | >0.002 | | 29 | 砷 | ≤0.001 | ≤0.001 | ≤0.01 | | ≤0.05 | >0.05 | | 30 | 硒 | ≤0.01 | ≤0.01 | ≤0.01 | | ≤0.1 | >0.1 | | 31 | 镉 | ≤0.0001 | ≤0.001 | ≤0.05 | | ≤0.01 | >0.01 | | 32 | 铬（六价） | ≤0.005 | ≤0.01 | ≤0.05 | | ≤0.1 | >0.1 | | 33 | 铅 | ≤0.005 | ≤0.005 | ≤0.01 | | ≤0.1 | >0.1 | | 34 | 三氯甲烷  (μg/L) | ≤0.5 | ≤6 | ≤60 | | ≤300 | >300 | | 35 | 四氯化碳  (μg/L) | ≤0.5 | ≤0.5 | ≤2.0 | | ≤50.0 | >50.0 | | 36 | 苯(μg/L) | ≤0.5 | ≤1.0 | ≤10.0 | | ≤120 | >120 | | 37 | 甲苯(μg/L) | ≤0.5 | ≤140 | ≤700 | | ≤1400 | >1400 | | **放射性指标**d | | | | | | | | | 38 | 总α放射性（Bq/L） | ≤0.1 | ≤0.1 | ≤0.5 | | >0.5 | >0.5 | | 39 | 总β放射性（Bq/L） | ≤0.1 | ≤1.0 | ≤1.0 | | >1.0 | >1.0 | | a、NTU为散射浊度单位。  b、MPN表示最可能数。  c、CFU表示菌落形成单位。  d、放射性指标超过指导值，应进行核素分析和评价。 | | | | | | | |   1.4 声环境  本项目声环境功能区划为3类区，执行《声环境质量标准》（GB3096-2008）中3类标准，具体见表4-4。  **表4-4 环境噪声质量标准** （单位：dB（A））   |  |  |  |  | | --- | --- | --- | --- | | **类别** | **昼间** | **夜间** | **标准来源** | | 3类 | 65 | 55 | 《声环境质量标准》（GB3096-2008） |   1.5 土壤  区域土壤环境质量执行土壤环境质量建设用地土壤污染风险管控标准（试行）（GB36600-2018）中第二类用地标准，具体标准值见表4-5。  表4-5 建设用地土壤污染风险筛选值、管制值及背景值 （单位：mg/kg）   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **序号** | **污染物项目** | **CAS 编号** | **筛选值** | **管制值** | | **第二类用地** | **第二类用地** | | 重金属和无机物 | | | | | | 1 | 砷 | 7440-38-2 | 60[1] | 140 | | 2 | 镉 | 7440-43-9 | 65 | 172 | | 3 | 铬（六价） | 18540-29-9 | 5.7 | 78 | | 4 | 铜 | 7440-50-8 | 18000 | 36000 | | 5 | 铅 | 7439-92-1 | 800 | 2500 | | 6 | 汞 | 7439-97-6 | 38 | 82 | | 7 | 镍 | 7440-02-0 | 900 | 2000 | | 挥发性有机物 | | | | | | 8 | 四氯化碳 | 56-23-5 | 2.8 | 36 | | 9 | 氯仿 | 67-66-3 | 0.9 | 10 | | 10 | 氯甲烷 | 74-87-3 | 37 | 120 | | 11 | 1,1-二氯乙烷 | 75-34-3 | 9 | 100 | | 12 | 1,2-二氯乙烷 | 107-06-2 | 5 | 21 | | 13 | 1,1-二氯乙烯 | 75-35-4 | 66 | 200 | | 14 | 顺-1,2-二氯乙烯 | 156-59-2 | 596 | 2000 | | 15 | 反-1,2-二氯乙烯 | 156-60-5 | 54 | 163 | | 16 | 二氯甲烷 | 75-09-2 | 616 | 2000 | | 17 | 1,2-二氯丙烷 | 78-87-5 | 5 | 47 | | 18 | 1,1,1,2-四氯乙烷 | 630-20-6 | 10 | 100 | | 19 | 1,1,2,2-四氯乙烷 | 79-34-5 | 6.8 | 50 | | 20 | 四氯乙烯 | 127-18-4 | 53 | 183 | | 21 | 1,1,1-三氯乙烷 | 71-55-6 | 840 | 840 | | 22 | 1,1,2-三氯乙烷 | 79-00-5 | 2.8 | 15 | | 23 | 三氯乙烯 | 79-01-6 | 2.8 | 20 | | 24 | 1,2,3-三氯丙烷 | 96-18-4 | 0.5 | 5 | | 25 | 氯乙烯 | 75-01-4 | 0.43 | 4.3 | | 26 | 苯 | 71-43-2 | 4 | 40 | | 27 | 氯苯 | 108-90-7 | 270 | 1000 | | 28 | 1,2-二氯苯 | 95-50-1 | 560 | 560 | | 29 | 1,4-二氯苯 | 106-46-7 | 20 | 200 | | 30 | 乙苯 | 100-41-4 | 28 | 280 | | 31 | 苯乙烯 | 100-42-5 | 1290 | 1290 | | 32 | 甲苯 | 108-88-3 | 1200 | 1200 | | 33 | 间二甲苯+对二甲苯 | 108-38-3，106-42-3  106-42-3 | 570 | 570 | | 34 | 邻二甲苯 | 95-47-6 | 640 | 640 | | 半挥发性有机物 | | | | | | 35 | 硝基苯 | 98-95-3 | 76 | 760 | | 36 | 苯胺 | 62-53-3 | 260 | 663 | | 37 | 2-氯酚 | 95-57-8 | 2256 | 4500 | | 38 | 苯并[a]蒽 | 56-55-3 | 15 | 151 | | 39 | 苯并[a]芘 | 50-32-8 | 1.5 | 15 | | 40 | 苯并[b]荧蒽 | 205-99-2 | 15 | 151 | | 41 | 苯并[k]荧蒽 | 207-08-9 | 151 | 1500 | | 42 | 䓛 | 218-01-9 | 1293 | 12900 | | 43 | 二苯并[a, h]蒽 | 53-70-3 | 1.5 | 15 | | 44 | 茚并[1,2,3-cd]芘 | 193-39-5 | 15 | 151 | | 45 | 萘 | 91-20-3 | 70 | 700 |  注：[1]具体地块土壤中污染物检测含量超过筛选值，但等于或者低于土壤环境背景值（40 mg/kg）水平的，不纳入污染地块管理。 |
| 2 污染物排放标准  2.1 废气  项目运营期排放的颗粒物执行《大气污染物综合排放标准》（GB16297-1996）表2中二级标准；甲醇、甲醛、DMF（N,N-二甲基甲酰胺）、酚类、非甲烷总烃参照《江苏省化学工业挥发性有机物排放标准》（DB32/3151-2016）中排放限值，具体见下表。  表4-6 大气污染物排放标准   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **污染**  **因子** | **有组织排放** | | | **无组织排放** | | **标准来源** | | **排气筒**  **高度**  **（m）** | **最高允许**  **排放浓度**  **（mg/m3）** | **最高允许排放速率（kg/h）** | **监控点** | **监控浓度限值**  **（mg/m3）** | | 颗粒物 | 20 | 18[1] | 0.85[1] | 厂界 | 肉眼不可见[1] | GB16297-1996 | | 甲醇 | 20 | 40 | 7.2 | 厂界 | 1.0 | DB32/3151-2016 | | 甲醛 | 20 | 10 | 0.36 | 厂界 | 0.05 | | N,N-二甲基甲酰胺 | 20 | 30 | 1.1 | 厂界 | 0.40 | | 酚类 | 20 | 20 | 0.14 | 厂界 | 0.02 | | 非甲烷总烃 | 20 | 80 | 14 | 厂界 | 4.0 | | 氨气 | - | 1500 | - | 厂界 | 20 | | 氯化氢 | 20 | 100 | 0.43 | 厂界 | 0.2 | GB16297-1996 | | 硫酸雾 | 20 | 45 | 2.6 | 厂界 | 1.2 | | 氮氧化物 | 20 | 240 | 1.3 | 厂界 | 0.12 |  注：[1]为碳黑尘标准，本项目碳黑投料过程产生碳黑尘，与其他颗粒物混合处理及排放，因此本项目颗粒物排放标准从严执行碳黑尘标准。 **2.2 废水**  本项目产生的生活污水经化粪池处理，生产废水经污水处理站预处理，尾水一起接管至益民污水处理公司集中处置。  污水处理厂接管要求执行《污水综合排放标准》（GB8978-1996）表4中三级标准，氨氮、总磷、总氮、硫酸盐参照执行《污水排入城镇下水道水质标准》（GB/T31962-2015）表1中B级标准，总锡参照执行上海市《污水综合排放标准》（DB31/199-2018）表1中标准，益民污水处理公司处理符合《城镇污水处理厂污染物排放标准》（GB18918-2002）一级A标准后排入通甲河，最终汇入新江海河具体标准见表4-8。清下水标准为COD 40 mg/L，SS 30 mg/L。  **表4-8 废水排放标准** （单位：mg/L，pH无量纲）   |  |  |  | | --- | --- | --- | | **项目** | **益民污水处理公司** | | | **接管要求** | **排放标准** | | - | 《城镇污水处理厂污染物排放标准》（GB18918-2002）中一级A标准 | | COD | 500 | 50 | | pH | 6-9 | 6-9 | | SS | 400 | 10 | | NH3-N | 45 | 5（8） | | 总磷（以P计） | 8 | 0.5 | | 总铜 | 2 | 0.5 | | 总锡 | 5.0 | - | | 挥发酚 | 2.0 | 0.5 | | 甲醛 | 5.0 | 1.0 | | LAS | 20 | 0.5 | | 总锰 | 5.0 | 2.0 | | 总氮（以N计） | 70 | 15 | | 硫酸盐 | 600 | - |   **注：括号外数值为水温＞12℃时的控制指标，括号内数值为水温≤12℃时的控制指标。**  **2.3噪声**  根据本项目所在地声环境功能区划，拟建项目运营期噪声排放标准执行《工业企业厂界环境噪声排放标准》（GB12348-2008）中3类标准，具体见表4-9。  **表4-9 工业企业厂界环境噪声排放标准** （单位：dB（A））   |  |  |  |  | | --- | --- | --- | --- | | **类别** | **昼间** | **夜间** | **标准来源** | | 3类 | 65 | 55 | GB12348-2008 |   **2.4 固废贮存**  本项目危险废物的贮存、处置应分别执行《危险废物贮存污染控制标准》（GB18597-2001）、《危险废物污染防治技术政策》（环发[2001]199号）中的规定。  一般工业固废储存按《一般工业固体废物贮存、处置场污染控制标准》（GB18599-2001）(2013年修改版)中相关规定执行。  生活垃圾处理执行《城市生活垃圾处理及污染防治技术政策》（建城[2000]120号）和《生活垃圾处理技术指南》（建城[2010]61号）以及国家、省市关于固体废物污染环境防治的法律法规。 |
| **3 总量控制指标**  根据《江苏省排放水污染物总量控制技术指南》、《江苏省建设项目主要污染物排放总量平衡方案审核管理办法》（苏环办[2011]71号）和《关于加强建设项目烟粉尘、挥发性有机物准入审核的通知》（苏环办[2014]148号），结合项目排污特征，确定项目总量控制因子为：  （1）大气污染物总量控制因子：颗粒物、氮氧化物、VOCs；  （2）水污染总量控制因子：废水量、COD、NH3-N、TP；  （3）固体废物总量控制因子：一般固废产生量及处置量、危险固废产生量及处置量。  本项目实施后，污染物总量控制情况见表4-12。  **表4-12 拟建项目总量控制指标** （单位：t/a）   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **类别** | **污染物** | | **现有项目排放量** | **现有项目环评排放量** | **本项目排放量** | **以新带老削减量** | **建成后全厂排放** | **增减量** | **建议申请量** | **平衡**  **途径** | | 废气 | 有组织 | 颗粒物 | 0 | 0 | 0.008816 | 0 | 0.008816 | 0.008816 | 0.055208[4] | 通州区内平衡 | | 甲醛[1] | 0 | 0 | 0.006063 | 0 | 0.006063 | 0.006063 | - | | 非甲烷总烃[1] | 0 | 0 | 0.252273 | 0 | 0.252273 | 0.252273 | - | | 氮氧化物 | 0 | 0 | 0.000969 | 0 | 0.000969 | 0.000969 | 0.001473[4] | | 硫酸雾 | 0 | 0 | 0.047025 | 0 | 0.047025 | 0.047025 | 0.071769[4] | | 氯化氢 | 0 | 0 | 0.001054 | 0 | 0.001054 | 0.001054 | 0.0016108[4] | | 氨气 | 0 | 0 | 0.0003188 | 0 | 0.0003188 | 0.0003188 | 0.0004858[4] | | VOCs[1] | - | - | - | - | - | - | 0.394296[4] | | 无组织 | 颗粒物 | 0.19[2] | 0 | 0.046392 | 0.19[3] | 0.046392 | -0.143608 | - | | 甲醛[1] | 0.01[2] | 0.01 | 0.003192 | 0.01[3] | 0.003192 | -0.006808 | - | | 非甲烷总烃[1] | 0.45[2] | 0 | 0.132768 | 0.45[3] | 0.132768 | -0.317232 | - | | 氮氧化物 | 0 | 0 | 0.000504 | 0 | 0.000504 | 0.000504 | - | | 硫酸雾 | 0 | 0 | 0.024744 | 0 | 0.024744 | 0.024744 | - | | 氯化氢 | 0 | 0 | 0.0005568 | 0 | 0.0005568 | 0.0005568 | - | | 氨气 | 0 | 0 | 0.000167 | 0 | 0.000167 | 0.000167 | - | | VOCs[1] | - | - | - | - | - | - | - | | 废水 | 水量 | | 3840 | 5000 | 4137.72 | 0 | 4977.72 | +1137.72 | 4977.72 | 通州区益民污水处理有限公司 | | COD | | 0.166 | 1.7 | 2.02748 | 0 | 2.02748 | +1.86148 | 2.02748 | | 氨氮 | | 0.0067 | 0.06 | 0.18206 | 0 | 0.18206 | +0.17536 | 0.18206 | | SS | | 0.0134 | 0.6 | 1.59499 | 0 | 1.59499 | +1.58159 | 1.59499 | | 总磷 | | - | - | 0.00108 | 0 | 0.00108 | +0.00108 | 0.00108 | | 总铜 | | 0.0018 | 0.15 | 0.00493 | 0 | 0.00493 | +0.00313 | 0.00493 | | 总锡 | | - | - | 0.00658 | 0 | 0.00658 | +0.00658 | 0.00658 | | 固  废 | 一般固废 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 综合利用或安全处置 | | 危险固废 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 生活垃圾 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  注：[1]VOCs量为其他污染物之和；[2]根据现有原料使用情况核算，均无组织排放；[3]考虑到本项目调整了全厂产品结构，同时现有产品配方也进行了变化，本项目建成后认为现有项目不存在了，因此现有项目产生废气量认为是本项目以新带老削减废气量；[4]包括有组织和无组织排放量，VOCs量为非甲烷总烃量与甲醛量之和。 根据《关于做好建设项目环评审批中主要污染物排放总量指标审核与排污权交易衔接工作的通知》（通环办〔2019〕8号）要求，本项目需对增加的化学需氧量、氨氮、总磷、氮氧化物排污总量指标开展排污权交易。 |

**五 建设项目工程分析**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 工艺流程简述  1.1 生产工艺流程    **图5-1 本项目生产工艺流程及产污节点图**  **（注：Gm-n中，当m为1时表示颗粒物，当m为2时表示有机废气，当m为3时表示无机废气，n表示原料序数1~62）**  **表5-1 本项目大气污染物排序表**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 化学名称 | 序号 | 化学名称 | 序号 | 化学名称 | 序号 | 化学名称 | 序号 | 化学名称 | | 1 | 氯化钠 | 14 | 月桂醇硫酸钠 | 27 | 硼酸 | 40 | 50HB-400 | 53 | 二乙二醇乙醚 | | 2 | 对甲基苯磺酸钠 | 15 | 炭黑 | 28 | 硫酸羟胺 | 41 | 壬基酚聚氧乙烯醚 | 54 | 环己胺 | | 3 | 硫酸锰 | 16 | 硫酸钠 | 29 | PVI（季胺化聚乙烯咪唑） | 42 | 单异壬苯基聚乙二醇 | 55 | 甲酸 | | 4 | 硫酸亚锡 | 17 | 硫酸钯 | 30 | PAS-5-A | 43 | NP-10 | 56 | 甲醛 | | 5 | 酒石酸钾钠 | 18 | 石墨烯 | 31 | N-甲基吡咯烷酮 | 44 | 乙醇 | 57 | 甲醇 | | 6 | 碳酸钾 | 19 | 亚氯酸钠 | 32 | 大防白（二乙二醇丁醚） | 45 | 异丙醇 | 58 | DMF | | 7 | 氯化亚锡 | 20 | 碳酸氢钠 | 33 | 乙二醇 | 46 | 丁醚 | 59 | 硝酸 | | 8 | 硫酸铜 | 21 | EDTA-2Na | 34 | EDOT（3,2-乙烯二氧噻吩） | 47 | 乙酸 | 60 | 硫酸 | | 9 | 聚乙二醇1000 | 22 | 二乙酰胺 | 35 | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 48 | 邻甲酚磺酸 | 61 | 盐酸 | | 10 | 碳酸钠 | 23 | 对苯二酚 | 36 | 聚苯乙烯磺酸 | 49 | 葡萄糖酸 | 62 | 氨水 | | 11 | PEG10000 | 24 | 柠檬酸 | 37 | 甲基磺酸 | 50 | 单乙醇胺 | - | - | | 12 | 聚二硫二丙烷磺酸钠 | 25 | 氨基四唑 | 38 | 二乙烯三胺 | 51 | 三乙醇胺 | - | - | | 13 | 异丙基苯磺酸钠 | 26 | 丙骈三氮唑 | 39 | OP-10 | 52 | 三乙二醇单乙醚 | - | - |   1.2 工艺说明  （1）投料：将纯水泵入搅拌槽中，同时按比例投入（人工投入）其他试剂。该过程仅产生废气。  （2）混合：投料结束后密闭搅拌1.5h，使混合均匀。该过程不加热，无污染物产生。  （3）搅拌：打开设备盖，补加纯水使槽内液位达目标液位，盖上盖子继续搅拌5.5h。该过程仅加水时产生少量废气。  （4）检验包装：打开盖子，取样检测合格后物料经过滤器过滤后装入专用包装桶，密封后作为产品入库。该过程产生废气及滤渣。  本项目产品生产过程仅为物理混合过程，无化学反应。  1.3 主要产污环节  本项目生产过程中主要的产污环节和排污特征见表5-2。  **表5-2 主要产污环节和排污特征**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **类别** | **代码** | **产污环节** | **主要污染物** | **产生特征** | **去向** | | 废气 | G1-1~G1-28 | 投料 | 颗粒物 | 间歇 | 布袋除尘+排气筒 | | G2-30~G2-58 | 投料 | VOCs | 喷淋吸收+排气筒 | | G3-59~G3-62 | 投料 | 无机废气（氮氧化物、硫酸雾、氯化氢、氨气） | 喷淋吸收+排气筒 | | G\*2-22~G\*2-26、G\*2-28~G\*2-58 | 搅拌 | VOCs | 布袋除尘+排气筒 | | G\*3-27、G\*3-59~G\*3-62 | 搅拌 | 无机废气（硼酸雾、氮氧化物、硫酸雾、氯化氢、氨气） | 喷淋吸收+排气筒 | | G\*\*2-22~G\*\*2-26、G\*\*2-28~G\*\*2-58 | 检验包装 | VOCs | 布袋除尘+排气筒 | | G\*\*3-27、G\*\*3-59~G\*\*3-62 | 检验包装 | 无机废气（硼酸雾、氮氧化物、硫酸雾、氯化氢、氨气） | 喷淋吸收+排气筒 | | 废水 | W1 | 清洗废水 | COD、NH3-N、TP、Cu、Sn等 | 污水处理站预处理后接管至益民污水处理厂 | | W2 | 初期雨水 | COD、NH3-N、TP等 | | W3 | 喷淋塔废水 | COD、NH3-N、TP等 | | W4 | 生活污水 | COD、SS、NH3-N、TP | 经化粪池预处理后接管至益民污水处理厂 | | 噪声 | - | 生产设备 | 噪声 | 隔声、减震 | | 固废 | S1 | 检验包装时过滤 | 废滤芯 | 妥善收集后委托资质单位定期处置 | | S2 | 原料使用 | 废原料包装桶/袋 | | S3 | 纯水制备 | 废树脂 | | S4 | 废气处理 | 除尘器收集灰 | | S5 | 纯水制备 | 废活性炭 | 出售给回收单位 | | S6 | 纯水制备 | 废石英砂 | 出售给回收单位 | | S7 | 员工生活 | 生活垃圾 | 环卫清运 |   2 物料平衡  **表5-2 本项目物料平衡表** （单位：t/a）   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 入方 | | | | | 出方 | | | | | | 物料名称 | 数量 | 组成 | 组成 | 数量 | 物料名称 | | 数量 | 物料名称 | 数量 | | 氯化钠 | 86 | 99 | 氯化钠 | 85.14 | 产品 | | 13700 | 水 | 8896.545825 | | 杂质 | 0.86 | 氯化钠 | 85.09743 | | 对甲苯磺酸钠 | 9 | 99 | 对甲苯磺酸钠 | 8.91 | 对甲苯磺酸钠 | 8.905544 | | 杂质 | 0.09 | 高锰酸钠 | 16 | | 高锰酸钠 | 40 | 40 | 高锰酸钠 | 16 | 无水硫酸锰 | 29.68515 | | 杂质 | 24 | 无水硫酸铜 | 509.3452 | | 无水硫酸锰 | 30 | 99 | 无水硫酸锰 | 29.7 | 十二烷基三甲基氯化铵 | 1.5 | | 杂质 | 0.3 | 酒石酸钾钠 | 395.802 | | 无水硫酸铜 | 520 | 98 | 无水硫酸铜 | 509.6 | 氢氧化钠 | 449.7 | | 杂质 | 10.4 | 碳酸钾 | 117.5412 | | 十二烷基三甲基氯化铵 | 3 | 50 | 十二烷基三甲基氯化铵 | 1.5 | 亚氯酸钠 | 9.89505 | | 水 | 1.5 | 氯化亚锡 | 9.89505 | | 酒石酸钾钠 | 400 | 99 | 酒石酸钾钠 | 396 | 碳酸氢钠 | 9.89505 | | 杂质 | 4 | EDTA-2Na | 24.73763 | | 氢氧化钠 | 1499 | 30 | 氢氧化钠 | 449.7 | 碳酸钠 | 316.6416 | | 水 | 1049.3 | 异丙基苯磺酸钠 | 4.647674 | | 碳酸钾 | 120 | 98 | 碳酸钾 | 117.6 | 硫酸亚锡 | 59.3703 | | 杂质 | 2.4 | 月桂醇硫酸钠 | 1.97901 | | 亚氯酸钠 | 10 | 99 | 亚氯酸钠 | 9.9 | 硫酸钠 | 0.989504 | | 杂质 | 0.1 | 硫酸钯 | 0.494753 | | 氯化亚锡 | 10 | 99 | 氯化亚锡 | 9.9 | 石墨烯 | 49.47525 | | 杂质 | 0.1 | 炭黑 | 4.947524 | | 碳酸氢钠 | 10 | 99 | 碳酸氢钠 | 9.9 | 聚二硫二丙烷磺酸钠 | 9.69515 | | 杂质 | 0.1 | 二乙烯三胺 | 128.507 | | EDTA-2Na | 25 | 99 | EDTA-2Na | 24.75 | 硫酸羟胺 | 148.2773 | | 杂质 | 0.25 | 二乙酰胺 | 4.942575 | | 碳酸钠 | 320 | 99 | 碳酸钠 | 316.8 | 5-氨基四唑 | 1.997 | | 杂质 | 3.2 | OP-10 | 103.7941 | | 异丙基苯磺酸钠 | 5 | 93 | 异丙基苯磺酸钠 | 4.65 | PAS-5-A | 7.988 | | 杂质 | 0.35 | PVI（季胺化聚乙烯咪唑） | 51.922 | | 硫酸亚锡 | 60 | 99 | 硫酸亚锡 | 59.4 | 硼酸 | 9.88515 | | 杂质 | 0.6 | PEG10000 | 133.4495 | | 月桂醇硫酸钠 | 2 | 99 | 月桂醇硫酸钠 | 1.98 | 聚乙二醇1000 | 0.598501 | | 杂质 | 0.02 | N-甲基吡咯烷酮 | 44.48318 | | 硫酸钠 | 1 | 99 | 硫酸钠 | 0.99 | 大防白（二乙二醇丁醚） | 444.8318 | | 杂质 | 0.01 | 乙二醇 | 39.5406 | | 硫酸钯 | 0.5 | 99 | 硫酸钯 | 0.495 | EDOT（3,4-乙烯二氧噻吩） | 14.82773 | | 杂质 | 0.005 | 农乳1600 | 29.65545 | | 石墨烯 | 50 | 99 | 石墨烯 | 49.5 | 聚苯乙烯磺酸 | 17.973 | | 杂质 | 0.5 | 甲基磺酸 | 108.7367 | | 炭黑 | 5 | 99 | 炭黑 | 4.95 | 壬基酚聚氧乙烯醚 | 49.42575 | | 杂质 | 0.05 | 单异壬苯基聚乙二醇 | 19.7702 | | 聚二硫二丙烷磺酸钠 | 10 | 97 | 聚二硫二丙烷磺酸钠 | 9.7 | 对苯二酚 | 2.965545 | | 杂质 | 0.3 | 单乙醇胺 | 9.7853 | | 二乙烯三胺 | 130 | 99 | 二乙烯三胺 | 128.7 | 三乙醇胺 | 4.942575 | | 杂质 | 1.3 | 三乙二醇单乙醚 | 0.97853 | | 硫酸羟胺 | 150 | 99 | 硫酸羟胺 | 148.5 | 二乙二醇乙醚 | 0.97853 | | 杂质 | 1.5 | 邻甲酚磺酸 | 9.7853 | | 二乙酰胺 | 5 | 99 | 二乙酰胺 | 4.95 | 乙醇 | 107.6383 | | 杂质 | 0.05 | 异丙醇 | 11.74236 | | 5-氨基四唑 | 2 | 100 | 5-氨基四唑 | 2 | 甲醇 | 19.5706 | | OP-10 | 105 | 99 | OP-10 | 103.95 | DMF | 49.42575 | | 杂质 | 1.05 | 50HB-400 | 69.19605 | | PAS-5-A | 20 | 40 | PAS-5-A | 8 | 甲醛 | 42.48618 | | 水 | 12 | 丁醚 | 19.5706 | | PVI（季胺化聚乙烯咪唑） | 130 | 40 | PVI（季胺化聚乙烯咪唑） | 52 | 苯丙三氮唑 | 1.97703 | | 水 | 78 | 环己胺 | 9.88515 | | 硼酸 | 10 | 99 | 硼酸 | 9.9 | 葡萄糖酸 | 4.49325 | | 杂质 | 0.1 | 醋酸 | 49.87508 | | PEG10000 | 135 | 99 | PEG10000 | 133.65 | 柠檬酸 | 59.3109 | | 杂质 | 1.35 | 甲酸 | 79.0812 | | 聚乙二醇1000 | 0.6 | 99.9 | 聚乙二醇1000 | 0.5994 | 氯化氢 | 7.3889 | | 杂质 | 0.0006 | 硫酸 | 329.505 | | N-甲基吡咯烷酮 | 45 | 99 | N-甲基吡咯烷酮 | 44.55 | 硝酸 | 6.7898 | | 杂质 | 0.45 | 氨 | 2.23664 | | 大防白（二乙二醇丁醚） | 450 | 99 | 大防白（二乙二醇丁醚） | 445.5 | 双氧水 | 364 | | 杂质 | 63 | | 杂质 | 4.5 | 废气 | G1-1~G1-28 | 1.06975 | 颗粒物 | 1.06975 | | | 乙二醇 | 40 | 99 | 乙二醇 | 39.6 | G2-30~G2-58 | 0.713725 | 甲醛 | 0.021275 | | | 杂质 | 0.4 | | EDOT（3,4-乙烯二氧噻吩） | 15 | 99 | EDOT（3,4-乙烯二氧噻吩） | 14.85 | | 杂质 | 0.15 | 非甲烷总烃 | 0.69245 | | | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 30 | 99 | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 29.7 | G3-59~G3-62 | 0.1732 | 氯化氢 | 0.0037 | | | 杂质 | 0.3 | 硫酸雾 | 0.165 | | | 聚苯乙烯磺酸 | 60 | 30 | 聚苯乙烯磺酸 | 18 | 氮氧化物 | 0.0034 | | | 水 | 42 | 氨气 | 0.0011 | | | 甲基磺酸 | 110 | 99 | 甲基磺酸 | 108.9 | G\*2-22~G\*2-26、G\*2-28~G\*2-58 | 0.953625 | 甲醛 | 0.021275 | | | 杂质 | 1.1 | | 壬基酚聚氧乙烯醚 | 50 | 99 | 壬基酚聚氧乙烯醚 | 49.5 | | 杂质 | 0.5 | 非甲烷总烃 | 0.93235 | | | 单异壬苯基聚乙二醇 | 20 | 99 | 单异壬苯基聚乙二醇 | 19.8 | G\*3-27、G\*3-59~G\*3-62 | 0.17815 | 氯化氢 | 0.0037 | | | 杂质 | 0.2 | 硫酸雾 | 0.165 | | | 对苯二酚 | 3 | 99 | 对苯二酚 | 2.97 | 氮氧化物 | 0.0034 | | | 杂质 | 0.03 | 硼酸雾 | 0.00495 | | | 单乙醇胺 | 10 | 98 | 单乙醇胺 | 9.8 | 氨气 | 0.0011 | | | 杂质 | 0.2 | G\*\*2-22~G\*\*2-26、G\*\*2-28~G\*\*2-58 | 0.953625 | 甲醛 | 0.021275 | | | 三乙醇胺 | 5 | 99 | 三乙醇胺 | 4.95 | | 杂质 | 0.05 | | 三乙二醇单乙醚 | 1 | 98 | 三乙二醇单乙醚 | 0.98 | 非甲烷总烃 | 0.93235 | | | 杂质 | 0.02 | G\*\*3-27、G\*\*3-59~G\*\*3-62 | 0.17815 | 氯化氢 | 0.0037 | | | 二乙二醇乙醚 | 1 | 98 | 二乙二醇乙醚 | 0.98 | 硫酸雾 | 0.165 | | | 杂质 | 0.02 | 氮氧化物 | 0.0034 | | | 邻甲酚磺酸 | 10 | 98 | 邻甲酚磺酸 | 9.8 | 硼酸雾 | 0.00495 | | | 杂质 | 0.2 | 氨气 | 0.0011 | | | 乙醇 | 110 | 98 | 乙醇 | 107.8 | 水汽 | | 5.522405 | 水汽 | 5.522405 | | 杂质 | 2.2 | 固废 | S1 | 4.0656 | 滤渣 | 4.0656 | | | 异丙醇 | 12 | 98 | 异丙醇 | 11.76 |  |  |  |  |  | | | 杂质 | 0.24 |  |  |  |  |  | | | 甲醇 | 20 | 98 | 甲醇 | 19.6 |  |  |  |  |  | | | 杂质 | 0.4 |  |  |  |  |  | | | DMF | 50 | 99 | DMF | 49.5 |  |  |  |  |  | | | 杂质 | 0.5 |  |  |  |  |  | | | 50HB-400 | 70 | 99 | 50HB-400 | 69.3 |  |  |  |  |  | | | 杂质 | 0.7 |  |  |  |  |  | | | 甲醛 | 115 | 37 | 甲醛 | 42.55 |  |  |  |  |  | | | 水 | 72.45 |  |  |  |  |  | | | 丁醚 | 20 | 98 | 丁醚 | 19.6 |  |  |  |  |  | | | 杂质 | 0.4 |  |  |  |  |  | | | 苯丙三氮唑 | 2 | 99 | 苯丙三氮唑 | 1.98 |  |  |  |  |  | | | 杂质 | 0.02 |  |  |  |  |  | | | 环己胺 | 10 | 99 | 环己胺 | 9.9 |  |  |  |  |  | | | 杂质 | 0.1 |  |  |  |  |  | | | 葡萄糖酸 | 10 | 45 | 葡萄糖酸 | 4.5 |  |  |  |  |  | | | 水 | 5.5 |  |  |  |  |  | | | 醋酸 | 50 | 99.9 | 醋酸 | 49.95 |  |  |  |  |  | | | 水 | 0.05 |  |  |  |  |  | | | 柠檬酸 | 60 | 99 | 柠檬酸 | 59.4 |  |  |  |  |  | | | 杂质 | 0.6 |  |  |  |  |  | | | 甲酸 | 80 | 99 | 甲酸 | 79.2 |  |  |  |  |  | | | 杂质 | 0.8 |  |  |  |  |  | | | 盐酸 | 20 | 37 | 盐酸 | 7.4 |  |  |  |  |  | | | 水 | 12.6 |  |  |  |  |  | | | 硫酸 | 550 | 60 | 硫酸 | 330 |  |  |  |  |  | | | 水 | 220 |  |  |  |  |  | | | 硝酸 | 10 | 68 | 硝酸 | 6.8 |  |  |  |  |  | | | 水 | 3.2 |  |  |  |  |  | | | 氨水 | 8 | 28 | 氨水 | 2.24 |  |  |  |  |  | | | 水 | 5.76 |  |  |  |  |  | | | 双氧水 | 1040 | 35 | 双氧水 | 364 |  |  |  |  |  | | | 水 | 676 |  |  |  |  |  | | | 水 | 6723.70823 | - | 水 | 6723.70823 |  |  |  |  |  | | | 合计 | 13713.80823 | | | | 13713.80823 | | | | |   **表5-3 废气产生情况详表** （单位：t/a）   |  |  |  |  | | --- | --- | --- | --- | | 污染物名称 | 投料工序 | 搅拌工序 | 检验包装工序 | | 氯化钠 | 0.04257 | 0 | 0 | | 对甲苯磺酸钠 | 0.004455 | 0 | 0 | | 硫酸锰 | 0.01485 | 0 | 0 | | 硫酸铜 | 0.2548 | 0 | 0 | | 酒石酸钾钠 | 0.198 | 0 | 0 | | 碳酸钾 | 0.0588 | 0 | 0 | | 亚氯酸钠 | 0.00495 | 0 | 0 | | 氯化亚锡 | 0.00495 | 0 | 0 | | 碳酸氢钠 | 0.00495 | 0 | 0 | | EDTA-2Na | 0.012375 | 0 | 0 | | 碳酸钠 | 0.1584 | 0 | 0 | | 异丙基苯磺酸钠 | 0.002325 | 0 | 0 | | 硫酸亚锡 | 0.0297 | 0 | 0 | | 月桂醇硫酸钠 | 0.00099 | 0 | 0 | | 硫酸钠 | 0.000495 | 0 | 0 | | 硫酸钯 | 0.0002475 | 0 | 0 | | 石墨烯 | 0.02475 | 0 | 0 | | 炭黑 | 0.002475 | 0 | 0 | | 聚二硫二丙烷磺酸钠 | 0.00485 | 0 | 0 | | 二乙烯三胺 | 0.06435 | 0.06435 | 0.06435 | | 硫酸羟胺 | 0.07425 | 0.07425 | 0.07425 | | 二乙酰胺 | 0.002475 | 0.002475 | 0.002475 | | 5-氨基四唑 | 0.001 | 0.001 | 0.001 | | OP-10 | 0.051975 | 0.051975 | 0.051975 | | PAS-5-A | 0.004 | 0.004 | 0.004 | | PVI（季胺化聚乙烯咪唑） | 0.026 | 0.026 | 0.026 | | 硼酸 | 0.00495 | 0.00495 | 0.00495 | | PEG10000 | 0.066825 | 0 | 0 | | 聚乙二醇1000 | 0.0002997 | 0 | 0 | | N-甲基吡咯烷酮 | 0.022275 | 0.022275 | 0.022275 | | 大防白（二乙二醇丁醚） | 0.22275 | 0.22275 | 0.22275 | | 乙二醇 | 0.0198 | 0.086925 | 0.086925 | | EDOT（3,4-乙烯二氧噻吩） | 0.007425 | 0.007425 | 0.007425 | | 农乳1600（苯乙烯基苯酚聚氧乙烯醚） | 0.01485 | 0.01485 | 0.01485 | | 聚苯乙烯磺酸 | 0.009 | 0.009 | 0.009 | | 甲基磺酸 | 0.05445 | 0.05445 | 0.05445 | | 壬基酚聚氧乙烯醚 | 0.02475 | 0.02475 | 0.02475 | | 单异壬苯基聚乙二醇 | 0.0099 | 0.0099 | 0.0099 | | 对苯二酚 | 0.001485 | 0.001485 | 0.001485 | | 单乙醇胺 | 0.0049 | 0.0049 | 0.0049 | | 三乙醇胺 | 0.002475 | 0.002475 | 0.002475 | | 三乙二醇单乙醚 | 0.00049 | 0.00049 | 0.00049 | | 二乙二醇乙醚 | 0.00049 | 0.00049 | 0.00049 | | 邻甲酚磺酸 | 0.0049 | 0.0049 | 0.0049 | | 乙醇 | 0.0539 | 0.0539 | 0.0539 | | 异丙醇 | 0.00588 | 0.00588 | 0.00588 | | 甲醇 | 0.0098 | 0.0098 | 0.0098 | | DMF | 0.02475 | 0.02475 | 0.02475 | | 50HB-400 | 0.03465 | 0.03465 | 0.03465 | | 甲醛 | 0.021275 | 0.021275 | 0.021275 | | 丁醚 | 0.0098 | 0.0098 | 0.0098 | | 苯骈三氮唑 | 0.00099 | 0.00099 | 0.00099 | | 环己胺 | 0.00495 | 0.00495 | 0.00495 | | 葡萄糖酸 | 0.00225 | 0.00225 | 0.00225 | | 乙酸 | 0.024975 | 0.024975 | 0.024975 | | 柠檬酸 | 0.0297 | 0.0297 | 0.0297 | | 甲酸 | 0.0396 | 0.0396 | 0.0396 | | 氯化氢 | 0.0037 | 0.0037 | 0.0037 | | 硫酸雾 | 0.165 | 0.165 | 0.165 | | 氮氧化物 | 0.0034 | 0.0034 | 0.0034 | | 氨气 | 0.00112 | 0.00112 | 0.00112 |  注：表内数据为废气量。 **3 水量平衡**  （1）纯水制备用水  本项目纯水主要用于产品生产及纯水设备、包装桶的清洗。  根据物料平衡计算，本项目产品制备使用纯水6723.70823t/a，其中以水汽蒸发9.40411066t/a，其余（6714.30411934 t/a）全部进入产品。  据现有项目类比，用于设备和包装桶清洗的自来水系数约为自来水0.2425t/吨产品、纯水0.0575 t/吨产品。本项目用纯水制备产生的浓水代替自来水进行清洗，本项目建成后产品增加至13700t/a，则本项目浓水、纯水用量分别为3322.25 t/a、787.75 t/a。  根据以上分析，本项目纯水使用量为7511.45823t/a。根据现有项目情况，纯水制备使用自来水量为纯水产生量的3倍，则本项目纯水制备使用自来水量为22534.37469t/a，产生浓水15022.91646t/a。  纯水制备过程中，自来水依次经过“砂滤”、“碳滤”、“离子交换”，最后进入反渗透膜设备。在膜设备中，部分水透过膜成为纯水，收集后用于生产；而膜表面循环的浓水中部分排出（排出浓水体积为纯水体积的2倍）。据此推断浓水成分与自来水相同，且各组分浓度约为自来水浓度1.5倍，而自来水中各浓度较小，即使增加到1.5倍浓度也满足清下水排放要求。本项目纯水制备过程产生的浓水可回用于清洗环节、绿化环节，剩余部分作为清下水外排。  （2）喷淋吸收用水  本项目喷淋吸收用水循环使用，定期补充，每个喷淋塔循环水量2t/h，年工作时间按2400h计，损耗按1.5%计，则循环水量为4800t/a，补水量为72t/a。本项目设有2台喷淋塔，则需补水144t/a；，据类比，废水排放量约为循环量的0.5%，则喷淋废水排放量为48t/a。  （3）生活用水  根据现有项目情况，员工生活用水量为50L/人•d计，本项目定员10人，可得员工生活用水量为150t/a（年工作日为300天），产污系数以0.8计，则生活污水量为120t/a。  （4）初期雨水  南通市的暴雨强度公式：    式中：q--按设计降雨重现期与历时所算出的降雨强度（L/s.hm2），计算得q为168.139 L/s·hm2；  Ψ--径流系数（取0.85）；  P--重现期为0.5；  F--设计汇水面积（1.06 hm2）；  t--降雨前5min。  计算得Q=151.4932L/s，即Q=45.448m3/次，间歇降雨频次按15次/年计，则该项目受污染初期雨水收集量为681.72t/a。  本项目水平衡图见图5-2。    图5-2 本项目水量平衡图 （单位：t/a）    图5-3 建成后全厂水量平衡图 （单位：t/a）  **3 甲醛平衡**    **图5-4 本项目（全厂）甲醛平衡图** （单位：t/a）  **4 污染源强核算**  **4.1 废气**  本项目废气主要为投料、搅拌、检测包装过程产生的颗粒物、挥发性有机物、酸雾，以及研发、试验过程产生的少量废气。由于研发、试验涉及产品在本项目产品范围内，且工作量不到1t/a（以产品计），仅为生产产能0.007%，本次环评不核算研发、试验过程废气量。  表5-3.1 本项目（全厂）大气污染物产生情况（按产品分）   |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 产品 | 投料工序 | | | | 搅拌工序 | | | | 检验包装工序 | | | | | 高分子导电膜A | 氯化钠 | 0.0099 | 颗粒物 | 0.011385 | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.055975 | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.055975 | | 对甲基苯磺酸钠 | 0.001485 | 二乙二醇丁醚 | 0.02475 | 二乙二醇丁醚 | 0.02475 | | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.051975 | 乙二醇 | 0.0099 | 乙二醇 | 0.0099 | | 二乙二醇丁醚 | 0.02475 | 3,2-乙烯二氧噻吩 | 0.002475 | 3,2-乙烯二氧噻吩 | 0.002475 | | 乙二醇 | 0.0099 | 苯乙烯基苯酚聚氧乙烯醚 | 0.00495 | 苯乙烯基苯酚聚氧乙烯醚 | 0.00495 | | 3,2-乙烯二氧噻吩 | 0.002475 | 季胺化聚乙烯咪唑 | 0.004 | 季胺化聚乙烯咪唑 | 0.004 | | 苯乙烯基苯酚聚氧乙烯醚 | 0.00495 |  |  |  |  |  |  |  |  | | 高分子导电膜B | 硫酸锰 | 0.0099 | 颗粒物 | 0.012375 | 聚苯乙烯磺酸 | 0.0075 | 非甲烷总烃 | 0.02235 | 聚苯乙烯磺酸 | 0.0075 | 非甲烷总烃 | 0.02235 | | 硼酸 | 0.002475 | 甲基磺酸 | 0.01485 | 甲基磺酸 | 0.01485 | | 聚苯乙烯磺酸 | 0.0075 | 非甲烷总烃 | 0.02235  0 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | | 甲基磺酸 | 0.01485 |  |  |  |  |  |  |  |  | | 化学铜添加剂A | 酒石酸钾钠 | 0.0495 | 颗粒物 | 0.0985 | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1149 | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1149 | | 碳酸钾 | 0.049 | 硫酸羟胺 | 0.02475 | 硫酸羟胺 | 0.02475 | | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1089 | 二乙烯三胺 | 0.02475 | 二乙烯三胺 | 0.02475 | | 硫酸羟胺 | 0.02475 | OP-10 | 0.0099 | OP-10 | 0.0099 | | 二乙烯三胺 | 0.02475 | 季胺化聚乙烯咪唑 | 0.006 | 季胺化聚乙烯咪唑 | 0.006 | | OP-10 | 0.0099 |  |  |  |  |  |  |  |  | | 化学铜添加剂B | 氯化钠 | 0.021285 | 颗粒物 | 0.4087349 | 乙二醇 | 9.99E-05 | 非甲烷总烃 | 0.0000999 | 乙二醇 | 9.99E-05 | 非甲烷总烃 | 0.0000999 | | 氯化亚锡 | 0.00495 | 甲醛 | 0.006475 | 甲醛 | 0.006475 | 甲醛 | 0.006475 | 甲醛 | 0.006475 | | 硫酸铜 | 0.24875 | 氯化氢 | 0.000925 | 氯化氢 | 0.000925 | 氯化氢 | 0.000925 | 氯化氢 | 0.000925 | | 聚乙二醇1000 | 9.99E-05 |  |  |  |  |  |  |  |  | | 酒石酸钾钠 | 0.07425 |  |  |  |  |  |  |  |  | | EDTA-2Na | 0.0099 |  |  |  |  |  |  |  |  | | 碳酸钠 | 0.0495 |  |  |  |  |  |  |  |  | | 甲醛 | 0.006475 | 甲醛 | 0.006475 |  |  |  |  |  |  |  |  | | 氯化氢 | 0.000925 | 氯化氢 | 0.000925 |  |  |  |  |  |  |  |  | | 电镀光亮剂 | 硫酸铜 | 0.00049 | 颗粒物 | 0.02816 | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.042095 | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.042095 | | PEG10000 | 0.017325 | 壬基酚聚氧乙烯醚 | 0.00495 | 壬基酚聚氧乙烯醚 | 0.00495 | | 聚二硫二丙烷磺酸钠 | 0.002425 | 单异壬苯基聚乙二醇 | 0.00495 | 单异壬苯基聚乙二醇 | 0.00495 | | 对苯二酚 | 0.000495 | NP-10 | 0.002475 | NP-10 | 0.002475 | | 柠檬酸 | 0.00495 | PAS-5-A | 0.002 | PAS-5-A | 0.002 | | 氯化钠 | 0.002475 | 对苯二酚 | 0.000495 | 对苯二酚 | 0.000495 | | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.03465 | 柠檬酸 | 0.00495 | 柠檬酸 | 0.00495 | | 壬基酚聚氧乙烯醚 | 0.00495 | 甲酸 | 0.00495 | 甲酸 | 0.00495 | | 单异壬苯基聚乙二醇 | 0.00495 |  |  |  |  |  |  |  |  | | NP-10 | 0.002475 |  |  |  |  |  |  |  |  | | 甲酸 | 0.00495 |  |  |  |  |  |  |  |  | | 金属保护液 | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1089 | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1149 | 二乙二醇丁醚 | 0.0495 | 非甲烷总烃 | 0.1149 | | 硫酸羟胺 | 0.02475 | 硫酸羟胺 | 0.02475 | 硫酸羟胺 | 0.02475 | | 二乙烯三胺 | 0.02475 | 二乙烯三胺 | 0.02475 | 二乙烯三胺 | 0.02475 | | OP-10 | 0.0099 | OP-10 | 0.0099 | OP-10 | 0.0099 | |  |  |  |  | PVI（季胺化聚乙烯咪唑） | 0.006 | PVI（季胺化聚乙烯咪唑） | 0.006 | | 电子用剥离液 | 氨基四唑 | 0.0005 | 颗粒物 | 0.02673 | N-甲基吡咯烷酮 | 0.002475 | 非甲烷总烃 | 0.258945 | N-甲基吡咯烷酮 | 0.002475 | 非甲烷总烃 | 0.258945 | | 硫酸铜 | 0.00049 | 乙醇 | 0.0392 | 乙醇 | 0.0392 | | 硫酸亚锡 | 0.02475 | 异丙醇 | 0.00588 | 异丙醇 | 0.00588 | | 丙骈三氮唑 | 0.00099 | 甲醇 | 0.0098 | 甲醇 | 0.0098 | | N-甲基吡咯烷酮 | 0.002475 | 非甲烷总烃 | 0.207955 | 丁醚 | 0.0098 | 丁醚 | 0.0098 | | 乙醇 | 0.0392 | OP-10 | 0.01485 | OP-10 | 0.01485 | | 异丙醇 | 0.00588 | 二乙二醇丁醚 | 0.0594 | 二乙二醇丁醚 | 0.0594 | | 甲醇 | 0.0098 | 冰乙酸 | 0.02475 | 冰乙酸 | 0.02475 | | 丁醚 | 0.0098 | 甲基磺酸 | 0.02475 | 甲基磺酸 | 0.02475 | | OP-10 | 0.01485 | 甲酸 | 0.0099 | 甲酸 | 0.0099 | | 二乙二醇丁醚 | 0.0594 | 二乙二醇丁醚 | 0.0495 | 二乙二醇丁醚 | 0.0495 | | 冰乙酸 | 0.02475 | 邻甲酚磺酸 | 0.0049 | 邻甲酚磺酸 | 0.0049 | | 甲基磺酸 | 0.02475 | 葡萄糖酸 | 0.00225 | 葡萄糖酸 | 0.00225 | | 甲酸 | 0.0099 | 氨基四唑 | 0.0005 | 氨基四唑 | 0.0005 | | 邻甲酚磺酸 | 0.0049 | 丙骈三氮唑 | 0.00099 | 丙骈三氮唑 | 0.00099 | | 葡萄糖酸 | 0.00225 | 氮氧化物 | 0.0034 | 氮氧化物 | 0.0034 | 氮氧化物 | 0.0034 | 氮氧化物 | 0.0034 | | 氮氧化物 | 0.0034 | 氮氧化物 | 0.0034 | 硫酸雾 | 0.015 | 硫酸雾 | 0.015 | 硫酸雾 | 0.015 | 硫酸雾 | 0.015 | | 硫酸雾 | 0.015 | 硫酸雾 | 0.015 | 氯化氢 | 0.00185 | 氯化氢 | 0.00185 | 氯化氢 | 0.00185 | 氯化氢 | 0.00185 | | 氯化氢 | 0.00185 | 氯化氢 | 0.00185 |  |  |  |  |  |  |  |  | | 蚀刻液 | 对甲苯磺酸钠 | 0.001485 | 颗粒物 | 0.1024099 | 单乙醇胺 | 0.0049 | 非甲烷总烃 | 0.0677049 | 单乙醇胺 | 0.0049 | 非甲烷总烃 | 0.0677049 | | 异丙基苯磺酸钠 | 0.002325 | 三乙醇胺 | 0.002475 | 三乙醇胺 | 0.002475 | | 碳酸钾 | 0.049 | NP-10 | 0.00495 | NP-10 | 0.00495 | | 碳酸钠 | 0.0495 | 三乙二醇单乙醚 | 0.00049 | 三乙二醇单乙醚 | 0.00049 | | 聚乙二醇1000 | 9.99E-05 | 二乙二醇乙醚 | 0.00049 | 二乙二醇乙醚 | 0.00049 | | 单乙醇胺 | 0.0049 | 非甲烷总烃 | 0.067605 | DMF | 0.02475 | DMF | 0.02475 | | 三乙醇胺 | 0.002475 | 环己胺 | 0.00495 | 环己胺 | 0.00495 | | NP-10 | 0.00495 | OP-10 | 0.0099 | OP-10 | 0.0099 | | 三乙二醇单乙醚 | 0.00049 | 乙醇 | 0.0147 | 乙醇 | 0.0147 | | 二乙二醇乙醚 | 0.00049 | 乙二醇 | 9.99E-05 | 乙二醇 | 9.99E-05 | | DMF | 0.02475 | 氨 | 0.00112 | 氨 | 0.00112 | 氨 | 0.00112 | 氨 | 0.00112 | | 环己胺 | 0.00495 |  |  |  |  |  |  |  |  | | OP-10 | 0.0099 |  |  |  |  |  |  |  |  | | 乙醇 | 0.0147 |  |  |  |  |  |  |  |  | | 氨 | 0.00112 | 氨 | 0.00112 |  |  |  |  |  |  |  |  | | 酸性孔金属化试剂 | 对甲基苯磺酸钠 | 0.001485 | 颗粒物 | 0.0904374 | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.13023 | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.13023 | | 氯化亚锡 | 0.00495 | 二乙二醇丁醚 | 0.0396 | 二乙二醇丁醚 | 0.0396 | | 氯化钠 | 0.001485 | 乙二醇 | 0.011485 | 乙二醇 | 0.011485 | | 聚乙二醇1000 | 9.99E-05 | 3,4-乙烯二氧噻吩 | 0.00495 | 3,4-乙烯二氧噻吩 | 0.00495 | | 月桂醇硫酸钠 | 0.00099 | 苯乙烯基苯酚聚氧乙烯醚 | 0.0099 | 苯乙烯基苯酚聚氧乙烯醚 | 0.0099 | | 炭黑 | 0.002475 | 硫酸羟胺 | 0.02475 | 硫酸羟胺 | 0.02475 | | 五水硫酸铜 | 0.00049 | OP-10 | 0.00495 | OP-10 | 0.00495 | | 酒石酸钾钠 | 0.0495 | NP-10 | 0.00495 | NP-10 | 0.00495 | | 硫酸钠 | 0.000495 | 甲基磺酸 | 0.01485 | 甲基磺酸 | 0.01485 | | 硫酸钯 | 0.000248 | 对苯二酚 | 0.000495 | 对苯二酚 | 0.000495 | | 对苯二酚 | 0.000495 | 5-氨基四唑 | 0.0005 | 5-氨基四唑 | 0.0005 | | 5-氨基四唑 | 0.0005 | 季胺化聚乙烯咪唑 | 0.004 | 季胺化聚乙烯咪唑 | 0.004 | | 硼酸 | 0.002475 | 甲醛 | 0.0148 | 甲醛 | 0.0148 | 甲醛 | 0.0148 | 甲醛 | 0.0148 | | 石墨烯 | 0.02475 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | 硼酸 | 0.002475 | | N-甲基吡咯烷酮 | 0.0099 | 非甲烷总烃 | 0.12375 | 盐酸 | 0.000925 | 盐酸 | 0.000925 | 盐酸 | 0.000925 | 盐酸 | 0.000925 | | 二乙二醇丁醚 | 0.0396 | 硫酸 | 0.15 | 硫酸 | 0.15 | 硫酸 | 0.15 | 硫酸 | 0.15 | | 乙二醇 | 0.0099 |  |  |  |  |  |  |  |  | | 3,4-乙烯二氧噻吩 | 0.00495 |  |  |  |  |  |  |  |  | | 苯乙烯基苯酚聚氧乙烯醚 | 0.0099 |  |  |  |  |  |  |  |  | | 硫酸羟胺 | 0.02475 |  |  |  |  |  |  |  |  | | OP-10 | 0.00495 |  |  |  |  |  |  |  |  | | NP-10 | 0.00495 |  |  |  |  |  |  |  |  | | 甲基磺酸 | 0.01485 |  |  |  |  |  |  |  |  | | 甲醛 | 0.0148 | 甲醛 | 0.0148 |  |  |  |  |  |  |  |  | | 盐酸 | 0.000925 | 盐酸 | 0.000925 |  |  |  |  |  |  |  |  | | 硫酸 | 0.15 | 硫酸 | 0.15 |  |  |  |  |  |  |  |  | | 碱性孔金属化试剂 | 硫酸锰 | 0.00495 | 颗粒物 | 0.0692 | 聚苯乙烯磺酸 | 0.0015 | 非甲烷总烃 | 0.05205 | 聚苯乙烯磺酸 | 0.0015 | 非甲烷总烃 | 0.05205 | | 酒石酸钾钠 | 0.02475 | 二乙二醇单丁醚 | 0.02475 | 二乙二醇单丁醚 | 0.02475 | | 亚氯酸钠 | 0.00495 | 二乙烯三胺 | 0.01485 | 二乙烯三胺 | 0.01485 | | 碳酸钾 | 0.0098 | OP-10 | 0.002475 | OP-10 | 0.002475 | | 氯化钠 | 0.00495 | 季胺化聚乙烯咪唑 | 0.006 | 季胺化聚乙烯咪唑 | 0.006 | | 碳酸氢钠 | 0.00495 | 二乙酰胺 | 0.002475 | 二乙酰胺 | 0.002475 | | EDTA-2Na | 0.002475 |  |  |  |  |  |  |  |  | | 二乙酰胺 | 0.002475 |  |  |  |  |  |  |  |  | | 碳酸钠 | 0.0099 |  |  |  |  |  |  |  |  | | 聚苯乙烯磺酸 | 0.0015 | 非甲烷总烃 | 0.043575 |  |  |  |  |  |  |  |  | | 二乙二醇单丁醚 | 0.02475 |  |  |  |  |  |  |  |  | | 二乙烯三胺 | 0.01485 |  |  |  |  |  |  |  |  | | OP-10 | 0.002475 |  |  |  |  |  |  |  |  | | 高纵横比通孔和填孔镀铜液 | 硫酸铜 | 0.00049 | 颗粒物 | 0.080135 | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.10595 | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.10595 | | PEG10000 | 0.0495 | 壬基酚聚氧乙烯醚 | 0.00495 | 壬基酚聚氧乙烯醚 | 0.00495 | | 聚二硫二丙烷磺酸钠 | 0.002425 | 单异壬苯基聚乙二醇 | 0.00495 | 单异壬苯基聚乙二醇 | 0.00495 | | 对苯二酚 | 0.000495 | 甲酸 | 0.02475 | 甲酸 | 0.02475 | | 柠檬酸 | 0.02475 | NP-10 | 0.002475 | NP-10 | 0.002475 | | 氯化钠 | 0.002475 | PAS-5-A | 0.002 | PAS-5-A | 0.002 | | 50HB-400 | 0.017325 | 非甲烷总烃 | 0.05445 | 乙二醇 | 0.0495 | 乙二醇 | 0.0495 | | 壬基酚聚氧乙烯醚 | 0.00495 |  |  |  |  |  |  |  |  | | 单异壬苯基聚乙二醇 | 0.00495 |  |  |  |  |  |  |  |  | | 甲酸 | 0.02475 |  |  |  |  |  |  |  |  | | NP-10 | 0.002475 |  |  |  |  |  |  |  |  |   注：单位为t/a。  表5-3.2 本项目（全厂）大气污染物排放情况（按产品分）   |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 产品 | 投料工序 | | | | 搅拌工序 | | | | 检验包装工序 | | | | | 高分子导电膜A | 氯化钠 | 0.09405 | 颗粒物 | 0.1081575 | N-甲基吡咯烷酮 | 0.9405 | 非甲烷总烃 | 5.317625 | N-甲基吡咯烷酮 | 0.9405 | 非甲烷总烃 | 5.317625 | | 对甲基苯磺酸钠 | 0.0141075 | 二乙二醇丁醚 | 2.35125 | 二乙二醇丁醚 | 2.35125 | | N-甲基吡咯烷酮 | 0.09405 | 非甲烷总烃 | 0.4937625 | 乙二醇 | 0.9405 | 乙二醇 | 0.9405 | | 二乙二醇丁醚 | 0.235125 | 3,2-乙烯二氧噻吩 | 0.235125 | 3,2-乙烯二氧噻吩 | 0.235125 | | 乙二醇 | 0.09405 | 苯乙烯基苯酚聚氧乙烯醚 | 0.47025 | 苯乙烯基苯酚聚氧乙烯醚 | 0.47025 | | 3,2-乙烯二氧噻吩 | 0.0235125 | 季胺化聚乙烯咪唑 | 0.38 | 季胺化聚乙烯咪唑 | 0.38 | | 苯乙烯基苯酚聚氧乙烯醚 | 0.047025 |  |  |  |  |  |  |  |  | | 高分子导电膜B | 硫酸锰 | 0.09405 | 颗粒物 | 0.1175625 | 聚苯乙烯磺酸 | 0.7125 | 非甲烷总烃 | 2.12325 | 聚苯乙烯磺酸 | 0.7125 | 非甲烷总烃 | 2.12325 | | 硼酸 | 0.0235125 | 甲基磺酸 | 1.41075 | 甲基磺酸 | 1.41075 | | 聚苯乙烯磺酸 | 0.07125 | 非甲烷总烃 | 0.212325 | 硼酸 | 0.235125 | 硼酸 | 0.002475 | 硼酸 | 0.235125 | 硼酸 | 0.002475 | | 甲基磺酸 | 0.141075 | 0 |  |  |  |  |  |  |  |  | | 化学铜添加剂A | 酒石酸钾钠 | 0.47025 | 颗粒物 | 0.93575 | 二乙二醇丁醚 | 4.7025 | 非甲烷总烃 | 10.9155 | 二乙二醇丁醚 | 4.7025 | 非甲烷总烃 | 10.9155 | | 碳酸钾 | 0.4655 | 硫酸羟胺 | 2.35125 | 硫酸羟胺 | 2.35125 | | 二乙二醇丁醚 | 0.47025 | 非甲烷总烃 | 1.03455 | 二乙烯三胺 | 2.35125 | 二乙烯三胺 | 2.35125 | | 硫酸羟胺 | 0.235125 | OP-10 | 0.9405 | OP-10 | 0.9405 | | 二乙烯三胺 | 0.235125 | 季胺化聚乙烯咪唑 | 0.57 | 季胺化聚乙烯咪唑 | 0.57 | | OP-10 | 0.09405 |  |  |  |  |  |  |  |  | | 化学铜添加剂B | 氯化钠 | 0.2022075 | 颗粒物 | 3.88298155 | 乙二醇 | 0.0094905 | 非甲烷总烃 | 0.0000999 | 乙二醇 | 0.0094905 | 非甲烷总烃 | 0.0000999 | | 氯化亚锡 | 0.047025 | 甲醛 | 0.615125 | 甲醛 | 0.006475 | 甲醛 | 0.615125 | 甲醛 | 0.006475 | | 硫酸铜 | 2.363125 | 氯化氢 | 0.087875 | 氯化氢 | 0.000925 | 氯化氢 | 0.087875 | 氯化氢 | 0.000925 | | 聚乙二醇1000 | 0.00094905 |  |  |  |  |  |  |  |  | | 酒石酸钾钠 | 0.705375 |  |  |  |  |  |  |  |  | | EDTA-2Na | 0.09405 |  |  |  |  |  |  |  |  | | 碳酸钠 | 0.47025 |  |  |  |  |  |  |  |  | | 甲醛 | 0.0615125 | 甲醛 | 0.0615125 |  |  |  |  |  |  |  |  | | 氯化氢 | 0.0087875 | 氯化氢 | 0.0087875 |  |  |  |  |  |  |  |  | | 电镀光亮剂 | 硫酸铜 | 0.004655 | 颗粒物 | 0.26752 | 50HB-400 | 1.645875 | 非甲烷总烃 | 3.999025 | 50HB-400 | 1.645875 | 非甲烷总烃 | 3.999025 | | PEG10000 | 0.1645875 | 壬基酚聚氧乙烯醚 | 0.47025 | 壬基酚聚氧乙烯醚 | 0.47025 | | 聚二硫二丙烷磺酸钠 | 0.0230375 | 单异壬苯基聚乙二醇 | 0.47025 | 单异壬苯基聚乙二醇 | 0.47025 | | 对苯二酚 | 0.0047025 | NP-10 | 0.235125 | NP-10 | 0.235125 | | 柠檬酸 | 0.047025 | PAS-5-A | 0.19 | PAS-5-A | 0.19 | | 氯化钠 | 0.0235125 | 对苯二酚 | 0.047025 | 对苯二酚 | 0.047025 | | 50HB-400 | 0.1645875 | 非甲烷总烃 | 0.329175 | 柠檬酸 | 0.47025 | 柠檬酸 | 0.47025 | | 壬基酚聚氧乙烯醚 | 0.047025 | 甲酸 | 0.47025 | 甲酸 | 0.47025 | | 单异壬苯基聚乙二醇 | 0.047025 |  |  |  |  |  |  |  |  | | NP-10 | 0.0235125 |  |  |  |  |  |  |  |  | | 甲酸 | 0.047025 |  |  |  |  |  |  |  |  | | 金属保护液 | 二乙二醇丁醚 | 0.47025 | 非甲烷总烃 | 1.03455 | 二乙二醇丁醚 | 4.7025 | 非甲烷总烃 | 10.9155 | 二乙二醇丁醚 | 4.7025 | 非甲烷总烃 | 10.9155 | | 硫酸羟胺 | 0.235125 | 硫酸羟胺 | 2.35125 | 硫酸羟胺 | 2.35125 | | 二乙烯三胺 | 0.235125 | 二乙烯三胺 | 2.35125 | 二乙烯三胺 | 2.35125 | | OP-10 | 0.09405 | OP-10 | 0.9405 | OP-10 | 0.9405 | |  |  |  |  | 季胺化聚乙烯咪唑 | 0.57 | 季胺化聚乙烯咪唑 | 0.57 | | 电子用剥离液 | 氨基四唑 | 0.00475 | 颗粒物 | 0.253935 | N-甲基吡咯烷酮 | 0.235125 | 非甲烷总烃 | 24.599775 | N-甲基吡咯烷酮 | 0.235125 | 非甲烷总烃 | 24.599775 | | 硫酸铜 | 0.004655 | 乙醇 | 3.724 | 乙醇 | 3.724 | | 硫酸亚锡 | 0.235125 | 异丙醇 | 0.5586 | 异丙醇 | 0.5586 | | 丙骈三氮唑 | 0.009405 | 甲醇 | 0.931 | 甲醇 | 0.931 | | N-甲基吡咯烷酮 | 0.0235125 | 非甲烷总烃 | 1.9755725 | 丁醚 | 0.931 | 丁醚 | 0.931 | | 乙醇 | 0.3724 | OP-10 | 1.41075 | OP-10 | 1.41075 | | 异丙醇 | 0.05586 | 二乙二醇丁醚 | 5.643 | 二乙二醇丁醚 | 5.643 | | 甲醇 | 0.0931 | 冰乙酸 | 2.35125 | 冰乙酸 | 2.35125 | | 丁醚 | 0.0931 | 甲基磺酸 | 2.35125 | 甲基磺酸 | 2.35125 | | OP-10 | 0.141075 | 甲酸 | 0.9405 | 甲酸 | 0.9405 | | 二乙二醇丁醚 | 0.5643 | 二乙二醇丁醚 | 4.7025 | 二乙二醇丁醚 | 4.7025 | | 冰乙酸 | 0.235125 | 邻甲酚磺酸 | 0.4655 | 邻甲酚磺酸 | 0.4655 | | 甲基磺酸 | 0.235125 | 葡萄糖酸 | 0.21375 | 葡萄糖酸 | 0.21375 | | 甲酸 | 0.09405 | 氨基四唑 | 0.0475 | 氨基四唑 | 0.0475 | | 邻甲酚磺酸 | 0.04655 | 丙骈三氮唑 | 0.09405 | 丙骈三氮唑 | 0.09405 | | 葡萄糖酸 | 0.021375 | 氮氧化物 | 0.323 | 氮氧化物 | 0.0034 | 氮氧化物 | 0.323 | 氮氧化物 | 0.0034 | | 氮氧化物 | 0.0323 | 氮氧化物 | 0.0323 | 硫酸雾 | 1.425 | 硫酸雾 | 0.015 | 硫酸雾 | 1.425 | 硫酸雾 | 0.015 | | 硫酸雾 | 0.1425 | 硫酸雾 | 0.1425 | 氯化氢 | 0.17575 | 氯化氢 | 0.00185 | 氯化氢 | 0.17575 | 氯化氢 | 0.00185 | | 氯化氢 | 0.017575 | 氯化氢 | 0.017575 |  |  |  |  |  |  |  |  | | 蚀刻液 | 对甲苯磺酸钠 | 0.0141075 | 颗粒物 | 0.97289405 | 单乙醇胺 | 0.4655 | 非甲烷总烃 | 6.4319655 | 单乙醇胺 | 0.4655 | 非甲烷总烃 | 6.4319655 | | 异丙基苯磺酸钠 | 0.0220875 | 三乙醇胺 | 0.235125 | 三乙醇胺 | 0.235125 | | 碳酸钾 | 0.4655 | NP-10 | 0.47025 | NP-10 | 0.47025 | | 碳酸钠 | 0.47025 | 三乙二醇单乙醚 | 0.04655 | 三乙二醇单乙醚 | 0.04655 | | 聚乙二醇1000 | 0.00094905 | 二乙二醇乙醚 | 0.04655 | 二乙二醇乙醚 | 0.04655 | | 单乙醇胺 | 0.04655 | 非甲烷总烃 | 0.6422475 | DMF | 2.35125 | DMF | 2.35125 | | 三乙醇胺 | 0.0235125 | 环己胺 | 0.47025 | 环己胺 | 0.47025 | | NP-10 | 0.047025 | OP-10 | 0.9405 | OP-10 | 0.9405 | | 三乙二醇单乙醚 | 0.004655 | 乙醇 | 1.3965 | 乙醇 | 1.3965 | | 二乙二醇乙醚 | 0.004655 | 乙二醇 | 0.0094905 | 乙二醇 | 0.0094905 | | DMF | 0.235125 | 氨 | 0.1064 | 氨 | 0.00112 | 氨 | 0.1064 | 氨 | 0.00112 | | 环己胺 | 0.047025 |  |  |  |  |  |  |  |  | | OP-10 | 0.09405 |  |  |  |  |  |  |  |  | | 乙醇 | 0.13965 |  |  |  |  |  |  |  |  | | 氨 | 0.01064 | 氨 | 0.01064 |  |  |  |  |  |  |  |  | | 酸性孔金属化试剂 | 对甲基苯磺酸钠 | 0.0141075 | 颗粒物 | 0.85916005 | N-甲基吡咯烷酮 | 0.9405 | 非甲烷总烃 | 12.38135 | N-甲基吡咯烷酮 | 0.9405 | 非甲烷总烃 | 12.38135 | | 氯化亚锡 | 0.047025 | 二乙二醇丁醚 | 3.762 | 二乙二醇丁醚 | 3.762 | | 氯化钠 | 0.0141075 | 乙二醇 | 1.091075 | 乙二醇 | 1.091075 | | 聚乙二醇1000 | 0.00094905 | 3,4-乙烯二氧噻吩 | 0.47025 | 3,4-乙烯二氧噻吩 | 0.47025 | | 月桂醇硫酸钠 | 0.009405 | 苯乙烯基苯酚聚氧乙烯醚 | 0.9405 | 苯乙烯基苯酚聚氧乙烯醚 | 0.9405 | | 炭黑 | 0.0235125 | 硫酸羟胺 | 2.35125 | 硫酸羟胺 | 2.35125 | | 五水硫酸铜 | 0.004655 | OP-10 | 0.47025 | OP-10 | 0.47025 | | 酒石酸钾钠 | 0.47025 | NP-10 | 0.47025 | NP-10 | 0.47025 | | 硫酸钠 | 0.0047025 | 甲基磺酸 | 1.41075 | 甲基磺酸 | 1.41075 | | 硫酸钯 | 0.002356 | 对苯二酚 | 0.047025 | 对苯二酚 | 0.047025 | | 对苯二酚 | 0.0047025 | 5-氨基四唑 | 0.0475 | 5-氨基四唑 | 0.0475 | | 5-氨基四唑 | 0.00475 | 季胺化聚乙烯咪唑 | 0.38 | 季胺化聚乙烯咪唑 | 0.38 | | 硼酸 | 0.0235125 | 甲醛 | 1.406 | 甲醛 | 1.406 | 甲醛 | 1.406 | 甲醛 | 1.406 | | 石墨烯 | 0.235125 | 硼酸 | 0.235125 | 硼酸 | 0.235125 | 硼酸 | 0.235125 | 硼酸 | 0.235125 | | N-甲基吡咯烷酮 | 0.09405 | 非甲烷总烃 | 1.175625 | 氯化氢 | 0.087875 | 盐酸 | 0.087875 | 氯化氢 | 0.087875 | 氯化氢 | 0.087875 | | 二乙二醇丁醚 | 0.3762 | 硫酸雾 | 14.25 | 硫酸雾 | 14.25 | 硫酸雾 | 14.25 | 硫酸雾 | 14.25 | | 乙二醇 | 0.09405 |  |  |  |  |  |  |  |  | | 3,4-乙烯二氧噻吩 | 0.047025 |  |  |  |  |  |  |  |  | | 苯乙烯基苯酚聚氧乙烯醚 | 0.09405 |  |  |  |  |  |  |  |  | | 硫酸羟胺 | 0.235125 |  |  |  |  |  |  |  |  | | OP-10 | 0.047025 |  |  |  |  |  |  |  |  | | NP-10 | 0.047025 |  |  |  |  |  |  |  |  | | 甲基磺酸 | 0.141075 |  |  |  |  |  |  |  |  | | 甲醛 | 0.1406 | 甲醛 | 0.1406 |  |  |  |  |  |  |  |  | | 氯化氢 | 0.0087875 | 氯化氢 | 0.0087875 |  |  |  |  |  |  |  |  | | 硫酸雾 | 1.425 | 硫酸雾 | 1.425 |  |  |  |  |  |  |  |  | | 碱性孔金属化试剂 | 硫酸锰 | 0.047025 | 颗粒物 | 0.6574 | 聚苯乙烯磺酸 | 0.1425 | 非甲烷总烃 | 4.94475 | 聚苯乙烯磺酸 | 0.1425 | 非甲烷总烃 | 4.94475 | | 酒石酸钾钠 | 0.235125 | 二乙二醇单丁醚 | 2.35125 | 二乙二醇单丁醚 | 2.35125 | | 亚氯酸钠 | 0.047025 | 二乙烯三胺 | 1.41075 | 二乙烯三胺 | 1.41075 | | 碳酸钾 | 0.0931 | OP-10 | 0.235125 | OP-10 | 0.235125 | | 氯化钠 | 0.047025 | 季胺化聚乙烯咪唑 | 0.57 | 季胺化聚乙烯咪唑 | 0.57 | | 碳酸氢钠 | 0.047025 | 二乙酰胺 | 0.235125 | 二乙酰胺 | 0.235125 | | EDTA-2Na | 0.0235125 |  |  |  |  |  |  |  |  | | 二乙酰胺 | 0.0235125 |  |  |  |  |  |  |  |  | | 碳酸钠 | 0.09405 |  |  |  |  |  |  |  |  | | 聚苯乙烯磺酸 | 0.01425 | 非甲烷总烃 | 0.4139625 |  |  |  |  |  |  |  |  | | 二乙二醇单丁醚 | 0.235125 |  |  |  |  |  |  |  |  | | 二乙烯三胺 | 0.141075 |  |  |  |  |  |  |  |  | | OP-10 | 0.0235125 |  |  |  |  |  |  |  |  | | 高纵横比通孔和填孔镀铜液 | 硫酸铜 | 0.004655 | 颗粒物 | 0.7612825 | 50HB-400 | 1.645875 | 非甲烷总烃 | 10.06525 | 50HB-400 | 1.645875 | 非甲烷总烃 | 10.06525 | | PEG10000 | 0.47025 | 壬基酚聚氧乙烯醚 | 0.47025 | 壬基酚聚氧乙烯醚 | 0.47025 | | 聚二硫二丙烷磺酸钠 | 0.0230375 | 单异壬苯基聚乙二醇 | 0.47025 | 单异壬苯基聚乙二醇 | 0.47025 | | 对苯二酚 | 0.0047025 | 甲酸 | 2.35125 | 甲酸 | 2.35125 | | 柠檬酸 | 0.235125 | NP-10 | 0.235125 | NP-10 | 0.235125 | | 氯化钠 | 0.0235125 | PAS-5-A | 0.19 | PAS-5-A | 0.19 | | 50HB-400 | 0.1645875 | 非甲烷总烃 | 0.517275 | 乙二醇 | 4.7025 | 乙二醇 | 4.7025 | | 壬基酚聚氧乙烯醚 | 0.047025 |  |  |  |  |  |  |  |  | | 单异壬苯基聚乙二醇 | 0.047025 |  |  |  |  |  |  |  |  | | 甲酸 | 0.235125 |  |  |  |  |  |  |  |  | | NP-10 | 0.0235125 |  |  |  |  |  |  |  |  |  注：颗粒物收集率95%，去除率99%；非甲烷总烃收集率95%，去除率90%；单位为kg/a。 表5-3 本项目（全厂）大气污染物产生及排放情况（按厂房分）   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 厂房序号 | 污染物 | 产生量（t/a） | 治理措施 | | | 排放量（t/a） | | | 治理措施 | 收集效率/（%） | 处理效率/（%） | 有组织 | 无组织 | | l# | 颗粒物 | 0.0485 | 集气罩收集+布袋除尘+喷淋吸收+排气筒（1#）排放 | 95 | 99 | 0.000461 | 0.002425 | | 非甲烷总烃 | 0.77787 | 90 | 0.073898 | 0.038894 | | 硼酸雾 | 0.00495 | 0.00047 | 0.000248 | | 氮氧化物 | 0.00631 | 0.0006 | 0.000316 | | 硫酸雾 | 0.02786 | 0.002646 | 0.001393 | | 氯化氢 | 0.00344 | 0.000326 | 0.000172 | | 氨气 | 0.00027 | 2.55E-05 | 1.34E-05 | | 3# | 颗粒物 | 0.60913 | 集气罩收集+布袋除尘+喷淋吸收+排气筒（1#）排放 | 99 | 0.005787 | 0.030457 | | 非甲烷总烃 | 0.76435 | 90 | 0.072613 | 0.038217 | | 甲醛 | 0.01943 | 0.001845 | 0.000971 | | 氯化氢 | 0.00278 | 0.000264 | 0.000139 | | 氨气 | 0.00242 | 0.00023 | 0.000121 | | 2# | 颗粒物 | 0.02557 | 集气罩收集+布袋除尘+喷淋吸收+排气筒（2#）排放 | 99 | 0.000243 | 0.001279 | | 非甲烷总烃 | 0.16 | 90 | 0.0152 | 0.008 | | 氮氧化物 | 0.00194 | 0.000185 | 9.71E-05 | | 硫酸雾 | 0.00857 | 0.000814 | 0.000429 | | 氯化氢 | 0.00106 | 0.0001 | 5.29E-05 | | 氨气 | 0.00067 | 6.38E-05 | 3.36E-05 | | 4# | 颗粒物 | 0.24486 | 集气罩收集+布袋除尘+喷淋吸收+排气筒（2#）排放 | 99 | 0.002326 | 0.012243 | | 非甲烷总烃 | 0.95329 | 90 | 0.090562 | 0.047664 | | 甲醛 | 0.0444 | 0.004218 | 0.00222 | | 硼酸雾 | 0.00495 | 0.00047 | 0.000248 | | 氮氧化物 | 0.00194 | 0.000185 | 9.71E-05 | | 硫酸雾 | 0.45857 | 0.043564 | 0.022929 | | 氯化氢 | 0.00383 | 0.000364 | 0.000192 |   表5-3 本项目（全厂）大气污染物产生及排放情况（有组织）   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 工序 | 装置 | 污染源 | 污染物 | 污染物产生 | | | | 治理措施 | | 污染物排放 | | | | 排放时间（h） | | 核算方法 | 产生量（m3/h） | 产生浓度（mg/m3） | 产生量（kg/h） | 工艺 | 效率（%） | 核算方法 | 排放量（m3/h） | 排放浓度（mg/m3） | 排放量（kg/h） | | 投料、搅拌、包装 | 搅拌系统（1#、3#厂房）[1] | 1#排气筒 | 颗粒物 | 物料平衡法 | 10000 | 27.4012 | 0.274012 | 集气罩+布袋除尘  +喷淋吸收 | 收集95，布袋除尘99，喷淋90 | 类比法 | 10000 | 0.26031 | 0.002603 | 2400 | | 非甲烷总烃 | 64.2592 | 0.642592 | 6.10462 | 0.061046 | | 甲醛 | 0.80938 | 0.008094 | 0.07689 | 0.000769 | | 氮氧化物 | 0.2631 | 0.002631 | 0.02499 | 0.00025 | | 硫酸雾 | 1.16071 | 0.011607 | 0.11027 | 0.001103 | | 氯化氢 | 0.25878 | 0.002588 | 0.02458 | 0.000246 | | 氨气 | 0.112 | 0.00112 | 0.01064 | 0.000106 | | 硼酸雾 | 0.20625 | 0.002063 | 0.01959 | 0.000196 | | 搅拌系统（2#、4#厂房）[2] | 2#排气筒 | 颗粒物 | 物料平衡法 | 10000 | 11.2682 | 0.112682 | 布袋除尘+喷淋吸收 | 收集95，布袋除尘99，喷淋90 | 类比法 | 10000 | 0.10705 | 0.00107 | | 非甲烷总烃 | 46.387 | 0.46387 | 4.40677 | 0.044068 | | 甲醛 | 1.85 | 0.0185 | 0.17575 | 0.001758 | | 氮氧化物 | 0.1619 | 0.001619 | 0.01538 | 0.000154 | | 硫酸雾 | 19.4643 | 0.194643 | 1.84911 | 0.018491 | | 氯化氢 | 0.20372 | 0.002037 | 0.01935 | 0.000194 | | 氨气 | 0.028 | 0.00028 | 0.00266 | 2.66E-05 | | 硼酸雾 | 0.20625 | 0.002063 | 0.01959 | 0.000196 | | 研发[3] | 通风橱 | 2#排气筒 | 废气 | - | - | - | - | - | - | - | - | - | - | - | | 试验[3] | 试验设备 | 2#排气筒 | 废气 | - | - | - | - | - | - | - | - | - | - | - |  注：[1]涉及产品有：高分子导电膜A、化学铜添加剂A、化学铜添加剂B、金属保护液、蚀刻液、碱性孔金属化试剂；[2]涉及产品有：高分子导电膜B、电镀光亮剂、电子用剥离液、酸性孔金属化试剂、高纵横比通孔和填孔镀铜液；[3]研发、试验产品为本项目生产所涉及产品，所用原料在生产原料种类范围之内，则产生废气种类与生产废气种类相同；又由于研发、试验产生产品总量小于1t/a，经类比计算（本项目产能13700t/a），研发、试验废气产生量微乎其微，在本次环评中忽略。 表5-3 本项目（全厂）大气污染物产生及排放情况（无组织）   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 工序 | 装置 | 污染源 | 污染物 | 污染物产生 | | | | 治理措施 | | 污染物排放 | | | | 排放时间（h） | | 核算方法 | 产生量（m3/h） | 产生浓度（mg/m3） | 产生量（kg/h） | 工艺 | 效率（%） | 核算方法 | 排放量（m3/h） | 排放浓度（mg/m3） | 排放量（kg/h） | | 投料、搅拌、包装 | 搅拌系统 | 1#厂房 | 颗粒物 | 物料平衡法 | - | - | 0.00101 | 卫生防护距离 | - | 类比法 | - | - | 0.00101 | 2400 | | 非甲烷总烃 | 0.01621 | 0.01621 | | 硼酸雾 | 0.0001 | 0.0001 | | 氮氧化物 | 0.00013 | 0.00013 | | 硫酸雾 | 0.00058 | 0.00058 | | 氯化氢 | 7.2E-05 | 7.2E-05 | | 氨气 | 5.6E-06 | 5.6E-06 | | 搅拌系统 | 3#厂房 | 颗粒物 | 物料平衡法 | - | 0.01269 | - |  | 类比法 | - | - | 0.01269 | | 非甲烷总烃 | 0.01592 | 0.01592 | | 甲醛 | 0.0004 | 0.0004 | | 氯化氢 | 5.8E-05 | 5.8E-05 | | 氨气 | 5E-05 | 5E-05 | | 投料、搅拌、包装 | 2#厂房 | 颗粒物 | 物料平衡法 | - | - | 0.00053 | 卫生防护距离 | 类比法 | - | 0.00053 | | 非甲烷总烃 | 0.00333 | 0.00333 | | 氮氧化物 | 4E-05 | 4E-05 | | 硫酸雾 | 0.00018 | 0.00018 | | 氯化氢 | 2.2E-05 | 2.2E-05 | | 氨气 | 1.4E-05 | 1.4E-05 | | 4#厂房 | 颗粒物 | 物料平衡法 | 0.0051 | 类比法- | - | 0.0051 | | 非甲烷总烃 | 0.01986 | 0.01986 | | 甲醛 | 0.00093 | 0.00093 | | 硼酸雾 | 0.0001 | 0.0001 | | 氮氧化物 | - | - | 4E-05 | - | - | - | 4E-05 | | 硫酸雾 | - | - | 0.00955 | - | - | - | 0.00955 | | 氯化氢 | - | - | 8E-05 | - | - | - | 8E-05 |   **表5-4 本项目大气污染物有组织排放量核算表**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **序号** | **排放口编号** | **污染物** | **核算排放浓度/（μg/m3）** | **核算排放速率/（kg/h）** | **核算年排放量/（t/a）** | | 主要排放口 | | | | | | | 1 | 1# | 颗粒物 | 260.31 | 0.002603 | 0.006247 | | 非甲烷总烃 | 6104.62 | 0.061046 | 0.146511 | | 甲醛 | 76.89 | 0.000769 | 0.001845 | | 氮氧化物 | 24.99 | 0.00025 | 0.0006 | | 硫酸雾 | 110.27 | 0.001103 | 0.002646 | | 氯化氢 | 24.58 | 0.000246 | 0.00059 | | 氨气 | 10.64 | 0.000106 | 0.000255 | | 硼酸雾 | 19.59 | 0.000196 | 0.00047 | | 2 | 2# | 颗粒物 | 107.05 | 0.00107 | 0.002569 | | 非甲烷总烃 | 4406.77 | 0.044068 | 0.105762 | | 甲醛 | 175.75 | 0.001758 | 0.004218 | | 氮氧化物 | 15.38 | 0.000154 | 0.000369 | | 硫酸雾 | 1849.11 | 0.018491 | 0.044379 | | 氯化氢 | 19.35 | 0.000194 | 0.000464 | | 氨气 | 2.66 | 2.66E-05 | 6.38E-05 | | 硼酸雾 | 19.59 | 0.000196 | 0.00047 |   **表5-5 本项目大气污染物无组织排放量核算表**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **排放口编号** | **产污环节** | **污染物** | **主要污染防治措施** | **国家或地方污染物排放标准** | | **年排放量/（t/a）** | | **标准名称** | **浓度限值/（μg/m3）** | | 1 | 1#厂房 | 投料、搅拌、包装 | 颗粒物 | 卫生防护距离 | GB16297-1996 | 1000 | 0.002424 | | 非甲烷总烃 | DB32/3151-2016 | 4000 | 0.038904 | | 氮氧化物 | GB16297-1996 | 120 | 0.000312 | | 硫酸雾 | GB16297-1996 | 1200 | 0.001392 | | 氯化氢 | GB16297-1996 | 200 | 0.0001728 | | 氨气 | DB32/3151-2016 | 20000 | 1.344E-05 | | 硼酸雾 | - | - | 0.00024 | | 2 | 3#厂房 | 颗粒物 | GB16297-1996 | 1000 | 0.030456 | | 非甲烷总烃 | DB32/3151-2016 | 4000 | 0.038208 | | 甲醛 | DB32/3151-2016 | 50 | 0.00096 | | 氯化氢 | GB16297-1996 | 200 | 0.0001392 | | 氨气 | DB32/3151-2016 | 20000 | 0.00012 | | 3 | 2#厂房 | 颗粒物 | GB16297-1996 | 1000 | 0.001272 | | 非甲烷总烃 | DB32/3151-2016 | 4000 | 0.007992 | | 氮氧化物 | GB16297-1996 | 120 | 0.000096 | | 硫酸雾 | GB16297-1996 | 1200 | 0.000432 | | 氯化氢 | GB16297-1996 | 200 | 0.0000528 | | 氨气 | DB32/3151-2016 | 20000 | 0.0000336 | | 4 | 4#厂房 | 颗粒物 | GB16297-1996 | 1000 | 0.01224 | | 非甲烷总烃 | DB32/3151-2016 | 4000 | 0.047664 | | 甲醛 | DB32/3151-2016 | 50 | 0.002232 | | 氮氧化物 | GB16297-1996 | 120 | 0.000096 | | 硫酸雾 | GB16297-1996 | 1200 | 0.02292 | | 氯化氢 | GB16297-1996 | 200 | 0.000192 | | 硼酸雾 | - | - | 0.00024 | | 无组织排放总计 | | | | | | | | | 无组织排放总计 | | | | 颗粒物 | GB16297-1996 | 1000 | 0.046392 | | 非甲烷总烃 | DB32/3151-2016 | 4000 | 0.132768 | | 甲醛 | DB32/3151-2016 | 50 | 0.003192 | | 氮氧化物 | GB16297-1996 | 120 | 0.000504 | | 硫酸雾 | GB16297-1996 | 1200 | 0.024744 | | 氯化氢 | GB16297-1996 | 200 | 0.0005568 | | 氨气 | DB32/3151-2016 | 20000 | 1.67E-04 | | 硼酸雾 | - | - | 0.00048 |   **表5-6 本项目大气污染物年排放量核算表**   |  |  |  | | --- | --- | --- | | **序号** | **污染物** | **年排放量/（t/a）** | | 1 | 颗粒物 | 0.055208 | | 2 | VOCs | 0.385041 | | 3 | 甲醛 | 0.009255 | | 4 | 氮氧化物 | 0.001473 | | 5 | 硫酸雾 | 0.071769 | | 6 | 氯化氢 | 0.0016108 | | 7 | 氨气 | 0.0004858 | | 8 | 硼酸雾 | 0.00142 |   **4.2 废水**  本项目生活污水经化粪池预处理，生产废水、初期雨水经污水处理站预处理，随后一起接管至益民污水处理公司集中处置。  **表5-7 本项目废水污染物产生状况**   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 工序 | 装置 | 污染源 | 污染物 | 污染物产生 | | | | 治理措施 | | 污染物排放 | | | | 排放时间（h） | | 核算方法 | 废水量（m3/a） | 产生浓度（mg/m3） | 产生量（t/a） | 工艺 | 效率（%） | 核算方法 | 排放量（m3/a） | 排放浓度（mg/m3） | 排放量（t/a） | | 制备纯水 | 纯水设备 | 浓水 | SS | 类比法 | 10873.56646 | 30 | - | - | - | 类比法 | 10873.56646 | 30 | - | - | | COD | 40 | - | - | 40 | - | | 硫酸盐 | 375 | - | - | 375 | - | | 清洗 | - | 清洗废水 | pH | 3288 | 2.6~3.1 | - | 絮凝沉淀+生化 | - | 类比法 | 3288 | 7-9 | - | 2400 | | COD | 817 | 2.6863 | 40 | 490 | 1.61112 | | SS | 650 | 2.1372 | 40 | 390 | 1.28232 | | NH3-N | 73 | 0.24002 | 39.7 | 44 | 0.14467 | | Cu | 2.5 | 0.00822 | 40 | 1.5 | 0.00493 | | Sn | 3.3 | 0.01085 | 39.4 | 2 | 0.00658 | | 喷淋吸收 | 喷淋塔 | 喷淋废水 | pH | 48 | 7-9 | - | - | 48 | 7-9 | - | 2400 | | COD | 817 | 0.03922 | 40 | 490 | 0.02352 | | NH3-N | 73 | 0.0035 | 39.7 | 44 | 0.00211 | | - | - | 生活污水 | pH | 120 | 7~9 | - | 化粪池 | - | 120 | 7-9 | - |  | | COD | 700 | 0.084 | 30 | 490 | 0.0588 | 2400 | | SS | 557 | 0.06684 | 30 | 390 | 0.0468 | | NH3-N | 63 | 0.00756 | 30.2 | 44 | 0.00528 | | TP | 129 | 0.01548 | 93 | 9 | 0.00108 | | - | - | 初期雨水 | pH | 681.72 | 7~9 | - |  | - | 681.72 | 7-9 | - | - | | COD | 817 | 0.55697 | 40 | 490 | 0.33404 | | SS | 650 | 0.44312 | 40 | 390 | 0.26587 | | NH3-N | 73 | 0.04977 | 39.7 | 44 | 0.03 |   **4.3 噪声**  本项目进入运营期后，拟建项目噪声情况统计见表5-8。  表5-8 本项目主要生产设备噪声源强一览表 （单位：dB（A））   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 工序 | 装置 | 噪声源 | 声源类型（频发、偶发等） | 噪声源强 | | 降噪措施 | | 噪声排放值 | | 持续时间（h） | | 核算方法 | 噪声值 | 工艺 | 降噪效果 | 核算方法 | 噪声值 | | 混合、搅拌 | 搅拌系统 | 搅拌系统 | 偶发 | 类比法 | 80 | 选用低噪声设备，设置于室内，合理布局，厂房隔声 | ≥25 | 类比法 | 55 | 2400 |   **4.4 固废**  **表5-8 建设项目副产品产生情况汇总表**   |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **副产物**  **名称** | **产生**  **工序** | **形态** | **主要**  **成分** | **预测产生量(吨/年)** | **种类判断** | | | | **固体废物** | **副产品** | **判定依据** | | 1 | 滤芯 | 过滤 | 固 | 滤芯、残渣 | 4.137 | √ |  | 《固体废物鉴别通则》GB344330-2017 | | 2 | 废树脂 | 纯水制备 | 固 | 离子交换树脂 | 0.2 | √ |  | | 3 | 废包装桶/袋 | 原料包装 | 固 | 包装、残液 | 13.7 | √ |  | | 4 | 污泥 | 废水处理 | 半固 | 污泥、有毒物质 | 1.096 | √ |  | | 5 | 除尘器集尘 | 废气治理 | 固 | 化学物质 | 0.8728 | √ |  | | 6 | 废活性炭 | 纯水制备 | 固 | 废活性炭 | 0.01 | √ |  | | 7 | 废石英砂 | 纯水制备 | 固 | 废石英砂 | 0.02 | √ |  | | 8 | 生活垃圾 | 员工生活 | 固 | 纸张、果皮 | 3 | √ |  |   **表5-9 工程分析中危险废物汇总表**   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **危险废物名称** | **危险废物类别** | **危险废物代码** | **产生量**  **(t/a)** | **产生**  **工序** | **形态** | **主要成分** | **有害成分** | **产废周期** | **危险**  **特性** | **污染防治措施** | | 1 | 滤芯 | HW49 | 900-041-49 | 4.137 | 过滤 | 液 | 滤芯、残液 | 有机物料 | 1年 | T/In | 建专门的固废暂存点，做到防腐防渗；危险固废分类收集，委托有资质单位处置，建立健全固废管理台账。 | | 2 | 废树脂 | HW13 | 900-015-13 | 0.2 | 纯水制备 | 固 | 离子交换树脂 | 有毒物质 | 1年 | T | | 3 | 废包装桶/袋 | HW49 | 900-041-49 | 13.7 | 原料包装 | 固 | 包装、残液 | 残留物料 | 1d | T/In | | 4 | 除尘器集尘 | HW49 | 900-040-49 | 0.8728 | 废气治理 | 固 | 化学物质 | 化学物质 | 1年 | T | | 5 | 污泥 | HW06 | 900-049-06 | 1.096 | 废水处理 | 固 | 污泥、有毒物质 | 有机物 | 30d | T,I |   **表5-10 拟建项目危险废物贮存场所（设施）基本情况**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **贮存场所** | **危险废物名称** | **危险废物类别** | **危险废物代码** | **位置** | **占地面积（m2）** | **贮存方式** | **贮存能力** | **贮存**  **周期** | | 1 | 危险固废仓库 | 滤芯 | HW49 | 900-041-49 | 120°92′78.70″E，32°05′29.80″N | 2 | 标准铁桶暂存 | 2t | 30d | | 2 | 废树脂 | HW13 | 900-015-13 | 2 | 标准铁桶暂存 | 0.2 | 30d | | 3 | 废包装桶/袋 | HW49 | 900-041-49 | 50 | 标准铁桶暂存 | 1.2t | 30d | | 4 | 除尘器集尘 | HW49 | 900-040-49 | 1 | 标准铁桶暂存 | 3t | 30d | | 5 | 污泥 | HW06 | 900-049-06 | 2 | 标准铁桶暂存 | 2t | 30d |   **表5-11 拟建项目固体废物处理处置方式汇总表**   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | **序号** | **固废名称** | **产生工序** | **属性（危险废物、一般工业废物或待鉴别）** | **废物代码** | **产生量（t/a）** | **处置方式** | | 1 | 滤芯 | 过滤 | 危险废物 | HW49（900-041-49） | 4.137 | 妥善收集后委托资质单位处置 | | 2 | 废树脂 | 纯水制备 | 危险废物 | HW13（900-015-13） | 0.2 | | 3 | 废包装桶/袋 | 原料包装 | 危险废物 | HW49（900-041-49） | 13.7 | | 4 | 除尘器集尘 | 废气治理 | 危险废物 | HW49（900-040-49） | 0.8728 | | 5 | 污泥 | 水处理 | 危险废物 | HW06（900-049-06） | 1.096 | | 6 | 废活性炭 | 纯水制备 | 一般废物 | - | 0.01 | 出售给回收单位 | | 7 | 废石英砂 | 纯水制备 | 一般废物 | - | 0.02 | 出售给回收单位 | | 8 | 生活垃圾 | 员工生活 | 一般废物 | - | 3 | 环卫清运 | |

**表六 项目主要污染物产生及预计排放情况**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **种类** | **排放源**  **（编号）** | | **污染物名称** | **产生浓度**  **(mg/m3)** | **产生量**  **(t/a)** | **排放浓度**  **(μg/m3)** | **排放速率**  **(kg/h)** | | **排放量**  **(t/a)** | **排放去向** |
| **大 气 污 染 物** | 有组织 | 1#排气筒 | 颗粒物 | 27.4012 | 0.65763 | 260.31 | 0.002603 | | 0.006247 | 大气 |
| VOCs | 64.2592 | 1.542221 | 6104.62 | 0.061046 | | 0.146511 |
| 甲醛 | 0.80938 | 0.019425 | 76.89 | 0.000769 | | 0.001845 |
| 氮氧化物 | 0.2631 | 0.006314 | 24.99 | 0.00025 | | 0.0006 |
| 硫酸雾 | 1.16071 | 0.027857 | 110.27 | 0.001103 | | 0.002646 |
| 氯化氢 | 0.25878 | 0.006211 | 24.58 | 0.000246 | | 0.00059 |
| 氨气 | 0.112 | 0.002688 | 10.64 | 0.000106 | | 0.000255 |
| 硼酸雾 | 0.20625 | 0.00495 | 19.59 | 0.000196 | | 0.00047 |
| 2#排气筒 | 颗粒物 | 11.2682 | 0.270437 | 107.05 | 0.00107 | | 0.002569 |
| VOCs | 46.387 | 1.113289 | 4406.77 | 0.044068 | | 0.105762 |
| 甲醛 | 1.85 | 0.0444 | 175.75 | 0.001758 | | 0.004218 |
| 氮氧化物 | 0.1619 | 0.003886 | 15.38 | 0.000154 | | 0.000369 |
| 硫酸雾 | 19.4643 | 0.467143 | 1849.11 | 0.018491 | | 0.044379 |
| 氯化氢 | 0.20372 | 0.004889 | 19.35 | 0.000194 | | 0.000464 |
| 氨气 | 0.028 | 0.000672 | 2.66 | 2.66E-05 | | 6.38E-05 |
| 硼酸雾 | 0.20625 | 0.00495 | 19.59 | 0.000196 | | 0.00047 |
| 无组织 | 1#厂房 | 颗粒物 | - | 0.002424 | - | 0.00101 | | 0.002424 |
| VOCs | - | 0.038904 | - | 0.01621 | | 0.038904 |
| 氮氧化物 | - | 0.000312 | - | 0.0001 | | 0.000312 |
| 硫酸雾 | - | 0.001392 | - | 0.00013 | | 0.001392 |
| 氯化氢 | - | 0.0001728 | - | 0.00058 | | 0.0001728 |
| 氨气 | - | 1.344E-05 | - | 7.2E-05 | | 1.344E-05 |
| 硼酸雾 | - | 0.00024 | - | 5.6E-06 | | 0.00024 |
| 3#厂房 | 颗粒物 | - | 0.030456 | - | 0.01269 | | 0.030456 |
| VOCs | - | 0.038208 | - | 0.01592 | | 0.038208 |
| 甲醛 | - | 0.00096 | - | 0.0004 | | 0.00096 |
| 氯化氢 | - | 0.0001392 | - | 5.8E-05 | | 0.0001392 |
| 氨气 | - | 0.00012 | - | 5E-05 | | 0.00012 |
| 2#厂房 | 颗粒物 | - | 0.001272 | - | 0.00053 | | 0.001272 |
| VOCs | - | 0.007992 | - | 0.00333 | | 0.007992 |
| 氮氧化物 | - | 0.000096 | - | 4E-05 | | 0.000096 |
| 硫酸雾 | - | 0.000432 | - | 0.00018 | | 0.000432 |
| 氯化氢 | - | 0.0000528 | - | 2.2E-05 | | 0.0000528 |
| 氨气 | - | 0.0000336 | - | 1.4E-05 | | 0.0000336 |
| 4#厂房 | 颗粒物 | - | 0.01224 | - | 0.0051 | | 0.01224 |
| VOCs | - | 0.047664 | - | 0.01986 | | 0.047664 |
| 甲醛 | - | 0.002232 | - | 0.00093 | | 0.002232 |
| 氮氧化物 | - | 0.000096 | - | 0.0001 | | 0.000096 |
| 硫酸雾 | - | 0.02292 | - | 4E-05 | | 0.02292 |
| 氯化氢 | - | 0.000192 | - | 0.00955 | | 0.000192 |
| 硼酸雾 | - | 0.00024 | - | 8E-05 | | 0.00024 |
| **水污染物** | - | | **污染物名称** | **废水量**  **(t/a)** | **产生浓度**  **(mg/L)** | **产生量**  **(t/a)** | **污染物名称** | **排放浓度(mg/L)** | **排放量**  **(t/a)** | **排放去向** |
| 清洗废水 | | pH | 3288 | 2.6~3.1 | - | pH | 7-9 | - | 管道输送至益民污水处理公司集中处理 |
| COD | 817 | 2.6863 | COD | 489.999 | 2.02748 |
| SS | 650 | 2.1372 | SS | 385.476 | 1.59499 |
| NH3-N | 73 | 0.24002 | NH3-N | 44.0001 | 0.18206 |
| Cu | 2.5 | 0.00822 | TP | 0.26101 | 0.00108 |
| Sn | 3.3 | 0.01085 | Cu | 1.19148 | 0.00493 |
| 喷淋废水 | | pH | 48 | 7~9 | - | Sn | 1.59025 | 0.00658 |
| COD | 817 | 0.03922 | - | | - |
| NH3-N | 73 | 0.0035 | - | | - |
| 生活污水 | | pH | 120 | 7~9 | - | - | | - |
| COD | 700 | 0.084 | - | | - |
| SS | 557 | 0.06684 | - | | - |
| NH3-N | 63 | 0.00756 | - | | - |
| TP | 129 | 0.01548 | - | | - |
| 初期雨水 | | pH | 681.72 | 7~9 | - | - | | - |
| COD | 817 | 0.55697 | - | | - |
| SS | 650 | 0.44312 | - | | - |
| NH3-N | 73 | 0.04977 | - | | - |
| 浓水 | | SS | 10873.56646 | 30 | - | - | | - | 清下水排放 |
| COD | 40 | - | - | | - |
| 硫酸盐 | 375 | - | - | | - |
| **固体废物** | - | | **产生量(t/a)** | **处理处置量(t/a)** | | **综合利用量(t/a)** | **外排量(t/a)** | | | **备注** |
| 滤芯 | | 4.137 | 4.137 | | 0 | 0 | | | 妥善收集后委托资质单位处置 |
| 废包装桶/袋 | | 13.7 | 13.7 | | 0 | 0 | | |
| 除尘器集尘 | | 0.8728 | 0.8728 | | 0 | 0 | | |
| 污泥 | | 1.096 | 1.096 | | 0 | 0 | | |
| 废活性炭 | | 0.01 | 0.01 | | 0.01 | 0 | | | 出售给回收单位 |
| 废石英砂 | | 0.02 | 0.02 | | 0.02 | 0 | | | 出售给回收单位 |
| 生活垃圾 | | 3 | 3 | | 0 | 0 | | | 环卫清运 |
| **噪声** | 本项目噪声设备主要为搅拌系统等，经墙体隔声和距离衰减后可使厂界周边噪声满足《工业企业厂界环境噪声排放标准》（GB12348-2008）中3类标准要求。 | | | | | | | | | |
| **其他** | - | | | | | | | | | |

**表七 环境影响分析**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 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| 1 施工期环境影响分析  本项目依托现有厂房，项目施工期主要为生产设备及废气处理设施的安装建设。  施工期产污环节主要为集气管道切割、焊接及其他装置安装过程产生的烟尘、施工设备噪声。  （1）废气：施工现场不设食堂，工人就餐由外购盒饭解决，无饮食油烟。施工阶段废气主要为集气管道切割、焊接及其他装置安装过程产生的烟尘，影响范围局限在室内，对外环境影响较小。通过加强通风等措施可有效减小施工废气对周围环境的影响。  （2）废水：施工现场不设住宿、食堂，施工废水主要来自于施工人员产生少量生活污水，进入项目所在厂区化粪池后接管至益民水处理公司集中处置。生活污水不排入地表水环境，对周围水环境无影响。  （3）噪声：主要来自施工机械设备（如切割机、焊接机等）使用过程产生的噪声，且部分设备噪声值较高，但由于装修噪声属于间歇性噪声，且设备运行时间一般较短，不会持续很长时间，对外界的影响相对较小。  （4）固体废物：主要来自于施工过程中产生的金属边角料、焊渣等，经收集后对外出售综合利用，对周围环境影响较小。  综上所述，施工期影响为短期影响，工程施工结束影响也随之结束，在采取有效措施的情况下，施工期产生的废气、废水、噪声和固体废物对周围环境影响较小。  2.营运期环境影响分析  2.1 大气环境影响分析  2.1.1 污染防治措施简述  生产过程中搅拌系统产生的废气，经集气罩收集（收集效率以95%计）进入布袋除尘（除尘效率以99%计）器处理后进入喷淋塔（去除效率以90%计），尾气通过20m高排气筒排放。本项目设置2套废气收集处理装置，分别处理1#、3#厂房和2#、4#厂房废气。废气收集处理排放示意如下图：    图7-1 有组织废气治理工艺流程图  2.1.2 技术可行性分析  2.1.2.1 废气收集措施  集气罩的形式很多，根据其工作原理，一般可分为：外部罩、接收罩、吹吸罩和密闭罩。密闭集气罩是将扬尘点或产尘设备包围在罩内，并尽可能地密闭起来，使气体的扩散被限制在一个小的空间，只在罩上留出必要的工作孔或物料进出口，以及不经常开启的观察窗和检修门，由于密闭罩漏风面积小，用较小的排风量即可有效地防止气体外逸。密闭集气罩收集效率可达90%-95%。  2.1.2.2 废气处理措施  （1）颗粒物处理措施  项目投料工段产生的颗粒物拟采用布袋除尘器处理。布袋除尘原理：粉尘被捕集后、由灰斗上部进风口进入，在挡风板的作用下，气流向上流动，流速降低，部分大颗粒粉尘由于惯性力的作用被分离出来落入灰斗，含尘气体进入中箱体经滤袋的过滤净化，粉尘被阻留在滤袋的外表面，净化后的气体经滤袋口进入上箱体，由出风口排出。  根据《当前国家鼓励发展的环保产业设备(产品)目录》(第一批)，布袋除尘器的除尘效率通常可以达到95%以上，颗粒物经布袋过滤后灰尘积附在滤袋的内表面上，而洁净的空气则穿过滤袋后排入环境。  （2）有机废气处理措施  本项目产品为有机物的水溶液，所用原料基本溶于水，生产过程中产生有机废气可用水喷淋吸收处理。  每个吸收塔均由塔体和进气管、排气管、喷嘴组成。生产过程中产生的废气流入进气管，进而从各级吸收塔底螺旋上升，塔顶喷嘴喷射出雾状液体，两者逆流接触，可提高液体和气体接触的时间和接触面积，从而增加溶解和反应时间，提高吸收效率。液相从底部排出，气体经水汽分离器净化后从顶部进入排气筒排放  本项目喷淋吸收塔主要技术规格见表7-1。  表7-1 酸雾吸收塔主要技术规格表   |  |  |  | | --- | --- | --- | | 参数名称 | 参数值 | 备注 | | 设计风量 | 10000m3/h | - | | 操作压力，kPa | 101.3 | 常压 | | 操作温度，℃ | 20 | 常温 | | 流速，m3/h | ＜1.5 | - | | 压降，Pa | 680 | - | | 塔径，mm | Φ2000 | - | | 塔高，mm | 4500 | - | | 气液比，L/m3 | 3 | - | | 液体密度，kg/m3 | 1000 | 水 | | 喷头数量，只 | 10 | - |   2.1.2.3 排气筒设置合理性  经调查，本项目周边最高建筑物高度不到15米，排气筒高度（20m）设置满足高于周围200m范围内建筑5m的要求。排气筒直径为0.5m，风量10000m3/h，风速14.15m/s，排气筒风速均符合《大气污染治理工程技术导则》（HJ2000-2010）中流速宜取10-15m/s左右的要求。  **2.1.2 大气环境影响评价工作等级的确定**  依据《环境影响评价技术导则-大气环境》(HJ2.2-2018)中5.3节工作等级的确定方法，结合项目工程分析结果，选择正常排放的主要污染物及排放参数，采用附录A推荐模型中的AERSCREEN模式计算项目污染源的最大环境影响，然后按评价工作分级判据进行分级。  (1)Pmax及D10%的确定  依据《环境影响评价技术导则 大气环境》(HJ2.2-2018)中最大地面浓度占标率P*i*定义如下：  ——第i个污染物的最大地面空气质量浓度占标率，%；  ——采用估算模型计算出的第i个污染物的最大1h地面空气质量浓度，μg/m3；  ——第i个污染物的环境空气质量浓度标准，μg/m3。  (2)评价等级判别表  评价等级按下表的分级判据进行划分。  **表7-2 评价等级判别表**   |  |  | | --- | --- | | **评价工作等级** | **评价工作分级判据** | | 一级评价 | Pmax≧10% | | 二级评价 | 1%≦Pmax<10% | | 三级评价 | Pmax<1% |   （3）污染物评价标准  表7-3 污染物评价标准   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 污染物名称 | 功能区 | 取值时间 | 标准值(μg/m3) | 标准来源 | | PM10 | 二类限区 | 日均 | 150.0 | GB 3095-2012 | | NOx | 二类限区 | 一小时 | 250.0 | | 氯化氢 | 二类限区 | 一小时 | 50.0 | 《环境影响评价技术导则-大气环境》 HJ 2.2-2018 附录D | | NH3 | 二类限区 | 一小时 | 200.0 | | NMHC | 二类限区 | 一小时 | 2000.0 | | 甲醛 | 二类限区 | 一小时 | 50.0 | | 硫酸雾 | 二类限区 | 一小时 | 300.0 |   （4）污染源参数  主要废气污染源排放参数见下表。  **表7-4 主要废气污染源参数一览表(点源)**   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 污染源名称 | 排气筒底部中心坐标/m | | 排气筒底部海拔高度(m) | 排气筒参数 | | | | 年排放小时数/h | 排放工况 | 污染物排放速率（kg/h） | | | X | Y | 高度  (m) | 内径  (m) | 温度  (℃) | 流速  (m/s) | | 1#排气筒 | 0 | 0 | 4.0 | 20.0 | 0.5 | 25.0 | 14.15 | 2400 | 正常排放 | 颗粒物 | 0.002603 | | | VOCs | 0.061046 | | | 甲醛 | 0.000769 | | | 氮氧化物 | 0.00025 | | | 硫酸雾 | 0.001103 | | | 氯化氢 | 0.000246 | | | 氨气 | 0.000106 | | | 2#排气筒 | 30 | 42 | 4.0 | 20.0 | 0.5 | 25.0 | 14.15 | 2400 | 颗粒物 | 0.00107 | | | VOCs | 0.044068 | | | 甲醛 | 0.001758 | | | 氮氧化物 | 0.000154 | | | 硫酸雾 | 0.018491 | | | 氯化氢 | 0.000194 | | | 氨气 | 2.66E-05 | |   **表7-5 主要废气污染源参数一览表(矩形面源)**   |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 污染源名称 | 面源起点坐标/m | | 面源海拔高度/m | 面源长度/m | 面源宽度/m | 与正北向夹角/° | 面源有效排放高度/m | 年排放小时数/h | 排放工况 | 污染物排放速率（kg/h） | | | X | Y | | 1#厂房 | 28 | 37 | 4.0 | 50 | 21.6 | 0 | 9 | 2400 | 正常排放 | 颗粒物 | 0.00101 | | VOCs | 0.01621 | | 氮氧化物 | 0.00013 | | 硫酸雾 | 0.00058 | | 氯化氢 | 7.2E-05 | | 氨气 | 5.6E-06 | | 3#厂房 | 38 | 36 | 4.0 | 62 | 21.8 | 0 | 9 | 2400 | 正常排放 | 颗粒物 | 0.001269 | | VOCs | 0.01592 | | 甲醛 | 0.0004 | | 氯化氢 | 5.8E-05 | | 氨气 | 5E-05 | | 2#厂房 | 28 | 51 | 4.0 | 52 | 63.9 | 0 | 9 | 2400 | 正常排放 | 颗粒物 | 0.00053 | | VOCs | 0.00333 | | 氮氧化物 | 4E-05 | | 硫酸雾 | 0.00018 | | 氯化氢 | 2.2E-05 | | 氨气 | 1.4E-05 | | 4#厂房 | 38 | 47 | 4.0 | 50 | 25 | 0 | 16 | 2400 | 正常排放 | 颗粒物 | 0.0051 | | VOCs | 0.01986 | | 甲醛 | 0.00093 | | 氮氧化物 | 4E-05 | | 硫酸雾 | 0.000955 | | 氯化氢 | 8E-05 |   （5）项目参数  估算模式所用参数见表。  **表7-6 估算模型参数表**   |  |  |  | | --- | --- | --- | | 参数 | | 取值 | | 城市农村/选项 | 城市/农村 | 农村 | | 人口数(城市人口数) | / | | 最高环境温度 | | 40.0 °C | | 最低环境温度 | | -5.0 °C | | 土地利用类型 | | 农田 | | 区域湿度条件 | | 潮湿 | | 是否考虑地形 | 考虑地形 | 否 | | 地形数据分辨率(m) | / | | 是否考虑海岸线熏烟 | 考虑海岸线熏烟 | 否 | | 海岸线距离/km | / | | 海岸线方向/o | / |   （6）评级工作等级确定  本项目所有污染源的正常排放的污染物的Pmax和D10%预测结果如下：  表7-7 Pmax和D10%预测和计算结果一览表   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 污染源名称 | 评价因子 | 评价标准(μg/m3) | Cmax  (μg/m3) | Pmax  (%) | D10%  (m) | | 1#厂房 | PM10 | 450.0 | 1.08 | 0.24 | - | | NMHC | 2000.0 | 17.34 | 0.87 | - | | NOx | 250.0 | 0.14 | 0.06 | - | | 硫酸 | 300.0 | 0.62 | 0.21 | - | | 氯化氢 | 50.0 | 0.08 | 0.15 | - | | NH3 | 200.0 | 0.01 | 0.0 | - | | 3#厂房 | PM10 | 450.0 | 1.23 | 0.27 | - | | NMHC | 2000.0 | 15.47 | 0.77 | - | | 甲醛 | 50.0 | 0.39 | 0.78 | - | | 氯化氢 | 50.0 | 0.01 | 0.01 | - | | NH3 | 200.0 | 0.05 | 0.02 | - | | 1#排气筒 | PM10 | 450.0 | 0.14 | 0.03 | - | | NMHC | 2000.0 | 3.19 | 0.16 | - | | 甲醛 | 50.0 | 0.04 | 0.08 | - | | NOx | 250.0 | 0.01 | 0.01 | - | | 硫酸 | 300.0 | 0.06 | 0.02 | - | | 氯化氢 | 50.0 | 0.01 | 0.03 | - | | NH3 | 200.0 | 0.01 | 0.0 | - | | 2#排气筒 | PM10 | 450.0 | 0.06 | 0.01 | - | | NMHC | 2000.0 | 2.3 | 0.12 | - | | 甲醛 | 50.0 | 0.09 | 0.18 | - | | NOx | 250.0 | 0.01 | 0.0 | - | | 硫酸 | 300.0 | 0.97 | 0.32 | - | | 氯化氢 | 50.0 | 0.01 | 0.02 | - | | NH3 | 200.0 | 0.0 | 0.0 | - | | 4#厂房 | PM10 | 450.0 | 2.39 | 0.53 | - | | NMHC | 2000.0 | 9.3 | 0.47 | - | | 甲醛 | 50.0 | 0.44 | 0.87 | - | | NOx | 250.0 | 0.02 | 0.01 | - | | 硫酸 | 300.0 | 0.45 | 0.15 | - | | 氯化氢 | 50.0 | 0.04 | 0.07 | - | | 2#厂房 | PM10 | 450.0 | 0.54 | 0.12 | - | | NMHC | 2000.0 | 3.4 | 0.17 | - | | NOx | 250.0 | 0.04 | 0.02 | - | | 硫酸 | 300.0 | 0.18 | 0.06 | - | | 氯化氢 | 50.0 | 0.02 | 0.04 | - | | NH3 | 200.0 | 0.01 | 0.01 | - |   本项目Pmax最大值出现为4#厂房排放的甲醛和1#厂房排放的非甲烷总烃，Pmax值为0.87%，Cmax分别为0.44μg/m3、17.34μg/m3，根据《环境影响评价技术导则 大气环境》(HJ2.2-2018)分级判据，确定本项目大气环境影响评价工作等级为三级。  **2.1.3 大气环境防护距离**  **表7-8 大气环境防护距离计算参数**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **污染源位置** | **污染物名称** | **面源长（m）** | **面源宽（m）** | **面源高度（m）** | **计算结果（m）** | | 1#厂房 | VOCs、颗粒物、氯化氢、硫酸雾、氮氧化物、氨气 | 50 | 21.6 | 9 | 无超标点 | | 2#厂房 | 52 | 63.9 | 9 | 无超标点 | | 3#厂房 | 62 | 21.8 | 9 | 无超标点 | | 4#厂房 | 50 | 25 | 16 | 无超标点 |   经计算，本项目厂界范围内无超标点，即在项目厂界处，各污染物浓度不仅满足无组织排放厂界浓度要求，同时也达到其质量标准要求。根据《环境影响评价技术导则 大气环境》（HJ2.2-2018），本项目不需设置大气环境防护距离。  **2.1.4 卫生防护距离**  卫生防护距离按下式计算：    式中：Cm——标准浓度限值（mg/m3）  Qc——大气污染物可以达到的控制水平（kg/h）  A、B、C、D——卫生防护距离计算系数，无因次，根据工业企业所在地区近五年平均风速及工业企业大气污染物构成类别从《制定地方大气污染物排放标准的技术方法》（GB/T 3201-91）表5 中查取  r——排放源所在生产单元的等效半径（m）  L——卫生防护距离（m）  **表7-9 卫生防护距离计算结果表**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **污染源位置** | **污染物** | **计算参数** | | | | **卫生防护距离（m）** | | | **A** | **B** | **C** | **D** | **L** |  | | 1#厂房 | VOCs、颗粒物、甲醛、氯化氢、硫酸雾、氮氧化物、氨气 | 470 | 0.021 | 1.85 | 0.84 | 0.085 | 50 | | 2#厂房 | 470 | 0.021 | 1.85 | 0.84 | 0.128 | 50 | | 3#厂房 | 470 | 0.021 | 1.85 | 0.84 | 0.052 | 50 | | 4#厂房 | 470 | 0.021 | 1.85 | 0.84 | 0.023 | 50 |   根据规定，排放两种不同污染物时，项目卫生防护距离提高一级，由此可见，拟建项目需分别以1#厂房、2#厂房、3#厂房、4#厂房向外设置100m卫生防护距离，根据现场勘查，在此范围内无医院、居民等敏感保护目标。  **2.1.5 大气环境影响评价结论**  本项目位于环境质量不达标区，评价范围内无一类区，根据估算模式判定本项目大气评价等级为三级。  ①正常工况下，排放的大气污染物贡献值较小，经估算模型AERSCREEN初步预测，本项目Pmax＜1%，本项目大气环境影响评价等级为三级评价，对周围环境影响较小。且根据评价区的环境质量现状监测结果可知，区域大气环境质量较好。因此，项目正常情况排放的大气污染物对大气环境影响可接受，项目大气污染物排放方案可行。  ②项目厂界浓度满足大气污染物厂界浓度限值，且厂界外大气污染物短期贡献浓度不超过环境质量浓度限值，所以本项目不需要设置大气环境防护距离。  ③本项目卫生防护距离推荐值为：分别以1#厂房、2#厂房、3#厂房、4#厂房向外100m范围。经现场踏勘，项目卫生防护距离范围内无居民、医院、学校等环境敏感目标，能满足项目卫生防护距离的要求。  2.2 地表水环境  本项目为水污染影响型建设项目，根据《环境影响评价技术导则 地表水环境》（HJ2.3-2018）中表1内容确定地表水环境评价工作等级。  表7-10 水污染型建设项目评价等级判定   |  |  |  | | --- | --- | --- | | 评价等级 | 判定依据 | | | 排放方式 | 废水排放量Q/（m3/d）；水污染物当量数W/（无量纲） | | 一级 | 直接排放 | Q≥20000或W≥600000 | | 二级 | 直接排放 | 其他 | | 三级A | 直接排放 | Q<200且W<6000 | | 三级B | 间接排放 | - |   本项目废水包括生产废水和生活污水，均接管至通州区益民水处理公司，属于间接排放，则本项目地表水评价等级为三级B。  表 本项目废水类别、污染物及治理设施信息表   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 废水类别 | 污染物种类 | 排放去向 | 排放规律 | 污染治理设施 | | | 排放口编号 | 排放口设置是否符合要求 | 排放口类型 | | 编号 | 名称 | 工艺 | | 1 | 清洗废水 | pH、COD、SS、NH3-N、Cu、Sn | 通州区益民污水处理有限公司 | 连续排放，流量不稳定，但有周期性规律 | 1# | 污水处理站 | “调节+絮凝+沉淀+过滤” | 1# | 是 | 企业总排 | | 2 | 喷淋塔废水 | pH、COD、NH3-N | | 3 | 初期雨水 | pH、COD、SS、NH3-N | | 4 | 生活污水 | pH、COD、SS、NH3-N、TP | 间断排放，排放期间流量不稳定，但有周期性规律 | 2# | 化粪池 | - |   表 废水间接排放口基本情况表   |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 排放口编号 | 排放口地理坐标 | | 废水排放量/（万t/a） | 排放去向 | 排放规律 | 间歇排放时段 | 受纳污水处理厂信息 | | | | 经度 | 纬度 | 名称 | 污染物种类 | 国家或地方污染物排放标准浓度限值/（mg/L） | | 1 | 1# | 120°52′16′′ | 31°58′26′′ | 0.4138 | 通州区益民污水处理有限公司 | 连续排放，流量不稳定，但有周期性规律 | - | 通州区益民污水处理有限公司 | pH | 6-9 | | COD | 500 | | SS | 400 | | NH3-N | 5 | | TP | 0.5 | | Cu | 2 | | Sn | 5.0 |   表 废水污染物排放执行标准表   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 序号 | 排放口编号 | 污染物种类 | 国家或地方污染物排放标准及其他按规定商定的排放协议 | | | 名称 | 浓度限值/（mg/L） | | 1 | 1# | pH | 《污水综合排放标准》（GB8978-1996） | 6-9 | | COD | 500 | | SS | 400 | | NH3-N | 《污水排入城市下水道水质标准》（GB/T31962-2015） | 45 | | TP | 8 | | Cu | GB8978-1996 | - | | Sn | 《污水综合排放标准》（DB31/199-2018） | - |   表 废水污染物排放信息表（改建、扩建项目）   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 排放口编号 | 污染物种类 | 排放浓度/（mg/L） | 新增日排放量/（t/d） | 全厂日排放量/（t/d） | 新增年排放量/（t/a） | 全厂年排放量/（t/a） | | 1 | 1# | pH | 7-9 | 7-9 | 7-9 | 7-9 | 7-9 | | COD | 489.999 | 0.006758 | 0.006758 | 2.02748 | 2.02748 | | SS | 385.476 | 0.005317 | 0.005317 | 1.59499 | 1.59499 | | NH3-N | 44.0001 | 0.000607 | 0.000607 | 0.18206 | 0.18206 | | TP | 0.26101 | 3.6E-06 | 3.6E-06 | 0.00108 | 0.00108 | | Cu | 1.19148 | 1.64E-05 | 1.64E-05 | 0.00493 | 0.00493 | | Sn | 1.59025 | 2.19E-05 | 2.19E-05 | 0.00658 | 0.00658 | | 全厂排放口合计 | | COD | | | | 2.02748 | 2.49788 | | NH3-N | | | | 0.18206 | 0.2243 | | TP | | | | 0.00108 | 0.00972 | | Cu | | | | 0.00493 | 0.00493 | | Sn | | | | 0.00658 | 0.00658 |   本项目污水排放浓度可达接管要求，不会对污水厂产生冲击负荷。项目所在地污水管网已铺设到位，污水纳入当地污水管网后进入益民污水处理公司处理。因此，本项目污水不直接对外排放，不会对当地地表水环境产生不利影响。  拟建项目排放废水4137.72t/a（13.79t/d）。占益民水处理有限公司目前剩余处理能力（2万m3/d）的0.07%，在污水处理厂现有处理能力范围内。  根据益民水处理有限公司环评结论，在达标排放的前提下，对受纳水体影响较小，不会改变通甲河及新江海河现有水质类别。  综上，本项目废水接管至益民污水处理公司集中处理可以做到达标排放。  水环境影响评价结论：根据《环境影响评价技术导则-地表水环境》（HJ2.3-2018）本项目为水污染影响三级B等级，接管益民污水处理公司，对益民水处理有限公司接管可行性进行分析可知，本项目水量、水质等均符合益民污水处理公司接管要求，因此，本项目污水不直接对外排放，不会对当地地表水环境产生不利影响地表水影响可接受。  2.3 声环境  本项目的噪声源设备均安置在室内。在生产过程中，设备声源强度为75-85dB(A)。为了实现噪声达标排放，减轻对周边环境的影响，厂方采用的噪声防治措施包括：合理布置厂区格局，对噪声设备安装减震垫、隔声罩。  根据资料，以常规的噪声衰减和叠加模式进行预测计算与评价，同时考虑到厂方拟采取的厂房隔声等控制措施，预测了在正常生产条件下生产噪声对厂界的影响值：  a）建设项目声源在预测点产生的等效声级贡献值（*L*eqg）计算公式：    式中：*L*eqg—建设项目声源在预测点的等效声级贡献值，dB(A)；  *L*Ai—声源在预测点产生的A声级，dB(A)；  *T*—预测计算的时间段，s；  *t*i—*i*声源在*T*时段内的运行时间，s。  b）预测点的预测等效声级(L)计算公式：    式中：*L*eqg—建设项目声源在预测点的等效声级贡献值，dB(A)；  *L*eqb—预测点的背景值，dB(A)。  采取隔声减震等措施，房屋降噪可达25dB（A）。根据计算，厂区内各声源噪声叠加值经厂区隔声，换算成的等效室外声源声级值，各声源对预测点影响值进行叠加计算后，厂界噪声预测结果见表7-9。  **表7-9 各测点声环境影响预测结果** （单位：dB（A））   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **测点位** | | **昼间** | | | **夜间** | | | | **点号** | **位名** | **贡献值** | **本底值** | **叠加值** | **贡献值** | **本底值** | **叠加值** | | N1 | 北边界1m | 33.65 | 55.6 | 55.63 | 33.65 | 46.9 | 47.10 | | N2 | 东边界1m | 30.43 | 58.4 | 58.41 | 30.43 | 49.8 | 49.85 | | N3 | 南边界1m | 38.50 | 57.3 | 57.36 | 38.50 | 48.7 | 49.10 | | N4 | 西边界1m | 29.08 | 56.7 | 56.71 | 29.08 | 47.4 | 47.46 |   **注：表中本底值取各点监测结果中较大值。**  预测结果表明，该项目各高噪声设备，经厂方采取有效控制措施后，各测点昼间噪声均能满足《工业企业厂界环境噪声排放标准》（GB12348-2008）中3类标准要求。根据预测结果，本项目噪声经距离衰减、空气衰减和墙壁衰减后，不会改变声环境质量功能现状。  2.4 固体废物  （1）危险废物贮存场所（设施）环境影响分析  项目新建一个危废仓库，危废仓库按照《危险废物贮存污染控制标准》（GB18597-2001）要求进行建设，其中，基础防渗层为至少1m 厚粘土层（渗透系数≤10-7cm/s）或2mm 厚高密度聚乙烯，或至少2mm 厚的其他人工材料（渗透系数≤10-10cm/s），危险废物仓库能够做到防风、防雨、防晒等。项目危险废物暂存场所基本情况见下表。  **表7-10 拟建项目危险废物贮存场所（设施）基本情况**   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | **序号** | **贮存场所** | **危险废物名称** | **危险废物类别** | **危险废物代码** | **位置** | **占地面积（m2）** | **贮存方式** | **贮存能力** | **贮存**  **周期** | | 1 | 危险固废仓库 | 滤芯 | HW49 | 900-041-49 | 120°92′78.70″E，32°05′29.80″N | 1.8 | 标准铁桶暂存 | 2t | 30d | | 2 | 废包装桶/袋 | HW49 | 900-041-49 | 1 | 标准铁桶暂存 | 1.2t | 30d | | 3 | 除尘器集尘 | HW49 | 900-040-49 | 1 | 标准铁桶暂存 | 3t | 30d | | 4 | 污泥 | HW06 | 900-049-06 | 1.8 | 标准铁桶暂存 | 2t | 30d |   液态危废用密闭桶贮存，贮存过程中减少有毒有害物质的挥发和扩散和泄漏情况，因此本项目产生的危废在采取以上的污染防治措施条件下对周边的大气环境、地表水环境、土壤、地下水及周边环境保护目标影响较小。  （2）运输过程环境影响分析  项目危废采用密闭桶包装和密闭厢式货车运输，在运输过程中使用专业危废运输车辆进行运输，运输过程采取跑冒滴漏防治措施，经如此处理后，本项目危废在运输过程中对周边环境影响较小。  在采取上述措施后，项目固废均能够得到妥善处理处置，不会造成二次污染。拟建项目应强化废物产生、收集、贮运各环节的管理，杜绝固废在厂区内的散失、渗漏。做好固体废物在厂区内的收集和储存相关防护工作，收集后进行有效处置。建立完善的规章制度，以降低危险固体废物散落对周围环境的影响。因此，项目产生的固体废物经有效处理和处置后对环境影响较小。  2.5 环境风险  2.5.1 风险调查  2.5.1.1 建设项目风险源调查  （1）建设项目危险物质数量、分布情况及性质  根据《建设项目环境风险评价技术导则》（HJ169-2018）相关要求，调查本项目危险物质情况。  表7.1-1 主要危险物质情况一览表   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 危险物质 | CAS号及分子式 | 理化性质 | 燃烧爆炸性 | 毒性 | 最大存量 | 主要存储位置 | | 1 | 高锰酸钠（40%） | NaMnO4·3H2O  10101-50-5 | 紫色至红紫色结晶或粉末，分子量195.97，熔点170℃（分解），溶于水、乙醇、乙醚、液氨 | - | - | 2t | 危化品仓库 | | 2 | 甲基磺酸（99%） | CH4O3S  75-75-2 | 无色液体，熔点20℃，分子量96.10，沸点167℃(1.33kPa)，饱和蒸气压（kPa) 0.13（20℃），相对密度(水=1)1.48，不溶于[烷烃](https://baike.so.com/doc/1378366-1457098.html)、苯、甲苯等 | 闪点＞110℃ | LD50：200mg/kg（大鼠经口） | 0.5 t | 危化品仓库 | | 3 | 硫酸锰（99%） | MnSO4  7785-87-7 | 分子量151，其一水合物为微红色斜方晶体，熔点700℃，相对密度(水=1)3.25，溶于水 | - | LD50：64mg/kg（小鼠腹腔） | 1 t | 危化品仓库 | | 4 | 硫酸铜（99%） | CuSO4  7758-98-7 | [白色](https://baike.so.com/doc/404048-427867.html)或[灰](https://baike.so.com/doc/520143-550712.html)[白色](https://baike.so.com/doc/404048-427867.html)粉末，分子量159.61，熔点560℃，相对密度(水=1)3.606（25℃），蒸气压：7.3mm Hg（25ºC），溶于水、甲醇 | - | LD50：300mg/kg（大鼠经口） | 10 t | 危化品仓库 | | 5 | 甲酸（99%） | HCOOH 64-18-6 | 无色透明发烟液体，有强烈刺激性酸味，分子量46.03，熔点8.2℃，沸点100.8℃，相对密度（水=1）1.23，饱和蒸气压（kPa）5.33（24℃），溶于水 | 闪点68.9 ℃（开杯）。 | LD50：1100mg/kg（大鼠经口）；LC50：15000mg/m3（大鼠吸入，15min） | 0.5 t | 危化品仓库 | | 6 | 硫酸羟胺（99%） | H8N2O6S  10039-54-0 | 无色结晶，分子量164.15，熔点172℃，易溶于水 | - | - | 1 t | 危化品仓库 | | 7 | 亚氯酸钠（99%） | NaClO₂  7758-19-2 | 白色或微带黄绿色粉末或颗粒[晶体](https://baike.baidu.com/item/%E6%99%B6%E4%BD%93)，分子量90.04，在175℃时即分解而发热 | - | LD50：165mg/kg（大鼠经口），350mg/kg（小鼠经口） | 0.2 t | 危化品仓库 | | 8 | 盐酸（37%） | HCl  7647-01-0 | 无色液体，有刺激性气味分子量36.5，熔点-114.8℃，沸点108.6℃（20%），饱和蒸汽压（kPa）30.66（21℃），与水混溶 | - | - | 0.2 t | 危化品仓库 | | 9 | 氨水（28%） | NH₃·H₂0  1336-21-6 | 无色透明液体，有刺激性气味，熔点-77℃，沸点36℃，易溶于水 | - | LD50：350mg/kg（大鼠经口） | 0.5 t | 危化品仓库 | | 10 | 醋酸（99%） | CH3COOH  64-19-7 | 纯的无水乙酸（冰醋酸）是无色的吸湿性固体，分子量60.05，熔点16.6℃，沸点：117.9℃，饱和蒸气压（kPa)1.52（20℃），溶于水 | 闪点39℃ | LD50：3530mg/kg(大鼠经口)，1060mg/kg(兔经皮) | 1 t | 危化品仓库 | | 11 | 单乙醇胺（98%） | C2H7NO  141-43-5 | 无色或淡黄色液体，微有氨臭，分子量61.08，熔点10.5℃，沸点170.8℃，与水混合 | 闪点93℃ | - | 0.5 t | 危化品仓库 | | 12 | 硝酸（68%） | HNO3  7697-37-2 | 纯硝酸为无色透明液体，浓硝酸为淡黄色液体，有刺激气味，熔点-42℃，沸点122℃，饱和蒸气压（kpa)4.4(20℃），与水混溶 | - | - | 0.34t | 危化品仓库 | | 13 | 硫酸（60%） | H2SO4  7664-93-9 | 无色油状液体，熔点10.371℃，沸点337℃，饱和蒸气压（kpa)0.13(145.8℃），能与水以任意比例互溶 | - | LD50：2140mg/kg(大鼠经口)；LC50：510mg/m³，2小时(大鼠吸入) | 20 t | 危化品仓库 | | 14 | 双氧水（35%） | H₂O2  7722-84-1 | 无色透明液体，有微弱特殊气味，熔点-2℃，沸点158℃，饱和蒸气压（kpa)0.13(15.3℃），可任意比例与水混溶 | - | LD50：4060mg/kg（大鼠经皮）；LC50：2000mg/m3，4小时（大鼠吸入） | 6 t | 危化品仓库 | | 15 | 异丙醇（98%） | C3H8O  67-63-0 | 无色透明液体，有似[乙醇](https://baike.baidu.com/item/%E4%B9%99%E9%86%87)和[丙酮](https://baike.baidu.com/item/%E4%B8%99%E9%85%AE)混合物的气味，沸点82.45℃，熔点-87.9℃，相对密度（水=1）0.7863，饱和蒸气压（kpa)92232(80℃），能与醇、醚、氯仿和水混溶，不溶于[盐溶液](https://baike.baidu.com/item/%E7%9B%90%E6%BA%B6%E6%B6%B2) | 闪点22℃ | LD50：5800mg/kg(大鼠经口) | 0.4 t | 危化品仓库 | | 16 | 甲醇（98%） | CH3OH  67-56-1 | 无色透明液体，有刺激性气味，熔点（-97.8℃，沸点64.7℃，饱和蒸气压（kpa)13.33(21.2℃），溶于水，可混溶于醇类、乙醚等多数有机溶剂 | 闪点11℃ | LD50：5628mg/kg（大鼠经口），15800mg/kg（兔经皮）；LC50：83776mg/kg，4小时（大鼠吸入） | 0.6 t | 危化品仓库 | | 17 | DMF（99%） | C3H7NO  68-12-2 | 无色透明液体，有特殊臭味，熔点-61℃，沸点153℃，饱和蒸气压（kpa)3.46(60℃），与水及多数有机溶剂任意混合 | 闪点58℃ | LD50：4000mg/kg（大鼠经口）；4720mg/kg（兔经皮） | 1 t | 危化品仓库 | | 18 | 甲醛（37%） | HCHO  50-00-0 | 无色，有刺激性气味，分子量30.03，熔点-92℃，沸点-19.5℃，易溶于水和乙醇 | 闪点50℃（37℃） | LD50：800mg/kg（大鼠经口），270mg/kg（兔经皮）；LC50：590mg/kg（大鼠吸入） | 10 t | 危化品仓库 | | 19 | 苯骈三氮唑（99%） | C6H5N3  95-14-7 | 白色浅褐色针状结晶，分子量119.13，熔点98.5℃，沸点204℃，溶于乙醇、苯、甲苯 | 闪点170℃ | - | 0.025 t | 危化品仓库 | | 20 | 环己胺（99%） | C6H13N  108-91-8 | 无色液体，有鱼腥胺气味，沸点134.5℃，凝固点-17.7℃，溶于水，可混溶于多数有机溶剂 | 闪点32℃ | LD50：710mg/kg（大鼠经口），227mg/kg（兔经皮） | 0.2 t | 危化品仓库 |   （2）建设项目生产工艺特点  本项目生产仅为简单混合过程，不涉及化学反应；生产过程为常温常压，生产设备主要为搅拌系统，设备利用电力驱动。  2.5.2.1 环境敏感目标调查  本项目周边5km环境敏感目标见下表。  表 项目周边5km主要环境敏感目标   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 序号 | 敏感目标 | 相对厂址位置及距离 | 规模 | 备注 | | 1 | 狮子桥村 | 项目地及周边 | 约3800户，约4600人 | 人群保护 | | 2 | 金缘花苑 | N，约756m | 约1584户，约3168人 | 人群保护 | | 3 | 金西幼儿园 | N，约1.92km | 约600人 | 人群保护 | | 4 | 金西医院 | N，约1.89km | 约100人 | 人群保护 | | 5 | 太山村 | NE，约1.69km | 约3706人 | 人群保护 | | 6 | 泰山公寓 | NE，约2.06km | 约3888人 | 人群保护 | | 7 | 银河家园 | NE，约2.41km | 约2484人 | 人群保护 | | 8 | 融创玉兰公馆 | NE，约2.26km | 约1728人 | 人群保护 | | 9 | 翰林御花园 | NE，约2.70km | 约1728人 | 人群保护 | | 10 | 御景湾 | NE，约3.19km | 约2160人 | 人群保护 | | 11 | 水榭花城 | NE，约2.99km | 约3240人 | 人群保护 | | 12 | 颐河苑 | NE，约3.10km | 约1152人 | 人群保护 | | 13 | 锦绣江南 | NE，约3.06km | 约4608人 | 人群保护 | | 14 | 德庆名邸 | NE，约3.49km | 约2304人 | 人群保护 | | 15 | 富贵苑 | NE，约3.42km | 约2376人 | 人群保护 | | 16 | 通州区通州幼儿园虹西分园 | NE，约3.36km | 约200人 | 人群保护 | | 17 | 通州区金沙小学银河校区 | NE，约2.88km | 约1920人 | 人群保护 | | 18 | 通州区金效初中 | NE，约2.45km | 约2935人 | 人群保护 | | 19 | 八总桥村 | N，约2.46km | 约1488户，约4410人 | 人群保护 | | 20 | 亭南村 | WN，约2.47km | 约1457人 | 人群保护 | | 21 | 虹西花苑 | NE，约2.48km | 约862人 | 人群保护 | | 22 | 虹西村 | NE，约4.52km | 约8059人 | 人群保护 | | 23 | 虹桥北村 | NE，约4.49km | 约180人 | 人群保护 | | 24 | 通州建筑职工中专 | NE，约4km | 约1000人 | 人群保护 | | 25 | 景怡花苑 | NE，约4.26km | 约260人 | 人群保护 | | 26 | 银河花苑 | NE，约4.12km | 约2160人 | 人群保护 | | 27 | 通州区中医院 | NE，约4.45km | 约800人 | 人群保护 | | 28 | 华德公寓 | NE，约3.74km | 约680人 | 人群保护 | | 29 | 金城大厦 | NE，约4.21km | 约411人 | 人群保护 | | 30 | 教育大厦 | NE，约4.31km | 约364人 | 人群保护 | | 31 | 祥和大厦 | NE，约4km | 约352人 | 人群保护 | | 32 | 万达花苑 | NE，约3.97km | 约1152人 | 人群保护 | | 33 | 通州区政府 | NE，约3.58km | 约520人 | 人群保护 | | 34 | 金通家园 | E，约1.97km | 约2160人 | 人群保护 | | 35 | 水榭花都 | E，约2.72km | 约2880人 | 人群保护 | | 36 | 世纪城 | E，约3.01km | 约1296人 | 人群保护 | | 37 | 南通高新区职工之家 | E，约1.23km | 约3456人 | 人群保护 | | 38 | 华山花苑 | E，约1.58km | 约4248人 | 人群保护 | | 39 | 城东雅苑 | E，约4.57km | 约1076人 | 人群保护 | | 40 | 万和润园 | E，约4.49km | 约3226人 | 人群保护 | | 41 | 江海皇都 | E，约3.5km | 约4234人 | 人群保护 | | 42 | 金沙阳光府邸 | E，约3.69km | 约4032人 | 人群保护 | | 43 | 金色城邦 | E，约1.84km | 约2868人 | 人群保护 | | 44 | 万和华府 | E，约2.49km | 约2868人 | 人群保护 | | 45 | 御景华庭 | E，约3.34km | 约2509人 | 人群保护 | | 46 | 金桥东苑 | E，约3.31km | 约2868人 | 人群保护 | | 47 | 金桥名邸 | E，约2.5km | 约1433人 | 人群保护 | | 48 | 书香华府 | E，约2.25km | 约896人 | 人群保护 | | 49 | 名人世家 | ES，约4.03km | 约1792人 | 人群保护 | | 50 | 悦景城 | ES，约3.65km | 约1254人 | 人群保护 | | 51 | 富都豪园 | ES，约3.78km | 约896人 | 人群保护 | | 52 | 金欣佳园 | ES，约4.06km | 约5448人 | 人群保护 | | 53 | 南通市通州高级中学 | ES，约4.9km | 约3440人 | 人群保护 | | 54 | 双福佳苑 | S，约3.3km | 约6451人 | 人群保护 | | 55 | 正场村 | SW，约1.92km | 约5449人 | 人群保护 | | 56 | 复兴村 | S，约4.47km | 约4483人 | 人群保护 | | 57 | 金普村 | S，约4.42km | 约992户，约2629人 | 人群保护 | | 58 | 利民村 | SW，约4km | 约1043户，约3339人 | 人群保护 | | 59 | 民平村 | SW，约4.58km | 约186户，约2965人 | 人群保护 | | 60 | 阳光幼儿园 | SW，约4.59km | 约600人 | 人群保护 | | 61 | 花家渡村 | W，约2.08km | 约1811户，约6071人 | 人群保护 | | 62 | 陆扶桥村 | W，约3.24km | 约945户，约3028人 | 人群保护 | | 63 | 孙李桥村 | W，约4.4km | 约95户，约303人 | 人群保护 | | 64 | 通州张蹇学校 | WN，约2.16km | 约649人 | 人群保护 | | 65 | 永庆村 | WN，约3.97km | 约1679人 | 人群保护 | | 66 | 西禅寺村 | WN，约4.25km | 约1450人 | 人群保护 | | 67 | 通吕运河 | S，约1.24km | 中河 | 水源水质保护 | | 68 | 北侧小河 | N，约71m | 小河 | 水源水质保护 | | 69 | 金西中心竖河 | W，约635m | 小河 | 水源水质保护 | | 70 | 竖石河 | E，约1.73km | 中河 | 水源水质保护 | | 71 | 圩亭河 | W，约3.91km | 中河 | 水源水质保护 | | 72 | 正场三级横河 | S，约2.61km | 小河 | 水源水质保护 | | 73 | 跃进河 | SW，约3.95km | 小河 | 水源水质保护 | | 74 | 东港河 | S，约2.79km | 小河 |  | | 75 | 西片横河 | S，约4.9km | 小河 |  | | 76 | 金乐一号横河 | ES，约3.15km | 小河 |  | | 77 | 通甲河 | ES，约5.09km | 小河 |  | | 78 | 亭石河 | NE，约4.69km | 小河 | 水源水质保护 | | 79 | 长江 | SW，约18.58km | 大河 | 水源水质保护 | | 80 | 通吕运河(通州区)清水通道维护区二级管控区 | S，约0.74km | 通州区境内通吕运河及两岸各500米 | 水源水质保护 |   2.5.2 环境风险潜势初判及评价工作等级确定  根据《建设项目环境风险评价技术导则》（HJ169-2018）、《化学品分类和标签规范 第18部分：急性毒性》（GB 30000.18-2013）、《化学品分类和标签规范 第28部分：对水生环境的危害》（GB 30000.28-2013）进行环境风险潜势初判及评价工作等级确定。  2.5.2.1 P的分级确定  （1）Q值的确定  根据《建设项目环境风险评价技术导则》（HJ169-2018），计算所涉及的每种危险物质在厂界内的最大存在总量与其在附录B中对应临界量的比值Q。当只涉及一种危险物质时，计算该物质的总量与其临界量比值，即为Q；当存在多种危险物质时，则按下式计算物质总量与其临界量比值（Q）：    式中：q1，q2，...，qn——每种危险物质的最大存在总量，t；  Q1，Q2，...，Qn——每种危险物质的临界量，t。  参照《建设项目环境风险评价技术导则》（HJ169-2018）附录B，公司所涉及的主要风险物质及其存储量情况情况见表7.1-1。  表7.1-1 主要风险物质情况一览表   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 序号 | 危险物质名称 | CAS号 | 厂区最大存量（t） | 临界量（t） |  | | 1 | 高锰酸钠 | 10101-50-5 | 0.8（40%水溶液2t） | 100[1] | 0.008 | | 2 | 硫酸铜 | 7758-98-7 | 10 | 50[2] | 0.2 | | 3 | 亚氯酸钠 | 7758-19-2 | 0.2 | 50[2] | 0.004 | | 4 | 硫酸羟胺 | 10039-54-0 | 1 | 50[2] | 0.02 | | 5 | 甲基磺酸 | 75-75-2 | 0.5 | 50[2] | 0.01 | | 6 | 单乙醇胺 | 141-43-5 | 0.5 | 50[2] | 0.01 | | 7 | 异丙醇 | 67-63-0 | 0.4 | 10 | 0.04 | | 8 | 甲醇 | 67-56-1 | 0.6 | 10 | 0.06 | | 9 | DMF | 68-12-2 | 1 | 5 | 0.2 | | 10 | 甲醛 | 50-00-0 | 3.7（37%水溶液10t） | 0.5 | 7.4 | | 11 | 苯骈三氮唑 | 95-14-7 | 0.025 | 50[2] | 0.0005 | | 12 | 环己胺 | 108-91-8 | 0.2 | 10 | 0.02 | | 13 | 醋酸 | 64-19-7 | 1 | 10 | 0.1 | | 14 | 甲酸 | 64-18-6 | 0.5 | 10 | 0.05 | | 15 | 盐酸（37%） | 7647-01-0 | 0.2 | 7.5 | 0.0267 | | 16 | 硫酸 | 7664-93-9 | 12（60%水溶液20t） | 10 | 1.2 | | 17 | 硝酸 | 7697-37-2 | 0.34（68%水溶液0.5t） | 7.5 | 0.0453 | | 18 | 氨水（28%） | 1336-21-6 | 0.5 | 10 | 0.05 | | 19 | 双氧水 | 7722-84-1 | 2.1（35%水溶液6t） | 50[3] | 0.042 | | 20 | 石油气 | 68476-85-7 | 0.03（2瓶液化气，规格15kg/瓶） | 10 | 0.003 | | 21 | 锰及其化合物（以锰计） | - | 0.3602 | 0.25[4] | 1.4408 | | 22 | 油类物质（矿物油，如石油、汽油、柴油等；生物柴油等） | - | 0.05（润滑油50kg） | 2500 | 0.00005 | | 合计（） | | - | - | - | 10.93035 |   注：[1]属于GB 30000.28中急性毒性类别1物质；[2]属于GB 30000.18中类别3物质；[3]属于GB 30000.18中类别2物质；[4]硫酸锰（含量99%）最大存量约为1t；[5]硫酸锰（含量99%）最大存量约为1t。  根据HJ169-2018规定：  当Q<1时，该项目环境风险潜势为Ⅰ。  当Q≥1时，将Q值划分为：（1）1≤Q<10；（2）10≤Q<100；（3）Q≥100。  经计算，本项目Q=10.93035，在10≤Q<100范围内。  （2）M值的确定  根据HJ169-2018规定，分析本项目所属行业及生产工艺特点，评估生产工艺情况。将M划分为（1）M>20；（2）10<M≤20；（3）5<M≤10；（4）M=5，分别以M1、M2、M3和M4表示。  表1.9.4 行业及生产工艺（M）   |  |  |  | | --- | --- | --- | | 行业 | 评估依据 | 分值 | | 石化、化工、医药、轻工、化纤、有色冶炼等 | 涉及光气及光气化工艺、电解工艺（氯碱）、氯化工艺、硝化工艺、合成氨工艺、裂解（裂化）工艺、氟化工艺、加氢工艺、重氮化工艺、氧化工艺、过氧化工艺、胺基化工艺、磺化工艺、聚合工艺、烷基化工艺、新型煤化工工艺、电石生产工艺、偶氮化工艺 | 10/套 | | 无机酸制酸工艺、焦化工艺 | 5/套 | | 其他高温或高压，且涉及危险物质的工艺过程a、危险物质贮存罐区 | 5/套（罐区） | | 管道、港口/码头等 | 涉及危险物质管道运输项目、港口/码头等 | 10 | | 石油天然气 | 石油、天然气、页岩气开采（含净化），气库（不含加气站的气库），油库（不含加气站的油库）、油气管线b（不含城镇燃气管线） | 10 | | 其他 | 涉及危险物质使用、贮存的项目 | 5 |   本项目属于[C3985]电子专用材料制造，涉及甲醛等危险物质使用、贮存，确定M=5（M4）。  （3）P的分级确定  表1.9.4 危险物质及工艺系统危险性等级判断（P）   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 危险物质数量  与临界量比值（Q） | 行业及生产工艺（M） | | | | | M1 | M2 | M3 | M4 | | Q≥100 | P1 | P1 | P2 | P3 | | 10≤Q＜100 | P1 | P2 | P3 | P4 | | 1≤Q＜10 | P2 | P3 | P4 | P4 |   2.5.2.2 E的分级确定  （1）大气环境  表1.9.4 大气环境敏感程度分级   |  |  | | --- | --- | | 分级 | 大气环境敏感性 | | E1 | 周边5 km 范围内居住区、医疗卫生、文化教育、科研、行政办公等机构人口总数大于5万人，或其他需要特殊保护区域；或周边500 m 范围内人口总数大于1000 人；油气、化学品输送管线管段周边200 m 范围内，每千米管段人口数大于200 人 | | E2 | 周边5 km 范围内居住区、医疗卫生、文化教育、科研、行政办公等机构人口总数大于1万人，小于5 万人；或周边500 m 范围内人口总数大于500 人，小于1000 人；油气、化学品输送管线管段周边200 m 范围内，每千米管段人口数大于100 人，小于200 人 | | E3 | 周边5 km 范围内居住区、医疗卫生、文化教育、科研、行政办公等机构人口总数小于1万人；或周边500 m 范围内人口总数小于500 人；油气、化学品输送管线管段周边200 m  范围内，每千米管段人口数小于100 人 |   根据周边敏感目标调查结果，本项目项目周边5km范围内约有157540人，据此确定本项目大气环境敏感程度等级为E1。  （2）地表水环境  表1.9.4 地表水功能敏感性分区   |  |  | | --- | --- | | 敏感性 | 地表水环境敏感特征 | | 敏感F1 | 排放点进入地表水水域环境功能为Ⅱ类及以上，或海水水质分类第一类；  或以发生事故时，危险物质泄漏到水体的排放点算起，排放进入受纳河流最大流速时，24 h 流经范围内涉跨国界的 | | 较敏感F2 | 排放点进入地表水水域环境功能为Ⅲ类，或海水水质分类第二类；  或以发生事故时，危险物质泄漏到水体的排放点算起，排放进入受纳河流最大流速时，24 h 流经范围内涉跨省界的 | | 低敏感 F3 | 上述地区之外的其他地区 |   本项目废水接管至通州区益民水处理有限公司集中处理，尾水排入通甲河（地表水水域环境功能为Ⅳ类）；发生事故时，危险物质泄漏到水体的排放点算起，排放进入受纳河流最大流速（约1.1m/s）时，24 h流经范围内均属于南通市（未跨省界及国界）；则地表水功能敏感性为较敏感F3。  表1.9.4 环境敏感目标分级   |  |  | | --- | --- | | 分级 | 环境敏感目标 | | S1 | 发生事故时，危险物质泄漏到内陆水体的排放点下游（顺水流向）10 km 范围内、近岸海域一个潮周期水质点可能达到的最大水平距离的两倍范围内，有如下一类或多类环境风险受体：集中式地表水饮用水水源保护区（包括一级保护区、二级保护区及准保护区）；农村及分散式饮用水水源保护区；自然保护区；重要湿地；珍稀濒危野生动植物天然集中分布区；重要水生生物的自然产卵场及索饵场、越冬场和洄游通道；世界文化和自然遗产地；红树林、珊瑚礁等滨海湿地生态系统；珍稀、濒危海洋生物的天然集中分布区；海洋特别保护区；海上自然保护区；盐场保护区；海水浴场；海洋自然历史遗迹；风景名胜区；或其他特殊重要保护区域 | | S2 | 发生事故时，危险物质泄漏到内陆水体的排放点下游（顺水流向）10 km 范围内、近岸海域一个潮周期水质点可能达到的最大水平距离的两倍范围内，有如下一类或多类环境风险受体的：水产养殖区；天然渔场；森林公园；地质公园；海滨风景游览区；具有重要经济价值的海洋生物生存区域 | | S3 | 排放点下游（顺水流向）10 km 范围、近岸海域一个潮周期水质点可能达到的最大水平距离的两倍范围内无上述类型1 和类型2 包括的敏感保护目标 |   发生事故时，危险物质泄漏到内陆水体的排放点下游（顺水流向）10 km范围内涉及通吕运河（通州段）清水通道二级管控区，则地表水环境敏感目标等级为S1。  表1.9.4 地表水环境敏感程度分级   |  |  |  |  | | --- | --- | --- | --- | | 环境敏感目标 | 地表水功能敏感性 | | | | F1 | F2 | F3 | | S1 | E1 | E1 | E2 | | S2 | E1 | E2 | E3 | | S3 | E1 | E2 | E3 |   （3）地下水环境  表1.9.4 地下水功能敏感性分区   |  |  | | --- | --- | | 敏感性 | 地下水环境敏感特征 | | 敏感G1 | 集中式饮用水水源（包括已建成的在用、备用、应急水源，在建和规划的饮用水水源）准保护区；除集中式饮用水水源以外的国家或地方政府设定的与地下水环境相关的其他保护区，如热水、矿泉水、温泉等特殊地下水资源保护区 | | 较敏感G2 | 集中式饮用水水源（包括已建成的在用、备用、应急水源，在建和规划的饮用水水源）准保护区以外的补给径流区；未划定准保护区的集中式饮用水水源，其保护区以外的补给径流区；分散式饮用水水源地；特殊地下水资源（如热水、矿泉水、温泉等）保护区以外的分布区等其他未列入上述敏感分级的环境敏感区 | | 不敏感G3 | 上述地区之外的其他地区 |   表1.9.4 包气带防污性能分级   |  |  | | --- | --- | | 分级 | 包气带岩土的渗透性能 | | D3 | Mb≥1.0m，K≤1.0×10-6cm/s，且分布连续、稳定 | | D2 | 0.5m≤Mb<1.0m，K≤1.0×10-6cm/s，且分布连续、稳定  Mb≥1.0m，1.0×10-6cm/s＜K≤1.0×10-4cm/s，且分布连续、稳定 | | D1 | 岩（土）层不满足上述“D2”和“D3”条件 | | Mb：岩土层单层厚度，K：渗透系数。 | |   本项目位于南通市通州区，根据《南通市通州区生物多样性调查报告》（2017年7月），项目地自地表向下5.5 m一般为亚粘土层；根据《环境影响评价技术导则 地下水环境》（HJ610-2016），亚粘土层渗透系数为1.16×10-4-2.89×10-4cm/s，则包气带防污性能等级为D1。  表1.9.4 地下水环境敏感程度分级   |  |  |  |  | | --- | --- | --- | --- | | 包气带防污性能 | 地下水功能敏感性 | | | | G1 | G2 | G3 | | D1 | E1 | E1 | E2 | | D2 | E1 | E2 | E3 | | D3 | E2 | E3 | E3 |   2.5.2.3 环境风险潜势判断  表1.9.4 建设项目环境风险潜势划分   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 环境敏感程度（E） | 危险物质及工艺系统危险性（P） | | | | | 极高危害（P1） | 高度危害（P2） | 中度危害（P3） | 轻度危害（P4） | | 环境高度敏感区（E1） | Ⅳ+ | Ⅳ | Ⅲ | Ⅲ | | 环境中度敏感区（E2） | Ⅳ | Ⅲ | Ⅲ | Ⅱ | | 环境低度敏感区（E3） | Ⅲ | Ⅲ | Ⅱ | Ⅰ |   注：Ⅳ+为极高环境风险。  根据表确定本项目大气环境、地表水环境、地下水环境风险潜势分别为Ⅲ、Ⅱ、Ⅱ。根据HJ169-2018，建设项目环境风险潜势综合等级取各要素等级的相对高值，本项目环境风险潜势为Ⅲ。  2.5.2.4 评价等级的确定  根据下表确定本项目环境评价等级为二级。  表1.9.4 评价工作等级划分   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 环境风险潜势 | Ⅳ、Ⅳ+ | Ⅲ | Ⅱ | Ⅰ | | 评价工作等级 | 一 | 二 | 三 | 简单分析a |  a是相对于详细评价工作内容而言，在描述危险物质、环境影响途径、环境危害后果、风险防范措施等方面给出定性的说明。 2.5.2.4 评价范围初定  根据《建设项目环境风险评价技术导则》（HJ169-2018），本次大气环境风险评价范围为距本项目边界5 km区域。  2.5.3 风险识别  2.5.3.1 物质危险性识别  根据《建设项目环境风险评价技术导则》（HJ169-2018）附录B，分析主要原辅材料、燃料、中间产品、副产品、最终产品、污染物、火灾和爆炸伴生/次生物，给出主要危险物质危险特性及分布情况。  表 主要危险物质危险特性及分布情况   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 序号 | 危险物质 | 易燃易爆 | 有毒有害 | 分布位置 | 备注 | | 1 | 高锰酸钠 | - | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 2 | 甲基磺酸 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 3 | 硫酸锰 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 4 | 硫酸铜 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 5 | 甲酸 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 6 | 硫酸羟胺 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 7 | 亚氯酸钠 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 8 | 盐酸 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 9 | 氨水 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 10 | 醋酸 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 11 | 单乙醇胺 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 12 | 硝酸 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 13 | 硫酸 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 14 | 双氧水 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 15 | 异丙醇 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 16 | 甲醇 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 17 | DMF | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 18 | 甲醛 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 19 | 苯骈三氮唑 | 否 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 20 | 环己胺 | 是 | 是 | 原料仓库、生产车间、危废仓库 | 原料 | | 21 | 高分子导电膜A[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 22 | 高分子导电膜B[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 23 | 化学铜添加剂A[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 24 | 化学铜添加剂B[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 25 | 电镀光亮剂[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 26 | 金属保护液[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 27 | 电子用剥离液[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 28 | 蚀刻液[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 29 | 酸性孔金属化试剂[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 30 | 碱性孔金属化试剂[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 31 | 高纵横比通孔和填孔镀铜液[1] | 否 | 是 | 产品仓库、生产车间 | 产品 | | 32 | 一氧化碳 | 是 | 是 | 厂区 | 火灾和爆炸伴生/次生物 | | 33 | 氮氧化物 | 否 | 是 | 厂区 | 火灾和爆炸伴生/次生物 |  注：[1]由于生产仅为物理混合过程，本报告其他内容中产品归入多个危险物质，不以产品名称表示。 2.5.3.2 生产系统危险性识别  （1）危险单元划分  按工艺流程和平面布置功能区划（见厂区平面布置图），结合物质危险性识别，进行危险单元划分，结果如下表所示。  表 危险单元划分及危险物质最大存在量   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 序号 | 危险物质 | 危险单元 | | | | | | 原料仓库[4] | 1-3#厂房[2] | 2#厂房 | 4#厂房[3] | 危废仓库 | | 1 | 高锰酸钠 | 2 | 0.04 | 0.04 | 0.043 | 微乎其微[5] | | 2 | 硫酸铜 | 10 | 0.56 | 0.56 | 0.56 | | 3 | 亚氯酸钠 | 0.2 | 0.01 | 0.011 | 0.011 | | 4 | 硫酸羟胺 | 1 | 0.16 | 0.17 | 0.16 | | 5 | 甲基磺酸 | 0.5 | 0.12 | 0.12 | 0.12 | | 6 | 单乙醇胺 | 0.5 | 0.01 | 0.011 | 0.011 | | 7 | 异丙醇 | 0.4 | 0.01 | 0.01 | 0.01 | | 8 | 甲醇 | 0.6 | 0.02 | 0.02 | 0.022 | | 9 | DMF | 1 | 0.05 | 0.06 | 0.055 | | 10 | 甲醛 | 10 | 0.72 | 0.7 | 0.72 | | 11 | 苯丙三氮唑 | 0.025 | 0.002 | 0.0023 | 0.002 | | 12 | 环己胺 | 0.2 | 0.011 | 0.011 | 0.011 | | 13 | 醋酸 | 1 | 0.056 | 0.055 | 0.055 | | 14 | 甲酸 | 0.5 | 0.089 | 0.089 | 0.089 | | 15 | 盐酸 | 0.2 | 0.022 | 0.022 | 0.02 | | 16 | 硫酸 | 20 | 0.011 | 0.011 | 0.011 | | 17 | 硝酸 | 0.5 | 0.011 | 0.011 | 0.011 | | 18 | 氨水 | 0.5 | 0.009 | 0.009 | 0.009 | | 19 | 双氧水 | 6 | 0.55 | 0.56 | 0.5 | | 20 | 硫酸锰 | 1 | 0.03 | 0.033 | 0.033 | | 21 | 一氧化碳 | 0 | 0.044 | 0.044 | 0.044 | | 22 | 氮氧化物 | 0 | 0.56 | 0.56 | 0.56 | | 合计 | | 56.125 | 2.491 | 2.5053 | 2.453 | - |  注：[1]表数据为各危险单元各危险物质最大存在量；[2]1-3#厂房由相连的1#、3#厂房构成，污水处理站位于3#厂房1楼；[3]产品仓库位于4#厂房1楼；[4]包含相连的1#、2#原料仓库；[5]危废仓库主要暂存废原料包装桶/袋、水处理污泥等危险固废，通过定期委托资质单位处理，仓库中危废最大存在量较小，且根据危废种类及与同行业类比，其中危险物质存在量微乎其微。 （2）原料仓库危险性分析  原辅料由汽车运至原料仓库（厂区现有），随后人工卸入仓库内，分类存储，运输及储存方式为袋装或桶装；生产时原辅料由人工搬出原料仓库，由厂内叉车运至各生产厂房使用。其中危险源危险性分析如下。  ①输送、装、卸易燃易爆液体时，由于容器缺陷、撞击、挤压等原因，盛装容器可能被击穿、破裂或损坏，物料泄露，进而导致中毒、火灾或爆炸等事故；  ②储存过程中，若危险物品包装密封不严，物料泄露，挥发出的有毒蒸汽可能引起中毒；易燃物质与空气混合形成爆炸性混合气体，遇火源可能造成火灾、爆炸事故；  ③危险化学品储存时若不按照危险化学品的特性分开、分离储存，混合存放相忌的化学品可能发生化学反应，引起火灾、爆炸；  ④若仓库内危险货物摆放过多，阻挡通往消防器材的消防通道，一旦发生火灾事故，不能及时采取灭火措施，将导致事故扩大化；  ⑤仓库地面未设防潮措施，若包装物长期受潮，可能腐蚀包装物，造成包装容器内物料泄漏，引起事故；  ⑥若仓库内通风不良，泄漏出的可燃或有毒气体在仓库内大量聚集，可燃气体遇点火源将造成火灾爆炸事故，人员进入有毒气体仓库内可能造成人员中毒事故；  ⑦若仓库内危险化学品包装物堆放过高，发生危险化学品倒塌，下落的危险化学品包装破裂，将造成危险化学品泄漏，进而造成更严重的事故；  （3）1-3#厂房、2#厂房危险性分析  原辅料由叉车运至厂房内，人工卸料，按要求将一定量的原料投入（人工）搅拌系统（主要为搅拌桶）中；搅拌完成后混合溶液（产品）依靠重力差（用搅拌系统卸料管）转移至产品包装桶，包装桶封口；产品由人工搬至叉车，由叉车运至产品仓库。此外，3#厂房内设有污水处理站处理生产废水，设有一般固废暂存库存放一般固废；1-3#厂房、2#厂房均配有废气吸收塔及排气筒。其中危险源危险性分析如下。  ①若生产设备选用的材质和制造存在缺陷，在长期使用过程中，可能出现设备变形、损坏，引起设备内物料泄漏，造成火灾、爆炸、中毒事故；若接触腐蚀性物料的设备设施未按照物料性质要求进行防腐处理，在生产过程中可能造成设备腐蚀加快，损坏设备，引起物料泄漏，造成；若接触易燃易爆物品的容器未采取防静电措施或其防静电连接不可靠，其静电积聚放电产生的电火花为易燃易爆环境提供引燃、引爆源，有可能发生火灾爆炸事故；若投料不当（如酸碱投入同一容器中），可能发生化学反应，引起燃烧爆炸事故；产品包装过程中，若管道破裂或与阀门的连接处出现密封不严，可能引起物料外泄，造成事故；产品包装过程中，若阀门开度过大或其他操作不当原因，使得物料飞溅、喷出，可能引起事故。  ②电气线路过载、短路、接触不良、散热差、线路老化等设备和技术因素引起电气火灾，可能点燃搅拌系统内易燃物质，发生事故。  ③若废气收集管道破裂可能会导致厂房内废气浓度增大，引起中毒、火灾爆炸事故；若废气吸收塔中吸收液浓度过高，导致废气排放量增大，可能增大对周边环境影响程度。  ④搬运易燃易爆液体时，由于容器撞击等原因，盛装容器可能破裂或损坏，物料泄露，进而导致中毒、火灾或爆炸等事故。  （4）4#厂房危险性分析  4#厂房设有生产车间、研发实验室、试验室、产品仓库，其中危险源危险性分析如下。  ①若生产设备选用的材质和制造存在缺陷，在长期使用过程中，可能出现设备变形、损坏，引起设备内物料泄漏，造成火灾、爆炸、中毒事故；若接触腐蚀性物料的设备设施未按照物料性质要求进行防腐处理，在生产过程中可能造成设备腐蚀加快，损坏设备，引起物料泄漏，造成；若接触易燃易爆物品的容器未采取防静电措施或其防静电连接不可靠，其静电积聚放电产生的电火花为易燃易爆环境提供引燃、引爆源，有可能发生火灾爆炸事故；若投料不当（如酸碱投入同一容器中），可能发生化学反应，引起燃烧爆炸事故；产品包装过程中，若管道破裂或与阀门的连接处出现密封不严，可能引起物料外泄，造成事故；产品包装过程中，若阀门开度过大或其他操作不当原因，使得物料飞溅、喷出，可能引起事故。  ②电气线路过载、短路、接触不良、散热差、线路老化等设备和技术因素引起电气火灾，可能点燃搅拌系统内易燃物质，发生事故。  ③若废气收集管道破裂可能会导致厂房内废气浓度增大，引起中毒、火灾爆炸事故；若废气吸收塔中吸收液浓度过高，导致废气排放量增大，可能增大对周边环境影响程度。  ④搬运易燃易爆液体时，由于容器撞击等原因，盛装容器可能破裂或损坏，物料泄露，进而导致中毒、火灾或爆炸等事故；若仓库内危险货物摆放过多，阻挡通往消防器材的消防通道，一旦发生火灾事故，不能及时采取灭火措施，将导致事故扩大化；仓库地面未设防潮措施，若包装物长期受潮，可能腐蚀包装物，造成包装容器内物料泄漏，引起事故；若仓库内通风不良，泄漏出的可燃或有毒气体在仓库内大量聚集，可燃气体遇点火源将造成火灾爆炸事故，人员进入有毒气体仓库内可能造成人员中毒事故；若仓库内危险化学品包装物堆放过高，发生危险化学品倒塌，下落的危险化学品包装破裂，将造成危险化学品泄漏，进而造成更严重的事故；仓库周围若出现火源、热源可能引起化学品燃烧、爆炸。  （5）危废仓库危险性分析  危废仓库主要暂存废的原料包装桶/袋、水处理污泥等危险废物，其中危险源危险性分析如下。  ①若危废长时间不委托处置、仓库内通风不良，挥发出的易燃易爆气体预火源可能发生火灾爆炸事故；若危废长时间存放、原料包装桶破损，泄漏出物料可能引起事故；若仓库内危险货物摆放过多，阻挡通往消防器材的消防通道，一旦发生火灾事故，不能及时采取灭火措施，将导致事故扩大化；仓库地面未设防潮措施，若包装物长期受潮，可能腐蚀包装物，造成包装容器内物料泄漏，引起事故；仓库周围若出现火源、热源可能引起化学品燃烧、爆炸。  ②若废原料包装桶内残液较多，运输、装、卸过程中因碰撞等原因使得容器破损，导致物料泄漏，可能发生事故  2.5.3.3 主要危险源  根据生产工艺的特点及各危险单元中危险源危险性分析，并结合各危险单元中危险物质的存在情况，本项目主要风险源为原料仓库原料桶、1-3#厂房搅拌系统、2#厂房搅拌系统、4#厂房搅拌系统和产品桶。  2.5.3.4 环境风险类型及危害分析  根据物质及生产系统危险性识别结果，分析环境风险类型、危险物质向环境转移的可能途径和影响方式。  表 环境风险类型、危险物质向环境转移的可能途径和影响方式   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 序号 | 环境风险类型 | 危险单元 | 危险源 | 危险物质 | 危险物质向环境转移的可能途径和影响方式 | | 1 | 泄漏 | 原料仓库 | 原料桶、原料袋 | 高锰酸钠、硫酸铜、亚氯酸钠、硫酸羟胺、甲基磺酸、单乙醇胺、异丙醇、甲醇、DMF、甲醛、苯骈三氮唑、环己胺、醋酸、甲酸、盐酸、硫酸、硝酸、氨水、双氧水、硫酸锰 | 大气、土壤、地下水、地表水 | | 1-3#厂房、2#厂房 | 搅拌系统 | | 4#厂房 | 搅拌系统、产品桶 | | 危废仓库 | 原料桶、固废桶 | | 2 | 火灾、爆炸等引发的伴生/次生污染物 | 原料仓库 | 原料仓库 | 一氧化碳、氮氧化物 | 大气 | | 1-3#厂房、2#厂房 | 1-3#厂房、2#厂房 | | 4#厂房 | 4#厂房 | | 危废仓库 | 危废仓库 |   2.5.3.5 风险识别结果  在风险识别的基础上，图示危险单元分布。给出建设项目环境风险识别汇总，包括危险单元、风险源、主要危险物质、环境风险类型、环境影响途径、可能受影响的环境敏感目标等，说明风险源的主要参数。  表 环境风险类型、危险物质向环境转移的可能途径和影响方式   |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | 序号 | 危险单元 | 危险源 | 环境风险类型 | 主要危险物质 | 环境影响途径 | 可能受影响的环境敏感目标[1] | | 1 | 原料仓库 | 原料桶、原料袋 | 泄漏以及火灾、爆炸等引发的伴生/次生污染物 | 高锰酸钠、硫酸铜、亚氯酸钠、硫酸羟胺、甲基磺酸、单乙醇胺、异丙醇、甲醇、DMF、甲醛、苯骈三氮唑、环己胺、醋酸、甲酸、盐酸、硫酸、硝酸、氨水、双氧水、硫酸锰 | 大气、土壤、地下水、地表水 | 附近居民区、行政单位等敏感点人群；通吕运河、通甲河等附近地表环境；通吕运河清水通道维护区二级管控区 | | 2 | 1-3#厂房、2#厂房 | 搅拌系统 | | 3 | 4#厂房 | 搅拌系统、产品桶 | | 4 | 危废仓库 | 原料桶、固废桶 |  注：[1]具体见周边5km敏感目标调查。 2.5.4 风险事故情形分析  2.5.4.1 最大可信事故设定  有资料报导，在95个国家登记的化学品事故中，发生过突发性化学事件的常见的化学品，化学品物质形态、事故来源及事故的原因见表4.1-1。  表4.1-1 化学品事故分类情况   |  |  |  | | --- | --- | --- | | 类别 | 名称 | 百分数% | | 化学品类别 | 液化石油气 | 2.53 | | 汽油 | 18.0 | | 氨 | 16.1 | | 煤油 | 14.9 | | 氯 | 14.4 | | 原油 | 11.2 | | 化学品的物质形态 | 液体 | 47.8 | | 液化石油气 | 27.6 | | 气体 | 18.8 | | 固体 | 8.2 | | 事故来源 | 运输 | 34.2 | | 贮存 | 23.1 | | 工艺过程 | 33.0 | | 搬运 | 9.6 |   从事故来源来看，贮运事故高达57.3%；从化学品的物质形态看，液体事故高达47.8%。因此确定本项目最大可信事故为：液态原料桶发生泄漏事故。综合参考原料仓库储存液态危险物质，选择单桶毒储量最大、害性最大的环己胺为泄漏危险物质。  参照《建设项目环境风险评价技术导则》（HJ169-2018）附录E中常压单包容储罐泄露情况，泄漏孔径为10mm孔径的概率为1×10-4/a，10 min内储罐泄漏完概率为5×10-6/a。  本项目风险事故情形设定为：环己胺桶（25kg）在原料仓库搬运过程中不慎跌落，导致包装桶底部破损直径为10mm的小孔，10 min内桶内环己胺全部漏完。  表 7.5-1 本项目风险事故情况下设定一栏表   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 危险 单元 | 风险源 | 危险物质 | 风险 类型 | 影响途径 | 备注 | | 原料仓库 | 环己胺包装桶 | 环己胺 | 泄漏 | 大气：泄露后的环己胺在在原料仓库内无围堰处扩散形成厚度为0.001m，半径为3.03m的液池，挥发进入大气；  地表水：泄漏量的 1%经雨水管道流入雨水管网，经雨水排口进入附近小河；  地下水：泄漏量的 1‰泄漏物料经土壤下渗污染地下水。 |  |   2.5.4.2 源项分析  设计风险情形中，1桶（25kg）环己胺10min内全部漏完，经计算液体泄漏速率为0.0417kg/s。  根据《建设项目环境风险评价技术导则》（HJ 169-2018），泄漏液体的蒸发分为闪蒸蒸发、热量蒸发和质量蒸发三种，其蒸发总量为这三种蒸发之和。由于泄露时物料温度（常温）及环境温度（常温）均低于环己胺沸点，则环己胺泄漏时，闪蒸蒸发、热量蒸发均不会发生，本评价只考虑质量蒸发。  质量蒸发速度Q3按下式计算：    式中：Q3—质量蒸发速度，kg/s；  α,n—大气稳定度系数，取值为F稳定度下，n=0.3，α=5.285×10-3；  p—液体表面蒸气压，Pa，取值1170Pa（25℃）；  R—气体常数；J/mol·k，取值8.314 J/mol·k；  T0—环境温度，k，取值298.15k；  u—风速，m/s，取值1.5 m/s；  r—液池半径，m，取值3.03m（液池面积约28.84m2）；  M—物质摩尔量，kg/mol，取值0.09917 kg/mol。  表4.2-2 液池蒸发模式参数   |  |  |  | | --- | --- | --- | | 稳定度条件 | n | α | | 不稳定(A,B) | 0.2 | 3.846×10-3 | | 中性(D) | 0.25 | 4.685×10-3 | | 稳定(E,F) | 0.3 | 5.285×10-3 |   经计算，蒸发速度为0.0027kg/s。根据HJ 169-2018，蒸发时间可按15-30 min计，本次环评取值20min。  2.5.5 风险预测与评价  2.5.5.1 有毒有害物质在大气中的扩散  （1）预测模型  根据《建设项目环境风险评价技术导则》（HJ 169-2018）要求进行本次环评大气风险预测模型的选择。  T=2X/Ur  式中：X——事故发生地与计算点的距离，m，取值769m（最近敏感点为金源花苑）；Ur——10m高处风速，m/s，取值1.5 m/s。假设风速和风向在T时间段内保持不变。  经计算，T=1025s=17.1min<30min（排放时间），根据HJ 169-2018判断为连续排放。    式中：ρrel——排放物质进入大气的初始密度，kg/m3，取值867kg/m3；  ρa——环境空气密度，kg/m3，取值1.293 kg/m3；  Q——连续排放烟羽的排放速率，kg/s，取值0.000585 kg/s；  Drel——初始的烟团宽度，即源直径，取值2.7m；  Ur——10m高处风速，m/s，取值1.5 m/s。  经计算，环己烷泄漏后扩散气体理查德森数Ri=0.0786<1/6，根据HJ169-2018判断环己烷气体为轻质气体，本次评价选择AFTOX模型进行预测。  （2）预测范围与计算点  根据《建设项目环境风险评价技术导则》（HJ 169-2018），预测范围即预测物质浓度达到评价标准时的最大影响范围，经预测模型计算得到预测范围为110m。  计算点分特殊计算点和一般计算点。特殊计算点指大气环境敏感目标等关心点（本次环评选取 见表 7.2-1），一般计算点指下风向不同距离点。  （3）主要预测参数  表 主要预测参数   |  |  |  |  |  | | --- | --- | --- | --- | --- | | 序号 | 类型 | 项目 | 参数 | 备注 | | 1 | 事故源参数 | 泄露设备类型 | 环己胺原料桶 | - | | 操作参数 | 常温常压 | | 蒸发速率 | 0.0027kg/s | | 液池面积 | 28.84m2 | | 排放时间 | 20min | | 2 | 气象参数 | 稳定度 | F | 二级评价，需选取最不利气象条件进行后果预测 | | 风速 | 1.5 m/s | | 温度 | 25℃ | | 相对湿度 | 50% | | 3 | 大气毒性终点浓度值 | 毒性终点浓度-1/（mg/m3） | 120 | 取自HJ 169-2018附录H | | 毒性终点浓度-2/（mg/m3） | 35 | | 4 | 其他参数 | 测风处地表粗糙度 | 3cm | - | | 事故处地表粗糙度 | 3cm | | 事故所在地表类型 | 水泥地 | | 事故所在地表干湿度 | 干 | | 是否考虑地形 | - | | 地形数据精度/m | 90 |   （4）预测结果  表 下风向不同距离处有毒有害物质的最大浓度（最不利气象条件）   |  |  | | --- | --- | | 下风向距离 (m) | 预测浓度 (mg/m3) | | 10 | 1600.2 | | 60 | 98.327 | | 110 | 36.342 | | 160 | 19.536 | | 210 | 12.429 | | 260 | 8.7063 | | 310 | 6.4914 | | 360 | 5.0564 | | 410 | 4.0682 | | 460 | 3.3559 | | 510 | 2.8236 | | 610 | 2.0922 | | 710 | 1.6223 | | 810 | 1.3009 | | 910 | 1.0702 | | 1010 | 0.9855 | | 1110 | 0.076696 | | 1210 | 0.66364 | | 1310 | 0.58086 | | 1410 | 0.51031 | | 1510 | 0.46574 | | 1610 | 0.42756 | | 1710 | 0.39454 | | 1810 | 0.3657 | | 1910 | 0.34038 | | 2010 | 0.31797 | | 2110 | 0.29801 | | 2210 | 0.28015 | | 2310 | 0.26408 | | 2410 | 0.24955 | | 2510 | 0.23637 | | 2610 | 0.22435 | | 2710 | 0.21337 | | 2810 | 0.20329 | | 2910 | 0.19401 | | 3010 | 0.18545 | | 3110 | 0.17753 | | 3210 | 0.17018 | | 3310 | 0.16335 | | 3410 | 0.15698 | | 3510 | 0.15103 | | 3610 | 0.14547 | | 3710 | 0.14025 | | 3810 | 0.13536 | | 3910 | 0.13075 | | 4010 | 0.12641 | | 4110 | 0.12232 | | 4210 | 0.11845 | | 4310 | 0.11479 | | 4410 | 0.11133 | | 4510 | 0.10804 | | 4610 | 0.10492 | | 4710 | 0.10195 | | 4810 | 0.099129 | | 4910 | 0.096439 |   环己胺泄露时预测浓度达到不同毒性终点浓度的最大影响范围  表 最近关心点的有毒有害物质浓度随时间变化情况   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 序号 | 敏感点 | 浓度（mg/m3） | | | | 超标时刻（min） | | | 5min | 10min | 15min | 20min | 1级 | 2级 | | 1 | 金源花苑 | 0 | 0 | 0 | 0 | - | - | | 2 | 狮子桥村 | 0 | 0 | 0.0359 | 0.0359 | - | - | | 3 | 南通高新区职工宿舍 | 0 | 0 | 0 | 0 | - | - |     图 最近关心点的有毒有害物质浓度随时间变化情况  预测结果表明，环己胺泄露后本项目最近关心点的最大预测浓度较低，未达到大气毒性终点浓度值2级；据此可推测其他关心点最大预测浓度均低于大气毒性终点浓度值2级，在最大预测浓度下暴露1h一般不会对人体造成不可逆的伤害，或出现的症状一般不会损伤该个体采取有效防护措施的能力。因此本项目不属于存在极高大气环境风险的建设项目，本次评价不开展关心点概率分析。  2.5.5.2 有毒有害物质在地表水、地下水环境中的运移扩散  （1）地表水  本项目地表水环境风险评价等级为三级，仅需应定性分析说明地表水环境影响后果。  发生事故时，有害物质可以通过雨水管网进入附近河流，进而影响周边水环境。通过及时切断雨水排放口阀门，将受污染雨水引入事故池暂存，待事故结束后，对事故池内废水进行检测分析，根据水质情况拟定相应处理、处置措施，可有效防止污染物扩散到周围水体，减小对周边地表水环境的影响。  （2）地下水  本项目地下水风险评价等级为三级，根据导则要求，采用解析法进行地下水影响分析。  厂区潜水环境影响预测采用《环境影响评价技术导则-地下水环境》（HJ610-2016）推荐的一维稳定流动一维水动力弥散问题，概化条件为一维半无限长多孔介质柱体，一端为定浓度边界。其解析解为：    式中：x—预测点距污染源强的距离，m；  t—预测时间，d；  C—t 时刻x 处的污染物浓度，mg/L；  C0—地下水污染源强浓度，mg/L；  u—水流速度，m/d；  DL—纵向弥散系数，m2/d；  erfc ( )—余误差函数。  计算参数根据含水层中砂砾石颗粒大小、颗粒均匀度和排列情况类比取得的水文地质参数，如表所示。  表5.4-1 地下水含水层参数   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | |  | 渗透系数（m/d） | m指数 | 弥散度 | 水力坡度（‰） | 孔隙度 | | 项目建设区含水层 | 0.2678 | 1.07 | 16.3 | 1.5 | 0.475 |   表5.4-2 含水层弥散度类比取值表   |  |  |  |  | | --- | --- | --- | --- | | 粒径变化范围（mm） | 均匀度系数 | m数 | 弥散度 | | 0.4-.07 | 1.55 | 1.09 | 3.96 | | 0.5-1.5 | 1.85 | 1.1 | 5.78 | | 1-2 | 1.6 | 1.1 | 8.8 | | 2-3 | 1.3 | 1.09 | 13.0 | | 5-7 | 1.3 | 1.09 | 16.7 | | 0.5-2 | 2 | 1.08 | 3.11 | | 0.2-5 | 5 | 1.08 | 8.3 | | 0.1-10 | 10 | 1.07 | 16.3 | | 0.05-20 | 20 | 1.07 | 70.7 |   地下水实际流速和弥散系数的确定按下列方法取得：  U＝K×I/n  DL＝aL×Um  其中：U—地下水实际流速，m/d；  K—渗透系数，m/d；  I—水力坡度；  n—孔隙度；  DL—纵向弥散系数，m2/d；  aL—纵向弥散度；  m—指数。  假设雨水管网破裂，进入雨水管网的环己胺渗入土壤。选择本项目典型的特征污染物环己胺作为预测因子，污染物源强考虑最不利情况，取环己胺浓度最大值，计算参数结果如下。  表5.4-3 计算参数一览表   |  |  |  |  | | --- | --- | --- | --- | |  | 地下水实际流速（m/d） | 弥散系数D（m2/d） | 环己胺源强C0（mg/L） | | 项目建设区含水层 | 8.46×10-4 | 0.0138 | 132[1] |  注：[1]通州区年降水量1325.9mm，年降水128天，平均20min降水0.14mm（平均日降水量10.36mm），厂区内集水面积约为0.1352hm2，计算得到20min雨水量为189.28L；由土壤渗透入地下水环己胺量为0.025kg（25kg×0.001），据此得到环己胺源强。 预测时长为100d、1000d。  表5.4-4 环己胺运移范围预测结果表（mg/L）   |  |  |  | | --- | --- | --- | | 距离（m） | 100d | 1000d | | 0 | 0.1927001 | 0.0505063 | | 0.05 | 26.7108 | 2.774322 | | 0.1 | 0.4767594 | 3.804203 | | 0.15 | 0.0008005018 | 3.066902 | | 0.2 | 1.321054E-07 | 1.716165 | | 0.25 | 2.19269E-12 | 0.7025892 | | 0.3 | 0 | 0.215495 | | 0.35 | 0 | 0.0501618 | | 0.4 | 0 | 0.008932053 | | 0.45 | 0 | 0.001223157 | | 0.5 | 0 | 0.0001293081 | | 0.55 | 0 | 1.058391E-05 | | 0.6 | 0 | 6.722802E-07 | | 0.65 | 0 | 3.320288E-08 | | 0.7 | 0 | 1.249223E-09 | | 0.75 | 0 | 4.110601E-11 | | 0.8 | 0 | 9.714451E-13 | | 0.85 | 0 | 2.775558E-14 | | 0.9 | 0 | 0 | | 0.95 | 0 | 0 | | 1.0 | 0 | 0 |   本次评价无法获得环己胺终点浓度，直接根据预测结果分析。从表中可以看出，环己胺100 天扩散到0.25米，1000 天将扩散到0.85 米。项目拟建地周边居民生活用水已由自来水管网供给，不属于本项目的地下水保护目标及敏感点，污染物扩散不会对其产生明显影响；项目建设区处在贫水区渗透性能较差，弥散系数较小，水力坡度较缓；场地地下水初见水位标高为2.60m左右，地下水稳定水位在标高为2.80m左右，因此，若COD 一旦发生泄漏且无防渗措施下渗，1000天内对周围地下水可造成一定影响，但通过切实落实地下水污染防治措施后，其影响是可以接受的。  2.5.6 环境风险管理  2.5.6.1 环境风险防范措施  根据风险分析，提出防止风险事故的措施对策，其目的在于保证系统运行的安全性，降低事故发生的概率。  （1）设备、建筑和装备方面安全防范措施  所有管道系统均按照有关标准良好设计、制作及安装。项目较高的建筑物和设备，设置屋顶面避雷装置。库区设计符合《建筑物防雷设计规范》（GB50057-94）的规定。  （2）电气、电讯安全防范措施  仪表负荷、消防报警、关键设备等采用不间断电源装置供电，事故照明采用带铬镍电池应急灯照明。爆炸和火灾危险环境内可能产生静电的物体，均采用工业静电接地措施。构筑物设有防直雷击、防雷电感应、防雷电浸入的设施。  （3）消防及火灾报警系统  在库区内设置手动火灾报警器；库区消防水采用稳定高压消防供水系统。  （4）物料运输风险防范措施  公司储存品种涉及危险化学品，危险化学品运输过程中供货方及购货方委托有资质单位运输，降低运输过程中的风险。  （5）物料贮存风险防范措施  由于公司存储化学品具有易燃性，在贮存过程中应小心谨慎，熟知每种物料的性质和贮存注意事项。当发生化学品大量泄漏时，应迅速围堵、收集，防止物料泄漏经排水管网直接或间接进入地表水体，引起地表水污染。  （6）消防尾水收集处置防范措施  建设单位需新建应急池，当事故发生后，消防尾水由应急池收集，事故结束后排入污水处理站处理，达标后排入污水管网。严禁厂内废水处理站超负荷运行，导致出水水质超标。  根据《事故状态下水体污染的预防与控制技术要求》（Q/SY1190-2013）计算本项目所需事故应急池容积。事故储存设施总有效容积：  V总=（V1+V2-V3）max+V4+V5  V1——收集系统范围内发生事故的一个罐组或一套装置的物料量；本报告取搅拌系统最大容积5m3；  V2——发生事故的储罐或装置的消防水量，m3；  V2=∑Q消t消  Q消——发生事故的储罐或装置的同时使用的消防设施给水流量，m3/h，取25L/s；  t消——消防设施对应的设计消防历时，h，取1h；  V3——发生事故时可以转输到其他储存或处理设施的物料量，m3；取0；  V4——发生事故时仍必须进入该收集系统的生产废水量，m3；取0；  V5——发生事故时可能进入该收集系统的降雨量，m3；  V5=10qF  q——降雨强度，mm；按平均日降雨量；  q=qa/n  qa——年平均降雨量，mm，根据通州区多年气象资料取1325.9mm；  n——年平均降雨日数，根据通州区多年气象资料取128。  F——必须进入事故废水收集系统的雨水汇水面积，0.1352ha。  在现有储存设施不能满足事故排水储存容量要求时，应设置事故池。  V事故池=V总-V现有  V现有——用于储存事故排水的现有储存设施的总有效容积。  经计算V2=90m3；V5=14.01m3，事故储存设施总有效容积V总=109.01m3。  因此，本项目可设容积为110m3事故池，能够满足事故废水收集要求。  （7）危险废物泄露预防措施  项目仓储过程中产生的水处理污泥等均为危险废物。库区内设置临时堆场，危险废物暂存需严格按照《危险废物贮存污染控制标准》（GB 18597-2001）实施，储存场所防渗、溢流收集、围堰等相关措施，并设置危险废物标识和警示牌。项目在危险废物的转移时，按有关规定签订危险废物转移单，并需得到有关环保行政主管部门的批准。  2.5.6.2 突发环境事件应急预案  （1）适用范围  本预案适用于南通赛可特范围内发生的突发环境事件如化学品泄露、燃烧或爆炸次生环境事件等的应急处理，主要包括预警、处置、监测等工作内容。本预案不适用于生物安全事故和辐射安全事故风险。  （2）环境事件分类与分级  本公司突发环境事件按照环境污染事件严重性、紧急程度、危害程度和控制事态的能力分为一般、较大和重大突发环境事件三个级别，分别根据对应的应急响应程序分级处理。  重大环境事件（I级）：因环境污染事故影响超出公司范围，临近的企业受到影响，或者产生连锁反应，影响公司厂区之外的周围地区。  较大环境事件（Ⅱ级）：因环境污染事故的有害影响超出车间范围，但局限在公司的界区之内并且可被遏制和控制在公司区域内。  一般环境事件（Ⅲ级）：突发环境事件引发事故影响车间生产，事故的有害影响局限在各车间之内，并且可被现场的操作者遏制和控制在公司局部区域内。  （3）组织机构与职责  南通赛可特应急组织机构主要分为：应急指挥组、应急处置组、救护疏散组、后勤保障组、通信警戒组、事故处理组。  应急指挥组主要职责：组织制定突发性环境事件应急预案；组建突发性环境事件应急救援队伍；检查、督促做好突发性环境事件的预防措施和应急救援的准备工作，督促、协助有关部门及时消除有毒有害物质的跑、冒、滴、漏；负责组织本应急预案的审批与更新（企业应急指挥部负责审定企业内部各级应急预案）；批准本应急预案的启动与终止；协调突发性环境事件现场有关工作；负责应急状态下请求外部救援力量的决策；接受上级应急救援指挥机构的指令和调动，协助事件处理，配合有关部门对环境进行修复、事件调查、经验教训总结；  应急处置组主要职责：负责修复事故破坏的设备、设施，防止事故进一步扩大；负责修复用电设施，提供抢险临时用电，保证通讯、交通设施正常使用；负责火灾的初期扑救、有毒化学物质的洗消和处理；采取有效措施尽可能控制危险源免受威胁，防止有毒物质扩散；发生事故后，立刻关闭雨水闸控，防止事故水外排到雨水管网中。  救护疏散组主要职责：在现场设立隔离区域和疏散区域，实行警戒和交通管制；负责现场及周围人员的抢救、撤离、疏散和物资器材转移工作及所需灭火器材装备及其他抢救物资的供给；负责组织救护车辆及医务人员、器材进入指定地点。  通信警戒组主要职责：及时正确报警、接警；负责布置隔离区的安全警戒线，保证现场井然有序；负责配合现场总指挥向各小组传达救援指令和横向联络；必要时实行交通管制，保证现场及厂区道路畅通；加强保卫工作，禁止无关人员、车辆通行，协助疏散人员；负责清点离开事故区域的人数，并进行登记；按照总指挥要求负责与社会、周边单位各救援机构联络；保护事故现场物证、数据。  后勤保障组主要职责：为救援行动提供救援物质保障（包括救援应急药品、救援应急防护器材和指挥通讯器材）；在救援过程中，负责救援物质的发放、保管等工作；救援结束后，寻找、集中、清点、整理救援物质。  事故处置组主要职责：协助医疗部门组织伤员的医疗救治；寻找、集中、清点、营救事故受伤人员；负责伤亡人员的抚恤、安置及其家属的安抚、接待；事故处理组召开事故现场会和分析会，尽快查明事故原因；符合协助应急监测相关事宜。  （4）监控和预警  1）污染源监控  消防火灾报警系统：公司在生产车间、危险品仓库等危险场所均设有火灾手动报警按钮，人员巡查时发现泄漏引起火灾后，立即击碎附近报警按钮玻璃，其报警信号立即传送到消防泵房，消防泵立即自动启动确保消防管网水源、压力用于紧急灭火。  废水、废气定期检测：化验室负责定期委外对废水、废气进行检测，确保达标排放。废水系统设置COD在线检测仪、电子流量计等监控设施，实现实时检测功能。  消防灭火系统：在易燃易爆场所按标准配备灭火器材、消防器材，并定期检查，确保各器材正常使用。  2）发布预警的条件  在危险源排查时发现存在可能造成人员伤亡、财产损失等严重后果的重大危险源时，应及时预警；收到的环境信息证明突发环境事件即将发生或者发生的可能性增大时，立即进入预警状态，并启动突发环境事件应急预案。  3）预警分级  按照突发事件严重性、紧急程度和可能波及的范围，突发环境事件的预警分为三级，预警级别由低到高，依次为黄色三级预警（一般事故）、橙色二级预警（较大事故）、红色一级预警（重大事故）。根据事态的发展情况和采取措施的效果，预警颜色可以升级、降级或解除。  红色一级（Ⅰ）预警：设备、设施严重故障，已发生重大火灾或大面积的泄漏事件，泄漏物料已流入周边水域或影响到周边企业事业单位居民等，迅速启动应急预案组织自救并迅速向如东县环保局等上级有关部门报告，请求外部救援。  橙色二级（Ⅱ）预警：已发生泄漏、火灾事件，造成人员轻伤，影响范围较小，企业在短时间内可采取相应的措施，组织自救，未对周边企事业单位居民产生影响。  黄色三级（Ⅲ）预警：设备、设施发生故障；现场发现存在泄漏或火灾迹象；少量泄漏事故，不会对厂区人员及外界环境造成影响，可依靠企业自身能力处理。  4）发布预警的方式、方法  发现事故后，现场人员或部门负责人可通过公司电话、手机、广播、鸣笛等形式发布预警。在确认进入预警状态之后，根据预警相应级别环境应急行动小组按照相关程序可采取以下行动：立即启动相应事件的应急预案；按照环境污染事故发布预警的等级，向全公司以及附近居民发布预警等级。  （5）应急响应  表7.1-1 分级响应机制、具体表现及应急响应程序   |  |  |  | | --- | --- | --- | | 分机响应机制 | 具体表现 | 应急响应程序 | | 班组级应急响应 | 环境影响轻微或仅限于班组内，依靠班组力量就可以解决的突发环境事件 | 由现场人员或班组长负责执行应急工作，并通报部门负责人或值班领导 | | 部门级应急响应 | 环境影响较大或仅限于部门内，依靠班组力量无法解决，必须依靠整个部门的力量来解决的突发环境事件 | 由现场人员或班组长报告部门负责人或值班领导，并负责执行应级工作，然后报告公司主管，必要时请求支援，并暂代指挥权直到公司主管接管。 | | 公司级应急响应 | 环境影响较为严重，公司须动员公司人员或请求库外支援，才得以控制之环境事件 | 公司主管指挥应急工作，并启动公司级应急组织。必要时请求库外支援协助救援，并报告有关主管部门及通知库外相关单位及时撤离。 | | 库外应急响应 | 公司内之灾害已扩及库外，已对库外造成严重影响 | 后续的救援工作及应急组织运作，由地方政府指挥，环保、安监、公安及其他单位协助民众疏散。 |   图7.1-1 应急响应及处置流程图  （6）应急保障  ①经费及其他保障  经费保障：突发环境事件应急所需经费列入年度财政预算。突发环境事件应急保障资金的支出渠道以及拨付和使用的治理等，按现行规定执行；在紧急情况下，财政部门应当急事急办，特事特办，确保应急资金及时到位。  紧急避难场所：应急指挥部门对紧急疏散人员要妥善安置，并确保疏散人员生活所需。  （3）应急信息：提供现场指挥必备的现场平面布置图和周围地区图、工艺流程图等。  ②应急物资装备保障  应急物资、器材、设施的供应是根据装置的要求，向应急指挥部申请，由供应部门提供。公司环保部门发行有对应急装备的月点检表，各使用部门每月盘点记录于点检表内交至安环部门，再经由安环部门汇总及时更新、补缺。应急设施及物资等应急物资按规定放在适当的位置，并作了明显的标识；在事故发生紧急情况下，可以用来在厂区内进行堵漏等。  ③应急队伍保障  应加强环境应急队伍的建设，培训一支常备不懈，熟悉环境应急知识，充分掌握公司突发环境事件处置措施的预备应急力量，保证在处置突发环境事件中能迅速参与并完成抢救、排险、消毒、监测等现场处置工作，并形成应急网络，确保在事件发生时，能迅速控制污染、减少危害，确保环境和公众安全。  ④通信与信息保障  应急指挥组及各成员必须24小时开通个人手机，配备必要的有线、无线通信器材，值班电话保持24小时通畅，节假日必须安排人员值班。要充分发挥信息网络系统的作用，确保应急时能够统一调动有关人员、物资迅速到位。  ⑤技术保障  建立应急专家组，确保在事件发生后专家组能迅速到位，为指挥决策提供服务；建立应急救援物资和设备数据库，包括应急救援物资和设备名称、数量、型号大小、存放地点、负责人及调动方式；建立公司风险源相关危险性物质的数据库，包括物质名称、存放量、存放方式、存放地点以及其物理化学特性；存档公司环境应急预案，对公司内潜在事故危险的性质和规模及影响范围有充分了解，并建立公司内主要风险源示意图，图中应注明：存放大量危险物质的地方、救援设备存放点、消防系统、附近水源、污水管道、排水系统、重大危险源的进出口道路状况、安全区、重大危险源的位置与周边地区的关系；不定时更新突发环境事件应急组织机构各组成员联络方式，地方政府和应急服务机构的地址和联系方式，应急救援与事故处理法规标准手册等。  ⑥预测预警支持系统  环保部门按照早发现、早报告、早处置的原则，开展对全厂环境及污染源信息的收集、综合分析和风险评估工作，包括对发生在厂外有可能对我厂造成环境影响事件信息的收集与传报。  各突发环境事件成员单位负责各自职责范围内的可能造成环境事件或环境事件处理所需信息的监测，并做好相关信息的接收、报告、处理和统计分析。  （7）善后处置  ①污染物处理  本着科学处理、尽可能减少对周围环境污染的原则对因发生事故产生的污染物进行处理。对于有毒有害的污染物，禁止直接排入下水道中，采用合适器具将污染物收集或排入废水处理站，集中进行处理。  ②事故后果影响消除  应急结束后，事故发生部门负责善后事宜，包括事故现场清理、人员重新调配、设备调试等工作。出现人员伤亡的，所属部门立即安排人员进行护理工作，负责联系治疗资金的来源。  ③仓储秩序恢复  确认事故现场无隐患后，由安全环保科协助事故发生部门调整人员，调试设备，尽快恢复仓储运行，尽可能的降低事故损失。  ④善后赔偿  财产损失由财务科进行统计，事故发生部门做好配合工作。发生人员伤亡的，由公司组织人员对受伤人员及其家属进行安抚，商谈救治期间的费用问题。安全环保科准备工伤认定材料，按照工伤上报程序进行上报。  ⑤抢险过程和应急救援能力评估及应急预案的修订  由应急救援指挥部组织相关人员，召开专题会议，分析事故具体原因，拿出整改意见和处理方案，评议在抢险过程中的成绩与不足，对应急救援能力进行评估，进一步完善应急预案。  ⑥保险  公司给每位员工均办理了各种保险包括医疗、养老、工伤、失业等，另外还给所有职工办理了安全责任险等，确保公司员工及应急救援队员的人身安全及相应的保障。  （8）预案管理与演练  ①演练准备内容  由应急组织机构组织综合演练，主要针对泄漏、火灾、水、电中断等为主要内容，每年演练1次。  ②演练方式  组织指挥演练：由应急组织机构的领导和各组负责人分别按应急救援预案要求，以组织指挥的形式组织实施应急救援任务的演练。  单项演练：由各组各自开展的应急救援任务重的单项科目的演练。  综合演练：由应急组织机构按应急救援预案要求，开展的全面演练。  ③演练内容：装置、设备泄漏的应急处置抢险；通信及报警信号的联络；急救及医疗；消毒及洗消处理；防护指导，包括专业人员的个人及员工的自我防护；各种标志、设备警戒范围及人员控制；库区内交通控制及管理；泄漏污染区域内人员的疏散撤离及人员清查；向上级报告情况及向友邻单位通报情况、事故的善后工作。  ④演练方式、范围和频次：组织指挥演练由应急组织机构副总指挥每年组织一次；单项演练由安全环保科每年组织一次；综合演练由应急组织机构组织每年组织一次。  ⑤演练评价、总结和追踪  每次应急演练后及时进行评价和总结，检验制定的应急预案的有效性、应急准备的完善性、应急影响能力的适应性和应急人员的协同性，经完善总结实现应急预案的持续改进。  ⑥演练评估与总结  公司级应急预案的演练效果由突发环境事件应急指挥部负责进行评估和总结；部门级应急预案的演练效果由应急协调组负责进行评估和总结。  应急预案应根据实际，适时组织各专业队伍进行演练。公司和各单位可结合仓储情况，在确保安全、无环境风险的情况下，组织演练，以检验和测试应急救援指挥中心的应急能力和应急预案的可行性，提高实际技能及熟练程度，通过演练后的评价、总结，纠正存在的问题，从而不断提高预案质量。  （9）与通州区开发区应急预案及应急措施的衔接  ①应急组织机构、人员的衔接  当发生风险事故时，应急指挥部应及时承担起与当地区域或各职能管理部门的应急指挥机构的联系工作，及时将事故发生情况及最新进展向南通市经济开发区环境保护局汇报。  ②预案分级响应的衔接  发生一级响应时，库区内无法解决时，向当地南通市经济开发区环境保护局请求救援。  ③应急救援保障的衔接  单位互助体系：建设单位和周边企事业建立良好的应急互助关系， 在重大事故发生后，相互支援。  公共援助力量：本单位还可以联系南通经济开发区及南通市消防队、医院、公安、交通、安监局以及各相关职能部门，请求救援力量、设备的支持。  ④应急培训计划的衔接  本单位在开展应急培训计划的同时，还应积极配合经济开发区开展的应急培训计划，在发生风险事故时，及时与开发区应急组织取得联系。  ⑤公众教育的衔接  本单位对附近周边企业职工、公众开展教育、培训时，应加强与周边单位的交流，如发生事故，可更好的疏散、防护污染。  ⑥污染治理措施的衔接  当风险事故废水超过本单位能够处理范围后，应及时向相关单位请求援助，帮助收集事故废水，以免风险事故发生扩大。  ⑦消防及火灾报警系统的衔接  当发生火灾事故超过本单位能够处理范围，中控室应及时采用电话报警。  ⑧应急救援物资的衔接  当本单位应急救援物资不能满足事故现场需求时，可在开发区应应急中心的协调下向邻近企事业请求援助，以免风险事故的扩大，同时应服从开发区应急中心的调度，对其他单位援助请求进行帮带。  2.5.8 评价结论  全厂涉及的主要危险化学品有异丙醇、N,N-二甲基甲酰胺、氨水、乙酸、正己烷、甲醇、硫酸、甲醛、盐酸、环己胺等。  环评要求，企业须加强管理，采取必要的风险事故防范措施，杜绝物料燃爆事故发生；同时若一旦发生事故，则应立即启动应急预案，判断风向、及时对下风向的敏感点发布警报，并组织附近群众在短时间内按拟定的逃生路线进行撤离和疏散。  项目制定了较为周全的风险事故防范措施和事故应急预案。此外，企业今后需要进一步加强管理和监控，将环境风险控制在可接受水平之内。项目在发生风 险事故后如能立即启动厂区事故应急预案，确保事故不扩大，将不会对建设地区 环境造成较大危险。  本项目环境风险评价认为，项目存在一定风险，但项目的风险处于环境可接受的水平，项目各种风险事故均不会对岳池县城及周边住户等社会关注点造成影 响，项目的风险防范措施可行。综合分析，本项目从环境风险角度可行。  **3 本项目以新带老措施**  （1）现有生产设备投料口均设置集气罩收集废气，通过管道连接至新增布袋除尘器及喷淋塔，处理后尾气由新增排气筒排放，尽量减少废气的无组织排放。  （2）本项目在厂区按要求设置初期雨水池（50m3）及应急池（110m3）。 |

**表八 建设项目拟采取的防治措施及预期治理效果**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **内容**  **类型** | **排放源**  **（编号）** | **污染物名称** | | **防治措施** | **预期治理效果** |
| 大气污染物 | 有组织排放 | 颗粒物、甲醛、非甲烷总烃、氯化氢、硫酸雾、氮氧化物、氨气 | | 集气罩+布袋除尘+喷淋吸收+20m高排气筒 | 达标排放，对周边大气环境影响较小 |
| 无组织排放 | 卫生防护距离100m |
| 水污染物 | 生产废水 | PH | | 污水处理站预处理达标后接管至益民污水处理公司处理 | 达标排放，对周边水环境影响较小 |
| COD | |
| SS | |
| NH3-N | |
| TP | |
| Cu | |
| Sn | |
| 生活污水 | COD | | 化粪池预处理达标后接管至益民污水处理公司处理 |
| SS | |
| NH3-N | |
| TP | |
| 噪声 | 生产设备等 | 噪声 | | 选用低噪声设备、合理布局、隔声、减震 | 达标，不产生扰民影响 |
| 固废 | 危险固废 | 滤芯 | | 有资质单位处置 | 零排放 |
| 废包装桶/袋 | |
| 污泥 | |
| 一般固废 | 废活性炭 | | 出售给回收单位 |
| 废石英砂 | | 出售给回收单位 |
| 生活垃圾 | | 环卫清运 |
| 电离辐射和  电磁辐射 | - | | | - | - |
| 其他 | - | | - | - | - |
| **主要生态影响：**  拟建项目对周围生态环境基本无影响。 | | | | | |
| 1 建设项目“三同时”验收一览表  本项目总投资1000万元，其中环保投资为70万元，占总投资额的7%。  表8-1 建设项目“三同时”项目及投资估算表   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **类别** | **环保设施名称** | **设计规模** | **数量** | **环保投资(万元)** | **比例（%）** | | 废水 | 化粪池 | 10m3 | 1个 | 0（依托原有） | 0 | | 污水处理站 | 18t/d | 1套 | 0（依托原有） | 0 | | 废气 | 收集系统 | - | 2套 | 24 | 34.3 | | 布袋除尘装置 | - | 2套 | 20 | 28.6 | | 喷淋系统 | - | 2套 | 20 | 28.6 | | 噪声 | 隔声、消声防治措施 | 降噪量≥20dB(A) | - | 2 | 2.8 | | 固废 | 危废堆场 | 50m2 | 1个 | 4 | 5.7 | | 排污口设置 | 雨水排口 | - | 1个 | 0（依托原有） | 0 | | 污水排口 | - | 1个 | 0（依托原有） | 0 | | 清污分流  管网建设 | 污水管网 | - | 1套 | 0（依托原有） | 0 | | 雨水管网 | - | 1套 | 0（依托原有） | 0 | | 合计 | - | - | - | 70 | 100 |   表8-2 环保措施“三同时”验收一览表   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **项目名称** | | | **南通赛可特电子有限公司PCB、封装基板及芯片专用材料扩改项目** | | | | | | **类别** | | **污染源** | **污染物** | **治理措施** | **处理效果、**  **执行标准**  **或拟达要求** | **环保投资（万元）** | **完成**  **时间** | | 营运期 | 废气 | 1#排气筒 | 颗粒物、甲醛、非甲烷总烃、氯化氢、硫酸雾、氮氧化物、氨气 | 集气罩收集+布袋除尘+喷淋吸收+20m高排气筒 | 收集率95%，颗粒物去除率99%，其他废气去除率90%，甲醛、非甲烷总烃、氨气参照执行《江苏省化学工业挥发性有机物排放标准》（DB32/3151-2016）中的排放限值，其他执行《大气污染物综合排放标准》（GB16297-1996）中标准 | 64 | 与该项目“同时设计、同时施工、同时投入  运行 | | 2#排气筒 | | 1#厂房 | 卫生防护距离 | 厂界内无超标点 | - | | 2#厂房 | | 3#厂房 | | 4#厂房 | | 废水 | 生产废水 | COD、NH3-N、SS、TP、Cu、Sn等 | 污水处理站预处理达标后接管至益民污水处理公司 | 水质满足接管要求 | 0 | | 生活污水 | COD、NH3-N、SS、TP等 | 化粪池预处理达标后接管至益民污水处理公司 | 水质满足接管要求 | 0 | | 噪声 | 车间排放 | 噪声 | 厂界隔声、合理布局、距离衰减等综合防治措施 | 执行《工业企业厂界环境噪声排放标准》（GB12348-2008）2类标准 | 2 | | 固废 | 生产废物 | 危险固废 | 委托有资质单位处理 | 零排放 | 4 | | 绿化 | | | - | | - | - | | 环境管理 | | | 专职人员管理 | | | - | | 清污分流、排污口规范化设置 | | | 清污分流、排污口规范化设置 | | | - | | “以新带老”措施 | | | 无 | | | - | | 总量平衡具体方案 | | | VOCs、颗粒物、氮氧化物总量在通州区范围内平衡；废水接管至益民污水处理公司，在益民污水处理公司范围内平衡；工业固体废物排放量为零。 | | | - | | 区域解决方案 | | | 无 | | | - | | 卫生防护距离设置 | | | 分别以1#车间、2#车间、3#车间、4#车间为边界设置100米卫生防护距离，该范围内无敏感目标 | | | - | | 环保投资合计 | | | | | | 70 |   2 排污口规范化设置  排污口应根据省环保厅《江苏省排污口设置及规范化整治管理办法》的规定，进行规范化设置：  废水：厂区排水体制按“雨污分流”制排水体系实施，雨水、废水排口分别依托现有排口，雨水通过下水道排入通甲河，生活污水经化粪池预处理，与污水处理站预处理达标的生产废水后接管至益民污水处理公司。  废气：废气排气筒高度为20米，设置采样平台，并在醒目处设置环境保护图形标志牌。  危险废物：设置专用堆放场，防止雨淋和地渗，并在醒目处设置标志牌。  3环境管理与监测计划  3.1 环境管理  （1）管理目的  保证工程各项环保措施的顺利落实，使工程建设对环境的不利影响得以减免，并保证工程区环保工作的长期胜利进行，以保持工程地区生态环境的良性发展。  （2）环境管理  在合同中明确各环保设施施工单位的环保责任，检查“三同时”的实施情况，保证各项环境保护措施的落实，防止和减轻工程施工对环境造成的污染和破坏。  3.2 环境监测计划  （1）监测目的  结合项目污染特点和项目区环境现状，本项目运营期环境监测重点是废气、废水和噪声，定期委托有资质单位进行监测，以便连续、系统地观测项目新建前后环境因子的变化及其对当地环境的影响，验证环境影响评价结论。  （2）监测计划  **表8-3 污染源监测计划一览表**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **类型** | **监测位置** | **监测项目** | **频次** | **备注** | | 废气 | 1#排气筒 | 颗粒物、氮氧化物、甲醛、非甲烷总烃、硫酸雾、氯化氢 | 半年一次 | 委托有资质的检测单位实施监测 | | 2#排气筒 | 颗粒物、氮氧化物、甲醛、非甲烷总烃、硫酸雾、氯化氢 | 半年一次 | | 无组织；厂界上风向设置1个点，下风向设置3个点 | 颗粒物、氮氧化物、甲醛、非甲烷总烃、硫酸雾、氯化氢 | 半年一次 | | 废水 | 排污口 | COD、SS、氨氮、总磷、总铜、总锡 | 半年一次 | | 噪声 | 厂界四周 | Leq(A) | 半年一次 |   **表8-4 应急监测**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **类型** | **监测位置** | **监测项目** | **频次** | **备注** | | 废气 | 厂界上风向设置1个点，下风向设置3个点 | 一氧化碳、氮氧化物、环己胺等 | - | 委托有资质的检测单位实施监测 | | 废水 | 附近小河 | COD、SS、氨氮、总磷、总铜、总锡、环己胺等 | - | | | | | | |

**表九 结论与建议**

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| **一、结论**  **1 项目概况**  南通赛可特投资2000万元，依托现有厂房对现有产品结构及配方进行调整，建设PCB、封装基板及芯片专用材料扩改项目，项目建成后总产能达13700t/a。  **2 政策相符性**  本项目行业类别为[C3985]电子专用材料制造，不属于《产业结构调整指导目录》（2011年本，2013年修正）及《江苏省工业和信息产业结构调整指导目录》（2012年本）中限制类、淘汰类以及落后产品，为允许类项目；属于《南通市工业结构调整指导目录》（通政办发〔2007〕14号）鼓励类“一、信息产业”中“24、电子专用材料、电子功能陶瓷材料制造”。符合国家及地方产业政策。  **3 规划相符性**  本项目位于南通高新技术开发区，建设地为工业用地，项目建设符合《南通市城市总体规划（2008-2030）》、《南通市通州区土地利用总体规划（2006-2030）》规划要求。 本项目距通吕运河约1200m，距离通吕运河（通州区）清水通道维护区二级管控区北侧约为700m，不属于通吕运河（通州区）清水通道维护区二级管控区范围，满足南通市生态红线的建设要求。 **4 环境质量状况**  大气环境质量状况：本项目所在区域环境空气SO2、NO2、PM10符合《环境空气质量标准》（GB3095-2012）二级标准，PM2.5、O3超标，为非达标区。根据大气环境质量达标规划，通过进一步控制二氧化硫排放量，减少氮氧化物的排放量，控制扬尘污染，机动车尾气污染防治等措施，大气环境质量状况可以得到进一步改善。  水环境质量状况：项目附近通吕运河水质达到《地表水环境质量标准》（GB3838-2002）Ⅲ类标准。  声环境质量现状：根据噪声监测结果，项目周边4个监测点昼、夜间声环境质量符合《声环境质量标准》（GB3096-2008）表1中3类标准。  **5 污染防治措施**  本项目针对污染物排放特点，采取了较有效的污染防治措施，各类污染物均能达标排放。  有组织废气：本项目投料、搅拌、包装等过程产生废气，由集气罩收集，依次经过布袋除尘、喷淋吸收装置，最后由20m高排气筒排放。收集效率为92%，净化效率为90%，处理后废气能达标排放。  无组织废气：厂界外废气浓度达相应排放限值。  本项目废水预处理后接管至益民污水处理有限公司集中处理，达标排放。  本项目噪声源为搅拌系统等，噪声源强≤80dB(A)，经车间内合理布局，车间厂房隔声及距离衰减后，噪声排放达《工业企业厂界环境噪声排放标准》表1中的3类标准。  本项目生活垃圾由环卫清运，其他一般固废向回收公司出售；危险固废委托资质单位定期处置。  **6 环境影响预测结果**  预测结果表明，本项目排放的废气污染物对周围大气环境质量影响不大，不会对周围环境造成不利影响；本项目排放的废气污染物在厂界无超标点，故无需设大气环境防护距离；卫生防护距离为分别以1#厂房、2#厂房、3#厂房、4#厂房为边界向外100m。根据现场踏勘，卫生防护距离内无敏感目标。  本项目废水预处理后接管至益民污水处理公司处理，不会改变区域水环境功能，对周边水体影响较小。  本项目噪声防治措施实施后，厂界噪声可达《工业企业厂界环境噪声排放标准》（GB12348-2008）表1中3类标准，对周围环境影响较小。  本项目生活垃圾由环卫清运，危险固废委托资质单位定期处置。  **7 总量控制**  废气排放量：VOCs 0.394296t/a、颗粒物0.055208t/a、氮氧化物0.001473 t/a，在南通市通州区范围内平衡。  废水排放量为4977.72t/a，各污染物接管量分别为COD 2.02748 t/a、氨氮0.18206 t/a，其排放总量纳入益民污水处理有限公司水总量中平衡。  固体废物妥善处置后排放总量为零。  **综上所述，南通赛可特电子有限公司PCB、封装基板及芯片专用材料扩改项目符合国家产业政策，选址符合规划，采取的污染防治措施可行，可以达标排放，预测结果表明，该项目对周围环境影响较小，从环保角度分析，本项目建设可行。**  **上述评价结果根据通赛可特提供资料得出，如果建设地点、产品方案、规模、工艺流程、设备布局和污染治理措施等发生变化，则须另行办理环保审批手续经有权部门审批后方可实施。**  **二、建议**  （1）认真执行环保“三同时”制度，污染防治措施委托有资质的单位设计、施工，确保各类污染物稳定达标排放。  （2）建立环保管理制度，认真落实本环评提出的各项措施。  （3）按《建设项目环境管理条例》的要求，工程竣工后在规定时间内办理环保竣工验收手续；同时环境风险防范措施纳入环保验收内容。 |

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| 预审意见：    公 章    经办人： 年 月 日 |
| 下一级环境保护行政主管部门审查意见：  公 章    经办人： 年 月 日 |
| 审批意见：    公 章    经 办 人： 年 月 日 |