淮安港涟水港区薛行作业区

国能涟水一期热电联产项目配套码头工程

**环境影响报告书**

（报批稿）

**建设单位：国家能源集团江苏电力有限公司**

**评价单位：南京普环电力科技有限公司**

**2024年11月**

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1. 概述
   1. 项目背景

涟水县位于自古以来就有“南船北马、九省通衢之地”美称的淮安市的东北部，地理位置优越，具有畅达的立体交通优势。涟水是全国唯一拥有“空铁水公”综合交通体系的县级城市，贯穿全境的盐河黄金水道通江达海。

涟水县水运优势明显、基础良好，境内的盐河是江苏干线航道网中的三级航道，目前已经达到三级标准，按照新的《江苏省干线航道网规划（2023—2035年）》，盐河航道等级规划调整为二级（2031—2035年）。涟水县“借港出海”“海港内移”的发展思路明确，与连云港等初步建立了良好的合作关系，以低成本、高效率、立体化的优势，让涟水成为重要的物流基地。根据《淮安港总体规划（2020—2035年）》，涟水港区薛行作业区主要服务于薛行工业园区内的企业。作业区定位以装卸、仓储和物流服务功能为主，并服务临港工业发展，主要承担矿建材料、企业原材料和产成品等物资运输。

随着涟水县经济的不断发展，供热需求也日益增加。但是目前的企业主要依靠分散小锅炉供热，带来环境污染和能源浪费的同时也影响了城市的景观和整体形象。国家能源集团江苏电力有限公司拟在江苏省涟水县朱码街道高台村建设国能涟水绿色智慧综合能源示范项目一期工程（简称：国能涟水一期热电联产项目），该项目拟建设3×165t/h高温超高压循环流化床锅炉＋2×20MW抽背汽轮发电机组及相关公辅设施，预留扩建条件。项目环境影响评价已于2022年7月1日获得江苏省生态环境厅“苏环审〔2022〕4号”文的批复，目前该项目尚未开工。

为了满足燃煤等进出及环保要求的同时也为了降低运输成本，国家能源集团江苏电力有限公司拟在规划厂区南侧，淮安市涟水县朱码闸下游约4.3km处盐河航道左岸，建设淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程。

本次“淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程”为国能涟水一期热电联产项目配套的码头新建项目，本码头使用岸线性质为企业岸线，仅服务于后方热电联产项目。本项目进行了建设项目备案信息登记（见附件2），项目代码为：2212-320000-04-01-268177。

现有热电项目环评中“设3个1000吨级散货泊位，分别为煤炭卸船泊位、煤炭清仓泊位和灰运出泊位，泊位长度为230m，设计通过能力为153万吨。”为了减少对盐河的生态环境影响，集约岸线资源利用，节约码头建设成本，建设单位决定对本码头向下游调整位置。2022年11月24日，建设单位向江苏省发展改革委提交了《国能涟水一期热电联产配套码头工程登记信息表变更的申请》（见附件11），对原登记信息表内的部分信息进行变更，变更后的码头方案为“拟布置2个1000吨级散货泊位，1个1000吨级待泊泊位，泊位总长220m，设计通过能力为118万吨”。于2023年3月完成调整后的码头位置及方案布置，并对本项目布置进行了优化。

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》中的有关规定，建设项目需进行环境影响评价。根据《建设项目环境影响评价分类管理名录》（2021年版），本项目属于“五十二、交通运输业、管道运输业 139干散货（含煤炭、矿石）、杂件、多用途、通用码头 单个泊位1000吨级及以上的内河港口类别”，需编制环境影响报告书。国家能源集团江苏电力有限公司委托南京普环电力科技有限公司对本项目进行环境影响评价。通过对项目所在地现场勘查，收集相关资料，对有关数据进行分析，依照《环境影响评价技术导则》及其他技术规范，编制完成了该项目的环境影响报告书，以供主管部门审查。

* 1. 项目特点

本项目主要的特点有：

1. 本项目为新建码头项目，装卸货种为煤炭，不涉及危化品；拟建设2个1000吨级煤炭卸船泊位，1个1000吨级待泊泊位。码头主要货种为煤炭，码头吞吐量2030年将达到112万吨。
2. 本项目为码头工程，采用挖入式港池布置，项目选址位于国能涟水一期热电联产项目厂区内（置换调整后的用地红线内，具体情况见3.2.8 工程用地情况），对照《江苏省国家级生态保护红线规划》（苏政发〔2018〕74号）和《江苏省生态空间管控区域规划》（苏政发〔2020〕1号），本项目评价范围内不涉及江苏省国家级生态保护红线、江苏省生态空间管控区域。对照涟水县（朱码街道）“三区三线”成果图，本项目不占用永久基本农田保护区和生态保护红线，用地预审置换的用地在城镇开发边界范围内，其余部分不在城镇开发边界范围内，目前本项目已取得建设用地许可证，本项目与当地土地利用总体规划无冲突。
3. 本环评对项目选址附近的空气、声环境质量等进行现状评价及影响分析。项目选址环境敏感度较低，结合码头布局以及周围敏感点分布情况，从地理位置上看，本项目选址合理。
   1. 关注的主要环境问题及环境影响

作为煤炭散货码头项目，本次评价主要关注的环境问题是建设项目建设期和运营期间主要污染物的产生、控制和环境风险。本项目关注的主要环境问题是：

（1）施工期对区域河流水质及水生生态环境的影响；

（2）施工期弃土、占地对陆生生态环境的影响；

（3）运营期产生的废气、废水、噪声、固废等影响；

（4）运营期装卸货种的环境影响是否能够满足环境功能区划的要求；

（5）施工期及运营期拟采取的环保措施是否能确保污染物稳定达标排放；

（6）环境风险是否达到环境可接受。

* 1. 环境影响评价工作过程

根据《建设项目环境影响评价技术导则 总纲》（HJ2.1-2016）等相关技术规范的要求，本项目环境影响评价的工作过程见图1.4-1。

![文本, 信件

描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAsoAAANgCAYAAAA1Zk58AAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQDshRN6AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATt1fuQAAIABJREFUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAAAAAAAAAAAAAAAAAMTCwAB+gocAAAAAAAAAAAAAAAAAAAAAAExPUQCFgXwAnqKpAAAAAAAAAAAAAAAAAAAAAACHi5EAFxcYANLQzwAAAAAAAAAAAPX19ADr6+oA6OjnACMjJQAAAAAAAAAAAAAAAAAAAAAA3d3bACMjJQAAAAAAAAAAAAAAAACsqqcAd3t/AHl1bwAAAAAAYWRoAAAAAADS0M8Aw8K/AAAAAAAAAAAAAAAAAOPi4QAAAAAAAAAAAAAAAAAjIyUAb3J2AAAAAAAAAAAAAAAAAAAAAADp6egAm5mVAI6SlwCfnJgAYWRoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6efnAAAAAADGxMIAOjw+AAAAAAA+QUMAIyMlAKyqpwA6PD4A8PDuAAAAAAC7wMcAAAAAAAAAAAAAAAAAAAAAAAAAAADd29sAAAAAACMjJQAAAAAAAAAAANjX1gCfnJgAAAAAAAAAAAAAAAAA0c/OADo8PgAAAAAAAAAAAPXz9ABHSUwAqaejAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAtrSyAIeLkQAAAAAAAAAAAAAAAACfnJgAAAAAAAAAAAAAAAAA8/PzACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3d3bAM/NzADy8vIAYWRMAAAAAAAAAAAAAAAAAAAAAACHi5EALykhAMXL0gAjIyUAAAAAAAAAAAAAAAAA7ezsAKyqpwANDQ0ADQ0OAD0+QQBhZGgAAAAAAAAAAAAAAAAA0tDPAJCOiAAAAAAAAAAAAAAAAAAAAAAAAAAAAGFkaAAAAAAAAAAAAAAAAADS0M8A4ODeAAAAAACfnJgAMzQ3AEdJMQAAAAAA9fX0ANHPzgA6PD4AAAAAAAAAAACwrqoAzczJANjX1gAAAAAAAAAAAAAAAAAAAAAAw8K/AAAAAADj4uEAHR4fAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAG9ydgAAAAAAAAAAAAAAAAAAAAAAAAAAAGFkaAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3ODoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABna28AUUxFAFdZXQBKTE4AIyMlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC4wMQAAAAAAAAAAAAAAAAALCwwAb3J2AAAAAAAAAAAAAAAAANLQzwDg4N4AYWRoAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAAAAAAAAAAAAAAAAAAAAAAAAAAAA5uXkANPS0QBHSUwAAAAAAAAAAAAAAAAAAAAAALm3tAAAAAAAR0lMAOnp6ADd29oAjpKXAAAAAAAAAAAAAAAAAH6ChwCfnJgAtLGvAG9ydgAAAAAAOjw+AC8xMgCTlwAACwsMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAADDwr8AFxcYAAAAAAAAAAAAv767AG9ydgAAAAAAtrSyAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAxsTCAN3c2gCOkpcAAAAAAGRnagBaVU8ApquxAAsLDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC2tLAAh4uRABcXGABitLAA0tDPAC4wMQDp6egA8PDuACMjJQAAAAAAAAAAAAAAAADEwsAAR0lMAAAAAAAAAAAAAAAAALm3tQBrb3IA3d3bACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADY19YAn5yYAOPi4QAAAAAAAAAAAMPCvwCHi5EAFxcYANLQzwDNzMkAYWRoANLQzwCQjogAAAAAAAAAAAAAAAAAAAAAAMPBvwB/gocA0tDPAC4wMQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0tDPAKCemgDIx8QAf4KHAEdJTADp6egAFxcYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABzd3sACwsMAAAAAAAjJSYAOjw+AI6SlwAAAAAAAAAAAAAAAAAjJSUAnqKpAJ+cmAAqLC4AJiYoAM3MyQBhZGgAAAAAAPX19AALCwwAAAAAAAAAAACTl50AqqekAGFkaAB5dnEASk1QAPT08wAjIyUAAAAAAAAAAAAAAAAAAAAAAIJ+eQAAAAAAu8DHAAsLDAAAAAAAk5edAAsLDAAAAAAAOjw+AAAAAADy8vIAAAAAADo8PgAAAAAAAAAAABcXGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD19fQAqqekAFZZXAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA2trYAEpMUAAAAAAAAAAAAAAAAAAAAABIZeSrAAAgAElEQVQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPX19ADNzMoAIiMkANDOzABHSUwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAsLDABvcnYAAAAAAAAAAAAAAAAAAAAAAOnp6ACbmZUAfoKHALm3tAAkJicAIyMlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD19fQAnJmWAA4ODgAAAAAAAAAAAMPCvwAAAAAAAAAAAAAAAAAAAAAAHR4fANHPzgA6PD4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB9eXUAg4eLAAsLDAAAAAAArrK5AFJORwBaXGAAd3t/ABcXGADp6egA6efnAPT08wAAAAAA6enoAODg3gAjIyUAwr+9AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3d3bAGRnagAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3d3bAJyalQCmq7EAAAAAAAAAAAALCwwAd3p/AFpVTwCOk5gAIyMlAAAAAAAAAAAAAAAAAAAAAADp6egAICAiABcXGAAAAAAAcHJ4AAsNDAAAAAAAiYWBAHt/hAAAAAAAAAAAAAAAAAAAAAAA2NfWAEdJTAAAAAAAAAAAAOnp6AAQEBAAIyMlAOnp6ADGxMIADAwNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKCkqAGFkaADp6egA6efnAPX19AAAAAAAFxcYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC2tLAAnqKpAPX19AC5t7QAR0lMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACMlJQAfICEAg4eLAAsLDAAAAAAAFxcYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAAAAAAAAAAAAFxcYAFRWWQAAAAAAAAAAAAAAAAAAAAAACwsMAAAAAACwrqsAmp+lAOnn5wAAAAAAAAAAAAAAAACqp6QAYWRoAAAAAAAAAAAAxMLAANPS0QD19fQAAAAAABcXGACZlZEA8PDwAI6SlwAAAAAA9fX0AI2JhQAdHh8AYWRoAAAAAAAAAAAAAAAAAAsLDAAAAAAAAAAAAAAAAAAAAAAA0dDNAEFCRQAAAAAAAAAAAAAAAADd3dsA9fP0APT08wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADy8vIAbWljAHt/hAALCwwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKOgnACmq7EAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAN3d2wCFgXwAam1xACQmJwBdWFIAube1AHd7fwAXFxgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB5dW8AjI+VAAAAAABHSUwAgn55ACosLgBUVlkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAG9ydgAAAAAAAAAAAAAAAAAAAAAAAAAAAGFkaAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA7IUTegQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADd3dsAAAAAAAAAAAAAAAAA6enoACIjJACDh4sACwsMAAAAAAAAAAAAOjw+AKGlqwDz8/MADAwMAAAAAAAXFxgAw8G/AGxoYgCusrkAqKWiAIeLkQAAAAAAAAAAAMPCvwAAAAAAAAAAAAAAAAAAAAAAtrSyAAAAAAAAAAAAIyMlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADn5+UAw8K/AAAAAAAAAAAAAAAAAOPi4QAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACsqqcA1tTSAJOXnQALCwwAAAAAAAAAAAAAAAAAOjw+AGptcQA7NS4AamxwAGdrbwAXFxgAAAAAAAAAAACZlZEAc3d7AAAAAAAAAAAALjAxAPX19ACCfnkAa29yACMjJQAAAAAA2NfWANLQzwDn5+UAh4R/AGRnagALCwwAAAAAAJmVkQBzd3sAAAAAABcXGADd29oAfXp0AOvr6gCfnJgAMzQ3AAAAAAAAAAAAAAAAAPT08wAAAAAAOjw+AAAAAAAAAAAAV1ldAAAAAAAXFxgAFxcYAJ+cmABwcngAAAAAAAAAAAAAAAAA8vLyAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKyqpwBwcngAAAAAAAsLDAAkJicAcm5pAAAAAACfnJgAJygqAAwMDQAAAAAAAAAAAAAAAADa2tgAVFZZAAsLDABvcnYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIJ+eQBCREcAFxcYAOnn5wAAAAAAAAAAAAAAAAAAAAAA9fX0AAsLDADp6egA2NfWAI6SlwAAAAAAAAAAAAAAAAB+gocAOjUtAAAAAADd3dsAlZGOAGBiZgAuMDEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYGBkAxNrAAF9bVQBqbHAAAAAAAAAAAAAAAAAAAAAAAM3MyQCHhH8AxcvSACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAkY6KAI6TmAALCwwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAn5yYANPS0QCHi5EAFxcYAAAAAAC7wMcAjYmFAC8pIQBaXGAAOjw+ACYmKAAXGRkAFxcYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6enoAHl1bwBXWV0AOjw+AAAAAAAAAAAAfoKHAJ+cmAA6NS0AcnV6ADEzNAAjIyUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCfnkANzk7AEdJTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAjIyUAAAAAAAAAAAAAAAAA0tDPAAsNDAAjIyUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALCwwAb3J2AAAAAAAAAAAAAAAAAAAAAAAAAAAAYWRoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADc4OgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALjAxAN3d2wAAAAAAAAAAAAAAAAAAAAAAAAAAAPX19ADo6OcAAAAAAEpMTgAAAAAA9fX0AAsLDAAAAAAAAAAAAAAAAAAAAAAAOjw+ADo8PgAAAAAAAAAAAMPCvwBhZGgAAAAAAAAAAAB5dnEAIyMlAAAAAAAAAAAAAAAAAAAAAAAAAAAAmZWRAJOXnQAAAAAAAAAAAAAAAAAAAAAAfoKHANLQzwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABhZGgAAAAAAAAAAAAAAAAA0tDPAODg3gBhZGgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACMlJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALm3tAB3en8AnJqVAAAAAAB+gocAAAAAAJWRjgB/gocAFxcYAAAAAAAAAAAALjAxAJCOiAAZGRsALjAxAAAAAAAuMDEA2trYAEpMTgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAube0ACQmJwAjIyUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGRnagCHhH8ADAwNAAAAAAAuMDEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACfnJgAAAAAANjX1gCfnJgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAO3s7AAkJicAAAAAAAAAAAAAAAAAUFJWAC4wMQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADd3dsA3NrZAEdJTAAAAAAAAAAAAJGOigAODg4AAAAAAPLy8gAODg4AAAAAAAAAAAAAAAAAAAAAAMPCvwAAAAAAn5yYAAAAAAAAAAAA9fX0AAsLDABna28AW19iACMjJQAAAAAAAAAAAAAAAADd3dsAWlxgAAAAAABKTFAArKqnAMbEwgBqbXEAAAAAAAAAAAAAAAAAAAAAAPT08wBGQjoANzg6AI6TmAAjIyUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACsqqcAVFZZAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAANLQzwATFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0tDPAPT08wCJhoEAmp+lAAAAAAAAAAAAAAAAAAAAAAALCwwA9fP0AEZCOgChpasAAAAAANHPzgA6PD4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMbEwgAAAAAANzg6AAAAAAAAAAAAAAAAAAAAAAAAAAAArKqnAFtfYgALCwwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA2NfWAJ+cmAAAAAAAAAAAANjX1gAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMbEwgAjJSYAFxcYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALa0sgCeogwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADJx8UAfoKHAJyalQAAAAAAAAAAAOnp6ADw8O4AR0lMAAAAAAAAAAAAAAAAAAAAAABwcngARkI6AN3j6wALCwwAAAAAABoaGwAAAAAAAAAAAAAAAAAAAAAAAAAAALCuqgDNzMkAAAAAAMPCvwDj4uEAzczJAAAAAADz8/MAIyMlAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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PX19ADY19YAsK6qAM3MyQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwrqsAXWBkAFRWWQAAAAAAPT9BABcXGAAAAAAAsK6rAAsLDAAAAAAAAAAAADw+QADz8/MAAAAAAAAAAADGxMIAWFteAAAAAADp6egAFxcYAAAAAADGxMIAW19iAPXz9AAAAAAA9PTzAEdJTAAAAAAA8PDuABkZGwAAAAAAAAAAAJaUkABzd3sAYWRoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0tDPALCuqgBna28AFxcYAAAAAAA8PkAAjYmFAC8pIQA3ODoAUFJVADM0NwAXGRkAFxcYAAsLDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB5dW8AmJuiAM3MyQAAAAAAOjw+AJGOigAoKSoAR0lMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJ+cmAAAAAAAAAAAAAAAAAAAAAAA2NfWAAwMDQAAAAAAAAAAAMbEwgDZ2NYAAAAAAAAAAADZ2NYAw8K/ADc4OgDCv70Awr+9AAAAAAAAAAAAAAAAAAAAAACcmpUAtrSyAMXL0gAjIyUAAAAAAAAAAAAAAAAA1tTSAB8gIQANDQ4AAAAAALCuqgAdHh8Ar7S7AOnn5wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAXFxgAAAAAAAAAAAAAAAAAAAAAAAAAAAD19fQAgX55ALvAxwBtaWMAAAAAADw+QAB9eXUAa29yACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMPCvwAAAAAAAAAAAAAAAAAAAAAA4+LhABMUFAAAAAAAAAAAAAAAAAAXFxgAxsTCANnY1gAAAAAAAAAAAAAAAAAAAAAAw8K/AIeLkQAXFxgAAAAAAJGOigBqbXEAR0lMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADo8PgAAAAAAAAAAAAAAAAAAAAAAAAAAABMUFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALCwwAube0ADEzNADCv70AAAAAAOfn5QAAAAAAAAAAANPS0QAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAALCwwAf4KHADw+QAALCwwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAw8K/ACYmKAAAAAAAAAAAABcXGAAAAAAAAAAAABMUFAAAAAAArKqnAPPy8QAAAAAAAAAAALCuqgDY19YA2djWANnY1gDy8vIAh4R/AKGlqwBHSUwADAwNACMjJQDS0M8AAAAAACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACCAQJ6AAAgAElEQVQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgP9/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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3+EACMjJQAAAAAAAAAAAAAAAAAAAAAAAAAAAMTCwABzd3sACwsMAODg3gAYGBkAAAAAAAAAAACCfnkAUFJWANHX3wAXFxgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADNAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC0sa8AuLe0AN7d3ABGQjoAur7GAC4wMQAAAAAAAAAAAN3d2wDY19YAb3J2AAAAAAAXFxgA9fX0AAsLDAAAAAAAAAAAAAAAAAAAAAAA9fX0AAsLDAAAAAAAAAAAAAAAAAAAAAAArKqnAD0/QQALCwwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC4wMQDS0M8AFxcYAAAAAAAAAAAAAAAAAGRnagALCwwAAAAAAIJ+eQBBQkUArKqnAPPy8QAAAAAA2NfWALCuqgDNzMkA09LRAGBiZgAuMDEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADQ0NANLQzwAuMDEAAAAAAJuZlQCYm6IAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAw8K/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMPCvwA9PkEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOnp6ACwrqsAsba9AMPCvwAAAAAAVFZZAHJuaQBHSUsAR0lMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA2NfWAJ+cmAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJGOigB7f4QAtrSyABcXGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAXFxgAAAAAAAAAAAAAAAAAIyUlAAAAAACCfnkAHR4fAAAAAADY19YAsK6qAM3MyQDT0tEAHyAhAG9ydgAAAAAAAAAAAAAAAABQUlYALjAxAAAAAADS0M8AzczJAAAAAAAAAAAAR0lLAIWBfACeoqkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3d3bALSxrwAODg4AAAAAAM3MyQDY19YAsK6qAB0eHwDZ2NYA09LRAAAAAACDh4sA9PT0AFRWWQAAAAAAAAAAAAwMDQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA9fX0AKWhngB+gocAAAAAAAAAAAAAAAAAc3d7AAsLDAAAAAAAYWRoAAAAAAAAAAAAVllcAAsLDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABHSUwAAAAAAAAAAAAAAAAACwsMAAAAAAC5t7QAzczKAERGSQAuFzEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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图1.4-1 项目环评工作流程图

本次评价的主要工作过程及时间节点如下：

◆ 2023年7月10日，建设单位委托南京普环电力科技有限公司承担《淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程环境影响报告书》的编制工作。

◆ 2023年7月14日，建设单位在涟水新闻网站上进行了项目环境影响评价首次公众参与公示。

◆ 2023年7月，评价单位根据项目可行性研究报告及项目单位提供的其他技术资料进行工程分析，确定评价思路、评价重点及各环境要素评价等级。

◆ 2023年7月和8月，评价单位委托监测公司对项目区进行了环境质量现状监测。

◆ 2023年9月，建设单位对工程内容进行了调整。

◆ 2024年3月，评价单位根据调整后的工程内容编制完成了项目征求意见稿，于2024年3月4日在涟水新闻网上进行了征求意见稿公示，2024年3月5日及9日在现代快报进行了登报公示。

◆ 2024年8月20日，经审核审定后形成《淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程环境影响报告书（送审稿）》。

* 1. 分析判定相关情况
     1. 产业政策相符性

根据《港口深水岸线标准》：二、内河港口深水岸线（一）内河港口岸线的范围：内河港口岸线是指除沿海港口岸线以外的河流、湖泊、水库等水域内的港口岸线。（二）内河港口深水岸线的标准：内河港口深水岸线是指适宜建设千吨级及以上泊位的内河港口岸线（含维持其正常运营所需的相关水域和陆域）。本项目位于内河港口岸线，且建设千吨级及以上泊位，故属于深水岸线。

根据《产业结构调整指导目录（2024年本）》，本项目属于第一类（鼓励类）第二十五项（水运）第1款“2．港口枢纽建设：码头泊位建设”的范畴。本项目不属于《限制用地项目目录》（2012年本）和《禁止用地项目目录》（2012年本）中所列的限制用地和禁止用地项目。

本项目不属于《省政府办公厅转发省经济和信息化委省发展改革委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的通知》（苏政办发〔2015〕118号）中限制类和淘汰类；不属于《江苏省产业结构调整限制、淘汰和禁止目录》（苏办发〔2018〕32号配套文件）中限制、淘汰和禁止类；不属于《江苏省限制用地项目目录（2013）》及《江苏省禁止用地项目目录（2013）》中涉及的行业及项目。

项目建设符合产业政策要求。

* + 1. “三线一单”相符性
       1. 生态红线

本项目与《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）、《江苏省国家级生态保护红线规划》（苏政发〔2018〕74号）相符性分析见表1.5-1。

本项目与生态红线相符性分析

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **地区名称** | **红线区域名称** | **红线区域范围** | | **项目**  **相符性分析** |
| **国家级生态红线保护范围** | **生态空间管控区域范围** |
| 江苏涟水涟漪湖黄嘴白鹭省级自然保护区 | 生物多样性保护 | 包括自然保护区核心区、缓冲区和实验区。自然保护区五岛公园以及相连水域为核心区和缓冲区。实验区范围包括涟水县涟城镇的五岛公园以及相连水域，城郊废黄河沿线的林区和水域、湿地生态系统。坐标为：118°59′E至119°35′E，33°45′N至34°65′N之间 | — | 本项目位于国家级生态保护红线实验区的东北侧约7.5km左右，不在生态空间保护区域范围内 |

由表1.5-1可知，本项目距离最近的国家级生态红线保护为江苏涟水涟漪湖黄嘴白鹭省级自然保护区，距离生态红线边界约7.5km，不在生态红线范围内，因此项目建设与《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）、《江苏省国家级生态保护红线规划》的通知（苏政发〔2018〕74号）相符，项目与生态管控空间规划及生态保护红线关系详见图1.5-1和图1.5-2。

* + - 1. 环境质量底线

①地表水环境质量现状情况

地表水环境渠西河、盐河均满足《地表水环境质量标准》（GB3838-2002）中的相应水质标准。

②大气环境质量现状情况

根据《2023年淮安市生态环境状况公报》：“2023年，淮安市细颗粒物（PM2.5）可吸入颗粒物（PM10）、二氧化硫（SO2）、二氧化氮（NO2）年均浓度分别为36微克/立方米、58微克/立方米、8微克/立方米、25微克/立方米；一氧化碳（CO）和臭氧（O3）浓度分别为1毫克/立方米、158微克/立方米。”“各县区中，PM2.5、PM10、NO2、CO、SO2均达标，各县区PM2.5年均浓度在31-36微克/立方米之间，其中金湖县最低，清江浦区最高，PM10年均浓度介于52~62微克/立方米之间，金湖县浓度最低，淮阴区浓度最高。”

因此，本次收集了距离本项目7.2km处涟水县环境监测监控站点2023年的全年例行监测数据，统计了各因子的百分位日均值数据，具体如下表，除PM2.5保证率日均值外，其余各因子年均值和保证率均满足环境空气质量标准要求，PM2.5保证率日均值占标率为110.7%。根据《环境影响评价技术导则 大气环境》（HJ2.2-2018）达标区判定要求，项目所在区域为不达标区。

涟水县发布了《涟水县2024年生态环境基础设施建设重点项目计划》，淮安市发布了《淮安市空气质量持续改善行动两年实施方案》，随着计划和方案的实施，本项目所在区域环境空气质量将得到持续改善。

③声环境质量现状情况

项目主厂区和码头厂界及周边声环境可以满足《声环境质量标准》（GB3096-2008）中相应标准。

开挖港池处河道底泥重金属指标满足《土壤环境质量 农用地土壤污染风险管控标准（试行）》（GB15618-2018）中其他类标准，其余指标满足《土壤环境质量 建设用地土壤污染风险管控标准（试行）》（GB36600-2018）中表1中第二类用地筛选值。

本项目废气主要为运输、装卸产生粉尘，采用洒水等降尘措施，无组织废气能够达标排放，不会降低区域环境空气质量功能。建设期和运营期无污染废水排入盐河，根据预测及分析，项目废气、废水、噪声均能达标排放，固废均能妥善处置。项目的建设不会恶化区域环境质量功能，不会触碰区域环境质量底线，随着淮安市实施方案和涟水县生态环境重点项目的实施，本项目区域空气质量将得到持续改善。

因此，项目的建设符合环境质量底线要求。

* + - 1. 资源利用上线

本项目用水来自市政供水管网，用电来自市政供电。本项目建成后通过内部管理、设备选择的选用和管理、废物回收利用和污染治理等多方面采取合理可行的防治措施，以“节能、降耗、减污”为目标，有效控制污染。本项目的水气电等资源利用不会突破区域的资源利用上限要求。目前项目用地为国能涟水一期热电项目预留建设用地，不违背当地土地规划要求，亦不会达到项目所在区域土地资源利用上限。本工程位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，属于国能涟水一期热电联产项目配套码头，盐河左岸，地理位置优越。根据《淮安港总体规划（2020—2035年）》，本项目所在的港口规划岸线为朱码船闸下游4300m至朱码船闸下游5300m，全长1000m，岸线用途为矿建材等散杂货。本码头实际利用的岸线为朱码船闸下游4300m至朱码船闸下游4482m，约182m，位于规划岸线范围内，本码头工程所使用的岸线符合《淮安港总体规划（2020—2035年）》。项目不断突破地区能源、水、土地、岸线等资源消耗的“天花板”。

* + - 1. 环境准入负面清单

对照《长江经济带发展负面清单指南（试行，2022年版）》《〈长江经济带发展负面清单指南（试行，2022年版）〉江苏省实施细则》，本项目为码头新建项目，符合产业定位，未被列入环境准入负面清单内，符合环境准入负面清单管理要求，详见表1.5-2和表1.5-3。

与《长江经济带发展负面清单指南（试行，2022年版）》相符性分析

| **序号** | **文件相关内容** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 1 | 禁止建设不符合全国和省级港口布局规划以及港口总体规划的码头项目，禁止建设不符合《长江干线过江通道布局规划》地过长江通道项目。 | 本码头建设位置在规划岸线上，符合《淮安港总体规划（2020—2035年）》，不属于长江通道项目。 | 相符 |
| 2 | 禁止在自然保护区核心区、缓冲区的岸线和河段范围内投资建设旅游和生产经营项目。禁止在风景名胜区核心景区的岸线和河段范围内投资建设与风景名胜资源保护无关的项目。 | 本项目选址不属于自然保护区和风景名胜区。 | 相符 |
| 3 | 禁止在饮用水源一级保护区的岸线和河段范围内新建、改建、扩建与供水设施和保护水源无关的项目，以及网箱养殖、畜禽养殖、旅游等可能污染饮用水水体的投资建设项目。禁止在饮用水水源二级保护区的岸线和河段范围内新建、改建、扩建排放污染物的投资建设项目。 | 项目选址不在饮用水水源一级保护区和二级保护区的岸线和河段范围内。 | 相符 |
| 4 | 禁止在水产种质资源保护区的岸线和河段范围内新建围湖造田、围海造地或围填海等投资建设项目。禁止在国家湿地公园的岸线和河段范围内挖沙、采矿，以及任何不符合主体功能定位的投资建设项目。 | 本项目不涉及水产种质资源保护区和国家湿地公园。 | 相符 |
| 5 | 禁止违法利用、占用长江流域河湖岸线。禁止在《长江岸线保护和开发利用总体规划》划定的岸线保护区内投资建设除事关公共安全及公众利益的防洪护岸、河道治理、供水、生态环境保护、航道整治、国家重要基础设施以外的项目。禁止在《全国重要江河湖泊水功能区划》划定的河段及湖泊保护区、保留区内投资建设不利于水资源及自然生态保护的项目。 | 本项目不在《长江岸线保护和开发利用总体规划》划定的岸线保护区内，不在《全国重要江河湖泊水功能区划》划定的河段及湖泊保护区、保留区内。 | 相符 |
| 6 | 禁止未经许可在长江干支流及湖泊新设、改设或扩大排污口。 | 本项目不新设、改设或扩大排污口。 | 相符 |
| 7 | 禁止在“一江一口两湖七河”和332个水生生物保护区开展生产性捕捞。 | 本项目不涉及生产性捕捞。 | 相符 |
| 8 | 禁止在长江干支流、重要湖泊岸线一公里范围内新建、扩建化工园区和化工项目。禁止在长江干流岸线三公里范围内和重要支流岸线一公里范围内新建、改建、扩建尾矿库、冶炼渣库和磷石膏库，以提升安全、生态环境保护水平为目的的改建除外。 | 本项目不属于新建、扩建化工园区和化工项目，不属于新建、改建、扩建尾矿库、冶炼渣库和磷石膏库。 | 相符 |
| 9 | 禁止在合规园区外新建、扩建钢铁、石化、化工、焦化、建材、有色、制浆造纸等高污染项目 | / | / |
| 10 | 禁止新建、扩建不符合国家石化、现代煤化工等产业布局的规划的项目。 | 本项目不属于石化、现代煤化工产业。 | 相符 |
| 11 | 禁止新建、扩建法律法规和相关政策明令禁止的落后产能项目。禁止新建、扩建不符合国家产能置换要求的严重过剩产能行业的项目。禁止新建、扩建不符合要求的高耗能高排放项目。 | 本项目不属于此类项目。 | 相符 |

与《〈长江经济带发展负面清单指南（试行，2022年版）〉江苏省实施细则》相符性分析

| **序号** | **文件相关内容** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 1 | 严格执行《中华人民共和国自然保护区条例》，禁止在自然保护区核心区、缓冲区的岸线和河段范围内投资建设旅游和生产经营项目。严格执行《风景名胜区条例》《江苏省风景名胜区管理条例》，禁止在国家级和省级风景名胜区核心景区的岸线和河段范围内投资建设与风景名胜资源保护无关的项目。 | 本项目不涉及自然保护区、风景名胜区。 | 相符 |
| 2 | 严格执行《中华人民共和国水污染防治法》《江苏省人民代表大会常务委员会关于加强饮用水源地保护的决定》《江苏省水污染防治条例》，禁止在饮用水水源一级保护区的岸线和河段范围内新建、改建、扩建与供水设施和保护水源无关的项目，以及网箱养殖、畜禽养殖、旅游等可能污染饮用水水体的投资建设项目。禁止在饮用水水源二级保护区的岸线和河段范围内新建、改建、扩建排放污染物的投资建设项目；禁止在饮用水水源准保护区的岸线和河段范围内新建、扩建对水体污染严重的投资建设项目，改建项目应当削减排污量。 | 本项目不在饮用水水源一级保护区和二级保护区内，项目满足《中华人民共和国水污染防治法》《江苏省人民代表大会常务委员会关于加强饮用水源地保护的决定》《江苏省水污染防治条例》要求。 | 相符 |
| 3 | 严格执行《水产种资源保护区管理暂行办法》，禁止在国家级和省级水产种质资源保护区的岸线和河段范围内新建排污口，以及围湖造田、围海造地或围填海等投资建设项目。严格执行《江苏省湿地保护条例》，禁止在国家湿地公园的岸线和河段范围内挖沙、采矿，以及任何不符合主体功能定位的投资建设项目。 | 本项目不新建排污口，无围湖造田、围海造地或围填海。 | 相符 |
| 4 | 禁止未经许可在长江干支流及湖泊新设、改设或扩大排污口。 | 本项目废水接管热电联产项目污水处理站，不在长江干支流及湖泊设置排污口。 | 相符 |
| 5 | 禁止在距离长江干支流岸线一公里范围内新建、扩建化工园区和化工项目。 | 本项目不属于化工项目。 | 相符 |
| 6 | 禁止在距离长江干流岸线 3 公里范围内新建、改建、扩建尾矿库、冶炼渣库和磷石膏库，以提升安全、生态环境保护水平为目的的改建除外。 | 本项目无尾矿库、冶炼渣库和磷石膏库。 | 相符 |
| 7 | 禁止在太湖流域一、二、三级保护区内开展《江苏省太湖水污染防治条例》禁止的投资建设活动。 | 本项目不涉及。 | 相符 |
| 8 | 禁止在沿江地区新建、扩建未纳入国家和省市布局规划的燃煤发电项目。 | 本项目不涉及。 | 相符 |
| 9 | 禁止在合规园区外新建、扩建钢铁、石化、化工、焦化、建材、有色等高污染项目。合规园区名录按照《江苏省长江经济带发展负面清单实施细则（试行）合规园区名录》执行。高污染项目应严格按照《环境保护综合名录》等有关要求执行。 | 本项目不属于钢铁、石化、化工、焦化、建材、有色等高污染项目。 | 相符 |
| 10 | 禁止在取消化工定位的园区（集中区）内新建化工项目。 | 本项目符合园区定位且不属于化工项目。 | 相符 |
| 11 | 禁止在化工企业周边建设不符合安全距离规定的劳动密集型的非化工项目和其他人员密集的公共设施项目。 | 本项目与周边化工企业符合安全距离规定且不属于劳动密集型项目。 | 相符 |
| 12 | 禁止新建、扩建不符合国家和省产业政策的尿素、磷铵、电石、烧碱、聚氯乙烯、纯碱等行业新增产能项目。 | 本项目不涉及。 | 相符 |
| 13 | 禁止新建、改建、扩建高毒、高残留以及对环境影响大的农药原药（化学合成类）项目，禁止新建、扩建不符合国家和省产业政策的农药、医药和染料中间体化工项目。 | 本项目不涉及。 | 相符 |
| 14 | 禁止新建、扩建国家《产业结构调整指导目录》明确的限制类、淘汰类、禁止类项目，法律法规和相关政策明令禁止的落后产能项目，以及明令淘汰的安全生产落后工艺及装备项目。 | 本项目不属于《产业结构调整指导目录（2024年本）》明确的限制类、淘汰类、禁止类项目，不属于法律法规和相关政策明令禁止的落后产能项目以及明令淘汰的安全生产落后工艺及装备项目。 | 相符 |
| 15 | 禁止新建、扩建不符合国家产能置换要求的严重产能过剩产能行业的项目。 | 本项目不属于严重过剩产能行业的项目。 | 相符 |

对照《淮安港总体规划（2020—2035年）》及环境影响报告书环境准入清单，本项目不属于其中规定的禁止引入的项目，符合引入类项目的要求。详见表1.5-4。

《淮安港总体规划（2020—2035年）环境影响报告书》环境准入清单

| **类别** | **准入清单相关内容** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 优先引入类项目 | 清洁型货种项目：1、集装箱；2、件杂货。（不含采用集装箱或件杂货形式包装运输的危险化学品） | 本项目为煤炭散货码头，不涉及危险化学品。 | 不符合 |
| 采用低污染方式的项目：1、集装箱运输；2、散货转运密闭化与自动化：散货由码头向堆场的转运以封闭式固定皮带为主；3、船舶使用岸电：新建码头作业区设置船舶使用岸电设施。 | 本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带。 | 符合 |
| 岸线集约化利用程度高的项目：单位岸线通过能力>0.2万吨/米的码头。 | 本项目岸线长度182m，设计年通过能力为118万吨，单位岸线通过能力0.66万吨/m>0.2万吨/m。 | 符合 |
| 禁止引入类项目 | 1、吞吐列入《内河禁运危险化学品目录（2019版）》的危险化学品的码头。2、京杭运河两侧1公里范围内，和位于重要湿地、清水通道维护区生态红线区域，饮用水水源保护区及准保护区，新、改、扩建化工码头。 | 本项目不涉及。 | 符合 |
| 限制引入类项目 | 污染型货种项目：1、粉尘治理措施达不到《江苏省港口粉尘综合治理专项行动实施方案》等要求的吞吐矿建材、煤炭、矿石等散货的码头作业区；2、挥发性有机物治理措施达不到《挥发性有机物（VOCs）污染防治技术政策》《江苏省重点行业挥发性有机物污染控制指南》等要求的危险化学品码头作业区；3、初期雨水未收集处理的散货和化学品码头作业区。 | 本项目粉尘治理后能满足标准要求，粉尘治理措施能够达到《江苏省港口粉尘综合治理专项行动实施方案》的要求，初期雨水收集后处理；本项目除船舶、运输车辆尾气中涉及烃类排放，无其他vocs排放。 | 符合 |
| 岸线集约化利用程度低的项目：1、主要和一般作业码头：单位岸线通过能力<0.2万吨/米；2、其他码头：单位岸线通过能力<0.07万吨/米。 | 本项目单位岸线通过能力0.66万吨/m的码头>0.2万吨/m，不属于岸线集约化利用程度低的项目。 | 符合 |
| 空间管制要求禁止引入的项目 | 国家生态保护红线内，饮用水源一级、二级保护区内，永久基本农田内；新改扩建码头作业区。 | 本项目不涉及。 | 符合 |
| 饮用水源准保护区：新建吞吐危险化学品、煤炭的码头作业区。 | 本项目不涉及。 | 符合 |

因此，本码头新建项目的建设与区域环境准入负面清单相符。

* + - 1. 与《江苏省2023年度生态环境分区管控动态更新成果》符合性分析

2024年6月13日，江苏省生态环境厅发布了《江苏省2023年度生态环境分区管控动态更新成果公告》，对江苏省生态环境分区管控成果进行了动态更新。

对照《江苏省2023年度生态环境分区管控动态更新成果》，本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，位于一般管控单元且位于淮河流域内，淮河流域管控要求为：空间布局约束：1、禁止在淮河流域新建化学制浆造纸企业，禁止在淮河流域新建制革、化工、印染、电镀、酿造等污染严重的小型企业。2、落实《江苏省通榆河水污染防治条例》，在通榆河一级保护区、二级保护区，禁止新建、改建、扩建制浆、造纸、化工、制革、酿造、燃料、印染、电镀、炼油、铅酸蓄电池和排放水污染物的黑色金属冶炼及压延加工项目、有色金属冶炼及压延加工项目，金属制品项目等污染环境的项目。3、在通榆河一级保护区，禁止新建、扩建直接或间接向水体排放污染物的项目，禁止建设工业固体废物集中贮存、利用、处置设施或者场所以及城市生活垃圾填埋场，禁止新建规模化畜禽养殖场。

本项目不在通榆河保护范围内，污染物达标排放，不涉及制浆、造纸、化工、制革、酿造、燃料、印染、电镀、炼油、铅酸蓄电池等行业，因此，符合江苏省“三线一单”生态环境分区管控方案的要求。根据表1.5-5，本项目建设符合《江苏省2023年度生态环境分区管控动态更新成果》要求，项目与《江苏省2023年度生态环境分区管控动态更新成果》中江苏省生态环境管控单元图（陆域）（2023年动态更新成果）位置关系见图1.5-3。

本项目与《江苏省2023年度生态环境分区管控动态更新成果》相符性分析

| **类别** | | **文件相关内容** | **相符性分析** |
| --- | --- | --- | --- |
| 省域生态环境管控要求 | 空间布局约束 | l.按照《自然资源部 生态环境部 国家林业和草原局关于加强生态保护红线管理的通知（试行）》（自然资发〔2022〕142号）、《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）、《关于进一步加强生态保护红线监督管理的通知》（苏自然函〔2023〕880号）、《江苏省国土空间规划（2021—2035年）》（国函〔2023〕69号），坚持节约优先、保护优先、自然恢复为主的方针，以改善生态环境质量为核心，以保障和维护生态功能为主线，统筹山水林田湖草一体化保护和修复，严守生态保护红线，实行最严格的生态空间管控制度，确保全省生态功能不降低、面积不减少、性质不改变，切实维护生态安全。生态保护红线不低于1.82万平方千米，其中海洋生态保护红线不低于0.95万平方千米。 | 符合  本项目作业泊位均布置在生态空间管控区域外，工程不占用生态空间管控区域，疏浚污泥余水处理后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河，工程产生的水下方干化后弃方全部用于临时用地恢复，运营期无污废水排入盐河，对其主导生态功能无影响。  本项目不属于排放量大、耗能高、产能过剩的产业。  本项目不属于化工生产企业，沿江和沿海地区。  本项目不属于钢铁企业。  本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，所在地不属于生态空间管控区、生态红线保护区。 |
| 2. 牢牢把握推动长江经济带发展“共抓大保护、不搞大开发”战略导向，对省域范围内需要重点保护的岸线、河段和区域实行严格管控，管住控好排放量大、耗能高、产能过剩的产业，推动长江经济带高质量发展。 |
| 3. 大幅压减沿长江干支流两侧1公里范围内、环境敏感区域、城镇人口密集区、化工园区外和规模以下化工生产企业，着力破解“重化围江”突出问题，高起点同步推进沿江地区战略性转型和沿海地区战略性布局。 |
| 4. 全省钢铁行业坚持布局调整和产能整合相结合，坚持企业搬迁与转型升级相结合，鼓励有条件的企业实施跨地区、跨所有制的兼并重组，高起点、高标准规划建设沿海精品钢基地，做精做优沿江特钢产业基地，加快推动全省钢铁行业转型升级优化布局。 |
| 5. 对列入国家和省规划，涉及生态保护红线和相关法定保护区的重要民生项目、重大基础设施项目（交通基础设施项目等），应优化空间布局（选线）、主动避让；确实无法避让的，应采取无害化方式（如无害化穿、跨越方式等），依法依规履行行政审批手续，强化减缓生态环境影响和生态补偿措施。 |
| 污染物排放管控 | 1．坚持生态环境质量只能更好、不能变坏，实施污染物总量控制，以环境容量定产业、定项目、定规模，确保开发建设行为不突破生态环境承载力。 | 符合  本项目总量指标在区域内平衡。 |
| 2．2025年，主要污染物排放减排完成国家下达任务，单位工业增加值二氧化碳排放量下降20%，主要高耗能行业单位产品二氧化碳排放达到世界先进水平。实施氮氧化物（NOx）和VOCs协同减排，推进多污染物和关联区域联防联控。 |
| 环境风险防控 | 1.强化饮用水水源环境风险管控。县级以上城市全部建成应急水源或双源供水。 | 符合  本项目不属于危化品码头，企业将制定环境风险预案，并落实各项环境风险防控措施。 |
| 2.强化化工行业环境风险管控。重点加强化学工业园区、涉及大宗危化品使用企业、贮存和运输危化品的港口码头、尾矿库、集中式污水处理厂、危废处理企业的环境风险防控；严厉打击危险废物非法转移、处置和倾倒行为；加强关闭搬迁化工企业及遗留地块的调查评估、风险管控、治理修复。 |
| 3.强化环境事故应急管理。深化跨部门、跨区域环境应急协调联动，分区域建立环境应急物资储备库。各级工业园区（集聚区）和企业的环境应急装备和储备物资应纳入储备体系。 |
| 4.强化环境风险防控能力建设。按照统一信息平台、统一监管力度、统一应急等级、协同应急救援的思路，在沿江发展带、沿海发展带、环太湖等地区构建区域性环境风险预警应急响应机制，实施区域突发环境风险预警联防联控。 |
| 资源利用效率要求 | 1．水资源利用总量及效率要求：到2025年，全省用水总量控制在525.9亿立方米以内，万元地区生产总值用水量、万元工业增加值用水量下降完成国家下达目标，农田灌溉水有效利用系数提高到0.625。 | 本项目的水气电等资源利用不会突破区域的资源利用上限要求。项目用地为国能涟水一期热电项目预留建设用地，不违背当地土地规划要求，亦不会达到项目所在区域土地资源利用上限。项目位于允许建设用地。对照《涟水县国土空间规划（2021-2035）》，本项目不在中心城区开发边界内，主要用地为国能涟水一期热电项目预留建设用地，不违背国土空间规划要求。  项目不使用高污染燃料。 |
| 2．土地资源总量要求：到2025年，江苏省耕地保有量不低于5977万亩，其中永久基本农田保护面积不低于5344万亩。 |
| 3.禁燃区要求：在禁燃区内，禁止销售、燃用高污染燃料；禁止新建、扩建燃用高污染燃料的设施，已建成的，应当在城市人民政府规定的期限内改用天然气、页岩气、液化石油气、电力或者其他清洁能源。 |
| 淮河流域生态环境分区管控要求 | 空间布局约束 | 1.禁止在淮河流域新建化学制浆造纸企业，禁止在淮河流域新建制革、化工、印染、电镀、酿造等污染严重的小型企业。 | 符合  本项目不属于制革、化工、印染、电镀、酿造等污染严重的小型企业。  项目位于淮安市涟水县，紧靠盐河，不在通榆河保护区范围内，运营期无废水排入盐河内，属于码头项目，不属于禁止新建、改建、扩建项目。 |
| 2.落实《江苏省通榆河水污染防治条例》，在通榆河一级保护区、二级保护区，禁止新建、改建、扩建制浆、造纸、化工、制革、酿造、染料、印染、电镀、炼油、铅酸蓄电池和排放水污染物的黑色金属冶炼及压延加工项目、有色金属冶炼及压延加工项目、金属制品项目等污染环境的项目。 |
| 3.在通榆河一级保护区，禁止新建、扩建直接或者间接向水体排放污染物的项目，禁止建设工业固体废物集中贮存、利用、处置设施或者场所以及城市生活垃圾填埋场，禁止新建规模化畜禽养殖场。 |
| 污染物排放管控 | 按照《淮河流域水污染防治暂行条例》实施排污总量控制制度。 | 本项目总量指标在区域内平衡。 |
| 环境风险防控 | 禁止运输剧毒化学品以及国家规定禁止通过内河运输的其他危险化学品的船舶进入通榆河及主要供水河道。 | 本项目不涉及剧毒化学品及禁止通过内河运输的其他危险化学品。 |
| 资源利用效率要求 | 限制缺水地区发展耗水型产业，调整缺水地区的产业结构，严格控制高耗水、高耗能和重污染的建设项目。 | 项目所在地不属于缺水地区，也不属于高耗水、高耗能和重污染的建设项目。 |

* + - 1. 与《淮安市生态环境分区管控动态更新成果》（2023版）符合性分析

2024年5月6日，淮安市生态环境局发布了《淮安市2023年度生态环境分区管控动态更新成果公告》。对照该成果，本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，位于重点管控单元，具体对照见下表。

项目与《淮安市2023年度生态环境分区管控动态更新成果》中淮安市生态环境管控单元图（2023年动态更新成果）位置关系见图1.5-4。

与淮安市生态环境分区管控动态更新成果相符性分析

| **类型** | | **管控要求** | **建设项目情况** | **相符性** |
| --- | --- | --- | --- | --- |
| 基本原则 | | 1、依法依规，严守底线。2、立足实际，因地制宜。3、严格准入，提升效能。 | 本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，所在地不属于生态空间管控区、生态红线保护区。 | 相符 |
| 总体目标 | 生态红线 | 全市生态空间保护区域总面积2036.8907平方公里，占全市国土面积的20.31%。其中，生态保护红线面积1411.1018平方公里，占全市国土面积的14.07%，生态空间管控区域面积625.7889平方公里，占全市国土面积的6.24%。 | 本项目位于国家级生态保护红线实验区的东北侧约7.5km左右，不在生态空间保护区域范围内，不在生态红线范围内 | 相符 |
| 环境质量底线 | 城市空气质量优良天数比率达81%左右，城市PM2.5年均浓度达32微克/立方米左右，臭氧污染得到有效控制，协同推进减污降碳的工作体系基本建立。57个地表水国省考断面年度水质均值达到或优于川类水质比例稳定达到省定要求。土壤和声环境质量保持稳定，受污染耕地安全利用率达到93%以上。 | 项目所在区域环境空气为不达标区。随着淮安市实施方案和涟水县生态环境重点项目的实施，本项目区域空气质量将得到持续改善。地表水环境质量总体水质为良好。建设项目所在区域噪声环境质量达标。 | 相符 |
| 资源利用上线 | 全市用水总量不超过33亿立方米，耕地保有量不少于697.3500万亩，永久基本农田保护面积不低于596.0050万亩（含易地代保任务3.0000万亩），煤炭消费总量下降5%左右，煤炭占能源消费总量的比重下降至50%左右，非化石能源消费比重达到18%左右。 | 本项目不在中心城区开发边界内，主要用地为国能涟水一期热电项目预留建设用地，不违背国土空间规划要求。项目不使用高污染燃料。 | 相符 |
| 环境管控单元 | | 优先保护单元：97个，重点管控单元：147个，一般管控单元：91个 | 项目位于重点管控单元。 | 相符 |
| 更新内容 | 淮安市生态环境管控总体要求 | 删除《中共淮安市委淮安市人民政府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》（淮发〔2018〕33号）等过期文件及相关要求。新增中共江苏省委江苏省人民政府关于《深入打好污染防治攻坚战的实施意见》（2022年1月24日）等最新文件及相关要求。 | 对照《关于深入打好污染防治攻坚战的实施意见》（2022年1月24日），根据前文分析，本项目不属于高耗水、高耗能项目，符合“三线一单”要求 | 相符 |
| 空间布局约束 | 根据中共江苏省委江苏省人民政府关于《深入打好污染防治攻坚战的实施意见》（2022年1月24日）、《淮安市深入打好净土保卫战实施方案》（淮污防攻坚指办〔2023〕17号）、淮政《淮安市生态碧水三年行动方案》发〔2022〕12号）、《淮安市国土空间总体规划（2021—2035年）》《大运河淮安段核心监控区国土空间管控细则》（淮政规〔2022〕8号）等文件进行调整。 | 对照《淮安市深入打好净土保卫战实施方案》（淮污防攻坚指办〔2023〕17号），本项目不在中心城区开发边界内，主要用地为国能涟水一期热电项目预留建设用地，不违背国土空间规划要求，项目未使用国家明令淘汰或者禁止使用的回收利用技术、工艺，符合相关产业政策。 | 相符 |
| 污染物排放管控 | 物排放管控根据《江苏省“十四五”节能减排综合实施方案（苏政传发〔2022〕224号）文件进行调整。 | 本项目严格落实各项污染治理措施和节能措施 | 相符 |
| 环境风险防控 | 根据《淮安市突发环境事件应急预案》（淮政复〔2020〕67号）、《淮安市集中式饮用水源突发污染事件应急预案》（淮污防攻坚指办〔2020〕58号）、《淮安市辐射事故应急预案》《淮安市重污染天气应急预案》（淮政复〔2021〕24号）、《中共江苏省委江苏省人民政府关于深入打好污染防治攻坚战的实施意见》（2022年1月24日）等文件进行调整。 | 企业需根据规定编制环境应急预案并备案，定时安排预案演练，熟练应急物资的使用。对照《淮安市深入打好净土保卫战实施方案》（淮污防攻坚指办〔2023〕17号），项目周边为企业，项目未使用国家明令淘汰或者禁止使用的回收利用技术、工艺，符合相关产业政策。本项目不属于高耗水、高耗能项目。 | 相符 |
| 资源利用效率要求 | 根据《江苏省水利厅江苏省发改委关于印发十四五用水总量和强度控制目标的通知》（苏水节〔2022〕6号）、《市水利局市发展和改革委员会关于下达“一四五”用水总量和强度控制目标的通知》（淮水资〔2022〕4号）、《淮安市国土空间总体规划（2021—2035年）》《中共江苏省委江苏省人民政府关于深入打好污染（2022年1月24日）等防治攻坚战的实施意见》文件进行调整。 | 相符 |

* + - 1. 与《淮安市“三线一单”生态环境分区管控方案》（淮政发〔2020〕16号）符合性分析

对照《淮安市“三线一单”生态环境分区管控方案》，本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，位于一般管控单元内。根据表1.5-7，本项目建设符合《淮安市“三线一单”生态环境分区管控方案》（淮政发〔2020〕16号）要求。

本项目与淮政发〔2020〕16号相符性分析

| **类别** | **文件相关内容** | **相符性分析** |
| --- | --- | --- |
| 空间布局约束 | 1.严格执行《中共淮安市委 淮安市人民政府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》（淮发〔2018〕33号）、《淮安市打赢蓝天保卫战三年行动计划实施方案》（淮政发〔2018〕113号）、《淮安市“两减六治三提升”专项行动方案》（淮发〔2017〕26号）、《淮安市土壤污染防治工作方案》（淮政发〔2017〕86号）、《淮安市水污染防治工作方案》（淮政发〔2016〕95号）等文件要求。  2.严格执行《中共淮安市委 淮安市人民政府关于优化全市空间功能定位和产业布局的意见》（淮发〔2016〕37号）、《淮安市产业结构调整指导目录（2018—2020年版）》（淮政办发〔2018〕6号）等文件要求，重点鼓励休闲农业、电子信息、高端装备制造、新能源汽车及零部件、金融、旅游、健康养生等资源节约型、环境友好型产业。对钢铁、电解铝、水泥、平板玻璃、船舶等产能严重过剩行业，以及酒精、造纸、皮革、农药、橡胶、水泥、金属冶炼等高耗能、高污染、技术落后的产业进行限制和禁止。同时，对属于限制类的现有生产能力，允许企业开展技术改造，推动产业转型升级。  3.根据《淮安市“两减六治三提升”专项行动方案》（淮发〔2017〕26号），推动化工企业入园进区，禁止园区外（除重点监测点化工企业外）一切新建、扩建化工项目。一律不批化工园区内环境基础设施不完善或长期不能稳定运行企业的新改扩建化工项目。新建（含搬迁）化工项目必须进入已经依法完成规划环评审查的化工园区。园区外化工企业（除重点监测点化工企业外）只允许在原有生产产品种类不变、产能规模不变、排放总量不增加的前提下，进行安全隐患改造和节能环保设施改造。禁止限制类项目产能（搬迁改造升级项目除外）入园进区。  4.根据《中共淮安市委 淮安市人民政府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》（淮发〔2018〕33号），从严控制京杭大运河（南水北调东线）沿岸两侧危化品码头新建项目的审批。严禁在京杭运河沿线1公里范围内新建布局化工园区和化工企业。  5.根据《省政府关于加强全省化工园区化工集中区规范化管理的通知》（苏政发〔2020〕94号），淮安市具备化工定位的化工集中区为江苏淮安工业园区，化工集中区内已建成的企业要通过改进工艺、更新装备、加大信息化智能化改造等措施提升本质安全水平。取消化工定位的园区（集中区）要大幅压减化工生产企业数量，不得新增化工生产企业、新建扩建化工生产项目，现有化工生产企业符合条件的可以定位为化工重点监测点，重点监测点在不新增工地和污染物排放总量的情况下可以实施产业政策鼓励类、允许类的技术改造项目。 | 符合  项目严格执行《中共淮安市委 淮安市人民政府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》（淮发〔2018〕33号）等文件要求。  本项目不属于化工项目，不属于限制类项目；项目不属于不允许实施的项目。本项目不属于危化品码头。 |
| 污染物排放管控 | 1.允许排放量要求：根据《淮安市“十三五”节能减排综合实施方案》（淮政发〔2017〕119号），到2020年，淮安市化学需氧量、氨氮、总氮、总磷、二氧化硫、氮氧化物、VOCs排放量不得超过5.91万吨/年、0.77万吨/年、1.50万吨/年、0.155万吨/年、3.57万吨/年、4.72万吨/年、7.92万吨/年。  2.新增源排放标准限制：根据《淮安市打赢蓝天保卫战三年行动计划实施方案》（淮政发〔2018〕113号），全市范围内二氧化硫、氮氧化物、颗粒物、VOCs全面执行大气污染物特别排放限值。 | 符合  本项目总量指标在区域内平衡。 |
| 环境风险防控 | 1.严格执行《淮安市突发环境事件应急预案》（淮政办发〔2017〕93号）、《淮安市集中式饮用水源突发污染事件应急预案》（淮政办发〔2010〕173号）、《淮安市核与辐射突发环境事件应急预案》《淮安市重污染天气应急预案》（淮政办发〔2016〕159号）等文件要求，建立区域监测预警系统，建立省市县上下联动、区域之间左右联动等联动应急响应体系，实行联防联控。  2.根据《淮安市“两减六治三提升”专项行动方案》（淮发〔2017〕26号），加强县级以上城市应急备用水源建设和管理，强化应急体系建设，建立饮用水源地实时监测监控系统，落实水源地日常巡查制度。  3.根据《中共淮安市委 淮安市人民政府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》（淮发〔2018〕33号），严格控制环境风险项目，整合和提升现有工业集聚区，加快城市建成区内石化、化工、水泥、钢铁等重污染企业和危险化学品企业搬迁改造。深化跨部门、跨县区环境应急协调联动，建立环境应急预案电子备案系统。分区域建立环境应急物资储备库，市、县（区）两级政府建立应急物资储备库，各级工业园区和企业环境应急装备和储备物资应纳入储备体系。完善市、县、乡三级突发环境事件应急响应体系，定期组织演练，提高应急处置能力。 | 符合  企业将制定环境风险预案，并落实各项环境风险防控措施。 |
| 资源利用效率要求 | 1.水资源利用总量及效率要求：根据《省最严格水资源管理考核联席会议关于下达2020年和2030年全省实行最严格水资源管理制度控制指标的通知》（苏水资联〔2016〕5号），到2020年，淮安市用水总量不得超过33.33亿立方米，万元地区生产总值用水量降至79立方米以下，万元工业增加值用水量降至10.3立方米以下，农田灌溉水有效利用系数达到0.610以上。  2.地下水开采要求：根据《淮安市“两减六治三提升”专项行动方案》（淮发〔2017〕26号），到2020年，淮安市地下水超采区全面达到用水总量控制和水位红线控制要求，累计压缩地下水开采量3952.3万立方米。  3.土地资源利用总量及效率要求：根据《淮安市土地利用总体规划（2006—2020年）调整方案》，到2020年，淮安市耕地保有量不得低于47.6027万公顷，永久基本农田保护面积不低于39.4699万公顷，开发强度不得高于18%。  4.能源利用总量及效率要求：根据《淮安市“两减六治三提升”专项行动方案》（淮发〔2017〕26号），到2020年，淮安市煤炭消费总量比2016年减少55万吨，电子行业煤炭消费占煤炭消费总量的比重提高到65%以上，非化石能源占一次能源比重达到10%。  5.禁燃区要求：根据《江苏省大气污染防治条例》，禁燃区禁止新建、扩建燃用高污染燃料的项目和设施，已建成的应逐步或依法限期改用天然气、电力或者其他清洁能源。  6.能耗要求：根据《淮安市打赢蓝天保卫战三年行动计划实施方案》（淮政发〔2018〕113号），新建高耗能项目单位产品（产值）能耗要达到国际先进水平。 | 本项目的水气电等资源利用不会突破区域的资源利用上限要求。项目用地为国能涟水一期热电项目预留建设用地，不违背当地土地规划要求，亦不会达到项目所在区域土地资源利用上限。对照《涟水县国土空间规划（2021-2035）》，本项目不在中心城区开发边界内，主要用地为国能涟水一期热电项目预留建设用地。项目不使用高污染燃料。 |

综上，本项目符合《省政府关于印发江苏省“三线一单”生态环境分区管控方案的通知》（苏政发〔2020〕49号）、《市政府关于印发淮安市“三线一单”生态环境分区管控方案的通知》（淮政发〔2020〕16号）的要求。

* + 1. 与相关规划相符性
       1. 与土地利用规划的相符性

对照《自然资源部、国家发展和改革委员会关于发布实施〈限制用地项目目录（2012年本）〉和〈禁止用地项目目录（2012年本）〉的通知》（国土资发〔2012〕98号）和《关于发布实施〈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）〉的通知》（苏国土资发〔2013〕323号），本项目用地不属于限制和禁止用地项目。

对照《涟水县国土空间规划（2021-2035）》，本项目不在中心城区开发边界内，主要用地为国能涟水一期热电项目预留建设用地。本项目与涟水县国土空间总体规划（2021-2035）中心城区土地使用规划图相对位置见图1.5-5。目前本项目已取得建设用地许可证，本项目与当地土地利用总体规划无冲突。本项目用地范围与用地预审范围关系情况见图1.5-6。对照涟水县（朱码街道）三区三线成果图（见图1.5-7），本项目不占用永久基本农田保护区和生态保护红线，用地预审置换的用地在城镇开发边界范围内。

根据自然资源部《关于明确用地预审工作要点规范报部初审报告格式的通知》（自然资用途管制函〔2022〕45号），二、重新预审 2.项目农用地转用和土地征收申请总面积超预审总面积达到10%、范围重合度低于80%的（范围对比适用分期分段情形）。国能用地置换面积为0.84公顷，国能项目总用地为12.81公顷，占总用地面积的6.66%＜10%，重合度93.34%＞80%，不符合重新办理用地预审的要求，不需要重新办理用地预审文件，项目用地范围，将在最终取得的土地手续中确认。涟水县人民政府出具了《关于明确国能涟水热电联产项目规划用地范围的函》，承诺保障本项目用地（附件5）。

* + - 1. 与《淮安港总体规划（2020—2035年）》（苏政复〔2020〕108号）及环境影响报告书（苏环审〔2020〕16号）相符性分析

**一、港口港区划分和涟水港区作业区规划**

规划将淮安港划分为七个港区，分别为市区港区、淮阴港区、淮安港区、**涟水港区**、盱眙港区、洪泽港区和金湖港区。本项目位于涟水港区的一般作业区的薛行作业区。

涟水港区：涟水港区服务于涟水地区大宗货物运输，以及为规划的开发区及相关企业的原材料、产成品的运输提供装卸、仓储、中转运输服务。该港区规划主要作业区为涟水新港作业区，另外在涟水县城以及朱码、高沟、赵码等乡镇规划作业区。

薛行作业区：位于盐河航道薛行工业园境内，主要服务于薛行工业园区内的企业。作业区定位以装卸、仓储和物流服务功能为主，促进临港工业发展，主要承担矿建材料、企业原材料和产成品等物资运输。具体薛行作业区岸线利用规划情况见图1.5-10。

**二、岸线利用规划情况**

项目位于盐河岸线左岸，朱码船闸下游4300m～5300m岸线（本工程拟利用盐河左岸朱码船闸下游4300m至朱码船闸下游4482m之间的岸线，约182m）。根据苏环审〔2020〕16号，盐河为三级航道。按照新的《江苏省干线航道网规划（2023—2035年）》，盐河航道等级规划调整为二级（2031—2035年）。

本项目相关淮安港港口岸线规划表

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 岸线名称 | 起讫点 | 规划岸线长度（米） | 航道名称 | 规划航道等级 | 岸别 | 规划作业区 | 规划货种 | 已建/未建 | 公用/专用码头岸线 | 岸线与国家生态保护红线的关系 | 岸线与江苏省生态空间管控区域的关系 | 岸线与水源保护区的关系 | 与上轮规划及专项调整规划的比较 | |
| 原岸线起讫 | 岸线变化情况 |
| 1 | 朱码船闸下游段 | 朱码船闸下游4300米～5300米 | 1000 | 盐河 | 三级 | 左 | 薛行作业区 | 矿建材料、企业原材料和产成品等 | 未建 | 公用 | / | / | / | / | 新增段，新增1000m |
| 2 | 朱码闸桥下游段 | 朱码船闸下游5800米～6400米 | 600 | 盐河 | 三级 | 右 | 已建 | 企业用 | / | / | / | 朱码船闸下游5800m～6800m | 直接在原来岸线基础上调减400m，未有新增段 |
| 3 | 朱码闸桥下游段 | 朱码船闸下游4000～4500米 | 500 | 盐河 | 三级 | 右 | 未建 | 公用 | / | / | / | / | 新增段，新增500m |

**三、盐河岸线**

1、左岸

（1）从西互通连接线大桥下游180米至西互通连接线大桥下游1520米，全长1340米。规划为港口岸线，其中已开发利用1140米，规划利用200米。（2）从G205大桥下游150米至下游1600米，全长1260米（不含桥区保护范围）。规划为港口岸线，其中已开发利用1260米。（3）从南昌北路至宁连路大桥上游750米，全长1050米。规划为港口岸线，可用作临港工业开发。其中已开发利用520米，规划利用岸线530米。（4）从宁连路大桥下游1200至1400米，全长200米。规划为港口岸线，可用作临港工业开发。其中已开发利用200米。（5）从康马路大桥上游1500米至康马路大桥，全长1500米。规划为港口岸线，可用作公用港口开发。其中已开发利用1300米，规划利用200米。（6）从大关大桥上游3950米至大关大桥上游3450米，全长500米，规划为港口岸线。（7）从陶码大桥下游200米至陶码大桥下游1200米，全长1000米。规划为港口岸线，可用作公用港口开发。其中已开发利用740米，规划利用260米。（8）从朱码闸桥上游2450米至朱码闸桥上游950米，全长1500米。规划为港口岸线，可用作公用港口开发。其中已开发利用550米，规划利用950米。（9）**从朱码船闸下游4300米至朱码船闸下游5300米，全长1000米，规划为港口岸线。**（10）从赵码大桥上游300米至赵码大桥上游1300米，全长1000米，规划为港口岸线。（11）从赵码大桥下游300米至赵码大桥下游700米，全长400米，规划为港口岸线。

淮安市港口岸线利用规划表（单位：米）

| **航道** | **岸线名称** | **岸线起讫点** | **岸别** | **岸线长度（m）** | **开发情况** | **岸线用途** |
| --- | --- | --- | --- | --- | --- | --- |
| 盐河 | 西互通连接线大桥下游段 | 西互通连接线大桥下游180米～1520米 | 左 | 1340 | 已开发 | 油品、钢材等散杂货 |
| 华能铁路桥下游段 | G205大桥下游150米～1600米 | 左 | 1260 | 已开发 | 矿建材等散杂货 |
| 宁连路大桥上游段 | 南昌北路～宁连路大桥上游750米 | 左 | 1050 | 已开发 | 矿建材等散杂货 |
| 宁连路大桥段 | 宁连路大桥下游1200米～下游1400米 | 左 | 200 | 已开发 | 矿建材等散杂货 |
| 康马路大桥上游段 | 康马路大桥上游1500米～康马路大桥 | 左 | 1500 | 已开发 | 集装箱、件杂货等 |
| 大关大桥上游段 | 大关大桥上游3950米～3450米 | 左 | 500 | 未开发 | 矿建材等散杂货 |
| 陶码大桥下游段 | 陶码大桥下游200米～1200米 | 左 | 1000 | 已开发 | 矿建材、钢材等 |
| 朱码船闸上游段 | 朱码闸桥上游2450米～950米 | 左 | 1500 | 已开发 | 矿建材、钢材等 |
| 朱码船闸下游段 | 朱码船闸下游4300米～5300米 | 左 | 1000 | 未开发 | 矿建材等散杂货 |
| 赵码大桥上游段 | 赵码大桥上游300米～1300米 | 左 | 1000 | 未开发 | 矿建材等散杂货 |
| 赵码大桥下游段 | 赵码大桥下游300米～700米 | 左 | 400 | 已开发 | 粮食等 |
| 西互通连接线大桥上游段 | 西互通连接线大桥上游90米～1000米 | 右 | 910 | 已开发 | 矿建材等散杂货 |
| 京沪高速桥上游段 | 京沪高速大桥上游150米～650米 | 右 | 500 | 已开发 | 钢材、矿用建材等 |
| 京沪高速桥下游段 | 京沪高速桥～京沪高速桥下游1500米 | 右 | 1500 | 已开发 | 钢材、矿用建材等 |
| 大关大桥上游段 | 大关大桥上游6300米～5000米 | 右 | 1300 | 未开发 | 矿建材等散杂货 |
| 朱码船闸下游段 | 朱码船闸下游4000米～4500米 | 右 | 500 | 未开发 | 矿建材等散杂货 |
| 朱码船闸下游段 | 朱码船闸下游5800米～6400米 | 右 | 600 | 已开发 | 钢材、矿用建材等 |
| 殷渡桥上游段 | 殷渡桥上游4560米～3760米 | 右 | 800 | 未开发 | 钢材、矿用建材等 |
| 小计 | |  | 16860 |  |  |

**四、港区吞吐量预测**

根据《淮安港总体规划（2020—2035年），预测2025年和2035年淮安港吞吐量分别1.4亿吨和1.65亿吨，2020—2025年年均增速10%，2025—2035年年均增速1.5%。涟水港区2025年和2035年吞吐量预测值分别为1640万吨和1865万吨。根据总规预测结果，涟水港区2025—2035年年均增速为1.37%，因此预测其2030年的吞吐量为1756万吨。

涟水港区货物吞吐量增长情况

|  |  |  |  |
| --- | --- | --- | --- |
| 预测水平年 | 2025年 | 2030年 | 2035年 |
| 吞吐量预测（万吨） | 1640 | 1756 | 1865 |
| 区间年均增长率（%） | 1.37% | | |

**五、与《淮安港总体规划（2020—2035年）》相容性分析**

对照《淮安港总体规划（2020—2035年）》，本码头位于涟水港区薛行作业区，盐河左岸。本项目在淮安港的位置见图1.5-8。本项目在淮安港港口岸线利用规划的位置见图1.5-9。根据图1.5-9，薛行作业区共计规划长度2100m，为三个作业分区，右岸两个作业分区，左岸一个作业分区，其中左岸分区规划长度为1000m，目前已有的码头均位于右岸，左岸目前未有码头项目。本项目所在的港口规划岸线为朱码船闸下游4300m至朱码船闸下游5300m，全长1000m的薛行作业区左岸线，岸线用途为矿建材等散杂货。据现场调查及相关资料，目前涟水港区薛行作业区内现有码头均位于盐河航道右侧，薛行作业区左岸岸线范围内现状、近期规划期均无使用情况。本码头实际利用的左侧岸线为朱码船闸下游4300m至朱码船闸下游4482m，约182m，位于规划左侧岸线范围内。朱码船闸下游段岸线用途主要为矿建材等散杂货，本项目建成后承担国能涟水一期热电联产项目燃料煤炭的物资运输，货种为散货煤炭，符合要求。

本项目港口岸线使用已于2022年10月取得《准予交通运输行政许可决定书》（淮交航确定〔2022〕00011号）（见附件7）。相关决定摘录如下：

一、拟建码头采用顺岸挖入式布置形式，共设置了3个1000吨级泊位，其中2个1000吨级装卸泊位，1个1000吨级待泊泊位，装卸泊位长度为144m，待泊泊位长度为76m；码头前沿顶高程7.2m，码头前沿设计河底高程-1.66m，码头前沿距离航道中心线120m，符合航道通航标准，满足通航需求。

二、拟建码头位于淮安市涟水县薛行作业区内，盐河航道左岸朱码闸下游约4.3km处。该航段设计最高通航水位7.10m（85国家高程基准，下同），设计最低通航水位1.84m。本项目符合《淮安港总体规划（2020-2035）》，选址可行。

根据近期国能涟水热电联产项目耗煤量分析结果，预计本码头近期2025年水运吞吐量将达到约40万吨，远期2030年将达到约112万吨。不突破规划预测的涟水港区货物吞吐量。

本码头符合《淮安港总体规划（2020—2035年）》。

**六、与《淮安港总体规划（2020—2035年）环境影响报告书》（苏环审〔2020〕16号）环境影响报告书相符性**

《淮安港总体规划（2020—2035年）环境影响报告书》于2020年6月9日取得了江苏省生态环境厅审查意见。拟建项目与《省生态环境厅关于淮安港总体规划（2020—2035年）环境影响报告书的审查意见》（苏环审〔2020〕16号）的符合性分析见表1.5-11。

本项目与淮安港总体规划（2020—2035年）环境影响报告书审查意见相符性一览表

| **序号** | **审查意见** | **拟建码头情况** | **符合性分析** |
| --- | --- | --- | --- |
| 1 | （一）正确处理保护和发展的关系。坚持生态优先、绿色发展战略定位，明确规划期水环境、大气环境质量改善目标以及生态系统修复目标，作为开发建设的底线。立足大运河保护、南水北调东线工程水环境保护、清水通道维护区管控要求、水源地保护、生态系统完整性保护以及自然岸线和湿地等保护，强化对港口开发的引导和约束作用，进一步优化开发方案，落实环保对策措施。加强《规划》与有关规划要求的衔接，确保符合国土空间规划、国家级生态保护红线、生态空间管控区域、环境功能区划等管理要求。 | 本工程拟利用盐河左岸朱码船闸下游4300m至朱码船闸下游4482m之间的岸线，约182m。本新建码头项目符合淮安港的岸线利用规划。朱码船闸下游段岸线用途主要为矿建材等散杂货，本项目建成后主要承担国能涟水一期热电联产项目的燃料煤炭的运输，符合要求。在采取综合环保措施后，港区污染物排放满足标准要求。经分析项目与淮安市城市总体规划、淮安港总体规划、国土空间规划、国家级生态保护红线、生态空间管控区域、环境功能区划等管理要求均相符。 | 符合 |
| 2 | （二）明确并落实生态空间管控要求。国家级生态保护红线，区域按照禁止开发区域要求进行管理。闸桥上游段岸线950米（废黄河工业作业区，已建华能淮阴电厂码头、海螺水泥码头），部分位于国家级生态保护红线中的北京路水厂废黄河饮用水水源准保护区；运西电站节制闸下游岸线300米（已建大山粮食码头），全部位于国家级生态保护红线京杭大运河淮安区饮用水水源保护区二级保护区内。所有位于饮用水源二级保护区、准保护区范围内的码头不得扩充经营货种，不得增加货种吞吐量，做好环保措施：如2025年前保护区尚未调整，需及时拆除码头设施，并取消该规划岸线。金湖二桥下游岸线中的134米未建设，位于国家级生态保护红线金湖县饮用水水源保护区二级保护区，在国家生态保护红线调整发布前，未建岸线不得开发利用。其余部分岸线及锚地涉及江苏省生态空间管控区域清水通道维护区的，应严格执行《南水北调工程供用水管理条例》《江苏省河道管理条例》等有关规定，并严格环保措施，不设置排污口。位于江苏省生态空间管控区域淮阴区生态公益林的3段岸线（淮三路大桥上游段、老淮泗路下游段、徐宋路大桥上游段）需严格控制占用，如需占用应征得省级主管部门同意，并由所在地县级林业行政主管部门按照“占一补一”的原则组织林地恢复补偿到位。 | 项目不占用国家级生态保护红线及饮用水源保护区各级保护区范围，并采取措施严禁往盐河排污，与生态保护红线及饮用水源保护等管理要求相符。 | 符合 |
| 3 | （三）严格饮用水源保护。应根据《中华人民共和国水污染防治法》等有关法律法规要求，严格岸线及作业区设置，减轻港口对水源地的不利影响。运西电站节制闸下游岸线1320米（部分上河作业区）位于京杭大运河淮安区饮用水水源准保护区内，涉及准保护区的部分岸线及作业区禁止从事危化品、油品、煤炭等重污染装卸作业，需符合饮用水源准保护区相关规定要求；白马湖下游引河河口段880米（部分林集作业区）位于京杭大运河淮安区饮用水水源准保护区内，根据专项调整规划环评的批复（苏环审〔2017〕40号），林集作业区禁止从事化学品及油品等危险货物以及煤炭、矿砂、水泥等散货装卸作业。 | 项目不占用国家级生态保护红线及饮用水源保护区各级保护区范围。 | 符合 |
| 4 | （四）严格港区环境准入。执行《报告书》提出的环境准入清单。禁止建设区为国家级生态保护红线区域、饮用水水源地一级保护区和二级保护区、永久基本农田；在禁止建设区内严禁码头作业区开发建设活动。限制开发区为清水通道维护区、洪水调蓄区、饮用水水源地的准保护区，需符合相应管控要求。根据环境准入清单，各规划岸线的作业区禁止装卸列入《内河禁运危险化学品目录》的危险化学品。 | 本项目不在禁止建设区和限制开发区，不涉及危险化学品。 | 符合 |
| 5 | （五）强化生态保护以及污染防治措施。采取防风抑尘网、湿式除尘系统、洒水喷淋系统、封闭式输送廊道、散货堆场封闭式大棚等国内外先进的除尘、防尘技术和设备，最大限度地降低粉尘排放量，按照相关规定，逐步完善船舶岸电系统及接口，提高在港船舶岸电使用率，减少船舶尾气排放；落实报告书提出的各项船舶污水处理措施，不得外排洗舱废水。苏淮高新区作业区等原油成品油码头应配套建设油气回收设施。进一步加快各作业区污水收集管网建设，规划各作业区生活污水、生产废水等各类废水应尽可能接管至污水处理厂（站）进行处理，暂不具备接管条件的，应提出切实可行的污染治理措施并满足环境管理要求。各作业区固体废物应按要求规范收集处置。 | 本项目采用洒水抑尘等先进的除尘技术。使用船舶岸电系统。本项目船舶含油废水委托海事部门指定的环保船接收处理；船舶生活污水、陆域生活废水、冲洗废水等收集后进入热电项目厂区污水处理站处理，全部回用不外排。危废委外安全处置，生活垃圾等环卫清运，运营期清淤固废按一般固废进行处置。本项目设置岸电系统。 | 符合 |
| 6 | （六）加强环境风险防范。严格限定和管理各作业区运输和存储的货种，加强港区安全保障和风险防范力度。落实港区环境风险应急能力建设要求，各作业区应按要求编制环境风险防范和应急预案，完善区域联动应急反应体系，合理配备应急设备设施，加强日常应急管理演练，及时应对可能出现的突发环境污染事故。苏淮高新区作业区主要货种为石油及制品、液体化学品等，作业区前方水域为洪水调蓄区以及南水北调输水河道苏北灌溉总渠，应采取严格措施防止对苏北灌溉总渠、南水北调通道的水质影响。 | 本项目加强环境风险应急能力建设，按要求编制环境风险防范和应急预案，完善区域联动应急反应体系，合理配备应急设备设施，加强日常应急管理演练。 | 符合 |
| 7 | （七）强化长期监测和跟踪评价。完善港口环境保护管理和监测机构，严格执行建设项目环评及“三同时”制度。建立完善港口环境监测监控系统，制定并实施港区日常环境监测计划，针对《规划》实施可能产生的长期累积不良环境影响，建立预警机制。在《规划》实施过程后，按规定开展环境影响跟踪评价，《规划》修编时应重新编制环境影响报告书。 | 本项目制定环境监测计划。 | 符合 |
| 8 | 四、对拟入区建设项目环评的指导意见：强化规划环评对项目环评的指导和约束作用，对拟建项目应重点分析项目实施对大气环境、水环境、生态环境等的影响。涉及重要生态环境敏感区域的，应就拟建项目的影响方式、范围和程度开展深入分析预测，强化环境风险防范，细化落实施工期、运营期环保对策措施，预防或者减轻项目实施可能产生的不良环境影响。有关规划协调性分析及现状评价内容可适当简化。 | 本项目位于《淮安港总体规划（2020—2035年）》规划的薛行作业区，该规划环评已取得批复意见，本项目不涉及重要生态环境敏感区域。 | 符合 |

综上，本项目不在禁止建设区和限制开发区，运输货种不涉及危险化学品，在严格落实报告书中的各项环保措施前提下，无污废水排入盐河中，不会对其水质和生态功能造成不利影响，固废废物得到有效处置，厂界废气、噪声达标，环境风险可控。因此，本项目的建设与《淮安港总体规划（2020—2035年）环境影响报告书》中的各项环保要求相符。

* + - 1. 与《淮安市大运河文化遗产保护条例》《大运河（淮安段）遗产保护规划》和《大运河淮安段清口枢纽保护总体规划（2012-2030）》相符性分析

根据《淮安市大运河文化遗产保护条例》《大运河（淮安段）遗产保护规划》和《大运河淮安段清口枢纽保护总体规划（2012-2030）》，大运河文化遗产包括：

（一）列入大运河世界文化遗产的清口枢纽片区，包括淮扬运河淮安段河道（里运河、里运河故道、古黄河、中运河、张福河）和清口枢纽、双金闸、清江大闸、洪泽湖大堤遗产点；

（二）列入大运河世界文化遗产的总督漕运公署遗址片区；

（三）大运河世界文化遗产以外的大运河河道，板闸遗址等其他水工遗存，泗州城遗址、第一山题刻等各类伴生历史遗存，历史街区村镇，以及相关联的环境景观等；

（四）近代以来兴建的具有文化代表性和突出价值的大运河水利设施；

（五）列入淮安市大运河文化遗产保护名录的其他物质文化遗产和非物质文化遗产。

大运河世界文化遗产清口枢纽片区范围：东界自淮阴船闸东侧里运河岸线外扩5m，至里运河与新京杭运河交汇处止。

本项目选址位于清口枢纽保护范围以外。同时，项目用地范围不占用大运河文化遗产，不在自然保护区、风景名胜区和森林公园内，未发现文物古迹。因此，项目建设符合文物保护规划要求。

* + - 1. 与《江苏省干线航道网规划（2023—2035年）》相符性分析

根据《省政府关于江苏省干线航道网规划（2023－2035年）的批复》（苏政复〔2023〕47号），“四、实施安排及效果展望 （一）分期实施安排 ：2031—2035年：重点推进淮河出海航道、**盐河**、苏申外港线、锡溧漕河、锡澄运河、泰东线**等二级航道整治工程**，同步推进兴东线、盐宝线、新汴河等三级航道整治工程”。本工程所在盐河航道现状等级为三级，规划等级为二级（2031—2035年）。二级航道可通航2000吨。本工程拟建泊位为3个1000吨级泊位，其中2个煤炭散货泊位、1个待泊泊位，泊位长度220m，码头建设规模符合《江苏省干线航道网规划》中规划的盐河工程河段的航道等级。

因此，本项目建设规模与《江苏省干线航道网规划（2023－2035年）》的相关要求相符。

* + - 1. 与《江苏省内河港口布局规划（2017—2035年）》相符性分析

根据《江苏省内河港口布局规划（2017-2035）》，淮安港包括市区、淮安、淮阴、盱眙、涟水、洪泽和金湖港区，以原材料、能源等大宗散杂货以及集装箱运输为主，逐步发展成为国家主要港口。

其中煤炭运输系统港口布局规划明确：“江苏内河港口煤炭运输将以铁路调入、海港调入和沿江港口调入为主，形成以徐州港、**淮安港**等为铁路煤炭装船港、以沿江沿海港口为煤炭中转装船港（沿海港区后方内河作业区），以各地区内河煤炭公用码头、**电厂等企业专用煤炭码头为卸船港**，以京杭运河、徐宿连航道、灌河、**盐河**、锡溧漕河、锡澄运河、连云港港疏港航道、滨海港疏港航道、大丰港刘大线为主要运输通道的煤炭运输体系。”

其中矿建材料运输系统布局规划明确：“我省矿建材料需求量将保持总体稳定，结合矿建材料生产、需求分布等情况，**矿建材料运输基本维持目前以**苏北徐州、**淮安**、宿迁、苏南高淳、溧阳等为**矿建材料运输枢纽节点**，以京杭运河、丹金溧漕河、芜申线等为运输通道的总体运输格局，通过京杭运河、长江从外省调入的量不断增加。

矿建材料码头布局要贯彻规模化、集约化原则，在各港总体规划确定的港口作业区或规划港口岸线中根据需求合理选址，靠近产地和需求地，并进行集中布置和建设，满足城镇建设发展和运输需求，满足生态环保要求。”

本项目工程选址于江苏省涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，位于盐河航道左侧薛行作业区岸线范围内，主要作为国能涟水一期项目运行期间煤炭运输使用，满足《江苏省内河港口布局规划（2017-2035）》中关于煤炭和扩建材料运输系统的规划布局要求。

因此，本项目符合《江苏省内河港口布局规划（2017-2035）》相关要求。

《江苏省内河港口布局规划（2017－2035年）》中的“五、环境影响评价”对具体项目的环境影响评价提出了相应要求，本项目与其相符性情况见表1.5-12。

与江苏省内河港口布局规划环评要求相符性分析一览表

| **序号** | **江苏省内河港口布局规划环评要求** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 1 | 按照《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》《江苏省国家级生态保护红线规划》《江苏省生态空间管控区域规划》等有关环境保护要求，牢固树立绿色安全发展理念，严守安全、环保底线，加强污染防治，强化环境风险管控，集约高效利用资源，推动绿色循环低碳港口建设，促进内河港口与生态环境和谐发展。 | 本项目符合《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》《江苏省国家级生态保护红线规划》《江苏省生态空间管控区域规划》等法律法规和规划要求，不属于法律法规禁止占用的区域；项目通过采取废气、废水、噪声和固废等污染防治措施加强污染防治，通过配备应急设备和提出应急预案要求来强化环境风险管控，港口采用岸电系统，符合绿色循环低碳港口建设要求。 | 相符 |
| 2 | 推动集约高效发展。着力优化内河港口布局，加强港口资源整合，促进重点规模化港口作业区建设发展。依法取缔拆除非法、小散乱码头，建设规模化、专业化码头，采用环保性能好、作业效率高的装卸机械设备。 | 本项目为散货码头，且项目采取了岸电设备，环保性能较好、作业效率较高。 | 相符 |
| 3 | 提升污染防治能力。加强港口污染物接收处理设施建设。加强港口粉尘综合防治和噪声防治。加强港口清洁能源推广应用，加快内河靠港船舶使用岸电基础设施建设，提高低碳绿色港口建设发展水平。 | 本项目废气均为无组织排放，设有洒水降尘措施，废气污染物排放符合《江苏省大气污染物综合排放标准》（DB324041-2021）要求；本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池 ，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。项目通过合理布局、隔声等措施减轻噪声污染的影响，确保场界噪声达标；固废均得到有效处置；项目拟建设岸电设备，建成后可提高低碳绿色港口建设发展水平。 | 相符 |
| 4 | 加强突发环境事件风险防控。危化品码头企业应开展突发环境事件风险评估，完善环境应急预案并备案。定期开展危险货物装卸专项治理，港口作业区内成立污染事故应急机构，加强污染事件应急处置队伍建设， | 本项目不属于危化品码头，主要环境风险为船舶溢油事故，已要求建设单位配备围油栏等应急设备，并提出了对应的环境风险应急措施及应急预案的编制要求。 | 相符 |
| 5 | 做好环境保护工作。在实施港门项目建设时，严格落实港口项目环境影响评价和环境保护“三同时”、排污许可要求，加强施工期间、生产运营过程中的环境保护管理工作，各地在编制港口总体规划时，应取消与饮用水源地等生态红线区域有冲突、不符合生态环境保护和相关规划要求的港口岸线，提高港口岸线利用效率和效益，根据规划确定的功能，充分考虑岸线和水陆域规划方案的环境保护要求，合理规划环境保护设施。 | 本项目施工期间、生产运营将严格按照相关法律法规和本报告书的环保措施要求落实环境保护“三同时”、排污许可要求，并加强过程中的环境保护管理工作。项目不属于“与饮用水源地等生态红线区域有冲突、不符合生态环境保护和相关规划要求的港口岸线”。 | 相符 |

* + 1. 与相关环保政策相符性
       1. 与《港口建设项目环境影响评价文件审批原则（试行）》相符性分析

根据关于印发机场、港口、水利（河湖整治与防洪除涝）三个行业建设项目环境影响评价文件审批原则的通知（环办环评〔2018〕2号），本项目建设与港口建设项目环境影响评价文件审批原则（试行）的相符性分析见表1.5-13，可以看出，本项目与该审批原则的各项要求相符。

本项目与港口建设项目环境影响评价文件审批原则（试行）相符性分析

| **序号** | **审批原则** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 1 | 项目符合环境保护相关法律法规和政策要求，与主体功能区规划、近岸海域环境功能区划、水环境功能区划、生态功能区划、海洋功能区划、生态环境保护规划、港口总体规划、流域规划等相协调，满足相关规划环评要求 | 本项目建设符合国家和江苏省的环境保护相关法律和政策要求，与江苏省水环境功能区划、《江苏省国家级生态保护红线规划》《江苏省生态空间管控区域规划》《淮安港总体规划（2020—2035年）》等相符，满足淮安港总体规划（2020—2035年）环评的各项环保要求 | 相符 |
| 2 | 项目选址、施工布置不占用自然保护区、风景名胜区、世界文化和自然遗产地、饮用水水源保护区以及其他生态保护红线等环境敏感区中法律法规禁止占用的区域。通过优化项目主要污染源和风险源的平面布置，与居民集中区等环境敏感区的距离科学合理。 | 本项目选址、施工未占用自然保护区、风景名胜区、世界文化和自然遗产地、饮用水水源保护区以及其他生态保护红线等环境敏感区中法律法规禁止占用的区域。项目平面布局合理，与周边居民点较远，不会对周围的声环境造成不利影响 | 相符 |
| 3 | 项目对鱼类等水生生物的洄游通道及“三场”等重要生境、物种多样性及资源量产生不利影响的，提出了工程设计和施工方案优化、施工噪声及振动控制、施工期监控驱赶救助、迁地保护、增殖放流、人工鱼礁及其他生态修复措施。对湿地生态系统结构和功能、河湖生态缓冲带造成不利影响的，提出了优化工程设计、生态修复等措施。对陆域生态造成不利影响的，提出了避让环境敏感区、生态修复等对策。在采取上述措施后，对水生生物的不利影响能够得到缓解和控制，不会造成原有珍稀濒危保护或重要经济水生生物在相关河段、湖泊或海域消失，不会对区域生态系统造成重大不利影响。 | 本项目不涉及重要水生生物的洄游通道及“三场”等重要生境，亦未涉及湿地生态系统、河湖生态缓冲带。 | 相符 |
| 4 | 项目布置及水工构筑物改变水文情势，造成水体交换、水污染物扩散能力降低且影响水质的，提出了工程优化调整措施。针对冲洗污水、初期雨污水、含尘废水、含油污水、洗箱（罐）废水、生活污水等，提出了收集、处置措施。在采取上述措施后，废（污）水能够得到妥善处置，排放、回用或综合利用均符合相关标准，排污口设置符合相关要求。 | 本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。 | 相符 |
| 5 | **煤炭、矿石等干散货码头项目，综合考虑建设性质、运营方式、货种等特点，针对物料装卸、输送和堆场储存提出了必要可行的封闭工艺优化方案，以及防风抑尘网、喷淋湿式抑尘等措施。油气、化工等液体散货码头项目，提**出了必要可行的挥发性气体控制、油气回收处理等措施。散装粮食、木材及其制品等采用熏蒸工艺的，提出了采用符合国家相关规定的工艺、药剂的要求以及控制气体挥发强度的措施。根据国家相关规划或政策规定，提出了配备岸电设施要求。  在采取上述措施后，粉尘、挥发性气体等排放符合相关标准，不会对周边环境敏感目标造成重大不利影响。 | （1）本项目采用封闭输煤皮带机运输，货种为煤炭，仅涉及物料卸船，不涉及物料装船。（2）本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带；转运站采用密闭方式且仓顶装有布袋除尘器。在运营过程中卸料时采用喷淋降尘的方式减少粉尘产生量，卸船接料口下口设置闸板、出料溜筒等，在吊机抓斗落料处的料斗顶端设置洒水喷嘴，作业时喷水形成水幕，抑制落料时所产生的粉尘。（3）本项目不涉及油气、化工等液体散货、粮食、木材及其制品。码头每个泊位均设计配套岸电设施。采取以上措施后，粉尘排放符合《江苏省大气污染物综合排放标准》（DB324041-2021）要求，不会对周边环境敏感目标造成重大不利影响。 | 相符 |
| 6 | 对声环境敏感目标产生不利影响的，提出了优化平面布置、选用低噪声设备、隔声减振等措施。按照国家相关规定，提出了一般固体废物、危险废物的收集、贮存、运输及处置要求。  在采取上述措施后，噪声排放、固体废物处置等符合相关标准，不会对周边居民集中区等环境敏感目标造成重大不利影响。 | 本项目所在区域空旷，周围居民点较少，最近距离为550m，各类固废均采取合理的收集、贮存、运输及处置，在采取上述措施后，本项目噪声排放、固体废物处置等符合相关标准，不会对周边居民等环境敏感目标造成重大不利影响。 | 相符 |
| 7 | 根据相关规划和政策要求，提出了船舶污水、船舶垃圾、船舶压载水及沉积物等接收处置措施。 | 本项目船舶含油污水经油水分离器处理后收集至码头船舶油污水收集装置，由海事部门认可的具备资质的油污水处理单位接收处理。 | 相符 |
| 8 | 项目施工组织方案具有环境合理性，对取、弃土（渣）场、施工场地（道路）等提出了水土流失防治和生态修复等措施。根据环境保护相关标准和要求，对施工期各类废（污）水、废气、噪声、固体废物等提出防治或处置措施。其中，涉水施工对水质造成不利影响的，提出了施工方案优化及悬浮物控制等措施；针对施工产生的疏浚物，提出了符合相关规定的处置或综合利用方案 | 本项目施工方案组织合理，施工场地、临时表土堆场等均布设于国能涟水一期热电联产项目的预留空地内，弃土场位于热电项目预留用地内，排泥场位于项目西侧，在使用过程中做好水保措施，最大限度减少临时工程对周围环境和土地的不利影响；项目疏浚时采用挡污帘等措施减少对盐河的影响，疏浚污泥余水经围堰、泄水口及后续沉淀池等预处理后，满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河，工程产生的水下方干化后弃方全部用于临时用地恢复。 | 相符 |
| 9 | 针对码头、港区航道等存在的溢油或危险化学品泄漏等环境风险，提出了工程防控、应急资源配备、事故池、事故污水处置等风险防范措施，以及环境应急预案编制、与地方人民政府及相关部门、有关单位建立应急联动机制等要求 | 本项目针对码头等存在的溢油泄漏等环境风险提出了加强风险管理、配备围油栏、吸油毡等风险防范措施，提出了环境应急预案编制、与地方相关部门、有关单位建立应急联动机制等要求。 | 相符 |
| 10 | 改、扩建项目在全面梳理了与项目有关的现有工程环境问题基础上，提出了“以新带老”措施。 | 本项目码头属于新建项目，不涉及“以新带老”措施。 | 相符 |
| 11 | 按相关导则及规定要求，制定了水生生态、水环境、大气环境、噪声等环境监测计划，明确了监测网点、因子、频次等有关要求，提出了开展环境影响后评价、根据监测评估结果优化环境保护措施的要求。根据需要和相关规定，提出了环境保护设计、开展相关科学研究、环境管理等要求。 | 本项目提出了全过程的环境管理计划；按照相应环境要素导则要求，制定了水环境、大气环境、噪声等环境监测计划。提出了项目建设、运行过程中产生不符合经审批的环境影响评价文件的情形时，需开展环境影响后评价、根据监测评估结果优化环境保护措施的要求。 | 相符 |
| 12 | 对环境保护措施进行了深入论证，建设单位主体责任、投资估算、时间节点、预期效果明确，确保科学有效、安全可行、绿色协调。 | 报告对拟采取的各项环境保护措施进行了深入论证，明确了建设单位主体责任，对环保设施的投资估算、投产时间、拟达到处理效果等提出了相应要求，可有效指导项目的全过程环境保护。 | 相符 |
| 13 | 按相关规定开展了信息公开和公众参与 | 本项目将按照《环境影响评价公众参与办法》进行了网络公示、登报公示、现场张贴公告等多种公众参与方式。 | 相符 |

* + - 1. 与《中华人民共和国长江保护法》相符性分析

对照《中华人民共和国长江保护法》，本项目符合要求，详见表1.5-14。

与《中华人民共和国长江保护法》相符性分析

| **项目** | **文件相关内容** | **相符性分析** | **是否相符** |
| --- | --- | --- | --- |
| 规划与管控 | 第二十一条“国务院生态环境主管部门根据水环境质量改善目标和水污染防治要求，确定长江流域各省级行政区域重点污染物排放总量控制指标。长江流域水质超标的水功能区，应当实施更严格的污染物排放总量削减要求。企业事业单位应当按照要求，采取污染物排放总量控制措施。” | 本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，初期雨水经过滤处理达到回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。 | 相符 |
| 资源保护 | 第三十八条“国务院水行政主管部门会同国务院有关部门确定长江流域农业、工业用水效率目标，加强用水计量和监测设施建设；完善规划和建设项目水资源论证制度；加强对高耗水行业、重点用水单位的用水定额管理，严格控制高耗水项目建设。” | 本项目不属于高耗水项目，加强水资源利用。 | 相符 |
| 水污染防治 | 第五十条“长江流域县级以上地方人民政府应当组织对沿河湖垃圾填埋场、加油站、矿山、尾矿库、危险废物处置场、化工园区和化工项目等地下水重点污染源及周边地下水环境风险隐患开展调查评估，并采取相应风险防范和整治措施。” | 本项目不属于垃圾填埋场、加油站、矿山、尾矿库、危险废物处置场、化工园区和化工项目。 | 相符 |
| 第四十九条　禁止在长江流域河湖管理范围内倾倒、填埋、堆放、弃置、处理固体废物。长江流域县级以上地方人民政府应当加强对固体废物非法转移和倾倒的联防联控 | 项目危废暂存于后房热电厂区危废仓库后定期交由有资质的单位处置，生活垃圾等采取环卫清运，均得到合理处置。 | 相符 |

* + - 1. 《“十四五”生态保护监管规划》（环生态〔2022〕15号）

根据《“十四五”生态保护监管规划》：结合“绿盾”自然保护地强化监督专项行动，重点加强采矿采砂、工矿企业、核心区缓冲区旅游设施和水电设施四类重点问题，以及长江经济带国家级自然保护区设立后发生的采矿（石）、采砂、非法建设码头、开办工矿企业、挤占河（湖）岸、侵占湿地，以及核心区缓冲区内旅游开发和水电开发等八类重点问题监测。

本项目不在生态保护红线和自然保护地内，对照该规划附表，项目不在生态保护监管重点区域。

* + - 1. 与《关于建立健全长江经济带船舶和港口污染防治长效机制的意见》（交水发〔2021〕27号）的相符性

与“交水发〔2021〕27号”文的相符性

| **条款** | **文件要求** | **本项目情况** | **相符性分析** |
| --- | --- | --- | --- |
| 第一条 | 严格源头管控。新、改、扩建码头工程严格按照法律法规和标准规范要求同步配置环保设施并按规定履行环保手续，同步建设岸电设施，在码头设计、建设和运营各环节管理中严格把关 | 本项目道路扬尘主要采用洒水抑尘措施；废水经收集后接管至国能涟水一期热电联产项目厂区处理，本项目岸电设施与环保设施同步建设 | 符合 |
| 第二条 | 巩固污染防治总体能力。加强码头自身环保设施的维护和管理，确保稳定运行。强化干散货码头扬尘污染防治，推进港作机械新能源和清洁能源替代，推进原油、成品油码头和船舶油气回收 | 本项目码头主要货种为煤炭，在运营过程中加强码头自身环保设施的维护和管理，项目道路扬尘主要采用洒水抑尘措施，属于《排污许可证申请与核发技术规范 码头》（HJ1107-2020）中推荐可行措施，港作机械使用清洁能源电能。 | 符合 |
| 第三条 | 加强船舶污染物接收转运处置有效衔接。严格执行内河港口船舶生活垃圾免费接收政策。 | 本项目船舶生活垃圾由国能涟水一期热电联产项目厂区保洁接收，并交由环卫部门定期清理。 | 符合 |

* + - 1. 与《江苏省生态环境厅关于进一步做好建设项目环评审批工作的通知》相符性分析

根据《江苏省生态环境厅关于进一步做好建设项目环评审批工作的通知》（苏环办〔2019〕36号）建设项目环评审批要点，本项目与相关内容相符性分析见表1.5-16。

与《省环保厅关于进一步做好建设项目环评审批工作的通知》相符性分析

| **序号** | **建设项目环评审批要点** | | **相符性分析** | **是否相符** |
| --- | --- | --- | --- | --- |
| 1 | 以下情形不予审批 | 建设项目类型及其选址、布局、规模等不符合环境保护法律法规和相关法定规划。 | 经过与“三线一单”及规划相符性分析可知，建设项目类型及其选址、布局、规模等均符合环境保护法律法规和相关法定规划。 | 符合 |
| 所在区域环境质量未达到国家或者地方环境质量标准，且建设项目拟采取的措施不能满足区域环境质量改善目标管理要求。 | 项目所在区域属于环境空气达标区；本项目地表水环境渠西河、盐河均满足《地表水环境质量标准》（GB3838-2002）中的相应水质标准；区域声环境质量达标。 | 符合 |
| 建设项目采取的污染防治措施无法确保污染物排放达到国家和地方排放标准，或者未采取必要措施预防和控制生态破坏。 | 本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，初期雨水池设置过滤装置，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。 | 符合 |
| 改建、扩建和技术改造项目，未针对项目原有环境污染和生态破坏提出有效防治措施。 | 本项目为国能涟水一期热电联产项目配套码头，码头属于新建项目。 | / |
| 建设项目的环境影响报告书、环境影响报告表的基础资料数据明显不实，内容存在重大缺陷、遗漏，或者环境影响评价结论不明确、不合理。 | 本次评价以企业实际提供资料为前提，核实后进行报告编制，环境影响评价结论明确。 | / |
| 2 | 严格控制在优先保护类耕地集中区域新建有色金属冶炼、石油加工、化工、焦化、电镀、制革等行业企业，有关环境保护主管部门依法不予审批可能造成耕地土壤污染的建设项目环境影响报告书或者报告表。 | | 本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，用地性质为国能涟水一期热电项目预留建设用地，不属于严格控制的行业。 | 符合 |
| 3 | 严格落实污染物排放总量控制制度，把主要污染物排放总量指标作为建设项目环境影响评价审批的前置条件。排放主要污染物的建设项目，在环境影响评价文件审批前，须取得主要污染物排放总量指标。 | | 本项目总量指标在区域内平衡。 | 符合 |
| 4 | 对环境质量现状超标的地区，项目拟采取的措施不能满足区域环境质量改善目标管理要求的，依法不予审批其环评文件。 | | 项目所在区域属于环境空气达标区；本项目地表水环境渠西河、盐河均满足《地表水环境质量标准》（GB3838-2002）中的相应水质标准；区域声环境质量达标，故满足区域环境质量改善目标管理要求。 | 符合 |
| 5 | 生态保护红线原则上按禁止开发区域的要求进行管理，严禁不符合主体功能定位的各类开发活动，严禁任意改变用途。 | | 本项目不在生态红线区域范围之内。 | 符合 |
| 6 | 禁止审批无法落实危险废物利用、处置途径的项目，从严审批危险废物产生量大、本地无配套利用处置能力且需设区市统筹解决的项目。 | | 本项目危险废物合理合法利用、处置。固废处置率100%。 | 符合 |
| 7 | 禁止新建、扩建法律法规和相关政策明令禁止的落后产能项目。 | | 项目不属于法律法规和相关政策明令禁止的落后产能项目，不属于国家产能置换要求的过剩产能行业的项目。 | 符合 |
| 8 | 禁止新建、扩建不符合国家产能置换要求的严重过剩产能行业的项目。 | |

* + - 1. 与《江苏省水污染防治条例》相符性分析

项目与《江苏省水污染防治条例》相符性分析详见表1.5-17。

项目建设与江苏省水污染防治条例相符性分析

| **文件要求（涉及主要内容）** | **相符性分析** | **是否相符** |
| --- | --- | --- |
| 对超过重点水污染物排放总量控制指标或者未完成水环境质量改善目标的地区，省生态环境主管部门应当会同有关部门约谈相关地区人民政府的主要负责人，并暂停审批该地区新增重点水污染物排放总量的建设项目的环境影响评价文件。 | 本项目地表水环境渠西河、盐河均满足《地表水环境质量标准》（GB3838-2002）中的相应水质标准。 | 相符 |
| 新建、改建、扩建直接或者间接向水体排放污染物的建设项目和其他水上设施，应当依法进行环境影响评价，并符合国家和省有关生态保护红线、环境准入清单、生态环境质量和资源利用的要求 | 本项目依法开展环评，项目布局符合江苏省生态空间管控区域规划、环境准入负面清单和生态环境、资源利用的相关要求。 | 相符 |
| 在江河、湖泊新建、改建、扩建入河排污口，或者已经设置的入河排污口位置、排放方式等需要调整的，不得违反有关法律法规禁止设置入河排污口的规定，并依法经过批准 | 本项目不设置污水入河排污口。本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，初期雨水池设置过滤装置，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。 | 相符 |
| 实行排污许可管理的企业事业单位和其他生产经营者经依法批准设置入河排污口的，应当按照国家有关规定和生态环境监测标准、技术规范，在厂界处、入河处设置便于采样的监测点，设置标识牌，对所排放的水污染物自行监测并保存原始监测记录 | 本项目不设置入河排污口。本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，初期雨水池设置过滤装置，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。 | 相符 |
| 禁止在长江干支流岸线规定范围内新建、扩建化工园区和化工项目，具体范围按照国家和省有关规定执行 | 本项目不涉及长江干支流，也不属于化工园区和化工项目。 | 相符 |
| 船舶排放含油污水、生活污水，应当符合船舶污染物排放标准。船舶的残油、废油应当回收，禁止排入水体。禁止向水体倾倒船舶垃圾。不符合排放规定的船舶污染物应当交由港口、码头、装卸站或者有资质的单位接收。船舶应当按照规定设置或者改造生活污水存储设施、船舶垃圾储存容器，并正常使用，不得停止使用或者挪作他用。含油污水、残油、油泥、含有毒液体物质洗舱水等船舶污染物、废弃物不得排入船舶生活污水存储设施或者船舶垃圾储存容器；属于危险废物的，应当按照有关危险废物的管理规定进行管理。 | 本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，初期雨水池设置过滤装置，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。生活垃圾按照分类要求进行分类收集；垃圾日产日清，垃圾收集区域无暴露积存垃圾。装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。 | 相符 |
| 禁止在通榆河和本省行政区域内的长江、南水北调输水干线运输剧毒化学品以及国家规定禁止通过内河运输的其他危险化学品。 | 本项目不涉及通榆河及长江、南水北调输水干线。本项目运输的货物为散货煤炭，不涉及剧毒化学品和其他危险化学品。 | 相符 |

* + - 1. 与《关于印发江苏省港口与船舶大气污染防治工作方案的通知》（苏环办〔2022〕258号）相符性分析

为落实国家及江苏省关于深入打好污染防治攻坚战的意见要求，深入打好蓝天保卫战，持续改善环境空气质量，江苏省生态环境厅联合省交通运输厅、江苏海事局制定了江苏省港口与船舶大气污染防治工作方案。本项目与方案相关要求的相符性分析如下表。

项目与（苏环办〔2022〕258号）相符性分析

| **文件要求（涉及主要内容）** | **相符性分析** | **是否相符** |
| --- | --- | --- |
| 二、工作目标 | | |
| 港口粉尘治理深入推进。在确保安全的前提下，全省规模以上干散货港口适宜建设的，2023年底前力争实现封闭式料仓和封闭式皮带廊道运输系统全覆盖。 | 本项目实施依托后方热电厂区堆场，该堆场全封闭；散货煤炭通过密闭皮带输送至热电厂区封闭煤场内。 | 相符 |
| 推进岸电设施建设使用。2023年底前，完成干散货码头岸电设施建设和改造工作。2025年主要港口和排放控制区内靠港船舶的岸电使用电量在2020年基础上翻一番。 | 本项目建设岸电工程。 | 相符 |
| 三、工作要求 | | |
| 干散货港口码头应采取综合抑尘措施。在确保安全的前提下，全省规模以上干散货港口适宜建设的，2023年底前力争实现封闭式料仓和封闭式皮带廊道运输系统全覆盖。  装卸作业要求：装卸船机、带斗门机、堆场堆取料设备、翻车机、装车机等应根据物流特性采用适宜的除尘抑尘方式。装船机、卸船机皮带头部设置密闭罩，装船机尾车、臂架皮带机两侧及装船机行走段皮带机、卸船机行走段皮带机设置挡风板。  输送作业要求：带式输送机除需要与装卸设备配套的部分外采用廊道等予以封闭，同时应考虑安全要求。建设有转接站的应在转接落料、抑尘点处设置封闭式导料槽、密闭罩、防尘帘等密闭设施，并优先采用干雾抑尘、静电除尘、布袋除尘等方式。强化转运作业扬尘污染防治，外出车辆冲洗干净后方可驶离港区。  堆存要求：按照交通运输部发布的《港口干散货封闭式料仓工艺设计规范》（JTS/T 186—2022）要求，推进建设筒仓、穹顶圆形料仓、条形仓、平房仓等封闭式料仓。煤炭封闭式料仓可选用筒仓、穹顶圆形料仓、条型仓等；矿石封闭式料仓可选用条型仓等；粮食封闭式料仓可选用筒仓、平房仓等；化肥封闭式料仓可采用平房仓等；水泥封闭式料仓可采用筒仓等。尚未进入封闭式料仓的物料，应根据需要对堆场设置防风抑尘网、围墙等防尘屏障。除不宜洒水降尘的货种外，鼓励规模以上港口配备固定式喷枪洒水（或高杆喷雾）抑尘系统，其他可采用移动式洒水等设施。 | 本项目煤炭装卸采用的桥式抓斗卸煤机装有干雾抑尘装置，抓斗卸船时，落料落差低于1.5米，煤炭输送带采用密闭方式，转运站采用密闭方式且仓顶装有布袋除尘器；船舱清理采用小型推耙机，并配以人工辅助，清舱期间采用洒水抑尘，并在大风天气（不利气象条件下）停止装卸作业。本项目无汽车转运作业。 | 相符 |
| （五）强化岸电设施建设使用  1.推进码头岸电设施建设  新、改、扩建码头工程应严格执行《港口和船舶岸电管理办法》《码头岸电设施建设技术规范》等相关要求，确保码头岸电设施供电能力与靠泊船舶的用电需求相适应。港口企业应按照相关规范对岸电进行更新或升级改造，并定期组织开展岸电检测情况监督检查。2022年底前，完成沿海、沿江煤炭干散货码头、长江干线商品车滚装码头、长江干线集装箱码头岸电设施建设和改造工作。2023年底前，完成全省干散货码头岸电设施建设和改造工作。2025年底前，推动长江港口非危码头岸电覆盖率100%。  2.强化船舶受电设施建设改造  推进滚装船、600总吨及以上干散货船和多用途船等船舶岸电系统受电设施改造。2023年底前，基本完成内河滚装船、1200总吨及以上内河干散货船和多用途船、海进江船受电设施改造；2025年底前，基本完成600总吨及以上内河干散货船和多用途船改造工作。鼓励其他类型运输船舶（散装液体危险货物运输船舶除外）实施改造。  3.提高岸电设施使用率  推进船舶靠港使用岸电常态化。2023年，靠港2小时及以上且无等效替代措施情况下，长江干线集装箱船靠港岸电使用率比2020年提升80%。2025年，靠港2小时及以上且无等效替代措施情况下，1200总吨及以上的内河干散货船靠港岸电使用率比2020年提升90%；主要港口和排放控制区内靠港船舶的岸电使用电量在2020年基础上翻一番，具备岸电供电条件的码头、水上服务区岸电应用尽用。 | 本项目建设岸电工程，并推进船舶靠港使用岸电常态化，提高岸电设施使用率。 | 相符 |
| （八）提高监测监控能力  加快智慧港口建设，2022年底前，从事易起尘货种装卸的港口码头粉尘在线监测覆盖率100%。2023年底前，从事原油成品油装卸作业的港口码头已建油气回收设施在线监测覆盖率力争达100%。新建港口码头需依法安装相应的污染物排放在线监测设备。强化非现场监管能力，推进在线监测数据互联共享、分析应用。探索船舶尾气遥感遥测系统建设和船舶尾气排放在线监测设备试点。 | 本项目不涉及原油成品油装卸。本项目建设单位将按照文件要求及相关管理部门的统一部署，建设粉尘在线监测系统，数据互联共享。 | 相符 |

综上，本项目建设与《关于印发江苏省港口与船舶大气污染防治工作方案的通知》（苏环办〔2022〕258号）要求相符。

* + - 1. 与《江苏省大气颗粒物污染防治管理办法》（省政府令第91号）相符性分析

《江苏省大气颗粒物污染防治管理办法》提出：港口码头、建设工地和钢铁、火电、建材等企业的物料堆放场所应当按照要求进行地面硬化，并采取密闭、围挡、遮盖、喷淋、绿化、设置防风抑尘网等措施。物料装卸可以密闭作业的应当密闭，避免作业起尘。大型煤场、物料堆放场所应当建立密闭料仓与传送装置。

本码头新建项目不涉及高污染工业项目，属于港口码头项目，提供散杂煤炭的运输服务，码头不设置物料堆场。本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带，符合《江苏省大气颗粒物污染防治管理办法》（省政府令第91号）中的相关要求。

* + - 1. 与《江苏省港口粉尘综合治理专项行动实施方案》（苏交港〔2017〕11号）相符性分析

与《江苏省港口粉尘综合治理专项行动实施方案》（苏交港〔2017〕11号）相符性分析详见表1.5-19。

项目与苏交港〔2017〕11号的相符性

| **文件要求（涉及主要内容）** | **相符性分析** | **是否相符** |
| --- | --- | --- |
| 1、堆场扬尘综合防治措施  露天堆场应根据需要设置防风抑尘网、围墙、防护林等防尘屏障，并采取洒水抑尘、干雾抑尘、苫盖等粉尘控制措施。大型堆场应配备固定式喷枪洒水（或高秆喷雾）抑尘系统，小型堆场也可采用移动式洒水（或高秆喷雾）设施。防风抑尘网高度宜取堆垛高度的1.1-1.5倍，且高出堆垛部分不应小于1米，开孔率为30%～40%。  电厂等煤炭专用码头实施半封闭或封闭堆存方式，并满足安全要求。 | 本项目为电厂配套码头项目，属于电厂的煤炭专用码头，项目不涉及露天堆场。本项目码头煤炭卸料后直接通过封闭输煤栈桥输送至后方电厂封闭煤场。 | 相符 |
| 2、装卸设备粉尘控制措施  装卸机械采取适用的抑尘措施，在不利气象条件下停止作业。装卸船机、带斗门机、堆场堆取料设备、翻车机、装车机等宜采用湿法除尘抑尘方式。带式输送机除需要与装卸设备配套的部分外应采用皮带罩或廊道予以封闭，同时考虑安全要求，避免火灾和烟囱效应。转接站应在转接落料、抑尘点处设置导料槽、密闭罩、防尘帘等密闭设施，并优先采用干雾抑尘、微动力除尘、静电除尘、布袋除尘等方式。煤炭筛分鼓励有条件的堆场建设专用筛分库房，筛分量较小的设置固定场地，且在防风抑尘网范围内进行，作业同时喷淋。  电厂等煤炭专用码头进行封闭式作业工艺改造，采用封闭带式输送机系统替代原有的自卸汽车，采用堆取料机装卸作业替代原有单斗装载机作业等。 | 本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带；转运站采用密闭方式且仓顶装有布袋除尘器。在运营过程中装卸时采用喷淋降尘的方式减少粉尘产生量，在吊机抓斗落料处的料斗顶端设置洒水喷嘴，作业时喷水形成水幕，抑制落料时所产生的粉尘 | 相符 |
| 3、汽车转运粉尘控制措施  港口散货运输车辆优先采用封闭车型，敞篷车型必须对车厢进行覆盖封闭，防止抛洒滴漏。有车辆进出的码头堆场应在港区出口处设置车辆清洗的专用场地，冲洗范围应包括车轮和车架。鼓励有条件的港口企业设置车辆自动冲洗场地，并在汽车装卸车作业点配备移动式远程射雾器进行喷雾抑尘。 | 本项目为电厂配套码头项目，本项目码头煤炭卸料后直接通过封闭输煤栈桥输送至后方电厂封闭煤场。不涉及散货运输车辆 | 相符 |
| 4、道路扬尘控制措施  港区主干道及辅助道路进行铺装、硬化处理，并对破损路面应及时修复。鼓励有条件的企业采用钢筋混凝土道路结构并采用机械化清扫方式，并配以洒水抑尘。 | 给水设计中考虑定期对道路冲洗，道路铺面结构采用现浇普通混凝土铺面结构，结构整体性好，耐久性高，每天定期清扫，从而有效减少码头道路扬尘。 | 相符 |
| （三）加强粉尘监测监控  加快推进覆盖全省主要港口的粉尘监测网建设，在从事易起尘货种装卸的港口区域安装粉尘在线监测设备，监测数据按照相关技术要求接入市级环保监控平台，与交通运输（港口）管理部门实时共享数据信息。 | 本项目建设有港口能耗在线监测系统和污染物排放在线监测系统，能够进行码头粉尘监测 | 相符 |

本项目符合《江苏省港口粉尘综合治理专项行动实施方案》中的相关要求。

* + - 1. 与《江苏省重点行业堆场扬尘污染防治指导意见（试行）》（苏环办〔2021〕80号）相符性分析

本项目与《江苏省重点行业堆场扬尘污染防治指导意见（试行）》（苏环办〔2021〕80号）相符性分析详见表1.5-20。

项目与苏环办〔2021〕80号文相符性分析

| **文件要求（涉及港口主要内容）** | **相符性分析** | **是否相符** |
| --- | --- | --- |
| 1.物料存储环节：经营煤炭、砂石、矿建材的，应采取条仓、筒仓等封闭或者半封闭存储措施；散装水泥、超细粉应采用筒仓等封闭措施进行储存，袋装水泥、超细粉应采用库房等封闭措施进行储存，上述措施应满足安全生产要求。码头应配置流动清扫车、洒水车或喷扫两用车并配备必要的冲洗设备。块状物料采用露天堆场堆存的，应根据需要对堆场设置防风抑尘网、围墙、防护林等防尘屏障，堆垛四周应设置连续围堰，堆场的运输通道应机械吸尘、清扫。除不宜洒水降尘的货种外，露天堆场应配备喷枪洒水、高秆喷雾等抑尘系统。不宜洒水降尘的货种，露天堆场应采取苫盖等粉尘控制措施。 | 本项目为电厂配套码头项目，属于电厂的煤炭专用码头，项目不涉及露天堆场。本项目码头煤炭卸料后直接通过封闭输煤栈桥输送至后方电厂封闭煤场。码头配备冲洗设备。 | 相符 |
| 2.物料装卸、运输、输送环节：港口码头物料的装卸运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施。装卸和输送设备应配备完善的除尘抑尘系统，提高自动化程度，优化工艺流程，尽可能减少粉尘排放。物料垛高度低于堆料机最低位高度（初始堆料）时，堆料机应处在最低位进行堆料作业。使用抓斗卸船时，落料落差不得超过1.5米。严禁直接将港口码头落地的物料清扫入河、入海。物料在进行汽车装卸运输作业时，应降低装车落料高度，控制装载量，并平整、压实、封闭或苫盖严密。装载车辆应控制车速，选择合理线路。汽车出场时应冲洗轮胎，控制并减少二次扬尘。 | 本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带；转运站采用密闭方式且仓顶装有布袋除尘器。在运营过程中装卸时采用喷淋降尘的方式减少粉尘产生量，在吊机抓斗落料处的料斗顶端设置洒水喷嘴，作业时喷水形成水幕，抑制落料时所产生的粉尘。码头不涉及装载车辆运输。 | 相符 |

本项目符合《江苏省重点行业堆场扬尘污染防治指导意见（试行）》中的相关要求。

* + - 1. 与《关于开展新一轮港口污染防治能力提升的通知》（苏交港〔2023〕27号）相符性分析

本项目属于干散货码头，为后方热电项目配套码头，不涉及堆场、仓储，仅涉及物料转运。本项目与《省交通运输厅省生态环境厅关于开展新一轮港口污染防治能力提升工作的通知》（苏交港〔2023〕27号）的相符性分析见表1.5-21。

项目与苏交港〔2023〕27号文相符性分析

| 文件要求（涉及港口主要内容） | | | | 本项目情况 | 是否相符 |
| --- | --- | --- | --- | --- | --- |
| 污染类型 | 控制目标 | 环保设施 | 内河港口要求 |
| 扬尘 | 港口装卸、运输及储存扬尘得到有效控制，地面无明显物料，运输过程无跑冒滴漏，现场无明显可见扬尘，实现厂界达标 | 堆场及道路硬化 | （1）堆场及港区内车辆行驶道路采用联锁块（硫黄、化肥等可造成地下水污染的货种除外）、混凝土浇筑、沥青铺装等方式进行硬化，并保证场地无损坏。 | 本项目不涉及堆场，港区内车辆行驶道路采用混凝土浇筑进行硬化，场地无损坏。 | 相符 |
| 运输方式及封闭 | （1）设有皮带输送系统运输的港口码头，可参考沿海、沿江要求封闭皮带机系统；（2）散货运输车辆优先采用封闭车型，敞篷车型须对车厢覆盖封闭。 | （1）本项目皮带机输送，设置防护罩密闭运输。（2）本项目物料不涉及车辆运输 | 相符 |
| 洒水喷淋—装卸运输 | （1）采用皮带机运输系统的，参考沿海、沿江要求：①卸船接料斗下口应设闸板、出料溜筒；②散货应通过皮带输送系统作业装船，装船机头部应可调节高度，头部应设导料软帘和喷雾压尘，喷雾射程大于1m，喷雾嘴数量、喷雾角度的参数设置，应能使喷雾覆盖落料口四周半径1m范围；③皮带机转运站应在头罩、导料槽处采用干雾抑尘、微动力除尘、静电除尘、布袋除尘等除尘方式；④皮带机落料辊筒下方应设置皮带清扫或人工清扫，设置清扫器时，下方应设接料斗和溜槽，将清扫物料转入接料皮带；（2）卸船接料斗下方对应车辆运输的，接料斗下口应设闸板、出料溜筒和喷雾压尘，喷雾射程大于1m，喷雾嘴数量、喷雾角度的参数设置，应能使喷雾覆盖接料斗上口。 | （1）本项目采用封闭输煤皮带机运输，货种为煤炭，仅涉及物料卸船，不涉及物料装船。（2）本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带；转运站采用密闭方式且仓顶装有布袋除尘器。在运营过程中卸料时采用喷淋降尘的方式减少粉尘产生量，卸船接料口下口设置闸板、出料溜筒等，在吊机抓斗落料处的料斗顶端设置洒水喷嘴，作业时喷水形成水幕，抑制落料时所产生的粉尘。项目不涉及车辆运输 | 相符 |
| 车辆冲洗平台 | （1）至少在厂区出口设置1套车辆冲洗平台；（2）冲洗平台应设置沉淀池，确保冲洗废水经沉淀处理后回用，不得外排。 | 本项目物料运输为封闭输煤皮带运输，不涉及车辆运输 | 相符 |
| 粉尘在线监测设备 | （1）装卸易起尘货种码头应设置粉尘在线监测设备；（2）监测点数量根据码头堆场面积而定，监测点位应设置在粉尘无组织排放源下风向，同时在排放源上风向设参照点；（3）监测点位设置应符合“1+n”原则，其中“1”为厂界监测点，“n”为港区内监测点。厂界监测点的设置应满足环保部门关于环境空气质量监测的需求，符合GB3095、HJ655的相关要求；港区内监测点应设置于码头厂界范围内，且可直接监控码头堆场主要生产活动的区域。 | 本码头需设置粉尘在线监测设备，本码头不涉及堆场，在码头西侧设置一个码头厂界监测点，同时在码头上风向设参照点。 | 相符 |
| 船舶废气 | 船舶停泊期间岸电设施得到有效利用。 | 岸电设施 | 港口均应配备岸电设施，并保证岸电设施的正常运行。 | 本码头配备岸电设施，并保证岸电设施的正常运行。 | 相符 |
| 初期雨水、冲洗废水 | 初期雨水以及冲洗废水全收集和妥善处置，禁止外排。 | 集水沟 | （1）港区码头面、堆场处应设置集水沟，集水沟的尺寸应与汇水面积和降雨强度等因素相适应；（2）港区码头无条件设置集水沟时，可设置明渠、导流槽等替代收集设施；（3）码头面护轮坎保持完好，无破损、缺失，避免初期雨水、冲洗废水直排。 | 本项目不涉及堆场，码头设置集水沟。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排 | 相符 |
| 沉淀池 | （1）集水沟下游应设置沉淀池，沉淀池有效容积应与汇水面积和降雨强度等因素相适应；（2）码头面初期雨水量由汇水面积和降雨强度公式确定；（3）初期雨水及冲洗废水优先回用。 | 相符 |
| 生活垃圾 | 船舶污染物的“应收尽收、应转尽转、应处尽处”，实现“船港城”协同治理 | 垃圾接收装置 | （1）船舶生活垃圾使用固定式接收装置或流动接收装置收集；（2）采取岸上固定式接收装置收集时，港口码头船舶生活垃圾桶（箱）配置数量应不低于下表的要求；    （3）船舶垃圾纳入市政公共转运处置体系（第三方或者环卫部门）进行清运处置，并按照“船E行”系统要求完成污染物接收确认及转运工作。 | 本项目设置船舶生活垃圾分类接收桶，接收的船舶垃圾定期由环卫处置。 | 相符 |
| 生活废水 | 废水接收装置 | （1）船舶生活污水使用固定式接收装置或流动接收装置收集；（2）采取岸上固定式接收装置收集时，港口码头船舶生活污水储存设施的容积应根据码头泊位的设计通过能力确定，并应不低于下表中的要求；    （3）设计通过能力低于50万吨或者靠港船舶数量少、码头泊位相邻的经营企业可共用暂存装置或者污水接收车；（4）船舶生活污水可通过委托第三方转运处置、自建污水处理设施处理以及接管等方式处理，并按照“船E行”系统要求完成污染物接收确认及转运工作。 | 本项目设计吞吐量112万吨/年，设置1个10m3船舶生活污水收集桶，满足相关管理规定要求。项目接收船舶生活污水，暂存于船舶生活污水收集桶内，然后排入厂区污水处理站处理后全部回用。 | 相符 |
| 含油污水 | 含油污水接收装置 | （1）船舶含油污水使用固定式接收装置或流动接收装置收集；（2）采取岸上固定式接收装置收集时，港口码头应配置接收桶、接收罐、接收池等含油污水接收设施，其容积应不低于下表要求；    （3）船舶含油污水收集后应委托第三方有资质单位、自建污水处理站点处理、预处理后接管等方式进行收集处置，并按照“船E行”系统要求完成污染物接收确认及转运工作。 | 本项目设计吞吐量112万吨/年，设置1个1m3船舶含油污水收集桶，满足相关管理要求。项目接收船舶含油污水，暂存于船舶含油污水收集桶内，委托有资质单位处理。 | 相符 |

* + - 1. 与《省生态环境厅关于印发防范清淤疏浚工程对水质影响工作方案的通知》（苏环办[2021]185 号）相符性分析

本项目在施工前按照相关要求制定了详细的施工组织方案，已完成了项目立项和初步设计，环评等工作正在进行。项目河段及下游清水河不涉及省考断面。项目施工过程中科学建设挡水围堰，施工水下土方经现场干拌后直接外运至附近排泥场，运输车辆运输过程全程封闭。项目产生的施工废水收集后进入沉砂池，沉淀后的上清液可回用于施工场地的洒水抑尘、施工车辆的清洗等，不直接排放。具体见下表。

与苏环办〔2021〕185号相符性分析

| **主要措施** | **序号** | **措施要求** | **相符性分析** | **是否符合** |
| --- | --- | --- | --- | --- |
| 规范清淤前期管理程序 | 1 | 一般建设性工程建设单位施工前需按照相关要求完成项目立项、初步设计、环评、稳评、洪评等工作，需制定详细施工组织方案。按照环评批复要求，制定环境管控工作方案和突发环境事故的应急处置预案。对于工程规模较小或临时性、应急性工程，需针对环境质量状况和工程作业方法，提前制定环境保护工程措施。 | 本项目施工前需完成项目立项、初步设计、环评、稳评、洪评等工作，目前处在工可编制阶段，前期环评专题已完成备案，本次环评正在审批，洪评正在编制，以上专题为工可批复的前提，工可批复后取得省发改委立项批复，后续进行初步设计，工程将严格按照程序要求，办理审批手续；并在施工前制定详细的施工组织方案。报告已提出本项目施工前制定环境管控工作方案和突发环境事故的应急处置预案，必要时制定环境保护工程措施，具体见6.1.1.5和6.1.1.6小节。 | 相符 |
| 2 | 对于重点湖泊和较大骨干河道清淤前，应开展湖（河）底泥摸底调查，切实掌握底泥分布特点和实际污染状况，科学确定清淤深度和土方量。合理安排生态清淤工程作业方法，确保工程能够取得较大环境效益的同时，减轻对水环境、水生态造成影响。 | 本次环评已对项目范围底泥进行了监测，本次评价还提出项目在疏浚前开展底泥监测，进行底泥摸底性调查，并纳入三同时和施工期监测计划中，具体见表7.1-1和8.2.2；本项目根据二级航道标准进行疏浚，项目采用反铲式挖泥船疏浚，减轻对水环境、水生态造成影响。 | 相符 |
| 3 | 影响国省考断面水质的治污清淤工程，应在工程实施前向省厅提前报备，并提供工程实施计划、图片资料等（包括招标合同、开工证明、清淤位置、淤泥去向、土方量、上游汇水去向、施工时限等）。若治污清淤工程将引起考核断面所在水体断流无监测数据的，应申请临时替代监测点位，其中涉及国考断面应提前三个月由设区市生态环境部门向省厅提出申请，经论证后由省厅报生态环境部审核批准；省考断面应提前两个月由设区市生态环境部门向省厅申请。为有效保障水环境质量，当地生态环境部门应会同相关行业主管部门和工程施工单位，立即编制断面水质保障应对方案，确保工程施工期间水质保持稳定。 | 本项目盐河上下游10km范围内未有国省考水质断面 | 相符 |
| 强化清淤施工期间各项环境管控 | 1 | 实施生态清淤。干法清淤需科学建设挡水围堰，严禁施工淤泥沿岸露天堆放。湿法清淤需规避抓斗式方法，减少底泥扰动扩散，严控对河水的二次污染。优先选用新型环保绞吸式清淤船作业，利用环保绞刀头进行全方位封闭式清淤，挖泥区周围需设置防淤帘，减少底泥中污染物释放。严禁水冲式湿法清淤，避免大量高浓度泥水下泻，造成下游水质污染。淤泥采用管路输送或汽运、船运等环节均需全程封闭，淤泥堆场需进行防渗、防漏、防雨处置。 | 本次评价提出清淤方式采用两栖反铲式清淤船疏浚；挖出的水下土方通过泥舶转运至污泥干化场。临时堆土场进行防渗、防漏和防雨处置。 | 相符 |
| 2 | 清淤船舶管理。水下施工时，禁止将污水、垃圾和其他施工机械的废油等污染物抛入水体，清淤船舶内各种阀件和油路管中可能溢出的含油废水不可直接排放，含油废水需收集到岸上，进入隔油池进行预处理，处理后产生的油污交由有资质的单位处置。 | 施工船舶产生的生活污水和油污水自行收集上岸处理，不向施工水域排放。 | 相符 |
| 3 | 生产生活污水管控。严格规范施工行为，及时维护和修理施工机械，避免机油的跑冒滴漏，施工期车辆、设备冲洗废水、施工人员生活污水不可直接排放。需配建隔油池、沉淀池、集水池等设施，就近接入污水管网进行收集，送污水处理厂处理。淤泥堆场的尾水需经处理后达标排放，尾水排口应设置在考核断面下游，避免对考核监测带来不利影响。 | 施工营地依托热电项目施工营地，依托热电施工营地污水处理设施，生活污水处理后回用于绿化，不直接外排。水下土方干化场排水特征污染物为SS，需经三级沉淀池后回用于施工现场。陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理，不外排。施工车辆及机械冲洗废水经沉淀池预处理后用作场地洒水抑尘，不外排。 | 相符 |
| 4 | 加强应急处置。建设足够容量的收集池，尤其在雨季和汛期，对可能存在的漫溢风险，做好雨水收集池的监管，降低漫溢风险。清淤船作业中一旦发生工程事故，按照保障方案要求进行应急处置。 | 本次评价提出施工期设置水下土方干化场，干化场容积能够满足本项目水下方堆放，并留有一定余量，能够满足雨季使用。本次环评提出施工单位施工前需制订环境管控工作方案和突发环境事故的应急处置预案，一旦发生工程事故，按照保障方案要求进行应急处置。 | 相符 |
| 5 | 加强水质监测监控。建设单位需科学制定企业自行监测方案。按照有关要求在淤泥尾水排放点设置监控断面或尾水自动监测，委托第三方有资质检测单位定期对水质进行监测，及时研判施工过程对水体影响。如尾水出现不达标的情况，立即停工，优化措施，确保减少对断面水质的影响。 | 本次环评要求建设单位对水下土方干化场尾水沉淀池进行维护管理，实现全部回用不外排。应保证尾水具有足够的沉淀时间。 | 相符 |
| 6 | 严禁干扰国省考断面监测的行为。施工单位和相关部门要严格落实《省生态环境厅关于进一步明确生态环境监测设施保护范围的通知》要求，在河流型站点的采水口周边区域覆盖站点采水口上、下游1公里范围以及湖库型站点的采水口周边区域覆盖站点采水口500m半径水域，严禁对采水环境实施人为干扰，造成河流改道或断流或故意绕开站点采水口，导致站点失去污染监控作用等违法违规行为。杜绝出现《环境监测数据弄虚作假行为判定及处理办法》和《国家采测分离管理办法》等文件中禁止的违法违规行为。如确因突发性事件影响监测条件需暂停或替代断面监测的，要及时履行相关报批、备案、审批等手续。 | 本项目盐河上下游10km范围内未有国省考水质断面 | 相符 |
| 规范淤泥临时堆场管理 | 1 | 严格规范淤泥堆场设置。淤泥堆场应尽量设置于考核断面下游，若河道往复流频繁的原则上清淤堆场应设置在考核断面1公里范围以外。干化淤泥等堆放应远离水体，应在场地四周设置围挡，必要时进行加高加固，同时应备有防雨遮雨等设施，避免淤泥受雨水冲刷后随地表径流进入附近水体。 | 本项目盐河上下游10km范围内未有国省考水质断面。水下土方干化场不在国省考核断面1公里范围内，尾水全部回用不外排。水下土方干化场使用前铺设复合土工膜、并在四周设置围堰；干化场一端围堰开排水口，排水口下游设置沉淀池收集干化场排水，防止水下土方被雨水冲刷随地表径流进入附近水体。 | 相符 |
| 2 | 严格规范淤泥管理程序。根据《固体废物鉴别导则》《土壤环境质量建设用地土壤污染风险管控标准（试行）》和《土壤环境质量农用地土壤污染风险管控标准（试行）》中风险筛选值和管制值的要求，对淤泥进行鉴定和监测，如不能满足淤泥去向对应的风险管控标准，应合理利用、妥善处置；属于危险废物的，及时送交资质单位处置，不得用于农用地填埋，避免对土壤造成二次污染。 | 根据对港池附近底泥监测结果，项目疏浚淤泥满足《土壤环境质量农用地土壤污染风险管控标准（试行）》（GB15618-2018）筛选值标准，以及《土壤环境质量建设用地土壤污染风险管控标准（试行）》（GB36600-2018）中标准。本次评价提出规划实施阶段对底泥进行监测，并采取合适的措施，并纳入施工期监测计划中。施工期间如发现底泥超标，需对疏浚底泥进行鉴定和监测，如不能满足水下土方去向对应的风险管控标准，应合理利用、妥善处置；属于危险废物的，及时送交资质单位处置，不得用于农用地填埋，避免对土壤造成二次污染。 | 相符 |

因此，本项目的建设总体符合《省生态环境厅关于印发防范清淤疏浚工程对水质影响工作方案的通知》（苏环办[2021]185 号）相关要求。

* + - 1. 《江苏省“十四五”生态环境保护规划》

根据《江苏省“十四五”生态环境保护规划》：推进港口码头仓库料场封闭管理，全面完成抑尘设施建设和物料输送系统封闭改造。加强船舶废水排放监管。加快完善沿江、沿海与内河港口码头船舶污染物接收、转运及处置设施建设，推进船舶生活污水、生活垃圾与城市环卫公共处理系统的有效衔接，加快建立船舶污染物“船－港－城”一体化处理模式，落实船舶污染接收、转运、处置联合监管机制。推进船舶生活污水存储设施改造和船舶垃圾储存容器规范配备，严控船舶含油废水、生活污水、化学品洗舱水违规排放。强化长江、淮河等水上危险化学品运输环境风险防范，严厉打击化学品非法水上运输。

本项目为国能涟水一期热电联产项目配套码头，码头不设物料堆场，物料存储依托后方热电项目厂区封闭煤场。本项目港口码头物料的卸船运输实行全过程控制，防止物料扬散，采取各类除尘、抑尘设施；抓斗卸船时，落料落差低于1.5m；码头落地的物料清扫后回用；向堆场的转运采用封闭式固定皮带。在运营过程中装卸时采用喷淋降尘的方式减少粉尘产生量，在吊机抓斗落料处的料斗顶端设置洒水喷嘴，作业时喷水形成水幕，抑制落料时所产生的粉尘；给水设计中考虑定期对道路冲洗，道路铺面结构采用现浇普通混凝土铺面结构，结构整体性好，耐久性高，每天定期清扫，从而有效减少码头道路扬尘。

本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。生活垃圾按照分类要求进行分类收集；垃圾日产日清，垃圾收集区域无暴露积存垃圾。装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。

* + - 1. 《关于用更加严格举措切实加强船舶水污染防治的实施意见》（苏污防攻坚指办〔2019〕70号）

根据《关于用更加严格举措切实加强船舶水污染防治的实施意见》（苏污防攻坚指办〔2019〕70号）：加快推进港口码头船舶污染物接收设施建设、落实港口码头经营企业船舶污染物的接收责任、全面提升船舶污染物接收的公共服务保障能力、开展航运企业和船舶落实水污染防治情况大排查、加强船舶生活污水防污设施的监督检查、对重点港口码头实现现场驻点管理、明确船舶及港口码头和执法部门的规范要求、对400总吨以上货运船舶生活污水防治精准法律、切实加大船舶水污染违法违规行为的惩处力度。

本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。生活垃圾按照分类要求进行分类收集；垃圾日产日清，垃圾收集区域无暴露积存垃圾。装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。

故本项目符合《关于用更严格举措切实加强船舶水污染防治的实施意见》（苏污防攻坚指办〔2019〕70号）相关要求。

* + 1. 初步判定结果

通过初步筛查，本项目符合国家产业政策，淮安市总体规划，区域港口和航道规划，与“三线一单”、区域生态环境分区管控要求基本相符，在本项目用地手续办理完成后，可符合当地土地利用总体规划。

* 1. 环境影响报告主要结论

综上，提出本项目环境影响评价总结论：

（1）项目符合当前国家产业政策。

（2）项目符合淮安市城市总体规划，区域港口和航道规划，与“三线一单”、区域生态环境分区管控要求相符。

（3）在本项目用地手续办理完成后，可符合当地土地利用总体规划。

（4）项目拟采取的各项环保措施合理可靠，排放的污染物能够满足国家和地方规定的排放标准，可做到长期稳定达标排放。

（5）本项目落实各项环保措施后能够维持当地环境质量，不降低当地环境功能。

（6）本项目废气均为无组织排放，燃煤输送均采用封闭输煤皮带运输，设有洒水降尘、插入式除尘器等措施，废气污染物排放符合《江苏省大气污染物综合排放标准》（DB324041-2021）要求。

本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。生活垃圾按照分类要求进行分类收集；垃圾日产日清，垃圾收集区域无暴露积存垃圾。装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。

（7）项目经制定环境风险应急预案，采取有效的事故防范和减缓措施后，环境风险水平可以接受。

1. 总则
   1. 编制依据
      1. 国家法律法规和文件
2. 《中华人民共和国环境保护法》（2015年01月01日实施）；
3. 《中华人民共和国大气污染防治法》（2018年10月26日起施行）；
4. 《中华人民共和国固体废物污染环境防治法》（2020年04月29日修正，2020年9月1日起实施）；
5. 《中华人民共和国水污染防治法》（2018年1月1日起实施）；
6. 《中华人民共和国环境噪声污染防治法》（2022年6月5日起实施）；
7. 《中华人民共和国环境影响评价法》（2018年12月29日修正）；
8. 《建设项目环境保护管理条例》（2017年7月16日修正）；
9. 《建设项目环境影响评价分类管理名录》（2021版）；
10. 《产业结构调整指导目录（2024年本）》；
11. 《国家危险废物名录（2021年版）》（2021年1月1日施行）；

（11）《危险化学品安全管理条例》（国务院第645号令）；

（12）《中华人民共和国港口法》（2015年4月24日修订）；

（13）《关于切实加强风险防范严格环境影响评价管理的通知》（环发〔2012〕98号）；

（14）《关于加强污染源环境监管信息公开工作的通知》（环发〔2013〕74号）；

（15）《关于执行大气污染物特别排放限值的公告》（生态环境部公告2013年第14号）；

（16）《建设项目危险废物环境影响评价指南》（2017年第43号公告）；

（17）《中华人民共和国内河交通安全管理条例（2019修正）》（2019年3月2日）；

（18）《中华人民共和国航道管理条例》（2008年12月28日修订）；

（19）《港口（码头）溢油应急计划编制指南》（2001年8月中国海事局颁布）；

（20）《港口码头水上污染事故应急防备能力要求》（JT/T451-2017）；

（21）《水上溢油环境风险评估技术导则》（JT/T1143-2017）；

（22）《船舶溢油应急能力评估导则》（JT/T877-2013）；

（23）《水运工程环境保护设计规范》（JTS 149-2018）；

（24）《关于加强水上污染应急工作的指导意见》（交海发〔2010〕366号）；

（25）《船舶水污染物内河港口岸上接收设施设计指南》（JTS/T175-2019）。

* + 1. 地方性法规和文件

（1）《江苏省环境噪声污染防治条例》（2018年3月28日）；

（2）《江苏省大气污染防治条例（修正）》（2018年3月28日）；

（3）《江苏省水污染防治条例》（江苏省第十三届人民代表大会常务委员会第十九次会议审议通过，2021年5月1日起实施）；

（4）《江苏省固体废物污染环境防治条例（第二次修正）》（2017年6月3日）；

（5）《江苏省干线航道网规划（2017—2035年）》；

（6）《关于修改江苏省固体废物污染环境防治条例等二十六件地方性法规的决定》（江苏省人民代表大会常务委员会第58号，2017年9月1日）；

（7）《江苏省“十四五”生态环境保护规划》；

（8）《江苏省内河水域船舶污染防治条例》（2018年修正）；

（9）《江苏省渔业管理条例》（2020年修正）；

（10）《关于执行大气污染物特别排放限值的通告》（江苏省生态环境厅，2018.7.23）；

（11）《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）；

（12）《江苏省政府关于印发江苏省主体功能区规划的通知》（苏政发〔2014〕20号）；

（13）《江苏省国家级生态保护红线规划》（苏政发〔2018〕74号）；

（14）《省政府关于印发江苏省“三线一单”生态环境分区管控方案的通知》（苏政发〔2020〕49号）；

（15）《省政府关于印发江苏省生态空间管控区域管理办法的通知》（苏政发〔2021〕3号，2021年1月6日）；

（16）《省政府办公厅关于印发江苏省生态空间管控区域监督管理办法的通知》（苏政办发〔2021〕20号，2021年3月26日）；

（17）《江苏省人民代表大会常务委员会关于加强饮用水源地保护的决定》（第十届人民代表大会常务委员会第三十五次会议于2008年1月19日通过，2008年3月22日起施行）；

（18）《省生态环境厅 省水利厅关于印发〈江苏省地表水（环境）功能区划（2021—2030年）〉的通知》（苏环办〔2022〕82号）；

（19）《江苏省环境空气质量功能区划分》（江苏省环境保护局，1998年9月）；

（20）《关于印发江苏省港口粉尘综合治理专项行动实施方案的通知》（江苏省交通运输厅、环境保护厅，2017年4月7日）；

（21）《关于印发江苏省重点行业堆场污染防治指导意见（试行）的通知》（江苏省生态环境厅，2021年3月10日）；

（22）《关于印发〈江苏省排污口设置及规范化整治管理办法〉的通知》（苏环控〔97〕122号）；

（23）《关于印发淮安市港口和船舶污染物接收、转运及处置设施建设方案的通知》（淮政办发〔2016〕154号）；

（24）《省生态环境厅关于进一步做好建设项目环评审批工作的通知》（2019年2月2日）；

（26）《省交通运输厅省发展改革委省水利厅关于印发江苏省沿江砂石码头布局方案的通知》（苏交计〔2019〕75号）；

（27）《省交通运输厅省生态环境厅关于进一步推动全省内河港口码头环保问题整改的通知》（苏交计〔2020〕142号）；

（28）《省生态环境厅关于进一步加强建设项目环评审批和服务工作的指导意见》（苏环办〔2020〕225号）；

（29）《关于印发江苏省港口与船舶大气污染防治工作方案的通知》（苏环办〔2022〕258号）；

（30）《十四五生态保护监管规划》（苏环办〔2022〕258号）；

（31）《江苏省“十四五”生态环境保护规划》（苏政办发〔2021〕84号）；

（32）《江苏省港口岸线管理办法（2017）》；

（33）《关于用更加严格举措切实加强船舶水污染防治的实施意见》（苏污防攻坚指办〔2019〕70号）；

（34）《关于印发〈淮安市环境管控单元生态环境准入清单〉的通知》（淮环发〔2020〕264号）；

（35）《淮安市城市总体规划（2009-2030）》（苏政复〔2011〕50号文）；

（36）《涟水县“十四五”生态环境保护规划》；

（37）《涟水县国土空间规划（2021—2035年）》。

* + 1. 技术规范

（1）《环境影响评价技术导则 总纲》（HJ2.1-2016）；

（2）《环境影响评价技术导则 大气环境》（HJ2.2-2018）；

（3）《环境影响评价技术导则 地表水环境》（HJ2.3-2018）；

（4）《环境影响评价技术导则 声环境》（HJ2.4-2021）；

（5）《环境影响评价技术导则 地下水环境》（HJ610-2016）；

（6）《环境影响评价技术导则 生态影响》（HJ19-2022）；

（7）《环境影响评价技术导则 土壤环境（试行）》（HJ964-2018）；

（8）《建设项目环境风险评价技术导则》（HJ169-2018）；

（9）《水运工程建设项目环境影响评价指南》（JTS/T 105-2021）；

（10）《水运工程环境保护设计规范》（JTS 149-2018）及修订单；

（11）《水运工程混凝土结构设计规范》（JTS151-2011）；

（12）《河港总体设计规范》（JTS 166—2020）；

（13）《建设项目竣工环境保护验收技术规范 港口》（HJ436-2008）；

（14）《港口码头水上污染事故应急防备能力要求》（JT/T 451-2017）；

（15）《水上溢油环境风险评估技术导则》（JT/T1143-2017）；

（16）《排污许可证申请与核发技术规范 码头》（HJ 1107-2020）；

（17）《煤炭矿石码头粉尘控制设计规范》（JTS156-2015）；

（18）《危险废物识别标志设置技术规范》（HJ1276-2022）；

（19）《污染源源强核算技术指南 准则》（HJ884-2018）；

（20）《船舶溢油应急能力评估导则》（JT/T877-2013）。

* + 1. 项目相关文件

（1）《淮安港总体规划（2020—2035年）》；

（2）《淮安港总体规划（2020—2035年）环境影响报告书》及审查意见（苏环审〔2020〕16号）；

（5）《淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程工程可行性研究报告》（中交武汉港湾工程设计研究院有限公司，2023 年3 月）；

（6）《淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程航道通航条件影响评价报告》（2022年9月）；

（7）《淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程通航安全技术分析报告》（中交武汉港湾工程设计研究院有限公司，2023年2月）；

（8）建设单位提供的其他资料。

* 1. 评价目的及评价原则
     1. 评价目的

根据项目的环境特征和污染特征，分析拟采用污染防治措施的效果，必要时提出优化调整方案；在污染物达标排放和满足排放总量控制的前提下，分析预测项目建成后对周围环境可能造成的影响及其影响范围和程度；提出避免和减少污染的环境保护对策和措施；论证拟建项目的环境可行性，为项目的设计和管理提供科学依据。

* + 1. 评价原则

项目遵循以下原则开展环境影响评价工作：

1、依法评价原则

贯彻执行我国环境保护相关法律法规、标准、政策和规划等，优化项目建设，服务环境管理。

2、科学评价原则

规范环境影响评价方法，科学分析项目建设对环境质量的影响。

3、突出重点

根据建设项目的工程内容及其特点，明确与环境要素间的作用效应关系，根据规划环境影响评价结论和审查意见，充分利用符合时效的数据资料及成果，对建设项目主要环境影响予以重点分析和评价。

* + 1. 环境影响识别与评价因子

根据本项目的生产规律和污染物排放特征及建设项目所在地区的环境状况，采用矩阵法对可能受该工程影响的环境要素进行识别筛选，筛选结果见表2.2-1。

环境影响要素识别表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 类别 | | 自然环境 | | | 生态环境 | |
| 环境空气 | 地表水环境 | 声环境 | 陆生生态 | 水生生态 |
|  |
| 施工期 | 废气 | -1D | / | / | / | / |  |
| 废水 | / | -1D | / | / | -1D |  |
| 噪声 | / | / | -1D |  | / |  |
| 固废 | / | / | / | / | / |  |
| 运营期 | 废气 | -1C | / | / | / | / |  |
| 废水 | / | -1C | / | / | -1C |  |
| 噪声 | / | / | -1C | / | / |  |
| 固废 | / | / | / | / | / |  |
| 风险 | -1D | -1D | / | -1D | -2D |  |

说明：“－”分别表示有利、不利影响；“C”“D”分别表示长期、短期影响；“1”至“2”数值分别表示轻微影响、中度影响。

由表2.2-1可知，本项目的建设对环境的影响是多方面的，既存在短期、局部及可恢复的不利影响，也存在长期的不利影响。施工期主要表现在对自然环境和水生生态环境产生一定程度的负影响。运营期对环境的不利影响是长期存在的，主要表现在对环境空气、地表水环境、声环境及生态环境等方面的长期负影响。但本项目的建设对当地的工业发展、劳动就业及交通运输均会起到一定的积极作用。

根据环境影响因素识别，结合工程排污特征和当地环境质量现状，工程运行期评价因子筛选和确定详见表2.2-2。

评价因子确定一览表

| **要素** | | **现状评价因子** | **影响评价因子** | **总量控制**  **因子** |
| --- | --- | --- | --- | --- |
| 大气 | | SO2、NO2、CO、O3、PM10、PM2.5、TSP、VOCs、硫化氢、氨气、臭氧浓度 | 施工期：TSP、SO2、CO、NOx、烃类、硫化氢、氨气、臭氧浓度  运营期：SO2、NOx、PM10、PM2.5、TSP、CO、非甲烷总烃 | SO2、NOx、颗粒物、VOCs |
| 地表水 | 水污染性 | pH、水温、溶解氧、悬浮物、化学需氧量、生化需氧量（BOD5）、氨氮、总氮、总磷、高锰酸盐指数、石油类 | 施工期：SS、COD、石油类  运营期：COD、SS、NH3-N、总氮、TP、石油类 | COD、氨氮、总氮、总磷 |
| 水文要素型 | 水位、水深、流速、水面宽、冲淤变化 | 水位、水深、流速、水面宽、冲淤变化 | / |
| 固体  废物 | | / | 施工期：生活垃圾、建筑垃圾  运营期：生活垃圾、船舶垃圾、工业固废等 | / |
| 生态环境 | | **施工期、运营期：**  物种：分布范围、种群数量、种群结构、行为等  生境 生境面积、质量、连通性等  生物群落：物种组成、群落结构等  生态系统：植被覆盖度、生产力、生物量、生态系统功能等  生物多样性：物种丰富度、均匀度、优势度等  生态敏感区：主要保护对象、生态功能等  自然景观：景观多样性、完整性等  自然遗迹：遗迹多样性、完整性等 | **施工期、运营期：**  物种：分布范围、种群数量、种群结构、行为等  生境 生境面积、质量、连通性等  生物群落：物种组成、群落结构等  生态系统：植被覆盖度、生产力、生物量、生态系统功能等  生物多样性：物种丰富度、均匀度、优势度等  生态敏感区：主要保护对象、生态功能等  自然景观：景观多样性、完整性等  自然遗迹：遗迹多样性、完整性等 | / |
| 土壤 | | / | / | / |
| 底泥 | | 45项+pH、总铬、锌、石油烃 | / | / |
| 噪声 | | 等效连续A声级 | | / |
| 环境风险 | | / | 柴油 | / |

* 1. 环境功能区划与评价标准
     1. 环境功能区划

1、地表水环境功能区划

根据《江苏省地表水（环境）功能区划（2021—2030年）》，评价范围内盐河执行《地表水环境质量标准》（GB3838-2002）中Ⅲ类标准；《江苏省地表水（环境）功能区划（2021—2030年）》中未对渠西河划分水功能区，根据《江苏涟水经济开发区循环经济产业园产业发展规划环评环境影响报告书》，渠西河执行《地表水环境质量标准》（GB3838-2002）中的Ⅳ类标准。

2、大气环境功能区划

项目所在地区大气环境功能区划为二类区，环境空气质量执行《环境空气质量标准》（GB3095-2012）中的二级标准。

3、声环境功能区划

根据《声环境质量标准》（GB3096-2008），码头陆域以工业生产为主要功能的区域执行3类标准；码头前沿，公路干线、内河航道两侧执行4a类标准。

* + 1. 环境质量标准

1、大气环境

项目所在区域为二类区，SO2、NO2、TSP、PM10、PM2.5、CO、O3执行《环境空气质量标准》（GB3095-2012）及其修改单中二级标准。大气环境质量标准主要指标见表2.3-1。

环境空气质量评价标准

| **污染物名称** | **取值时间** | **浓度限值** | **单位** | **标准来源** |
| --- | --- | --- | --- | --- |
| SO2 | 年平均 | 60 | μg/m3 | 《环境空气质量标准》  （GB 3095-2012）二级标准 |
| 24小时平均 | 150 |
| 1小时平均 | 500 |
| NO2 | 年平均 | 40 |
| 24小时平均 | 80 |
| 1小时平均 | 200 |
| NOx | 年平均 | 50 |
| 24小时平均 | 100 |
| 1小时平均 | 250 |
| TSP | 年平均 | 200 |
| 24小时平均 | 300 |
| PM10 | 年平均 | 70 |
| 24小时平均 | 150 |
| PM2.5 | 年平均 | 35 |
| 24小时平均 | 75 |
| O3 | 日最大8小时平均 | 160 |
| 1小时平均 | 200 |
| CO | 24小时平均 | 4 | mg/m3 |
| 1小时平均 | 10 |
| 非甲烷总烃 | 小时平均浓度 | 2.0 | mg/Nm³ | 参照《大气污染物综合排放标准详解》中值 |
| NH3 | 1h 平均 | 0.2 | mg/m3 | 参照执行《环境影响评价技术导则 大气环境》（HJ2.2－2018）附录D中相关标准 |
| H2S | 1h 平均 | 0.01 | mg/m3 |

2、地表水环境

根据省政府关于《江苏省地表水（环境）功能区划（2021—2030年）》（苏环办〔2022〕82号），评价范围内盐河执行《地表水环境质量标准》（GB3838-2002）中Ⅲ类标准；《江苏省地表水（环境）功能区划（2021—2030年）》（苏环办〔2022〕82号）未对渠西河划分水功能区，根据《江苏涟水经济开发区循环经济产业园产业发展规划环评环境影响报告书》，渠西河执行《地表水环境质量标准》（GB3838-2002）中的Ⅳ类标准。主要指标见表2.3-2。

地表水水质标准 单位：mg/L，pH除外

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **执行标准** | **污染物指标** | **单位** | **Ⅲ类标准** | **Ⅳ类标准** |
| 《地表水环境质量标准》（GB3838-2002） | pH | — | 6~9 | |
| COD | mg/L | ≤20 | ≤30 |
| 高锰酸盐指数 | mg/L | ≤6 | ≤10 |
| BOD5 | mg/L | ≤4 | ≤6 |
| DO | mg/L | ≥5 | ≥3 |
| 氨氮 | mg/L | ≤1.0 | ≤1.5 |
| 总氮（湖、库，以N计） | mg/L | ≤1.0 | ≤1.5 |
| 总磷 | mg/L | ≤0.2 | ≤0.3 |
| 石油类 | mg/L | ≤0.05 | ≤0.5 |

3、噪声

本项目位于国能涟水一期热电联产项目厂区内，国能涟水一期四周厂界外区域声环境执行《声环境质量标准》（GB3096-2008）3类标准，本项目所在区域声环境功能区划为3类。码头陆域北、南、西侧执行3类标准，码头东侧靠盐河内河航道，东侧河堤护栏向外（向码头一侧）25m执行4a类标准。具体见表2.3-3。

声环境质量标准 单位：dB（A）

|  |  |  |  |
| --- | --- | --- | --- |
| 区域 | 功能类别 | 标准值 | |
| 昼间 | 夜间 |
| 工业区 | 3类 | 65 | 55 |
| 公路干线两侧、航道两侧 | 4a类 | 70 | 55 |

4、底泥

底泥的重金属指标参照执行《土壤环境质量 农用地土壤污染风险管控标准（试行）》（GB15618-2018）中其他类标准，其余指标执行《土壤环境质量 建设用地土壤污染风险管控标准（试行）》（GB36600-2018）中表1中第二类用地筛选值见表2.3-4。

农用地土壤污染风险值标准 单位：mg/kg

| **序号** | **污染物项目** | | **风险筛选值** | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **pH≤5.5** | **5.5<pH≤6.5** | **6.5<pH≤7.5** | **pH>7.5** |
| 1 | 镉 | 水田 | 0.3 | 0.4 | 0.6 | 0.8 |
| 其他 | 0.3 | 0.3 | 0.3 | 0.6 |
| 2 | 汞 | 水田 | 0.5 | 0.5 | 0.6 | 1.0 |
| 其他 | 1.3 | 1.8 | 2.4 | 3.4 |
| 3 | 砷 | 水田 | 30 | 30 | 25 | 20 |
| 其他 | 40 | 40 | 30 | 25 |
| 4 | 铅 | 水田 | 80 | 100 | 140 | 240 |
| 其他 | 70 | 90 | 120 | 170 |
| 5 | 铬 | 水田 | 250 | 250 | 300 | 350 |
| 其他 | 150 | 150 | 200 | 250 |
| 6 | 铜 | 果园 | 150 | 150 | 200 | 200 |
| 其他 | 50 | 50 | 100 | 100 |
| 7 | 镍 | | 60 | 70 | 100 | 190 |
| 8 | 锌 | | 200 | 200 | 250 | 300 |

土壤环境质量标准（试行）（GB36600-2018） 单位：mg/kg

| 项目 | 第二类用地筛选值 | 项目 | 第二类用地筛选值 |
| --- | --- | --- | --- |
| 镉 | 65 | 1,2,3-三氯丙烷 | 0.5 |
| 汞 | 38 | 氯乙烯 | 0.43 |
| 砷 | 60 | 苯 | 4 |
| 铜 | 18000 | 氯苯 | 270 |
| 铅 | 800 | 1,2-二氯苯 | 560 |
| 镍 | 900 | 1,4-二氯苯 | 20 |
| 六价铬 | 5.7 | 乙苯 | 28 |
| 四氯化碳 | 2.8 | 苯乙烯 | 1290 |
| 氯仿 | 0.9 | 甲苯 | 1200 |
| 氯甲烷 | 37 | 间二甲苯+对二甲苯 | 570 |
| 1,1-二氯乙烷 | 9 | 邻二甲苯 | 640 |
| 1,2-二氯乙烷 | 5 | 硝基苯 | 76 |
| 1,1-二氯乙烯 | 66 | 苯胺 | 260 |
| 顺1,2-二氯乙烯 | 596 | 2-氯酚 | 2256 |
| 反1,2-二氯乙烯 | 54 | 苯并[a]蒽 | 15 |
| 二氯甲烷 | 616 | 苯并[a]芘 | 1.5 |
| 1,2-二氯丙烷 | 5 | 苯并[b]荧蒽 | 15 |
| 1,1,1,2-四氯乙烷 | 10 | 苯并[k]荧蒽 | 151 |
| 1,1,2,2-四氯乙烷 | 6.8 | 䓛 | 1293 |
| 四氯乙烯 | 53 | 二苯并[a,h]蒽 | 1.5 |
| 1,1,1-三氯乙烷 | 840 | 茚并[1,2,3-cd]芘 | 15 |
| 1,1,2-三氯乙烷 | 2.8 | 萘 | 70 |
| 三氯乙烯 | 2.8 | 石油烃 | 4500 |
| 二噁英类 | 4×10-5 | -- | -- |

* + 1. 污染物排放标准

1、大气污染物排放标准

船舶、车辆尾气SO2、NOX、颗粒物等无组织排放执行《江苏省大气污染物综合排放标准》（DB324041—2021）表3中排放标准限值，施工扬尘执行《施工场地扬尘排放标准》（DB32／4437-2022），施工期恶臭气体执行《恶臭污染物排放标准》（GB14554-93）。具体见表2.3-6。

大气污染物综合排放标准

|  |  |  |  |
| --- | --- | --- | --- |
| **污染物** | **无组织排放监控浓度限值** | | **标准来源** |
| **监控点** | **浓度（mg/m3）** |
| SO2 | 边界外浓度最高点 | 0.4 | 《大气污染物综合排放标准》（DB324041—2021） |
| NOx | 0.12 |
| 颗粒物 | 0.5 |
| NMHC | 4 |
| CO | 10 |
| 扬尘-TSP | 施工易产生扬尘场所 | 0.5 | 《施工场地扬尘排放标准》（DB32／4437-2022）表1 |
| 扬尘-PM10 | 0.08 |
| 氨 | 施工场地周界 | 1.5 | 《恶臭污染物排放标准》（GB14554-93）表1 |
| 硫化氢 | 0.06 |
| 臭气浓度 | 20 |

2、水污染物排放标准

水下土方干化场余水经围堰、泄水口及后续沉淀池等预处理，经核算水下土方干化场余水量约为1.2万立方，平均产水量为200立方/d，水量较大，施工期的各类用水无法完全消纳，仅能做到部分回用，在部分回用后，剩余部分满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河。根据《污水综合排放标准》（GB8978-1996），排入GB3838III类水域（划定的保护区和游泳区除外）和排入GB3097中二类海域的污水执行一级标准。GB3838中I、II类水域和III类水域中划定的保护区和游泳区，GB 3097中一类海域禁止新建排污口。盐河涟水段属于III类水体，未划定保护区和游泳区，在水下土方干化场余水满足《污水综合排放标准》（GB8978-1996）表4一级标准后，能够就近排入盐河。

本项目船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。

船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理后全部回用不外排；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。

码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。该回用水标准执行《城市污水再生利用 工业用水水质》（GB/T19923-2024）洗涤用水标准，具体见表2.3-7。

码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。该回用水标准执行《城市污水再生利用 工业用水水质》（GB/T19923-2024）洗涤用水标准，具体见表2.3-7。

船舶废水执行《船舶水污染物排放控制标准》（GB3552-2018）（2018年7月1日实施）。船舶含油污水的排放控制要求按表2.3-8执行。生活污水回用执行《城市污水再生利用―城市杂用水水质》（GB/T 18920-2020）中表1要求，具体见表2.3-9。

城市污水再生利用 工业用水水质（mg/L，pH无量纲）

|  |  |  |  |
| --- | --- | --- | --- |
| **序号** | **控制项目** | **洗涤用水** | **工艺与产品用水** |
| 1 | pH | 6.5~9.0 | 6.5~9.0 |
| 2 | 总氮 | 15 | 15 |
| 3 | 浊度≤ | - | 5 |
| 4 | 色度≤ | 20 | 20 |
| 5 | BOD5≤ | 10 | 10 |
| 6 | CODcr≤ | 50 | 50 |
| 7 | 铁≤ | 0.5 | 0.3 |
| 8 | 锰≤ | 0.2 | 0.1 |
| 9 | 氯化物≤ | 400 | 250 |
| 10 | 二氧化硅≤ | 50 | 30 |
| 11 | 总硬度（以CaCO3计）≤ | 450 | 450 |
| 12 | 总碱度（以CaCO3计）≤ | 350 | 350 |
| 13 | 硫酸盐≤ | 600 | 250 |
| 14 | 氨氮≤ | 5 | 5 |
| 15 | 总磷≤ | 0.5 | 0.5 |
| 16 | 溶解性总固体≤ | 1500 | 1000 |
| 17 | 石油类≤ | 1 | 1 |
| 18 | 阴离子表面活性剂≤ | 0.5 | 0.5 |
| 19 | 余氯≤ | 0.1~0.2 | 0.1~0.2 |
| 20 | 粪大肠杆菌群≤ | 1000 | 1000 |

船舶水污染物排放控制标准

|  |  |  |  |
| --- | --- | --- | --- |
| **污染物种类** | **水域类别** | **船舶类别** | **规定** |
| 船舶含油污水 | 内河 | 2021年1月1日之前建造的船舶 | 自2018年7月1日起，按油污水处理装置出水口石油类浓度15mg/L，或收集并排入接收设施。 |
| 2021年1月1日之后建造的船舶 | 收集并排入接收设施 |

生活污水回用执行标准

| **序号** | **项目** | **冲厕、车辆冲洗** | **城市绿化、道路清扫、消防、建筑施工** |
| --- | --- | --- | --- |
| 1 | pH | 6.0~9.0 | 6.0-9.0 |
| 2 | 色度，铂钴色度单位 | 15 | 30 |
| 3 | 嗅 | 无不快感 | 无不快感 |
| 4 | 浊度/NTU | 5 | 10 |
| 5 | 五日生化需氧量（BOD5）/(mg/L) | 10 | 10 |
| 6 | 氨氮/(mg/L) | 5 | 8 |
| 7 | 阴离子表面活性剂/（mg/L） | 0.5 | 0.5 |
| 8 | 铁/(mg/L) | 0.3 | - |
| 9 | 锰/(mg/L) | 0.1 | - |
| 10 | 溶解性总固体/（mg/L） | 1000(2000)a | 1000(2000)a |
| 11 | 溶解氧/(mg/L) | 2 | 2 |
| 12 | 总氯/(mg/L)≥ | 1.0（出厂），0.2（管网末端） | 1.0（出厂）0.2b（管网末端） |
| 13 | 大肠埃希氏菌/（MPN/100mL或CFU/100mL） | 无c | 无c |
| 注 | “－”表示对此项无要求  a 括号内指标值为沿海及本地水源中溶解性固体含量较高的区域的指标  b 用于城市绿化时，不应超过2.5 mg/L  c 大肠埃希氏菌不应检出 | | |

3、噪声排放标准

建筑施工期执行《建筑施工场界环境噪声排放标准》（GB12523-2011），见表2.3-10。

建筑施工场界环境噪声排放标准

|  |  |  |
| --- | --- | --- |
| 标准 | 标准值（dB（A）） | |
| 昼间 | 夜间 |
| 《建筑施工场界环境噪声排放标准》（GB12523-2011） | 70 | 55 |

依据《工业企业厂界环境噪声排放标准》（GB12348-2008），工业生产区执行3类标准，道路交通干线两侧以及航道西侧区域内执行4类标准、夜间突发噪声最大值不超过标准限值的15dB（A）。运营期码头陆域北侧、西侧和南侧噪声执行《工业企业厂界环境噪声排放标准》（GB12348-2008）3类标准，东侧靠近内河航道，执行4类标准。具体标准值见表2.3-11。

工业企业厂界环境噪声排放标准（单位： dB（A））

|  |  |  |  |
| --- | --- | --- | --- |
| 声环境功能区类型 | 昼间 | 夜间 | 依据 |
| 3 | 65 | 55 | 《工业企业厂界环境噪声排放标准》（GB12348-2008） |
| 4 | 70 | 55 |

4、固体废物排放标准

一般固废的暂存参考执行《一般工业固体废物贮存和填埋污染控制标准》（GB18599-2020）的规定要求。危险固废贮存执行《危险废物贮存污染控制标准》（GB 18597-2023）要求。船舶固废按照《船舶水污染物排放控制标准》（GB3552-2018）中船舶垃圾控制要求执行。

* 1. 评价工作等级
     1. 评价工作等级
        1. 地表水环境影响评价工作等级

码头建设会对水体产生扰动，属于“水文要素影响型”，同时码头项目运营期产生生活污水和生产废水，属于“水污染影响型”，综合判断本项目属于复合型建设项目，需分别确定水文要素影响和水污染影响的地表水环境评价等级。

水文要素影响型建设项目评价等级判定

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 评价等级 | 水温 | 径流 | | 受影响地表水域 | | |
| 年径流量与总库容百分比α/% | 兴利库容占年径流量百分比β/% | 取水量占多年平均径流量百分比γ/% | 工程垂直投影面积及外扩范围A1/km2；工程扰动基底面积A2/km2；过水断面宽度占用比例或占用水域面积比例R/% | | 工程垂直投影面积及外扩范围A1/km2；工程扰动水深面积A2/km2 |
| 河流 | 湖库 | 入海河口、近岸海域 |
| 一级 | α≤10；或稳定分层 | β≥20；或完全年调节与多年调节 | γ≥30 | A1≥0.3；或A2≥1.5；或R≥10 | A1≥0.3；或A2≥1.5；或R≥20 | A1≥0.5；或A2≥3 |
| 二级 | 20>α>10；或不稳定分层 | 20>β>2；或季；调节与不完全年调节 | 30>γ>10 | 0.3>A1>0.05；或1.5>A2>0.2；或10>R>5 | 0.3>A1>0.05；或1.5>A2>0.2: 或20>R>5 | 0.5>A1>0.15；或3>A2>0.5 |
| 三级 | α≥20；或混合型 | β≤2；或无调节 | γ≤10 | A1≤0.05；或A2≤0.2；或R≤5 | A1≤0.05；或A2≤0.2；或R≤5 | A1≤0.15；或A2≤0.5 |
| 注1：影响范围涉及饮用水水源保护区、重点保护与珍稀水生生物的栖息地、重要水生生物的自然产卵场、自然保护区等保护目标，评价等级应不低于二级。  注2：跨流域调水、引水式电站、可能受到大型河流感潮河段咸潮影响的建设项目，评价等级不低于二级。  注3：造成入海河口（湾口）宽度束窄（束窄尺度达到原宽度的5%以上），评价等级应不低于二级。  注4：对不透水的单方向建筑尺度较长的水工建筑物（如防波堤、导流堤等），其与潮流或水流主流向切线垂直方向投影长度大于2km时，评价等级应不低于二级。  注5：允许在一类海域建设的项目，评价等级为一级。  注6：同时存在多个水文要素影响的建设项目，分别判定各水文要素影响评价等级，并取其中最高等级作为水文要素影响型建设项目评价等级。 | | | | | | |
| 计算过程及依据：  A1：本项目码头为采用挖入式港池的布置形式，码头结构为钢筋砼扶壁式，与高桩梁板结构型式不同，不会向水面外扩，垂直方向不占用水域，不产生垂直投影面积，因此A1为0。  A2：本项目港池面积约为0.02km2，项目工程扰动水深面积为本项目挖入式港池的面积，因此A2为0.02km2。  R：本项目为挖入式港池，不占用盐河过水断面及水域面积，因此R为0。 | | | | | | |

（1）水文要素影响性评价等级确定

本项目采用挖入式港池的布置形式，码头结构为钢筋砼扶壁式。根据上表，其中水工建筑工程（码头）对水域的垂直投影面积及外扩面积Al为0，小于0.05km2，工程扰动基底面积A2约为0.02km2，<0.5km2，过水断面宽度占用比例或占用水域面积（比例R为0，小于5。因此地表水环境水文要素影响性评价等级判定为三级。

根据《水运工程建设项目环境影响评价指南》（JTS105-2021）中的河港工程评价等级划分表，本项目属于干散货（煤炭）工程项目，不涉及重要生境，水环境影响评价中的水文动力环境、冲淤环境评价、水质和沉积物环境评价等级为三级，详见下表2.4-2。

河港建设项目评价等级划分表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **港口性质** | **工程特性** | **环境敏感性** | **生态影响**  **评价等级** | **水环境影响评价等级** | | |
| **水文动力 环境** | **冲淤环境** | **水质和沉**  **积物环境** |
| 干散货码头工程 | 新开港区 | 重要生境 | 一 | 一 | 一 | 一 |
| 一般区域 | 二 | 二 | 二 | 二 |
| 现有港区 | 重要生境 | 二 | 二 | 二 | 二 |
| 一般区域 | 三 | 三 | 三 | 三 |

（2）水污染影响性评价等级确定

本项目施工期废水主要为施工船舶舱底油污水、施工船舶生活污水、疏浚污泥浊水、陆域施工生活污水、施工车辆及机械冲洗废水。

其中施工船舶舱底油污水和施工船舶生活污水由船舶带走；水下土方干化场余水经围堰、泄水口及后续沉淀池等预处理后部分回用，部分满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河，工程产生的水下方干化后弃方全部用于临时用地恢复。陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理不外排；施工车辆及机械冲洗废水经沉淀池预处理后用作场地洒水抑尘不外排。

水下土方干化场余水排放至盐河按照60天计算，则平均流量为160m3/d＜200m3/d，排放SS 0.672t，折672kg，污染当量为W=168＜6000。因此，项目施工期水污染影响型地表水环境评价工作等级定为三级A。

本项目码头营运期废水包括：船舶舱底油污水、船舶生活污水、陆域生活污水、初期雨水及码头冲洗废水等。

本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。因此，根据《环境影响评价技术导则 地表水环境》（HJ2.3-2018）表1，运营期水污染影响型地表水环境评价工作等级定为三级B。

本项目为码头工程，属于水污染影响型和水文要素影响型兼有的复合影响型。综上所述，本项目地表水评价等级为水污染影响型三级B和水文要素影响型三级。水环境影响评价中的水文动力环境、冲淤环境、水质和沉积物环境评价等级为三级。

* + - 1. 大气环境影响评价工作等级

根据《环境影响评价技术导则 大气环境》（HJ2.2-2018）的要求，选择估算模型对项目的大气环境评价工作进行分级，估算模型参数见下表2.4-3。

估算模型参数表

| **参数** | | | **取值** |
| --- | --- | --- | --- |
| 城市/农村 | 城市/农村 | | 城市 |
| 人口数（城市选项时） | | 100000 |
| 最高环境温度 | | | 39.5℃ |
| 最低环境温度 | | | -21.5℃ |
| 土地利用类型 | | | 城市 |
| 区域湿度条件 | | | 中等湿度 |
| 是否考虑地形 | | 考虑地形 | ■是 □否 |
| 地形数据分辨率/m | 90 |
| 是否考虑岸线熏烟 | | 考虑岸线熏烟 | □是 ■否 |
| 岸线距离/km | / |
| 岸线方向/° | / |

本项目运营期，主要废气污染物为无组织排放的SO2、NOx、颗粒物、CO，利用估算模式分别计算无组织排放的各项污染物最大地面浓度占标率Pi，最大地面浓度及占标率见表2.4-4，项目无组织排放的各因子大气污染物的最大占标率为9.355%＜10%，大气环境影响评价等级判断为二级。

估算模式得出无组织废气正常排放各因子的Pmax值统计表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | **污染源** | **评价因子** | **评价标准（μg/m³）** | **Cmax (μg/m³)** | **Pmax(%)** | **D10%(m)** |
| 1 | 船舶尾气面源 | SO2 | 500 | 0.215 | 0.043 | / |
| 2 | NO2 | 200 | 17.598 | 8.799 | / |
| 3 | 1泊位卸船 | TSP | 900.0 | 84.198 | 9.355 | / |
| 4 | PM10 | 450.0 | 16.509 | 3.669 | / |
| 5 | PM2.5 | 225.0 | 3.467 | 1.541 | / |
| 6 | 2泊位卸船 | TSP | 900.0 | 84.198 | 9.355 | / |
| 7 | PM10 | 450.0 | 16.509 | 3.669 | / |
| 8 | PM2.5 | 225.0 | 3.467 | 1.541 | / |

注：根据《环境影响评价技术导则 大气环境》（HJ 2.2-2018）5.3.2.1节，环境空气质量浓度标准一般选用GB 3095中1h平均质量浓度的二级浓度限值；对该标准中未包含的污染物，使用5.2确定的各评价因子1h平均质量浓度限值。对仅有8h平均质量浓度限值、日平均质量浓度限值或年平均质量浓度限值的，可分别按2倍、3倍、6倍折算为1h平均质量浓度限值。对于TSP、PM10和PM2.5的1h平均质量浓度限值，均采用其日均质量浓度限值的3倍进行计算，即分别为900μg/m³、450μg/m³、225μg/m³。

* + - 1. 噪声评价工作等级

本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，所处声环境功能区为3类区，项目建成后主要噪声为码头装卸机械噪声和输送泵噪声，产生的噪声经距离等衰减后对周围声环境影响较小，噪声增加量不超过3dB（A），且受影响人口数量变化不大，根据《环境影响评价技术导则 声环境》（HJ2.4-2021）评价等级划分依据，本项目评价等级为三级。

* + - 1. 地下水评价工作等级

根据《环境影响评价技术导则 地下水环境》（HJ610-2016），本项目属于“S水运130、干散货（含煤炭、矿石）、件杂、多用途、通用码头”，编写报告书，地下水环境影响评价类别为Ⅳ类，不开展地下水环境影响评价。

附录A地下水环境影响评价行业分类表

| 环评类别  行业类别 | 报告书 | 地下水环境影响评价项目类别 |
| --- | --- | --- |
| 干散货（含煤炭、矿石）、件杂、多用途、通用码头 | 单个泊位1000吨级及以上的内河港口；单个泊位1万吨级及以上的沿海港口；涉及环境敏感区的 | Ⅳ类 |

* + - 1. 土壤评价工作等级

根据《环境影响评价技术导则土壤环境（试行）》（HJ964-2018）附录表A.1，本项目为通用码头，属于“交通运输仓储邮政业—其他”，本项目属于Ⅳ类项目，无需开展土壤环境影响评价。仅对码头前沿处沿河底泥开展现状监测及评价。

附录A.1土壤环境影响评价项目类别

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 行业类别 | 项目类别 | | | |
| I类 | Ⅱ类 | III类 | Ⅳ类 |
| 交通运输仓储邮政业 | / | 油库（不含加油站的油库）；机场的供油工程及油库；涉及危险品、化学品、石油、成品油储罐区的码头及仓储；石油及成品油的输送管线 | 公路的加油站；铁路的维修场所 | 其他 |

* + - 1. 环境风险评价工作等级

根据项目涉及的物质（Q）及工艺系统危险性（M）和所在地的环境敏感性（E）确定环境风险潜势，再按照风险潜势判定环境风险评价工作等级。环境风险评价工作等级划分为一级、二级、三级、简单分析。

1、风险物质数量与临界量比值（Q）

本项目运输的主要物质为热电厂燃料煤炭，属于无毒不易燃物质，不涉及危险化学品，因此主要考虑施工期施工船舶和营运期的船舶燃料油量泄漏。

（1）施工期

参照《水上溢油环境风险评估技术导则》（JTT1143-2017）中7.2.1.1章节“新建水运工程建设项目的最大可信水上溢油事故溢油量，按照设计代表船型所载货油或者船用燃料油全部泄漏的数量确定”。

项目新建3个1000吨级泊位，设计船型为1000吨级、500吨级；根据《水上溢油环境风险评估技术导则》（JT/T1143-2017）中表C.6散货船燃料油舱中燃油数量关系（详见表2.4-7），＜5000t散货船，燃油总舱容＜456m3，单舱燃油量＜61m3，燃油总量（载油率80%）＜365m3。本项目施工期清淤方式采用两栖反铲式清淤船疏浚，疏浚作业时，按1艘船型为500t考虑，燃油总舱容约为46m3（456m3×500/5000），燃油油舱单舱燃油量为6m3（61m3×500/5000）；本次环评燃油密度按照0.85t/m3计，则挖泥船携带燃油总量为39.1t，燃油油舱单舱燃油质量为5.1t。

散货船燃油舱中燃油数量关系

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 散货船载重吨位（t） | 散货船总吨数GT | 燃油总舱容（m3） | 燃油总量（载油率80%）（m3） | 燃油舱单舱燃油量（m3） |
| <5000 | <3800 | <456 | <365 | <61 |

根据《建设项目环境风险评价技术导则》（HJ169-2018）附录B，船舶燃油属于其中“381油类物质”，临界量为2500t；根据前述计算，得到判定情况见表2.4-8。

建设项目风险物质Q值情况（施工期）

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 危险物质名称 | CAS号 | 最大存在总量qn/t | 临界量Qn/t | 该种危险物质Q值 |
| 1 | 油类物质（船用燃油） | / | 39.1 | 2500 | 0.0156 |
| 施工期项目Q值 | | | | | 0.0156 |

根据核算，故本项目施工期涉及附录B中危险物质总量与其临界量比值为0.0156（Q＜1）。

（2）营运期

根据建设项目营运期间按3艘1000t级散货船同时在港考虑，燃油总舱容约为91m3（456m3×1000/5000），燃油油舱单舱燃油量为12m3（61m3×1000/5000）；本次环评燃油密度按照0.85t/m3计，则3个1000吨级散货船携带燃油总量为232.05t，燃油油舱单舱燃油质量为10.2t。

涉及的危险物质的最大存在总量与其在附录B中对应临界量的比值计算Q，判定情况见表2.4-9。

建设项目风险物质Q值情况（运行期）

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 危险物质名称 | CAS号 | 最大存在总量qn/t | 临界量Qn/t | 该种危险物质Q值 |
| 1 | 油类物质（船用燃油） | / | 232.05 | 2500 | 0.0928 |
| 2 | 废油 | / | 2.3 | 50 | 0.046 |
| 项目Q值 | | | | | 0.1388 |

根据核算，本项目营运期涉及的危险物质总量与其临界量比值为0.1388（Q＜1）。

2、环境风险潜势划分

根据《建设项目环境风险评价技术导则》（HJ169-2018）附录C，本项目施工期Q=0.0156（Q＜1）、营运期间Q=0.1388（Q＜1），项目环境风险潜势为Ⅰ。

3、环境风险评价等级判定

根据风险潜势确定评价工作等级，项目风险潜势为Ⅰ，对照表2.4-10，本项目环境风险评价进行简单分析。

环境风险综合评级工作等级划分

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 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。 | | | | |

考虑到新建码头项目紧邻盐河，盐河水质目标为Ⅲ类，因此对船舶突发性溢油事故造成的地表水环境影响进行预测评价。

* + - 1. 生态环境评价工作等级

本项目为国能涟水一期热电联产项目配套码头工程，在国能涟水热电联产项目厂区内进行扩建。根据《环境影响评价技术导则 生态影响》（HJ19-2022），并参考《水运工程建设项目环境影响评价指南》（JTS/T105-2021），分别对陆生生态、水生生态进行评价等级判定如下，详见表2.4-11和表2.4-12。

生态环境影响评价项目类别表

|  |  |  |  |
| --- | --- | --- | --- |
| 评价原则 | 原则内容 | 本项目情况 | 符合情况 |
| a | 涉及国家公园、自然保护区、世界自然遗产、重要生境时，评价等级为一级 | 本项目为码头项目，本项目不涉及国家公园、自然保护区、世界自然遗产、重要生境 | 不属于 |
| b | 涉及自然公园时，评价等级为二级 | 本项目不涉及自然公园 | 不属于 |
| c | 涉及生态保护红线时，评价等级不低于二级 | 本项目评价范围内不涉及生态红线区 | 不属于 |
| d | 根据HJ 2.3判断属于水文要素影响型且地表水评价等级不低于二级的建设项目，生态影响评价等级不低于二级 | 本项目为码头工程，属于水污染影响型和水文要素影响型兼有的复合影响型。项目地表水评价等级为水污染影响型三级B和水文要素影响型三级 | 不属于 |
| e | 根据HJ610、HJ964判断地下水水位或土壤影响范围内分布有天然林、公益林、湿地等生态保护目标的建设项目，生态影响评价等级不低于二级 | 根据《环境影响评价技术导则土壤环境（试行）》（HJ964-2018）、《环境影响评价技术导则 地下水环境》（HJ610-2016），建设项目地下水和土壤环境影响评价类别为Ⅳ类，可不开展土壤和地下水环境影响评价，且本项目用地范围内无天然林、公益林、湿地等生态保护目标 | 不属于 |
| f | 当工程占地规模大于20km2时（包括永久和临时占用陆域和水域），评价等级不低于二级；改扩建项目的占地范围以新增占地（包括陆域和水域）确定 | 本项目工程占地规模（包括永久和临时占用陆域和水域）约为0.042km2，小于20km2 | 不属于 |
| g | 除本条a）、b）、c）、d）、e）、f）以外的情况 | 本项目为除本条a）、b）、c）、d）、e）、f）以外的情况 | 属于 |

河港建设项目评价工作等级划分表

|  |  |  |  |
| --- | --- | --- | --- |
| 港口性质 | 工程特性 | 影响区域 | 生态影响评价等级 |
| 干散货码头工程 | 新开港区 | 重要生境 | 一 |
| 一般区域 | 二 |
| 非新开港区 | 重要生境 | 二 |
| 一般区域 | 三 |

（1）陆生生态影响评价等级

本项目码头永久占地和临时占地面积共约0.042km2＜20km2，不涉及国家公园、自然保护区、世界自然遗产、重要生境、自然公园和生态保护红线，地下水水位或土壤影响范围内无天然林、公益林、湿地等生态保护目标，综合判定陆生生态影响评价等级为三级。

（2）水生生态影响评价等级

本项目水文要素影响型地表水评价等级为三级，项目不涉及国家公园、自然保护区、世界自然遗产、重要生境、自然公园和生态保护红线，综合判定水生生态影响评价等级为三级。

* + 1. 评价重点及评价时段

根据建设项目排污特点及周围地区环境特征，确定本次评价重点为：建设项目工程分析，施工期和运营期环境影响、大气及水污染物、固废污染防治措施，环境影响预测，污染物排放清单。评价时段主要为施工期及营运期。

* 1. 评价范围及环境保护目标
     1. 评价范围

根据本项目环境影响评价等级和环境影响评价技术导则规定的工作范围，参照《水运工程建设项目环境影响评价指南》要求范围见表2.5-1。

建设项目环境要素评价范围表

|  |  |
| --- | --- |
| 评价内容 | 评价范围 |
| 大气环境影响评价 | 以项目厂址为中心，边长为5km的矩形区域。 |
| 地表水环境影响评价 | 电厂取水口上游1000m到下游3000m。 |
| 噪声环境影响评价 | 码头边界外扩200m范围。 |
| 地下水环境影响评价 | 无需开展评价。 |
| 环境风险影响评价 | 大气：简要分析，项目周边1000m范围。地表水：项目所在地至下游约30km处盐河袁闸断面。地下水：无需开展评价。 |
| 土壤环境影响评价 | 无需开展评价。 |
| 生态环境影响评价 | 水生生态环境调查范围为施工区域及上游约50m至下游2000m，陆生生态环境调查范围为陆域占地范围外扩1000m范围。 |

* + 1. 环境保护目标

环境保护目标与本项目的相对方位及距离汇总见表2.5-2，环境保护目标见图2.5-1。本次规划与江苏省生态空间管控区域级及国家级生态红线位置关系见表2.5-3和图1.5-1和图1.5-2。

环境保护目标表

| **主要环境空气保护目标名称** | | **坐标/m** | | **保护对象** | **保护内容** | **环境功能区** | **相对厂址方位** | **相对厂界最近距离/km** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **X** | **Y** |
| 花庄村 | | -2608.3 | 2427.8 | 村庄 | 大气环境 | 环境空气二类区 | NW | 3.44 |
| 王刘村 | | -2073.9 | 2331 | 村庄 | NW | 2.86 |
| 王二庄村 | 王二庄村 | -2451.3 | 411 | 村庄 | W | 2.13 |
| 闸南村 | -2600 | 1601.2 | 村庄 | NW | 2.73 |
| 朱舍 | -2757.1 | 940 | 村庄 | WNW | 2.68 |
| 林场 | -2393.4 | 1039.2 | 村庄 | WNW | 2.39 |
| 圩外 | -1462.3 | 1066.3 | 村庄 | WNW | 1.31 |
| 柴市村 | 柴市村 | -2693.9 | -1194 | 村庄 | WSW | 2.4 |
| 林许庄 | -2558.7 | -456.9 | 村庄 | W | 1.8 |
| 孙徐村 | -2746.1 | -2372 | 村庄 | SW | 2.7 |
| 高台村 | 越堆 | -1480.1 | -807.4 | 村庄 | SW | 1.06 |
| 嵇陆村 | 嵇陆村 | -1492 | -2300.4 | 村庄 | SSW | 2.21 |
| 陆陈 | -1283 | -1213.5 | 村庄 | SW | 1.35 |
| 何李庄 | -399.2 | -1846.5 | 村庄 | S | 1.54 |
| 胡楼村 | 胡楼村 | 796 | -2251.6 | 村庄 | SE | 1.72 |
| 孙夏村 | -215.8 | -2399.1 | 村庄 | S | 2.25 |
| 李集村 | 李集村 | 1009.2 | -1281.2 | 村庄 | ESE | 1.11 |
| 前贾庄 | 1653.9 | -1297.7 | 村庄 | ESE | 1.85 |
| 王庄 | -751.5 | -956.7 | 村庄 | S | 0.51 |
| 徐庄 | -321.5 | -1171.7 | 村庄 | S | 0.91 |
| 笪巷村 | 笪巷村 | 2075.5 | -2107.7 | 村庄 | SE | 2.75 |
| 肖庄 | 1315.9 | -2005.6 | 村庄 | SE | 2.17 |
| 笪北村 | 高庄 | 2240.8 | -1413.4 | 村庄 | ESE | 2.56 |
| 贾庄 | 2050.7 | -900.9 | 村庄 | ESE | 2.08 |
| 金杨 | 2447.5 | 41.4 | 村庄 | E | 2.09 |
| 韩高村 | | 796 | -2251.6 | 村庄 | E | 2.07 |
| 华昌固废宿舍区 | | 2083.8 | 1372.2 | 村庄 | NE | 2.26 |
| 嵇码村 | 嵇码村 | 1935 | 2471.5 | 村庄 | NE | 2.96 |
| 薛圩 | 2100.3 | 2157.4 | 村庄 | NE | 2.83 |
| 新灯塔村 | 新灯塔村 | 290.1 | 2173.9 | 村庄 | NE | 1.82 |
| 韩庄 | -106.7 | 1405.2 | 村庄 | N | 1.14 |
| 赵庄 | -205.8 | 1206.8 | 村庄 | N | 0.97 |
| 西刘 | -717.5 | 1938.6 | 村庄 | NNE | 2.09 |
| 东刘 | -1065.8 | 1926.3 | 村庄 | NNE | 1.51 |
| 盐河 | | | | | 地表水 | 《地表水环境质量标准》（GB3838-2002）Ⅲ类 | E（紧邻） | / |
| 盐河袁闸断面（国考断面） | | | | | N | 27 |
| 渠西河 | | | | | S.E | 4.36 |
| 界外200m范围内无声环境敏感点 | | | | | 声环境 | 《声环境质量标准》（GB 3096-2008）3类 | | |
| 河堤护栏外25m范围内无声环境敏感点 | | | | | 《声环境质量标准》（GB 3096-2008）4a | | |

注：本次评价码头红线水域南侧角为原点，坐标（0，0）。东西方向为X轴、南北方向为Y轴，敏感点坐标为相对坐标。

本项目与周边生态保护目标位置情况表

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 生态空间保护区域名称 | 主导生态功能 | 范围 | | 面积（km2） | | | 相对位置、  距离（km） |
| 国家级生态保护红线范围 | 生态空间管控区域范围 | 国家级生态保护红线面积 | 生态空间管控区域面积 | 总面积 |
| 江苏涟水涟漪湖黄嘴白鹭省级自然保护区 | 生物多样性保护 | 包括自然保护区核心区、缓冲区和实验区。自然保护区五岛公园以及相连水域为核心区和缓冲区。实验区范围包括涟水县涟城镇的五岛公园以及相连水域，城郊废黄河沿线的林区和水域、湿地生态系统。坐标为：118°59′E至119°35′E33°45′N至34°65′N之间 | / | 34.33 | / | 34.33 | 本项目位于国家级生态保护红线实验区的东北偏北侧约7.5km左右 |

1. 项目概况与工程分析
   1. 国能涟水一期热电联产项目概况

国能涟水一期热电联产项目环境影响报告书于2022年7月1日取得江苏省生态环境厅《省生态环境厅关于国能涟水一期热电联产项目环境影响报告书的批复》（苏环审〔2022〕43号）（以下简称“热电项目”），截至目前，热电项目尚未开工建设。本次根据已批复项目环评报告文件对国能涟水一期热电联产项目进行回顾。

* + 1. 热电项目及与本项目的关系

热电项目拟建设2×20MW级抽背机组，配套3×165t/h循环流化床锅炉，配套建设脱硫脱硝除尘系统。锅炉总蒸发量折算至3台的设备年利用小时数为5500h，全厂年供热小时数为8000h。

项目主要建设内容及与本项目的关系见表3.1-1。

热电项目主要建设内容及与本项目关系一览表

| **类别** | **主要名称** | **主要内容** | **与本项目关系** |
| --- | --- | --- | --- |
| 主体工程 | 锅炉 | 3×165t/h高温高压循环流化床锅炉，型号：CG-165/11.0-MX | / |
| 汽轮机 | 2×20MW级背压式汽轮机，型号：CB20-10.3/535/4/1.8 | / |
| 发电机 | 2×20MW静态励磁发电机，型号：QF3(N)-20-2 | / |
| 储运工程 | 封闭煤场 | 封闭式煤场，跨度约为80m，长度86m，堆高10m，可贮煤约2.36万吨 | 利用该部分区域作为临时堆土场 |
| 上煤系统 | 2条运煤皮带B=650mm，带速1.0m/s，出力140t/h，内煤库至锅炉房采用密闭式管带机输送。包括3个转运站T0、T1、T2 | 已评价 |
| 码头 | 设3个1000吨级散货泊位，分别为煤炭卸船泊位、煤炭清仓泊位和灰运出泊位，泊位长度为230m，设计通过能力为153万吨。码头环评不在热电联产项目评价范围内 | 本项目内容，有变动，本工程拟建泊位为3个1000吨级泊位，其中2个煤炭散货泊位、1个待泊泊位，实际泊位共计长度220m，岸线占用长度182m，无清仓泊位和灰运出泊位，设计通过能力为118万t |
| 柴油储罐 | 1座，每座容量为50m3 | / |
| 公用工程 | 除灰渣系统 | 每台炉设有2个冷渣器，通过链斗式输送机和斗式提升机输送到渣仓储存。链斗输送机和斗式提升机的出力均为4t/h。  每台炉设一个渣仓，容积约为30m3，可储存一台165t/h机组在MCR工况燃用设计煤种时，24小时的渣量。  厂内除灰系统拟采用正压气力输送方式。3台炉设置2座灰库，1座粗灰库，1座细灰库。2座灰库容积相同，为1500m3。灰、渣库内的灰渣定期由协作单位用密封罐车外运综合利用。 | / |
| 化学系统 | 除盐水制备系统出力设计为3×120m3/h。 | / |
| 供水系统 | 机组冷却水水源：盐河河水。生活水采用市政自来水；工业水、消防水采用经净水站处理后的盐河河水。电厂本期平均需水量约为305.61m3/h，其中含7.3m3/h生活用水。  补给水泵房布置于厂址前沿盐河码头南侧，设于厂址内。本期原水预处理区内设3座220m3/h原水反应沉淀池；3座220m3/h空气擦洗滤池；1座500m3化学水池；1座500m3化学工业水池（中间隔墙分隔，其中化学水250m3，工业水250m3）；加药间1座；1座排水池；1座排泥池。工程需于厂区南侧新建取水泵站至取水口取水管线约60m | 本项目依托 |
| 辅机冷却水系统 | 项目开式循环冷却水约1200m3/h，共设3台机械通风冷却塔和3台冷却水泵。冷却后的循环水经冷却水泵将水送至主厂房开式循环冷却水系统，升温后返回加力通风冷却塔进行冷却，形成循环 | / |
| 排水系统 | 项目不设污水排放口。生产废水主要包括脱硫废水、含煤废水、锅炉补给水处理系统排水、循环冷却水排污水等，其中脱硫废水采用中和（碱化）、沉降、絮凝处理后，通过旋转喷雾干燥技术实现零排放；含煤废水经煤水处理设施处理后，回用于输煤系统冲洗和煤场喷淋；化学水处理系统产生的反渗透浓水和循环冷却水排污水全部排至回用水池，用于脱硫工艺用水补水，煤场冲洗、喷淋用水补水及全厂服务用水；锅炉清洗排水4年生产一次，电厂委托专业锅炉清洗公司负责将完成清洗后的废水用密闭罐车外运至具有处理资质的公司处置。项目设雨水泵房一座，位于厂区东北侧，紧邻盐河。雨水泵房内设3台雨水泵（2大1小），并预留1台小雨水泵位置。厂区范围的雨水排水将自成体系独立排放。雨水管网在厂区呈枝状布置，采用钢筋混凝土排水管。厂区雨水经雨水泵提升，送至雨水泵房后排水井，并通过自流排入电厂东侧盐河。设初期雨水池，容积约1500m3。初期雨水过滤装置处理能力50t/h | 本项目依托 |
| 升压站及出线 | 升压站接线方案：110kV单母线接线，配套建设2回进线（#1主变、#2主变），2回出线。（由建设单位另行委托，不在热电联产项目评价范围内） | 本项目依托 |
| 环保工程 | 脱硝设施 | 每台燃煤锅炉配1套处理设施，采用SCR-SNCR联合脱硝，尿素为脱硝剂，脱硝效率不低于80% | / |
| 除尘设施 | 每台燃煤锅炉配1套高效布袋除尘器，综合除尘效率不低于99.975% | / |
| 脱硫设施 | 每台燃煤锅炉配1套处理设施，采用石灰石-石膏法脱硫，脱硫效率不小于98.4% | / |
| 烟囱 | 每台燃煤锅炉烟气经高度为80m、出口内径为2m的烟囱排入大气 | / |
| 生活污水 | 经化粪池处理后接管排入生活污水处理站，经处理后回用于厂区绿化 | 本项目依托 |
| 脱硫废水 | 脱硫废水采用中和（碱化）、沉降、絮凝处理后，通过旋转喷雾干燥技术实现零排放 | / |
| 初期雨水和事故应急水池 | 厂区设事故应急水池1座，设计有效容积1500m3，满足事故应急需要；设初期雨水收集池，容积约1500m3，满足初期雨水量收集要求。初期雨水设过滤装置，处理能力50t/h；设1座280m3的事故油池，用以接纳柴油罐区初期雨水以及变压器事故状态下排油，配套油水分离装置。 | 本项目依托 |
| 渣仓 | 3座，每座容量为30m3 | / |
| 灰仓 | 2座，1座粗灰库，1座细灰库。每座灰库有效容积为1500m3， | / |
| 石灰石粉仓 | 1座，容积为110m3 | / |
| 脱硫石膏库 | 1座，容积为250m3 | / |
| 危废暂存库 | 1座，占地约50m2 | 本项目依托 |
| 噪声 | 采用低噪声设备、隔声、消声设施 | / |

* + 1. 全厂总体规划

一期建设3×165t/h高温高压循环流化床锅炉＋2×20MW级抽风汽轮发电机组。

（1）厂址

项目厂址位于涟水县朱码街道高台村，在薛行大桥南侧、紧邻盐河西岸，距离涟水县城中心约8.7km，厂址东临盐河，向西约1.7km至王二庄村，向南约800m至李集村王庄，向北约2km至华昌大道。

（2）燃料运输

厂外燃煤运输方式采用水路运输，采用铁-海-江-河联运作为热电联产项目燃煤运输方案。

山西煤经石太线、京石线、京秦线在秦皇岛（或曹妃甸）下水，在常州或泰州中转，通过海-江－盐河－盐河联运至电厂卸煤码头。运输过程均采用全封闭式。

（3）给水

项目生活用水接自电厂市政自来水管网；机组冷却水水源取自盐河河水；工业水、消防水采用经净水站处理后的盐河河水。热电项目平均取水量约为305.61m3/h，其中含7.3m3/h生活用水。根据全厂年供热小时数，年取水量约250.88×104m3/a。

（4）除灰渣

项目采用灰、渣分离，炉渣采用“滚筒式冷渣机+链斗式输送机+斗式提升机+渣仓”连续排渣方式，气力除灰。

* + 1. 热电项目主要工艺流程

燃料经铁-海-江-河联运到厂，经输煤系统给入锅炉炉膛燃烧蒸发水，产生蒸汽推动汽轮机带动发电机发电，电能接入配电装置后送出；烟气经脱硝、除尘、脱硫等设施净化后由烟囱排入大气；采用“灰渣分除、粗细分排”系统，灰渣、石膏综合利用；循环冷却水取自盐河，工业水、消防水采用经净水站处理后的盐河河水，生活水采用市政自来水。热电工程主要生产工艺流程示意图见图3.1-1。

* + 1. 给排水系统
       1. 水源及取水方案

热电项目生活用水接自电厂市政自来水管网；机组冷却水水源为盐河河水；工业水、消防水采用经净水站处理后的盐河河水。平均取水量约为305.61m3/h，其中含7.3m3/h生活用水。根据全厂年供热小时数，年取水量约250.88×104m3/a。

热电项目用水量详见下表，热电项目水量平衡图见图3.1-2。

热电项目用水情况一览表（单位：t/h）

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 用水项目 | 用水量 | 回用量（原水制备系统） | 回用量（回用水池） | 备注 |
| 1 | 原水澄清处理系统 | 1.5 | / | 1.5 |  |
| 2 | 污泥浓缩脱水处理 | 2 | 18.89 |  | 化学水系统污泥量17，产生泥饼0.11 |
| 3 | 开放式冷却水 | 21 | / | 4 | 消耗17 |
| 4 | 化学水用水 | 332 | 32 | 43 | 17排入污泥脱水系统240供热消耗 |
| 合计 | | 356.5 | 50.89 | 48.5 | 取水量305.61 |

全厂回用水池用水量一览表

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 用水项目 | 用水量 | 备注 |
| 1 | 灰渣系统用水 | 4 | 消耗 |
| 2 | 暖通用水 | 4 | 消耗 |
| 3 | 化学服务水 | 4 | 消耗 |
| 4 | 脱硫工艺用水 | 28 | 消耗27，旋转喷雾干燥1 |
| 5 | 地面冲洗水 | 1 | 消耗 |
| 6 | 煤场喷淋、栈桥冲洗水 | 7.5 | 消耗10，码头回用2.5 |
| 合计 | | 48.5 | |

本项目市政管网用水量一览表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 序号 | 用水项目 | 用水量 | 回水量 | 备注 |
| 1 | 厂区生活用水 | 3 | 2 | 消耗1 |
| 2 | 码头生活用水 | 1.8 | 0.3 | 消耗1.5 |
| 3 | 码头面冲洗水 | 2.5 | 2.5 | 厂区含煤废水处理系统 |
| 合计 | | 7.3 | 4.8 |  |

热电项目原水取水量为305.61t/h，其中用于冷却水补水21t/h，化学水用水332 t/h，污泥浓缩脱水系统用水2 t/h。污泥浓缩脱水处理环节产生的水量18.89t/h以及超滤反冲洗排水量约32t/h，主要污染物为SS，与原水水质接近，回至原水处理系统，与原水一起处理后回用。

* + - 1. 厂区排水

厂区雨水本项目厂区内排水采用雨、污分流制。不设污水排放口，废水全部厂内利用不外排；厂区通过道路及场地雨水口、建构筑物雨水管沟等设施收集雨水，再经遍及全厂的雨水下水道自流汇集至雨水泵房，经雨水泵房再排至厂外。设初期雨水池，容积约1500m3，待降雨结束后，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。初期雨水过滤装置处理能力50t/h。

* + 1. 热电项目与本项目有关的污染防治措施

**一、废水处理措施**

生产废水主要包括脱硫废水、含煤废水、锅炉补给水处理系统排水、循环冷却水排污水等，其中脱硫废水采用中和（碱化）、沉降、絮凝处理后，通过旋转喷雾干燥技术实现零排放；含煤废水经煤水处理设施处理后，回用于输煤系统冲洗和煤场喷淋；化学水处理系统产生的反渗透浓水和循环冷却水排污水全部排至回用水池，用于脱硫工艺用水补水，煤场冲洗、喷淋用水补水及全厂服务用水；锅炉清洗排水4年生产一次，电厂委托专业锅炉清洗公司负责将完成清洗后的废水用密闭罐车外运至具有处理资质的公司处置。

1、本项目工业废水按经常性废水、非经常性废水分类。经常性废水包括超滤反洗排水、反渗透浓水和脱硫废水等；非经常性废水包括膜化学清洗排水、锅炉化学清洗排水等。处理技术工艺流程如下：

（1）超滤反洗排水：悬浮物较高，含盐量同进水，回至原水预处理系统反应沉淀池。

（2）一级反渗透浓水：共计约105/h：其中83t/h再经浓水反渗透减量至21t/h（剩余62t/h回到一级反渗透处理），至回用水池；另外22t/h反渗透浓水直接至回用水池。反渗透浓水外观清澈，含盐量较高，可全部直接回用作为二级用户用水，无需进行处理。

（3）脱硫废水

本项目的脱硫废水产生量约1t/h，需要设置单独的脱硫废水处理设施进行处理，脱硫废水水质特点是悬浮物浓度高、COD高、pH值呈酸性，石膏脱水后的脱硫废水经曝气、絮凝、加药、沉淀、pH 调节等一系列处理过程后，使废水 SS、COD、重金属离子、氟化物等有害元素满足《污水综合排放标准》（GB8978）的第一，二类污染物最高允许排放浓度规定的一级排水要求，但含盐量仍高达数万毫克每升。本项目脱硫废水产生量较少，因此采用中和（碱化）、沉降、絮凝处理后，通过旋转喷雾干燥技术实现零排放，三台炉合用一套。

脱硫废水经过旋转雾化器雾化成粒径约几十微米的细雾滴喷入干燥塔内，利用空预器前的锅炉热烟气或者空预器出口的二次风作为热源，在喷雾干燥塔内将废水蒸发，水分进入烟气中，蒸发析出的粗盐分颗粒落入干燥塔底端被收集转运，细小盐分颗粒随烟气进入除尘器处理。

本工程拟采用的旋转喷雾干燥技术较为成熟，已在国内多个项目应用，如：浙能长兴发电厂（4×300MW燃煤亚临界机组）脱硫废水设计出力为3t/h，工程总投资约6000万元，吨水处理费用约50~60元/吨。华能瑞金电厂二期、华电扬州电厂、江苏利港电厂、华电如皋电厂（热电联产1×13MW抽背机组+1×25MW抽背机组）等国内十几家电厂均已成功应用此技术，目前均运行良好。目前还有几十台火电机组正在按此技术建设脱硫废水零排放系统。

（4）非经常性废水：主要为锅炉清洗排水，每台锅炉约4年进行1次清洗，每次产生量为455t。主要污染物为pH值、COD、SS、氨氮、挥发酚、氟化物、Fe等。电厂委托专业锅炉清洗公司负责将完成清洗后的废水用密闭罐车外运至具有工业污水处理资质的单位处置。建设单位已与无锡能之汇环保科技有限公司签订处置协议，由其负责锅炉清洗工作，清洗完成后将废水外运处理。

2、含煤废水

煤场区输煤栈桥冲洗水、码头冲洗水等含煤废水及煤场初期雨水，首先由设在煤场的一座煤泥沉淀池储存并初步沉淀处理，再经一套煤污水絮凝处理装置处理后，用作煤场喷淋及栈桥冲洗。煤浆采用液下泵输送至室外煤泥沉淀池，煤泥抓取后晾干，然后转运至煤场。

煤场周围设集水沟，雨水汇入集水沟后流入设在煤场一侧的煤泥沉淀池。煤泥沉淀池长14.2m，宽17.5m，高约5.5m。池内沉积下的煤泥采用桁架式刮泥机及龙门式抓斗吊或人工清理。

煤泥沉淀池旁另设有含煤废水处理设备，处理煤场喷淋及栈桥冲洗水、排污水以及雨季的初期雨水，分离出来的煤粒返回煤场，清水流入雨水管。煤泥沉淀池另设有溢流管，大雨期间的雨水经煤泥沉淀池沉淀后流入厂区雨水管。

含煤废水处理工艺流程如下：

废水：煤场排水沟、输煤建构筑物场地排水管、出渣系统中的沉淀池及贮水池排水管→煤泥沉淀池沉淀区域→煤泥池处理水区域→含煤废水提升泵→含煤废水处理设备（电子絮凝器→离心澄清反应器→中间水池→升压泵→过滤器）→煤泥池回用水区域→喷淋冲洗泵→喷淋冲洗水管→煤场喷淋及输煤建构筑物场地冲洗用户。

煤泥：含煤废水处理设备（包括澄清、过滤设施）→煤泥池沉淀区域→人工抓斗吊→自卸车辆→煤场。

3、含油废水

本项目设1座280m3的事故油池，用以接纳柴油罐区初期雨水以及变压器事故状态下排油。油与水在事故油池内分离后，水排入回用水池，油流入集油坑用油泵抽走后，存放在危废暂存间，委托有资质单位处置。

4、循环冷却水排污水

本项目采用机械通风冷却塔的二次循环供水系统，冷却后的开式循环水经冷却水泵将水送至主厂房开式循环冷却水系统，升温后返回机力通风冷却塔进行冷却，形成循环。冷却塔会产生循环冷却水排水，主要含盐分较高，水量约4t/h，排放至回用水池，用于脱硫工艺用水补水，煤场冲洗、喷淋用水补水及全厂服务水，不外排。

5、生活污水处理系统

本项目生活污水量约2t/h，生活污水中的污染物主要为SS、COD、BOD5、氨氮和总磷等，经化粪池处理后，再排入生活污水处理系统。本项目新建2套处理能力均为1m3/h的地埋式一体化生活污水处理装置，设于厂区东北侧。主要处理工艺为二级生物接触氧化，经处理后的生活污水回用于厂区绿化。

6、初期雨水

本项目采取雨污分流制，设雨水泵房一座，雨水泵房位于本期厂区东北侧，紧邻盐河。雨水管网在厂区呈枝状布置，采用钢筋混凝土排水管。厂区雨水经雨水泵提升，送至雨水泵房后排水井，并通过自流排入电厂东侧盐河。初期雨水经过专用管道排至初期雨水收集池，正常下雨时当该水池达初期雨水满水位时，将关闭闸门，不再接收雨水进水。本项目设初期雨水池，容积约1500m3。待降雨结束后，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。初期雨水过滤装置处理能力50t/h。

本项目煤场和输煤系统为封闭式，这些区域初期雨水不需专门收集，依托含油废水处理设施；油罐区四周设置围堰，围堰外设排水切换阀，正常情况下通向雨水系统的阀门关闭，柴油罐区初期雨水收集处理后送到回用水池，用于厂内二级用户用水。

本项目生产过程中，正常情况下产生的各类废水在厂内分别经处理后回用，不外排。

**二、固体废弃物**

热电联产项目运行过程中产生的固体废物主要为炉渣、飞灰、脱硫石膏、脱硝废催化剂、废布袋、废活性炭、废离子交换树脂、脱硫废水污泥、原水制备污泥、废机油、含油废水浮油和生活垃圾。

脱硝废催化剂、废活性炭、废离子交换树脂、废机油、含油废水浮油为危险废物，须委托有资质单位处置，建设单位已分别与具有废活性炭、废离子交换树脂、废矿物油、废脱硝催化剂处理处置资质的单位签订处置协议，并承诺严格落实相关处理处置要求。

建设单位拟在厂内建设危险废物暂存库1座，占地约50m2，总暂存能力约30t。本项目新增危险废物共约26.701/a，其中废活性炭约0.04t/a、废离子交换树脂0.2t/a、废矿物油1.001t/a、废脱硝催化剂14.4t/a、脱硫废水污泥7.3t/a、废布袋3.6 t/a。危废量小于危废暂存间的暂存能力，故本项目危废暂存间可满足危险废物暂存需要。

**三、初期雨水及事故水池**

热电一期项目不存在重大危险源，采用尿素为脱硝还原剂，不涉及液氨的贮存和使用；项目采用微油点火，涉及易燃液体柴油环境风险潜势为I，评价等级为简单分析。为控制事故时物料泄漏可能对地表水体造成的污染，柴油罐区四周设置围堰，防止发生事故时污染物进入地表水体。建设单位必须做好风险事故应急预案的编制、组织和实施工作，完善公司风险防范体系。

对厂区初期雨水设雨水收集池收集。热电一期项目初期雨水收集范围包括厂区道路、储罐及装卸区等，总汇水面积约10.31公顷，地面集水时间15分钟，经计算，热电一期项目初期雨水产生量约为948m3/次。厂区设初期雨水收集池1座，容积约1500m3，土建地下结构尺寸约10m×25m×6m（深），满足初期雨水收集要求。初期雨水经过专用管道排至初期雨水收集池，正常下雨时当该水池达初期雨水满水位时，将关闭闸门，不再接收雨水进水，大量雨水将通过下游管道流入雨水泵站。待降雨结束后，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。初期雨水过滤装置处理能力50t/h。

根据计算结果可知，热电一期项目全厂事故废水为1321.6m3。热电一期项目厂内设置一体积约1500m3的事故应急水池，满足项目事故应急需要。土建地下结构尺寸约10m×25m×6m（深），并配备了提升泵、排水管网、截留阀等相关设施。发生事故时，场地事故排水就地散排进入雨水管网，并第一时间将雨水管网末端闸门由初期雨水池切换至事故水池，确保事故废水流入事故水池。

热电项目应急物资情况见表3.1-5。

热电一期项目应急物资一览表

| **物资名称** | **规格型号** | **单位** | **数量** | **存储地点** |
| --- | --- | --- | --- | --- |
| 铁锹（尖锹） | FT0222 | 把 | 20 | 办公区 |
| 塑料布 | 3米\*100米 | 卷 | 3 | 办公区 |
| 移动电源盘 | QF—C4 | 只 | 3 | 办公区 |
| 编织袋 | 75 kg | 只 | 500 | 办公区 |
| 雨靴 | 42码 | 双 | 15 | 办公区 |
| 雨衣 | XXL | 套 | 15 | 办公区 |
| 安全带 | XGD—2 | 根 | 5 | 办公区 |
| 强光远射灯 | D08—A | 台 | 2 | 办公区 |
| 麻绳 | 直径20mm | 米 | 100 | 办公区 |
| 潜水泵 | BQW15-22-3 | 台 | 3 | 办公区 |
| 全塑软管 | 直径80mm | 米 | 40 | 值班室 |
| 全塑软管 | 直径65mm | 米 | 120 | 值班室 |
| 涂塑软管 | 直径40mm | 米 | 40 | 值班室 |
| 潜水泵软管 | 直径50mm | 米 | 100 | 值班室 |
| 铅丝 | #12 | kg | 10 | 值班室 |
| 彩条尼龙布 | 50m×8m | m2 | 1600 | 值班室 |
| 特制泥浆专用袋 |  | 只 | 12 | 值班室 |
| 防毒面具 | 防止伤害和气体中毒 | 套 | 6 | 值班室 |
| 重型防护服 | 防止接触皮肤伤害 | 套 | 2 | 值班室 |
| 正压式呼吸器 | 防止伤害和气体中毒 | 套 | 2 | 值班室 |
| 便携式漏氨监测仪 | 检测浓度 | 套 | 1 | 值班室 |
| 防护服 | 防止接触皮肤伤害 | 套 | 4 | 值班室 |
| 防护手套 | 防止伤害 | 副 | 4 | 值班室 |
| 防酸碱雨鞋 | 防止伤害 | 双 | 4 | 值班室 |
| 毛巾 | 擦拭、清理伤害部位 | 条 | 若干 | 值班室 |
| 肥皂 | 清理伤害部位 | 块 | 若干 | 值班室 |
| 手提灭火器 | 灭火 | 个 | 6 | 办公区、 |
| 手推式灭火器 | 灭火 | 个 | 10 | 柴油储罐区、锅炉房、汽机房 |
| 黄沙 | 灭火 | 吨 | 1 | 柴油储罐区 |
| 消防水带 | 灭火 | 米 | 200 | 锅炉房、办公区、点火油罐区 |

* + 1. 热电项目污染物产生与排放情况

热电项目污染物产生与排放情况见表3.1-6。

热电项目污染物产生与排放情况表

| **污染物种类** | **污染物** | | **产生量t/a** | **削减量** | **排放量t/a** |
| --- | --- | --- | --- | --- | --- |
| 废水 | 冷却水系统排水 | | 32000 | 32000 | 0 |
| 化学处理反渗透排水 | | 344000 | 344000 | 0 |
| 化学水处理超滤反洗排水 | | 256000 | 256000 | 0 |
| 含煤废水 | | 80000 | 80000 | 0 |
| 脱硫废水 | | 5500 | 5500 | 0 |
| 生活污水 | | 20148 | 20148 | 0 |
| 合计 | | 737648 | 737648 | 0 |
| 废气 | 设计煤种 | SO2 | 3941.09 | 3878.03 | 63.06 |
| NOx | 406.98 | 325.58 | 81.40 |
| 烟尘 | 23111.88 | 23106.10 | 5.78 |
| NH3 | 2.06 | 0 | 2.06 |
| Hg | 0.0402 | 0.0279 | 0.0121 |
| 校核煤种 | SO2 | 4236.79 | 4169.0 | 67.79 |
| NOx | 438.75 | 351.0 | 87.75 |
| 烟尘 | 36361.16 | 36352.07 | 9.09 |
| NH3 | 2.22 | 0 | 2.22 |
| Hg | 0.0446 | 0.0316 | 0.0134 |
| 低矮源及无组织颗粒物 | 封闭煤场 | 0.41 | 0 | 0.41 |
| 煤仓间 | 123.8 | 123.181 | 0.619 |
| 尿素车间 | 0.00066 | 0 | 0.00066 |
| 转运站T0 | 115.6 | 115.022 | 0.578 |
| 转运站T1 | 280.6 | 279.197 | 1.403 |
| 转运站T2 | 264 | 262.68 | 1.32 |
| 碎煤机室 | 165 | 164.175 | 0.825 |
| 干灰库 | 79.2 | 78.804 | 0.396 |
| 渣仓 | 79.2 | 78.804 | 0.396 |
| 石灰石粉仓 | 19.8 | 19.701 | 0.099 |
| 固废 | 炉渣 | 设计煤种 | 15407.92 | 15407.92 | 0 |
| 校核煤种 | 24240.77 | 24240.77 | 0 |
| 飞灰 | 设计煤种 | 23106.10 | 23106.10 | 0 |
| 校核煤种 | 36352.07 | 36352.07 | 0 |
| 脱硫石膏 | 设计煤种 | 12877.41 | 12877.41 | 0 |
| 校核煤种 | 13843.58 | 13843.58 | 0 |
| 原水制备污泥 | | 920 | 920 | 0 |
| 废脱硝催化剂 | | 43.2t/3年 | 43.2t/3年 | 0 |
| 废布袋 | | 10.8t/3年 | 10.8t/3年 | 0 |
| 废活性炭 | | 0.08t/2年 | 0.08t/2年 | 0 |
| 废离子交换树脂 | | 2t/10年 | 2t/10年 | 0 |
| 脱硫废水污泥 | | 16.5 | 16.5 | 0 |
| 废矿物油 | | 1.001 | 1.001 | 0 |
| 生活垃圾 | | 50 | 50 | 0 |

* 1. 本次码头项目概况及工程分析
     1. 港口吞吐量预测
        1. 吞吐量预测思路、依据及方法

本工程主要为后方临港企业国能涟水热电联产项目提供水运服务，主要承担燃煤运输。因此，本次吞吐量预测主要在总规吞吐量预测结果的基础上，结合区域热电规划、发展需求，以及国能热电联产项目的水运发展需求，通过产、运、销平衡综合分析预测吞吐量。

2、预测水平年

本次预测基准年为 2022 年。

预测特征年取 2025 年：热电项目一期建成时间；2030 年：热电项目二期建成时间。

* + - 1. 涟水港区吞吐量预测

根据《淮安港总体规划（2020-2035 年）》，预测涟水港区 2025 年和 2035 年吞吐量预测值分别为 1640万吨和 1865 万吨。根据总规预测结果，涟水港区 2025～2035 年年均增速为 1.37%，因此预测其 2030 年的吞吐量为 1756万吨。

* + - 1. 本工程吞吐量分析

本工程为国能涟水热电联产项目的配套码头，其吞吐量符合该项目的规模和生产能力。根据《国能涟水绿色智慧综合能源示范项目一期工程（国能涟水一期热电联产项目）可行性研究报告》，热电项目采用山西、蒙东等地区的燃煤，按锅炉最大连续蒸发量（B-MCR）时的耗煤量计，近期年耗燃煤量约 39.344 万吨（校核煤种），远期新增耗煤量约 71.854 万吨（校核煤种），合计 111.198 万吨（校核煤种），均采用水运。

根据上述近远期国能涟水热电联产项目耗煤量分析结果，预计码头近期 2025年水运吞吐量将达到约 40 万吨，远期 2030 年将达到约 112 万吨。具体见表3.2-1。

本工程吞吐量预测表（单位：万吨）

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 货种 | 2025年 | | | 2030年 | | |
| 出港 | 进港 | 合计 | 出港 | 进港 | 合计 |
| 煤炭 | 0 | 40 | 40 | 0 | 112 | 112 |
| 合计 | 0 | 40 | 40 | 0 | 112 | 112 |

* + 1. 基本情况

（1）项目名称：淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程。

（2）建设性质：新建

（3）建设单位：国家能源集团江苏电力有限公司

（4）建设地点：淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，项目地理位置见图3.2-1，周边环境概况图见图3.2-2。

（5）项目总投资：5942.36万元，其中环保投资90万元，占总投资的1.52%；

（6）建设内容和规模：本项目采用顺岸凹入式港池型式，拟布置3个1000吨级散货泊位，平行于航道方向布置2个1000吨级煤炭卸船泊位；西南侧布置1个1000吨级待泊泊位。本项目码头泊位长度为220m，距离航道中心线120m。本项目设计通过能力为118万t，设计吞吐量为112万t，主要货种是煤炭。在码头上游端部设转运站一座（9m×9m），码头密闭式带式输送机直接接入该转运站内；水平运输采用直径为65mm的管状带式输送，将煤直接运输至后方电厂封闭煤场。项目配套建设相应的码头前沿铺面结构、生产辅助建筑物、供电照明、通讯、环保、给排水、消防等设施。

（7）建设占地：本码头工程占地面积21661m2，其中码头区域水域面积约12077m2，陆域面积约9584m2。

（8）职工定员及构成：职工定员45人，其中装卸司机7人，装卸工人3人，管理人员25人，其他人员（仓库管理员、巡检工、保安等）10人，本项目不设食堂。热电项目环评中已经考虑了码头定员。本次不新增定员。

（9）作业制度：实行全天工作24小时，三班两运转，码头年作业天数为330天；

（10）工程建设计划：工程的建设期总工期约10个月，初步拟定为2025年2月至2025年11月。本项目为热电项目配套码头项目，规划为同时施工，统一安排施工建设时序，并同时投入生产。

* + 1. 项目组成

本工程建设内容包括主体工程、依托工程、辅助工程、公用工程以及环保工程，本项目项目组成见表3.2-2。本项目是国能涟水一期热电联产项目配套码头工程，污水处理、危废库、事故池及煤炭堆场依托码头后方热电厂区，航道利用现有航道，其余为本项目新建。本项目依托现有项目情况见图3.2-3～图3.2-5。

本项目工程组成

| **项目** | | **建设内容及规模** | **备注** |
| --- | --- | --- | --- |
| 主体工程 | 码头泊位 | 采用顺岸凹入式港池型式，拟布置3个1000吨级散货泊位，平行于航道方向布置2个1000吨级煤炭卸船泊位；西南侧布置1个1000吨级待泊泊位。本项目码头泊位长度为220m，距离航道中心线120m。码头采用船舶岸电设施，且岸电供应能力设计泊位数量占比100%。项目设计通过能力为118t，设计吞吐量为112t，详见表3.2-3。 | 货种是煤炭（不涉及危化品） |
| 储运工程 | | 本项目为国能涟水一期热电联产项目配套码头，卸载的燃煤直接通过封闭输煤皮带输送至热电项目封闭煤场，码头区域不设置煤炭暂存设施 |  |
| 辅助工程 | 1#转运站 | 煤炭转运站，用于煤炭自船舶到T1转运站的接力转运，转移能力≥400t/h |  |
| 运输 | 固定皮带机，L=340m，封闭式，B=1.2m，V=2.5m/s |  |
| 配套工程 | 给水 | 市政自来水给水，项目用水量34056m3/a，生产及生活污水水源由给水管网接入 | 依托热电项目 |
| 排水 | 雨污分流机制，新建雨污分流系统。①码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达到回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头的后期洁净雨水依托后方电厂雨水排口，与电厂洁净雨水通过雨水泵房经电厂现有雨水排口一并排至盐河。②码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。③船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理，禁止船舶生活污水直接向水域排放；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排；  ④船舶舱底油污水由船舶自备的油水分离器隔油处理后通过软管、污水泵及时输送至码头面油污水收集装置，然后由海事部门认可的具备资质的油污水处理单位接收处理。禁止船舶舱底油污水在码头附近水域排放。 | 依托热电项目 |
| 供电 | 依托国能涟水一期热电联产项目供应 | / |
| 环保  工程 | 废水 | 船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水，接收装置规模1m3，不锈钢水箱盛满后，委托有资质单位处置 | 新建 |
| 船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理。国能涟水一期热电联产项目建设1套处理能力均为3m3/h的地埋式一体化生活污水处理装置。处理工艺为二级生物接触氧化，经处理后的生活污水回用于厂区绿化 | 依托热电项目 |
| 码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排 | 依托热电项目 |
| 码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统，含煤废水处理系统处理能力为20t/h，处理工艺为沉煤池+电子絮凝沉淀+澄清、过滤处理。1座煤泥沉淀池（14.2m×17.5m×5.5m）储存并初步沉淀处理，再经1套煤污水絮凝处理装置。用作厂区煤场喷淋和输煤栈桥冲洗，不外排 | 依托热电项目 |
| 机械设备冲洗过程会产生含油废水，依托热电项目油水分离装置，经处理后排至回用水池，不外排。本项目依托后方厂区的机修间承担装卸机械的保养与小修任务，机修废水依托后方厂区的污水处理设施处理。 | 依托热电项目 |
| 废气 | 道路扬尘的治理采用除尘炮雾车、洒水车进行抑尘 |  |
| 车船、装卸机械废气选择优质燃料、加强车辆管理 |  |
| 桥式抓斗卸船机的防尘、抑尘系统： 每台桥式抓斗卸船机装备1套干雾加高压水雾的抑尘系统，并对桥式抓斗卸船机在运转过程中的起尘部位采取密闭防尘措施。桥式抓斗卸船机漏斗上口设挡风板，漏斗至码头皮带转运处设密闭溜槽和密闭导料槽，卸船接料斗下口应设闸板、出料溜筒，进、出口设橡胶帘 |  |
| 带式输送机的防尘、抑尘措施： 带式输送机设置皮带机罩，混凝土栈桥两侧设置防风板，在带式输送机卸料处回程皮带头部设置自动洗带装置 |  |
| 噪声 | 采用低噪声设备、减震隔声、消音等 |  |
| 固废 | 生活垃圾由垃圾桶收集，交由市政环卫部门处理 |  |
| 危险废物依托国能涟水一期热电联产项目厂区西南角建设的1座危险废物暂存库，占地约50m2，总暂存能力约30t | 依托 |
| 船舶生活污水接收设施 | 在码头前沿设置智能一体化船舶生活污水收集设施1处，有效容积10m3。 |  |
| 船舶含油污水接收设施 | 在码头前沿设置智能一体化船舶含油污水收集设施1处，有效容积1m3。 |  |
| 船舶生活垃圾接收设施 | 在码头前沿设置船舶污染物接收柜1处，有效接收能力为2t。 |  |
| 风险 | 设置围油栏、收油机、油拖网、吸油材料等 |  |
| 临时工程 | 临时场地 | 临时疏浚水下土方堆场，占地面积约5000m2，围堰高4m，总容量约为3.5万方，位于国能涟水一期热电联产项目厂区空地处 | 依托 |
| 临时堆土场依托国能涟水一期热电联产项目施工临时堆场进行调配 | 依托 |
| 施工营地依托国能涟水一期热电联产项目施工营地进行调配 | 依托 |
| 机械设备场地依托国能涟水一期热电联产项目施工机械设备场地进行调配 | 依托 |
| 施工材料堆放场所依托国能涟水一期热电联产项目施工材料堆放场地进行调配 | 依托 |
| 临时环保工程 | 陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理不排放，处理能力2m3/h | 依托 |
| 依托国能涟水一期热电联产项目临时沉淀池，处理能力5m3/h，疏浚污泥余水经围堰、泄水口及后续沉淀池等预处理后，满足《污水综合排放标准》（GB8978-1996）表4一级标准后排入盐河 | 依托 |

本项目所使用的混凝土均为商品混凝土，水工构筑物及结构均为厂家预制，不在现场设置搅拌站、预制场等临时工程。

项目依托可行性分析

| **类别** | **依托工程内容** | **依托工程规模及建设情况** | **拟建项目依托情况** | **是否可行** |
| --- | --- | --- | --- | --- |
| 废水处理 | 3m3/d地埋式一体化生活污水处理站 | 热电项目生活污水量约2.3t/h（已考虑码头陆域和船舶生活污水，已在热电项目报告书中统一核算），新建1套处理能力为3m3/h的地埋式一体化生活污水处理装置，设于厂区东北侧。主要处理工艺为二级生物接触氧化，经处理后的生活污水回用于厂区绿化。 | 船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理，陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理。 | 可行 |
| 初期雨水处理设施 | 设初期雨水收集池，容积约1500m3，满足初期雨水量收集要求。初期雨水设过滤装置，处理能力50t/h。 | 项目周围已铺设雨水导排系统，设置转换阀 | 可行 |
| 含煤废水处理设施 | 热电项目含煤废水为10t/h，新建出力为20t/h的含煤废水处理装置。处理工艺为絮凝-沉淀-澄清-过滤。 | 项目新增含煤废水量2.5t/h，富余处理量满足需求；经处理后全部回用于煤炭喷洒、栈桥冲洗 | 可行 |
| 含油废水处理设施 | 热电项目设1座280m3的事故油池，用以接纳柴油罐区初期雨水以及变压器事故状态下排油，配套油水分离装置。油与水在事故油池内分离后，水排入回用水池。含油废水约29 m3/次（事故排油） | 根据生态环境部《关于事故应急池建设方式及容积计算问题的回复》（2021年5月24日）“关于事故应急池是否可以兼用，目前尚无明确规定”。热电项目设置了1座280m3的事故油池，兼做柴油罐区初期雨水池，主要是考虑变压器事故排油和柴油罐区均会产生含油废水，是为便于含油废水的统一处理。在满足变压器一次最大事故排油及含油废水和柴油罐区初期雨水最大产生量暂存的情况，可以兼用。根据《火力发电厂与变电所设计防火规范》（GB 50229-2019）“6.7.8 总事故贮油池的容量应按其接入的油量最大的一台设备确定，并设置油水分离装置。”热电项目变压器为110kv变电站变压器，最大额定容量50000kVA的，单台用油量为7.73吨，考虑事故情况下的消防废水，含油废水约29 m3/次（事故排油），事故油池富余251立方容量。柴油罐区围堰面积900m2，按照一次降雨的30mm厚度雨量，计算得柴油罐区初期雨水量为27 m3/次，事故油池富余容量能够满足柴油罐区初期雨水容纳需求。  本项目新增含油废水0.6m3/d，富余处理量满足需求，经处理后至回用水池回用 | 可行 |
| 固体废物暂存及处置 | 危废仓库 | 热电项目建设危废库占地约50m2，按照相关规范进行建设 | 根据危废属性分区存放，空间满足转移频次要求 | 可行 |
| 环境风险 | 事故水池 | 厂区设事故应急水池1座，设计有效容积1500m3，满足事故应急需要 | 项目周围已铺设事故水导排系统 | 可行 |
| 辅助工程 | 供水系统 | 机组冷却水水源：盐河河水。生活水采用市政自来水；工业水、消防水采用经净水站处理后的盐河河水。电厂本期平均需水量约为305.61m3/h，其中含7.3m3/h生活用水。 | 项目用水需求量为12m3/h，余量可满足使用需求 | 可行 |

* + 1. 主要经济技术指标

本项目主要技术经济指标情况表

| **序号** | **项 目** | **单位** | **指标** | **备注** |
| --- | --- | --- | --- | --- |
| 1 | 设计通过能力 | 万吨 | 118 | - |
| 2 | 吞吐量 | 万吨 | 112 | 2030年 |
| 3 | 泊位数量 | 个 | 2 | 1000吨级，煤炭卸船泊位 |
| 4 | 待泊泊位 | 个 | 1 | 1000吨级 |
| 5 | 泊位长度 | m | 220 | - |
| 6 | 总占地面积 | m2 | 21661 | - |
| 7 | 陆域面积 | m2 | 9584 | - |
| 8 | 水域面积 | m2 | 12077 | - |
| 9 | 前沿作业带 | m2 | 3478 | - |
| 10 | 疏港道路 | m2 | 2341 | - |
| 11 | 生产辅助建筑物 | m2 | 270 | 转运站，集污池 |
| 12 | 翼墙长度 | m | 26 | - |
| 13 | 开挖土方量 | 万m3 | 18.8 | - |
| 14 | 回填方量 | 万m3 | 9.7 | - |
| 15 | 疏浚方量 | 万m3 | 2.4 | - |
| 16 | 项目总投资 | 万元 | 5942.36 | - |
| 17 | 工程费用 | 万元 | 5335.91 | - |

* + 1. 主要设计参数

（1）项目作业货种及吞吐量

本项目主要为国能涟水热电联产项目提供煤炭运输服务。主要货种为煤炭。预计2030年码头设计年吞吐总量112万吨。详见下表。

运输货种及吞吐量 单位：（万吨）

|  |  |  |  |
| --- | --- | --- | --- |
| 货种 | 进港 | 出港 | 小计 |
| 煤炭 | 112 | 0 | 112 |
| 合计 | 112 | 0 | 112 |

（2）船舶选择

本项目设计船型见表3.2-6。

设计船型采用表

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 船舶吨级（t） | 单船 长×宽×吃水（m） | 备 注 |
| 1 | 1000吨级货船 | 60×10.8×2.7 | 设计代表船型 |
| 2 | 500t吨级货船 | 44×8.8×2.5 | 兼顾船型 |

（3）码头泊位通过能力计算

根据《河港总体设计规范》（JTS166-2020）的有关规定，本工程码头年设计通过能力按下列公式进行计算：

![形状

中度可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAIAAAABSCAYAAACcyNzvAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQBAgL9/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAD/AAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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![形状

低可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAFsAAABNCAYAAADJuRgfAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQHJbTaSAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAA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*Ps*－一个泊位年设计通过能力（t）；

*Pt*－各类船舶年装卸不同货物的数量一个泊位年设计通过能力（t）；

——为各类船舶年装卸不同货物的数量占泊位年装卸总量的百分比（%）；

——年营运天数，取330d；

——装卸一艘设计代表船型所需时间（h）；

——昼夜小时数，取24h；

——船舶的装卸辅助作业、技术作业时间以及船舶靠离泊时间之和；

——昼夜非生产时间之和，取4h；

G——设计代表船型实际装卸量（t），取设计船型载重量；

*p*——设计船时效率（t/h），根据两方案单个泊位装卸船设备配置情况，按装卸船设备额定效率的60%～70%计；

*AP*——泊位利用率，件杂货取ρ=0.65。

各种货种泊位通过能力计算 （万吨）

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 名称 | *G* | *P* | *tz* | *tf* | *ts* | *td* | *Ty* | *AP* | *Ps* |  | *Pt* |
| 煤炭卸船泊位  (1000t) | 800 | 250 | 3.2 | 2 | 3 | 24 | 330 | 0.6 | 64 | 80% | 59 |
| 煤炭卸船泊位  (500t) | 400 | 250 | 1.6 | 2 | 3 | 24 | 330 | 0.6 | 46.2 | 20% |

本项目综合通过能力

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 名称 | | 泊位数（个） | 设计吞吐量  （万吨） | 设计通过能力（万吨） | 船型比例 |
| 装卸泊位 | 煤炭卸船 | 2 | 112 | 118 | 1000t船80%  500t船20% |
| 合计 | | 2 | 112 | 118 |

* + 1. 总平面布置

1、岸线与泊位布置

（1）泊位布置

本项目采用顺岸凹入式布置，码头前沿线与航道中心线平行，距离航宽线为90m，距离航道中心线为120m。拟布置3个1000吨级散货泊位，平行于航道方向布置2个1000吨级煤炭卸船泊位；西南侧布置1个1000吨级待泊泊位。码头北侧考虑与淮安新港建设有限公司码头相接。本项目码头南侧采用翼墙与原护岸相接，夹角为120°。装卸泊位长度共220m，其中装卸泊位长度144m（1#~2#煤炭卸船泊位长度=8+60+8+60+8=144m），待泊泊位长度76m（待泊泊位长度=8+60+8=76m）。翼墙长度约26m，水域面积约12077m2。

（2）水域布置

码头前沿停泊水域：港池码头前方作业带宽度为15m，码头前沿作业地带顶高程▽7.2。考虑到码头靠泊1000吨级船型，根据《河港总体设计规范》（JTS166-2020），停泊水域宽度取2倍船宽（设计船型船宽10.8m）为21.6m。

码头回旋水域：因盐河现状为三级航道，设计底宽为45m，航宽为60m，根据规定，码头前沿作业水域和调头水域不得影响航道通航，根据《内河通航标准》（GB 50139-2014），码头前沿应设置调头水域，因盐河河道顺直，本项目周边无调头水域，故在码头前沿设置船舶调头水域，因本项目为水流平缓的河网地区，回旋圆直径为船长的1.2倍，取72m。

本项目总平面布置图见图3.2-6。

2、陆域布置

根据地形条件和后方场区布置要求，码头前方陆域主要为码头前沿场地，面积约3478m2。码头前方陆域设计高程▽7.20，港区陆域即为国能涟水热电联产项目厂区。

3、生产辅助建筑

本项目生产辅助建筑主要为1#转运站和1个集污池及固定式煤炭转运皮带机。项目于码头岸线侧设置宽度1.2m、长度340m，运速2.5m/s的封闭式固定皮带机，煤炭自船舱用卸船机卸入皮带机后，运输至本次拟设1#转运站后接入国能涟水一期热电联产项目转运站的皮带机上，转运至热电联产厂区封闭煤场储存。

4、码头进场道路

平行于码头前沿线方向布置一条港区道路，宽7m，与码头前沿相接，进而沟通进厂道路

5、主干管线系统

本项目主要管线有：给水管、排水管、消防管、通信管线、控制管线、供电管线等。管线的敷设采用明沟和暗管相结合，其走向原则上在绿化带内或主干道下敷设。

* + 1. 厂界周边环境概况

本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，项目东侧为盐河，其余周边500m范围内为耕地、工业用地。具体见图3.2-2。

* + 1. 工程用地情况

（1）置换调整后的用地红线情况

《国能涟水一期热电联产项目环境影响报告书》于2022年7月1日取得江苏省生态环境厅的批复意见（苏环审〔2022〕43号），该热电项目的可研、环评及设计均涵盖了码头的规划和布置方案。根据热电项目环评的内容，本项目原设计方案为：在盐河航道左岸规划的薛行作业区岸线范围内，项目采用挖入式港池型式，拟布置3个1000吨级散货泊位，三个码头泊位长度共计为220m，本项目所在的港口岸线为朱码船闸下游4300米至朱码船闸下游5300米，全长1000米，占用盐河自然岸线长度约246m。为了减少对盐河的生态环境影响，集约岸线资源利用，节约码头建设成本，建设单位决定对本码头向下游调整位置，与淮安新港建设有限公司签订码头合作框架协议，共同建设两家公司的码头，并对本项目布置进行了优化。本项目码头位置调整及布置方案优化，于2023年3月完成，调整后的码头位置及方案布置，即为本次报告评价的内容。

（2）永久用地

本项目永久用地面积总计为2.16hm2，其中陆域用地面积为0.958hm2，用地类型见表3.2-9，水域用地面积为1.208hm2。项目用地在国能涟水一期热电联产项目厂区内，不新增占地，用地类型均为建设用地。

（3）临时用地

项目施工场地（包含材料堆场）在本项目永久用地范围内。不另行征地。施工便道利用项目周边现有道路，不另行征地。项目施工过程中设置排土场1处、排泥场1处，占地面积分别为1hm2和0.4hm2，排土场和排泥场均位于国能涟水一期热电联产项目厂区范围内，均为建设用地。本项目为热电项目配套码头项目，规划为同时施工，统一安排施工建设时序。

* + 1. 公辅工程
       1. 给水

1. 给水水源

项目员工用水来自市政自来水管网。码头设生产生活给水和消防给水两个给水系统，均由后方国能涟水一期热电联产项目厂区生活给水和消防给水系统引接，消防给水来自盐河，生活给水由市政自来水供给。

②用水量

港区用水主要包括船舶用水、道路喷洒用水、卸船喷淋用水、生活用水、绿化用水、冲洗用水、码头机修废水等。

1）船舶用水：本项目船舶年运输量为112万t，预估年停靠1000DWT船1120艘，供水定额20m3/·艘，船舶用水量为22400m3/a（67.9m3/d）。

2）生活用水：根据《江苏省林牧渔业、工业、服务业和生活用水定额（2019年修订）》中其他居民服务业农村地区用水通用值计算，港区劳动定员为45人，3班工作制，按照用水定额50L/人·班，生活用水量为2.25m3/d，共计743m3/a。

3）冲洗用水：主要为码头面冲洗。码头面冲洗用水：根据《[水运工程环境保护规范](https://www.so.com/link?m=ukuGiHKC9DO1QKF9yZ9AxeHiAfBNs74S3mxxycOZXm+B1OhbZgZ+5fJpCTq1dRPAWoqYghJhJldL/h+qTD600yG4j1Pxhwvq+0cxSGAp2Cd3UDDUz2N4n505xFAGW7rj6KFyiAGgdH3NTLZT116OFb7cgGxm3tmkARZYgN/tE7Fc=)》（JTS149-2018），码头面冲洗水量指标为3.0L/m2·次-5L/m2·次，本项目取4.0L/m2·次，煤码头作业区面积按7243m2（陆域面积9584 m2-疏港道路面积2341 m2=7243m2）计，全年按照每周冲洗1次，年营运天数330d，则码头面、转运站冲洗用水量为4.74m3/d，共计1564m3/a。

4）道路喷洒用水：根据《江苏省林牧渔业、工业、服务业和生活用水定额（2019年修订）》中环境卫生管理－道路场地浇洒用水定额先进值1.5L/（m2·d），面积0.23hm2，这部分用水量为3.5m3/d，该用水蒸发，无废水产生。

5）卸船喷淋用水：燃煤在卸船过程中进行洒水抑尘。本码头燃煤卸船量为112万吨。煤炭的自然含水率按10%计，使煤炭含水率达到12%可有效减少粉尘，考虑淮安市年降雨天数90天，按照240天计算用水量，则需要用水14662m3/a。该部分用水进入煤炭及蒸发，无废水产生。

6）机械设备冲洗用水：工艺流动机械按2台考虑，冲洗的数量按50%计，冲洗水量按600L/台·次考虑，每天一次，则机械冲洗用水量为0.6m3/d，共计198 m3/a。

7）绿化用水：根据《江苏省林牧渔业、工业、服务业和生活用水定额（2019年修订）》中绿化管理绿化用水先进值计算，按绿化0.2m3/（m2·a），每日喷洒1次，绿化面积2500m2，这部分用水量为500m3/a。

本项目雨污水管网见图3.2-8。每年用水量为47290m3，具体见表3.2-9。本项目水平衡情况见表3.2-10和图3.2-9。本项目建成后全厂水量平衡图见图3.2-10。

本项目用水量表

| **序号** | **用水项目** | **用水量** | | **用水水源** | **备注** |
| --- | --- | --- | --- | --- | --- |
| **m3/d** | **m3/a** |
| 1 | 船舶用水 | 67.9 | 22400 | 市政自来水 | 每年用水时间按330d计 |
| 2 | 码头陆域生活用水 | 4.5 | 1485 |
| 3 | 码头面冲洗用水 | 20.9 | 6886 |
| 4 | 卸船喷淋用水 | 61.1 | 14662 | 考虑淮安市年降雨天数90d，按照一年洒水天数240d计 |
| 5 | 道路洒水 | 3.5 | 1159 |
| 6 | 绿化用水 | 1.5 | 500 |
| 7 | 设备冲洗用水 | 0.6 | 198 | 每年用水时间按330d计 |
| 合计 | |  | 47290 | / | / |

本项目水量平衡表

| **序号** | **用水项目** | **用水量** | | | | **排水项目** | | **用水量** | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **m3/d** | | **m3/a** | | **m3/d** | | **m3/a** | |
| 1 | 船舶用水 | 67.9 | | 22400 | | 船舶生活污水 | | 4.46 | | 1470 | |
| 船舶舱底油污水 | | 0.46 | | 151 | |
| 船舶消耗 | | 62.97 | | 20779 | |
| 2 | 码头陆域生活用水 | 2.3 | | 743 | | 陆域生活污水 | | 2.03 | | 668 | |
| 生活污水消耗 | | 0.23 | | 74 | |
| 3 | 码头面冲洗用水 | 4.7 | | 1564 | | 码头冲洗废水 | | 4.27 | | 1408 | |
| 码头冲洗消耗 | | 0.47 | | 156 | |
| 4 | 卸船喷淋用水 | 61.1 | | 14662 | | 卸船喷淋消耗 | | 61.09 | | 14662 | |
| 5 | 道路洒水 | 3.5 | | 1159 | | 道路洒水消耗 | | 3.51 | | 1159 | |
| 6 | 绿化用水 | 1.5 | | 500 | | 绿化用水消耗 | | 1.52 | | 500 | |
| 7 | 设备冲洗用水 | 0.6 | | 198 | | 设备冲洗废水 | | 0.48 | | 158 | |
| 设备冲洗消耗 | | 0.12 | | 40 | |
| 8 | 初期雨水 | 5.2 | | 1725 | | 初期雨水回用 | | 5.23 | | 1725 | |
| 合计 | | | 146.8 | | 42951 | | 合计 | | 146.8 | | 42951 | |

* + - 1. 排水

本项目排水系统采用雨、污水分流制。雨水排放口位于码头西北侧。

①雨水系统

本项目码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头后期洁净雨水依托后方电厂雨水排口，与电厂洁净雨水通过雨水泵房经电厂现有雨水排口一并排至盐河。

②排水系统

本项目船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。本项目在码头南侧设置不锈钢船舶舱底油污水接收装置，容积约1m2，水箱盛满后，委托由海事部门认可的具备资质的油污水处理单位接收处置，不外排。

船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。

码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。禁止船舶舱底油污水在码头附近水域排放。

* + - 1. 消防

本工程水域、陆域消防系统主要由国能涟水一期热电联产项目厂区消防系统引接，不另行设置消防站。

本工程按照码头区和生产辅建区的性质划定防火分区，建筑物与建筑物之间按照《水运工程环境保护设计规范》（JTS149-2018）的规定设置防火距离。

码头区布置了环行车道，可供消防车在场区发生火灾时使用，并可作为疏散通道及时将场区作业人员疏散到安全地带。

本工程消防采用水冷却的灭火方式。室外消火栓系统供水强度15L/s，火灾延续时间为3h。码头消防给水采用临时高压供水系统，从后方厂区消防管网引入两路管道，沿码头后沿环状敷设。两消火栓之间的间距不大于120m，每个阀门关断消火栓的数量不超过5个。

* + - 1. 供电系统

（1）供电电源

本项目所需供电电源引自国能涟水一期热电联产项目，电厂用电系统提供码头桥式抓斗卸船机、皮带机、岸电等用电设备电源，电压等级为0.38/0.22kV，码头所有设备均采用放射式供电。

（2）岸电设施

新建码头同步规划、设计、建设岸电设施。本项目在码头泊位建设时同步建设岸电设施，进港船舶应利用岸电作为能源，以减少船舶大气污染物排放。

本项目船舶停靠码头的时候，停止使用船舶上的自备辅助发电机，转而使用陆地电源向主要船载系统供电。其操作方式如下：靠泊船舶放下受电系统接头线缆，港口工作人员将船舶与船舶岸电系统连通，启动船舶岸电系统为靠泊船舶提供辅助动力，使用岸电系统。泊岸电系统包括三个部分：岸上供电系统、船岸连接设备、船舶受电系统。

①岸上供电系统：由国能涟水一期热电联产项目厂用电系统供电。

②船岸连接设备：连接岸上连接点及船上受电装置间的电缆和设备。电缆连接设备必须满足快速连接和存储的要求，不使用的时候存储在船上、岸上或者驳船上。

③船舶受电系统：在船上固定安装受电系统，可能包括电缆绞车、船上变压器和相关电气管理系统。

船舶岸电的供电模式可以分为以下三类：高压岸电模式、低压岸电模式、低压小容量岸电模式。高压岸电模式的供电方式是将码头电网10kV、50Hz高压变频、变压转换为6.6kV/（6）kV、60Hz/50Hz高压电源，接入船上配备的船载变电设备变压后供船舶受电设备使用。

低压岸电模式的供电方式是将码头电网10kV、50Hz高压变频、变压转换为 450V/（400）V、60Hz/50Hz低压电源，直接接入船上供受电设备使用。

低压小容量岸电模式的供电方式是将码头配变380V三相低压电源，经过低压一体化岸电桩输出380V或220V电源，接入船上供受电设备使用。

根据《码头岸电设施建设技术规范》（JTS155-2019），本项目在散货泊位分别设置30kVA船用岸电箱1台，船用岸电电源参数为400V，50Hz，码头前沿船用岸电箱采用放射式接电，箱体材质采用304不锈钢，厚度不低于10mm，箱体防护等级不低于IP65，配IP67工业级插座。

（3）照明系统

本项目码头平均照度要求不低于15lx，水平照度均匀度不低于0.25，眩光值小于50，一般显色指数大于20。码头前沿作业平台主要依靠码头后方附近设置的20m高升降式中杆灯作为堆场照明，每座中杆灯装设6套400WLED灯。

* + - 1. 生产辅助设施

码头与后方热电厂区统一管理，码头前沿根据生产和生活需要，建设转运站和集污池。

* + - 1. 机修

码头前沿不承担本工程装卸机械的保养与小修任务，由后方热电厂区机修承担。修理中所需的各类机械的易损件、零部件均由原制造厂或社会化采购提供。装卸机械的中修、大修任务仍由原制造厂承担，或通过专业生产厂家外协解决。

* + - 1. 通信、监控及导航

港区内生产调度人员之间以及调度人员与移动机械操作人员之间的通信联系采用VHF无线对讲机。

本工程在码头作业平台及周边设置工业电视监控装置。

码头区内不设短波单边带（SSB）电台和甚高频（VHF）船、岸通信电台，进出码头区船舶与码头区之间的远、近通信联系依托钦州港现有的船、岸通信设施。

消防通信依靠自动电话、无线调度通信、VHF电话完成。

* + - 1. 办公辅助区

本工程不设综合办公楼及生活辅助区，管理人员办公等依托附近后方热电厂区的相关配套设施。

* + - 1. 锚地

本项目在码头西南侧设置待泊泊位，总长76m，可停靠一艘1000吨级船舶。本码头为货主码头，企业可通过准确控制到港船舶的频率和艘次，有效船舶调度，避免发生船舶拥堵及等待的情况。对于突发状况，可利用距本工程约4公里的朱码船闸水上服务区进行短暂待泊，朱码船闸水上服务区建设长400m的待泊泊位，可以满足本码头短暂待泊的需求。

* + 1. 临时工程

（1）疏浚水下土方堆场

根据水下方疏浚施工工程量，堆场共需容纳水下放弃土约2.4万方，根据《疏浚与吹填工程设计规范》（JTS181—5—2012）公式9.4.4：

文本, 信件

描述已自动生成

其中，B按照表6.2.7，粘土（软）一般为1.1-1.15。本项目与一般港池和河道疏浚不同，本项目港池属于陆域开挖，疏浚的是陆域的水下土方，不对现有河道进行疏浚，采用反铲式疏浚，因此，本项目的水下土方相较于一般的航道疏浚，含水率低，搅松系数可以按照较小值选取。本次取1.1。

则本项目水下土方堆放场容量为3.04万立方。

故设计水下土方干化场围堰高度为4米，占地0.4hm2，总容量约为3.5万方，能够满足要求，堆场利用国能涟水一期热电联产项目厂区低洼空地，不新增临时占地。水下土方干化场围堰采用充填袋堤心结构，围堰内边坡取1:1.5，外边坡取1:3。围堰吹泥侧斜坡采用袋装土填隙，其上铺设防渗土工膜，土工膜下铺至现状泥面以下4m，坡面防渗土工膜沿围堤轴线方向每 20m 长用 0.3m 厚袋装土压护。外坡侧采用袋装土填隙与护面，护面厚0.2m。

水下土方干化场设置1个排水口，排水口位置按照有利于泥沙沉淀、土质均匀分布及余水含泥沙量低的原则，设置在远离排泥口处。水门结构采用水门箱与泄水管连接而成，水门箱采用钢质结构，泄水管采用钢管，水门置于现状泥面标高以上1.0m处。堆场尾水经沉淀后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河。工程产生的水下方干化后弃方全部用于临时用地恢复。

（2）临时堆土场

本次码头项目陆域开挖形成的少量土方运至国能涟水一期热电联产项目施工设置的临时堆土区暂存，国能涟水一期热电联产项目临时堆土区布设与厂区道路硬化及管线区，占地1hm2，堆土区周围设置临时拦挡，临时排水沟和沉砂池，堆土四周表面利用防尘网苫盖。

图示, 工程绘图

描述已自动生成

图3.2-11 临时堆土场临时防护措施典型设计

（3）临时表土堆场

在排泥场西侧设置圆形表土临时堆场，面积为1385m2，施工结束后，将对表土临时堆场进行平整，平整后进行绿化。具体情况见图3.2-12。

（4）施工便道

本项目施工期与后方国能涟水一期热电联产项目同期实施，项目四周有盐河、省道346、省道235及多条乡镇通行道路分布，交通便利。因此项目施工期间利用现有道路至国能涟水一期热电联产项目厂区后再由厂区道路至码头区域，项目设计大件设备运输亦可考虑使用水路进行运输，项目不再另外建设施工便道。

* 1. 水工建筑物
     1. 建设内容

（1）建设规模

根据总平面布置，本项目拟建3个1000t级的散货泊位。平行于航道方向布置2个1000吨级煤炭卸船泊位；西南侧布置1个1000吨级待泊泊位。码头北侧考虑与淮安新港建设有限公司码头相接。装卸泊位长度共220m。

（2）建筑物等级

本项目主要水工建筑物包括码头结构、翼墙等，结构安全等级均为Ⅱ级。

* + 1. 荷载

（1）水工建筑物自重。

（2）均布荷载

码头前沿20m范围内：20kN/m2；人群荷载：3kN/m2。

（3）起重机械荷载

桥式抓斗卸船机：4腿，每腿6轮，轮压250kN，轨距10.5m，基距10.5m。

16t—20m固定吊：垂直力1500kN，水平力180kN，倾覆力矩3940kN•m。

（4）船舶荷载

①船舶系缆力

系缆力标准值按1000DWT泊位进行计算。根据风流最不利工况进行组合，最大系缆力标准值为217kN，兼顾水流力，码头面选用250kN系船柱。

②船舶靠泊撞击力

1000t级船舶的有效撞击能量*E0*=76.2kJ，橡胶护舷采用SA400H×2000L标准反力型橡胶护舷，变形52.5%时，反力为550kN，吸能为92kJ。

③挤压力

船舶停靠码头后，由吹拢风产生的船舶挤靠力，由船舶的直线段与码头护舷相接触，并传递给码头结构。经计算，其反力值远小于船舶靠泊撞击力，对码头结构不起控制作用。

（5）地震作用

根据《中国地震动参数区划图》（GB18306-2015）及《建筑抗震设计规范》（GB50011-2010（2016年版）），拟建场区设计基本地震加速度值为0.065g，抗震设防烈度6度，特征周期0.65s。

* + 1. 水工建筑物结构方案

1、码头结构方案

结合场地地质、水文、码头等设计条件综合考虑，码头水工结构拟采用扶壁式结构。

（1）1#-2#煤炭卸船泊位码头结构

钢筋混凝土扶壁式结构：码头顶高程▽7.2m，护轮坎顶高程▽7.5m，设计底高程▽-1.66m。立板厚0.6m，底板宽10.7m，底板厚0.8m，肋板间距为4.2m，肋板宽度0.6m，前轨道梁位于扶壁肋板上，底高程▽6.0m，前轨距码头前沿2.5m。底板下设置0.1m素砼垫层。地基处理采用1.6m抛石换填。后轨道梁呈倒T形结构，上部宽度为1.0m，下部宽度为1.4m，高度为1.5m，轨道梁下部采用Φ800mmPHC桩，间距为4.2m，桩长为22m。

图示, 工程绘图

描述已自动生成

图3.3-1 散货泊位水工结构（有轨）方案

（2）待泊泊位码头结构

钢筋混凝土扶壁式结构：码头顶高程▽7.2m，护轮坎顶高程▽7.5m，设计底高程▽-1.66m。立板厚0.6m，底板宽10.4m，底板厚0.8m，肋板间距为4.2m，肋板宽度0.6m。底板下设置0.1m素砼垫层。地基处理采用1.2m抛石换填。

图示, 工程绘图

描述已自动生成

图3.3-2 待泊泊位码头结构

（3）翼墙

素混凝土重力式结构：码头顶高程▽7.2，护轮坎顶高程▽7.5，前沿河底高程▽-1.66。底板宽9.6m，底板厚0.8m。地基处理采用1.2m抛石换填。

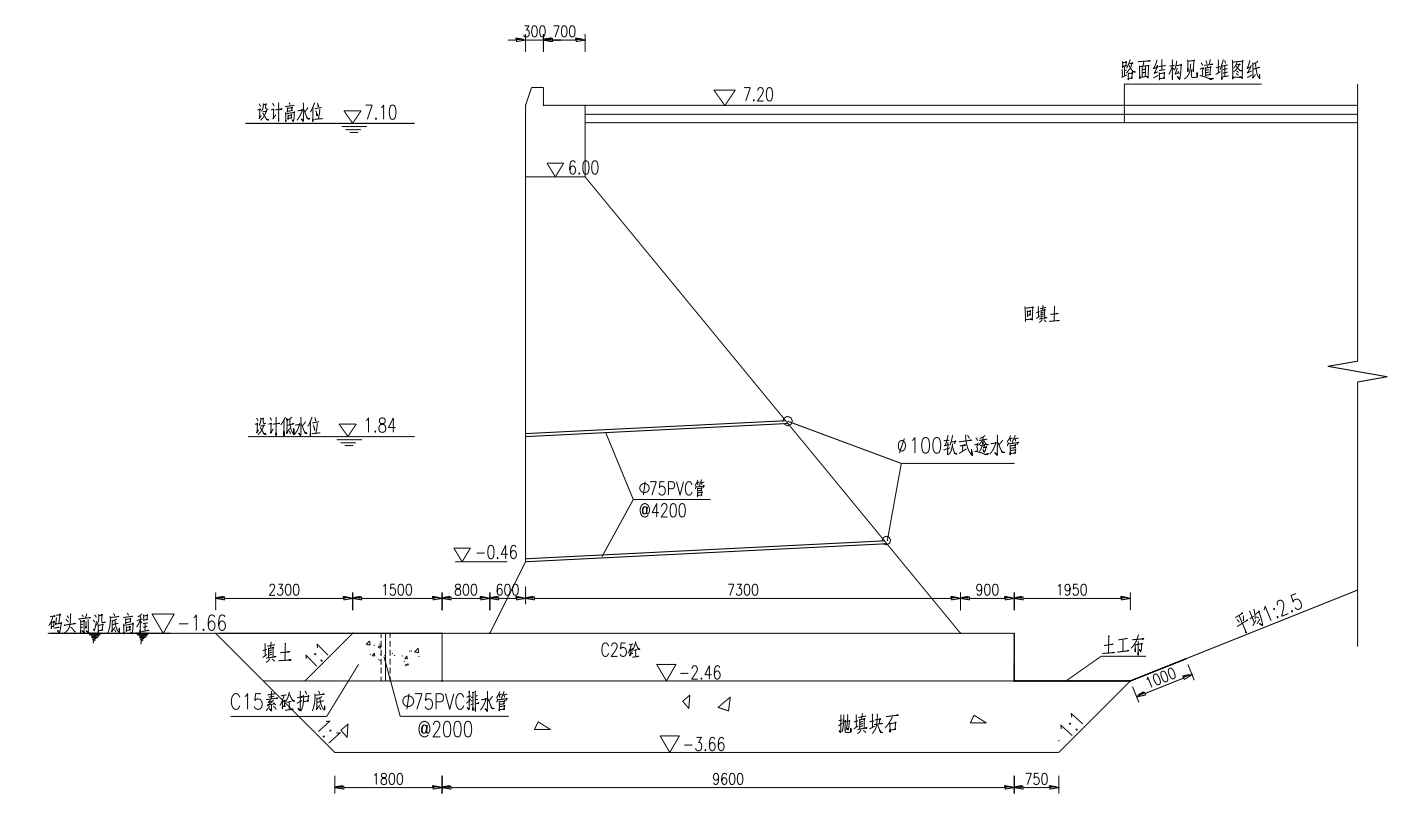


图3.3-4 翼墙水工结构

* 1. 施工方案
     1. 施工条件

本项目为国能涟水一期热电联产项目配套项目，后方为拟建电厂区域，电厂项目施工阶段外部配套条件齐全，故本项目施工期间交通条件、给排水、供电、通信、建筑材料等均可依托电厂项目。

* + 1. 施工方案
       1. 施工现场布置

本项目施工时序考虑与后期电厂项目同时进行，本项目施工区不再单独设置施工营地、施工材料临时堆放区、施工机械设备堆放区、临时化粪池和临时沉淀池、临时堆土区等临时设施，上述区域均依托使用。疏浚水下土方干化场位于国能涟水一期热电联产项目施工空地内。本项目为热电项目配套码头项目，规划为同时施工，统一安排施工建设时序，并同时投入生产。

* + - 1. 施工方案

（1）施工工艺及方法

①码头岸线泊位施工应在枯水季节进行（每年11月至来年5月）。

②本项目码头水工建筑物施工利用原盐河河堤形成临时施工围堰，实现土方利用。为确保安全，在开挖码头前沿时，将部分挖方用于加固围堰，防止发生渗流、管涌等事故。根据工程地质条件，围堰迎水侧基本利用原河岸线坡面，顶宽不小于5m，背水侧放坡不小于1:2.5，施工时还应做好降排水工作。

③本项目水工结构为常见型式，可按正常施工工艺进行施工。

（2）各主要工程项目的施工方法

①水工建筑物

本项目水工建筑物上部结构全部采用现浇结构，基坑开挖达到标高后，即可进行换填块石的施工，基坑施工结束后可进行底板的施工，现浇钢筋砼采用现场人工制作钢筋，现场搅拌砼或者购置商品砼的方式施工；待底板施工完毕并达到设计强度后，再进行立板、肋板的施工，墙身砼强度达到设计强度的80%后进行土方回填压实，压实度要达到设计要求；码头土方清除完毕并验收合格后，再进行码头面板施工及附属设施安装翼墙采用重力式结构，当底板浇筑完成且砼强度达到80%的设计强度后，将底板冲刷干净再进行墙身砌筑。底板基础与墙身接触面须凿毛处理，以增加底板与墙身结合面的抗剪能力。墙身浇筑完成且强度达到设计要求后，方可进行土方回填压实，压实度应满足设计要求，其后进行面层结构施工。

②土方工程

土方施工以机械开挖为主，码头开挖以陆上开挖为主，辅以人工作业。码头工程对回填土的回填要求相对较高，要求墙身强度达80％以上方可进行墙后土回填，回填土应分层夯实，层厚不允许超过30cm，且应控制回填土施工速率，对墙身进行观测，如发现较大位移时应立即停止回填，待位移基本稳定后再继续施工，土方回填宜采用机械夯实。码头的回填土要求：路基顶面以下0～80cm压实度为95%；路基顶面以下深度80～150cm，压实度为93%。回填土采用双控指标，要求回填土干容重应不小于15.5kN/m3，且应注意墙后边角处土的夯实。

③疏浚工程

本项目所处航道盐河涟水段Ⅲ级航道整治工程已经疏浚完毕，全线航道已达Ⅲ级，航道线形顺直，河面宽阔，可常年满足 1000 吨级船舶正常通航。本次疏浚工程仅为陆域部分开挖港池后的围堰水下土石方部分。按照新的《江苏省干线航道网规划（2023—2035年）》，盐河航道等级规划调整为二级。

清淤疏浚工程应符合《省生态环境厅关于印发防范清淤疏浚工程对水质影响工作方案的通知》（苏环办〔2021〕185号）要求。施工应严格按照《疏浚与吹填工程设计规范》（JTS181-5-2012）、《疏浚与吹填工程施工规范》（JTS207-2012）的要求进行。具体疏浚范围和疏浚深度见图3.4-1。

本项目疏浚作业选择两栖反铲式清淤船进行疏浚，两栖反铲式清淤船就如陆用挖掘机一样，反铲挖泥船也使用柴油机驱动控制单元，主机和挖掘机的机械手臂部分，通过旋转机械装置来挖掘水下土方，不必重新移动挖泥船。吊杆装置由液压缸驱动，这就意味着液压缸装满液体—通常是某种液体—通过施压来使挖掘装置延伸，通过减压使挖掘装置收缩。这就使得铲斗和吊杆容许承受很大的装载量。作业员坐在驾驶室里面控制吊杆的运动，挖出的水下土方通过泥舶转运至污泥干化场。

开工时应进行试挖，选择挖泥船最佳的横移速度、切削厚度、前移（进挡）距离等挖泥技术参数，以达到最好的施工效果和挖泥工效。横向分层土层厚度1.0m（含超深）以上按“上层宜厚，下层宜薄”分多层开挖。疏浚之前应做好疏浚区的排查工作，清除水面障碍物。

码头建成后，正常运营期港池不需要疏浚，在码头长期运行后，将根据港池淤积情况进行疏浚，不在本次评价范围内。

④桩基施工

后轨道梁PHC桩采用陆上运输至施工现场，采用打桩机锤击成桩。

⑤设备安装工艺

工艺设备在厂家订购，运至现场安装。

* + - 1. 施工进度安排

本项目码头施工顺序安排如下：

后方场地表土开挖、碾压回填、围堰形成与加固、码头结构施工、码头前沿面层结构施工、房建施工、设备基础施工、给排水工程施工、设备安装、电气工程施工、设备调试、绿化工程、水下工程验收、水上方开挖、放水、水下方疏浚、工程整体验收等。

（1）水工建筑物

码头区表层土方清除→形成施工围堰→基坑开挖→现浇钢筋砼扶壁式结构→墙后土方回填→码头附属设施安装→拆除围堰。

（2）前沿路面

表层土方清除→回填土或开挖土方→铺设路基→铺设垫层→铺设基层→面层。

（3）施工进度安排

本项目施工期初步拟定为2025年2月—2025年11月，工期为10个月。本环评建议涉水构筑物的施工及港池疏浚应选在枯水期施工（每年11月至来年5月），避开丰水期（6月至8月）及禁渔期（4月1日至6月30日），施工进度安排详见下表：

本项目施工时序表

| **序号** | **时间**  **项目** | **2025年2月—2025年11月** | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** |
| 1 | 施工准备 |  |  |  |  |  |  |  |  |  |  |
| 2 | 陆域地基处理 |  |  |  |  |  |  |  |  |  |  |
| 3 | 围堰施工 |  |  |  |  |  |  |  |  |  |  |
| 4 | 港池土方开挖 |  |  |  |  |  |  |  |  |  |  |
| 5 | 清淤工程 |  |  |  |  |  |  |  |  |  |  |
| 6 | 水工建筑物施工 |  |  |  |  |  |  |  |  |  |  |
| 7 | 码头上部结构施工 |  |  |  |  |  |  |  |  |  |  |
| 8 | 围堰拆除工程 |  |  |  |  |  |  |  |  |  |  |
| 9 | 码头附属设施安装 |  |  |  |  |  |  |  |  |  |  |
| 10 | 码头前沿铺面工程 |  |  |  |  |  |  |  |  |  |  |
| 11 | 建筑工程、电气工程 |  |  |  |  |  |  |  |  |  |  |
| 12 | 设备安装调试 |  |  |  |  |  |  |  |  |  |  |
| 13 | 交工验收 |  |  |  |  |  |  |  |  |  |  |

* + 1. 土石方及平衡情况

根据《国能涟水一期热电联产项目水土保持方案报告书》，本项目土石方开挖量为18.8万m³，其中水下方疏浚量为2.4万m³，土石方开挖量为16.4万m³。不涉及现有水域清淤。

水下土方疏浚量计算过程如下：根据图3.4-1 码头疏浚范围及疏浚深度图，疏浚范围为港池开挖后码头前沿围堰的水下部分，具体而言，长约为码头所占岸线前沿190m长，宽为开挖的陆域港池前沿至盐河自然河滩延伸至码头前沿底高程-1.66m处约25m宽，高为码头前沿底高程-1.66m至施工时盐河水位6m的约7.66m高，顶宽约8m的梯形范围，该梯形范围自然状态下的水下土方量为190m×（8m+25m）×7.66m÷2=24014m3。即水下土方疏浚量约为2.4万立方米。

根据《关于国能涟水一期热电联产项目水土保持方案的行政许可决定》（淮水许可〔2021〕62号）和《国能涟水一期热电联产项目水土保持方案报告书》，国能涟水一期热电联产项目借方9.10万m3（来源于配套码头工程及本项目的挖方），本项目工程区域需要回填土方量9.7万m3，因此，本项目无弃方产生。

本项目不设置临时堆场、取土场和弃渣场，均依托国能涟水一期热电联产项目临时工程，本项目土石方平衡见表3.4-2。

项目土石方平衡表 单位：万m³

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 挖方 | | | 总填方量 | | | 总弃方量 |
| 土方开挖量 | 疏浚量 | 小计 | 热电项目（一期）借方 | 回填量 | 小计 |
| 16.4 | 2.4 | 18.8 | 9.1 | 9.7 | 18.8 | 0 |

* 1. 工艺流程及产污环节
     1. 装卸工艺方案
        1. 主要设计参数

1、码头设计吞吐量：因本项目为电厂专用码头，主要为后方国能淮安绿色低碳综合能源服务项目服务，码头吞吐量预测为112万吨/年；

2、设计代表船型：1000t级散货船；

3、作业天数：泊位年作业天数330天；

4、作业班次：3班；

5、主要货种的物料重度：煤炭 0.85 t/m3；

6、泊位利用率：取0.65。

* + - 1. 装卸工艺流程

本码头设计范围主要为码头前沿部分，后方堆场及堆场转运等另行设计，故本次装卸工艺方案仅针对码头前沿部分。

卸船工艺流程为：船→桥式抓斗卸船机→水平输送皮带机→1#转运站→入电厂皮带机。

* + - 1. 装卸设备

装卸设备选型主要是依据年吞吐量、装卸货种及设计船型等因素进行。

本项目设计船型为 1000t 级，货种主要为煤炭卸船。

1、煤炭卸船

本码头新建1000t级卸煤泊位共2个，1000t待泊泊位1个，待泊泊位不设置装卸装置，均为煤炭进口至后方电厂发电用，煤炭进口吞吐量为112万t，由本码头承担，吞吐量较大，煤炭泊位卸船应选用专业化的煤炭卸船设备及清舱设备。

适应本码头改扩建工程的卸煤设备主要有：桥式抓斗卸煤机、螺旋式连续卸煤机两种；清仓设备采用：抓料机、小型推耙机等，并配以人工辅助。本码头根据上述各设备的特点，考虑本码头为电厂专用煤炭卸船，为满足厂区来煤的稳定性，本次评价卸煤泊位采用2台桥式抓斗卸船机卸煤炭。

2、水平运输选型

码头前沿与后方电厂的煤炭堆场之间采用皮带输送机进行水平运输，码头前沿采用1条带宽为1.2m的固定带式输送机，将卸下的煤炭转运入电厂转运站的皮带机上。

本项目主要装卸机械设备根据码头设计能力进行配套配置，见表3.5-1。

装卸机械设置一览表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **序号** | **设备名称** | **型号及规格** | **单位** | **数量** | **备注** |
| 1 | 桥式抓斗卸船机 | 400t/h | 台 | 2 | 400kW，卸煤 |
| 2 | 小型推耙机 | 1m3 | 台 | 2 | 清舱 |
| 3 | 固定皮带机 | B=1.2m,V=2.5m/s | m | 336 | 75kW |
| 4 | 除铁器 |  | 台 | 1 | 20kW |
| 5 | 皮带机挡风墙 |  | m | 200 |  |

* + 1. 施工期工艺流程及产污环节

本项目施工期间工艺流程及产物环节示意图见图3.5-1。

![图示, 示意图

描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAArEAAAMgCAYAAAA0lzp/AAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQA8gcN+Af////8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEBAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADi4uIAysrKACcnJwC/v78AGRkZAAEBAQAAAAAAAAAAAP39/QD7+/sABwcHAP///wD///8AAQEBAAEBAQAAAAAAAAAAAP39/QDh4eEANzc3AAAAAAAAAAAAAAAAAAAAAAACAgIA8PDwAAEBAQAzMzMAvr6+AMnJyQBHR0cAAQEBAAEBAQD29vYAysrKAEpKSgAAAAAA/f39AOPj4wAcHBwA9vb2AAMDAwACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAADp6ekA5OTkAAUFBQDd3d0A7e3tANbW1gAQEBAAAAAAAOnp6QDY2NgALCwsALi4uAC/v78AcHBwACYmJgAAAAAAAAAAAAAAAADq6uoAp6enACsrKwAAAAAAAAAAAAAAAAD19fUAy8vLAEZGRgAAAAAAAAAAAAAAAAAAAAAA7OzsANbW1gD6+voA////AObm5gDj4+MAICAgALy8vABGRkYA9/f3AL+/vwBSUlIA2NjYAMrKygA2NjYABgYGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A////AAAAAAACAgIAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AFBQUAB8fHwD5+fkATExMAOjo6AD19fUAAAAAAOLi4gDw8PAA1tbWAOzs7ADp6ekASEhIABMTEwAAAAAAAAAAAAAAAAD///8A////AOXl5QDz8/MAAAAAAAAAAAAAAAAA6+vrAOPj4wAgICAAICAgAMnJyQA0NDQAFBQUAAAAAAAAAAAAAgICAAUFBQABAQEA/v7+AICAgACFhYUAAAAAAAAAAAAAAAAA9vb2APr6+gAQEBAAAQEBAAAAAAACAgIABQUFAAQEBAAPDw8ADg4OAAQEBAAEBAQAAAAAAAMDAwABAQEAAwMDACIiIgAZGRkACAgIAAAAAAAAAAAAAAAAAP7+/gDa2toAJCQkACcnJwD///8A5eXlABMTEwD///8AAgICAAUFBQABAQEAAAAAAAAAAAAAAAAAAAAAAAMDAwD9/f0Avr6+ADU1NQA3NzcA8PDwABMTEwBNTU0A7e3tAMLCQuOLFwAAIABJREFUwgBSUlIAyMjIAPv7+wAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP///wAAAAAAAQEBAPz8/AACAgIAAgICAPT09ADj4+MACgoKAAICAgD7+/sA6urqACYmJgASEhIAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD19fUAuLi4AC0tLQAmJiYAAQEBAAAAAAD///8A////AAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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CcnJwBISEgA/f39AAQEBAAEBAQAAAAAAP///wAAAAAAAAAAAAAAAAABAQEA9fX1AODg4ADv7+8AAAAAAOvr6wD29vYAAAAAAP///wD19fUACgoKAAICAgABAQEA////AM7OzgAKCgoANjY2AA0NDQC1tbUuQHqyAAAgAElEQVQAHh4eACgoKADn5+cAFxcXAD4+PgChoaEArq6uAGlpaQAlJSUA+Pj4AO3t7QD09PQA8fHxANDQ0ADv7+8AAQEBABUVFQA/Pz8A7u7uALu7uwBDQ0MADQ0NALa2tgD+/v4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcHBwAFBQUALCwsAAgICADe3t4AAQEBAAICAgAKCgoA0tLSAOTk5ADx8fEACAgIAAYGBgAAAAAA////AAAAAAASEhIAPj4+AAkJCQAFBQUAAAAAAAAAAADu7u4A7OzsAEtLSwAqKioA/f39AO7u7gBMTEwADw8PAAkJCQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AO3t7QAFBQUAEBAQAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////ANnZ2QDPz88A/f39AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+ANLS0gDz8/MApqamAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcHBwA3NzcAHx8fAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOrq6gAODg4ADQ0NAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACIiIgDd3d0AnJycACUlJQALCwsAAAAAANPT0wDo6OgAwsLCAAQEBADu7u4ACwsLACQkJAAICAgABwcHAAUFBQABAQEABQUFAAcHBwABAQEASEhIAPHx8QDe3t4A6urqAOnp6QD9/f0ACgoKABwcHAAAAAAADAwMAEZGRgDf398AsLCwAEVFRQD+/v4A////AAcHBwAtLS0A9PT0AN7e3gAEBAQA/v7+AP///wAAAAAAAAAAAPr6+gDt7e0A+/v7AAEBAQDr6+sAAgICAA4ODgAQEBAAAAAAAPj4+AAFBQUA6+vrANXV1QCenp4AVVVVADMzMwAHBwcA+fn5AM/PzwBPT08A7OzsAAwMDADAwMAAMzMzAA8PDwDo6OgAAwMDADExMQA9PT0AgoKCAKSkpACBgYEA/f39AOLi4gD5+fkA9PT0APn5+QAODg4A8fHxAPf39wDn5+cA8PDwAPf39wDm5uYA6+vrAODg4AD9/f0AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AO3t7QAGBgYADAwMAAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQABAQEAAgICAAEBAQABAQEA7OzsAP39/QBeXl4ABQUFACEhIQDu7u4AIiIiAPPz8wDh4eEAHBwcAAMDAwAEBAQAEhISAOLi4gDq6uoABAQEAAEBAQD19fUAAAAAAOTk5AAAAAAA9fX1ALOzswAtLS0AUlJSAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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vLyANfX1wDQ0NAA/f39AFdXVwAHBwcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA+/v7AMPDwwDV1dUAAgICAA4ODgBnZ2cAIyMjAPLy8gCjo6MA1tbWAP///wAAAAAAAAAAAAAAAAAAAAAA6OjoAAAAAAD4+PgA4+PjAOPj4wABAQEAwMDAAA0NDQBfX18AKSkpAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD6+voA1tbWAA4ODgD6+voAAgICAOrq6gClpaUA4ODgACAgIAD8/PwAAAAAAAEBAQAAAAAA+vr6AOrq6gAsLCwACQkJAPDw8ADAwMAAPDw8ACgoKAAAAAAADQ0NAM7OzgADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wAVFRUAPT09ACMjIwBAQEAA6enpAAEBAQABAQEAAAAAAAAAAAAAAAAAAQEBAAEBAQABAQEAAAAAAOLi4gB5eXkA8PDwAGBgYAA7OzsACAgIAPz8/ADa2toA19fXAA8PDwDl5eUABwcHAPr6+gD///8A2dnZAAICAgAuLi4A/f39APf39wD9/f0A1dXVAMzMzABBQUEA/v7+AAAAAAAICAgAFBQUAD09PQAaGhoAGxsbAM7OzgBKSkoA/Pz8AOvr6wChoaEAGRkZACQkJADf398A4ODgAO7u7gDV1dUA3NzcALCwsABiYmIAISEhAIiIiADOzs4AeXl5AB0dHQApKSkAAQEBAP39/QAUFBQACAgIABoaGgD8/PwAAwMDAAEBAQAHBwcAAgICAAAAAAD///8AAAAAAAAAAAD6+voA8fHxAODg4ADT09MA3NzcAHFxcQDz8/MAwMDAAAICAgDv7+8A6enpAMLCwgD5+fkAAAAAAPn5+QAGBgYAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAABwcHAF9fXwBnZ2cABgYGAAEBAQAKCgoAAAAAABkZGQCMjIwA/Pz8AAAAAAAAAAAAAAAAAAAAAAD7+/sAcHBwAOfn5wAHBwcACgoKAA8PDwAyMjIAQ0NDADo6OgAaGhoADQ0NAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAAAAAP39/QDz8/MA9fX1AAAAAAApKSkANTU1AC8vLwAXFxcA2dnZAHFxcQAkJCQA9/f3AP///wAGBgYAAAAAAAAAAAAAAAAAAAAAAP7+/gD6+voAAwMDAPn5+QD8/PwA+vr6APn5+QABAQEA+vr6AAEBAQACAgIAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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Pb29gD///8AEhISAAICAgD7+/sAAwMDAA4ODgAhISEABQUFAAICAgAAAAAA+fn5AKSkpABWVlYAHR0dAAAAAAD///8AJSUlAAoKCgADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPj4+AAmJiYA8fHxAP///wABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAjStNqwAAIABJREFUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD7+/sA+/v7AP39/QAqKioAGhoaAN/f3wC6uroAKioqAMbGxgA3NzcAv7+/AAICAgD8/PwA6+vrAP39/QBZWVkAAAAAAA0NDQAeHh4ABgYGAAAAAAAAAAAAAAAAAKSkpABBQUEANjY2AAEBAQAYGBgAKCgoAA0NDQAEBAQAAAAAAP7+/gD9/f0A////AP7+/gD8/PwA6enpAP7+/gDs7OwAQkJCAE5OTgD09PQAzc3NAAwMDAADAwMAAAAAAP///wD+/v4A/Pz8AP39/QD///8A7e3tAAoKCgAAAAAAAwMDAAAAAAAAAAAA////AAEBAQA3NzcA4eHhAOnp6QAXFxcAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAN7e3gATExMAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA9fX1AIqKigAZGRkAeXl5AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAwMDAMnJyQDo6OgAWVlZAAMDAwBjY2MAvLy8AEhISAApKSkAt7e3AE9PTwAaGhoAAAAAAP///wABAQEAAAAAAA0NDQANDQ0AAQEBAAEBAQAAAAAA+Pj4AAcHBwATExMAGRkZAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AOnp6QALCwsA29vbAP7+/gADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD9/f0ABAQEAL29vQANDQ0AAAAAAAAAAAAAAAAA5eXlACAgIAACAgIA////AAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADr6+sAyMjIAKKiogAZGRkAREREAAAAAAAbGxsAycnJAHp6egAgICAA0NDQADo6OgALCwsA////AAICAgAAAAAAAAAAAA4ODgAODg4AAAAAAAEBAQAAAAAA////AP///wAPDw8AGBgYAAMDAwAAAAAAAAAAAP///wAAAAAAAAAAAOLi4gDU1NQA+/v7ANjY2ADBwcEA09PTAFVVVQD+/v4ABAQEAAcHBwD6+voAAgICAAICAgAAAAAAAAAAAP7+/gDX19cA5eXlAN/f3wAJCQkAkJCQADQ0NADT09MAIiIiAPz8/AAJCQkA4eHhAMDAwAAVFRUA9fX1AOnp6QD+/v4AAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGxsbABbW1sAXFxcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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Q0ABgYGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAPDw8AEBAQANra2gD7+/sAAQEBAAQEBADY2NgA5eXlAOLi4gAUFBQA/Pz8AAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAD29vYAxMTEAAAAAAD09PQAbGxsAMLCwgD9/f0AAAAAAP///wAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAA5ubmAODg4AAwMDAACwsLANbW1gD9/f0A+vr6APr6+gDr6+sADQ0NAPr6+gDd3d0A8/PzABcXFwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA8gcN+AgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAQEBABISEgAgICAACQkJANzc3AD09PQABwcHACUlJQAWFhYAMTExACQkJAABAQEAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wDd3d0AExMTABkZGQAkJCQAxcXFAPj4+AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABwcHAAAAAAAAAAAAPf39wDOzs4ADQ0NAAEBAQAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A/v7+ABISEgAcHBwACwsLAM3NzQDl5eUA8/PzAA4ODgAZGRkAR0dHACwsLAALCwsAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOPj4wD8/PwAJCQkAEBAQABBQUEAz8/PAAQEBAAGBgYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP7+/gDc3NwADg4OAAwMDAA5OTkA5eXlAOLi4gDGxsYA2traALCwsADz8/MA6enpAMfHxwAqKioAHx8fAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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QEBAAUFBQAqKioAKioqAAAAAAAAAAAAAAAAAAAAAAAEBAQAWlpaAAQEBAACAgIAAgICAPn5+QBBQUEABwcHAAICAgABAQEAAgICABkZGQB2dnYA/f39AAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAq6urAAgICAAzMzMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wDU1NQA+vr6AB4eHgDj4+MA7OzsAC8vLwD29vYAOjo6AN/f3wC4uLgA/f39AGlpaQALCwsA5OTkANfX1wBbW1sAGBgYADc3NwACAgIAAgICAAEBAQD///8A/v7+AOLi4gAcHBwABQUFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP39/QC4uLgAAgICAAsLCwDm5uYA5+fnAAgICAD29vYAPj4+AM/PzwCfn58A+vr6AGRkZAAFBQUA29vbAOjo6AAmJiYA3t7eAKOjowAWFhYA/Pz8ACEhIQC1tbUA9fX1AEFBQQA5OTkABgYGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIACQkJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEACAgIAAAAAAAAAAAAAAAAAAYGBgAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AP7+/gAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAAAAAAAAAAAEBAQASUlJAOjo6ADe3t4A8PDwAAICAgDi4uIA////AEBAQADs7OwA+/v7APr6+gAEBAQA5OTkAEZGRgDs7OwA4eHhAAYGBgD///8AAQEBAAAAAAAAA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AAAAMLCwgAYGBgAODg4AJCQkABHR0cAysrKAEtLSwD///8A8fHxAAEBAQAAAAAAAAAAAAICAgD5+fkA/v7+ABsbGwAAAAAAAAAAAAgICAAMDAwABwcHAAAAAAAHBwcA0tLSAPX19QAKCgoAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJiYmABcXFwAJiYmAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcUcWlAAAgAElEQVQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////APT09AC/v78ARUVFABUVFQDu7u4A9PT0APn5+QDv7+8A////AP39/QDQ0NAA9/f3AEVFRQAJCQkA/v7+ANTU1ADq6uoABgYGAAEBAQAAAAAA2traAPv7+wDe3t4Atra2AA0NDQAAAAAA+Pj4AAgICAD5+fkA+fn5AAUFBQAAAAAABgYGACIiIgAAAAAAAAAAAP///wDl5eUAAQEBAPz8/ADIyMgA7e3tAH9/fwAaGhoAAgICAAAAAAAAAAAArq6uABkZGQArKysAqampAENDQwDPz88ANTU1AAAAAAAKCgoA1NTUAAAAAAAAAAAAoaGhAB8fHwAeHh4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPn5+QD4+PgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAL+/vwBKSkoAREREAAQEBAABAQEA2NjYAOLi4gAyMjIAEBAQAAAAAAA5OTkAAAAAAAgICAAAAAAACQkJAAMDAwCRkZEAbm5uAPr6+gDFxcUA8PDwAAAAAAAAAAAAysrKAAgICADg4OAA////APPz8wDv7+8Abm5uACAgIAD9/f0A/f39AP7+/gD+/v4AKioqABcXFwAUFBQAAwMDAA8PDwAAAAAA9PT0ALOzswA6OjoAExMTAAICAgAJCQkAGRkZAPv7+wALCwsAKCgoAERERAD+/v4A9/f3AA8PDwDIyMgAyMjIABgYGACQkJAAExMTAGZmZgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP39/QABAQEAAwMDAAICAgAEBAQA+fn5APT09AD6+voABAQEAAAAAAAAAAAAAAAAAAEBAQDz8/MAqqqqACsrKwAAAAAAAAAAAKampgBGRkYAJiYmAAAAAAD09PQAxsbGAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPj4+AD5+fkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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Pn5+QD29vYA+/v7AAAAAAAAAAAAAAAAAP///wD8/PwA+fn5AAAAAAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAEBAQADAwMA////AAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAASEhIAAAAAAAAAAAAAAAAADg4OAAcHBwAXFxcAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAA/Pz8ANnZ2QCTk5MAEBAQAA4ODgAGBgYAGRkZACEhIQAxMTEAAAAAAAAAAAAAAAAA3NzcAOvr6wAEBAQA////AP39/QDi4uIA09PTAOfn5wDOzs4AAgICACQkJAAJCQkAERERAAAAAAABAQEA+/v7ABwcHAD///8AAAAAAAEBAQD4+PgAurq6AM3NzQASEhIAHBwcACEhIQCqqqoAa2trABwcHAAkJCQAj4+PADs7OwAwMDAA////AAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAMDAwAAAAAAAAAAAA////APn5+QC3t7cALS0tAEZGRgCioqIAKioqALi4uADk5OQAREREAAcHBwABAQEAAAAAAOjo6AD39/cAOzs7AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAxXToXwAAIABJREFUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAwMAGRkZAP///wAsLCwAHh4eAAMDAwAAAAAA/Pz8APz8/ABEREQAAAAAAAAAAAACAgIAERERAAEBAQAAAAAA////ABMTEwAWFhYACAgIAPj4+ACcnJwAPT09AMTExAArKysAERERAAAAAAABAQEALCwsADU1NQAKCgoADw8PAAAAAAD4+PgA7OzsALq6ugD29vYA9fX1ABMTEwDd3d0AEhISAO7u7gAvLy8AIyMjAAQEBAC5ubkAvr6+AHV1dQAbGxsAAQEBAODg4AAQEBAA8vLyAAEBAQAAAAAAAAAAAPj4+ADY2NgA+vr6APX19QD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABwcHAE5OTgAODg4A////AAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAAAAAAAAAAABAQEACUlJQAlJSUABQUFAAcHBwD///8ABAQEAP///wD+/v4AAAAAAAAAAAAAAAAA////AP///wAAAAAAAAAAAOLi4gBubm4ACQkJAGNjYwA1NTUADQ0NAAQEBAAAAAAASEhIAAAAAADc3NwAMDAwAAwMDAD7+/sAAwMDAAICAgD4+PgAw8PDADs7OwA9PT0ADg4OAJWVlQA8PDwAJiYmAAEBAQD6+voA8vLyAOrq6gDu7u4AFRUVAAMDAwAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAP///wD///8A8fHxAKurqwAPDw8ATk5OAPT09AACAgIAKSkpABMTEwCHh4cArq6uAGpqagAuLi4ABQUFAL6+vgAnJycAERERAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGNjYwAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAEBAQAXFxcAFhYWAAEBAQAAAAAAFxcXAA8PDwAiIiIAAAAAAAAAAAD///8AAAAAAAAAAAD///8ACQkJABwcHADZ2dkA0NDQAB8fHwC+vr4AVVVVADY2NgCIiIgAKioqAAcHBwD09PQAoqKiACwsLABQUFAAAQEBAAEBAQAPDw8AZGRkAAICAgD6+voA19fXAFZWVgBYWFgAGxsbABoaGgACAgIAAAAAAL+/vwCioqIAYGBgAA4ODgAAAAAAAwMDACYmJgA9PT0ABQUFABkZGQDExMQAAAAAACQkJAAsLCwAGhoaAEFBQQASEhIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIAE1NTQAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD+/v4A/Pz8AAAAAAABAQEAAAAAAAAAAAAAAAAA////AAICAgD8/PwA+/v7AAAAAAD8/PwAy8vLAAgICAAvLy8ACAgIAPz8/ADt7e0AGxsbAAEBAQD9/f0A/f39ANjY2ADExMQAAAAAAAAAAAAAAAAA2traAAsLCwAAAAAAAAAAABgYGABra2sAKCgoACAgIAAAAAAA+fn5AO/v7wAAAAAABgYGAAEBAQCioqIAZ2dnAOzs7AC7u7sAFRUVAD4+PgAQEBAAhoaGAAMDAwD9/f0Azc3NAPLy8gBoaGgA9vb2AMDAwADQ0NAAk5OTAKSkpABXV1cAcXFxADk5OQAVFRUAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADx8fEAwsLCADQ0NAAtLS0AAwMDAPf39wAVFRUABwcHAC8vLwB4eHgAq6urABwcHAAFBQUA4uLiAAYGBgBJSUkABQUFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFxcXAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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eHhAEVFRQAAAAAAAAAAAP///wDq6uoADQ0NAAcHBwAODg4A+Pj4ANbW1gD19fUAv7+/AMzMzADv7+8Avb29AHR0dABHR0cAAAAAAAAAAAAAAAAA////AP39/QC6uroAODg4ABcXFwDa2toAAAAAADY2NgC6uroAwMDAAE1NTQAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAANDQ0AAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD8/PwA3d3dAAcHBwAgICAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAP7+/gDJyckA6+vrAB0dHQAAAAAAAAAAANnZ2QApKSkAtbW1AAUFBQBPT08ACQkJAAAAAAD///8A+/v7APX19QDHx8cAFBQUABoaGgDg4OAALCwsAHx8fAAaGhoAeHh4ADY2NgBSUlIAqampAPHx8QAAAAAAAAAAAAAAAADx8fEADQ0NAAUFBQABAQEA4ODgAOzs7ABfX18AKioqADMzMwCsrKwANjY2ADMzMwAAAAAAAAAAAAAAAAD///8A////ANHR0QDGxsYAfn5+AAQEBAAAAAAAAAAAAAMDAwBRUVEAnp6eACYmJgAkJCQABAQEAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0NDQABkZGQAZGRkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAEBAQAUFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEACwsLACQkJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcHBwAHBwcAAAAAAAQEBAAYGBgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAUFBQAWFhYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAREREAERERAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBABUVFQC4uLgA09PTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgICAE5OTgBycnIA6enpAIiIiADNzc0AAAAAAAAAAAAAAAAAAAAAAAAAAAAREREAe3t7ADg4OADLy8sAkJCQAObm5gAAAAAAAAAAAAAAAAAAAAAAAQEBAB4eHgCQkJAAEBAQAK2trQCgoKAA+/v7AAAAAAAAAAAAAAAAAAAAAAAFBQUAXFxcAFpaWgDk5OQAampqAPj4+AD///8AAAAAAAAAAAAAAAAAAQEBABsbGwBubm4AOjo6ALKysgCampoA+/v7AAAAAAAAAAAAAAAAAAAAAAAAAAAANjY2AHd3dwAXFxcAiIiIAMfHxwD///8AAAAAAAAAAAAAAAAAAAAAAA8PDwBubm4AR0dHAM/PzwB8fHwA8fHxAAAAAAAAAAAAAAAAAAAAAAABAQEAKioqAIiIiAALCwsAq6urAKKiogD8/PwAAAAAAAAAAAAAAAAAAAAAAAEBAQBXV1cAZGRkAP///wCAgIAA1NTUAP///wAAAAAAAAAAAAAAAAAAAAAADAwMAIKCggA2NjYAxsbGAIyMjADw8PAAAAAAAAAAAAAAAAAAAAAAAAEBAQA2NjYAjo6OAOzs7ACRkZEAwcHBAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAGVlZQBaWloA09PTAI+PjwDf398A////AAAAAAAAAAAAAAAAAAEBAQAODg4ApaWlAAkJCQCwsLAAm5ubAPv7+wAAAAAAAAAAAAAAAAAAAAAABAQEAFhYWABhYWEA8/PzAHp6egDZ2dkA////AAAAAAAAAAAAAAAAAAAAAAAVFRUAc3NzADo6OgDQ0NAAh4eHAOvr6wAAAAAAAAAAAAAAAAAAAAAAAAAAACoqKgB/f38AGxsbAJ2dnQCqqqoA/v7+AAAAAAAAAAAAAAAAAAAAAAAEBAQAX19fAGBgYADX19cAcnJyAPT09AAAAAAAAAAAAAAAAAAAAAAAAAAAAB0dHQBzc3MAMzMzALCwsACenp4A+vr6AAAAAAAAAAAAAAAAAAAAAAABAQEAOjo6AHR0dAATExMAfHx8ANbW1gD///8AAAAAAAAAAAAAAAAAAAAAABISEgB5eXkAOTk5AMnJyQCFhYUA8/PzAAAAAAAAAAAAAAAAAAAAAAABAQEAMjIyAH5+fgAJCQkAqKioAKmpqQD5+fkAAAAAAAAAAAAAAAAAAAAAAAICAgBUVFQAbW1tAO3t7QCEhIQA0tLSAP7+/gAAAAAAAAAAAAAAAAAAAAAAAAAAAPv7+wASEhIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD8/PwAs7OzAAMDAwBISEgACgoKAPr6+gCsrKwAISEhAFdXVwDX19cAycnJAHZ2dgAICAgAAAAAAAAAAAAAAAAA9/f3AKmpqQANDQ0ASEhIAA8PDwAAAAAAAAAAAAEBAQCpqakACQkJAE9PTwAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AKWlpQACAgIAX19fAAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAN7e3gCnp6cAPT09AEVFRQABAQEAAQEBAAAAAAD///8AAAAAAAAAAAAAAAAA+Pj4AO3t7QD///8AAAAAAP///wABAQEAAAAAAAAAAAD///8A////AAEBAQDV1dUA/v7+AEJCQgAJCQkAAAAAAAAAAADq6uoAfn5+AH19fQAhISEAAgICAAAAAAD///8AxMTEANra2gBzc3MADw8PAP7+/gABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAA////AAAAAAAAAAAAAQEBAP///wD///8AAAAAAAAAAAD///8AAAAAAAEBAQAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD+/v4A+Pj4AAcHBwACAgIAAQEBAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAEBAQAkJCQAJCQkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wD///8AKCgoAFRUVAD5+fkAz8/PAMjIyADV1dUA9fX1AO3t7QDW1tYA6OjoAJKSkgDu7u4AeHh4AB8fHwD+/v4AAQEBAB0dHQBSUlIACQkJAOTk5ADn5+cA8/PzAEhISAAAAAAAAQEBAAAAAAD6+voAAAAAAAUFBQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPX19QDf398A+fn5AAAAAAAAAAAAAAAAAP///wAmJiYANTU1ANnZ2QAHBwcAAAAAAP7+/gC7u7sA7u7uAHZ2dgAUFBQAFxcXAEtLSwABAQEA5ubmANra2gA3NzcAKCgoAAAAAADV1dUAxcXFADw8PAAfHx8AAAAAAAICAgAAAAAA/v7+AAEBAQAAAAAA////AOvr6wAEBAQAycnJANra2gAXFxcA/f39AElJSQDT09MA0tLSAI6OjgBsbGwAXl5eAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOXl5QDV1dUAICAgANfX1wD8/PwAVFRUAOfn5wCOjo4AaGhoABQUFADu7u4AuLi4ACIiIgAZGRkAAAAAAAAAAAD+/v4AAQEBAAAAAAAAAAAAAAAAAAAAAAD7+/sA5OTkADY2NgAAAAAA////AAAAAADh4eEA9/f3ACUlJQAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOnp6QDFxcUAMjIyAEZGRgDDw8MANjY2AA8PDwDf398AMjIyAENDQwAKCgoA3t7eAGVlZQAAAAAACwsLAP7+/gDx8fEA3NzcACQkJABBQUEAysrKAAEBAQDu7u4A4eHhAP7+/gD+/v4A8/PzAOjo6ADOzs4A5ubmAF1dXQAJCQkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD+/v4AAAAAAAAAAAABAQEAAQEBAPj4+ADn5+cA9vb2AAAAAAAAAAAAAAAAANPT0wDS0tIAWlpaAOvr6wAAAAAAAAAAAAAAAAAVFRUAHx8fAPv7+wAAAAAAAwMDAAMDAwAAAAAAAwMDAAEBAQAEBAQABQUFAAAAAAAEBAQAAgICAAQEBAAFBQUAAAAAAAAAAAD+/v4A4+PjANHR0QDm5uYA5ubmAKysrAAqKioA1NTUAEVFRQAJCQkAJSUlAAICAgDw8PAA6enpAFdXVwA8PDwA////AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPT09ACenp4AVVVVAN/f3wDR0dEAVFRUAP///wD///8AFRUVABkZGQAEBAQACgoKAAoKCgABAQEAAAAAAAAAAAD09PQA0tLSAAAAAAAGBgYAAAAAAAAAAADy8vIA5+fnANbW1gD39/cAAAAAAP7+/gDW1tYA+fn5ABoaGgAPDw8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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MfHxwAkJCQAFBQUANbW1gAAAAAAYmJiACsrKwDz8/MArq6uACMjIwAiIiIABAQEAAMDAwABAQEAISEhAIiIiADx8fEA+vr6AFtbWwDS0tIA8vLyACAgIAAREREAAgICAAEBAQABAQEAAQEBAAAAAAAAAAAAAAAAAA8PDwBgYGAAAAAAAAICAgAAAAAA/v7+AOTk5AAGBgYAVFRUAAMDAwD+/v4AV1dXAAQEBAALCwsAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A/f39AOfn5wDv7+8Ajo6OAAEBAQAAAAAAw8PDACUlJQB/f38ABQUFAAAAAADr6+sAtra2AAkJCQALCwsA6+vrANbW1gDCwsIA3d3dAAAAAADi4uIA5OTkALy8vAATExMA8vLyAN3d3QA4ODgABgYGAPz8/ADl5eUA6urqAMbGxgArKysA4ODgAEhISAD+/v4Azs7OAP7+/gDk5OQAQkJCAODg4ADn5+cAJCQkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQD8/PwA+vr6AAEBAQD///8AAwMDAAQEBAD///8A/Pz8AP///wAAAAAAAAAAAAAAAAAAAAAA9/f3AFRUVADk5OQAMTExADExMQAmJiYAHBwcABgYGAASEhIACgoKAAUFBQACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAApaWlANXV1QAnJycAysrKAHp6egCTk5MAQkJCANDQ0AAICAgAdnZ2AAwMDAAAAAAABQUFACAgIAAQEBAAEBAQAAEBAQD+/v4AQUFBAAQEBAADAwMA////ADg4OADy8vIAAwMDAP///wABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAwMA7u7uAPT09AAWFhYA7u7uAKenpwD19fUA6OjoAO7u7gDz8/MAuLi4AMvLywBISEgAPT09ABISEgADAwMACQkJAC4uLgCqqqoALi4uABgYGADc3NwA9PT0AAICAgAAAAAAAAAAAP///wD///8A////AP///wABAQEAAAAAAAMDAwANDQ0AAAAAAAAAAAAAAAAA////AAYGBgAGBgYADAwMAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A9/f3AOrq6gBra2sALi4uAAAAAAAAAAAA6OjoACYmJgAJCQkAAAAAAAAAAAAWFhYAXl5eAAAAAAADAwMA29vbAM3NzQBDQ0MAJCQkAAEBAQDU1NQAzs7OAERERAAfHx8AUFBQAP///wD+/v4A2traALe3twDV1dUAAwMDAENDQwAHBwcAJycnAOHh4QD19fUA/f39AMbGxgC7u7sAbm5uAJWVlQAREREAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPz8/AC2trYA4+PjAAMDAwAKCgoASUlJAEFBQQDs7OwAnZ2dAOXl5QD///8AAAAAAAAAAAAAAAAA////APT09ADg4OAA4ODgALCwsAADAwMAEhISABkZGQAaGhoASkpKAF1dXQAPDw8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBADk5OQBMTEwA1tbWAAMDAwD///8ALCwsAPb29gD///8ABAQEAAAAAAAAAAAAAQEBANra2gC1tbUAVVVVAAYGBgD29vYAwcHBADAwMAAZGRkAAAAAAOLi4gDAwMAAGBgYABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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j4+AAQEBAAAAAAAAAAAAOTk5AD39/cAExMTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPDw8ADi4uIAODg4AAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAODg4AAAAAAPHx8QAAAAAAAAAAAAAAAAAAAAAA5ubmAKmpqQBJSUkANzc3AAMDAwAAAAAA4ODgAAgICAAjIyMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAZ2dnAAYGBgAZGRkACwsLAAkJCQAJCQkAAAAAAAAAAAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA+/v7AAAAAAAhISEADQ0NAAICAgDv7+8A7u7uANfX1wDJyckAz8/PABcXFwD8/PwA7+/vAMfHxwAaGhoAMTExAAEBAQAAAAAA7+/vAPn5+QDh4eEABgYGAP7+/gAyMjIA+/v7AN/f3wAAAAAA8fHxACsrKwAODg4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////APz8/AAAAAAAAwMDAAEBAQD+/v4A////AAICAgABAQEAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAP7+/gD9/f0AAgICAAICAgABAQEAAAAAAP///wAAAAAAAAAAAAAAAAD///8AAAAAAAICAgAAAAAAAAAAAP39/QAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A/f39AAEBAQACAgIAAgICAAAAAAAAAAAA////AP7+/gD+vE+YygAAIABJREFU/v4AAwMDAAEBAQABAQEA/v7+AP///wACAgIAAAAAAAAAAAAAAAAAAAAAAAEBAQD+/v4AAAAAAAEBAQAAAAAAAAAAAAAAAAABAQEAAAAAAP///wAAAAAA/Pz8AAQEBAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AP39/QADAwMAAAAAAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP7+/gABAQEAAQEBAP///wD///8AAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAA/Pz8AAAAAAACAgIAAQEBAP///wD9/f0AAgICAAICAgABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AP39/QABAQEAAgICAAICAgAAAAAAAAAAAAAAAAAAAAAA////AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A/v7+AAICAgABAQEAAAAAAP39/QD///8AAwMDAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wD9/f0A/Pz8AAUFBQACAgIAAQEBAAAAAAD///8AAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP7+/gAAAAAAAwMDAAEBAQAAAAAA////AAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAD///8AAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAP39/QD///8AAwMDAAAAAAABAQEA////AAAAAAD7+/sAAgICAAICAgABAQEAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAA////AAAAAAAAAAAAAAAAAAAAAAD6+voABAQEAAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEACAgIABEREQAGBgYAJiYmACYmJgABAQEAAQEBABAQEAAtLS0AFBQUAP7+/gAyMjIACAgIAMTExAAkJCQADw8PAAUFBQAUFBQABgYGAAMDAwABAQEAAAAAAAAAAAD+/v4A////AElJSQAFBQUACQkJACIiIgDa2toAyMjIACIiIgALCwsA+/v7AAAAAAAAAAAAAAAAAAAAAAD+/v4A/Pz8AAMDAwD5+fkAAgICAAAAAAD8/PwAtbW1AB8fHwA1NTUAAgICAAAAAAD9/f0A2traANbW1gBcXFwAFBQUAP7+/gD+/v4AAQEBANbW1gD9/f0ADw8PAAAAAAAAAAAAAAAAAP///wAAAAAA+Pj4AK2trQAODg4AMzMzAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAAAAAABAQEAAQEBAAAAAAD19fUAh4eHACUlJQA6OjoABAQEAP///wAAAAAA09PTABAQEAAhISEAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAPj4+AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABQUFAERERAAmJiYALy8vAD8/PwD29vYA/f39AIuLiwDg4OAABAQEANnZ2QAxMTEAJycnADg4OAAMDAwAAQEBAP///wD///8A4eHhADQ0NABLS0sABgYGAAAAAAAAAAAAAAAAAAAAAAAAAAAA/f39AP39/QAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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/8AAAAAAAAAAAAAAAAA////APn5+QDf398A39/fAAsLCwAMDAwA7+/vAMnJyQAaGhoAIyMjAIGBgQCFhYUAEBAQAMTExAAjIyMAAQEBAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAASEhIAGxsbAJ2dnQBxcXEALCwsAAAAAAD+/v4A3t7eAAsLCwAYGBgA////AAAAAAAAAAAAAAAAAAAAAADt7e0A19fXAPv7+wAPDw8A6OjoALCwsABoaGgA/Pz8AAQEBAABAQEA/v7+AAAAAAAAAAAA////ANDQ0ACsrKwAPT09AAgICAAAAAAAAAAAAAAAAAD+/v4AtLS0ABsbGwBzc3MACwsLAAAAAAAAAAAAAAAAAA8PDwDS0tIA0tLSAGtrawAGBgYA////ANPT0wDHx8cAODg4AAICAgD+/v4A8vLyAAYGBgAKCgoAAAAAAPr6+gD4+PgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD5+fkAsrKyADQ0NAAtLS0AAwMDAAAAAAAAAAAA/Pz8ALW1tQAEBAQARkZGAAcHBwDBwcEAKCgoADs7OwAAAAAAAAAAAP///wAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACMjIwBeXl4AEhISAAEBAQAAAAAAGRkZAEBAQAC/v78AAAAAAAAAAAABAQEAAQEBABwcHAAgICAAAQEBAAAAAAAVFRUAh4eHADExMQAAAAAAAAAAACwsLAD09PQA7OzsAAAAAAAAAAAAAAAAAAAAAAAtLS0AT09PACkpKQAKCgoASkpKAAcHBwACAgIAAAAAAAAAAAD///8AR0dHAAAAAAAAAAAAAQEBAAAAAAD///8ATExMAAAAAAAAAAAA9/f3AMPDwwAFBQUAS0tLABQUFAABAQEAAAAAACEhIQDp6ekAmpqaAA8PDwBlZWUADAwMAAAAAAAAAAAAAAAAAPz8/ADZ2dkADg4OAGVlZQAHBwcAAQEBAAAAAAAAAAAAAAAAAAYGBgAlJSUACQkJAAAAAAAAAAAAAAAAAAAAAAAHBwcAFRUVANfX1wBBQUEADAwMAAAAAAANDQ0Ae3t7AOvr6wD///8AAAAAAAAAAAAAAAAAc3NzABgYGAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwMDAAMDAwAAAAAAAAAAAPv7+wDKysoA19fXAHV1dQD4+PgAAwMDADIyMgDh4eEAg4ODAEVFRQBBQUEAFxcXAP7+/gDKysoAICAgAC0tLQACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A4eHhAOXl5QBVVVUA7e3tAO/v7wD///8AHx8fAKqqqgDW1tYA/Pz8AO/v7wDCwsIAU1NTABsbGwAAAAAAAAAAAAAAAAAAAAAA/v7+AO7u7gDn5+cA4uLiAM7OzgDQ0NAAeHh4ACwsLAAICAgAAQEBAAAAAAAAAAAAAABGQfqQAAAgAElEQVQAAAQEBAAGBgYADg4OANnZ2QACAgIAAAAAAPj4+AAGBgYAAQEBAM3NzQAVFRUADAwMAAAAAAACAgIAAAAAAP///wD09PQAwMDAADIyMgBJSUkA0tLSAMzMzABISEgA/v7+AAYGBgDt7e0Ar6+vANvb2wBsbGwAEBAQAP///wABAQEAJCQkACgoKACsrKwAdHR0AIWFhQD7+/sACQkJAAQEBAC5ubkAUFBQAM7OzgDr6+sA5eXlAE9PTwAXFxcAAAAAAAAAAAAAAAAAAAAAAP///wAAAAAAAAAAAAQEBAAHBwcAAgICAP///wD6+voA6urqABgYGAAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wDx8fEA1NTUAN7e3gDw8PAAysrKAOfn5wD19fUAqKioABcXFwDq6uoAaWlpAC8vLwDu7u4AiIiIAAkJCQACAgIA/v7+APb29gAAAAAA+vr6AP7+/gDW1tYADw8PAAwMDAAMDAwA+/v7APv7+wDU1NQAJiYmAA0NDQAAAAAAAAAAAAAAAAD8/PwA8/PzAAkJCQAAAAAAAAAAAP///wD///8A+fn5APv7+wD///8A7u7uAA0NDQANDQ0AAQEBAAgICAASEhIAjIyMADo6OgA8PDwAtra2APz8/ABHR0cAFRUVAJiYmADT09MAGRkZABwcHABCQkIABAQEAP///wD///8A4uLiANnZ2QAMDAwABAQEAP39/QACAgIAAAAAABYWFgDe3t4A9PT0AP39/QD8/PwAr6+vABwcHABqamoAAwMDAM3NzQDr6+sA8vLyAPz8/ADk5OQAERERAF9fXwAMDAwA09PTADAwMAA0NDQA+/v7APr6+gAFBQUABQUFAAAAAAAAAAAAAQEBAPv7+wDLy8sAenp6ABUVFQABAQEAAAAAAAAAAAD+/v4AxcXFAA4ODgAJCQkAAAAAAAAAAAD+/v4A+vr6AP7+/gA0NDQAzs7OAO/v7wDq6uoAFhYWALq6ugACAgIA09PTANjY2AD6+voA0dHRACwsLABOTk4ACwsLAO3t7QDU1NQACAgIAAEBAQAAAAAAAAAAANTU1AAQEBAAHBwcAAAAAADy8vIAzc3NAAICAgAnJycACQkJAAAAAAAAAAAA9fX1AL+/vwAbGxsAQ0NDAAAAAAD///8ACQkJAAAAAAAAAAAA////APv7+wADAwMAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABEREQBMTEwAAQEBAAAAAAAAAAAAERERAHFxcQABAQEAAQEBAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAANDQ0AXFxcAAAAAAAAAAAAAAAAAA0NDQBFRUUAAQEBAAAAAAAAAAAAAAAAAAAAAAD///8AAAAAAAEBAQAAAAAACQkJAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAgICADg4OAAODg4A////AAEBAQAAAAAAAAAAAAgICAA/Pz8ALS0tAAwMDAAICAgAAAAAAAAAAAAAAAAAAAAAAPz8/AApKSkABwcHAAICAgABAQEAAAAAAAAAAAAAAAAAAAAAACMjIwB0dHQABAQEAAAAAAAAAAAAAAAAAAEBAQAGBgYAJycnAJCQkAAEBAQAAgICAAAAAAABAQEAHx8fAB8fHwAAAAAAAAAAAAAAAAAAAAAA////AAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAD///8A8/PzAM/PzwDv7+8AVVVVABoaGgDW1tYACAgIAAkJCQBOTk4A8/PzAKysrAAeHh4AExMTAOzs7ADx8fEATExMAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD+/v4AxMTEABAQEAAbGxsA6+vrAAcHBwD8/PwAzMzMABAQEAAHBwcA8fHxAPf39wAaGhoA/f39AAAAAADw8PAA6urqAPb29gDy8vIA0NDQAN3d3QA+Pj4ANzc3ACUlJQD39/cAJSUlAAoKCgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwMDAAsLCwAKCgoA+vr6ALGxsQBDQ0MAHx8fADY2NgAJCQkAycnJAP7+/gAAAAAAAAAAAPPz8wCoqKgA5OTkAEVFRQDS0tIA9fX1ANPT0wDl5eUAPT09APHx8QDLy8sAGhoaAEVFRQD7+/sA+vr6AAMDAwD///8AAwMDAEdHRwAkJCQAGBgYADw8PAD///8AFhYWAMzMzAAHBwcAFhYWAPn5+QAiIiIAHh4eAAoKCgAAAAAAAAAAAAAAAAAAAAAAAAAAAP7+/gD///8AAAAAAPDw8ADx8fEA/v7+AP///wDKysoAtra2AGRkZAAjIyMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAFBQUA+vr6AP39/QD9/f0A+/v7AP///wABAQEAFBQUAAUFBQD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEA8/PzAMTExAD19fUAz8/PAPLy8gD39/cAHx8fABMTEwDY2NgAEhISAMrKygCYmJgAeHh4ADIyMgAAAAAAAAAAAAAAAADr6+sAnZ2dAD8/PwADAwMAAAAAAODg4ADo6OgAz8/PAAEBAQD4+PgAtLS0AEhISABCQkIABQUFAAEBAQAZGRkADw8PABYWFgAhISEAEhISAPj4+AAAAAAA4uLiAERERAAAAAAAyMjIAA4ODgDAwMAALi4uADAwMAABAQEACAgIABcXFwAJCQkAAgICANDQ0AALCwsAJSUlAF9fXwAEBAQA1NTUANXV1QBMTEwAX19fAAgICAAFBQUAAAAAABQUFAAGBgYA2dnZAO3t7QBUVFQACQkJANLS0gAHBwcA8vLyAB8fHwDb29sA8vLyAM7OzgA4ODgAKysrAAEBAQAAAAAAAAAAAAEBAQAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAcHBwABAQEAAAAAAAAAAADz8/MA1tbWAOjo6ADt7e0AICAgANbW1gDIyMgAHx8fAPf39wBMTEwA9/f3ABMTEwAICAgAFRUVABYWFgAEBAQAAAAAABEREQAtLS0ABgYGAAEBAQAAAAAA////AL29vQAQEBAAKysrAAAAAAD///8AODg4AAMDAwAGBgYAAAAAAAAAAAAAAAAA7OzsAPn5+QBCQkIA+Pj4APj4+AD8/PwA9PT0AO3t7QAAAAAA8PDwAMHBwQBKSkoAGBgYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQABAQEAAAAAAAAAAAAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIAAgICAAAAAAAAQEBAAAAAAAAAAAAAAAAAAICAgAAAAAAFRUVAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAoKCgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMDAwADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAcHBwAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBABsbGwAyMjIACwsLAAEBAQAWFhYAW1tbAAAAAAANDQ0AXV1dAEdHRwAcHBwAAwMDAP///wA7OzsAHBwcAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AEBAQAAAAAAAAAAAAAAAAAAAAAAAwMDAAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAUFBQAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQADAwMAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAICAgAGBgYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0NDQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMDAwAAAAAAAAAAAAAAAAAAAAAAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAASEhIAAAAAAAAAAAAAAAAAERERAAoKCgAZGRkACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIAAYGBgDOzs4A19fXACoqKgDOzs4AdnZ2AOLi4gB2dnYAR0dHABwcHAABAQEAsbGxACkpKQBVVVUAAQEBAAAAAAASEhIAYmJiAAkJCQAKCgoAurq6AE9PTwAsLCwAExMTABUVFQAEBAQA+/v7ALCwsACmpqYAcXFxABAQEAD8/PwABAQEAB8fHwA0NDQADQ0NAAoKCgAAAAAAAgICACwsLAAzMzMAHR0dAFpaWgAREREAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA5fplLQAAIABJREFUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAPb29gDi4uIAHx8fAAgICAABAQEAAAAAAAAAAADY2NgABgYGAB4eHgAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+APDw8AAQEBAAAQEBAAEBAQAAAAAA////AOnp6QAVFRUAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP///wAAAAAAAQEBAAEBAQAAAAAAAAAAAP39/QD///8ABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4ODgBAQEAABwcHAAgICAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABJSUkA////AP///wABAQEADg4OAAAAAAD///8AGxsbAIWFhQD09PQAAQEBAAAAAAAAAAAASUlJABYWFgAODg4AAQEBAAEBAQABAQEAERERAENDQwASEhIAHR0dAIaGhgAiIiIABwcHAAUFBQAyMjIAFxcXABAQEAABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgICAFxcXAAeHh4AAAAAAAEBAQALCwsAPDw8ACQkJAD+/v4AFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOHh4QDCwsIATExMABgYGAAAAAAAAAAAAAAAAAAAAAAA4uLiAMXFxQC8vLwAFRUVAHFxcQAYGBgAAAAAAAAAAADPz88Azs7OABwcHAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A5+fnAMHBwQBQUFAAS0tLAAYGBgABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAADZ2dkAsrKyAIiIiAADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD6+voAqampABgYGABaWloAAwMDAP39/QD///8AAwMDAAEBAQD///8A8fHxAO7u7gAgICAAAQEBAAAAAAAAAAAAAAAAAO7u7gC2trYAOzs7AC8vLwADAwMA8vLyAJaWlgA0NDQAUVFRAAYGBgAAAAAAAAAAAAAAAAAAAAAA9PT0AKCgoABISEgAJycnAAEBAQDT09MAurq6ADg4OAAAAAAAvr6+ACgoKABfX18ABQUFAAAAAAAAAAAAAAAAAAAAAAC/v78ACgoKAFhYWAAHBwcA////AP///wCHh4cAS0tLAB0dHQD///8A////AAEBAQD///8AAgICAAAAAAAAAAAA8PDwAHFxcQBdXV0AQ0NDAAAAAAAAAAAAAAAAAHFxcQB1dXUAMjIyAAAAAAAAAAAAAAAAAP///wD///8AAQEBAAAAAAD///8A+fn5AO/v7wDe3t4AFhYWAAEBAQAAAAAAAAAAAOrq6gDo6OgASUlJAAkJCQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAEBAQAAAAAACQkJAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAABQUFAAUFBQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP39/QAAAAAACwsLACkpKQABAQEA19fXAPDw8AAVFRUA/Pz8APT09ADExMQASEhIAC4uLgACAgIA////ABsbGwADAwMAAAAAABMTEwAHBwcAAAAAAAAAAAAAAAAAAAAAAPHx8QAdHR0AERERAAUFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPj4+AAFBQUAGBgYADExMQD8/PwA3d3dAAsLCwAMDAwA/Pz8APX19QDDw8MAV1dXACcnJwACAgIAAAAAAAAAAAABAQEA/f39AL29vQAhISEAGBgYAOXl5QAFBQUAPDw8AK6urgA8PDwAIiIiAAAAAAAAAAAAAQEBAC8vLwCWlpYA4+PjANzc3ADe3t4A4ODgAN3d3QDe3t4A/f39AFtbWwBDQ0MAAwMDAAAAAAAAAAAAAAAAAAICAgAaGhoAAAAAABcXFwB2dnYA9/f3AAEBAQAAAAAAUlJSAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD9/f0ABwcHABEREQAAAAAAExMTAEJCQgAZGRkAAAAAANfX1wDi4uIAQUFBAAgICAAAAAAAAQEBAAAAAAD6+voA1tbWAM7OzgDNzc0AUVFRAPn5+QDt7e0AJSUlAAAAAADv7+8AyMjIAAEBAQBiYmIAHR0dAPr6+gAGBgYAAgICAAEBAQAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAEBAQAAAAAA////AB4eHgABAQEA+Pj4AAAAAAD7+/sAyMjIANjY2AAaGhoALy8vAAcHBwACAgIAAQEBAAAAAADy8vIA/f39ABEREQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD7+/sAuLi4ABAQEAAnJycAAAAAAAAAAAABAQEAExMTADU1NQCcnJwAhISEABQUFAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AMfHxwBBQUEA8fHxADY2NgAoKCgAIiIiAPDw8ADDw8MALy8vADc3NwD39/cAzs7OADMzMwAUFBQAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAP39/QDz8/MA8PDwAIyMjAA+Pj4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA2dnZAENDQwD6+voAAQEBADY2NgDy8vIAzMzMAAEBAQD///8A5OTkAOPj4wABAQEAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABwcHAExMTABkZGQAAQEBAAAAAAAAAAAAExMTAAgICAACAgIAXFxcAE1NTQAAAAAAAAAAAAAAAAAAAAAAAAAAAAMDAwAaGhoAAAAAACQkJACOjo4A/v7+AAAAAAAAAAAAAAAAAAAAAAD///8A3NzcAIGBgQACAgIADw8PACUlJQAdHR0AHR0dACMjIwAnJycAKysrAAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAP///wD+/v4AAQEBAAEBAQAAAAAA/f39AP39/QAFBQUAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/f39AOPj4wATExMADg4OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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enpAF9fXwAPDw8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADc3NwAvLy8AFhYWAAaGhoAAAAAAP///wD9/f0AAgICAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA8gcN+BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPr6+gAVFRUAPT09ADs7OwAICAgAAQEBAAEBAQD///8A9PT0ANPT0wDn5+cA39/fAAEBAQAPDw8A////AAAAAAAAAAAA+/v7AOHh4QC5ubkA8/PzAIaGhgAPDw8AAQEBAA8PDwBdXV0AHBwcAHp6egDd3d0AjIyMABwcHADs7OwA9PT0AAMDAwAAAAAAAAAAAP7+/gD39/cAAQEBAN/f3wACAgIAAAAAAP7+/gDV1dUAnp6eAH19fQAwMDAAAwMDAPPz8wDt7e0A09PTAAAAAAD///8A6enpACsrKwAAAAAAAQEBABISEgBOTk4AJiYmADo6OgAHBwcA/Pz8AK6urgCTk5MAKCgoAF5eXgA2NjYACgoKAOLi4gD9/f0AysrKAAAAAAAAAAAA8vLyAPDw8AD///8AAAAAAAEBAQAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAWFhYAAAAAAP39/QDi4uIA8vLyAPn5+QDV1dUAMjIyAAAAAAD6+voA2NjYADQ0NAC5ubkAz8/PAPDw8AAlJSUA////AObm5gDV1dUAKSkpAPr6+gDV1dUA8/PzALS0tABHR0cAFRUVAM3NzQD+/v4ACAgIAAAAAAAAAAAA////AO7u7gD5+fkAysrKAAEBAQD///8A4uLiALOzswA/Pz8AX19fAAoKCgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAAAAAADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD9/f0Ax8fHAPT09AAhISEAqampAFtbWwAhISEA09PTAOzs7ABQUFAA////ANfX1wC/v78AAAAAAAAAAAAAAAAA/v7+APn5+QD4+PgAAAAAAAAAAAAAAAAAAAAAAO3t7QDt7e0A+Pj4AO/v7wAAAAAA9/f3ANTU1AAaGhoAKioqAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AD///8A+fn5AAAAAAAAAAAAAAAAAAAAAAAAAAAA////AP39/QD+/v4A////AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPv7+wD29vYAEBAQAAEBAQD///8A0dHRAB4eHgD///8AHBwcAPT09ADOzs4AFhYWAAEBAQAAAAAAAAAAAAAAAAAAAAAA8PDwALu7uwAzMzMAHR0dAAAAAAAAAAAAFhYWAC8vLwCrq6sA5+fnAP///wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD19fUAiIiIAOHh4QAXFxcAAAAAAAAAAAD4+PgAAQEBAAcHBwAAAAAA////APv7+wDa2toAampqAFRUVAABAQEAAAAAAPb29gCTk5MAMjIyAERERADU1NQABAQEAA8PDwACAgIAAAAAAAAAAAD+/v4Ay8vLAMfHxwBqamoAHh4eAAAAAAD4+PgAhoaGAC8vLwBcXFwABQUFAPX19QAHBwcA9vb2AOzs7ADS0tIAoKCgAE1NTQBeXl4ABwcHAAAAAADp6ekA6OjoABYWFgDv7+8AxsbGAExMTAAYGBgA5+fnAHJycgArKysAeHh4AAsLCwAAAAAAAAAAAAAAAAD///8A////AP///wAAAAAAAQEBAAAAAAAAAAAA////AAAAAAABAQEAAAAAAP///wDy8vIAAgICAA4ODgAAAAAA/v7+APr6+gDv7+8A6OjoALe3twDKysoAdHR0AObm5gAVFRUAGhoaAAEBAQAAAAAA9/f3ALy8vABbW1sAFxcXAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOvr6wD///8AFhYWAAEBAQDh4eEAy8vLAG1tbQDS0tIA9vb2AN/f3wAJCQkAOTk5AAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAATExMAx8fHAAAAAAD+/v4A////AAICAgABAQEA5+fnAL29vQAgICAALy8vAAwMDAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA////APHx8QAUFBQAFhYWAP7+/gDc3NwAubm5AGpqagDQ0NAAKSkpAMXFxQB5eXkAKSkpAAAAAAAAAAAAAAAAAAAAAAD+/v4A0tLSAPr6+gBVVVUABQUFAP39/QAAAAAABAQEAEtLSwDJyckAnp6eAG1tbQAREREAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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QUA+vr6AAkJCQArKysApaWlACsrKwA3NzcAQUFBAPv7+wD8/PwABAQEAPj4+ADq6uoA7u7uAM3NzQAPDw8AMTExAO/v7wAPDw8ABAQEAAQEBAACAgIAFBQUAAsLCwABAQEAAAAAAAAAAAAAAAAAAgICACMjIwC+vr4AGRkZADExMQAFBQUAMDAwALq6ugDOzs4APj4+AAwMDAD29vYADw8PAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIABwcHAAcHBwDOzs4A5eXlAMfHxwACAgIAODg4ACAgIAAKCgoA6OjoAOnp6QAQEBAACAgIALi4uAD19fUANzc3AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD6+voA9fX1AAEBAQAAAAAAAAAAAAMDAwAGBgYAAQEBAPj4+AD+/v4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABQUFAAUFBQD8/PwA+fn5AAEBAQAAAAAAAAAAAAAAAAAAAAAA/v7+AL+/vwBjY2MAAAAAADAwMABDQ0MAJiYmABYWFgAXFxcAExMTAAsLCwAFBQUADAwMAAEBAQABAQEA////ABkZGQABAQEAAAAAAAAAAAABAQEA////AAEBAQABAQEADAwMAAsLCwABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAA////AAAAAAAAAAAAAAAAAAEBAQABAQEAAQEBAAYGBgATExMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAEBAQABAQEAAgICABYWFgABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAEBAQADAwMAAsLCwABAQEAAQEBAAAAAAAAAAAAAAAAAAEBAQABAQEAAgICACEhIQAAAAAAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPb29gDAwMAAAAAAAA8PDwDf398A8PDwALOzswD+/v4AxcXFAGBgYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A8fHxAPb29gAZGRkA8fHxACkpKQD7+/sALS0tAMLCwgA6OjoAHR0dAKCgoADf398A39/fAENDQwA+Pj4A+fn5AAcHBwAJCQkA6enpAMjIyADn5+cA4uLiACcnJwADAwMAAAAAAAAAAAAAAAAAAgICAAsLCwA9PT0AoKCgABcXFwAHBwcAAAAAANra2gDr6+sAzs7OAPz8/ADKysoAZWVlABwcHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADb29sAFhYWADY2NgDm5uYAwsLCADExMQAFBQUA9fX1AJ6engBJSUkALi4uAEtLSwAREREAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPr6+gC7u7sA7u7uAAAAAAAAAAAAAgICADw8PABLS0sABgYGAKqqqgDNzc0A////AAAAAAAAAAAAAAAAAAAAAAAKCgoAV1dXADExMQDf398AmJiYAPv7+wAAAAAAAAAAAAAAAAAAAAAAAgICAA8PDwAyMjIAurq6ALy8vAC9vb0ABwcHABUVFQAaGhoAHh4eAGBgYABISEgAAgICAAAAAAAAAAAAAQEBAAEBAQD///8A////AAAAAAABAQEAAAAAAP39/QAAAAAABAQEAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPX19QD6+voADw8PAAMDAwAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgICAAAAAAAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAD+/v4AAgICAP///wDg4OAA7+/vAE9PTwDU1NQAAQEBAAEBAQAFBQUABwcHAAoKCgAAAAAABwcHAAsLCwAaGhoARUVFAAsLCwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAJycnAImJiQATExMAFRUVAAsLCwAICAgABQUFAAAAAAABAQEAAQEBAP39/QDW1tYA6OjoADk5OQDCwsIAR0dHAAcHBwD7+/sAFBQUACMjIwD+/v4AFRUVAPf39wAEBAQAAAAAAAAAAAD9/f0A39/fAN/f3wAPDw8AAgICAAAAAAAAAAAA4eHhAO/v7wDY2NgACQkJAAAAAADz8/MA0dHRADc3NwAZGRkAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADM7Z1OAAAgAElEQVQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wAAAAAAAAAAAAUFBQD///8AFRUVAGtrawAAAAAA/v7+AP///wAAAAAAAAAAAP7+/gDAwMAAGBgYAIKCggAUFBQAAgICANfX1wD19fUA7u7uAKqqqgDz8/MAlpaWAAICAgChoaEAycnJAB8fHwAFBQUA/v7+AP///wD8/PwA/v7+ANHR0QD19fUAODg4AAAAAAAAAAAA////AAAAAAAJCQkAWlpaAPv7+wAEBAQAAAAAAAAAAAAGBgYALi4uACoqKgDg4OAAsLCwAKurqwAUFBQAu7u7AAEBAQAYGBgAUVFRADg4OAD///8AWVlZAP///wD9/f0A////AAAAAAAAAAAAAAAAAAAAAAD8/PwA+/v7APj4+AAAAAAAAAAAAPLy8gDDw8MAPz8/AAsLCwD9/f0AUFBQABISEgABAQEA+/v7AAAAAAACAgIAJSUlAAAAAADt7e0ADQ0NABoaGgAiIiIA/v7+AP7+/gAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAExMTAEFBQQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAFBQUAFhYWAC8vLwAQEBAAAAAAAP///wABAQEAxMTEAOzs7AAAAAAA1tbWADAwMAAAAAAAAAAAAAAAAAABAQEAIyMjAB8fHwADAwMAAgICAAAAAAAAAAAA8PDwAPr6+gAxMTEACwsLAPf39wDu7u4APT09AAUFBQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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Onp6QA2NjYAAAAAAM/PzwDu7u4AXFxcAAoKCgCsrKwA3NzcABMTEwAqKioAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMDAwAWFhYA4uLiAP39/QDY2NgAIyMjAAkJCQAGBgYAMDAwAMXFxQBsbGwAdHR0AExMTAAHBwcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA9/f3APf39wAmJiYA9/f3AK+vrwD+/v4APz8/APPz8wCVlZUA5+fn2gX/JwAAIABJREFUAHd3dwAWFhYAAAAAAAAAAAD///8AAAAAAPv7+wDKysoAERERAEdHRwAEBAQA////AAAAAAABAQEAAAAAADMzMwAwMDAAfn5+AP39/QA5OTkAEBAQAAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAA6enpAOjo6ABMTEwAAwMDAAEBAQAAAAAA9vb2AB4eHgAQEBAAAAAAAPX19QAEBAQABgYGAAEBAQAAAAAAAAAAAPLy8gDe3t4AEhISABwcHAB0dHQAISEhAOnp6QAEBAQAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/Pz8AOvr6wA4ODgACwsLALKysgASEhIACAgIAOvr6wABAQEA7+/vAPT09ADNzc0AGhoaAB4eHgABAQEAAAAAAAYGBgAtLS0AJycnAObm5gAGBgYA8vLyAOfn5wDu7u4A9fX1AN7e3gAzMzMAGhoaAAAAAAAAAAAAAAAAAAAAAAAPDw8AMTExAAMDAwD8/PwA0tLSAFNTUwAAAAAAAAAAAAAAAADt7e0A1dXVAP39/QAhISEAGRkZAAsLCwDk5OQAqqqqAHt7ewD+/v4AGxsbANnZ2QAcHBwAUlJSAMrKygD19fUASEhIAAMDAwD///8AAAAAAAAAAAD39/cAnJycAPz8/AArKysABgYGAOLi4gDx8fEAQ0NDAAYGBgAAAAAA/f39AO/v7wBjY2MAOjo6AAICAgAAAAAAAAAAAC8vLwD+/v4A39/fAP///wAeHh4ABwcHAAYGBgDt7e0ACQkJABgYGAAYGBgAJiYmAAoKCgACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6+vrAPX19QAZGRkAy8vLAN/f3wBNTU0AFhYWAOXl5QAEBAQAyMjIADg4OADw8PAADAwMAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUFBQA1NTUAwMDAAD09PQC6uroAW1tbAAkJCQABAQEAFBQUAGlpaQDPz88Ao6OjADk5OQAaGhoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A7OzsAAwMDAAYGBgAxMTEAAAAAABhYWEACAgIAOXl5QD4+PgA5ubmAPX19QDt7e0AFBQUAAAAAAAAAAAA////ANzc3ADx8fEAVlZWAAoKCgD///8A/v7+AP///wAAAAAAAAAAAAkJCQBhYWEAAAAAAIuLiwBJSUkAYmJiABYWFgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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f0A39/fAB4eHgB5eXkAAQEBAAAAAAAAAAAAAAAAABMTEwBwcHAAYmJiAAUFBQALCwsAAAAAAAAAAAABAQEAAAAAAAAAAAAYGBgAd3d3AFxcXAApKSkAAAAAAAAAAAABAQEAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP7+/gDf398AMTExAO3t7QAAAAAAAQEBAAAAAAAMDAwAVFRUAA4ODgAUFBQA/v7+ACkpKQD19fUAjIyMABwcHAAAAAAA8/PzANvb2wAJCQkA////AC4uLgDn5+cA6OjoANzc3ADy8vIA1tbWAAAAAAD6+voArKysANzc3AB1dXUAMjIyAAAAAAAAAAAAAAAAABQUFADx8fEA7OzsAA0NDQAAAAAAEhISAPj4+ACRkZEAYmJiAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AAUFBQAPDw8ABAQEAAICAgDKysoA/Pz8AOXl5QDR0dEA8fHxAOHh4QAjIyMAAgICAAAAAAABAQEAAQEBAAAAAAABAQEABQUFACcnJwAICAgAJSUlAMzMzABBQUEAEhISANvb2wAhISEASUlJAAEBAQAAAAAAAAAAAAAAAAD9/f0ACgoKABsbGwAUFBQA2NjYAL29vQD29vYAJiYmAOLi4gAcHBwAPj4+ALq6ugABAQEAAAAAAAYGBgAlJSUA/v7+AAAAAAD29vYAuLi4AENDQwBEREQABAQEAPLy8gCSkpIAOzs7AEBAQABCQkIAAQEBAAQEBAD8/PwA9/f3AOvr6wABAQEA8/PzAC0tLQDz8/MA/v7+AMjIyAAwMDAABAQEAAAAAADv7+8AtLS0AEZGRgA8PDwABAQEAAAAAAAAAAAAAAAAAAAAAACEhIQADw8PAAAAAAATExMAc3NzADc3NwDf398AhISEAOHh4QAAAAAAAAAAAAAAAAAAAAAA+/v7APj4+AD09PQA1NTUANXV1QACAgIABgYGAAcHBwATExMAe3t7AF5eXgAHBwcABgYGAAEBAQAAAAAAGBgYABgYGAABAQEAAQEBAAAAAAAAAAAAAAAAAAEBAQABAQEADg4OAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAQEBAAjIyMAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJCQkACgoKAAEBAQADAwMAIyMjAAAAAAACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAADAwMAERERAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAADQ0NACgoKAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPIHDfgQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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/cA2NjYAAcHBwAAAAAACQkJAAEBAQAQEBAAPj4+AAAAAAABAQEA////AP39/QDExMQA9fX1ABoaGgDf398ANDQ0ACAgIAABAQEAAQEBAAAAAAAAAAAAAAAAAP///wDj4+MAoKCgANfX1wBubm4A7+/vAAAAAAABAQEAGBgYABUVFQDX19cAAAAAAAAAAAAAAAAAAAAAAP///wDu7u4AEBAQAAkJCQC/v78ANTU1APPz8wDy8vIA+Pj4APDw8ADY2NgAERERAPf39wDMzMwAQEBAAAAAAAAAAAAAAAAAAAAAAAD///8A2NjYAOjo6AA5OTkAJycnAL6+vgClpaUAysrKAICAgAAMDAwAAAAAAAAAAAAAAAAA////AObm5gAvLy8A////APLy8gAdHR0ACAgIAAAAAAABAQEAAAAAAPPz8wCtra0A+fn5AA8PDwD///8AAQEBAAAAAAAAAAAAAAAAAO3t7QAsLCwA2dnZAOPj4wAUFBQAsLCwAE5OTgAXFxcAAQEBAAAAAAAAAAAAAAAAAAYGBgAoKCgAAgICAAICAgDc3NwAtLS0ABISEgBYWFgA6OjoAPPz8wA2NjYAs7OzAAEBAQBJSUkALS0tAAMDAwAAAAAAAAAAAAAAAAAAAAAAAAAAAEpKSgBBQUEAAAAAAAAAAAAAAAAAAAAAABMTEwBSUlIAAAAAAAEBAQAAAAAAAAAAAP7+/gDOzs4Azs7OADExMQAfHx8AKSkpAB4eHgAXFxcAEBAQABEREQAKCgoAAQEBAP///wD///8AAQEBAAAAAAAAAAAAAAAAAO7u7gDb29sABQUFAAAAAAD5+fkA7u7uADQ0NAAZGRkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD5+fkAsrKyADAwMAArKysAAAAAAAAAAAD///8AAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAP///wAAAAAAwsLCAN7e3gDY2NgAWlpaADMzMwADAwMAAwMDAAAAAAD///8AOzs7ANzc3AAAAAAACwsLAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAOfn5wCEhIQAXFxcAEhISADc3NwAd3d3ADc3NwBoaGgACQkJAAMDAwABAQEAAAAAAAICAgAdHR0ALy8vAD8/PwAuLi4Avb29AAAAAAAAAAAAAwMDAAMDAwABAQEAAAAAAAAAAAAAAAAAAAAAAP///wDo6OgAHx8fAAICAgAAAAAAMzMzABoaGgDJyckABgYGAAsLCwDn5+cA6OjoAERERADX19cAAgICAAAAAAAAAAAAAAAAAP7+/gDS0tIA7+/vAHBwcAAPDw8AAQEBAB0dHQCNjY0AYmJiACwsLAACAgIAAAAAAAAAAAAAAAAA+vr6APDw8ABCQkIAAQEBAPv7+wD///8AAQEBAAAAAAAAAAAAAAAAABAQEABHR0cASUlJAOHh4QAhISEABgYGAAAAAAAAAAAAAAAAAERERAA2NjYA8PDwANfX1wBxcXEA7u7uAD09PQD29vYACgoKAAEBAQAAAAAAAQEBAAAAAAAFBQUA+vr6ALm5uQClpaUA5eXlAIaGhgAtLS0AIiIiAHx8fADS0tIALi4uAHt7ewAPDw8AAQEBAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAsLCwAl5eXAAoKCgAJCQkAAgICAAICAgAAAAAAAAAAAAEBAQABAQEAAAAAAOnp6QDa2toANzc3AMLCwgACAgIAQUFBAOTk5ACnp6cAXl5eABgYGADt7e0ArKysACUlJQAZGRkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD8/PwA19fXACUlJQAAAAAAAAAAAAAAAADv7+8AAQEBABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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QAMDAwAV1dXAP///wACAgIAAgICAP///wDV1dUAwcHBADs7OwA7OzsAAgICAAAAAAD+/v4AAAAAAAAAAAABAQEAAQEBAPLy8gDLy8sAAwMDAAICAgAAAAAAAAAAAOjo6ADy8vIAIiIiAAQEBAD7+/sAu7u7APPz8wAgICAAGRkZAPj4+ADd3d0AFRUVACoqKgAFBQUAgoKCAAQEBAC4uLgAKioqAHNzcwABAQEAAAAAAPj4+ACHh4cAHh4eAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6OjoADU1NQACAgIAAQEBANvb2wDy8vIAHR0dAAgICAACAgIA2NjYABQUFAD6+voACgoKAAEBAQADAwMAAwMDAAAAAAADAwMAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8AAwMDAPv7+wACAgIAAAAAAAAAAAAAAAAAAAAAAP7+/gD9/f0AAgICAAICAgABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD5+fkA8PDwABgYGAADAwMA////ANvb2wD8/PwAAAAAAAoKCgD09PQAvLy8ACkpKQD+/v4ABAQEAAAAAAAAAAAA////APn5+QDDw8MAGxsbACgoKAABAQEAAAAAABQUFAA9PT0AtLS0ACgoKAAiIiIAAwMDAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwMDAD5+fkA2NjYADY2NgAICAgAAQEBAAEBAQDW1tYAvb29ACMjIwALCwsA+Pj4AAUFBQAHBwcAAAAAAAAAAAD///8A/f39AAEBAQAREREAenp6AHh4eADT09MAERERAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A3NzcANnZ2QAWFhYAAQEBAAAAAABOTk4ABwcHAM3NzQDv7+8AEhISANnZ2QD6+voA4+PjAObm5gDq6uoADAwMAAMDAwAFBQUAUVFRAC0tLQDo6OgAJiYmAPn5+QAAAAAAAAAAAAAAAAD///8AAAAAAAAAAAAAAAAAAAAAAP///wAAAAAAtra2ACEhIQDv7+8A5+fnAPn5+QD5+fkAAwMDAPz8/ADj4+MA8/PzAM7OzgAAAAAACAgIAOvr6wANDQ0A////AOvr6wADAwMABgYGAP///wDY2NgAQ0NDACUlJQDx8fEAAQEBAAAAAAD8/PwA39/fACQkJAAQEBAAAAAAAAwMDAAnJycABQUFAAICAgAAAAAAAAAAANra2gDR0dEAREREAAsLCwAAAAAALi4uAAAAAAANDQ0AAQEBAAoKCgA2NjYAAQEBANra2gAAAAAA/f39APz8/AAAAAAAAAAAAAEBAQABAQEAAAAAAAEBAQD///8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wAAAAAA9/f3AA8PDwABAQEA7e3tAMnJyQBTU1MAAQEBAAYGBgAFBQUA+/v7AFBQUAAKCgoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACwsLAOfn5wD7+/sABQUFAAAAAAAAAAAAAQEBAPf39wDLy8sA/v7+ADMzMwAODg4AAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD9/f0A/v7+ABMTEwD///8A7+/vALm5uQBWVlYA7u7uAAoKCgDZ2dkAMDAwAFVVVQAFBQUAAAAAAAAAAAAAAAAAAAAAAN/f3wDW1tYAUlJSAA8PDwD///8AAAAAAAAAAAA5OTkAxsbGAKOjowBsbGwAFRUVAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAP///wD///8AAQEBAP///wAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAADj4+MAoKCgAAUFBQAnJycAKCgoABwcHAAICAgAAwMDAAICAgABAQEAAAAAAPf39wDj4+MANDQ0AODg4ADZ2dkAWlpaAA4ODgDIyMgA0NDQAEFBQQAhISEAlpaWADk5OQAzMzMAHh4eAAsLCwACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIAFZWVgCzs7MA2dnZAPr6+gA3NzcAAAAAAAAAAAAFBQUAQUFBAERERAD7+/sAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPb29gDw8PAANTU1AM7OzgALCwsAQUFBAP7+/gC6uroA2dnZAFJSUgDc3NwAfn5+AEVFRQAwMDAAGxsbAAQEBADg4OAA3d3dAFZWVgAXFxcA7OzsAOfn5wD39/cA8PDwAAEBAQAAAAAABAQEAERERAAODg4Aurq6APr6+gD6+voABQUFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA8gcN+BAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0oxTjgAAIABJREFUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4uLiAPX19QAiIiIAICAgABAQEAAEBAQA8/PzANbW1gDq6uoA9vb2AP7+/gDb29sABwcHAHFxcQBMTEwAS0tLAAUFBQAAAAAACgoKAFJSUgAvLy8AGBgYAAAAAAAAAAAAExMTAAEBAQD///8A/Pz8ANPT0wDk5OQAQEBAAA0NDQABAQEAAAAAAPr6+gDe3t4ADAwMAOfn5wD7+/sAAAAAAAEBAQD+/v4AAgICAAoKCgAVFRUAAQEBAAEBAQAAAAAABgYGAGlpaQDf398ArKysACAgIADp6ekAbGxsABMTEwAAAAAAAAAAACUlJQCOjo4A7OzsABISEgALCwsABgYGADw8PAAMDAwA6urqAOjo6AAbGxsAAQEBAAICAgDLy8sA8/PzANPT0wD29vYAs7OzAM/PzwACAgIAAQEBAAAAAAABAQEACgoKAPr6+gABAQEAAAAAAPLy8gDIyMgA3t7eAODg4AAbGxsAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAQEBAAEBAQDf398A6urqACcnJwCdnZ0AHx8fAAYGBgAAAAAAFBQUAMbGxgAWFhYAIyMjAPj4+AAgICAAHR0dAAkJCQAAAAAAAAAAAAAAAAAAAAAA5ubmAN7e3gABAQEAAQEBABAQEAAPDw8A+fn5AOrq6gD9/f0AAAAAAAAAAAAAAAAAAAAAAOnp6QDFxcUAv7+/AAgICAANDQ0AEBAQACwsLABAQEAAMDAwAB8fHwAXFxcA3t7eAAwMDAAlJSUA9/f3AD8/PwDs7OwAsrKyABQUFABPT08AGBgYAP39/QDKysoAlpaWAJCQkABISEgAbGxsABoaGgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAEBAQAS0tLAPHx8QCdnZ0AJycnAP39/QAAAAAAAQEBAAAAAAAQEBAAkZGRAAUFBQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3t7eABISEgACAgIAExMTACAgIADb29sAvr6+ADExMQBeXl4AEBAQAPj4+ADFxcUAioqKAP39/QBVVVUAVlZWABcXFwBPT08ABgYGAP///wAKCgoA5+fnAIGBgQANDQ0AHx8fAAAAAAABAQEABgYGADw8PAA4ODgAAwMDAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAFRUVAPX19QAAAAAA////AP///wAAAAAA////AP///wD///8AAAAAAAICAgACAgIAAAAAAAAAAAD6+voA0dHRABoaGgA/Pz8AAAAAACEhIQAICAgAAgICAAAAAAAAAAAA6OjoAPf39wAwMDAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAA8PDwAaGhoA8vLyAO7u7gAfHx8ANzc3ABEREQDu7u4ALi4uABsbGwAAAAAAAAAAAAwMDABFRUUACQkJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA+/v7APf39wAJCQkAAwMDAAICAgAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wAMDAwAPDw8AAoKCgACAgIAx8fHAAYGBgA2NjYAExMTAAsLCwACAgIAFhYWAGRkZABBQUEA1tbWADIyMgAJCQkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAXFxcAd3d3ANDQ0AAGBgYAAwMDAAAAAAAAAAAAAQEBAAQEBAA1NTUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGBgYAOzs7AAUFBQD9/f0A1NTUAAcHBwBAQEAAERERAAkJCQABAQEAJSUlAHp6egDa2toA7OzsACkpKQAHBwcAISEhAAEBAQABAQEA////ABcXFwBEREQA7u7uADY2NgAYGBgAAAAAAAAAAAABAQEAAwMDAA8PDwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADX19cAhoaGADo6OgCenp4A2NjYAGNjYwD8/PwA/Pz8APr6+gD6+voA9vb2ABkZGQApKSkADAwMAAAAAAALCwsA6urqAL6+vgD+/v4Aw8PDACoqKgADAwMABwcHAKGhoQBNTU0AHBwcAN3d3QDMzMwAU1NTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAgIABgYGALq6ugDe3t4AAgICAAAAAADKysoA19fXALCwsAABAQEA8fHxAPDw8AAAAAAAAAAAAAAAAADq6uoABwcHAEhISACpqakA////AAgICAAAAAAAAQEBAAAAAAAAAAAA39/fAMrKygA2NjYAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBABYWFgAUFBQA1NTUAOrq6gDQ0NAAQ0NDACMjIwAUFBQABgYGAAwMDAD8/PwABAQEAPX19QDf398A3NzcADMzMwABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD///8A////AAEBAQAAAAAAAAAAAAAAAAD+/v4AAAAAAAEBAQABAQEAAAAAAAAAAAD+/v4AwMDAAHZ2dgAYGBgAODg4AEtLSwAmJiYABgYGAAQEBAACAgIAAQEBAAICAgAeHh4AAwMDAAAAAAD///8AOTk5AAICAgADAwMAAQEBAAAAAAAAAAAAAQEBAA0NDQAuLi4AKysrAAQEBAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAwMAGRkZABcXFwD+/v4AAwMDAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAArKysAAwMDAAEBAQAAAAAANDQ0AAICAgADAwMAAAAAAAAAAAAAAAAAAQEBABEREQA2NjYA/v7+AAICAgABAQEAAAAAAAAAAAAAAAAAAAAAAAICAgAUFBQAZWVlAAMDAwACAgIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAP7+/gDc3NwA+Pj4ACcnJwACAgIARkZGAPz8/ADm5uYA/v7+AO3t7QD5+fkA5+fnAPLy8gDS0tIASEhIABISEgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAB1dXUAPT09AP///wACAgIACwsLAAICAgAfHx8AhYWFAP39/QAAAAAAAAAAAAAAAAD+/v4Azs7OAG9vbwDp6ekADw8PACoqKgAgICAAHx8fACkpKQAsLCwAIiIiAP///wDi4uIAEBAQAAQEBADW1tYAKysrAAAAAAC7u7sA8vLyACkpKQD///8AwcHBAAEBAQB2dnYABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4eHhAMrKygAuLi4ACgoKAAAAAAD8/PwA9vb2AAcHBwAHBwcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAANzc3AKCgoAD+/v4AIyMjAL+/vwADAwMAAAAAANzc3AD5+fkAyMjIAAAAAADf398ACgoKAB0dHQD///8A////APn5+QDv7+8A+fn5AOXl5QACAgIA+vr6AAkJCQA4ODgA09PTANjY2AD+/v4AAAAAAPT09AAJCQkAAwMDAAICAgADAwMAl5eXABYWFgBlZWUAGxsbAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAERERACUlJQAVFRUAAwMDAAAAAAAKCgoADw8PABUVFQACAgIABwcHAFlZWQAMDAwA5OTkAB4eHgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGRkZAAAAAADq6uoAERERAO3t7QAODg4ABAQEAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/v7+AAAAAAABAQEAAQEBAPPz8wDLy8sAXFxcAL29vQABAQEABgYGAAEBAQDl5eUA/v7+APPz8wD7+/sA6+vrAPv7+wADAwMA+fn5AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAAFBQUAAAAAAAAAAAAAAAAAAAAAAACAgIAERERAAAAAAAAAAAAAAAAAAAAAAD+/v4AISEhAF9fXwAaGhoAICAgABwcHAAUFBQADAwMAAICAgABAQEAAQEBAPn5+QC+vr4A6OjoACcnJwCxsbEAhYWFABEREQDv7+8AFRUVAD4+PgD+/v4A4ODgAOHh4QAGBgYAAAAAAAAAAAD9/f0A4+PjAOrq6gAGBgYAAQEBAAAAAAAAAAAA3t7eAO/v7wDZ2dkACgoK9KzaOQAAIABJREFUAAAAAADu7u4Av7+/AEJCQgA+Pj4AAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAA8fHxAIyMjACQWUTFAAAgAElEQVQ6OjoAvLy8AERERAAJCQkAExMTAPr6+gDFxcUAXV1dAB0dHQABAQEA////APDw8AC6uroAAgICAAYGBgAAAAAAAAAAAB4eHgDDw8MAAAAAAP///wAxMTEA7OzsABoaGgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP///wD9/f0ARkZGAA0NDQABAQEAPz8/ADAwMADo6OgA8PDwAPn5+QAAAAAAAAAAAP///wABAQEAFRUVACkpKQAAAAAAAgICAP///wD7+/sA7+/vABgYGAAyMjIADAwMAAICAgAAAAAA////AB4eHgBxcXEA8vLyAFNTUwAhISEAAQEBAAAAAAAAAAAAAQEBABcXFwAXFxcAAgICAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABaWloA4eHhAPr6+gAAAAAAAAAAAAAAAAA8PDwAISEhAAcHBwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQEBAA4ODgBubm4ARUVFAOnp6QAJCQkABwcHAENDQwABAQEAAQEBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwMDAEVFRQAODg4ABwcHACkpKQADAwMAAQEBAP///wA0NDQAAAAAAAAAAAArKysAAgICAAkJCQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA+vr6ANzc3ABfX18Avr6+APPz8wDk5OQA/Pz8ABoaGgD9/f0A/f39AP///wABAQEAAgICAAMDAwD09PQAGxsbABISEgAAAAAA7u7uAPPz8wAcHBwAAwMDAPv7+wDMzMwAERERACkpKQAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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PPz8wABAQEAzs7OAHl5eQAGBgYAAQEBAAAAAADq6uoA2dnZANbW1gDk5OQA0NDQADQ0NADExMQA2traAAsLCwAaGhoAICAgALGxsQApKSkAx8fHADQ0NAADAwMADw8PAA8PDwAAAAAA+fn5ANTU1AAuLi4AMDAwAAoKCgDw8PAA2NjYAEFBQQAyMjIACgoKAAAAAAAAAAAA////AOvr6wDPz88A////AAAAAAD///8A29vbANTU1AD+/v4A09PTAN7e3gAAAAAA8fHxAMjIyAD6+voAMjIyABkZGQABAQEAAAAAAAEBAQAAAAAAAAAAAP///wAICAgA/f39ANjY2ABHR0cA7u7uAOLi4gAXFxcAAAAAAAEBAQABAQEAAAAAAAEBAQAAAAAAAQEBAAYGBgA2NjYA39/fAMTExAArKysAGhoaACYmJgDZ2dkAPDw8AP///wAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAN7e3gDy8vIAAQEBABISEgA9PT0A////APr6+gDd3d0A4+PjAAAAAAAAAAAAAAAAAAAAAAD39/cA+fn5AAAAAAAAAAAA/v7+APX19QDk5OQA/Pz8APv7+wDr6+sA/v7+AAMDAwAAAAAA////AAAAAAAAAAAA/f39AOfn5wDy8vIABAQEAP///wDu7u4ACAgIAC0tLQAFBQUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADX19cA3NzcAEhISAANDQ0A////AAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEBAQAAAAAAAAAAAAEBAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAQEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD6+voA0tLSAAsLCwAcHBwAAQEBAMrKygDPz88AIiIiACYmJgABAQEAAAAAAAAAAAD6+voAERERAFpaWgDU1NQABAQEAGZmZgAODg4ArKysABoaGgA7OzsA1dXVAMnJyQBzc3MAExMTAAgICAABAQEAAAAAAAEBAQD9/f0A4ODgAM3NzQBNTU0A6+vrAAwMDADExMQA7u7uAGlpaQAJCQkAAAAAAAEBAQAAAAAAAAAAABkZGQATExMACAgIAPz8/ADg4OAAs7OzABAQEABmZmYAAQEBAD4+PgD7+/sApqamACIiIgBeXl4AFBQUAAEBAQAAAAAA////AAAAAAD+/v4A4eHhAODg4AAODg4AERERAP7+/gD8/PwA/f39AAMDAwABAQEAAAAAAAAAAAAAAAAAAQEBAP///wAAAAAA////APf39wDy8vIAAAAAAAAAAAD///8AAwMDADc3NwCvr68AVlZWAAgICAD9/f0ACQkJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAH5+fgBBQUEAAAAAAAAAAAD///8AAQEBACAgIACOjo4AAAAAAAEBAQAAAAAAAAAAAP7+/gDMzMwAbm5uAAYGBgAWFhYAKioqACIiIgAdHR0AIiIiACUlJQAVFRUA////ANHR0QAICAgACQkJAM7OzgBCQkIABAQEALq6ugD5+fkANjY2AP7+/gC7u7sA+vr6ACsrKwAAAAAAAAAAAP///wD6+voA/f39AAAAAAAAAAAAAAAAAP///wDj4+MA09PTADs7OwADAwMAAAAAAPj4+ADl5eUAGBgYABQUFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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图3.5-1 本项目施工期间工艺流程及产污环节示意图

* + 1. 营运期工艺流程及产污环节

本项目营运期间工艺流程及产污环节示意图见图3.5-2。

运营期工艺流程为：船→桥式抓斗卸船机→水平输送皮带机→1#转运站→入电厂皮带机。

图示

描述已自动生成

图3.5-2 本项目营运期间工艺流程及产污环节示意图

（1）环境空气影响因素分析

主要包括煤炭在卸船作业过程产生的扬尘，港作机械设备废气，船舶废气、道路扬尘等对周边环境空气影响。项目码头地面设置岸电箱，到港船舶拟接入岸电系统，仅考虑船舶到港、离港及辅机产生的大气污染物排放。本项目配备桥式抓斗卸船机等机械设备。根据设计单位提供资料，桥式抓斗式卸船机等装卸设备均使用电能。因此本项目装卸机械及运输车辆产生废气较少，本次评价仅进行定性分析。

（2）水环境影响因素分析

主要包括到港船舶废水（生活污水、舱底油污水），码头面、廊道区域地面冲洗废水、流动机械冲洗水，初期雨水，机械维修废水等对附近水体水质环境的影响。

（3）声环境影响因素分析

主要包括装卸设备运行噪声、运输车辆和船舶鸣号产生的交通噪声等对周围声环境的影响。

（4）固体废物影响因素分析

主要包括生活垃圾、机修废油、装卸废料等固体废物对附近水体生态环境造成影响。

输煤皮带首段设置电磁除铁，被皮带输送机输送的煤炭通过安装在首部支架上的磁选机（即旋转的直流磁铁）时，物料中的铁磁杂物被吸，由弃铁胶带将铁磁杂物拽至电动滚筒卸下，达到自动除铁的目的。

* 1. 环境风险识别

本项目码头主要货种为煤炭，项目营运期间的环境风险主要考虑运输船舶的溢油风险。

* + 1. 典型事故统计资料分析

根据淮安地方海事局提供资料，淮安内河境内2014至2018年共发生交通事故41起，事故（险情）成因主要是船舶在航行过程中发生碰撞、自沉。近年来淮安市水上交通事故主要集中在京杭运河、洪泽湖、淮河等辖区通航水域。淮安市内河通航水域2017年以前的水上交通事故（险情）发生呈逐年上升趋势，但随着港口货物吞吐量增加，船舶通航更加频繁，航行密度增大，事故发生的风险水平仍在不断提升。

现阶段，淮安市尚未发生过较大规模的船舶溢油污染事故。

* + 1. 物质危险性识别

本项目进出港船舶主要动力燃料为船用燃料油，危险物质分布于进港船舶。其燃料油危险特性及防范措施见表3.6-1。

燃料油危险特性及防范措施一览表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 理化特性 | | | | |
| 外观 | 黑色油状物 |  |  | |
| 闪点 | 120℃ | 引燃温度 | 520℃ | |
| 健康危害 | | | | |
| 侵入途径 | 吸入、食入 | | | |
| 健康危害 | 对皮肤有一定的损害，可致接触性皮炎、毛囊性损害等。接触后，尚可有咳嗽、胸闷、头痛、乏力、食欲缺乏等全身症状和眼、鼻、咽部的刺激症状。 | | | |
| 急救措施 | | | | |
| 皮肤接触 | 脱去污染的衣着，用大量流动清水冲洗 | | | |
| 眼睛接触 | 提起眼睑，用流动清水或生理盐水冲洗，就医 | | | |
| 吸入 | 脱离现场至空气新鲜处。如呼吸困难，给输氧，就医 | | | |
| 食入 | 饮足量温水，催吐，就医 | | | |
| 燃爆特性和消防 | | | | |
| 燃烧性 | 本品可燃，具有刺激性 | 有害燃烧产物 | | CO、CO2、成分未知的黑色烟雾 |
| 危险特性 | 受高热分解，放出腐蚀性、刺激性的烟雾 | | | |
| 灭火方法 | 消防人员须佩戴防毒面具、穿全身消防服，在上风向灭火。尽可能将容器  从火场移至空旷处。喷水保持火场容器冷却，直至灭火结束。处在火场中  的容器若已变色或从安全泄压装 置中产生声音，必须马上撤离 | | | |
| 其他 | | | | |
| 泄漏应急处理 | 迅速撤离泄漏污染区人员至安全区，并进行隔离，严格限制出入。切断火  源，建议应急处理人员戴自给正压式呼吸器，穿防毒服，尽可能切断泄漏  源，防止流入下水道、排洪沟等限制性空间。小量泄漏：用砂土或其他不  燃材料吸附或吸收。大量泄漏：构筑围堤或挖坑收容，用泵转移至槽车或  专用收集器内，回收或运至废物处理场所处置 | | | |
| 储存注意事项 | 储存于阴凉、通风的库房，远离火种、热源，应与氧化剂、酸类分开存放，切忌混储。配备相应品种和数量的消防器材。储区应备有泄漏应急处理设备和合适的收容材料 | | | |
| 运输注意事项 | 运输前应先检查包装容器是否完整、密封，运输过程中要确保容器不泄漏、不倒塌、不坠落、不损坏。严禁与氧化剂、酸类、食用化学品等混装混运。运输车船必须彻底清洗、消毒，否则不得装运其他物品。船运时，配装位置应远离卧室、厨房，并与机舱、电源、火源等部位隔离。公路运输时要按规定路线行驶 | | | |
| 操作处置注意事项 | 密闭操作，提供良好的自然通风条件。操作人员必须经过专门培训，严格遵守操作规程。建议操作人员佩戴自吸过滤式防毒面具（半面罩），戴化学安全防护眼镜，穿防毒物渗透工作服，戴橡胶耐油手套。远离火种、热源，工作场 所严禁吸烟。使用防爆型的通风系统和设备。防止蒸气泄漏到工作场所空气中，避免与氧化剂、酸类接触。搬运时要轻装轻卸，防止包装及容器损坏。配备相应品种和数量的消防器材及泄漏应急处理设备。倒空的容器可能残留有害物 | | | |
| 个体防护 | 工程控制：提供良好的自然通风条件。  呼吸系统防护：空气中浓度超标时，必须佩戴自吸过滤式防毒面具（半面罩）。 紧急事态抢救或撤离时，应该佩戴空气呼吸器。  眼睛防护：戴化学安全防护眼镜。  身体防护：穿防毒物渗透工作服。手防护：戴橡胶耐油手套。  其他：工作完毕，淋浴更衣，工作完毕，彻底清洗。 | | | |
| 稳定性和反应活性 | 稳定性：稳定聚合危害：不聚合  禁忌物：强氧化剂、强酸 | | | |

* + 1. 生产系统危险性识别

本项目船舶在入港航道中，由于船舶因素、人为因素、天气因素等可能造成船舶相互碰撞或船舶撞击码头，导致燃料油泄漏，污染周边水环境，甚至引发火灾、爆炸，污染水体及大气环境，危害人群健康。

* + 1. 危险物质向环境转移的途径识别

本项目若发生水上燃料泄漏，有毒有害物质的扩散途径主要是水体及大气。燃料油泄漏进入盐河后，不溶于且轻于水的燃料油漂浮在水面上，在水流及风力的作用下随水流漂移扩散。泄漏后，燃料油中易挥发的成分挥发至大气中，在风力的作用下载空气中迁移扩散。

* + 1. 小结

本项目环境风险识别情况详见表3.6-2。

本项目环境风险识别表

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 危险单元 | 风险源 | 主要危险物质 | 危险物质最大存载量 | 环境风险 | 环境影响途径 | 可能受影响的环境敏感目标 |
| 1 | 码头处（航道内） | 1000t散货船舶碰撞等事故，火灾等 | 燃料油 | 234.35t | 泄漏 | 盐河 | 上下游敏感水体 |
| 火灾爆炸二次污染 | 大气 | 影响范围内  居民 |

* 1. 施工期污染源分析
     1. 污染物产生环节

本项目在施工期状态下的污染包括废气、废水、噪声、固体废物等。其中：

（1）废气产生环节主要有施工扬尘、施工船舶、车辆和机械废气、排泥场废气、临时堆场扬尘、运输砂石料粉尘等。

（2）废水产生的主要环节有航道疏浚产生的水体污染、施工船舶污水、施工人员生活污水、疏浚水下土方干化场雨水。

（3）噪声的产生环节主要有施工船舶和施工机械噪声。

（4）固废的产生环节主要有生活垃圾、建筑垃圾、机修废油及沉淀池含油污泥。

* + 1. 废气源强分析

（1）施工扬尘

施工期间对大气环境的主要影响是施工期间的场地平整、土方回填、建材运输装卸等产生的施工扬尘会使周围大气中的悬浮微粒浓度增加，局部地区污染加剧。

本次评价采用《南京市扬尘源排放清单估算》（南京大学大气科学学院）采用的施工扬尘估算公式估算施工扬尘量，公式如下：

EC=A×T×EFC

式中：EC——在建工地引起的颗粒物排放量，t/a；

A——施工面积，m2；

T——施工时间，月；

EFC——在建工地引起的颗粒物排放系数，kg/m2·月，本次评价取0.068。

根据上述公式及排放系数，本项目施工面积为9584m2，施工时间10个月，则产生的粉尘约6.52t。采取洒水防尘措施后，扬尘削减量约66%，实际排放量约2.22t。

（2）施工船舶、车辆和机械废气

施工船舶、燃油机械和运输车辆运行过程中将产生燃油废气，主要污染物为NOx、CO、PM2.5等，排放强度较小。由于施工工地内的施工机械、运输车船分布较分散，属于无组织排放，工程基本处于开阔地，空气流动条件好，废气经稀释扩散后不会对周边空气环境产生明显影响。依据《道路机动车大气污染物排放清单编制技术指南》（试行）和《非道路移动源大气污染物排放清单编制技术指南》（试行），各类施工机械和运输车辆的污染物排放情况如表3.7-1所示。

部分施工机械和车辆的燃油废气排放情况

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类型 | 污染物排放情况（g/kg燃料） | | | | |
| PM10 | PM2.5 | HC | NOx | CO |
| 工程机械 | 2.09 | 2.09 | 3.39 | 32.79 | 10.72 |
| 柴油船舶 | 3.81 | 3.65 | 6.19 | 47.6 | 23.8 |
| 类型 | 污染物排放情况（g/km） | | | | |
| PM10 | PM2.5 | HC | NOx | CO |
| 重型货车（国四） | 0.153 | 0.138 | 0.129 | 5.554 | 2.2 |

（3）临时堆场扬尘

本期码头项目施工期间产生的土方依托国能涟水一期热电联产项目厂区临时堆场进行堆放，其扬尘量可按照堆场起尘的经验公式计算：

*Q*=2.1(*V*50-*V*0)3*e*-1.023*W*

式中：*Q*­—起尘量，kg/t.a；

*V*50—距地面50m处风速，m/s；

*V*0—起尘风速，m/s，*V*0=1.93*W*+3.02；

*W*—尘粒的含水率，%。

起尘风速与粒径和含水率有关，因此，减少露天堆放和保证一定的含水率减少裸露地面是减少风力起尘的有效手段。

（4）疏浚水下土方干化场臭气

本项目疏浚量约为2.4万m3。本工程考虑在国能涟水一期热电联产项目施工空地内布设1座排泥场，盐河河道疏浚底泥堆放于排泥场过程中将产生臭味，其主要成分为H2S、NH3、臭气。根据附近区域相关河湖疏浚工程经验，疏挖底泥本身只有微弱气味，在存放一段时间后气味会有所加重，但只要合理加土覆盖，工程结束后及时复垦或绿化，恶臭程度总体较小，影响范围有限。臭味强度是以臭味的嗅觉阈值为基准划分等级的，共分为六级，见表3.7-2。

臭味强度分级表

| **臭气强度** | **感觉强度描述** |
| --- | --- |
| 0 | 无气味 |
| 1 | 勉强能感觉到气味（感觉阈值） |
| 2 | 气味很弱但能分辨其性质（识别阈值） |
| 3 | 很容易感觉到气味 |
| 4 | 强烈的气味 |
| 5 | 无法忍受的极强的气味 |

限值标准一般相当于恶臭强度2.5~3.5级，超出该强度范围，即认为发生恶臭污染，需要采取相应措施。本项目采用类比法分析恶臭污染源强度级别。河湖疏浚工程类比分析，底泥在疏挖过程中在岸边将会有较明显的臭味；30m之外达到2级强度，有轻微臭味，低于恶臭强度的限制标准（2.5～3.5级）；50m之外，基本无气味。

* + 1. 废水污染源强分析

（1）航道疏浚产生的水体污染

本工程港池疏浚挖泥作业采用反铲式挖泥船。疏浚作业对环境的影响一是挖泥船挖泥作业时，挖斗将河底泥沙松动、扰动，虽然大部分土方被挖如铲斗，但部分泥沙仍引起悬浮，在紊动水流的作用下，向四周扩散，从而引起局部河浑浊浊度增大。

码头建设时疏浚、抛石护岸将造成的短期水体浑浊是近岸水体污染的主要因素。水域清淤悬浮泥沙入河源请参考《水运工程建设项目环境影响评价指南》（JTS/T105-2021）提出的疏浚作业悬浮物发生量计算公式及参数（见表3.7-3）。

![形状

中度可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAN8AAABECAYAAAABWOCsAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQARge5+AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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式中：Q－清淤作业悬浮物发生量，t/h；

*W0*－悬浮物发生系数，根据规范取0.038t/m3；

R0－现场流速悬浮物临界粒子累计百分比，根据指南取80.2%

R－发生系数W0时的悬浮物粒径累计百分比，根据指南取89.2%；

T－挖泥船施工效率，m3/h，单艘挖泥船效率取80m3/h；

疏浚悬浮物源强计算参数表

|  |  |  |  |
| --- | --- | --- | --- |
| 项目 | R | R0 | W0 |
| 疏浚 | 89.2% | 80.2% | 38.0×10—3t/m3 |

本工程港池疏浚量为2.4万m³，施工天数按30天计，则每天开浚量800m³，每天施工约10小时，拟采用疏浚效率为80m³/h的反铲式挖泥船。根据上述计算，港池疏浚时悬浮物产生量为3.38t/h（折0.94kg/s）。计算得到的悬浮物源强结果见表3.7-4。

疏浚工程悬浮泥沙产生量统计

|  |  |  |  |
| --- | --- | --- | --- |
| 项目 | 工程量 | 悬浮泥沙产生量 | |
| 疏浚挖泥 | 2.4万m3 | 3.38t/h | 0.94kg/s |

（2）翼墙端部对盐河水体扰动影响

码头翼墙端部施工时对水环境的影响主要是导致周边水体浑浊，底泥悬浮，以及管理、操作不当，施工物料跌落水体，泥浆水流入水体，将使地表水体中悬浮物含量增加，并可能对水生生物活动产生一定影响。尤其是在水下挖泥过程中，将使局部水域变浑浊，水体中的SS含量显著增加，SS浓度升高100～200mg/L，N、P释放速率较静止状态提高了2倍。

（3）水下方疏浚污泥余水

本项目采用反铲式挖泥船进行疏浚，本项目疏浚产生的水下方通过泥驳输送至陆域水下土方干化场。由于水下方含水量较大，堆存过程中产生溢流的泥浆水即余水，主要污染物为SS。

本项目采用顺岸凹入式港池布置，位于盐河的北岸，盐河自“五改三”工程实施后，两岸均建有护岸或护坡，泥沙来源较少，河水侵蚀、冲刷作用微弱，河岸（堤）稳定，疏浚的水下土方含沙量含淤泥量较少。

自然状态下的疏浚土方量约2.4万m3，考虑水下河滩土方的饱和状况，按照自然饱和含水率70%计。水下土方采用反铲式挖泥方式，含水率相对较小，疏挖泥浆通过驳船运至水下土方干化场，静置后经导流沟，排水进入尾水沉淀池，疏浚水下土方含水率考虑为80%，则疏浚至干化场的水下土方量为3.6万m3，澄清水从沉淀池流出，出水部分回用，部分就近排入盐河。按照水下土方排水干化后含水率仍为70%计，不考虑蒸发损失，则本项目疏浚水下土方排水共约1.2万m3，考虑20%的回用，则有9600m3排入盐河。

类比相关研究结果（吴海英*等.围滩吹填工程对水环境的影响分析[J].水资源保护，2005，21（2）：53-56*；*任荣珠等.港池清淤、岸边吹填对周围海域的环境影响分析[J].海洋通报，1996，15（1）：53-60*），由于泥沙的沉降速度较大，淤泥干化场原水SS浓度220mg/L时，经过30分钟的静沉后，悬浮物含量可降低至50mg/L左右，满足《污水综合排放标准》（GB8978-1996）表4一级标准。

（4）施工船舶污水

施工船舶污水包括船舶舱底油污水和船舶生活污水。本项目船舶水上施工按100天计。

①根据《水运工程环境保护设计规范》（JTS149-2018）中表4.2.4，500吨级船舶舱底油污水水量为0.14t/d•艘，本项目施工船舶多为500吨级，按2艘施工船舶同时工作估算，施工船舶舱底油污水产生量约为0.28t/d，共产生污水28t。

根据《水运工程环境保护设计规范》（JTS149-2018），无实测资料时含油量可取3000mg/L-6000mg/L，本次取含油浓度约为3000mg/L，石油类产生量为0.84kg/d。

②船舶生活污水产生量按150L/d•人，施工船舶工作人员按10人计，则施工期船舶生活污水量为150t。污水中主要污染因子为COD、SS、NH3-N、TN、TP。根据同类项目有关资料对比分析，其浓度分别达到400mg/L、300mg/L、40mg/L、50mg/L，10mg/L。COD、SS、NH3-N、TN、TP产生量分别为60kg、45kg、6kg、7.5kg和1.5kg，

上述施工船舶舱底油污水和施工船舶生活污水由船舶自行带走。

（5）陆域施工生活污水

施工人员生活用水量取150L/人·d，污水排放系数取0.9。码头施工高峰期施工人数约30人。施工生活污水产生量为405t。污水中主要污染因子为COD、SS、NH3-N、TN、TP。类比同类项目有关资料，其浓度分别达到400mg/L、300mg/L、40mg/L、50mg/L，10mg/L。COD、SS、NH3-N、TN、TP产生量分别为162kg、121.5kg、16.2kg、20.25kg和4.05kg。

陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理不排放。

（6）施工车辆及机械冲洗废水

根据《河港工程总体设计规范》（JTS166-2020），冲洗用水标准约600～800L/台•次，每天清洗台数约为20台，则施工机械冲洗用水量约为16m3/d。冲洗用水损耗量以10%计，则冲洗废水产生量约为14.4m3/d，该类废水的主要污染物为COD、SS和石油类，COD浓度约为100mg/L，SS浓度为200mg/L，石油类浓度为80mg/L。施工车辆及机械冲洗废水经沉淀池预处理后用作场地洒水抑尘不排放。

（7）基坑排水

本工程基坑排水包括围堰施工所形成的基坑明水以及主体建筑物基础开挖产生的基坑渗水。开挖过程中设置排水沟与集水井，对基坑地下渗水通过泵排放。基坑排水分初期排水和施工期排水，基坑排水量约为340m3，主要污染物均为SS，产生浓度约2000mg/L，基坑排水采取静置沉淀一段时间待泥沙下沉后再抽排上清液，排至周边沟渠，并控制水位下降速率，避免泥浆水外排，可有效降低排水中SS含量。

码头施工期废水污染源强汇见表3.7-5。

施工期废水汇总表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 类别 | 指标 | 单位 | 产生量 | 排放量 | 备注 |
| 疏浚泥沙 | SS | t/h | 3.38 | / | 疏浚引起盐河水体SS增加 |
| 疏浚污泥余水 | SS | t/d | 0.84 | 0.672 | 抛泥区（设置在后方电厂）设置围堰，并做好围堰、沉淀池，尾水部分回用于场地喷洒，部分在满足《污水综合排放标准》（GB8978-1996）表4一级标准后就近排入盐河 |
| 施工船舶舱底油污水 | COD | kg/d | 0.11 | / | 船舶自行带走 |
| SS | kg/d | 0.09 | / |
| 石油类 | kg/d | 0.84 | / |
| 施工船舶生活污水 | COD | kg/d | 0.60 | / |
| SS | kg/d | 0.45 | / |
| NH3-N | kg/d | 0.06 | / |
| TN | kg/d | 0.08 |  |
| TP | kg/d | 0.02 | / |
| 陆域生活污水 | COD | kg/d | 1.62 | / | 陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理，不外排。 |
| SS | kg/d | 1.22 | / |
| NH3-N | kg/d | 0.16 | / |
| TN | kg/d | 0.20 | / |
| TP | kg/d | 0.04 | / |
| 施工车辆及机械冲洗废水 | COD | kg/d | 1.44 | / | 施工车辆及机械冲洗废水经沉淀池预处理后用作场地洒水抑尘，不外排。 |
| SS | kg/d | 2.88 | / |
| 石油类 | kg/d | 1.15 | / |
| 基坑排水 | SS | kg/d | 0.68 | / | 基坑排水采取静置沉淀一段时间待泥沙下沉后再抽排上清液，排至周边沟渠，并控制水位下降速率，避免泥浆水外排 |

* + 1. 噪声污染源强分析

施工机械、船舶和运输车辆的噪声是施工期间的主要噪声源。施工噪声在空气中衰减很快，峰值噪声达100dB（A）的汽车喇叭和船舶汽笛瞬间排放，正常使用的挖掘机、挖土机噪声声源80～90dB（A），其他主要噪声设备简表3.7-7。

施工噪声源强一览表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 施工机械名称 | 数量（辆） | 位置 | 声源源强（dB（A）） | 声源控制措施 | 运行时段 |
| 1 | 载重车 | 3 | 施工场地内 | 85 | 施工围挡 | 8:00-18:00，间歇 |
| 2 | 静压桩机 | 1 | 105 |
| 3 | 装载机 | 1 | 90 |
| 4 | 推土机 | 1 | 86 |
| 5 | 移动式吊车器 | 1 | 89 |
| 6 | 挖掘机 | 2 | 89 |
| 7 | 挖泥船 | 1 | 河道疏浚范围内 | 105 | / | 8:00-18:00，间歇 |

注：引自《交通运输部环境保护设计规范》实测资料。

* + 1. 固废污染源强分析

施工期固体废物包括施工人员生活垃圾、施工建筑垃圾、弃土和施工废油泥。

（1）施工人员生活垃圾

本项目施工期间固体废弃物主要是施工垃圾及施工人员产生的生活垃圾。根据《城市生活垃圾产量计算预测方法》（CJ/T106-1999），施工人员生活垃圾发生量按1.0kg/人·d、施工人员30人及工期10个月计，则施工期施工人员生活垃圾发生量约9t。

本项目依托国能涟水一期热电联产项目施工用地，不再新设。生活垃圾经垃圾桶收集后由环卫部门定期拖运至垃圾处理厂处理。

（2）施工建筑垃圾

施工期间将产生一定数量废弃的建筑材料，如砂石、石灰、混凝土、木材、废砖等，类比同规模码头施工，施工建筑垃圾发生量约40t，大部分可以回收利用，剩余不可回收部分应按照相关规定的要求进行处置、管理，送至涟水县指定的建筑垃圾堆放场统一处置。

施工期间机械维修产生的少量含油废弃物集中收集后交有资质单位处理。

（3）施工取弃土

根据《关于国能涟水一期热电联产项目水土保持方案的行政许可决定》（淮水许可〔2021〕62号）和《国能涟水一期热电联产项目水土保持方案报告书》，国能涟水一期热电联产项目借方9.10万m3（来源于配套码头工程及本项目的挖方），本项目回填土方量9.7万m3，无弃方产生。其中，工程产生的水下方干化后弃方全部用于临时用地恢复，水上方产生的弃方供建设项目填土和护岸、道路地基回填等。

（4）施工废油泥、沉淀池污泥、化粪池污泥

施工期废油泥主要是由车辆、机械设备冲洗隔油沉淀处理产生的。本项目产生的化粪池污泥为0.3t，沉淀池污泥0.5t。废油污泥按照施工车辆及机械冲洗废水中石油类浓度80mg/L，隔油效率80%计算，则每天产生废油污泥为0.9216kg/d，按照施工期施工车辆及机械冲洗200d计算，则废油污泥产生量为0.184t。

本项目依托国能涟水一期热电联产项目施工用地，不再新设，化粪池污泥收集后交由当地环卫部门处置。本项目依托国能涟水一期热电联产项目临时施工场地内隔油池和沉淀池，不再新设，隔油池污泥交由专业资质单位处置，沉淀池污泥主要为泥沙，就地回填。

各种垃圾要分类堆放，不得随意弃于现场；工程弃土用于回填。

施工期固体废物利用处置方式一览表见表3.7-7。

施工期固体废物利用处置方式一览表

| **序号** | **固废名称** | **产生工序** | **属性（危险废物、一般工业固体废物或待鉴别）** | **估算产生量（t/a）** | **利用/处置方式** | **利用/处置单位** | **排放量（t）** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 生活垃圾 | 施工场地 | 一般固废 | 9t | 处置 | 依托国能涟水一期热电联产项目施工营地，由环卫部门统一处置 | 0 |
| 2 | 化粪池污泥 | 生活污水处理 | 一般固废 | 0.3 | 处置 | 0 |
| 3 | 沉淀污泥 | 施工废水沉淀 | 一般固废 | 0.5 | 处置 | 依托国能涟水一期热电联产项目临时施工场地，就地填埋 | 0 |
| 4 | 废油泥 | 施工废水隔油处理 | 危险废物 | 0.184 | 处置 | 委托有资质单位统一处置 | 0 |
| 5 | 施工建筑垃圾 | 施工过程 | 一般固废 | 40 | 回收利用 | 市政公司 | 0 |
| 6 | 工程弃土 | 施工过程 | 一般固废 | 18.8万m3 | 用于回填或场地平整 | 用于国能涟水一期热电联产项目场地平整及本项目回填 | 0 |

* + 1. 生态环境

1、陆域生态

本工程位于淮安市涟水县朱码街道高台村内，本项目陆域占地9584m2，项目占地原有主要为农用地，目前占地范围内已完成拆迁工作。

本工程的建设施工会造成部分陆域生态环境损失，主要包括堤外少量自然生长的杂草以及一些树木。

根据本工程施工特点，工程建设对项目区水土流失影响属于人为活动的影响，施工过程中，人为活动将使地表结构被破坏，在降雨、地表径流等自然因子的综合影响下，导致项目区水土流失剧烈增加。

2、水生生态

（1）施工期水工建筑和疏浚工程附近悬浮物增加，水体透明度下降，浮游动植物数量将有所减少，随着施工结束，该影响将会消失；施工对底栖动物生境和鱼卵仔鱼损失影响较大；施工期噪声及废渣、废水等产生的临时性水质污染对鱼类繁殖、觅食等有一定影响，工程抛石、船舶航行等增加鱼类伤亡概率；工程施工对产沉、粘性卵鱼类也有一定的不利影响。

（2）本项目施工作业的水域附近不存在水产养殖区、水生生物敏感区。施工河段无珍稀鱼类保护区，施工期间，对鱼类的影响主要包括施工船舶机械噪声、水下作业噪声和水下施工作业悬浮物。噪声污染会在一定程度上影响各种鱼类在该河段的游走方向和分布。码头前沿水工构筑物水下施工将造成局部水体悬浮浓度增加，施工船舶舱底油污水和生活污水，施工机械噪声等，对施工区域水生生境的影响。

* 1. 营运期污染源强
     1. 废气源强分析

本码头主要运输煤炭，码头地面不设置临时堆场，煤炭储存依托后方电厂封闭式煤场。因此营运期影响大气质量的主要为船舶停靠水域下卸作业产生粉尘和船舶废气等。

**（1）颗粒物粒径分布**

本项目吞吐货种为煤炭。参考天津大学张晋恺等人对港口散货堆场起尘规律的研究，对上百种煤尘粒径进行了检验，典型煤炭粒径分布如表3.8-1 所示。本次评价以4种典型煤炭粒径分布的平均值，分析其粒径百分比并进行无组织颗粒物中TSP、PM10和 PM2.5的源强分析。

煤炭的粒径分布（单位： % ）

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 粒径≥(μm) | 125-75 | 75-45 | 45-28 | 28-10 | 10-7.5 | 7.5-5 | 5-2.5 | ﹤2.5 | TSP累计频率 | PM10累计频率 | PM2.5累计频率 |
| 中值粒径（μm） | 100 | 60 | 36.5 | 19 | 8.75 | 6.25 | 3.75 | 2.5 |
| 平混6# | 0.73 | 0.62 | 0.34 | 0.44 | 0.09 | 0.1 | 0.11 | 0.06 | 2.49 | 0.36 | 0.06 |
| 平混2# | 2.31 | 1.88 | 1.25 | 1.68 | 0.35 | 0.43 | 0.56 | 0.40 | 8.86 | 1.74 | 0.4 |
| 沫煤1# | 2.97 | 3.05 | 2.77 | 4.89 | 0.97 | 1.09 | 1.22 | 0.81 | 17.77 | 4.09 | 0.81 |
| 沫煤2# | 5.77 | 3.55 | 1.57 | 1.82 | 0.44 | 0.60 | 0.86 | 0.57 | 15.18 | 2.47 | 0.57 |
| 平均粒径（煤炭）/频率 | 2.95 | 2.28 | 1.48 | 2.21 | 0.46 | 0.56 | 0.69 | 0.46 | **11.08** | **2.17** | **0.46** |

**（2）动态（卸船作业）粉尘起尘量**

目前码头项目尚无专门的污染源强核算指南。2020年2月28日，生态环境部发布了《排污许可证申请与核发技术规范 码头》（HJ1107-2020），对码头无组织颗粒物排污许可量提出了相应的计算方法，2021年5月1日，交通运输部发布《水运工程建设项目环境影响评价指南》（JTS/T 105-1-2021），其中，3.3.4 节规定了港口码头的大气环境污染物计算方法。本次评价综合考虑了两种计算方法，以两种计算方法中的较大值作为正常排放工程的大气污染物源强。

①依据《排污许可证申请与核发技术规范 码头》（HJ 1107-2020）

计算根据《排污许可证申请与核发技术规范 码头》（HJ 1107-2020），干散货码头在装船和卸船过程中，不同的作业方式与粉尘污染控制措施，其无组织颗粒物的排放计算公式如下：



R为第i个泊位生产单元或第j个堆场生产单元或第k个运输系统生产单元下不同生产工艺的年设计生产能力或堆场年周转量，t；

G为第i个泊位生产单元或第j个堆场生产单元或第k个运输系统生产单元下不同生产工艺的颗粒物无组织排放绩效值，kg/t，具体取值见表3.8-3。

β为货类起尘调节系数，无量纲，取值见表3.8-2。

货类起尘调节系数取值表

|  |  |
| --- | --- |
| **货类** | **系数值** |
| 煤炭 | 1.0 |
| 金属矿石 | 1.27 |
| 非金属矿石 | 0.4 |
| 水泥 | 1.04 |
| 粮食 | 0.1 |
| 矿建材料及其他 | 0.6 |

专业化干散货码头（煤炭、矿石）排污单位颗粒物排污系数表

| **主要生产单元** | **主要工艺** | **不同作业方式与粉尘污染控制措施** | **排污系数（kg/t）** |
| --- | --- | --- | --- |
| 泊位 | 卸船 | 污染控制措施满足或整体优于以下措施要求：  1）采用链斗式、斗轮式、螺旋式等卸船机；  2）卸船机采取防泄漏措施；  3）**卸船机皮带头部设置密闭罩，在物料转运处设置导料槽、密闭罩和防尘帘**；  4）在接料斗上口和向码头皮带机供料的导料槽处设置喷嘴组；  5）**卸船机行走段皮带机设置挡风板，其他区域皮带机采用防护罩或廊道予以封闭**；  6）有防冻要求的地区，湿式抑尘系统采取电伴热等保温防冻措施。 | 0.01158 |
| 污染控制措施优于以下措施，但劣于上述措施。 | 0.02994 |
| 1）**采用桥式、门座式等抓斗卸船机**；  2）**卸船机采取防泄漏措施**；  3）采用射雾器等设施对码头前沿卸船机卸料、装车作业实施喷雾或洒水抑尘。 | 0.04059 |
| 控制措施整体劣于上述措施。 | 0.04890 |

根据工程方案分析，本项目采用桥式抓斗卸船机，卸船机采取防泄漏措施，卸船机皮带头部设置密闭罩，在物料转运处设置导料槽、密闭罩和防尘帘，卸船机行走段皮带机设置挡风板，其他区域皮带机采用防护罩或廊道予以封闭。本工程码头卸船工艺排污系数选取0.02994kg/t，则按照上述系数计算本项目作业许可排放量见表3.8-4。

本工程大气污染物许可排放量

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 主要生产单元 | 货种 | 主要工艺 | 吞吐量（万t/a） | 调节系数 | 颗粒物排放系数（kg/t） | 颗粒物排放量（t/a） | TSP排放量（t/a） | PM10排放量（t/a） | PM2.5排放量（t/a） |
| 码头泊位处 | 煤炭 | 卸船 | 112 | 1 | 0.02994 | 33.533 | 3.715 | 0.728 | 0.154 |

②依据《水运工程建设项目环境影响评价指南》（JTS/T 105-2021）计算

码头卸料起尘的计算模式根据《水运工程建设项目环境影响评价指南》（JTS/T105-2021）（P11）中的公式计算，详见下式。



式中：

Q——作业起尘量，kg/h；

α——散货类型调节系数，根据《水运工程建设项目环境影响评价指南》（JTS/T105-2021）中表3.3.4-1内容，见下表3.8-5，原煤α取0.8；

β——作业方式系数，堆装（船）时，β=1，取料时，β=2；本项目卸煤采用桥式抓斗卸船机将煤炭运输至输送带上，β取值为2；

H——作业落差，m，本项目卸煤作业严格控制卸煤高度，本次评价落差取1m；

ω2—水分作业系数，与散货性质有关，取0.40~0.45，本项目按最不利影响取值，取0.40；

ω0—水分作用效果临界值，即含水率高于此值时水分作用效果增加不明显，与散货性质有关，煤炭的ω0值取6%；

ω—含水率（%），根据国能涟水一期热电联产项目煤质分析报告（见附件11），本项目煤炭含水率为10.6%；

Y—作业效率（t/h），根据可行性研究报告中对本项目设计单艘代表船型实际装载800t综合卸船作业时间5.2h计算，单台桥式抓斗卸船机作业效率为154t/h，2台卸船机作业效率为308t/h；

v2—作业起尘量达到最大起尘量50%时的风速（m/s），一般v2取16m/s；

U—风速（m/s），涟水县多年平均风速为2.7m/s；

货物类型起尘调节系数

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 标准类型 | 矿粉 | 球团矿 | 精煤类 | 大矿类 | 原煤类 | 水洗类 |
| 起尘调节系数 | 1.6 | 0.6 | 1.2 | 1.1 | 0.8 | 0.6 |

按照上述公式计算本项目码头卸船作业粉尘产生量见表3.8-6。

码头卸料作业起尘量

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **货种类型** | **作业类型** | **α** | **β** | **H** | **ω2** | **ω0** | **ω** | **Y** | **v2** | **U** | **Q起尘量** | **TSP 排放量** | | **PM10排放量** | | **PM2.5排放量** | |
| **m** | **%** | **%** | **t/h** | **m/s** | **m/s** | **kg/h** | **kg/h** | **t/a** | **kg/h** | **t/a** | **kg/h** | **t/a** |
| 煤炭 | 卸船 | 0.8 | 2 | 1 | 0.4 | 6 | 10.6 | 308 | 16 | 2.7 | 2.72 | 0.30 | 1.09 | 0.059 | 0.21 | 0.013 | 0.045 |

备注：1、本项目在大风条件下停止作业。

2、按照两台卸船机设计综合作业率为308t/h，全年卸船作业时间为3636h。

③两种计算方法码头装卸废气大气污染物排放情况对比

两种计算方法码头装卸废气大气污染物排放情况对比见表3.8-7。

码头卸船废气大气污染物排放情况汇总

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 主要工艺 | 计算方法依据 | TSP排放量（t/a） | PM10排放量（t/a） | PM2.5排放量（t/a） |
| 卸船 | 《排污许可证申请与核发技术规范 码头》 | 3.72 | 0.73 | 0.15 |
| 《水运工程建设项目环境影响评价指南》 | 1.09 | 0.21 | 0.045 |

对比以上两种大气污染物排放量的计算结果可以看出，依据《排污许可证申请与核发技术规范 码头》和《水运工程建设项目环境影响评价指南》和计算得到的TSP排放量分别为3.72t/a和1.09t/a，结果差别较大，可能是由于本项目煤炭含水率较高，按照水运工程指南中公式核算，起尘较小的原因。本次评价选取较大值3.72t/a为码头装卸无组织颗粒物许可排放量，对应的特征污染物PM10和PM2.5排放量分别为0.73t/a和0.15t/a。

营运期煤炭卸船作业主要采用抓斗式卸船机，在作业最后由于煤炭量较少，需要清仓机辅助桥式抓斗卸船机进行煤炭清仓卸船，码头清仓过程产生清仓粉尘，属于码头装卸起尘，该部分粉尘量已计入码头卸船起尘量中，不再重复计算。

**（2）船舶废气**

本项目采用码头岸电系统代替船舶辅机为停靠的船舶提供能源，可避免辅机工作时的废气污染，仅在船舶靠岸和驶离码头时产生少量的船舶尾气，船舶主机为柴油机，尾气主要污染指标为SO2、NOx。船舶废气排放量采用英国劳氏船级社推荐的方法，即每1kW·h耗油量平均231g，考虑代表船型1000吨主机功率为218kW。每艘货船装载货量约1000t，本项目码头年转运量为112万吨，则货船年泊港次数约为1120次，船舶靠岸和驶出时间均以0.25h/次计，则船舶尾气排放时间共计560小时。项目所在区域为开阔地区，废气污染物易排放，船舶尾气对周边影响较小。

根据《环境统计手册》（四川科学技术出版社），可知废气中SO2和NOx排放量计算公式为：

GSO2=2000×B×S

GNOx=1630×B×(N×0.4+0.000938)

式中：GSO2—SO2废气量，kg/a；

B—耗油量，t/a；

S—含硫率，硫含量小于10mg/kg，取10-5；

GNOx—NOx废气量，kg/a；

N—含氮率，取0.14%。

通过计算可得，船舶尾气中SO2和NOx的产生量分别为0.00056t/a、0.046t/a，均为无组织排放。SO2和NOX排放速率分别为0.0010kg/h、0.083kg/h，氮氧化物排放量满足《船舶发动机排气污染物排放限值及测量方法（中国第一、二阶段）》中的要求，排放情况见表3.8-8。

船舶尾气排放情况

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 污染源 | 工作状态 | 耗油量（t/a） | 污染物 | 排放量（t/a） | 排放速率（kg/h） |
| 船舶尾气 | 主机工作 | 28.20 | SO2 | 0.00056 | 0.0010 |
| NOx | 0.046 | 0.082 |

**（4）非正常排放大气污染物源强分析**

本项目大气污染源非正常排放是洒水措施失效的情形。未洒水时大气非正常排放源强（即不采取大气环保措施的粉尘产生量）按照下卸产生粉尘考虑，计算公式与正常工况的粉尘源强计算公式相同。未洒水时粉尘量5.44kg/h。

* + 1. 废水源强分析

拟建码头营运期废水包括：船舶舱底油污水、船舶生活污水、陆域生活污水、初期雨水、码头及中转站冲洗废水、洒水抑尘废水、车辆和装卸机械冲洗废水和机修废水等。

**1、船舶污水**

（1）船舶舱底油污水

根据《水运工程环境保护设计规范》（JTS 149-2018），船舶舱底油污水发生量在无实测资料时，可按规范中表4.2.4确定。本项目设计代表船型为1000吨级散货船。具体数值详见表3.8-9。

舶舱底油污水水量

| 船舶吨级DWT  (t) | 舱底油污水产生量  （t/d·艘） |
| --- | --- |
| 500-1000 | 0.14-0.27 |
| 1000-3000 | 0.27-0.81 |

根据上表采用内插法得到本项目1000吨级船的舱底油污水产生量为0.27t/d·艘。本项目码头设计年吞吐量为112万吨，因此估算到港艘次为1120艘/年。船舶平均在港停留时间评价按0.5d计算，估算本项目全年舱底油污水发生量为151.2t/a，船舶舱底油污水污染物产生源强详见表3.8-10和3.8-11。

本项目船舶舱底油污水水量

|  |  |  |  |
| --- | --- | --- | --- |
| 船舶吨级DWT（t） | 艘次（艘） | 舱底油污水产生量（t/d·艘） | 舱底油污水产生量（t/a） |
| 1000 | 1120 | 0.27 | 151.2 |

船舶舱底油污水污染物产生量

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 种类 | 废水量  (t/a) | COD | | SS | | 石油类 | |
| mg/L | t/a | mg/L | t/a | mg/L | t/a |
| 船舶舱底油污水 | 151.2 | 400 | 0.06 | 300 | 0.045 | 5000 | 0.756 |

根据《中华人民共和国防治船舶污染内河水域环境管理规定》及《船舶水污染物排放控制标准》（GB3552-2018）要求，到港船舶不得排放含油污水，本码头设置船舶污水收集装置，使用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水，由海事部门认可的具备资质的油污水处理单位接收处理。禁止船舶舱底油污水在码头附近水域排放。

（2）船舶生活污水

根据《工程船舶劳动定员 第3部分：航务工程船舶》（JT/T 383.3-2008）：船舶总吨500吨－3000吨的甲板部定员为4～7人，主机功率500kW-3000kW的轮机部定员为5～8人，船长1人。本项目码头作业区拟采用的设计船型以1000吨级货船为主。根据内插法计算本项目1000吨级船定员按照11人计算，平均按照各泊位泊港1艘/d计算，则本项目到港船员约33人/d。根据《建筑给水排水设计规范》（GB50015-2019），用水定额按150L/人·d，则船舶生活用水量为1633.5m3/a（330天），废水排污系数0.9，则船舶生活污水量约为1470.2m3/a。污染物发生浓度为：COD400mg/L、SS300mg/L、氨氮35mg/L、总氮45mg/L、总磷5mg/L。

根据船舶停靠时间计算船舶生活污水污染源强见表3.8-12。根据《船舶水污染物内河港口岸上接收设施设计指南》（JTS/T175-2019）及《省交通运输厅省生态环境厅关于开展新一轮港口污染防治能力提升工作的通知》（苏交港〔2023〕27号）要求，船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理。禁止直接向水域排放船舶生活污水。

船舶生活污水产生源强

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 项目 | 废水量m3/a | COD | | SS | | 氨氮 | | 总氮 | | 总磷 | |
| mg/L | t/a | mg/L | t/a | mg/L | t/a | mg/L | t/a | mg/L | t/a |
| 船舶生活污水 | 1470.2 | 400 | 0.588 | 300 | 0.441 | 35 | 0.052 | 45 | 0.066 | 5 | 0.007 |

2、陆域生活污水

本项目职工定员45人，年工作330天，用水定额按50L/人·d，则生活用水量为742.5m3/a，排放系数以0.9计，则生活污水产生量约为668.25m3/a。本项目营运期的陆域生活污水接管至国能涟水一期热电联产项目厂区污水处理设施处理。陆域生活污水污染源强见表3.8-13。

陆域生活污水产生源强

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 项目 | 废水量m3/a | COD | | SS | | 氨氮 | | 总氮 | | 总磷 | |
| mg/L | t/a | mg/L | t/a | mg/L | t/a | mg/L | t/a | mg/L | t/a |
| 陆域生活污水 | 668.25 | 400 | 0.267 | 300 | 0.200 | 35 | 0.023 | 45 | 0.030 | 5 | 0.003 |

3、初期雨水

码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达到回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；后期清洁雨水排入后方厂区雨水管网。

根据《水运工程环境保护设计规范》（JTS149-2018），初期雨水量按下式计算：



式中：

：初期雨水量，m3；

：径流系数，道路和码头面取0.9；

：汇水面积（m2），9584m2

：降雨深度（m），本项目取0.01m；

经计算初期雨水量约为86.256m3/次，间歇降雨频次按20次/年，则项目初期雨水总量约为1725.12m3/a，折合1725.12t/a。码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池 ，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。

初期雨水的污染物产生源强见表3.8-14。

初期雨水量及污染物产生量

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 种类 | 废水量  (m3/a) | COD | | SS | | 石油类 | |
| mg/L | t/a | mg/L | t/a | mg/L | t/a |
| 初期雨水 | 1725.12 | 100 | 0.173 | 400 | 0.690 | 20 | 0.035 |

4、码头面冲洗废水

码头装卸作业过后，作业平台有撒漏料，若不进行处理会有扬尘产生，因此在装卸后对装卸平台进行清扫并及时对码头平台进行冲洗。根据《水运工程环境保护设计规范》（JTS149-2018），冲洗水量可取3L/m2•次～5L/m2•次，本次评价按4L/m2•次计，煤码头作业区面积按7243m2（陆域面积9584-疏港道路面积2341=7243m2）计，全年按照每周冲洗1次，年营运天数330d，则码头面、转运站冲洗用水量为1564m3/a。冲洗用水损耗量以10%计，则码头面、转运站全年冲洗污水产生量约为1408m3/a（1564m3/a×90%=1408m3/a）。主要污染物为SS，类比泰州港靖江港区新港作业区深国际物流中心码头工程，SS浓度为1000mg/L。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。含煤废水处理系统处理能力为20t/h，处理工艺为沉煤池+电子絮凝沉淀+澄清、过滤处理。

5、洒水抑尘废水

燃煤在卸船过程中进行洒水抑尘。本码头燃煤卸船量为112万吨。煤炭的自然含水率按10%计，使煤炭含水率达到12%可有效减少粉尘，考虑淮安市年降雨天数90天，按照240天计算用水量，则需要用水14662m3/a。该部分用水进入煤炭及蒸发，无废水产生。

6、机械设备冲洗废水

工艺流动机械按2台考虑，冲洗的数量按50%计，冲洗水量按600L/台·次考虑，每天一次，则机械冲洗用水量为0.6m3/d。机械冲洗过程会产生含油废水，该废水产生随其他因素变化较大且不稳定。排放系数取0.8，机修废水排放量为158.4m3/a。该类废水的主要污染物为COD、SS和石油类，石油类浓度为400mg/L，SS浓度为200mg/L，COD浓度约为150mg/L。本项目依托后方厂区的机修间承担装卸机械的保养与小修任务，机修废水依托后方厂区的污水处理设施处理。

废水污染物的产生源强汇总见表3.8-15。

项目营运期废水污染物产生源强

| **废水来源** | **废水量（m3/a）** | **污染物名称** | **产生情况** | | **治理措施** | **去除效率（%）** | **排放/接管情况** | | **排放去向** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **浓度（mg/L）** | **产生量（t/a）** | **浓度（mg/L）** | **排放量（t/a）** |
|
| 船舶生活污水 | 1470.2 | COD | 400 | 0.588 | 化粪池 | / | 200 | 0.294 | 接管至国能涟水一期热电联产项目厂区污水处理站，处理后全部回用 |
| SS | 300 | 0.441 | / | 100 | 0.147 |
| NH3-N | 35 | 0.051 | / | 20 | 0.029 |
| TN | 45 | 0.066 | / | 25 | 0.037 |
| TP | 5 | 0.007 | / | 5 | 0.007 |
| 陆域生活污水 | 1336.5 | COD | 400 | 0.535 | / | 200 | 0.267 |
| SS | 300 | 0.401 | / | 100 | 0.134 |
| NH3-N | 35 | 0.047 | / | 20 | 0.027 |
| TN | 45 | 0.060 | / | 25 | 0.033 |
| TP | 5 | 0.007 | / | 5 | 0.007 |
| 初期雨水 | 1725.1 | COD | 100 | 0.17 | 初期雨水收集池（兼沉淀池） | / | 100 | 0.17 |
| SS | 400 | 0.69 | / | 200 | 0.345 |
| 码头面冲洗废水 | 1408.0 | SS | 1000 | 1.408 | 含煤废水处理站 | / | 100 | 0.141 |
| 机械冲洗废水 | 158.4 | COD | 150 | 0.024 | 油气污水处理站 | / | 100 | 0.016 |
| SS | 200 | 0.032 | / | 100 | 0.016 |
| 石油类 | 400 | 0.063 | / | 10 | 0.002 |
| 船舶舱底油污水 | 151.2 | COD | 400 | 0.06 | 码头前沿接收装置 | / | / | / | 委托有资质单位处置 |
| SS | 300 | 0.45 | / | / | / |
| 石油类 | 5000 | 0.756 | / | / | / |

* + 1. 固废源强分析

1、固体废物产生情况

（1）陆域生活垃圾

根据《水运工程环境保护设计规范》（JTS149-2018），港口陆域生活垃圾量可按每人1.5kg/d计算，项目总定员45人，年工作330天，则生活垃圾产生量为22.28t/a，主要成分为食品、杂物、纸屑等。经分类收集后由环卫部门定期清运。

（2）到港船舶生活垃圾

根据《水运工程环境保护设计规范》（JTS-2018），船舶生活垃圾量可按每人1.5kg/d计算，根据上文，则本项目到港船员约33人/d。则本项目船舶生活垃圾量约为16.34t/a。

船舶生活垃圾配备垃圾桶、灰尘清扫等设备，由码头前沿接收装置收集后由国能涟水一期热电联产项目厂区保洁接收，交由环卫部门定期清理。

（3）装卸作业产生的固体废物

根据《水运工程环境保护设计规范》（JTS149-2018），船舶装卸作业等产生的固体废物量可按下式计算：



式中：

G—高峰周期卸货作业产生的固体废物量，kg;

W—高峰周期卸下的货物量，kg；本工程高峰周期卸下的货物量取吞吐量的1/20;

K—货物废弃物发生率，干散货可取1/10000。

根据上述计算公式，本项目吞吐量为112万吨/a，则装卸作业产生的固体废物产生量约为5.6t/a。散落的货物（煤炭）装卸完成后全部清扫直接回收。

（4）机修废油

本项目依托后方厂区的机修间承担装卸机械的保养与小修任务，机修废水依托后方厂区的污水处理设施处理。根据企业提供资料，项目机械设备所用机油约半年更换一次，废机油产生量为0.2t/a，根据《国家危险废物名录》（2021），属于HW08废矿物油与含矿物油废物，代码900-214-08，码头项目依托后方电厂厂区危废暂存库，并委托相关有资质的单位统一处置。

（5）废含油抹布和手套

根据建设单位提供资料，本项目含油抹布手套产生量约0.02t/a，根据《国家危险废物名录》（2021年）附录〈危险废物豁免管理清单〉含油抹布及手套，豁免条件为“未分类收集”，本项目产生的废含油抹布和手套混入生活垃圾，委托环卫部门清运。

（6）除铁器除出来废金属等

根据业主提供资料，每吨煤除铁器除了的废金属物约0.0001t，本项目吞吐能力112万t，则除铁器除了的废金属物约112t，属于一般废物，外售综合利用。

2、固体废物属性判定

（1）固体废物属性判定

根据《固体废物鉴别标准 通则》（GB34330-2017）等，固体废物的判定情况见下表。

固体废弃物排放一览表

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 序号 | 名称 | 产生工序 | 形态 | 主要成分 | 产生量（t/a） | 种类判定 | | |
| 固体废物 | 副产物 | 判定依据 |
| 1 | 陆域生活垃圾 | 港口员工生活 | 固态 | 食品、杂物、纸屑等 | 22.28 | √ | - | 《固体废物鉴别标准 通则》（GB34330-2017） |
| 2 | 船舶生活垃圾 | 船员生活 | 固态 | 食品、杂物、纸屑等 | 16.34 | √ | - |
| 3 | 装卸作业产生的固体废物 | 装卸过程 | 固态 | 废包装等 | 5.6 | √ | - |
| 4 | 机修废油 | 设备维修 | 液态 | 废油 | 0.2 | √ | - |
| 5 | 废含油抹布及手套 | 设备维修 | 固态 | 废油、抹布等 | 0.02 | √ | - |
| 6 | 废金属物 | 除铁器 | 固态 | 废金属 | 112 | √ | - |

（2）危险废物属性判定

根据《国家危险废物名录》（2021年）以及《危险废物鉴别标准 通则》（GB5085.7-2019），判定本项目的固体废物是否属于危险废物，具体判定结果见下表。

危险废物属性判定表

| **序号** | **固废名称** | **产生工序** | **形态** | **主要成分** | **危险特性鉴别方法** | **是否属于危废** | **废物类别** | **废物代码** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 陆域生活垃圾 | 港口员工生活 | 固态 | 食品、杂物、纸屑等 | 《国家危险废物名录》（2021年版）、《危险废物鉴别标准 通则》（GB5085.7-2019） | 否 | - | - |
| 2 | 船舶生活垃圾 | 船员生活 | 固态 | 食品、杂物、纸屑等 | 否 | - | - |
| 3 | 装卸作业产生的固体废物 | 装卸过程 | 固态 | 废包装等 | 否 | - | - |
| 4 | 机修废油 | 设备维修 | 液态 | 废油 | 是 | HW08 | 900-214-08 |
| 5 | 废含油抹布及手套 | 设备维修 | 固态 | 废油、抹布等 | 是 | HW49 | 900-041-49 |
| 6 | 废金属物 | 除铁器 | 固态 | 废金属 | 否 | - | - |

（3）固体废物分析情况汇总

本项目固废产生及处置情况见下表。

项目固废产生及处置情况一览表 单位：t/a

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 序号 | 固废名称 | 产生工序 | 形态 | 主要成分 | 产生量 | 处置方式 |
| 1 | 陆域生活垃圾 | 港口员工生活 | 固态 | 食品、杂物、纸屑等 | 22.28 | 委托环卫部门定期清运 |
| 2 | 船舶生活垃圾 | 船员生活 | 固态 | 食品、杂物、纸屑等 | 16.34 | 委托环卫部门定期清运 |
| 3 | 装卸作业产生的固体废物 | 装卸过程 | 固态 | 散落的煤炭 | 5.6 | 委托环卫部门定期清运 |
| 4 | 机修废油 | 设备维修 | 液态 | 废油 | 0.2 | 委托有资质单位处理 |
| 5 | 废含油抹布及手套 | 设备维修 | 固态 | 废油、抹布等 | 0.02 | 混入生活垃圾后委托环卫部门定期清运 |
| 6 | 废金属物 | 除铁器 | 固态 | 废金属 | 112 | 外售综合利用 |

（4）危险固体废物分析情况汇总

本项目危险废物产生及处置情况表

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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） | 产生工序及装置 | 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 | 机修废油 | HW08 | 900-214-08 | 0.2 | 设备维修 | 液态 | 废油 | 废油 | 1年/次 | T,I | 委托有资质单位处置 |

综上所述，项目产生的固废都能得到合理处置，不会产生二次污染，处置合理。

* + 1. 噪声污染源强分析

本项目建成后，噪声源主要来自码头各类机械如皮带输送机、卸船机等发出的噪声以及来往船舶噪声，其噪声源强度约为75~100dB(A)。声源主要集中在码头及转运站附近区域。根据同类项目类比分析，本项目各主要声源的噪声源强见表3.8-20。

营运期噪声一览表

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **设备名称** | **数量（台/套）** | **型号** | **空间相对位置（m）** | | | **声功率级dB（A）** | **治理措施** | **运行时段** |
| **X** | **Y** | **Z** |
| 1 | 桥式抓斗卸船机 | 2 | 400t/h,400kW | -20 | 110 | 18 | 85 | 减振 | 24h，间断 |
| 2 | 皮带输送机 | 1 | B=1.2m,V=2.5m/s | -50 | 60 | 1.5 | 80 | 隔声、减振 |
| 4 | 转运站 | 1 | / | -140 | -80 | 1.5 | 80 | 隔声 |
| 5 | 转运站风机 | 1 | 5000m3/h,75kW | -140 | -80 | 3 | 80 | 隔声 |
| 6 | 船舶发动机 | / | / | / | / | 0 | 72 | 隔声 |

* + 1. 污染物排放量汇总

本项目码头营运期“三废”排放汇总见表3.8-21。

污染物产生和排放量汇总表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 种类 | | 污染物名称 | 产生量（t/a） | 削减量（t/a） | 接管量（t/a） | 排放量（t/a） |
| 废水 | 陆域及船舶生活污水 | 废水量 | 2138.45 | 2138.45 | 0 | 0 |
| COD | 0.86 | 0.86 | 0 | 0 |
| SS | 0.64 | 0.64 | 0 | 0 |
| NH3-N | 0.075 | 0.075 | 0 | 0 |
| TN | 0.10 | 0.10 | 0 | 0 |
| TP | 0.011 | 0.011 | 0 | 0 |
| 生产废水 | 废水量 | 3442.74 | 3442.74 | 0 | 0 |
| COD | 0.25 | 0.25 | 0 | 0 |
| SS | 2.18 | 2.18 | 0 | 0 |
| 石油类 | 0.82 | 0.82 | 0 | 0 |
| 废气 | | SO2 | 0.00056 | 0 | 0 | 0.00056 |
| CO | 0.33 | 0 | 0 | 0.33 |
| NOx | 0.046 | 0 | 0 | 0.046 |
| 颗粒物 | 33.533 | 29.817 | 0 | 3.715 |
| 固废 | | 一般固废 | 156.22 | 156.22 | 0 | 0 |
| 危险废物 | 0.974 | 0.974 | 0 | 0 |

本项目建造前后主要污染物产生量的对比情况详见表3.8-22。

本项目投运后全厂污染物排放“三本账”核算情况（单位：t/a）

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **种类** | **污染物名称** | **现有排放量** | **本项目污染物排放量** | **“以新带老”量** | **全厂污染物排放量** | **增减量** |
| 有组织废气 | SO2 | 67.79 | 0 | 0 | 67.79 | 0 |
| NOx | 87.75 | 0 | 0 | 87.75 | 0 |
| 烟尘 | 9.09 | 0 | 0 | 9.09 | 0 |
| NH3 | 2.22 | 0 | 0 | 2.22 | 0 |
| Hg | 0.0134 | 0 | 0 | 0.0134 | 0 |
| 无组织废气 | SO2 |  | 0.00056 | 0 | 0.00056 | 0.00056 |
| CO |  | 0.33 | 0 | 0.33 | 0.33 |
| NOx |  | 0.046 | 0 | 0.046 | 0.046 |
| 颗粒物 | 6.05 | 3.715 | 0 | 9.76 | 3.715 |
| 废水 | 废水量 | 0 | 0.0 | 0 | 0 | 0 |
| 固废 | 一般固废 | 0 | 0 | 0 | 0 | 0 |
| 危险废物 | 0 | 0 | 0 | 0 | 0 |
| 生活垃圾 | 0 | 0 | 0 | 0 | 0 |

* 1. 清洁生产分析
     1. 货物清洁性分析

拟建项目主要运输散货煤炭，属于块状货物，卸船过程中粉尘较少，采取环保措施后，对环境空气的影响较小。

* + 1. 生产工艺设备设施的先进性分析

散杂货码头装卸船作业采用船型适应性、物料适应性及可靠性较强的桥式抓斗卸船机进行装卸船作业。

* + 1. 节能措施

（1）港口陆域布置

本工程总平面按照节能的原则合理布置，即按生产区、辅助区和生活区等使用功能分区。前方作业区按货种就近配有堆场，减少了水平运输距离，港区内设有环形道路布置合理，平面顺适，方便物流的运转，从而节约能源，降低能耗。

（2）装卸工艺和装卸机械

对各能耗点实施计量，及时发现不正常用电。选用优质节能的装卸工艺设备。流动机械设备尽量选用电力驱动方式，以节约能源及保护环境。对装卸工艺设备经常进行维护保养，使其保持良好的工作状态。对启动频繁的设备，采用变频控制；对带载启动的设备，采用降压启动方式，以节约用电。

（3）供电照明

因港区范围较大，为节约用电，对港区照明采用集中控制和分散控制相结合，以避免大面积照明产生的浪费。选用节能的 LED 灯照明。采用调速给水泵，适应变工况运行的需要，节省用电。对码头用电采用低压电容自动补偿柜对功率因数进行补偿，补偿后因数不低于 0.9。

* + 1. 污染物排放分析

（1）生活垃圾按照分类要求进行分类收集；垃圾日产日清，垃圾收集区域无暴露积存垃圾。

（2）疏浚作业要求采用防治疏浚悬浮泥沙扩散污染的措施。定期委托有资质的公司对码头水域进行疏浚作业，要求执行过程做好防污染措施，减少疏浚过程中悬浮泥沙扩散污染。

根据本项目码头与同类型码头进行类比分析（表3.9-1），分析本项目码头的清洁生产性，选取的码头设计船型均为1000DWT型船舶，运输货种为散货、件杂货等，具有可比性。根据表3.9-1，本项目码头岸线利用率为0.62万吨/m，仅比金湖物流园码头项目的0.5万吨/m略高，岸线利用率偏低；本码头废水全部回用，回用水率达100%，远高于同类码头；对应的，在单位吞吐量废水排放量（m3/t）、单位吞吐量COD排放量（t/万t）方面能够做到零排放，均优于同类码头项目。

本项目岸线利用率、污染物排放与同类型码头类比

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 指标 | 本项目 | 宿迁港汇达港务码头项目 | 金湖物流园码头项目 | 宜春港樟树港区码头 |
| 岸线利用率（万吨/m） | 0.62 | 2.58 | 0.5 | 1.03 |
| 回用水率（%） | 100 | 10 | 0 | 50 |
| 单位吞吐量废水排放量（m3/t） | 0 | 0.0088 | 0.013 | 0.003 |
| 单位吞吐量COD排放量（t/万t） | 0 | 0.0044 | 0.0067 | 0.0014 |

1. 环境现状调查与评价
   1. 项目区自然环境简况
      1. 地理位置

本项目位于江苏省淮安市涟水县朱码街道高台村，建设项目地理位置图见图3.2-1。

涟水县地处江苏省域北，黄淮平原东部，淮河下游，位于北纬 33°39′—34°07′、东经 118°59′—119°46′之间，东与盐城市阜宁、滨海、响水三县为邻，西与淮安市淮阴区、宿迁市沭阳县接壤，南与淮安经济技术开发区、淮安市淮安区隔古淮河相望，北与连云港市灌南县毗连。东西长60千米，南北宽51.5千米，县域面积1677.47平方千米。下辖4个街道、12个镇、1个省级经济开发区。

本项目位于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，淮安市涟水县盐河朱码闸下游约4.3km处，盐河左岸。

* + 1. 地形地貌

涟水县处于我国东部新华夏系第二沉降带与秦岭昆仑纬向构造带和淮阴山字形外带相复交合地位、扬子准地台的苏北凹陷区。基底纬前震旦系泰山群变质岩类，上覆有第三系、第四系松散堆积层。第三系下部为峰山组，岩性以粉细砂和含砾中砂为主，局部间夹薄层粘土，上部为下草弯组，主要岩性为粘土、亚粘土，夹中细砂薄层。第四系自下而上分为三层，第一层为洪水期，第二层属冲洪积层，第三层属海陆交替相沉积层，地震烈度为7度。

涟水县位于徐淮平原的东南部，以废黄河决口扇堆积地形为主，陆地占95%。县内总的地势是西南高、东北低，坡隆1/1000左右，最高点位于西南部废黄河滩地，高程15.4m，最低点位于东北部唐集附近，高程2.7m。平均海拔介于9—5m之间。

地貌类型分为盐河高地（滩）、平原坡地和湖荡洼地三类。盐河高地包括废黄河高地、六塘河高地和张河高地，面积为30.5万亩，海拔在9m以上，坡度较大；平原坡地包括全县大部分地区，面积143.8万亩，海拔在6—8m；湖荡洼地以佃湖荡洼地和公兴河下游洼地及古硕项湖洼地为主，面积66.7万亩，海拔在6m以下，部分不足3m。

* + 1. 气候气象

涟水县属温带季风气候，冬干冷夏温热，春秋温和，四季分明。冬季主导风向为东北偏东（NEE）风，夏季主导风向为东南偏南（SSE）风。年平均日照时数2293.4小时。年平均气温14℃，平均年降水量966.1毫米，年平均降水天数101天，年平均蒸发量1414.4毫米，年平均相对湿度77%，年平均风速2.7米/秒。建设项目所在地的主要气象特征见表4.1-1。

主要气象气候特征（涟水气象站近20年统计）

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 序号 | 项目 | | 数值 | 单位 |
| 1 | 气温 | 年平均气温 | 14.1 | ℃ |
| 极端最高气温 | 37 |
| 极端最低气温 | -9.1 |
| 3 | 气压 | 年平均大气压 | 1021.0 | 100 |
| 4 | 空气湿度 | 年平均湿度 | 77 | % |
| 最高月平均温度 | 90 |
| 最低月平均温度 | 69 |
| 5 | 降雨量 | 平均年降水量 | 966.1 | mm |
| 日最大降水量 | 115.2 |
| 小时最大降水量 | 31 |
| 6 | 积雪深度 | 最大积雪量 | 10 | mm |
| 7 | 风向和频率 | 年度主导风向和频次 | 10 | NE |
| 冬季主导风向和频次 | 10 | NEE |
| 夏季主导风向和频次 | 14 | SSE |

* + 1. 地表水
       1. 地表水系

涟水县境内河流，除废黄河自成系统，独自流入黄海外，其余皆属灌河水系。涟水经济开发区周围主要水系为废黄河、盐河、涟中总干渠、涟东总干渠等。区域水系图见图4.1-1。

（1）废黄河

废黄河自西向东经淮安市城区、涟水、淮安、阜宁、响水，最终流入黄海，全长181公里，在涟水从保滩镇入境，环绕南部和东部边界，经涟城镇、徐集、南集、黄营、石湖镇出境，继续向东北，在涟水境内78公里。年平均流量85.6m3/s，年径流量27亿立方米。洪水季节分泄洪泽湖水，最大流量500m3/s，为常年积水河道，目前为淮安市区、涟水县、淮安区、响水县等的饮用水源，是当地地表水重点保护目标。

（2）盐河

盐河起源于大运河淮阴船闸上游，主要功能是航运、农灌和排涝。河流流向自西向东，全长140公里，流域面积359.3平方公里，年平均流量42.2 m3/s，年径流量13.2亿立方米，平均水深2.0—2.5米。盐河涟水段全长64公里，水域面积30平方公里，河宽30—130米，河深4—11米。现河道为5级航道，是县内调用洪泽湖水农灌的主要河道。盐河经灌南、灌云、连云港入海，盐河在涟水县下游主要功能为航运、农灌和排涝，不作为饮用水水源地。

（3）一帆河

一帆河是涟水、灌南两县盐河以东地区的主要排水干河，一帆河自古盐河、西官河汇合处起，流经东胡集、南禄、方渡三乡，至稽桥出境入涟水县，至响水口西入渠西河。

一帆河历史久远，1976年疏浚，河道底宽35.90m，流域面积913.9km2，境内累计受水面积438km2，境内长度14.5km，主要支流有西关河、古盐河与港河等。现主要有排涝、挡潮，灌溉和通航功能。

（4）涟中总干渠

涟中总干渠起建1958年，是涟中地区农灌的主要水利设施，属盐河支流，涟中总干渠始于朱码镇张码村，迄于五港镇港东村，全长32.7公里，河道底宽30m，提水能力45.33 m3/s，有效灌溉面积18.38万亩，是涟水县农业灌溉和排涝干渠，经灌南县东部，在响水县城东汇入灌河。

（5）涟东总干渠

涟东总干渠属盐河支流，始于涟城大关村，迄于南集下营村，全长11.5公里。该河主要接纳城区生活污水，无工业废水直接排入。

（6）渠西河

渠西河因紧靠涟中总干渠西侧而得名，为排涝河道，是当年因建涟中干渠阻隔了部分河道流向一帆河的去路，于1960年开挖形成。渠西河南起小李集东南的夏庄，在县境北五港镇东入港河。

（7）公兴河

公兴河南起涟水县朱码镇张扬庄，接涟西二千二支大沟，北经鸡鹅山、砦矶、谢口，至王头圩南入灌南，在小圩西入南六塘河，全长28.2公里。由于下游具备通航功能，因此上下游水文情况相差较大，上游流量50.8m3/s，流速0.62m/s，河宽15m，底坡0.00023；下游流量203.1m3/s，流速0.71m/s，河宽40m。

* + - 1. 流域、区域水资源与开发利用状况调查

一、淮河流域水资源开发利用概况

根据《2023年度淮河流域及山东半岛水资源公报》，2023年，淮河流域各类供水工程总供水量506.4亿m3，其中地表水源、地下水源、其他水源供水量分别为382.5亿m3、100.8亿m3、23.1亿m3，分别占总供水量的75.5%、19.9%、4.6%。跨流域调水71.8亿m3，占地表水源供水量的18.8%，另有海水直接利用量113.9亿m3未计入总供水量。

2023年，淮河流域总用水量506.4亿m3，其中农业用水、工业用水、生活用水、人工生态环境补水分别为345.9亿m3、52.2亿m3、78.9亿m3、29.4亿m3，分别占总用水量的68.3%、10.3%、15.6%、5.8%。

“十三五”以来，淮河流域及山东半岛用水总量总体相对平稳。其中，生活用水量呈持续增加态势；工业用水量总体呈减少态势，反映工业节水成效，但随着经济社会发展近年来减少态势有所放缓；农业用水量受当年降水和实际灌溉面积的影响上下波动。生活用水量占用水总量的比例逐渐增加，农业用水量和工业用水量占用水总量的比例有所减少。

二、淮安市水资源开发利用概况

根据《2023年淮安市水资源公报》：2023年淮安市平均降水量1076.5mm，折合降水总量107.977亿m3，比上年偏多67.0%，比多年平均偏多10.6％，属偏丰年份。2023年全市地表水资源量31.367亿m3，年径流深312.7mm，比上年偏多612.7%，比多年平均偏多20.8%。7个县（区）地表水资源量与多年平均比较，除盱眙县偏少16.1%外，其余县（区）均偏多10%以上。

2023年全市水资源总量为36.647亿m3。其中，地表水资源量31.367亿m3，地下水资源量12.982亿m3，重复计算量7.702亿m3。

（一）供水量

2023年全市供水总量32.083亿m3，其中地表水源供水31.373亿m3，占供水总量的97.8％；地下水源供水0.175亿m3，占供水总量的0.5％；其他水源供水0.535亿m3，占供水总量的1.7％。与上年相比，全市供水总量减少4.970亿m3。

（二）用水量

2023年全市用水总量为32.083亿m3。其中，生产用水29.599亿m3，占用水总量的92.3％；生活用水2.124亿m3，占用水总量的6.6％；生态环境用水0.360亿m3，占用水总量的1.1％。生产用水按产业结构划分，第一产业用水25.510亿m3，占生产用水的86.2％，其中农田灌溉用水22.688亿m3，林牧渔畜用水2.822亿m3；第二产业用水3.013亿m3，占10.2%，其中一般工业用水1.278亿m3，火电工业用水1.569亿m3，建筑业用水0.166亿m3；第三产业用水1.076亿m3，占3.6％。

（三）用水消耗量

2023年全市总耗水量为21.051亿m3，综合耗水率为65.6％。其中，农业耗水量19.025亿m3，耗水率74.6%；工业耗水量0.559亿m3，耗水率19.6%；生活耗水量1.117亿m3，城镇、农村居民生活耗水率分别为20.4%、78.2%；生态环境耗水量0.350亿m3，耗水率97.2%。

* + 1. 地下水
       1. 地下水类别与含水岩组划分

根据地下水赋存条件及水力特征，淮安市境内的地下水可分为松散岩类孔隙水、碳酸盐岩类裂隙溶洞水和基岩裂隙水三大类型。对于后两种类型，虽然具有一定的赋水性，但由于埋深过大，无论对供水或排水暂无现实意义。松散岩层孔隙水，按区域水文地质普查规范，结合本项目特征，根据沉积物的时代、成因、地层结构，以及水文地质特征，本区松散层可以划分为两个含水岩组，即：

潜水含水岩组：属潜水。含水层时代相当于第四纪全新世—晚更新世或第四纪。第Ⅰ承压含水岩组：属中层承压水，含水层时代相当于早、中更新世。

（1）潜水

含水层时代相当于第四纪全新世，含水层底板埋深约4～6m，含水层岩性以粉土、粉质粘土为主。平水期水位埋深一般0.48～2.17m；场区水井平水期水位埋深1.66～2.17m。含水层富水性一般，涌水量一般为20～60m3/d。地下水流向整体流向为西偏北。

评价区潜水含水层类型主要为HCO3·Cl—Na型水，部分为HCO3-Ca·Mg型水，含水层矿化度为1.1～1.8g/L。

（2）第Ⅰ承压水

分布于调查区大部分区域，含水层时代相当于早、中更新世，含水层顶板埋约20～30m左右，含水层厚度约3～6m。含水层岩性以细中砂、中粗砂为主。民井平水期水位埋深一般31.6～38.73m。含水层富水性较好，涌水量一般大于1000 m3/d。该层地下水流向由于受人工开采影响较大。

第Ⅰ承压含水层地下水类型主要为HCO3—Cl·Na型水，含水层矿化度1～3g/L。

* + - 1. 地下水的补给与排泄

（1）地下水补径排条件

①第Ⅰ含水层：主要接受大气降水补给和地表水补给，它与大气降水和地表水关系密切，积极参与水循环，易于补充和恢复，其水位动态有明显的季节性变化特征，雨季水位上升，旱季水位下降，水位变化幅度较大；受地表水质的影响其水质变化也较大，容易因地表水被污染而受到污染。该层水的排泄主要是垂向蒸发，其次是人工开采。

②第Ⅱ承压含水层：一定程度上也接受大气降水和地表水的补给，但与大气降水和地表水的联系较弱，参与水循环远不如第Ⅰ含水层那样积极，因此其动态相对较稳定，水位变化幅度较小，水位上升一般在降雨后期；其水质受地表水水质影响较小，一般不易受到污染；另外它还接受第Ⅰ含水层某些透水性较强的隔水层向下的越流补给。该层水的排泄主要是人工开采。

③第Ⅲ承压含水层：与大气降水和地表水的联系更小，基本不参与水循环，其动态较稳定，水位变化幅度很小，水位上升往往是滞后降水一段时间，而不是立即得到补给；其水质基本不受地表水的影响，水质状况稳定。该层水的排泄主要是人工开采。

④第Ⅳ承压含水层：埋藏较深，埋深一般大于300m，不易开采，目前涟水县基本未开采该层地下水，作为远景水源，有待进一步勘探。

（2）地下水动态特征

潜水：主要为废黄河冲积平原松散层潜水。地下水的动态变化与降雨、灌溉以及周边河流水位关系密切。潜水高水位在7～11月份，最低3～5月份；水位变化幅度0.6～1.7m。

Ⅰ承压水：水位变化与降雨量的关系不明显，而与地下水开采量的季节性变化有较密切的关系。一般6～9月地下水开采的最高峰，地下水水位较明显低于其他月份。

* + 1. 生态环境

（1）植被、生物多样性

根据淮安市第二次土壤普查报告，涟水县共有土壤面积167.65万亩，全部为潮土类，分为黄潮土、盐碱类潮土2个亚类。全县一级土壤301亩，仅占土壤面积的0.15%，二级土壤17.8万亩，占土壤面积的10.6%，三级土壤为55.3万亩，占土壤面积的33%，四级土壤74.8万亩，占土壤面积的44.6%，五级土壤19.6万亩，占土壤面积的11.7%。全县一、二级质量较好的土壤面积少，质量较差的四五级土壤面积占一半以上。

县境内垦殖历史悠久，原生自然植物已基本不存在，代之以人工植被和次生植被。主要树种以与温暖带气候相适应的落叶阔叶林为主，近年来，林木发展主要以杨树为主。全县宜林荒地全部绿化，四旁植树3200万株，成片造林18万亩，林木覆盖率达18.3%。

由于涟水县独特的气候及水土条件，发展农业得天独厚，使其一直是江苏省的生态农业县，是全国粮食生产、平原绿化百强县，全国商品粮生产基地县，全国商品猪生产基地县。主要农作物有水稻、小麦、玉米、山芋、棉花、大豆等。区内主要经济作物有洋葱、浅水藕、马铃薯、大蒜、朝天椒、大豆、花生、油菜等。

主要哺乳类野生动物有草狐、野兔、松鼠、黄鼬、蝙蝠、刺猬等；主要鸟类有布谷鸟、雁、云雀、喜鹊、麻雀、鹌鹑等近百种；淡水鱼有16科93种，常见的有草鱼、鳊鱼、鲤鱼、鲫鱼、鲶鱼、黄鳝、泥鳅等；另外还有爬行类、两栖类、软体类、节肢类等类别野生动物。

次生自然植被主要为灌木和草本植物，在农田隙地和抛荒地有盐碱土植被群落零星分布，组成种类简单，主要有海乳草和白茅草等。野生植物主要有菌、藻、地衣类、蕨类和被子植物类。菌、藻、地衣类包括念珠藻、白蘑、木耳等十余种；蕨类主要包括笔管草、海金沙、肾蕨、满江红等十余种；被子植物类品种繁多，大约有四五百种。

（2）陆生生物现状调查

项目所在地属北亚热带和暖湿带交界处，属暖湿带半湿润季风气候，四季分明，有利于野生动物的生存，随着地理环境的人为改变种类和数量大为减少。区域内无大型野生保护动物，常见动物有野兔、刺猬、野鸡、麻雀、灰喜鹊、山喜鹊等。

经资料查询及现场调查，项目用地周边未发现珍稀植物资源和古树名木分布，未发现国家和江苏省保护动物分布；无水产种质资源保护区等。

（3）水生生态现状调查

盐河的水生植物有浮游植物（蓝藻、硅藻和绿藻等）、挺水植物（芦苇、茭草、蒲草、艾蒿等），浮叶植物（荇菜、金银莲花和野菱）和漂浮植物（浮萍、槐叶萍、水花生等）等。浮游动物种类繁多，主要的浮游动物有原生动物、轮虫、枝角类和桡足类四大类，其中虾、蟹等甲壳类占据绝对优势。主要的底栖动物以蚯蚓、螺蚌、蚬子等为主。鱼类资源丰富，主要有青、鲢、草、鳙、鳊、鲫、黄鳝、鲤鱼等三十余种。甲壳类有虾、蟹等，贝类有田螺、蚌等。

（4）涟漪湖自然保护区

1993年12月，位于涟水县县城中的涟漪湖被列为省级自然保护区，涟漪湖中有岛，每到春季，数万只国家二级保护动物黄嘴白鹭成群结队飞至涟水觅食栖息。

涟漪湖自然保护区总面积约34.33公顷，主要保护对象为黄嘴白鹭，规划范围北至常青路、西至淮浦路及引河、南至中山路及涟漪东路、东至涟漪东湖以东50m，其环境空气功能规划为一类区。该保护区位于本项目西南侧约7.4公里，受本项目影响较小。

经资料查询及现场调查，项目用地周边未发现珍稀植物资源和古树名木分布，未发现国家和江苏省保护动物分布；无水产种质资源保护区等。

本项目所在地区及评价范围内没有风景名胜及古迹等重要保护目标。

* 1. 现有岸线利用情况

本项目位于涟水港区薛行作业区，淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内，淮安市涟水县盐河朱码闸下游约4km处，盐河左岸，地理位置优越。

根据《淮安港总体规划（2020—2035年）》，本项目所在的港口规划岸线为朱码船闸下游4300m至朱码船闸下游5300m，全长1000m。本工程拟利用朱码船闸下游4300m至朱码船闸下游4482m之间的岸线，约182m，位于规划岸线范围内，本码头工程所使用的岸线符合《淮安港总体规划（2020—2035年）》。

根据《淮安港总体规划（2020—2035年）》，薛行作业区位于盐河航道薛行工业园境内，主要服务于薛行工业园区内的企业。作业区定位以装卸、仓储和物流服务功能为主，并服务临港工业发展，主要承担矿建材料、企业原材料和产成品等物资运输。

本项目建成后主要承担国能涟水一期热电联产项目煤炭运输，本码头为电厂专用煤炭卸船。因此，本工程功能定位及岸线性质均与规划相匹配。

* + 1. 跨河建筑物

本工程与下游薛行大桥距离约1700m，上游盐河大桥距离约2000m。

* + 1. 拦河建筑物

本项目所在的盐河航道，目前已达Ⅱ级航道标准。码头上游设置有朱码船闸，下游设置有杨庄船闸。根据码头上下游船闸的船舶交通流量统计，2022年，码头周围通行船舶平均吨位达到450t左右，单箱船舶吨位已达700t。根据观测，盐河航道船舶大型化趋势明显，航道上常见1000t级船舶通行。根据统计数据，2022年全年朱码船闸和新沂河船闸的船舶交通量详情见下表。

杨庄船闸和朱码船闸观测点统计情况表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 船闸 | 船型 | 船舶艘数（条） | 货物通过量（万吨） | 船舶平均吨位（吨） |
| 杨庄船闸 | 上行 | 17080 | 1194 | 699 |
| 下行 | 19507 | 325 | 167 |
| 合计 | 36587 | 1519 | 415 |
| 朱码船闸 | 上行 | 14739 | 238 | 161 |
| 下行 | 16962 | 1196 | 705 |
| 合计 | 31701 | 1434 | 452 |

* + 1. 临河建筑物

涟水港区是淮安港的重要组成部分，现有港口经营企业22家，其中大部分为建材公司。码头泊位总数57个，形成泊位长度3809m，其中500t级泊位50个，泊位长度3349m；1000t级泊位7个，泊位长度460m；分别占全港总量的87.8%和12.2%。

涟水港区码头泊位基本情况表

| **序号** | **航道** | **码头名称** | **泊位长度（m）** | **泊位数（个）** | **靠泊吨级（t）** |
| --- | --- | --- | --- | --- | --- |
| 1 | 盐河 | 淮安东鹏建设有限公司 | 120 | 2 | 1000 |
| 2 | 涟水美赞建材科技有限公司 | 120 | 2 | 500 |
| 3 | 涟水新城建材科技有限公司 | 120 | 2 | 500 |
| 4 | 淮安宝优新材料科技有限公司 | 150 | 2 | 500 |
| 5 | 淮安华啸实业有限公司 | 230 | 4 | 500 |
| 6 | 淮安航骊建材有限公司 | 127 | 2 | 500 |
| 7 | 淮安锐志新型建材有限公司 | 130 | 2 | 500 |
| 8 | 江苏天昂管业有限公司 | 70 | 2 | 500 |
| 9 | 涟水红日港务有限公司  （新港作业区一期） | 410 | 6 | 500 |
| 10 | 涟水红日港务有限公司  （新港作业区二期） | 340 | 5 | 1000 |
| 11 | 江苏大自然食品有限公司 | 150 | 1 | 500 |
| 12 | 涟水永留建材有限公司 | 100 | 2 | 500 |
| 13 | 淮安兴港建材有限公司 | 127 | 2 | 500 |
| 14 | 涟水县新星水泥有限公司 | 105 | 1 | 500 |
| 15 | 江苏华源生态农业有限公司 | 777 | 10 | 500 |
| 16 | 淮安市博威新型建材有限公司 | 125 | 2 | 500 |
| 17 | 江苏东辰建材有限公司 | 98 | 2 | 500 |
| 18 | 江苏内地与澳门盐业有限公司 | 150 | 3 | 500 |
| 19 | 涟水县丙辰工程养护有限公司 | 90 | 1 | 500 |
| 20 | 淮安市兴盛管桩有限公司 | 80 | 1 | 500 |
| 21 | 淮安鼎冠建材有限公司 | 110 | 2 | 500 |
| 22 | 涟中干渠 | 淮安市兴盛管桩有限公司 | 80 | 1 | 500 |

涟水港区码头泊位分等级现状情况

|  |  |  |
| --- | --- | --- |
| **泊位等级** | **泊位数（个）** | **占比（%）** |
| 全港合计 | 57 | 100 |
| 500t级 | 50 | 87.8 |
| 1000t级 | 7 | 12.2 |

* 1. 环境质量现状调查与评价
     1. 大气环境质量现状监测与评价
        1. 区域环境空气长期监测资料统计结果

根据《环境影响评价技术导则大气环境》（HJ2.2-2018），项目所在区域达标情况优先选用国家或地方生态环境主管部门公开发布的环境质量公告或环境质量公告中的数据或结论。

根据《2023年淮安市生态环境状况公报》：“2023年，淮安市细颗粒物（PM2.5）可吸入颗粒物（PM10）、二氧化硫（SO2）、二氧化氮（NO2）年均浓度分别为36微克/立方米、58微克/立方米、8微克/立方米、25微克/立方米；一氧化碳（CO）和臭氧（O3）浓度分别为1毫克/立方米、158微克/立方米。”“各县区中，PM2.5、PM10、NO2、CO、SO2均达标，各县区PM2.5年均浓度在31-36微克/立方米之间，其中金湖县最低，清江浦区最高，PM10年均浓度介于52~62微克/立方米之间，金湖县浓度最低，淮阴区浓度最高。”

由于公报未明确2023年涟水县各因子达标情况，因此，本次收集了距离本项目7.2km处涟水县环境监测监控站点2023年的全年例行监测数据，统计了各因子的百分位日均值数据，具体如下表，除PM2.5保证率日均值外，其余各因子年均值和保证率均满足环境空气质量标准要求，PM2.5保证率日均值占标率为110.7%。根据《环境影响评价技术导则 大气环境》（HJ2.2-2018）达标区判定要求，项目所在区域为不达标区。具体监测结果见下表。

涟水县环境空气质量现状评价表

| **污染物** | **年度评价指标** | **现状浓度/（µg/m3）** | **标准值/（µg/m3）** | **占标率/%** | **达标情况** |
| --- | --- | --- | --- | --- | --- |
| PM10 | 年均值 | 64 | 70 | 92.0 | 达标 |
| 95百分位日均值 | 144 | 150 | 96.0 | 达标 |
| PM2.5 | 年均值 | 35 | 35 | 100.0 | 达标 |
| 95百分位日均值 | 83 | 75 | 110.7 | 不达标 |
| SO2 | 年均值 | 8 | 60 | 13.4 | 达标 |
| 98百分位日均值 | 13 | 150 | 8.7 | 达标 |
| NO2 | 年均值 | 19 | 40 | 47.5 | 达标 |
| 98百分位日均值 | 45 | 80 | 56.3 | 达标 |
| CO | 日均值 | 728 | 4000 | 18.2 | 达标 |
| 95百分位日均值 | 1100 | 4000 | 27.5 | 达标 |
| O3 | 日最大8小时平均值 | 81 | 160 | 50.4 | 达标 |
| 90百分位日均值 | 120 | 160 | 75.0 | 达标 |

根据淮安市人民政府2024年9月发布的《淮安市空气质量持续改善行动两年实施方案》，2024年全市PM2.5浓度达到35微克/立方米左右；2025年全市PM2.5浓度达到国家二级标准；完成国家下达的氮氧化物和VOCs减排目标。

实施方案包括优化“三项结构”，强化“两项治理”，加强“四项建设”，研究部署九个方面26项任务，以空气质量持续改善推动经济高质量发展。

**一是优化“三项结构”**，加快绿色低碳发展。**优化产业结构，**坚决遏制高耗能、高排放、低水平项目盲目上马，加强“两高”项目审批把关和实地核查。加快退出重点行业落后产能。推进园区、产业集群绿色低碳化改造与综合整治。优化含VOCs原辅材料和产品结构。深入实施绿色创建“十百千”行动，力争创建省级以上绿色工厂10家。**优化能源结构，**大力发展新能源和清洁能源，严格合理控制煤炭消费总量，深入推进燃煤锅炉关停整合和工业炉窑清洁能源替代。**优化交通结构，**调整货物运输结构，大宗货物中长距离运输时，优先采用铁路、水路运输，充分发挥淮安水运优势；加快提升机动车清洁化水平，强化非道路移动源综合治理。

**二是强化“两项治理”**，降低污染物排放强度。**强化面源污染整治，**加强建筑工地、港口码头、道路、公共绿地等各类扬尘源管控，完善扬尘污染防治体系，推进矿山生态环境综合整治。加强秸秆综合利用和禁烧，不断提高秸秆综合利用率。**强化污染物减排，**推动VOCs全流程、全环节综合治理。推进重点行业超低排放改造。巩固钢铁行业和燃煤锅炉超低排放改造成效，有序推进铸造、垃圾焚烧发电、水泥、焦化等行业改造和治理。实施重点行业绩效等级提升行动，培育一批绩效A级、B级和引领性企业。加强部门联动，因地制宜解决人民群众反映集中的油烟和恶臭扰民问题。稳步推进大气氨污染防控。

**三是加强“四项建设”，即机制建设、能力建设、法治建设、组织建设。**深化区域大气污染防治协作机制和城市空气质量达标管理。建立健全市县（区）重污染天气应急预案体系，完善重污染天气应对机制。加强监测和执法监管能力建设，依法拓展非现场监管手段应用，联合多部门联合执法。强化法律法规标准引领，积极发挥财政金融引导作用。通过加强组织领导，严格监督考核，引导全民共治，构建全社会参与的环境治理体系。

涟水县人民政府2024年1月发布《关于印发涟水县2024年生态环境基础设施建设重点项目计划的通知》（涟政发〔2024〕3号），将实施光大（涟水）固废焚烧烟气治理项目等污染治理项目。

随着淮安市实施方案和涟水县生态环境重点项目的实施，本项目区域空气质量将得到持续改善。

* + - 1. 评价区环境空气质量补充监测与评价

本次评价委托江苏正康检测技术有限公司开展环境空气质量补充监测。监测时间2023/08/16-2023/08/22。

**（1）监测布点**

监测点位布设见表4.3-2、图4.3-1。

大气监测点位一览表

|  |  |  |
| --- | --- | --- |
| 编号 | 位置 | 监测项目 |
| G1 | 电厂码头 | TSP、非甲烷总烃、NH3、H2S、臭氧浓度 |
| G2 | 厂址西南侧约960m处越堆村 |

**（2）监测项目及频次**

TSP、非甲烷总烃、氨气、H2S、臭氧浓度。

TSP监测24小时平均浓度，非甲烷总烃、氨气、H2S、臭气浓度监测1h平均浓度值，连续监测7天。

**（3）监测频次**

TSP 24小时平均浓度连续监测24个小时，连续监测7天。

非甲烷总烃、氨、H2S、臭氧浓度小时平均值连续监测7天，每天4次（02、08、14、20时各一次），每次不少于45分钟。

监测时同步测量气温、气压、湿度、风向、风速等气象参数。

**（4）采样及分析方法**

环境空气监测项目、分析方法和依据

|  |  |  |  |
| --- | --- | --- | --- |
| 项目 | 检测方法 | 方法依据 | 检出限mg/m3 |
| TSP | 重量法 | GB/T 15432-1995 | 0.001 |
| 非甲烷总烃 | 直接进样-气相色谱法 | HJ 604-2017 | 0.07 |
| NH3 | 环境空气和废气 氨的测定 纳氏试剂分光光度法 | HJ533-2009 | 0.01 |
| H2S | 亚甲基蓝分光光度法 | 《空气和废气监测分析方法》（第四版增补版）国家环境保护总局（（2003年） | 0.001 |
| 臭气浓度 | 三点比较式臭袋法 | GB/T 14675-1993 | / |

**（5）监测结果与评价**

大气环境质量现状采用单项标准指数法，即：

Iij = Cij / Csj

式中：Iij：第i种污染物在第j点的标准指数；

Cij：第i种污染物在第j点的检测值，mg/m3；

CSj：第i种污染物的评价标准，mg/m3。

监测结果经统计整理汇总见表4.3-4，厂区同步气象参数见4.3-4。

监测结果统计汇总单位

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 监测点位 | 监测项目 | 单位 | 取值类型 | 浓度范围 | | 标准限值 | 最大占标率（%） | 超标率（%） | 达标情况 |
| 最小值 | 最大值 |
| G1 | 硫化氢 | mg/m3 | 小时浓度 | 0.004 | 0.009 | 0.01 | 90 | 0 | 达标 |
| 氨 | mg/m3 | 小时浓度 | 0.05 | 0.08 | 0.2 | 40 | 0 | 达标 |
| 臭气浓度 | mg/m3 | 小时浓度 | 13 | 19 | / | / | 0 | 达标 |
| 非甲烷总烃 | mg/m3 | 小时浓度 | 0.51 | 0.59 | 2 | 29.5 | 0 | 达标 |
| TSP | mg/m3 | 日均值 | 0.027 | 0.056 | 0.3 | 18.7 | 0 | 达标 |
| G2 | 硫化氢 | mg/m3 | 小时浓度 | 0.003 | 0.008 | 0.01 | 80 | 0 | 达标 |
| 氨 | mg/m3 | 小时浓度 | 0.05 | 0.07 | 0.2 | 35 | 0 | 达标 |
| 臭气浓度 | mg/m3 | 小时浓度 | 13 | 18 | / | / | 0 | 达标 |
| 非甲烷总烃 | mg/m3 | 小时浓度 | 0.5 | 0.6 | 2 | 30 | 0 | 达标 |
| TSP | mg/m3 | 日均值 | 0.031 | 0.056 | 0.3 | 18.7 | 0 | 达标 |

厂址同步气象参数

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 采样日期 | 采样时间 | 环境温度 | 大气压 | 相对湿度 | 风速 | 风向 | 天气状况 |
| （℃） | (kPa) | （%） | (m/s) |
| 8月16日 | 00:00-00:00（次日） | 23.4-31.3 | 99.9-100.4 | 50.1-56.2 | 1.3-2.1 | 东 | 多云 |
| 8月17日 | 00:00-00:00（次日） | 22.9-30.8 | 100.0-100.5 | 48.3-58.3 | 1.7-2.1 | 东北 | 多云 |
| 8月18日 | 00:00-00:00（次日） | 21.7-31.1 | 100.1-100.5 | 51.8-58.4 | 1.3-1.8 | 东 | 多云 |
| 8月19日 | 00:00-00:00（次日） | 22.7-30.5 | 100.0-100.5 | 52.2-58.2 | 1.4-1.8 | 东北 | 多云 |
| 8月20日 | 00:00-00:00（次日） | 22.8-31.2 | 99.8-100.3 | 48.5-57.1 | 1.2-1.9 | 东 | 多云 |
| 8月21日 | 00:00-00:00（次日） | 23.6-31.2 | 99.9-100.5 | 47.6-56.8 | 1.3-2.1 | 东 | 多云 |
| 8月22日 | 00:00-00:00（次日） | 22.2-31.4 | 99.7-100.4 | 48.2-55.3 | 1.4-1.7 | 东 | 多云 |

由上表可知，项目周边区域各监测因子满足相应环境空气质量标准要求。

* + 1. 地表水环境质量现状监测与评价
       1. 水环境功能区达标状况

根据《2023年度淮安市环境状况公报》，纳入“十四五”国家地表水环境质量考核的11个国考断面达标率为100%，水质优良（达到或优于Ⅲ类标准）的断面有9个（Ⅱ类断面 5 个），占比81.8%。

2023年，淮河、京杭大运河、苏北灌溉总渠、盐河、淮河入江水道、分淮入沂水道水质状况为优；入海水道南偏泓浔河、黄河故道、金宝航道、维桥河、利农河、南淮泗河张福河、团结河、高桥河、南六塘河、跃进河、汪木排河草泽河、唐响河、头溪河、运西河－新河、周桥灌区总干渠一帆河、铜龙河、池河水质状况为良好；入海水道北偏泓赵公河、公兴河水质状况为轻度污染。

* + - 1. 地表水现状补充监测

本次环评盐河水环境质量现状监测委托江苏正康检测技术有限公司，监测时间为2023年8月16日—2023年8月18日连续监测3天。

（1）监测布点和监测项目

地表水水质监测情况见表4.3-6，本项目地表水监测点位见图4.3-1。

地表水水质监测断面

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **断面编号** | **河流** | **监测点布设位置** | **执行标准** | **监测因子** | **监测时间** |
| W1 | 盐河 | 热电厂一期雨水排放口上游 500m | Ⅲ类 | pH、水温、溶解氧、悬浮物、化学需氧量、生化需氧量（BOD5）、氨氮、总氮、总磷、高锰酸盐指数、石油类 | 2023年8月16日—2023年8月18日 |
| W2 | 雨水排放口下游 500m |
| W3 | 雨水排放口下游 1000m |

（2）监测频次

监测频次：连续监测3天，每天监测2次（上午、下午各1次）。

（3）评价方法

地表水环境质量现状采用单项水质参数评价模式，在各项水质参数评价中，对某一水质参数的现状浓度采用多次监测的平均浓度值。单因子污染指数计算公式为：

Si,j=Ci,j/Csj

式中：*Si,j*—评价因子i的水质指数，大于1表明该水质因子超标；

*Ci,j*—评价因子i在j点的实测评价浓度值，mg/L；

*Csj*—评价因子i的水质评价标准值，mg/L；

其中pH为：

 pHj≤7.0

 pHj>7.0

式中：*SpH,j*—为pH指数，大于1表明该水质因子超标；

*pHj*—为pH值实测统计代表值；

*pHsu*—为评价标准中pH值的上限值；

*pHsd*—为评价标准中pH值的下限值；

其中DO为：

*SDO,j=DOs/DOj* DOj<DOf

 DOj≥DOs

式中：*SDO,j*—为溶解氧的标准指数，大于1表明该水质因子超标；

*DOf*—饱和溶解氧浓度，mg/L，对于河流，DOf=486/（31.6+T），T为水温，℃；

*DOj*—为溶解氧在j点的实测统计代表值，mg/L；

*DOs*—为溶解氧的水质评价标准限值，mg/L。

（4）地表水环境质量现状监测结果评价

根据表4.3-7，地表水各监测断面指标均满足《地表水环境质量标准》（GB3838-2002）中III类水质标准要求，说明地表水环境质量较好。

盐河地表水环境质量监测数据统计及评价 单位：mg/L， pH无量纲

| **断面** | **项目** | **pH** | **溶解氧** | **悬浮物** | **COD** | **BOD5** | **氨氮** | **总氮** | **总磷** | **高锰酸盐指数** | **石油类** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| W1 | 最小值 | 7.2 | 6.2 | 12 | 8 | 2.1 | 0.334 | 1.76 | 0.12 | 1.8 | 0.02 |
| 最大值 | 7.3 | 6.3 | 15 | 14 | 2.4 | 0.35 | 1.79 | 0.12 | 2.1 | 0.04 |
| 平均值 | 7.3 | 6.27 | 13.83 | 11.50 | 2.27 | 0.34 | 1.78 | 0.12 | 1.90 | 0.03 |
| Ⅲ类标准值 | 6~9 | 5 | / | 20 | 4 | 1 | / | 0.2 | 6 | 0.05 |
| 标准指数 | 0.15 | 0.79 | / | 0.575 | 0.57 | 0.34 | / | 0.6 | 0.32 | 0.53 |
| 超标率% | 0 | 0 | / | 0 | 0 | 0 | / | 0 | 0 | 0 |
| W2 | 最小值 | 7.2 | 6.1 | 17 | 16 | 2.7 | 0.566 | 1.76 | 0.15 | 3.3 | 0.02 |
| 最大值 | 7.5 | 6.5 | 19 | 19 | 3.7 | 0.58 | 1.76 | 0.16 | 3.5 | 0.02 |
| 平均值 | 7.37 | 6.37 | 18.00 | 17.33 | 3.12 | 0.57 | 1.76 | 0.15 | 3.42 | 0.02 |
| Ⅲ类标准值 | 6~9 | 5 | / | 20 | 4 | 1 | / | 0.2 | 6 | 0.05 |
| 标准指数 | 0.25 | 0.77 | / | 0.87 | 0.78 | 0.57 | / | 0.76 | 0.57 | 0.40 |
| 超标率% | 0 | 0 | / | 0 | 0 | 0 | / | 0 | 0 | 0 |
| W3 | 最小值 | 7.3 | 6.3 | 11 | 12 | 2.1 | 0.601 | 2.03 | 0.14 | 2.5 | 0.03 |
| 最大值 | 7.5 | 6.5 | 15 | 17 | 2.3 | 0.61 | 2.11 | 0.16 | 2.8 | 0.03 |
| 平均值 | 7.38 | 6.42 | 12.67 | 13.83 | 2.20 | 0.60 | 2.08 | 0.15 | 2.65 | 0.03 |
| Ⅲ类标准值 | 6~9 | 5 | / | 20 | 4 | 1 | / | 0.2 | 6 | 0.05 |
| 标准指数 | 0.25 | 0.77 | / | 0.69 | 0.55 | 0.60 | / | 0.75 | 0.44 | 0.60 |
| 超标率% | 0 | 0 | / | 0 | 0 | 0 | / | 0 | 0 | 0 |

* + 1. 噪声环境质量现状监测和评价

（1）现状监测方案

根据《声环境质量标准》（GB 3096-2008）的要求，对本项目所在区域声环境质量进行监测。由江苏正康环境检测技术有限公司进行。

（2）监测点位及监测项目

监测项目：等效连续A声级

项目所在地东、南、西、北厂界，共设置9个监测点，具体见图4.3-1。

（3）监测时间、频次及方法

监测时间：2023年8月16日—8月17日。

监测频次：监测2天，每天昼间、夜间各1次。噪声监测按生态环境部颁发的《环境监测技术规范》执行。

监测方法：按核实监测规范和方法中的时效性，列出有效的规范或标准，包括标准有关规定和要求执行。

（4）监测结果及评价

各测点检测结果列入表4.3-8。

噪声监测结果

| **采样日期** | **采样点** | **采样时间** | | **等效声级值dB (A)** | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **昼间** | | | **夜间** | | |
| **昼间** | **夜间** | **监测值** | **标准值** | **达标情况** | **监测值** | **标准值** | **达标情况** |
| 8月16日 | N1 | 15:34-15:44 | 22:03-22:13 | 53 | 65 | 达标 | 42 | 55 | 达标 |
| N2 | 15:49-15:59 | 22:19-22:29 | 54 | 65 | 达标 | 41 | 55 | 达标 |
| N3 | 16:07-16:17 | 22:34-22:44 | 53 | 65 | 达标 | 43 | 55 | 达标 |
| N4 | 16:24-16:34 | 22:48-22:58 | 55 | 70 | 达标 | 42 | 55 | 达标 |
| N5 | 16:40-16:50 | 23:03-23:13 | 54 | 70 | 达标 | 41 | 55 | 达标 |
| N6 | 16:55-17:05 | 23:19-23:29 | 52 | 65 | 达标 | 41 | 55 | 达标 |
| N7 | 17:11-17:21 | 23:35-23:45 | 53 | 65 | 达标 | 42 | 55 | 达标 |
| N8 | 17:28-17:38 | 23:51-00:01  （次日） | 52 | 65 | 达标 | 43 | 55 | 达标 |
| N9 | 17:44-17:54 | 00:07-00:17  （次日） | 52 | 65 | 达标 | 43 | 55 | 达标 |
| 8月17日 | N1 | 15:57-16:07 | 22:01-22:11 | 52 | 65 | 达标 | 43 | 55 | 达标 |
| N2 | 16:12-16:22 | 22:17-22:27 | 53 | 65 | 达标 | 42 | 55 | 达标 |
| N3 | 16:28-16:38 | 22:33-22:43 | 51 | 65 | 达标 | 41 | 55 | 达标 |
| N4 | 16:43-16:53 | 22:48-22:58 | 52 | 70 | 达标 | 42 | 55 | 达标 |
| N5 | 17:00-17:10 | 23:03-23:13 | 52 | 70 | 达标 | 41 | 55 | 达标 |
| N6 | 17:16-17:26 | 23:19-23:29 | 53 | 65 | 达标 | 43 | 55 | 达标 |
| N7 | 17:31-17:41 | 23:34-23:44 | 53 | 65 | 达标 | 42 | 55 | 达标 |
| N8 | 17:49-17:59 | 23:50-00:00（次日） | 51 | 65 | 达标 | 42 | 55 | 达标 |
| N9 | 18:06-18:16 | 00:07-00:17（次日） | 52 | 65 | 达标 | 43 | 55 | 达标 |
| **备注：**2023年08月16日昼间多云、东风、风速1.7m/s；夜间多云、东风、风速1.9m/s。 2023年08月17日昼间多云、东风、风速1.7m/s；夜间多云、东风、风速1.9m/s。 | | | | | | | | | |

现状监测结果表明，拟建项目所在地的声环境质量较好，监测期2天内北、南、西三个厂界6个噪声监测点昼、夜间等效声级Leq（A）平均值均满足《声环境质量标准》（GB3096–2008）中3类标准要求。东厂界2个噪声监测点昼、夜间等效声级Leq（A）平均值均满足《声环境质量标准》（GB3096–2008）中4a类标准要求。

* + 1. 底泥环境质量现状监测和评价

（1）监测布点

监测点位：根据项目地形特点，在项目周界共布设1个底泥监测点，监测点位布设见表4.3-9、图4.1-1。

底泥监测点位一览表

|  |  |  |
| --- | --- | --- |
| 序号 | 位置 | 监测项目 |
| BS1 | 拟开挖港池处河道底泥 | 45项、pH、锌、石油类 |

**（2）监测项目**

底泥检测项目为：45项、pH、锌、石油烃。

**（3）监测频次**

2023年8月17日，监测1天，监测1次。

**（4）采样及分析方法**

底泥检测项目、分析方法和依据

| **项目** | **检测方法** | **方法依据** | **检出限mg/kg**  **（除氯甲烷/μg·kg-1及pH）** |
| --- | --- | --- | --- |
| pH | NY/T | 1377-2007 | / |
| 六价铬 | 碱溶液提取－火焰原子吸收分光光度法 | HJ 1082-2019 | 0.5 |
| 总铬 | 土壤 总铬的测定 火焰原子吸收分光光度法 | HJ 491 | 5 |
| 镉 | 石墨炉原子吸收分光光度法 | GB/T 17141-1997 | 0.01 |
| 汞 | 微波消解 原子荧光法 | HJ 680-2013 | 0.002 |
| 砷 | 微波消解 原子荧光法 | HJ 680-2013 | 0.01 |
| 铅 | 石墨炉原子吸收分光光度法 | GB/T 17141-1997 | 0.1 |
| 锌 | 火焰原子吸收分光光度法 | HJ 491-2019 | 1 |
| 铜 | 火焰原子吸收分光光度法 | HJ 491-2019 | 1 |
| 镍 | 火焰原子吸收分光光度法 | HJ 491-2019 | 3 |
| 四氯化碳 | 顶空/气相色谱 | HJ 741-2015 | 0.03 |
| 氯仿 | 顶空/气相色谱 | HJ 736-2015 | 0.02 |
| 氯甲烷 | 顶空/气相色谱－质谱法 | HJ 741-2015 | 3 |
| 1,1－二氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,2－二氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.01 |
| 1,1－二氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.01 |
| 顺－1,2－二氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.008 |
| 反－1,2－二氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 二氯甲烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,2－二氯丙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.008 |
| 1,1,1,2－四氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,1,2,2－四氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 四氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,1,1－三氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,1,2－三氯乙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.002 |
| 三氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.009 |
| 1,2,3－三氯丙烷 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 氯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 苯 | 顶空/气相色谱 | HJ 741-2015 | 0.01 |
| 氯苯 | 顶空/气相色谱 | HJ 741-2015 | 0.005 |
| 1,2－二氯苯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 1,4－二氯苯 | 顶空/气相色谱 | HJ 741-2015 | 0.008 |
| 乙苯 | 顶空/气相色谱 | HJ 741-2015 | 0.006 |
| 苯乙烯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 甲苯 | 顶空/气相色谱 | HJ 741-2015 | 0.006 |
| 间二甲苯+对二甲苯 | 顶空/气相色谱 | HJ 741-2015 | 0.009 |
| 邻二甲苯 | 顶空/气相色谱 | HJ 741-2015 | 0.02 |
| 硝基苯 | 气相色谱－质谱法 | HJ 834-2017 | 0.09 |
| 苯胺 | 气相色谱－质谱法 | HJ 834-2017 | 0.02 |
| 2－氯酚 | 气相色谱－质谱法 | HJ 834-2017 | 0.06 |
| 苯并[a]蒽 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 苯并[a]芘 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 苯并[b]荧蒽 | 气相色谱－质谱法 | HJ 834-2017 | 0.2 |
| 苯并[k]荧蒽 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 䓛 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 二苯并[a、h]蒽 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 茚并[1,2,3-cd]芘 | 气相色谱－质谱法 | HJ 834-2017 | 0.1 |
| 萘 | 气相色谱－质谱法 | HJ 834-2017 | 0.09 |
| 石油烃 | 气相色谱法 | HJ 1021-2019 |  |

**（5）监测结果与评价**

底泥监测结果表

| **监测信息** | **检测项目** | **数值** | **单位** | **检测项目** | **数值** | **单位** |
| --- | --- | --- | --- | --- | --- | --- |
| 监测点位：BS1  监测时间：08月17日  样品编号：ZKA080203 | pH | 8.52 | 无量纲 | 三氯乙烯 | ND | mg/kg |
| 砷 | 6.49 | mg/kg | 1,2-二氯丙烷 | ND |
| 汞 | 0.054 | 甲苯 | 0.002 |
| 镉 | 0.16 | 1,1,2-三氯乙烷 | ND |
| 铅 | 29.5 | 四氯乙烯 | ND |
| 镍 | 44 | 氯苯 | 0.0054 |
| 铜 | 29 | 1,1,1,2-四氯乙烷 | ND |
| 铬 | 98 | 乙苯 | 0.002 |
| 锌 | 56 | 间，对-二甲苯 | 0.0096 |
| 六价铬 | ND | 邻-二甲苯 | 0.0066 |
| 石油类 | 0.14 | 苯乙烯 | ND |
| 有机质 | 4.2×103 | 1,1,2,2-四氯乙烷 | ND |
| 氯甲烷 | ND | 1,2,3-三氯丙烷 | ND |
| 1,4-二氯苯 | ND |
| 1,2-二氯苯 | ND |
| 氯乙烯 | ND | 苯胺 | ND |
| 1,1-二氯乙烯 | ND | 2-氯酚 | ND |
| 二氯甲烷 | ND | 硝基苯 | ND |
| 反式-1,2-二氯乙烯 | ND | 萘 | ND |
| 1,1-二氯乙烷 | ND | 苯并（a）蒽 | ND |
| 顺式-1,2-二氯乙烯 | ND | 䓛 | ND |
| 氯仿 | ND | 苯并（b）荧蒽 | ND |
| 1,1,1-三氯乙烷 | ND | 苯并（k）荧蒽 | ND |
| 四氯化碳 | ND | 苯并（a）芘 | ND |
| 苯 | 0.0056 | 茚并（1,2,3-cd）芘 | ND |
| 1,2-二氯乙烷 | ND | 二苯并（a,h）蒽 | ND |

监测结果表明，拟开挖港池处河道底泥的重金属指标能够满足《土壤环境质量 农用地土壤污染风险管控标准（试行）》（GB15618-2018）中其他类标准，其余指标均能够满足《土壤环境质量 建设用地土壤污染风险管控标准（试行）》（GB36600-2018）中表1中第二类用地筛选值。

* + 1. 生态环境质量现状调查和评价
       1. 生态功能区规划评价

（1）江苏省生态功能区划概况

根据《省政府关于印发江苏省生态建设规划纲要的通知》（苏政发〔2004〕106号）全省划分为黄淮海平原、长江三角洲平原和沿海滩涂与海洋等3个生态区（一级区）以及7个生态亚区（二级区）。

（2）本工程沿线区域生态功能区划

根据江苏省生态功能区规划，本工程所在区域位于三级生态功能区“I2-3 总渠灌区农业生态功能区”。

* + - 1. 土地利用现状

1、区域土地利用现状

根据淮安市第二次土壤普查报告，涟水县共有土壤面积167.65万亩，全部为潮土类，分为黄潮土、盐碱类潮土2个亚类。全县一级土壤301亩，仅占土壤面积的0.15%，二级土壤17.8万亩，占土壤面积的10.6%，三级土壤为55.3万亩，占土壤面积的33%，四级土壤74.8万亩，占土壤面积的44.6%，五级土壤19.6万亩，占土壤面积的11.7%。全县一、二级质量较好的土壤面积少，质量较差的四五级土壤面积占一半以上。

2、项目评价范围土地利用现状

评价范围内土地利用以水浇地、工业用地为主，分别占评价范围总面积的64.72%、20.34%，此外还包括河流水面、农村道路等。

根据《土地利用现状分类》（GB/T 21010-2017）中类别划分，本项目厂界周边1公里范围土地利用现状请见报表4.3-12和图4.3-2。

项目（含排泥场和堆土场）周边1公里土地利用现状

| **土地类型** | **面积（hm2）** | **占比** |
| --- | --- | --- |
| 河流水面 | 17.08 | 4.11% |
| 农村宅基地 | 5.06 | 1.22% |
| 坑塘水面 | 3.82 | 0.92% |
| 内陆滩涂 | 12.68 | 3.05% |
| 其他草地 | 0.45 | 0.11% |
| 灌木林地 | 9.31 | 2.24% |
| 道路用地 | 13.75 | 3.31% |
| 工业用地 | 84.58 | 20.34% |
| 水浇地 | 269.14 | 64.72% |
| 总计 | 415.87 | |

* + - 1. 植物资源现状

根据现场踏勘情况，本项目研究范围内主要为耕地、工业园区和附近村庄，因此受人为干扰严重，植被类型以人工植被为主。沿河两侧陆域种植有人工防护林带，防护林主要由速生树种意杨组成，河岸两侧水域主要为芦苇、蒲草等水生植被；大堤外分布有农田，常见农作物主要有水稻、小麦、油菜和其他蔬菜。

本项目评价范围内有盐河东岸的淮安（薛行）循环经济产业园，街道景观植物类型相对较少，行道树简单以柳树、雪松、香樟为主，少量灌木丛包括大叶黄杨、红花檵木等，以及附近农家单植有广玉兰、银杏、枇杷、桃树等。

同时本项目评价范围内野生杂草较多，主要为当地常见的野生杂草，以禾本科、莎草科、藜科、菊科植物为主，包括猪殃殃、阿拉伯婆婆纳、狗尾草、鹅肠菜、泽漆、碎米荠等。

本项目永久占地范围内主要分布芦苇、蒲草等水生植被，陆域分布水稻、玉米等植被及野生杂草等。根据调查，本项目评价范围未发现古树名木分布。

本项目厂界1km评价范围植被类型情况见图4.3-3。

* + - 1. 陆生生物

根据资料查询及现场调查，项目所在地属北亚热带和暖湿带交界处，属暖湿带半湿润季风气候，四季分明，有利于野生动物的生存，随着地理环境的人为改变种类和数量大为减少。区域内无大型野生保护动物，主要哺乳类野生动物有草狐、野兔、松鼠、黄鼬、蝙蝠、刺猬等；主要鸟类有布谷鸟、雁、云雀、喜鹊、麻雀、鹌鹑等近百种。未发现国家和江苏省保护动物分布。

* + - 1. 水生生态

本次评价引用《宿连航道（京杭运河至盐河段）整治工程二期工程连云港段环境影响报告书》在2022年5月7日—5月8日委托无锡万物生态科技有限公司专业技术人员对古泊善后河与盐河交汇处附近进行的水生生态采样调查资料。该处距离本项目评价区域约70km，位于盐河下游水域，该段盐河水域与本项目评价范围水域连通良好，基本能够代表本项目评价范围水生生态状况。水生生物资源方面主要如下：

（1）浮游植物

①浮游植物群落结构：通过对样品镜检，共鉴定出浮游植物7科44种（属），隶属于硅藻门（Bacillariophyta）、蓝藻门（Cyanophyta）、绿藻门（Chlorophyta）、隐藻门（Cryptophyta）、甲藻门（Pyrrophyta）、金藻门（Chrysophytaq）和裸藻门（Euglennophyta）。绿藻门物种数最多，有20种（属），占浮游植物物种总数的比例为45.45%；其次为硅藻门，有9种（属），占20.45%；裸藻门有5种（属），占11.36%；蓝藻门有4种（属），占9.09%；隐藻门有3种（属），占6.82%，甲藻门有2种（属），占4.55%；金藻门有1种（属），占2.27%。

②浮游植物密度和生物量：采样调查结果显示，从浮游植物密度组成来看，水体中蓝藻门、硅藻门和绿藻门所占比重较大，而隐藻门、裸藻门、甲藻门和金藻门所占比重很小。从浮游植物生物量来看，硅藻门所占比重较大，而隐藻门、蓝藻门、绿藻门、裸藻门、甲藻门和金藻门所占比重较小。水体中浮游植物密度为1.33×107cells/L，浮游植物生物量为7.9154mg/L。

优势种藻类组成主要为绿藻门和硅藻门。

（2）浮游动物

①浮游动物群落结构：通过调查采样，共鉴定出原生动物（Protozoa）、轮虫类（Rotifera）、枝角类（Cladocera）、桡足类（Copepoda）共四门38种（属），其中轮虫类种类组成最多，13种（属），占总物种数的34.21%；其次，原生动物10种（属），占总物种数的26.32%；枝角类8种（属），占总物种数的21.05%；桡足类5种（属），占总物种数的13.16%。

②密度和生物量：采样调查结果显示，从浮游动物密度组成来看，水体中轮虫和原生动物所占比重较大，而桡足类和枝角类所占比重很小。从浮游动物生物量来看，水体中轮虫、枝角类和桡足类所占比重较大，而原生动物所占比重较小。水体中浮游动物密度为5765.667ind.L，浮游动物生物量为8.708mg/L。短水体浮游动物的优势类群共计有4类14种，其中原生动物门和枝角类优势种群较多。

（3）底栖动物

通过调查采样，共鉴定出底栖动物3门16种（属），包括环节动物门（Annelida）、节肢动物门（Arthropoda）和软体动物门（Mollusca）。其中软体动物门最多，为8种（属），占种类数的50.00%；其次，节肢动物门5种（属），占种类数的31.25%；环节动物门3种（属），占种类数的18.75%。

采样调查结果显示，从底栖动物密度组成来看，盐河水体中软体动物门所占比重较大，而环节动物门和节肢动物门所占比重很小。从生物量来看，水体软体动物门所占比重最大。水体中底栖动物密度为1340.00ind.L，底栖动物生物量为124.155g/m2。水体底栖动物的优势类群共计有3门8种，软体动物门和环节动物门优势种群较多。

（4）水生维管束植物调查

通过调查采样，共鉴定出水生植物 7 科 7 种（属）。对水生维管束植物的生活型进行分析，古泊山后河连云港段水体水生态型可分为挺水植物、浮叶植物和沉水植物。其中沉水植物1种，浮叶植物3种，挺水植物3种。

本项目所在盐河河段不涉及洄游性鱼类，“三场”等。

* + - 1. 涟漪湖自然保护区

1993年12月，位于涟水县县城中的涟漪湖被列为省级自然保护区，涟漪湖中有岛，每到春季，数万只国家二级保护动物黄嘴白鹭成群结队飞至涟水觅食栖息。

涟漪湖自然保护区总面积约34.33公顷，主要保护对象为黄嘴白鹭，规划范围北至常青路、西至淮浦路及引河、南至中山路及涟漪东路、东至涟漪东湖以东50m，其环境空气功能规划为一类区。该保护区位于本项目西南侧约7.4公里，受本项目影响较小。

经资料查询及现场调查，项目用地周边未发现珍稀植物资源和古树名木分布，未发现国家和江苏省保护动物分布；无水产种质资源保护区等。本项目所在地区及评价范围内没有风景名胜及古迹等重要保护目标。

* + - 1. 生态空间管控区概况

本工程厂址位于涟水县朱码街道高台村，根据《省政府关于印发江苏省国家级生态保护红线规划的通知》（苏政发〔2018〕74号）、《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）以及《淮安市人民政府关于印发淮安市“三线一单”生态环境分区管控方案的通知》（淮政发〔2020〕16号），本项目评价范围内无国家级生态保护红线分布，本项目不占用江苏省生态空间管控区，项目选址不在淮安市优先保护单元（生态保护红线、生态空间管控区域）范围。

* + - 1. 生态现状调查结论

由于近年来人类活动的加剧，周边的天然植物大多数被人工种植植被代替。项目范围内未见挂牌古木名树及珍稀保护动植物。拟建项目范围内主要是耕地。评价范围内主要利用现状以耕地、住宅用地、工业用地、河流等为主。

本工程厂址位于涟水县朱码街道高台村，根据《省政府关于印发江苏省国家级生态保护红线规划的通知》（苏政发〔2018〕74号）、《省政府关于印发江苏省生态空间管控区域规划的通知》（苏政发〔2020〕1号）以及《淮安市人民政府关于印发淮安市“三线一单”生态环境分区管控方案的通知》（淮政发〔2020〕16号），本项目评价范围内无国家级生态保护红线分布，本项目不占用江苏省生态空间管控区，项目选址不在淮安市优先保护单元（生态保护红线、生态空间管控区域）范围。

1. 环境影响预测与评价
   1. 施工期影响分析
      1. 废气影响预测与评价
         1. 施工粉尘

（1）来源

施工期环境空气影响主要是施工扬尘。施工扬尘来源主要是土方的挖掘、场地平整、建筑材料装卸和堆放、混凝土搅拌、车辆往来等。本项目涉及大量的土方挖掘，以及车辆往来运输，扬尘会对当地的环境空气造成影响。污染因子主要为TSP。

施工扬尘的起尘量与许多因素有关，挖土机等在工作时的起尘量与挖坑深度、挖土机抓斗与地面的相对高度、风速、土壤的颗粒度、土壤含水量等因素有关。对于渣土堆场而言，起尘量还与堆放方式、起动风速及堆场有无防护措施等有关。国内外的研究结果和类比调查表明，影响起尘量的主要因素分别为：防护措施、风速、土壤湿度、挖土方式或土堆的堆放方式等。此外，道路的扬尘量与车辆的行驶速度有关，速度越快，其扬尘量也越大。

（2）影响分析

施工过程中，扬尘影响最大的环节为挖土、露天堆放和车辆运输。

①土方挖掘

据有关资料统计，当工程挖土方量为400t/d时，其扬尘（TSP）对环境空气的影响较大，一般其影响范围在500m左右，近距离TSP浓度超过二级标准几倍至十几倍，但在600m左右均可达到二级标准。

②露天堆放

露天堆放扬尘受作业时风速的影响。对比相关实测资料，在风速3.6m/s时，施工现场下风向不同距离的扬尘浓度见表5.1-1。在自由风场中，施工扬尘可在150m范围内超过GB3095-1996《环境空气质量标准》中二级标准，对空气质量环境可造成不利影响；150m范围外，一般不会有大的影响。

施工现场下风向不同距离处的扬尘浓度 （单位：mg/m3）

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 距离 | 1m | 25m | 50m | 80m | 150m |
| TSP | 3.744 | 1.630 | 0.785 | 0.496 | 0.246 |

③车辆运输

施工期车辆运输过程产生的扬尘约占扬尘总量的60％，一般情况下，施工场地、施工道路在自然风作用下产生的扬尘所影响的范围在100m以内。如果在施工期间对车辆行驶的路面实施洒水抑尘，每天洒水4～5次，可使扬尘减少70％左右，将有效控制施工扬尘对周围环境空气的影响。表5.1-2为施工场地洒水抑尘的试验结果。

施工期场地洒水抑尘试验结果

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 距离（m） | | 5 | 20 | 50 | 100 |
| TSP小时平均浓度（mg/m3） | 不洒水 | 10.14 | 2.89 | 1.15 | 0.86 |
| 洒水 | 2.0l | 1.40 | 0.67 | 0.60 |

由上表可知，每天洒水4～5次进行抑尘，可有效地控制施工扬尘，可将TSP污染距离缩小到20～50m范围内。

（3）对敏感点的影响

根据类比资料，受施工扬尘影响的区域大约在150m范围内。

施工期要求施工单位在施工场所及临时堆场静静围挡、道路硬化、堆料覆盖、洒水抑尘等措施，具体详见6.1.1章节施工期大气污染防治措施。施工期的影响是局部的、短期的，随着工程完工并投入运行消失。

* + - 1. 运输车辆尾气

施工期间将会有大量的车辆进出场址区，会有一定量的尾气排放。汽车尾气中的污染物主要有一氧化碳（CO）、碳氢化合物（HC）及氮氧化物（NOx），会对下风向和运输沿线区域产生不利影响，但影响很小。

* + - 1. 运输砂石料粉尘、临时堆场粉尘

本项目施工期间公路砂石料运输、物料堆场等可能产生较大的扬尘，将对附近的大气环境带来不利的影响。评价要求施工单位在施工过程中采取设置围挡、施工现场洒水、加强路面喷洒和车辆清洗，出入口设置冲洗平台、沉淀池及冲洗设备，可以有效降低施工期施工扬尘、对沿线大气环境的影响，同时工程施工是暂时的，随着施工期的结束，这种影响也将随之结束。

* + - 1. 排泥场臭气

本项目在后方电厂厂区用地范围内低洼处布设1座排泥场，盐河河道疏浚底泥堆放于排泥场过程中将产生臭味，其主要成分为氨气、硫化氢、臭气。

本评价采用类比的方法说明堆存过程中的影响。采用类比实测资料的方法，对臭气影响范围和程度进行预测分析。类比对象选取在南京市秦淮河综合整治一期工程。在南京市秦淮河综合整治一期工程施工中，曾对秦淮河清淤段、天生桥河清淤段以及南河底泥堆放场附近的H2S、NH3、臭气浓度进行现场监测，监测结果见表5.1-3。

清淤段、堆放场 H2S、NH3、臭气浓度监测结果

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **位置** | | **测点距清淤河段距离** | **NH3(mg/m3)** | **H2S(mg/m3)** | **臭氧浓度（无量纲）** |
| 秦淮河清淤段 | 清凉门大桥 | 15 | 0.05~0.13 | 0.007 | 10~14 |
| 天生桥河清淤段 | 沙洲 | 50 | 0.03~0.15 | 0.007 | 10~20 |
| 南河底泥堆放场 | 洪蓝桥 | 15 | 0.04~0.10 | 0.007 | 10~20 |
| 二类区厂界标准值 | / | / | 1.5 | 0.06 | 20 |

从上表中可知，距水下土方堆放场15m处的H2S、NH3、臭气浓度均未超过《恶臭污染物排放标准》（GB14554-93）厂界标准值。以3个测点中最不利的数据预测水下土方臭气对周围环境的影响，即：距离整治河道或底泥堆放场50m时臭气浓度达到20，可认为达到恶臭污染物厂界标准值。

另外，根据《河湖清淤工程环境影响评价要点分析—以太湖输水主通道清淤工程为例》（《水利科技与经济》第18卷第12期），水下土方干化场下风向30m处臭气强度可达到2级强度，有轻微臭味，大致相当于《恶臭污染物排放标准》（GB14554-93）规定的二级标准限值，80m外基本无气味。类比太湖输水主通道清淤工程，本次清淤臭气强度与类比工程大致相当，恶臭对周边居民影响不明显。

综上所述，施工期排泥场边界需控制距离周边居民80m以上，本项目排泥场周边80m范围内无敏感目标，最近的敏感目标王庄约510m，本项目施工期加强监管，及时加土覆盖，工程结束后及时复垦或绿化，恶臭程度总体较小，基本不会对周边居民产生影响。并且，随着施工结束和植被的恢复，恶臭气味将逐渐消失。

* + 1. 水环境影响分析
       1. 施工期水文要素影响分析

本项目码头为采用挖入式港池的布置形式，码头结构为钢筋砼扶壁式，与高桩梁板结构型式不同，不会向水面外扩，垂直方向不占用水域，港池面积约为0.02km2，项目工程扰动水底面积仅为本项目挖入式港池的面积，项目不占用盐河过水断面及水域面积。本项目施工期设置施工围堰，占用少量水域，形成一定的阻水效应，对所在水域的水文动力环境产生一定程度的影响，致使水流减缓，进而引起泥沙地冲淤变化，但由于本项目码头平面布置采用挖入式港池，随着施工结束，港池开放完成，围堰拆除，不再占用水面。

* + - 1. 疏浚及码头施工的水环境影响

（1）疏浚泥沙影响分析

根据“3.7.3”本项目航道挖泥船疏浚悬浮物源强为3.38m3/h，即0.94kg/s。

挖泥船挖泥过程中导致水体悬浮物浓度增加，由于疏浚工程在平水、枯水期进行疏浚施工，航道内河水流速较小，故影响范围一般可控制在作业点周围200m以内。本项目采用对底泥扰动较小的绞吸式挖泥船进行挖泥，类比苏南航道网整治工程实测资料，挖泥船绞刀SS浓度底部为300～350mg/L，表层为230～260mg/L，表层离绞刀50m距离处水中SS浓度增加值不超过50mg/L，表层距绞刀200m距离处水中SS浓度增加值不超过10mg/L。航道疏浚挖泥将造成航道内局部水域悬浮物浓度增加，对局部水环境、生态环境有一定的污染影响。随着水下施工的结束，这种影响将不复存在。

（2）疏浚扰动底泥重金属的影响分析

根据湖南大学2008年的研究中对底泥重金属形态及迁移转化成果，水体金属污染物以残渣态、酸可溶和铁锰氧化为主，三者之和在75%以上，其他形态的重金属含量很少，一般条件下底泥中的重金属难以析出。

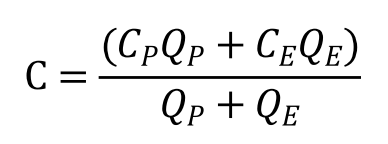
根据本报告“4.3.4章节”各疏浚工程区域的底泥现状监测结果表明，本工程所有疏浚整治工程区域的各监测因子均可达到相应的标准值，并且本工程航道疏浚整治等作业无酸性废水产生，同时水体中pH值正常，再悬浮于水体中的重金属形态不会发生新的改变，因此，航道疏浚整治除增加作业区下游局部水域水体中悬浮物浓度外，不会造成重金属污染。

* + - 1. 水下土方干化场退水的环境影响分析

本项目运至水下土方干化场土方量共约2.4万m3，根据工程分析可知，经围堰内初期沉淀后，其主要污染物为SS，若直接排入盐河，对盐河水质影响较大。本项目采取围堰、泄水口及后续沉淀池等措施（详见6.1.2章节）对疏浚的水下土方进行预处理，处理后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河。工程产生的水下方干化后弃方全部用于临时用地复耕恢复，水上方产生的弃方供建设项目填土和护岸、道路地基回填等。

根据工程分析，本项目水下土方干化场排水约1.2万m3，疏浚施工时间考虑为30d。

采用零维完全混合模式预测水下土方干化场排水对受纳水体悬浮物浓度的影响，因水下土方干化场排水已经沉淀池沉淀，故不再考虑悬浮物在河道中的沉降作用，预测模式如下：



式中：C——下游河水水质浓度增加值，mg/L

QP——排水流量，m3/s，根据本项目排水量及排水时间计算，考虑平均排水流量的10倍峰值计算，排水流量取0.046m3/s

CP——排水中污染物浓度，mg/L，参照“围滩吹填工程对水环境的影响分析”的研究结果，经沉淀处理后SS浓度为50mg/L

Q E ——河流流量，m3/s，流量21m3/s（按照年均流量的一半计）

CE——河流中污染物背景浓度，mg/L，根据本次评价对盐河三个断面的监测数据的平均值为14.83mg/L。

计算得水下土方干化场排水口下游水域悬浮物浓度为14.91mg/L，受纳水体悬浮物浓度增加量为0.08mg/L，水下土方干化场排水不会改变受纳水体的水质类别，对地表水环境的影响较小。

* + - 1. 施工船舶生活污水及船舶污水的水环境影响

根据工程分析，施工期船舶生活污水量为150t，污水中主要污染因子为COD和BOD5等；施工船舶污水主要污染因子为石油类等。根据有关规定，船舶应设置与船舶污水、生活污水发生量相当的储存容器，本项目船舶生活污水和含油废水经船主收集送港口部门指定单位收集并负责处理

* + - 1. 陆域施工生活污水

施工生活设施设置在陆域，本项目陆域施工生活污水依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理后回用，不排放。不会对周边水域产生不利影响，评价要求施工期严禁生活污水排入航道。

* + - 1. 施工车辆及机械冲洗废水

本项目施工车辆及机械冲洗废水经临时沉淀池预处理后接管至国能涟水一期热电联产项目厂区污水处理设施处理。不会对周边水域产生不利影响，评价要求施工期严禁生活污水排入航道。

* + 1. 噪声影响分析
       1. 施工期噪声源

施工期噪声源结果详见表3.7-7。

* + - 1. 扩散衰减预测

施工过程中使用的施工机械所产生的噪声主要属于中低频噪声，因此在预测其影响时可只考虑其扩散衰减，即预测模型可选用：

![形状

中度可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAJ0AAAA+CAYAAAAxrhmWAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQA5gsZ9AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAADHAAAAjwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAhwAAAP8AAAAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcAAAAO8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAL8AAAD/AAAAOAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACvAAAA/wAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJ8AAAAgAAAAAAAAAAAAAAAAAAAASAAAAP8AAAD/AAAAEAAAAAAAAAAAAAAAMAAAAP8AAACXAAAAAAAAAAAAAAAAAAAAUAAAAP8AAABQAAAAAAAAAAAAAAD/AAAA/wAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcAAAAPcAAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADfAAAAlwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA1wAAAJcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAA9wAAAN8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAO8AAADvAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAN8AAAAAAAAAAAAAAAAAAABoAAAA/wAAAEgAAAAAAAAAAAAAAAAAAAAwAAAA/wAAALcAAAAAAAAAAAAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAABAAAACPAAAAvwAAALcAAABgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADnAAAArwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACHAAAA/wAAACgAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAzIyAUwAAIABJREFUAAAAAAAAAAAAAAAAAEgAAAAIAAAAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAAAEAAAALgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwAAAAAAAAAAAAAAAAAAAACcAAAAAAAAA8AAAAAAAAAAAAAAAAAAAANgAAAAAAAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAAzwAAAFAAAACRAAAAmQAAAH8AAAD/AAAA/wAAAM8AAAAAAAAAUAAAABgAAADJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAEAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMEAAAAAAAAAWAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAARwAAAAAAAADBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAC/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAE8AAAAAAAAAuQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAAPgAAACJAAAAAAAAAAAAAAAAAAAAKAAAAAAAAADoAAAAAAAAAAAAAAAAAAAA+AAAAOgAAAAYAAAACAAAAPgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAI8AAAAgAAAAYQAAALAAAAAAAAAA8AAAAL8AAADAAAAAgQAAAAAAAAA/AAAAAAAAANgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAAAAAAAABPAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADvAAAA/wAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3wAAAP8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACvAAAAhwAAAAAAAAAAAAAAAAAAAAAAAADfAAAA/wAAACAAAAAAAAAAAAAAAAAAAAAAAAAA3wAAAP8AAAAYAAAAAAAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAzwAAAP8AAAAgAAAAAAAAAAAAAAAAAAAA7wAAAP8AAAAAAAAAAAAAAK8AAAD/AAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAA/wAAAPcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAP8AAADPAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACgAAAD/AAAAxwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAL8AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAL8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAA/wAAAAAAAAAAAAAA/wAAAP8AAAAgAAAAAAAAAAAAAACXAAAA/wAAAGgAAAAAAAAAAAAAABAAAAD3AAAA7wAAAAAAAAAAAAAA1wAAAP8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADnAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABHAAAAAAAAALgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAWAAAAAAAAAC5AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAB3AAAAUQAAAPgAAAAAAAAAAAAAAAAAAAAAAAAA6AAAAAAAAAAYAAAA4AAAAAAAAAAAAAAACAAAAAAAAADgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJEAAABQAAAAXwAAAKAAAAD4AAAAcAAAAAgAAACgAAAAAAAAAAAAAADwAAAAAAAAABAAAADoAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAABAAAAD4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAANcAAAD/AAAAQAAAAAAAAAAAAAAAAAAAAAAAAADPAAAAKAAAAP8AAAD/AAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADHAAAA/wAAADgAAAAAAAAAAAAAAAAAAAAAAAAA1wAAADAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAAlwAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABQAAAA/wAAAGgAAAAAAAAAAAAAAAAAAAA4AAAA/wAAAIcAAAAAAAAAAAAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAFAAAADfAAAA/wAAAP8AAAD/AAAAhwAAAAgAAAAAAAAAAAAAAKcAAAD/AAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAA/wAAANcAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAoAAAAKAAAAPgAAADIAAAAAAAAAAAAAAAAAAAAOAAAAAgAAADXAAAAAQAAAAAAAAAAAAAA/wAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAADgAAADwAAAAyAAAAAAAAAAAAAAAAAAAADgAAAAIAAAAzwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAHgAAAB5AAAA8AAAAAAAAAAAAAAAQAAAAKcAAAAZAAAAAAAAALgAAADoAAAAVwAAAJgAAAAAAAAAAAAAAEAAAAAAAAAAqQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAAA+AAAACEAAAAIAAAAIAAAANgAAAAAAAAAAAAAAAAAAAAAAAAAyQAAAFgAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAAAAAAA4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAKcAAAD/AAAArwAAAAAAAAAAAAAAAAAAACgAAADfAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAACnAAAA/wAAAK8AAAAAAAAAAAAAAAAAAAAgAAAA3wAAAIcAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAAC3AAAAxwAAAL8AAAC/AAAAvwAAAMcAAAD/AAAAnwAAAAAAAAAAAAAAAAAAAEAAAAD3AAAAWAAAAAAAAABAAAAA7wAAAJcAAAAAAAAAAAAAAAgAAAD/AAAA/wAAADgAAAAAAAAAAAAAAL8AAADnAAAAvwAAAL8AAAC/AAAAvwAAAL8AAABwAAAAEAAAAAAAAAAgAAAA/wAAAIcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAAP8AAABQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGgAAADnAAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAAoAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABwAAAA5wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAOAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAtwAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAABQAAAAAAAAAAAAAAAAAAAAAAAAAGgAAADfAAAA/wAAANcAAAB4AAAAAAAAAAAAAAAAAAAA3wAAAP8AAAD/AAAA/wAAAAAAAAAAAAAAaAAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAACvAAAAAAAAAAAAAACvAAAA3wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACnAAAA3wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAKAAAABgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACgAAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAAAAAAAAAAP8AAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMgAAAD4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAA6AAAAAAAAAAAAAAAAAAAAAAAAAA4AAAACAAAAAAAAAAAAAAAwAAAAAAAAAAwAAAASAAAAMgAAAAAAAAAAAAAAAAAAAAAAAAARwAAAHgAAAABAAAAAAAAADAAAADPAAAAUQAAALAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAANcAAABpAAAAoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUAAAAFAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAAxwAAAAAAAAAAAAAAAAAAAGgAAADvAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAAC/AAAAjwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADPAAAArwAAADAAAAAAAAAAAAAAAAAAAAAAAAAASAAAALcAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAHAAAADnAAAAUAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAAvwAAAK8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACgAAACAAAAAvwAAAO8AAADXAAAA1wAAANcAAACAAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAC3AAAAGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAM8AAABIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAtXgyLAAAgAElEQVQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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式中：L1、L2——距声源1、2处的等效A声级，dB(A)；

g r1、r2——接收点距声源的距离，m。

由上式推算出噪声值随距离增加而衰减的量DL：

![形状

中度可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAMwAAAA+CAYAAABnePTgAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQDZgiZ9AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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AAAAAAAAAAAAAAAAAAAAABgAAADfAAAAeAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGAAAAOcAAACPAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABYAAAA9wAAADgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAA/wAAAHgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABwAAAA/wAAAJcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAA/wAAAJcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAAAP8AAACPAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAGgAAADfAAAAcAAAAEAAAACXAAAA7wAAAP8AAADHAAAAAAAAAAAAAAAAAAAAAAAAAI8AAAD3AAAACAAAAAAAAAAAAAAAvwAAAM8AAAAAAAAAAAAAAAAAAAAAAAAA/wAAAP8AAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAADPAAAAjwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJcAAAD/AAAAKAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAHAAAADXAAAACAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAA1wAAAP8AAADfAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAArwAAAP8AAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAvwAAAP8AAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAL8AAAD/AAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACfAAAAEAAAAAAAAAAAAAAAAAAAAEgAAAD/AAAA/wAAABAAAAAAAAAAAAAAADgAAAD/AAAAlwAAAAAAAAAAAAAAAAAAAFgAAAD/AAAAUAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAA9wAAABgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAlwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA1wAAAIcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAcAAAAIAAAADPAAAA/wAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAO8AAADvAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAPcAAADvAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAD3AAAA3wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAN8AAAAAAAAAAAAAAAAAAACAAAAA/wAAAEgAAAAAAAAAAAAAAAAAAAA4AAAA/wAAALcAAAAAAAAAAAAAAAAAAAD/AAAA/wAAACAAAAAAAAAAAAAAAAAAAAAQAAAAjwAAAL8AAAC3AAAAWAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAA5wAAAK8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAP8AAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIcAAAD/AAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAN8AAAAYAAAAaAAAAP8AAACnAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAD/AAAApwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFgAAAD/AAAApwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABYAAAA/wAAAJ8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAACfAAAAAAAAAAAAAAAAAAAAtwAAAP8AAAA4AAAAAAAAAAAAAAAAAAAAEAAAAP8AAADXAAAAAAAAAAAAAAAAAAAA/wAAAP8AAAAgAAAAAAAAAAAAAAAgAAAA5wAAAN8AAABQAAAAUAAAAN8AAAD/AAAA/wAAANcAAAAAAAAAaAAAAP8AAAB4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABIAAAA/wAAAIcAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAFAAAACwAAAA6AAAAKAAAACPAAAAUAAAABgAAADoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABPAAAAAAAAALkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAvwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABZAAAA6AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABHAAAAAAAAALkAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAARwAAAAAAAADBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAvwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABZAAAA6AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAD4AAAAiQAAAAAAAAAAAAAAAAAAABgAAAAAAAAA6AAAAAAAAAAAAAAAAAAAAPAAAADoAAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAhwAAABgAAABhAAAAsAAAAAAAAADoAAAAxwAAAMAAAACBAAAAAAAAAC8AAAAAAAAA2AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6AAAAAAAAABQAAAAeQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADPAAAAKAAAAAAAAAAAAAAAlwAAAP8AAABwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA3wAAAP8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA7wAAAP8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAO8AAAD/AAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACvAAAAhwAAAAAAAAAAAAAAAAAAAAAAAADfAAAA/wAAACAAAAAAAAAAAAAAAAAAAAAAAAAA3wAAAP8AAAAAAAAAAAAAAAAAAAD/AAAA/wAAACAAAAAAAAAAAAAAAM8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAP8AAADvAAAACAAAAAAAAAC3AAAA/wAAADAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABgAAAD/AAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABIAAAArwAAAAAAAAAAAAAAAAAAADgAAAD/AAAAzwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKAAAAP8AAADHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAQAAAAP8AAADHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAD/AAAAzwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABQAAAAvwAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAvwAAAP8AAAAgAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAAAAAAAAAAAAAAAAAA/wAAAP8AAAAgAAAAAAAAAAAAAACfAAAA/wAAAGgAAAAAAAAAAAAAAAAAAAD/AAAA/wAAAAgAAAAAAAAA1wAAAP8AAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAP8AAAAYAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAZwAAAIEAAAAAAAAAAAAAAAAAAADIAAAA0AAAADAAAAA4AAD7sH2oAAAgAElEQVQAyAAAAAAAAAAAAAAAAAAAAFgAAAAAAAAAuQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEcAAAAAAAAAuQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABHAAAAAAAAALgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAgAAAAbwAAAFEAAAD4AAAAAAAAAAAAAAAAAAAAAAAAAOgAAAAAAAAAGAAAAOAAAAAAAAAAAAAAABAAAAAAAAAA4AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAkQAAAEgAAABXAAAAoAAAAPgAAABoAAAAAAAAAKAAAAD4AAAAAAAAAPAAAAAAAAAAEAAAAOgAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAAMcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAHAAAAD/AAAAnwAAAAAAAAAAAAAAAAAAAAAAAADHAAAA/wAAADgAAAAAAAAAAAAAAAAAAAAAAAAA1wAAADAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADXAAAA/wAAADgAAAAAAAAAAAAAAAAAAAAAAAAAzwAAADAAAAAAAAAA/wAAAP8AAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA1wAAAP8AAABAAAAAAAAAAAAAAAAAAAAAAAAAAM8AAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAIAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAAlwAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABYAAAA/wAAAGgAAAAAAAAAAAAAAAAAAABAAAAA/wAAAIcAAAAAAAAAAAAAAAAAAAD/AAAA/wAAACAAAAAAAAAAAAAAAAAAAABQAAAA3wAAAP8AAAD/AAAA/wAAAIcAAAAIAAAAAAAAAAAAAACnAAAA/wAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAD/AAAA1wAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAHcAAACJAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACgAAAAhwAAAFgAAABpAAAA+AAAAAAAAAAYAAAAOAAAAPAAAADIAAAAAAAAAAAAAAAAAAAAOAAAAAgAAADQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAoAAAAKAAAAPAAAADIAAAAAAAAAAAAAAAAAAAAUAAAABAAAADQAAAA/wAAAAEAAAAAAAAAAAAAAP8AAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKAAAACgAAAD4AAAAyAAAAAAAAAAAAAAAAAAAADgAAAAwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABBAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAOgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAAfwAAAHkAAADwAAAAAAAAAAAAAABAAAAApwAAABkAAAAAAAAAsAAAAPAAAABPAAAAmAAAAAAAAAAAAAAATwAAAPgAAAChAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwAAAAEAAAACEAAAAIAAAAIAAAANgAAAAAAAAAAAAAAAAAAAAAAAAAyQAAAFgAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAYAAAAAAAAAOAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABgAAADHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJ8AAAD/AAAAaAAAAAAAAAAIAAAApwAAAP8AAACvAAAAAAAAAAAAAAAAAAAAKAAAAN8AAACHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAApwAAAP8AAACvAAAAAAAAAAAAAAAAAAAAKAAAAN8AAACHAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAKcAAAD/AAAArwAAAAAAAAAAAAAAAAAAACAAAADfAAAAhwAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAIAAAAtwAAAMcAAAC/AAAAvwAAAL8AAADHAAAA/wAAAJ8AAAAAAAAAAAAAAAAAAABIAAAA/wAAAFgAAAAAAAAAQAAAAO8AAAB4AAAAAAAAAAAAAAAAAAAACAAAAP8AAAD/AAAAOAAAAAAAAAAAAAAAvwAAAOcAAAC/AAAAvwAAAL8AAAC/AAAAvwAAAHAAAAAIAAAAAAAAADAAAAD/AAAAhwAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAUAAAAP8AAABQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACPAAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAM8AAABoAAAA5wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAOAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABoAAAA5wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAOAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAhwAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAADAAAAD/AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAtwAAAP8AAAD/AAAA/wAAAP8AAAD/AAAA/wAAAP8AAABQAAAAAAAAAAAAAAAAAAAAAAAAAGgAAADfAAAA/wAAANcAAABgAAAAAAAAAAAAAAAAAAAAAAAAAN8AAAD/AAAA/wAAAP8AAAAAAAAAAAAAAGgAAAD3AAAA/wAAAP8AAAD/AAAA/wAAAP8AAAD/AAAAxwAAAAAAAAAAAAAAvwAAAOcAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAJ8AAADfAAAAAAAAAAAAAAAAAAAAAAAAAAABAAAAAAAAAAAAAAAAAAAAOAAAAAgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA6AAAABgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAKAAAABgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAABAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACgAAAAYAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAAAAA/wAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAEAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAyAAAAPgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAABgAAADoAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAAACAAAAAAAAAAAAAAAwAAAAAAAAAAwAAAAUAAAAMAAAAAAAAAAAAAAAAAAAAAAAAAAVwAAAGAAAAAJAAAAAAAAADAAAADPAAAAWQAAAKgAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAADXAAAAaQAAAKAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAP8AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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得出噪声值随距离衰减的结果见下表。

施工噪声值随距离的衰减关系表

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 距离，m | 1 | 10 | 50 | 100 | 150 | 200 | 250 | 400 | 600 |
| DL,dB(A) | 0 | 20 | 34 | 40 | 43 | 46 | 48 | 52 | 57 |

为了分析施工设备的噪声影响，现将不同等级声源在不同距离的影响值分析计算出来，列于下表。

施工噪声值随距离的衰减

| **声源**  **距离** | **85** | **90** | **95** | **100** | **105** | **110** | **115** | **120** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 65.0 | 70.0 | 75.0 | 80.0 | 85.0 | 90.0 | 95.0 | 100.0 |
| 30 | 59.0 | 64.0 | 69.0 | 74.0 | 79.0 | 84.0 | 89.0 | 94.0 |
| 50 | 51.0 | 56.0 | 61.0 | 66.0 | 71.0 | 76.0 | 81.0 | 86.0 |
| 75 | 47.5 | 52.5 | 57.5 | 62.5 | 17.5 | 72.5 | 77.5 | 82.5 |
| 100 | 45.0 | 50.0 | 55.0 | 60.0 | 65.0 | 70.0 | 75.0 | 80.0 |
| 125 | 43.1 | 48.1 | 53.1 | 58.1 | 63.1 | 68.1 | 73.1 | 78.1 |
| 150 | 41.5 | 46.5 | 51.5 | 56.5 | 61.5 | 66.5 | 71.5 | 76.5 |
| 200 | 39.0 | 44.0 | 49.0 | 54.0 | 59.0 | 64.0 | 69.0 | 74.0 |
| 250 | 27.0 | 42.0 | 47.0 | 52.0 | 57.0 | 62.0 | 67.0 | 72.0 |
| 300 | 35.5 | 40.5 | 45.5 | 50.5 | 55.5 | 60.5 | 65.5 | 70.5 |
| 400 | 33.0 | 38.0 | 43.0 | 48.0 | 53.0 | 58.0 | 63.0 | 68.0 |
| 500 | 31.0 | 36.0 | 41.0 | 46.0 | 51.0 | 56.0 | 61.0 | 66.0 |

由上表可见，按照多种施工机械同时施工白天最大噪声值120dB计算，多种施工机械同时作业产生的噪声将分别对距施工场界昼间最大约300m范围内影响超过《建筑施工场界环境噪声排放标准》（GB12523-2011）中的要求（昼间限值为70dB），夜间最大噪声值按照105dB计算，则夜间最大300m范围内影响超过《建筑施工场界环境噪声排放标准》（GB12523-2011）中的要求（夜间限值为55dB）。

因此，本工程施工过程中应尽量避免夜间施工，如因特殊情况必须夜间施工，施工单位应按规定及时办理相关手续，并做好相应的防护措施。在施工期夜间打桩机、搅拌机、振捣机等高噪声应禁止。其他机械的施工应合理安排，限制夜间施工的时间。尽管施工噪声将对环境产生一定的不利影响，但是通过加强管理，严禁部分机械夜间施工等措施可将其影响降低到最低程度。

本工程300m范围内不存在声环境敏感目标分布。

* + 1. 固废影响分析

施工期间产生的建筑垃圾如不及时处理，不仅影响景观，而且在遇大风天气时，将产生扬尘。本项目施工期固废主要包括两部分，一部分是主体工程港池疏浚、陆域填挖时产生的废弃土石方；另一部分是施工营地产生的生活垃圾和建筑垃圾和废油泥。

本项目土石方数量主要包括前沿码头区、后方陆域区及进港道路区施工等。工程产生的水下方干化后弃方全部用于临时用地恢复，水上方产生的弃方供建设项目填土和护岸、道路地基回填等。对于施工期生活垃圾，本项目依托国能涟水一期热电联产项目施工用地，不再新设。生活垃圾经垃圾桶收集后由环卫部门定期拖运至垃圾处理厂处理。

施工期间建筑垃圾主要有建设过程产生的废渣土、混凝土碎块、废弃钢筋等。建筑垃圾如废弃钢筋能回收利用的（如废弃钢筋）回收利用，不能回收利用的（如混凝土碎块）运至涟水县城市管理部门指定的建筑垃圾消纳场处理，对周边环境影响是可以接受的。

施工期废油泥主要是由车辆、机械设备冲洗隔油沉淀处理产生的，属于危险固废，委托有资质单位处理。

在做好以上收集处理措施后，本项目施工期固体废物对周边环境影响是可以接受的。

* + 1. 生态环境影响分析
       1. 对陆域生态的影响分析

**（1）对陆域植被的影响**

本项目工程不包括吹填造陆，项目用地为国能涟水一期热电项目预留建设用地。因此，项目建设破坏的植被不会对沿线生态系统物种的丰度和生态功能产生显著影响。

**（2）对陆生动物的影响**

根据现场调查，评价区内未发现国家级重点陆生保护动物和《中国濒危野生动物红皮书》记载中，所在地野生动物资源基本是常见鸟类和一些小型兽类。由于这些鸟类、兽类活动能力很强，活动范围较大，工程施工如果对其栖息地产生影响，它们很容易转移到别处，不会因此造成数量和种类的减少。

**（3）对陆域生态环境的影响**

本工程在施工期间存在水下土方干化场恶臭废气、施工粉尘、施工车辆和设备排放的尾气以及施工期生活垃圾污染等，如管理不当，会对周边生态环境造成一定的影响。虽然这些因素带来的影响是局部的、短期的，但仍需通过提高施工组织管理水平、加强施工期的环境监管等措施，促进和监督施工单位在保证工程质量与进度的同时，确保施工行为对周边生态环境的影响减至最低。建设方要与施工单位签订环保责任书，并会同有关部门加强施工环保监理。

* + - 1. 施工对水域生态的影响分析

（1）对水域水质的影响

码头建设过程中，可能对水质造成影响的施工类型主要来源于码头桩基施工、疏浚挖泥对水体的扰动对水环境造成影响，同时泥浆释放的部分污染物质也可能对水环境造成一定的影响，其主要污染物质为悬浮物。

水下施工过程会引起施工水域内的水质浑浊，将使水中的阳光透射率下降，从而使得该水域内的游泳生物迁移到别处，同时不同程度受到损伤，尤其是滤食性浮游生物和进行光合作用的浮游植物受到的影响较大。这主要是由于施工作业引起水中的悬浮物增多，悬浮颗粒会黏附在动物体表，干扰其正常的生理功能，水体透明度下降，对浮游植物的光合作用不利，进而影响其生长，降低其数量，导致水域内的初级生产力水平下降。

本项目水域施工采用围堰法，将施工区域与水体隔离，最大限度地减少悬浮物的产生。类比同类工程，疏浚产生的泥沙在河道内很快沉降，超标范围仅限在施工点下游几百米范围内，随着施工的结束，影响也立即消除。对河流水质的影响较小。

因此，本项目的建设不会对河流水质产生显著不利影响。

（2）对底栖生物的影响分析

项目疏浚会将大量的底泥从水域转运至陆地填埋，造成其中包含的一定量的底栖生物因脱离水体而死亡。绝大多数底栖生物生活在河床表层30cm沉积物中，疏浚的面积与深度直接影响损害的底栖动物的数量。有关研究指出，如果疏浚深度在7～13cm时，底栖生物可能在15d后得到恢复，但是如果疏浚深度为20cm时，疏浚后60d恢复才会开始。

随着疏浚作业的结束，恢复稳定的新河床成为底栖生物新的生境，随水流迁移的底栖生物在施工区域内逐步生存繁殖，原有的底栖生物群落得以逐步恢复。

（3）对浮游生物的影响分析

疏浚和打桩过程扰动局部水体，造成水中悬浮物浓度升高，降低了水的透光性。光强减少，将阻碍浮游植物的光合作用，从而降低水体初级生产力，使浮游植物生物量下降，进而通过水生食物链影响浮游动物和鱼类的生物量。

根据有关实验结论，水中过量的悬浮物会堵塞桡足类等浮游动物的食物过滤系统和消化器官，尤以悬浮物浓度达到300mg/L以上、悬浮物为黏性淤泥时为甚，如只能分辨颗粒大小的滤食性浮游动物可能会摄入大量的泥沙，造成其内部系统紊乱而亡；水中悬浮物浓度的增加会对桡足类等浮游动物的繁殖和存活存在显著的抑制，如具有依据光线强弱变化而进行昼夜垂直迁移习性的球状腹水蚤等部分地区优势桡足类动物可能会因为水体的透明度降低，造成其生活习性的混乱，进而破坏其生理功能而亡。

本项目影响的浮游生物均为沿线水域内的常见物种，具有普遍性的特点，适应环境的能力很强。施工建设可能暂时会降低施工区域内浮游生物的生物量，但这种影响是暂时的，随着施工的结束，原有浮游生物群落会逐渐得到恢复。

（4）对鱼类的影响分析

水中悬浮物质含量过高，使鱼类的腮腺积聚泥沙微粒，严重损害腮部的滤水和呼吸功能，甚至导致鱼类窒息死亡。不同的鱼类对悬浮物质含量高低的耐受范围有所区别。据有关实验数据，悬浮物质的含量水平为8×104mg/L 时，鱼类最多只能存活一天；含量水平为6000mg/L 时，最多能存活一周；若每天做短时间搅拌，使沉淀的淤泥泛起，保持悬浮物质达到 2300mg/L，则鱼类能存活 3～4 周。通常认为，悬浮物质的含量达到200mg/L 以下及影响期较短时，不会导致鱼类直接死亡。

本项目疏浚工程涉及的盐河河道主要功能是航运、农灌和排涝，相应的鱼类资源较少，无水产养殖功能，无鱼类产卵场、越冬场、索饵场和洄游通道。施工造成的悬浮物增加浓度远小于200mg/L，影响范围和影响时间较小，未达到造成鱼类死亡的阈值。由于游泳生物的活动能力较强，施工作业对鱼类等游泳生物的影响更多表现为驱离效应，对工程水域内鱼类的种类和数量不会产生显著不利影响。

综上所述，本项目建设会造成底栖生物、浮游生物等水生生物量的损失，但对水生生物生境的影响范围、影响程度、影响时间较小，随着施工的结束，水生生境得以恢复，原有的水生生物群落也会逐步恢复，项目建设对水生生态的影响较小。

由于本项目涉及的盐河河道主要功能是航运、农灌和排涝，相应的水生生物量较少，因此施工期对水生生态环境的影响较小。

* + - 1. 水土流失

施工期水土流失主要是由于场地平整以及土方堆存造成的。项目所在区域降雨集中，雨季暴雨较多，降雨强度较大，均为施工地土壤水力侵蚀的发生提供前提条件。在施工过程中，由于土壤松散和裸露，在雨季容易遭受雨滴溅击和地表径流冲刷而将以面蚀和沟蚀的方式产生明显的水土流失，特别是在暴雨的天气下施工，造成水土流失将更为严重。其可能造成的水土流失危害主要有以下几个方面：

①增加拟建港区的泥沙淤积进而造成水体淤积。

②影响土地生产力：施工过程中的各项施工设施，占用一定的土地，扰动原地形地貌，损坏原有表层土壤结构和地表植被，使地表失去良好的保护层，拦截地表径流能力下降，遇到降雨，大部分降雨直接打在土壤表面，若不采取措施有效遏制水土流失现象的发生，将使土壤中的氮、磷等有机物及无机盐含量迅速下降，土壤动植物、微生物以及它们的衍生资源减少，造成土地生产力下降。

③水域功能下降：伴随水土流失现象的发生，悬浮物及其他有机、无机污染物质随地表径流进入盐河，使所在地水域功能下降。但这一影响只是暂时的，将随着时间的推移逐渐得到恢复。

因此，建设单位在施工阶段，应严格按照设计要求确定开挖、填筑的坡度，确保边坡稳定；在施工场地设置截洪沟、溢洪道等；科学规划施工场地布局，合理安排施工时段，避免在暴雨期间进行开挖、填筑等扰动较大的施工活动。

施工结束后，必须及时对裸露地表采取绿化措施，以恢复自然景观，减少水土流失；建设单位应在道路的路边种植沿阶草，防止道路形成的地表径流对草地的侵蚀；对由于项目建设使生态环境受到的不可避免或暂时性的影响，应通过选择合适的植物种类改善介质或利用物理化学方法改良介质等生态恢复的技术对生态环境予以恢复。到了施工后期，随着绿化景观的建设，植物盖度的提高，配套设施的设立，水土流失过程将会有所减弱。

* 1. 营运期环境影响预测与评价
     1. 废气影响预测及评价
        1. 预测估算

本项目废气主要为卸船作业产生的粉尘、转运站粉尘、船舶尾气。根据本项目工程分析，船舶尾气产生废气较少，船舶废气污染物经大气稀释扩散后对周围大气环境影响较小，本次评价不进行定量分析。项目废气源强见表5.2-1。

本项目正常工况下面源排放参数（矩形面源）

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 污染源 | 面源起点坐标/m | | 面源海拔 | 面源长度/m | 面源宽度/m | 与正北夹角/（°） | 面源有效排放高度/m | 年排放小时数 | 排放工况 | 污染物排放速率/(kg/h) | | | | |
| X | Y | 高度/m | TSP | PM10 | PM2.5 | SO2 | NOx |
| 1#泊位卸船 | -20 | 108 | 5 | 70 | 40 | 35 | 25 | 3636 | 正常 | 0.51 | 0.10 | 0.021 |  |  |
| 2#泊位卸船 | 25 | 155 | 5 | 70 | 40 | 35 | 25 | 3636 | 正常 | 0.51 | 0.10 | 0.021 |  |  |
| 船舶尾气 | 0 | 0 | 3 | 182 | 90 | 35 | 25 | 2240 | 正常 |  |  |  | 0.0010 | 0.082 |

采用估算模式预测结果详见表5.2-2和表5.2-3。

本项目正常工况面源排放大气污染物预测结果

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 下风向距离 | 1泊位卸船 | | | | | | 船舶尾气面源 | | | | 2泊位卸船 | | | | | |
| TSP浓度（μg/m³） | TSP占标率（%） | PM10浓度（μg/m³） | PM10占标率（%） | PM2.5浓度（μg/m³） | PM2.5占标率（%） | SO2浓度（μg/m³） | SO2占标率（%） | NO2浓度（μg/m³） | NO2占标率（%） | TSP浓度（μg/m³） | TSP占标率（%） | PM10浓度（μg/m³） | PM10占标率（%） | PM2.5浓度（μg/m³） | PM2.5占标率（%） |
| 50 | 83.383 | 9.2648 | 16.3496 | 3.6332 | 3.4334 | 1.526 | 0.1625 | 0.0325 | 13.3266 | 6.6633 | 83.383 | 9.2648 | 16.3496 | 3.6332 | 3.4334 | 1.526 |
| 100 | 81.496 | 9.0551 | 15.9796 | 3.551 | 3.3557 | 1.4914 | 0.2104 | 0.0421 | 17.2561 | 8.628 | 81.496 | 9.0551 | 15.9796 | 3.551 | 3.3557 | 1.4914 |
| 200 | 70.983 | 7.887 | 13.9182 | 3.0929 | 2.9228 | 1.299 | 0.1996 | 0.0399 | 16.3688 | 8.1844 | 70.983 | 7.887 | 13.9182 | 3.0929 | 2.9228 | 1.299 |
| 500 | 37.259 | 4.1399 | 7.3057 | 1.6235 | 1.5342 | 0.6819 | 0.1014 | 0.0203 | 8.3164 | 4.1582 | 37.259 | 4.1399 | 7.3057 | 1.6235 | 1.5342 | 0.6819 |
| 800 | 23.766 | 2.6407 | 4.66 | 1.0356 | 0.9786 | 0.4349 | 0.0613 | 0.0123 | 5.0294 | 2.5147 | 23.766 | 2.6407 | 4.66 | 1.0356 | 0.9786 | 0.4349 |
| 1200 | 15.021 | 1.669 | 2.9453 | 0.6545 | 0.6185 | 0.2749 | 0.0378 | 0.0076 | 3.0992 | 1.5496 | 15.021 | 1.669 | 2.9453 | 0.6545 | 0.6185 | 0.2749 |
| 2000 | 8.0619 | 0.8958 | 1.5808 | 0.3513 | 0.332 | 0.1475 | 0.0202 | 0.004 | 1.6556 | 0.8278 | 8.0619 | 0.8958 | 1.5808 | 0.3513 | 0.332 | 0.1475 |
| 4000 | 3.3159 | 0.3684 | 0.6502 | 0.1445 | 0.1365 | 0.0607 | 0.008 | 0.0016 | 0.6575 | 0.3288 | 3.3159 | 0.3684 | 0.6502 | 0.1445 | 0.1365 | 0.0607 |
| 5000 | 2.4759 | 0.2751 | 0.4855 | 0.1079 | 0.1019 | 0.0453 | 0.0059 | 0.0012 | 0.4872 | 0.2436 | 2.4759 | 0.2751 | 0.4855 | 0.1079 | 0.1019 | 0.0453 |
| 10000 | 0.989 | 0.1099 | 0.1939 | 0.0431 | 0.0407 | 0.0181 | 0.0023 | 0.0005 | 0.1912 | 0.0956 | 0.989 | 0.1099 | 0.1939 | 0.0431 | 0.0407 | 0.0181 |
| 下风向最大浓度 | 84.198 | 9.3553 | 16.5094 | 3.6688 | 3.467 | 1.5409 | 0.2146 | 0.0429 | 17.598 | 8.799 | 84.198 | 9.3553 | 16.5094 | 3.6688 | 3.467 | 1.5409 |
| 下风向最大浓度出现距离 | 57 | 57 | 57 | 57 | 57 | 57 | 144 | 144 | 144 | 144 | 57 | 57 | 57 | 57 | 57 | 57 |
| D10%最远距离 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |

由上表可知，项目所有污染源正常工况下无组织排放细颗粒物的占标率最大，为9.355%，根据《环境影响评价技术导则 大气环境》（HJ2.2-2018），大气评价等级为二级，环境影响可接受，不进行进一步预测与评价，只对污染物排放量进行核算。项目大气污染物排放量核算详见表5.2-3。

项目大气污染物无组织排放量核算

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 | 污染物 | 浓度限值/（mg/m3） |
| 1 | 码头 | 汽车及机械燃油废气 | SO2 | / | 《大气污染物综合排放标准》（DB32/4041-2021）表3 | SO2 | 0.4 | 0.00056 |
| 2 | CO | CO | 10 | 0.33 |
| 3 | NOx | NOx | 0.12 | 0.046 |
| 5 | 卸船粉尘 | 颗粒物 | 颗粒物 | 0.5 | 3.72 |
| 无组织排放总计 | | | | | | | | |
| 无组织排放总计 | | | | SO2 | | | 0.00056 | |
| CO | | | 0.33 | |
| NOx | | | 0.046 | |
| 颗粒物（TSP） | | | 3.72 | |

根据以上预测结果，采取措施后，本项目无组织排放的颗粒物、SO2、NOx等最大落地浓度占标率均未超过质量标准的10%，对周围大气环境影响较小，本项目大气评价等级为二级，不需要做进一步预测。

* + - 1. 大气环境防护距离

本项目大气评价等级为二级，无需设置大气环境防护距离。

* + - 1. 卫生环境防护距离

按照“工程分析”核算的有害气体无组织排放量，根据《大气有害物质无组织排放卫生防护距离推导技术导则》（GB/T39499-2020）的有关规定，当目标企业无组织排放存在多种有毒有害污染物时，基于单个污染物的等标排放量（Qc/Cm）计算结果，优先选择等标排放量最大的污染物1～2种为企业无组织排放的主要特征大气有害物质。当前两种污染物的等标排放量相差在10%以内时，需要同时选择这两种特征大气有害物质分别计算卫生防护距离初值，本项目无组织污染物等标排放量详见表5.2-4。

无组织废气等标排放量计算结果一览表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 面源 | 污染物 | 源强Qc（kg/h） | 标准限值cm厘米计算（mg/Nm3） | Qc/Cm |
| 港区 | SO2 | 0.0010 | 0.5 | 0.002 |
| CO | 0.59 | 10 | 0.059 |
| NOx | 0.082 | 0.2 | 0.408 |
| 颗粒物（TSP） | 1.022 | 2 | 0.511 |

注：项目评价区为二类功能区，大气基本污染物SO2、NO2、PM10、PM2.5、CO、O3及NOx、TSP执行《环境空气质量标准》（GB3095-2012）及其修改单的二级标准。

由上表可知，本项目面源等标排放量最大的大气污染物为颗粒物（TSP），且同个面源多种污染物等标排放量相差超过10%，故本次评价选择颗粒物（TSP）为特征大气有害物质分别计算厂区的卫生防护距离。

根据《大气有害物质无组织排放卫生防护距离推导技术导则》（GB/T39499-2020）的有关规定，无组织排放有害气体的生产单元（生产区、车间或工段）与敏感区之间应设置卫生防护距离，计算公式如下：



式中：Qc——大气有害物质的无组织排放量，单位为千克每小时（kg/h）；

Cm——大气有害物质环境空气质量的标准限值，单位为毫克每立方米（mg/m3）；

*L*——大气有害物质卫生防护距离初值，单位为米（m）；

*g*——大气有害物质无组织排放源所在生产单元的等效半径，单位为米（m），*g* =(*S*/p)0.5m；

*A.B、C、D*——卫生防护距离初值计算系数，无因次，根据工业企业所在地区近5年平均风速及大气污染源构成类别从下表查取。

本项目面源颗粒物排放量小于江苏省地标《大气污染物综合排放标准》（DB32/4041-2021）表1中标准规定的允许排放量的1/3，按Ⅱ类进行取值。同时近5年平均风速为2.56m/s，本项目卫生防护距离计算系数取值见下表。

卫生防护距离计算系数

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 计  算  系  数 | 5年平均风速  m/s | 卫生防护距离L，m | | | | | | | | |
| L≤1000 | | | 1000<L≤2000 | | | L>2000 | | |
| 工业大气污染源构成类别 | | | | | | | | |
| Ⅰ | Ⅱ | Ⅲ | Ⅰ | Ⅱ | Ⅲ | Ⅰ | Ⅱ | Ⅲ |
| A | <2 | 400 | 400 | 400 | 400 | 400 | 400 | 80 | 80 | 80 |
| 2~4 | 700 | 470 | 350 | 700 | 470 | 350 | 380 | 250 | 190 |
| >4 | 530 | 350 | 260 | 530 | 350 | 260 | 290 | 190 | 140 |
| B | <2 | 0.01 | | | 0.015 | | | 0.015 | | |
| >2 | 0.021 | | | 0.036 | | | 0.036 | | |
| C | <2 | 1.85 | | | 1.79 | | | 1.79 | | |
| >2 | 1.85 | | | 1.77 | | | 1.77 | | |
| D | <2 | 0.78 | | | 0.78 | | | 0.57 | | |
| >2 | 0.84 | | | 0.84 | | | 0.76 | | |

卫生防护距离计算结果见表5.2-6。

本项目卫生防护距离计算结果表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 污染源 | 污染物 | 排放源强  (kg/h) | 面源长度（m） | 面源宽度（m） | 卫生防护距离计算结果（m） | 卫生防护距离取值（m） |
| 港区 | 颗粒物（TSP） | 1.022 | 182 | 90 | 24.604 | 50 |

经计算，颗粒物（TSP）计算的防护距离均为50m，根据确定卫生防护距离的要求，确定本项目厂界需设置50m的卫生防护距离。根据现场调查50m卫生防护距离内无环境保护目标。

建设项目大气环境影响评价自查表详见表5.2.1-7。

建设项目大气环境影响评价自查表

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 工作内容 | | 自查项目 | | | | | | | | | | | | |
| 评价等级与范围 | 评价等级 | 一级□ | | | | 二级☑ | | | | | | 三级□ | | |
| 评价范围 | 边长=50km□ | | | | 边长5～50km□ | | | | | | 边长=5km☑ | | |
| 评价因子 | SO2+NOx排放量 | ≥2000t/a□ | | | | 500~2000t/a□ | | | | | | <500t/a☑ | | |
| 评价因子 | 基本污染物（SO2、NO2、PM10、CO、O3、PM2.5）  其他污染物（H2S，NH3） | | | | | | | | 包括二次PM2.5□  不包括二次PM2.5☑ | | | | |
| 评价标准 | 评价标准 | 国家标准☑ | | | 地方标准£ | | | | | 附录D☑ | | 其他标准☑ | | |
| 现状评价 | 环境功能区 | 一类区£ | | | | 二类区☑ | | | | | | 一类区和二类区□ | | |
| 评价基准年 | （2022）年 | | | | | | | | | | | | |
| 环境空气质量现状调查数据来源 | 长期例行监测数据□ | | | | 主管部门发布的数据☑ | | | | | | 现状补充监测☑ | | |
| 现状评价 | 达标区□ | | | | | | | | 不达标区☑ | | | | |
| 污染源调查 | 调查内容 | 本项目正常排放源R  本项目非正常排放源☑  现有污染源□ | | | | 拟替代的污染源□ | | | | 其他在建、拟建项目污染源□ | | | 区域污染源□ | |
| 大气环境影响预测与评价 | 预测模型 | AERMOD  □ | | ADMS  □ | | AUSTAL2000□ | | EDMS/AEDT  □ | | CALPUFF  □ | | 网络模型  □ | | 其他□ |
| 预测范围 | 边长≥50km□ | | | | 边长5～50km□ | | | | | | 边长=5km□ | | |
| 预测因子 | 预测因子（ ） | | | | | | | | | 包括二次PM2.5□  不包括二次PM2.5□ | | | |
| 正常排放短期浓度贡献值 | C本项目最大占标率≤100%□ | | | | | | | | | C本项目最大占标率＞100%□ | | | |
| 正常排放年均浓度贡献值 | 一类区 | C本项目最大占标率≤10%□ | | | | | | | | C本项目最大占标率＞10%□ | | | |
| 二类区 | C本项目最大占标率≤30%□ | | | | | | | | C本项目最大占标率＞30%□ | | | |
| 非正常排放1h浓度贡献值 | 非正常持续时长（1）h | | | | | C非正常最大占标率≤100%□ | | | | C非正常最大占标率＞100%□ | | | |
| 保证率日平均浓度和年平均浓度叠加值 | C叠加达标□ | | | | | | | | | C叠加不达标□ | | | |
| 区域环境质量的整体变化情况 | k≤-20%□ | | | | | | | | | k>-20%□ | | | |
| 环境监测计划 | 污染源监测 | 监测因子：（颗粒物、SO2、CO、NOX） | | | | 有组织废气监测☑  无组织废气监测☑ | | | | | | 无监测□ | | |
| 环境质量监测 | 监测因子：（TSP、SO2、CO、NOX） | | | | 监测点位数（在厂界外上风向、下风向） | | | | | | 无监测□ | | |
| 评价结论 | 环境影响 | 可以接受☑ 不可以接受□ | | | | | | | | | | | | |
| 大气环境防护距离 | / | | | | | | | | | | | | |
| 污染源年排放量 | 颗粒物：（3.72）t/a | | | | SO2:(0.00056)t/a | | | NOx:(0.046)t/a | | | VOCs:()t/a | | |
| 注：“□” 为勾选项 ，填“√” ；“（ ）” 为内容填写项 | | | | | | | | | | | | | | |

* + 1. 地表水环境影响分析
       1. 营运期废水影响分析

拟建码头营运期废水包括：船舶舱底油污水、船舶生活污水、陆域生活污水、初期雨水、码头冲洗废水等。

其中，船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置；船舶生活污水经岸上接收装置接收后依托国能涟水一期热电联产项目污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目污水处理设施处理；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水、机修废水经排水沟收集进入厂区污水处理站预处理后依托国能涟水一期热电联产项目污水处理设施处理。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。

废水类别、污染物及污染治理设施信息表

| **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** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **污染治理设施编号** | **污染治理设施名称** | **污染治理设施工艺** |
| 1 | 船舶生活污水 | COD、SS、NH3-N、TP、TN | 依托国能涟水一期热电联产项目污水处理设施处理 | - | TW001 | 接收装置 | 化粪池 | - | - | - |
| 2 | 陆域生活污水 | COD、SS、NH3-N、TP、TN | TW002 | 化粪池 | - | - | - |
| 3 | 初期雨水 | SS | TW003 | 初期雨水收集池（兼沉淀池） | 沉淀 | - | - | - |
| 4 | 码头冲洗废水 | SS | TW004 | 含煤废水处理站 | 隔油池+调节沉淀池+气浮池。  冲洗废水经排水沟收集排入热电项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排 | - | - | - |
| 5 | 机械冲洗废水 | COD、SS、石油类 | TW005 | 油气污水处理站 | - | - | - |
| 6 | 船舶舱底油污水 | COD、SS、石油类 |  | TW006- | 委托有资质单位处置 | - | - | - | - |

* + - 1. 地表水水文要素影响分析

本项目为内河码头项目，码头港池为挖入式港池，码头结构为钢筋砼扶壁式，与高桩梁板结构型式不同，不会向水面外扩，垂直方向不占用水域，码头不占用盐河过水断面及水域面积。码头利用盐河现有航道，不对航道进行疏浚，不影响盐河水位和水深，对盐河水流影响较小。

本项目施工期设置施工围堰，占用少量水域，形成一定的阻水效应，对所在水域的水文动力环境产生一定程度的影响，致使水流减缓，进而引起泥沙地冲淤变化，但由于本项目码头平面布置采用挖入式港池，随着施工结束，港池开放完成，围堰拆除，不再占用水面。盐河本项目段地处徐淮平原的东南部，水位稳定，水流平缓，两岸护砌和植被绿化较好，地表水土流失轻微，泥沙来源相对较少，河床淤积较小，除人为因素和船舶活动对河床演变影响外，工程建设总体对河床演变影响较小。因此，项目对盐河水动力及冲淤环境影响较小。

* + - 1. 地表水环境影响评价自查情况

地表水环境影响评价自查情况

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 工作内容 | | 自查项目 | | | | | | | | | | | | |
| 影响识别 | 影响类型 | 水污染影响型☑；水文要素影响型☑ | | | | | | | | | | | | |
| 水环境保护目标 | 饮用水水源保护区□；饮用水取水口□；涉水的自然保护区□；重要湿地□；重点保护与珍稀水生生物的栖息地□；重要水生生物的自然产卵场及索饵场、越冬场和洄游通道、天然渔场等渔业水体□；涉水的风景名胜区□；其他□ | | | | | | | | | | | | |
| 影响途径 | 水污染影响型 | | | | | | 水文要素影响型 | | | | | | |
| 直接排放□；间接排放☑；其他☑ | | | | | | 水温□；径流□；水域面积□ | | | | | | |
| 影响因子 | 持久性污染物☑；有毒有害污染物□；非持久性污染物☑；pH值□；热污染□；富营养化□；其他□ | | | | | | 水温□；水位（水深）□；流速□；流量□；其他□ | | | | | | |
| 评价等级 | | 水污染影响型 | | | | | | 水文要素影响型 | | | | | | |
| 一级□；二级□；三级A□；三级B☑ | | | | | | 一级□；二级□；三级☑ | | | | | | |
| 现状调查 | 区域污染源 | 调查项目 | | | | | | 数据来源 | | | | | | |
| 已建□；在建□；拟建□；其他□ | | | 拟替代的污染源□ | | | 排污许可证□；环评□；环保验收□；既有实测□；现场监测□；入河排放口数据□；其他□ | | | | | | |
| 受影响水体水环境质量 | 调查时期 | | | | | | 数据来源 | | | | | | |
| 丰水期□；平水期□；枯水期□；冰封期□  春季□；夏季□；秋季□；冬季□ | | | | | | 生态环境保护主管部门□；补充监测☑；其他□ | | | | | | |
| 区域水资源开发利用状况 | 未开发□；开发量40%以下□；开发量40%以上□ | | | | | | | | | | | | |
| 水文情势调查 | 调查时期 | | | | | 数据来源 | | | | | | | |
| 丰水期□；平水期□；枯水期□；冰封期□  春季□；夏季□；秋季□；冬季□ | | | | | 水行政主管部门□；补充监测□；其他□ | | | | | | | |
| 补充监测 | 监测时期 | | | 监测因子 | | | | | | | 监测断面或点位 | | |
| 丰水期□；平水期□；枯水期□；冰封期□  春季□；夏季□；秋季R；冬季□ | | | （水温、pH、溶解氧、SS、高锰酸盐指数、COD、BOD5、氨氮、总磷、总氮、石油类） | | | | | | | 监测断面或点位个数  （3）个 | | |
| 现状评价 | 评价范围 | 河流：长度（4）km；湖库、河口及近岸海域：面积（）km2 | | | | | | | | | | | | |
| 评价因子 | （） | | | | | | | | | | | | |
| 评价标准 | 河流、湖库、河口：Ⅰ类□；Ⅱ类□；Ⅲ类☑；ⅣR；Ⅴ类□  近岸海域：第一类□；第二类□；第三类□；第四类□  规划年度评价标准（） | | | | | | | | | | | | |
| 评价时期 | 丰水期□；平水期□；枯水期□；冰封期□  春季□；夏季□；秋季R；冬季□ | | | | | | | | | | | | |
| 评价结论 | 水环境功能区或水功能区、近岸海域环境功能区水质达标状况：达标R；不达标□  水环境控制单元或断面水质达标状况：达标□；不达标□  水环境保护目标质量状况：达标□；不达标□  对照断面、控制断面等代表性断面的水质状况：达标□；不达标□  底泥污染评价□  水资源与开发利用程度及其水文情势评价□  水环境质量回顾评价□  流域（区域）水资源（包括水能资源）与开发利用总体状况、生态流量管理要求与现状满足程度、建设项目占用水域空间的水流状况与河湖演变状况□ | | | | | | | | | | | | 达标区☑  不达标区□ |
| 影响预测 | 预测范围 | 河流：长度（）km；湖库、河口及近岸海域：面积（）km2 | | | | | | | | | | | | |
| 预测因子 | （） | | | | | | | | | | | | |
| 预测时期 | 丰水期□；平水期□；枯水期□；冰封期□  春季□；夏季□；秋季□；冬季□  设计水文条件□ | | | | | | | | | | | | |
| 预测情景 | 建设期□；生产运行期□；服务期满后□  正常工况□；非正常工况□  污染控制和减缓措施方案□  区（流）域环境质量改善目标要求情景□ | | | | | | | | | | | | |
| 预测方法 | 数值解□；解析解□；其他□  导则推荐模式□；其他□ | | | | | | | | | | | | |
| 影响评价 | 水污染控制和水环境影响减缓措施有效性评价 | 区（流）域水环境质量改善目标□；替代削减源□ | | | | | | | | | | | | |
| 水环境影响评价 | 排放口混合区外满足水环境管理要求□  水环境功能区或水功能区、近岸海域环境功能区水质达标□  满足水环境保护目标水域水环境质量要求□  水环境控制单元或断面水质达标□  满足重点水污染物排放总量控制指标要求，重点行业建设项目，主要污染物排放满足等量或减量替代要求□  满足区（流）域水环境质量改善目标要求□  水文要素影响型建设项目同时应包括水文情势变化评价、主要水文特征值影响评价、生态流量符合性评价□  对于新设或调整入河（湖库、近岸海域）排放口的建设项目，应包括排放口设置的环境合理性评价□  满足生态保护红线、水环境质量底线、资源利用上线和环境准入清单管理要求□ | | | | | | | | | | | | |
| 污染源排放量核算（外排环境量） | 污染物名称 | | | 排放量/（t/a） | | | | | | 排放浓度/（mg/L） | | | |
| 污水量 | | | 0 | | | | | | 0 | | | |
| COD | | | 0 | | | | | | 0 | | | |
| SS | | | 0 | | | | | | 0 | | | |
| 氨氮 | | | 0 | | | | | | 0 | | | |
| 总氮 | | | 0 | | | | | | 0 | | | |
| 总磷 | | | 0 | | | | | | 0 | | | |
| 石油类 | | | 0 | | | | | | 0 | | | |
| 替代源排放情况 | 污染源名称 | | 排污许可证编号 | | 污染物名称 | | | | 排放量（t/a） | | | 排放浓度（mg/L） | |
| （） | | （） | | （） | | | | （） | | | （） | |
| 生态流量确定 | 生态流量：一般水期（）m3/s；鱼类繁殖期（）m3/s；其他（）m3/s  生态水位：一般水期（）m；鱼类繁殖期（）m；其他（） | | | | | | | | | | | | |
| 防治措施 | 环保措施 | 污水处理设施□；水文减缓设施□；生态流量保障设施□；区域削减□；依托其他工程措施□；其他□ | | | | | | | | | | | | |
| 监测计划 |  | 环境质量 | | | | | | 污染源 | | | | | |
| 监测方式 | 手动☑；自动□；无监测□； | | | | | | 手动☑；自动□；无监测□； | | | | | |
| 监测点位 | （码头上下游0.5km处） | | | | | | （雨水排口） | | | | | |
| 监测因子 | （pH、COD、SS、氨氮、总磷、总氮、石油类） | | | | | | 雨水排口：pH、COD、SS、氨氮、总磷、总氮、石油类 | | | | | |
| 污染物排放清单 | ☑ | | | | | | | | | | | | |
| 评价结论 | | 可以接受☑；不可以接受□ | | | | | | | | | | | | |

* + 1. 声环境影响预测与评价
       1. 噪声源

营运期的噪声污染主要来源于码头装卸机械噪声和船舶鸣笛产生的交通噪声等。具体见表3.8-18。

* + - 1. 预测模型

预测采用等距离衰减模式，并参照最为不利时气象条件等修正值进行计算，噪声从声源传播到受声点，受传播距离、空气吸收、阻挡物的反射与屏蔽等因素的影响，声能逐渐衰减，根据《环境影响评价技术导则 声环境》（HJ2.4-2021），

室外点声源在预测点产生的声级计算公式：

1. 已知声源倍频带声功率级时，预测点位置的倍频带声压级Lp（r）计算公式为：



式中：Lp（r）——预测点处声压级，dB；

Lw——声源的倍频带声功率级，dB；

Dc——指向性校正，dB；对辐射到自由空间的全向点声源Dc=0dB；

Adiv——几何发散引起的倍频带衰减，dB；

Aatm——大气吸收引起的倍频带衰减，dB；

Agr——地面效应引起的倍频带衰减，dB；

Abar——声屏障引起的倍频带衰减，dB；

Amisc——其他多方面效应引起的倍频带衰减，dB。

B.已知靠近声源处某点的倍频带声压级Lp（r0）时，预测点位置的倍频带声压级Lp（r）计算公式为：

Lp（r）=Lp（r0）－A或Lp（r）=Lw－A－8

预测点的A声级LA（r），可用8个倍频带的声压级按如下公式计算：

![形状

中度可信度描述已自动生成](data:image/png;base64,iVBORw0KGgoAAAANSUhEUgAAAMcAAABKCAYAAAAPK0DAAAAACXBIWXMAABJ0AAASdAHeZh94AAAgAElEQVR4AQDCgj19AQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA4AAABJAAAARQAAAB0AAAC7AAAAjAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAApQAAAA4AAADbAAAAtQAAAMIAAAD7AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA8AAAB/AAAAowAAAA8AAADBAAAAtQAAAMEAAADyAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAADaAAAA3AAAAAsAAABoAAAAfgAAAPAAAADTAAAA/wAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAwAAAA4QAAAJsAAAAaAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA0AAAAwQAAAL0AAAATAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAPAAAAOoAAABTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAAhwAAANoAAAAWAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAACAAAADnAAAARQAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA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文本

描述已自动生成

式中：Lpi(r)——预测点r处，第i倍频带声压级，dB；

△Li——i倍频带A计权网络修正值，dB。

C.在只能获得A声功率级或某点的A声级时，可做如下近似计算：

LA（r）=LAw+Dc－A或：LA（r）= LA（r0）－A

A可选择对A声级影响最大的倍频带计算，一般可选中心频率为500Hz的倍频带进行估算。

本项目营运期装卸设备噪声采用点声源衰减模式预测。点声源的几何发散衰减计算模式为：Adiv＝20lg（r/r0）；其他各种因素（包括声屏障、遮挡物、空气吸收、地面效应）引起的衰减计算详见导则。

建设项目声源对预测点产生的贡献值（Leqg）为：

图示

描述已自动生成

式中：ti——在T时间内j声源工作时间，s；

tj——在T时间内i声源工作时间，s；

T——用于计算等效声级的时间，s；

N——室外声源个数；

M——等效室外声源个数。

拟建项目声源对预测点等效声级为：

Leq=10lg(100.1Leqg+100.1Leqb)

式中：Leqg——建设项目声源在预测点的等效声级贡献值，dB(A)；

Leqb——预测点的背景值，dB(A)。

* + - 1. 预测条件

（1）声源数量：按全部露天机械同时运转的最不利条件计。

（2）噪声源强：噪声源声级取调查统计结果的平均值计算。

（3）声源位置：根据作业区装卸工艺平面布置确定，假设所有声源位置不变。

（4）声源类别：噪点声源均按点声源考虑。

（5）地形因素：本项目地形平缓，对于噪声传播没有干扰。

噪声源强调查清单（室外声源）

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **序号** | **设备名称** | **数量（台/套）** | **型号** | **空间相对位置（m）** | | | **声功率级dB（A）** | **治理措施** | **运行时段** |
| **X** | **Y** | **Z** |
| 1 | 1#桥式抓斗卸船机 | 1 | 400t/h,400kW | -20 | 110 | 18 | 80 | 减振 | 24h，间断 |
| 2 | 2#桥式抓斗卸船机 | 1 | 400t/h,400kW | 20 | 172 | 18 | 80 | 减振 |
| 3 | 皮带输送机 | 1 | B=1.2m,V=2.5m/s | -50 | 60 | 1.5 | 75 | 隔声、减振 |
| 4 | T0转运站 | 1 | / | -140 | -80 | 1.5 | 75 | 隔声 |
| 5 | T0转运站风机 | 1 | 5000m3/h,75kW | -140 | -80 | 3 | 80 | 隔声 |
| 6 | 电磁除铁 | 2 | / | -30 | 90 | 1.5 | 75 | 隔声 |
| 7 | 船舶发动机 | / | / | / | / | 0 | 72 | 隔声 |

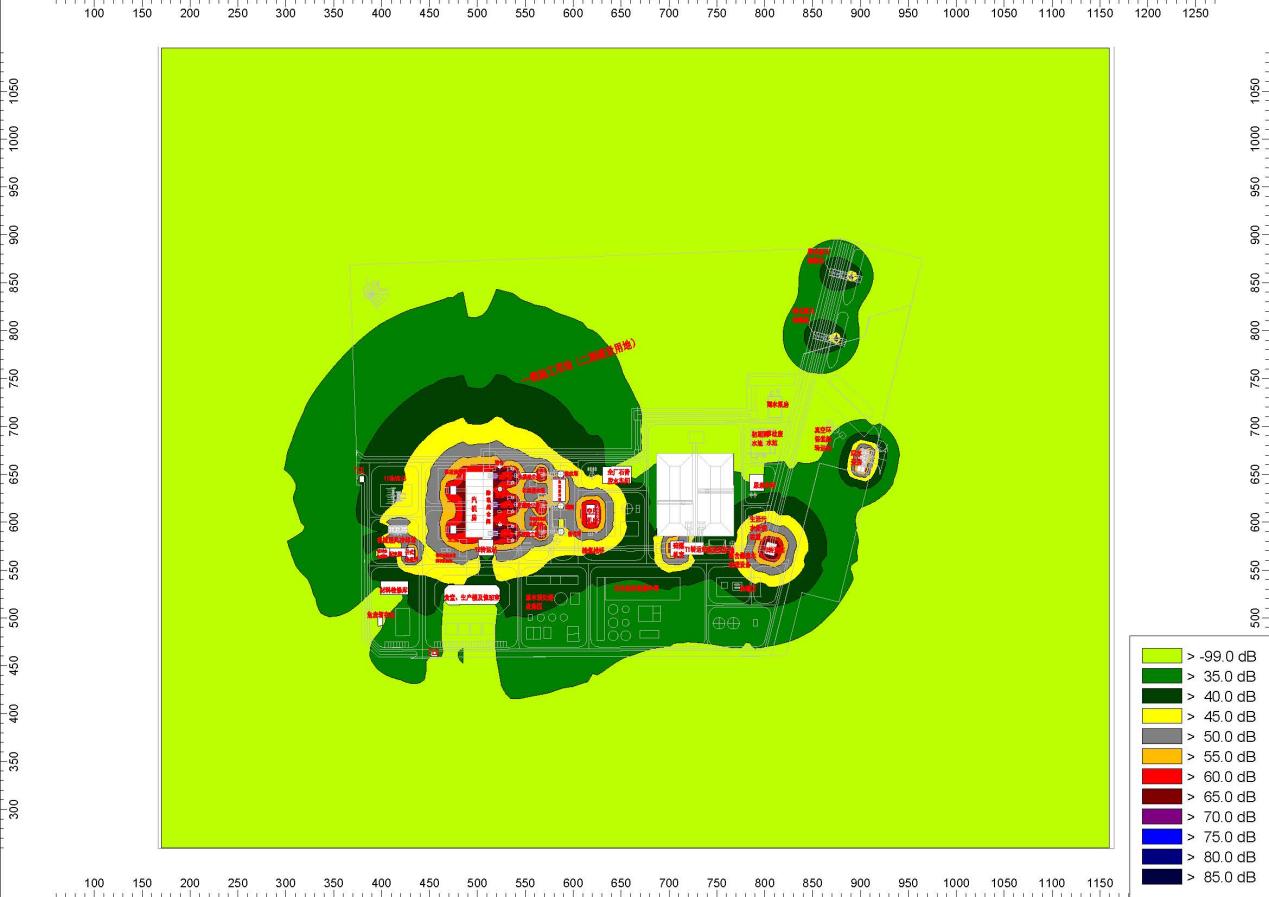
* + - 1. 噪声预测结果与评价

本项目与最近的敏感目标距离超过500m，因此本次评价不对敏感点噪声进行分析。通过预测模式计算，昼、夜厂界噪声预测结果，见表5.2-11。

噪声预测结果 单位：dB(A)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 测点编号 | 噪声背景值（dB（A）） | | 噪声现状值（dB（A）） | | 噪声标准（dB（A）） | | 噪声贡献值①（dB（A）） | | 噪声预测值（dB（A）） | | 较现状增量（dB（A）） | | 达标情况（dB（A）） | |
| 昼间 | 夜间 | 昼间 | 夜间 | 昼间 | 夜间 | 昼间 | 夜间 | 昼间 | 夜间 | 昼间 | 夜间 | 昼间 | 夜间 |
| N1 | 53 | 43 | 53 | 43 | 65 | 55 | 53.9 | 53.9 | 56.5 | 54.2 | 3.48 | 11.24 | 达标 | 达标 |
| N2 | 54 | 42 | 54 | 42 | 65 | 55 | 33.7 | 33.7 | 54.0 | 42.6 | 0.04 | 0.60 | 达标 | 达标 |
| N3 | 53 | 43 | 53 | 43 | 65 | 55 | 33.8 | 33.8 | 53.1 | 43.5 | 0.05 | 0.49 | 达标 | 达标 |
| N4 | 55 | 42 | 55 | 42 | 70 | 55 | 48.0 | 48.0 | 55.8 | 49.0 | 0.79 | 6.97 | 达标 | 达标 |
| N5 | 54 | 41 | 54 | 41 | 70 | 55 | 35.8 | 35.8 | 54.1 | 42.1 | 0.07 | 1.15 | 达标 | 达标 |
| N6 | 53 | 43 | 53 | 43 | 65 | 55 | 34.5 | 34.5 | 53.1 | 43.6 | 0.06 | 0.57 | 达标 | 达标 |
| N7 | 53 | 42 | 53 | 42 | 65 | 55 | 36.8 | 36.8 | 53.1 | 43.1 | 0.10 | 1.15 | 达标 | 达标 |
| N8 | 52 | 43 | 52 | 43 | 65 | 55 | 39.2 | 39.2 | 52.2 | 44.5 | 0.22 | 1.51 | 达标 | 达标 |
| N9 | 52 | 43 | 52 | 43 | 65 | 55 | 40.3 | 40.3 | 52.3 | 44.9 | 0.28 | 1.87 | 达标 | 达标 |

注：①贡献值已叠加在建热电项目噪声源。



**图5.2-1 本项目声环境影响预测图**

由表5.2-11和图5.2-1可知，采取了噪声防治措施后，项目厂界及周边噪声均满足相应标准要求，对周围声环境影响较小。

本项目建成后，在采取降噪措施的情况下，厂界预测点昼间、夜间噪声均符合《工业企业厂界环境噪声排放标准》（GB12348-2008）3、4类，因此本项目不设置噪声防护距离。

本项目声环境自查表见下表5.2-12。

声环境影响评价自查表

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 工作内容 | | 自查项目 | | | | | | | | | | | |
| 评价等级与范围 | 评价等级 | 一级□ 二级□ 三级☑ | | | | | | | | | | | |
| 评价范围 | 200m☑ 小于200m□ 大于200m□ | | | | | | | | | | | |
| 评价因子 | 等效连续A声级☑ 最大A声级□ 计权等效连续感觉噪声级□ | | | | | | | | | | | |
| 评价标准 | 评价标准 | 国家标准☑ 国外标准□ 地方标准□ | | | | | | | | | | | |
| 现状评价 | 环境功能区 | 0类区□ | 1类区□ | | | | 2类区□ | 3类区☑ | | 4a类区☑ | | | 4b类区□ |
| 评价年度 | 初期□ | | | 近期☑ | | | | 中期□ | | 远期□ | | |
| 现状调查方法 | 现场实测法☑ 现场实测加模型计算法□ 收集资料□ | | | | | | | | | | | |
| 现状评价 | 达标百分比 | | | | 100% | | | | | | | |
| 噪声源调查 | 噪声源调查方法 | 已有资料□ 现场实测☑ 研究成果□ | | | | | | | | | | | |
| 声环境影响预测与评价 | 预测模型 | 导则推荐模型☑ 其他□ | | | | | | | | | | | |
| 预测范围 | 200m☑ 小于200m□ 大于200m□ | | | | | | | | | | | |
| 预测因子 | 等效连续A声级☑ 最大A声级□ 计权等效连续感觉噪声级□ | | | | | | | | | | | |
| 厂界噪声贡献值 | 达标☑ 不达标□ | | | | | | | | | | | |
| 声环境保护目标处噪声值 | 达标☑ 不达标□ | | | | | | | | | | | |
| 环境监测计划 | 排放监测 | 厂界监测☑ 固定位置监测□ 自动监测□ 手动监测□  无监测□ | | | | | | | | | | | |
| 声环境保护目标处噪声监测 | 监测因子：（等效连续A声级） | | 监测点位数（4个） | | | | | | | | 无监测□ | |
| 评价结论 | 环境影响 | 可行☑ 不可行□ | | | | | | | | | | | |
| 注：“□”为勾选项，可√；“（）”为内容填写项 | | | | | | | | | | | | | |

* + 1. 固废影响分析与评价
       1. 固体废物产生及处置情况

本项目产生的固体废物主要包括船舶生活垃圾、维修废弃物、陆域生活垃圾、检修废物、含油抹布及手套等，固体废物处置方式详见表5.2-13。

固体废物处置方式一览表

| **序号** | **固废名称** | **产生工序** | **形态** | **主要成分** | **产生量** | **处置方式** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 陆域生活垃圾 | 港口员工生活 | 固态 | 食品、杂物、纸屑等 | 22.28 | 委托环卫部门定期清运 |
| 2 | 船舶生活垃圾 | 船员生活 | 固态 | 食品、杂物、纸屑等 | 16.34 | 委托环卫部门定期清运 |
| 3 | 装卸作业产生的固体废物 | 装卸过程 | 固态 | 散落的煤炭 | 5.6 | 委托环卫部门定期清运 |
| 4 | 机修废油 | 设备维修 | 液态 | 废油 | 0.2 | 委托有资质单位处置 |
| 5 | 废含油抹布及手套 | 设备维修 | 固态 | 废油、抹布等 | 0.02 | 混入生活垃圾后委托环卫部门定期清运 |
| 6 | 废金属物 | 除铁器 | 固态 | 废金属 | 112 | 外售综合利用 |

* + - 1. 固废环境影响分析

**一、贮存场所（设施）环境影响分析**

项目危险废物处置应严格按照《中华人民共和国固体废物污染环境防治法》中有关危险废物的管理条款执行，危险废物按法规要求应委托有资质的单位进行处理。考虑企业危险废物难以保证及时外运处置，后方厂内配套建设危险废物暂存间，占地约50m2，总暂存能力约30t，对危险废物进行收集及临时存放，然后集中由有资质单位收集处理。本项目产生的危险废物依托后方厂区危废暂存库。根据《建设项目危险废物环境影响评价指南》（原生态环境部公告2017年第43号）、《危险废物贮存污染控制标准》（GB18597-2023）中关于贮存场所（设施）建设和污染防治措施的要求：

1、企业应严格按照《环境保护图形标志固体废物贮存（处置）场》（GB 15562.2-1995）修改单和《危险废物识别标志设置技术规范》（HJ1276-2022）危险废物识别标识设置规范设置标志，配备通信设备、照明设施和消防设施；在出入口、设施内部、危险废物运输车辆通道等关键位置按照危险废物贮存设施视频监控布设要求设置视频监控，并与中控室联网。鼓励有条件的企业采用云存储方式保存视频监控数据。危险废物信息公开栏设置要求见下表5.2-14，贮存设施警示标志牌设置要求见下表5.2-15，包装识别标签见下表5.2-16。

危险废物信息公开栏设置要求

| **图案样式** | **设置规范** |
| --- | --- |
| 危险废物产生单位：  图形用户界面  描述已自动生成 | 1.设置位置  采用立式固定方式固定在危险废物产生单位厂区门口醒目位置，公开栏顶端距离地面200cm处。  2.规格参数  （1）尺寸：底板120cm×80cm。  （2）颜色与字体：公开栏底板背景颜色为蓝色（印刷CMYK参数附后，下同），文字颜色为白色，所有文字字体为黑体。  （3）材料：底板采用5mm铝板。  3.公开内容  包括企业名称、地址、法人代表及电话、环保负责人及电话、危险废物产生规模、贮存设施建筑面积和容积、贮存设施数量、危险废物名称、危险废物代码、环评批文、产生来源、环境污染防治措施、厂区平面示意图、监督举报途径、监制单位等信息。 |
| 危险废物经营单位：  图片包含 图形用户界面  描述已自动生成 | 1.设置位置  采用立式固定方式固定在危险废物经营单位厂区门口醒目位置，公开栏顶端距离地面200cm处。  2.规格参数  尺寸、颜色与字体、材料与危险废物产生单位信息公开栏规格参数一致。  3.公开内容  包括企业名称、地址、法人代表及电话、环保负责人及电话、危险废物经营许可证编号、有效期、核准经营危险废物种类和能力、次生危废种类和数量、环境污染防治措施（含装卸区域、贮存区域、利用处置过程、次生危废产生区域等）、厂区平面示意图、监督举报途径、监制单位等信息。 |

贮存设施警示标志牌设置要求

| **图案样式** | **设置规范** |
| --- | --- |
| 贮存设施警示标志牌（竖版）  日历  描述已自动生成  贮存设施警示标志牌（横版）  手机屏幕的截图  中度可信度描述已自动生成 | 1.设置要求  （1）在设施附近或场所的入口处设置相应的危险废物贮存设施标志。  （2）对于有独立场所的危险废物贮存、利用、处置设施，应在场所外入口处的墙壁或栏杆显著位置设置相应的设施标志  （3）位于建筑物内局部区域的危险废物贮存、利用、处置设施，应在其区域边界或入口处显著位置设置相应的标志。  （4）危险废物设施标志可采用附着式和柱式两种固定方式，应优先选择附着式，当无法选择附着式时，可选择柱式。  （5）附着式标志的设置高度，应尽量与视线高度一致；柱式的标志和支架应牢固地连接在一起，标志牌最上端距地面约2m；位于室外的标志牌中，支架固定在地下的，其支架埋深约0.3m。  （6）危险废物设施标志应稳固固定，不能产生倾斜、卷翘、摆动等现象。在室外露天设置时，应充分考虑风力的影响。  2.规格参数  （1）尺寸：  表格  描述已自动生成  （2）颜色与字体：标志牌背景颜色为黄色，RGB 颜色值为（255, 255, 0）。字体和边框颜色为黑色，RGB 颜色值为（0, 0, 0）。字体应采用黑体字，其中危险废物设施类型的字样应加粗放大并居中显示。  三角形警告性图形与其他信息间宜加黑色分界线区分，分界线的宽度宜不小于 3 mm。  （3）材料：宜采用坚固耐用的材料（如1.5mm～2 mm冷轧钢板），并做搪瓷处理或贴膜处理。一般不宜使用遇水变形、变质或易燃的材料。柱式标志牌的立柱可采用38×4无缝钢管或其他坚固耐用的材料，并经过防腐处理。  3.公开内容  包括单位名称、贮存设施编码、负责人及联系方式；二维码信息服务系统中应包含但不限于该设施场所的单位名称、设施类型、设施编码、负责人及联系方式，以及该设施场所贮存的危险废物名称和种类等信息。 |
| 贮存设施内部分区警示标志牌：  图示  描述已自动生成 | 1.设置要求  （1）宜在危险废物贮存设施内的每一个贮存分区处设置危险废物贮存分区标志。  （2）危险废物贮存分区标志宜设置在该贮存分区前的通道位置或墙壁、栏杆等易于观察的位置。  （3）危险废物贮存分区标志可采用附着式（如钉挂、粘贴等）、悬挂式和柱式（固定于标志杆或支架等物体上）等固定形式，  （4）危险废物贮存分区标志中各贮存分区存放的危险废物种类信息可采用卡槽式或附着式（如钉挂、粘贴等）固定方式。  2.规格参数  （1）尺寸：  表格  描述已自动生成  （2）颜色与字体：  ①背景色应采用黄色，RGB颜色值为（255,255,0）。废物种类信息应采用醒目的橘黄色，RGB颜色值为（255,150,0）。字体颜色为黑色，RGB 颜色值为（0,0,0）。  ②字体宜采用黑体字，其中“危险废物贮存分区标志”字样应加粗放大并居中显示  ③“危险废物贮存分区标志”字样与其他信息宜加黑色分界线区分，分界线的宽度不小于2mm。  （3）材料：衬底宜采用坚固耐用的材料，并具有耐用性和防水性。废物贮存种类信息等可采用印刷纸张、不粘胶材质或塑料卡片等，以便固定在衬底上。  3.公开内容  （1）危险废物贮存分区标志应以醒目的方式标注“危险废物贮存分区标志”字样。  （2）危险废物贮存分区标志应包含但不限于设施内部所有贮存分区的平面分布、各分区存放的危险废物信息、本贮存分区的具体位置、环境应急物资所在位置以及进出口位置和方向。  （3）危险废物贮存单位可根据自身贮存设施建设情况，在危险废物贮存分区标志中添加收集池、导流沟和通道等信息。  （4）危险废物贮存分区标志的信息应随着设施内废物贮存情况的变化及时调整。 |

包装识别标签

| **图案样式** | **设置规范** |
| --- | --- |
| 图片包含 表格  描述已自动生成 | 1.设置要求  （1）危险废物标签的设置位置应明显可见且易读，不应被容器、包装物自身的任何部分或其他标签遮挡。危险废物标签在各种包装上的粘贴位置分别为：  a）箱类包装：位于包装端面或侧面；  b）袋类包装：位于包装明显处；  c）桶类包装：位于桶身或桶盖；  d）其他包装：位于明显处。  （2）对于盛装同一类危险废物的组合包装容器，应在组合包装容器的外表面设置危险废物标签。  （3）容积超过450L的容器或包装物，应在相对的两面都设置危险废物标签。  （4）危险废物标签的固定可采用印刷、粘贴、拴挂、钉附等方式，标签的固定应保证在贮存、转移期间不易脱落和损坏。  （5）当危险废物容器或包装物还需同时设置危险货物运输相关标志时，危险废物标签可与其分开设置在不同的面上，也可设在相邻的位置。  （6）在贮存池内或贮存设施内堆存的无包装或无容器的危险废物，宜在其附近参照危险废物标签的格式和内容设置柱式标志牌。  2.规格参数  表格  描述已自动生成  3.内容填报  （1）危险废物标签应以醒目的字样标注“危险废物”。  （2）危险废物标签应包含废物名称、废物类别、废物代码、废物形态、危险特性、主要成分、有害成分、注意事项、产生/收集单位名称、联系人、联系方式、产生日期、废物重量和备注。  （3）危险废物标签宜设置危险废物数字识别码和二维码。 |

2、贮存设施应根据危险废物的形态、物理化学性质、包装形式和污染物迁移途径，采取必要的防风、防晒、防雨、防漏、防渗、防腐以及其他环境污染防治措施，不应露天堆放危险废物。贮存设施应根据危险废物的类别、数量、形态、物理化学性质和污染防治等要求设置必要的贮存分区，避免不相容的危险废物接触、混合。

对易爆、易燃及排出有毒气体的危险废物进行预处理，稳定后贮存，否则按易爆、易燃危险品贮存。贮存废弃剧毒化学品的，应按照公安机关要求落实治安防范措施。危险废物经营单位需制定废物入场控制措施，并不得接受核准经营许可以外的种类；贮存设施周转的累积贮存量不得超过年许可经营能力的六分之一，贮存期限原则上不得超过一年。

3、贮存设施或贮存分区内地面、墙面裙角、堵截泄漏的围堰、接触危险废物的隔板和墙体等应采用坚固的材料建造，表面无裂缝。贮存设施地面与裙脚应采取表面防渗措施；表面防渗材料应与所接触的物料或污染物相容，可采用抗渗混凝土、高密度聚乙烯膜、钠基膨润土防水毯或其他防渗性能等效的材料。贮存的危险废物直接接触地面的，还应进行基础防渗，防渗层为至少1m厚黏土层（渗透系数不大于10-7 cm/s），或至少2mm厚高密度聚乙烯膜等人工防渗材料（渗透系数不大于10-10 cm/s），或其他防渗性能等效的材料。

同一贮存设施宜采用相同的防渗、防腐工艺（包括防渗、防腐结构或材料），防渗、防腐材料应覆盖所有可能与废物及其渗滤液、渗漏液等接触的构筑物表面；采用不同防渗、防腐工艺应分别建设贮存分区。

贮存设施应采取技术和管理措施防止无关人员。

本项目涉及的危险废物主要为检修废物和含油污泥，本项目产生量较少，且均采用桶装密闭收集，本项目产生的危险废物依托后方厂区危废暂存库。

本项目产生的危险废物得到合理处置和有效利用，贮存场所采取的污染防治措施和危废安全标识牌满足相关标准要求，对地下水、土壤及大气环境影响较小。

**二、运输过程环境影响分析**

（1）环境影响分析

本项目危废均委托有资质单位处置，所有危废均不排放至外环境，对环境的影响较小。

（2）运输过程影响分析

本项目均采用密闭容器封装后装车运输，严格执行《危险废物收集贮存运输技术规范》（HJ2025-2012）中的要求和规定，正常情况下不会产生新的次生污染，运输至有资质单位处置中心过程中，主要为运输车辆尾气及扬尘、噪声对周围环境的影响。车辆运输严格执行《危险废物收集贮存运输技术规范》（HJ2025-2012）中的要求和规定，对周围环境影响较小。

* + 1. 生态环境影响分析

**（1）对水生生物的影响**

营运期的生态影响主要来自船舶进港引起的水体SS增加对水下生物特别是底栖生物的影响，停泊在港区的船舶跑冒滴漏的含油废水排放对该水域一定范围内的水生生物的影响。生态影响主要表现为：

①船舶进港引起水体中的悬浮物增加，减少了光的透射，导致水中植物光合作用的降低，干扰动物的迁移行为，甚至可能阻塞或刺激鱼和无脊椎动物呼吸器官。

②溶解和分散在水体中的油类，较易侵入水生生物的上皮细胞，破坏动植物的细胞质膜和线粒体膜，损害生物的酶系统和蛋白质结构，导致基础代谢活动出现障碍，引起生物种类异常。

项目营运期废水主要为船舶生活污水、陆域生活污水、到港船舶舱底油污水、初期雨水、码头冲洗废水、机修废水等。如果这部分污水不加处理直接排入水体，将会对该水域一定范围内的水生生物产生一定影响。主要表现为：生活污水中的有机物进入水体，将消耗水体中的溶解氧，降低水中溶解氧的含量，影响水生生物代谢和呼吸，使好氧生物生长受到抑制、厌氧和兼氧生物种类快速繁殖，从而改变原有的种类结构，引起生态平衡失调。

同时，营运期对水生生物的影响还表现为溢油风险事故状况下，对评价区域内的生物和鱼类影响较大。以石油类污染为例，在石油不同组分中，低沸点的芳香烃对一切生物均有毒性，而高沸点的芳香烃则是长效毒性，会对水生生物生命构成威胁和危害直至死亡。国内外许多的研究表明高浓度的石油会使鱼卵、仔幼鱼短时间内中毒死亡，低浓度的长期亚急性毒性可干扰鱼类摄食和繁殖，其毒性随石油组分的不同而有差异。

综上所述，本项目营运期间所产生的污水都得到有效治理，不向盐河排放，不会影响盐河水质及水生生态系统。

**（2）对珍稀和洄游性鱼类的影响**

项目建设区域未发现重点保护水生动物种类，未见区域特有鱼类，主要种类为青鱼、草鱼、鲫鱼等常见种类，但个体较小，经济价值不大。项目建设区不存在鱼类产卵场、索饵或育幼场和越冬场等鱼类“三场”，不存在洄游通道。

本项目船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。船舶生活污水经岸上接收装置接收后接管至厂区污水处理站处理达标后回用于绿化、道路喷洒；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水、机修废水经排水沟收集进入厂区污水处理站预处理后接管至厂区污水处理站处理达标后回用于绿化、道路喷洒，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。

在采取本报告提出的污染防治措施后，本码头营运期对鱼类的污染影响很小。码头水域的噪声将惊扰附近的渔业生物，干扰其完成繁殖活动，但码头距离保护区尚有一段距离，总体来说，对保护区内鱼类等水生生物的繁殖影响较小。

**（3）码头护岸对水生生态的影响**

码头主体结构为钢筋砼扶壁式结构。钢筋砼的护岸结构阻碍了水陆生态系统的交流，使岸线范围内在水陆界面栖息的两栖类生物消失。因此本项目码头护岸对水生生态造成一定的影响。

**（4）对陆生生态的影响**

（1）对动物栖息环境的影响

项目建成以后，随着植被的恢复，部分施工期间迁移走的动物会回归该区域。但作业噪声、夜里的汽车灯光、人为活动，仍对周边的动物栖息环境产生着长期的影响。这将导致该区域野生动物种群数量小于周边环境。

（2）环境污染对动物的影响

吊车、装载机、车辆产生的废气、噪声、振动及路面径流污染物等会对动物的生存环境造成污染。其中，噪声和灯光的影响更为突出，噪声、灯光会影响动物的交配和产卵。由于一般动物在选择生境和建立巢穴时，通常会远离喧闹区域，且拟建项目评价范围内无大型、保护动物分布，所以本项目营运期不会对动物生存、繁殖产生较大影响。本项目生态环境影响评价自查表见表5.2-17。

生态影响评价自查表

|  |  |  |
| --- | --- | --- |
| 工作内容 | | 自查项目 |
| 生态影响识别 | 生态保护目标 | 重要物种□；国家公园□；自然保护区□；自然公园□；世界自然遗产□；生态保护红线□；重要生境□；其他具有重要生态功能、对于保护生物多样性具有重要意义的区域□；其他□ |
| 影响方式 | 工程占用□；施工活动干扰□；改变环境条件□；其他□ |
| 评价因子 | 物种□（ ）  生境□（ ）  生物群落□（ ）  生态系统□（ ）  生物多样性□（ ）  生态敏感区□（ ）  自然景观□（ ）  自然遗迹□（ ）  其他□（ ） |
| 评价等级 | | 一级□ 二级□ 三级☑ 生态影响简单分析□ |
| 评价范围 | | 陆域面积：（0.9584）km2；水域面积：（1.2077）km2 |
| 生态现状调查与评价 | 调查方法 | 资料收集☑；遥感调查□；调查样方、样线□；调查点位、断面□；专家和公众咨询法□；其他□ |
| 调查时间 | 春季□；夏季□；秋季□；冬季□  丰水期□；枯水期□；平水期□ |
| 所在区域的生态问题 | 水土流失□；沙漠化□；石漠化□；盐渍化□；生物入侵□；污染危害□；其他□ |
| 评价内容 | 植被/植物群落☑；土地利用☑；生态系统□；生物多样性□；  重要物种□；生态敏感区□；其他□ |
| 生态影响预测与评价 | 评价方法 | 定性☑；定性和定量□ |
| 评价内容 | 植被/植物群落□；土地利用☑；生态系统□；生物多样性□；  重要物种□；生态敏感区□；生物入侵风险□；其他□ |
| 生态保护对策措施 | 对策措施 | 避让□；缓减□；生态修复☑；生态补偿□；科研□；其他□ |
| 生态监测计划 | 全生命周期□；长期跟踪□；常规□；无☑ |
| 环境管理 | 环境监理☑；环境影响后评价□；其他□ |
| 评价结论 | 生态影响 | 可行☑；不可行□ |
| 注： “□”为勾选项，可√；“（ ）”为内容填写项。 | | |

* 1. 环境风险影响预测与评价

环境风险评价的目的是分析和预测建设项目存在的潜在危险、有害因素，建设项目建设和运行期间可能发生的突发性事件或事故（一般不包括人为破坏及自然灾害），引起有毒有害和易燃易爆等物质泄漏，所造成的人身安全与环境影响和损害程度，提出合理可行的防范、应急与减缓措施，以使建设项目事故率、损失和环境影响达到可接受水平。环境风险评价的主要关注点是事故对厂（场）界外环境的影响。

* + 1. 环境风险分析
       1. 风险调查

本工程为国能涟水热电联产项目的配套码头，其吞吐量符合该项目的规模和生产能力。根据《国能涟水绿色智慧综合能源示范项目一期工程（国能涟水一期热电联产项目）可行性研究》，热电项目采用山西、蒙东等地区的燃煤，按锅炉最大连续蒸发量（B-MCR）时的耗煤量计，近期年耗燃煤量约39.344万吨（校核煤种），远期新增耗煤量约71.854万吨（校核煤种），合计111.198万吨（校核煤种）。不涉及危险化学品。根据对工程施工、运营过程的分析，并结合国内同类码头运营的实际情况，确定本项目可能出现事故排放的环节主要为：

（1）船舶舱底油泄漏导致船舶溢油事故。这类事故对水域造成的污染较小；

（2）船舶碰撞引起的柴油泄漏对地表水环境的影响；

（3）船舶溢油若发生燃烧事故，会对周边大气环境产生影响；

* + - 1. 评价等级

根据2.5.1判定结果，本项目风险潜势为I，风险评价等级为简单分析。

考虑到本项目受纳水体为盐河，水质目标为III级标准。因此参考三级评价要求对船舶突发性溢油事故造成的地表水环境影响进行预测评价。

目前，码头事故风险主要来源于船舶碰撞等突发性事故造成的油箱破裂带来的事故溢油。本项目无危险品运输。

根据《中国海上船舶溢油应急计划》和《中国海上搜救中心水上险情应急反应程序》中的相关规定，我国沿海船舶、码头溢油量达到50t以上时属于重大溢油事故或特大险情，溢油事故源基本上为油轮事故溢油。

根据以往事故发生的规律，船舶事故主要发生在港区码头和航道。根据多项事故类型和事故诱因的统计分析，船舶航行事故占各类事故的70%，且90%的船舶航行事故发生于港区或沿岸地区。统计归纳的典型事故诱因参考表5.3-1。

典型船舶事故诱因归纳表

|  |  |  |
| --- | --- | --- |
| **发生地点** | **发生源** | **发生原因** |
| 航线 | 船舶 | 触礁、搁浅、船舶碰撞、恶劣海况、火灾爆炸、危险品泄漏 |
| 锚地 | 船舶 | 船舶碰撞、火灾爆炸、泄漏 |
| 港池 | 船舶 | 船舶碰撞、船与码头碰撞、操作失误、火灾爆炸、泄漏 |

经分析筛选，本项目船舶溢油污染事故的环节主要为：到（离）港船舶发生碰撞造成柴油箱破裂，导致柴油泄漏；到（离）港船舶与航道上油轮发生碰撞，造成油轮部分储油罐（仓）破裂泄漏。

经识别，本项目事故风险主要来源为突发性溢油事故。

* + - 1. 环境风险敏感目标概况

（1）水环境：项目位于现状盐河三级航道西侧。项目上下游考核断面情况见图5.3-2。

（2）大气环境：本项目大气环境风险评价等级为简要分析。

环境风险敏感目标

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 环境要素 | 名称 | 相对方位 | 距本项目厂界最近距离（m） | 环境功能 |
| 地表水环境风险 | 盐河 | E | 紧邻 | 《地表水环境质量标准》（GB3838-2002）III类水体 |
| 盐河袁闸断面 | N | 位于项目下游约30km处 | 国控断面 |

* + 1. 风险识别
       1. 生产设施和物质危险性识别

本项目为散货码头，主要危险物料为进出港船舶使用的柴油，性质见表5.3-3。

船舶柴油的特性一览表

|  |  |  |  |
| --- | --- | --- | --- |
| 外观及气味 | 黑色黏稠有气味的液体 | 主要用途 | 船用燃料 |
| 液体相对密度 | 0.93 | 凝固点（℃） | <26 |
| 沸点（℃） | >398.9 | 黏度（Pa·s） | <180 |
| 20℃时蒸汽压（kPa） | 很低 | 水溶性 | 微溶 |
| 雷德蒸汽气压（kPa） | 0.3（50℃时） | 自燃温度（℃） | 407.2 |
| 闪点（℃） | 65.6~221.1 | 挥发性 | 挥发 |
| 易燃性 | 不易燃 | 灭火方法 | 二氧化碳、干粉、泡沫 |
| 爆炸极限 | 1%~5% | 危险性 | 必须加热才能持续燃烧 |

* + - 1. 危险物质向环境转移的途径识别

本项目影响环境的风险途径主要是船舶碰撞引起的柴油泄漏对地表水环境的影响。国内外发生较大事故的统计数据表明，突发性事故溢油有一定的风险概率。对某一项目的风险概率分析，由于受客观条件和不确定因素的影响，而多采用统计数据资料进行分析。同时，泄漏的柴油若引起火灾等事故，会产生CO等污染物影响周边大气环境。

本项目靠港作业的船舶以及物料装卸过程是可能发生事故的主要环节。采用类比分析方法，即根据同类或相近行业事故统计的原始资料，分析本项目可能发生的事故的类型和原因，从而有效地评价本项目的安全程度，特别是对岸线生态环境不产生污染影响的安全程度。表5.3-4是近20年来船舶事故的情况统计。

船舶事故统计

| **序号** | **事故时间** | **事故地点** | **船名或单位** | **事故原因** | **溢油量（t）** | **油种** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | 1995.06.19 | 万州区鼓动驸马 | “油库囤船” | 操作失误 | 1028 | 航空煤油 |
| 2 | 1997.03.28 | 南京扬子10-2码头 | “PUSAN"油轮（韩国） | 装油操作失误 | 5 | 汽油 |
| 3 | 1997.06.03 | 南京港栖霞山邮轮锚地 | “大庆243”油轮 | 爆炸起火而翻沉 | 1000 | 原油 |
| 4 | 1997.06.02 | 南京栖霞锚地 | “油63005驳”（南京长江油运公司） | 过驳时操作失误 | 6 | 原油 |
| 5 | 1998.02.06 | 南京大胜关水道宇鹏加油站附近 | “皖江供油  2001”油轮 | 沉没 | 35 | 原油 |
| 6 | 1998.07.30 | 万州区豹子滩 | “屈原7#”客滚船 | 海损事故 | 5 | 柴油 |
| 7 | 1998.09.12 | 吴淞口101灯浮附近 | “上电油1215”游轮 | 与“崇明岛"轮发生碰撞 | 272 | 重油 |
| 8 | 1998.04.18 | 上海炼油厂码头 | “浙航拖127船 | 输油管爆管 | 0.2 | 燃油 |
| 9 | 1999.07.25 | 重庆万州区巫山码头 | “旅游3囤”（油  囤船） | 操作失误 | 20 | 柴油 |
| 10 | 2003.02.09 | 长江浏河口 | “华盛油1” | 碰撞事故 | 20 | 成品油 |
| 11 | 2003.08.05 | 上海吴泾热电厂码头 | “长阳”轮 | 碰撞事故 | 85 | 燃料油 |
| 12 | 2003.04.18 | 长江口276号灯浮水域 | “现代荣耀”轮 | 碰撞事故 | 30 | 燃料油 |
| 13 | 2005.04.08 | 长江口水域 | “GG  CHEMIST”轮 | 碰撞事故 | 67 | 燃油和甲苯 |
| 14 | 2005.09.17 | 上海军工路闸北电厂码头水域 | “朝阳平8”轮 | 碰撞事故 | 185 | 汽油 |
| 15 | 2006.12.12 | 洋山沈家油库码头 | “舟通油11”轮 | 因误操作 | 11 | 燃油 |
| 16 | 2005.03 | 江阴港 | “林茂” | 沉没 | / | 重油 |
| 17 | 2010.02.08 | 长江#54浮下游 | “鹏翔9"轮  “金泰618"轮 | 碰撞沉没 | / | 汽油 |
| 18 | 2013.12.28 | 长江#99-98浮 | 采砂船 | 碰撞事故 | / | 柴油 |
| 19 | 2014.03.12 | 长江#112浮西游  500m处 | “皖永安”轮 | 碰撞事故 | / | 柴油 |
| 20 | 2014.04.26 | 长江#94黑浮附近 | “河牛，轮 | 碰撞事故 | / | 汽油 |
| 21 | 2015.1.15 | 长江泰州段 | “皖神舟67”轮 | 翻船沉没 | / | 汽油 |
| 22 | 2017.7.9 | 长江常州段 | 双龙海号货轮 | 碰撞造成码头坍塌 | / | 燃料油 |

1、船舶交通流量情况

淮安市范围有闸13座，主要分布在京杭运河、洪泽湖、福河等航道，其中京杭运河日船舶通量800艘次，年过境物资1.5亿吨，其中洪泽湖、淮河日船舶通量300艘次。根据淮安海事局提供资料，淮安河港2016至2018年船舶出港236500艘次，淮安河港3年的出港船舶和过境流量见表5.3-5。

2015~2017淮安港船舶出港及过境流量统计

| **年度** | **船舶出港** | **过境流量** |
| --- | --- | --- |
| 2016 | 76000艘次 | / |
| 2017 | 78000艘次 | / |
| 2018 | 82500艘次 | / |

2、淮安市船舶事故统计与分析

根据淮安海事局提供资料，淮安河境2014至2018年共发生交通事故41起，事故（险情）成因主要是船舶在航行过程中发生碰撞、自沉。近年淮安市水上交通事故主要集中在京杭运河、洪泽湖、淮河等通航水域。淮安市河通航水域2017年以前的水上交通事故（险情）发生呈逐年上升，但随着港口物吞吐量增加，船舶通航更加繁，航行密度增大，事故发生的风险水平仍在不断提升。

现阶段，淮安市尚未发生大规模的船舶污染事故。

2014—2018年淮安河境水上交通事故统计

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **年度** | **遇险种类** | **合计** | **碰撞** | **搁浅** | **触礁** | **火灾爆炸** | **机损** | **沉船** | **其他** |
| 2014 | / | 5 | 4 | / | / | / | / | 1 | / |
| 2015 | / | 8 | 5 | / | / | / | / | 3 | / |
| 2016 | / | 9 | 3 | / | / | / | / | 6 | / |
| 2017 | / | 12 | 2 | / | / | / | / | 10 | / |
| 2018 | / | 7 | 3 | / | / | / | / | 4 | / |

淮安海事局统计资料显示，近十年淮安河境未发生一起船舶溢油事故，可见发生溢油事故的风险概率小。项目实施后，船舶交通量和油品运量增长幅度相差不大，发生溢油事故的风险概率也小。

* + 1. 风险源项分析

一、施工期

本项目施工期使用500吨级船舶，运营过程中涉及的危险物质为柴油，施工期发生的溢油事故基本为因操作不当等因素造成施工船舶碰撞或自身操作不当导致事故而引发的溢油事故。本项目施工期反铲式挖泥船作业时，按1艘船型为500t考虑，燃油总舱容约为46m3（456m3×500/5000），燃油油舱单舱燃油量为6m3（61m3×500/5000）；本次环评燃油密度按照0.85t/m3计，则挖泥船携带燃油总量为39.1t，燃油油舱单舱燃油质量为5.1t。本次预测按照单仓全部泄漏计算，泄漏量为5.1t。

二、运营期

本项目运营期码头共设置3个1000吨级泊位，其中2个散货泊位、1个散货待泊泊位，运营过程中涉及的危险物质为柴油根据建设项目营运期间按3艘1000t级散货船同时在港考虑，燃油总舱容约为91m3（456m3×1000/5000），燃油油舱单舱燃油量为12m3（61m3×1000/5000）；本次环评燃油密度按照0.85t/m3计，则3个1000吨级散货船携带燃油总量为232.05t，燃油油舱单舱燃油质量为10.2t。

船舶到港进行装卸前，码头工作人员根据操作规程预先放置围油栏，船舶泄漏事故主要为船舶柴油发生泄漏，一旦发现泄漏，船方会立即启动应急程序，对泄漏的柴油进行围堵、蘸、吸，并通知相关部门应急救援，但仍有一部分油会泄漏。根据《水上溢油环境风险评估技术导则》（JT/T1143-2017）“7.2.1 船舶溢油事故溢油量 新建水运工程建设项目的最大可信水上溢油事故溢油量，按照设计代表船型所载货油或船用燃料油全部泄漏的数量确定”。本项目船舶发生事故时按一艘船燃料油全部溢出最可能发生的溢油事故泄漏量约为36m3（30.6t）。泄漏的石油类首先用吸油垫、围油栏、捞油兜等收油物品阻止或减少溢料下江，然后再经二道围油栏拦截回收。经上述处理后，泄漏入盐河的石油类截留率一般可达到90%，未被截留的油品将随水流向下游扩散，即流入盐河的量约为3.6m3（3.06t）。

具体各工况源强见表5.3-7。

污染预测源强

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 方案 | 事故风险类别 | 物质 | 释放速率（kg/s） | 污染船型 | 排放时间（min） |
| 方案一 | 码头船舶溢油事故（未采取措施） | 柴油 | 51 | 1000t级船 | 10 |
| 方案二 | 码头船舶溢油事故（采取措施） | 柴油 | 5.1 | 1000t级船 | 10 |

敏感保护目标见表5.3-8。

敏感保护目标表

| 名称 | 相对方位 | 距本项目厂界最近距离（m） |
| --- | --- | --- |
| 盐河 | E | 紧邻 |
| 盐河袁闸断面 | N | 位于项目下游约30km处 |

* + 1. 后果分析
       1. 盐河水环境数学模型建立

①水动力基本方程

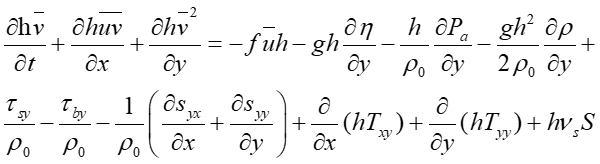
笛卡尔坐标系下二维水动力控制方程是不可压流体三维雷诺Navier-Stokes平均方程沿水深方向积分的连续方程和动量方程，可用如下方程表示：

连续方程：

动量方程：

形状

中度可信度描述已自动生成



其中：表示时长；、是笛卡尔坐标系下的空间位置；表示总水深；表示水位；表示水的密度；和为不同方向上的平均流速；表示Coriolis因子（是地球自转的角速度，是地理纬度）；、和为radiation应力张量；表示大气压；表示源项；表示重力加速度；；表示水的相对密度；表示外界排放到环境水体的速率。

横向应力Tij包括黏滞阻力、紊流摩擦阻力和差动平流摩擦阻力，可用垂向流速平均的涡粘方程来计算：

形状

中度可信度描述已自动生成

②模型计算区域及计算条件

本次建立朱码-袁闸下游1km段水环境数学模型。初始水位设为8m，温度25℃，起始时刻流速设为0。根据《淮安市级骨干河道盐河（盐河闸－涟水县殷渡）保护规划》，本次模型上边界取设计流量230m3/s，下边界取排涝水位8m。

在模型计算时，将模型划分三角形网格，模型计算范围见图5.3-1，模型。

模型计算时间步长为t=30s，计算总时长为4天。

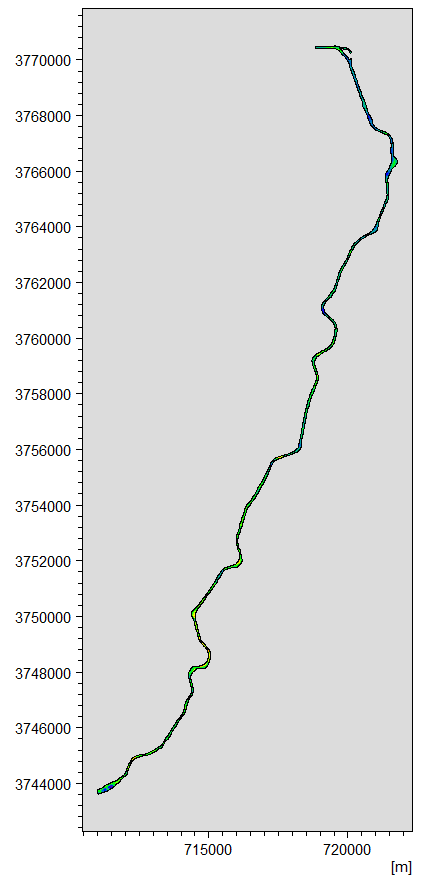


图5.3-1 模型计算范围图

②溢油预测模型

溢油进入水体后发生扩展、漂移、扩散等油膜组分保持恒定的输移过程和蒸发、溶解、乳化等油膜组分发生变化的风化过程。本次采用油粒子模型对船舶溢油风险进行预测，该模型可以很好地模拟上述物理化学过程，另外，“油粒子”模型是基于拉格朗日体系具有稳定性和高效率性的特点。“油粒子”模型就是把溢油离散为大量的油粒子，每个油粒子代表一定的油量，油膜就是由这些大量的油粒子所组成的“云团”。

1）输移过程

油粒子的输移包括了扩展、漂移、扩散等过程，这些过程是油粒子位置发生变化的主要原因，而油粒子的组分在这些过程中不发生变化。

①扩展运动

形状

中度可信度描述已自动生成

式中为油膜面积，；为油膜直径；为系数；为时间；油膜体积为：



初始油膜厚度：

=10cm

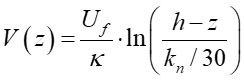
②漂移运动

油粒子漂移的作用力是水流和风拽力，油粒子总漂移速度由以下权重公式计算：

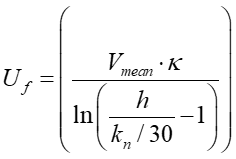


其中为水面以上10m处的风速；为表明流速；为风漂移系数，一般在0.03和0.04之间。

风场数据从气象部门获得，而流场从二维水动力模型计算结果获得。但是一般二维水动力模型计算出的是垂向平均值，必须据此估算流速的垂向分布。假定其符合对数关系：



其中为水面以下深度；为对数流速关系；为冯卡门常数（0.42）；为Nikuradse阻力系数；为摩阻速度，定义为：



其中为平均流速。

当两式满足等于0时：

形状

中度可信度描述已自动生成

当水深大于此位置时模型假定对流速度为0。

当z=0时，即可求出表面流速：



二维水动力计算结果中的流速计算点位于各离散的网格点，而“油粒子”模型中绝大部分时间里粒子不是正好处于这些点上，因此需要对流速值内插。因此本文采用双线内插值法：



其中、、、是网格点的已知流速；x、y为距离。

③紊动扩散

假定水平扩散各向同性，一个时间步长内方向上的可能扩散距离可表示为：



其中为-1到1的随机数，为方向上的扩散系数。

2）风化过程

油粒子的风化包括蒸发、溶解和形成乳化物等过程，在这些过程中油粒子的组成发生改变，但油粒子水平位置没有变化。

①蒸发

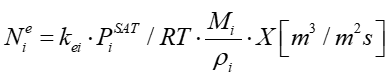
油膜蒸发受油分、气温和水温、溢油面积、风速、太阳辐射和油膜厚度等因素的影响。假定：

在油膜内部扩散不受限制（气温高于0℃以及油膜厚度低于5—10cm时基本如此）；

油膜完全混合；

油组分在大气中的分压与蒸汽压相比可忽略不计。

蒸发率可由下式表示：



式中N为蒸发率；为物质输移系数；为蒸汽压；R为气体常数；T为温度；M为分子量；为油组分密度；i为各种油组分。由下式估算：



其中k为蒸发系数；为组分i的蒸气Schmidts数。

②乳化

a．形成水包油乳化物过程

油向水体中的运动机理包括溶解、扩散、沉淀等。扩散是溢油发生后最初几星期内最重要的过程。扩散是一种机械过程，水流的紊动能量将油膜撕裂成油滴，形成水包油的乳化。这些乳化物可以被表面活性剂稳定，防止油滴返回到油膜。在恶劣天气状况下最主要的扩散作用力是波浪破碎，而在平静的天气状况下主要的扩散作用力是油膜的伸展压缩运动。从油膜扩散到水体中的油分损失量计算：



其中是进入到水体的分量；是进入到水体后没有返回的分量：

形状

中度可信度描述已自动生成

形状

中度可信度描述已自动生成

其中为油的黏度；为油一水界面张力。

油滴返回油膜的速率为：

形状

中度可信度描述已自动生成

b．形成油包水乳化物过程

油中含水率变化可由下式平衡方程表示：

形状

中度可信度描述已自动生成

和分别为水的吸收速率和释出速率，

形状

中度可信度描述已自动生成

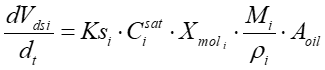
形状

中度可信度描述已自动生成

其中为最大含水率；为实际含水率；为油中沥青含量（重量比）；为油中总石蜡含量（重量比）；、分别为吸收系数和释放系数。

③溶解

溶解率用下式表示：



其中为组分i的溶解度；为组分的摩尔分数；为组分i的摩尔重量、为溶解传质系数，由下式估算：



其中

Oilspill模块主要（部分）参数取值如下表所示。本项目二维溢油模型是在二维水动力模型基础上建立的，其主要的工作在于定义各种模型参数值。模型中部分参数在各种应用场合中变化幅度较小，在合理取值范围内对结果影响不大，采用相关文献的推荐值（*姜卫星.黄浦江溢油事故的数值模拟研究［D］.上海:同济大学,2007.*）。

溢油模型主要参数取值

| 系数 | 过程 | 取值 |
| --- | --- | --- |
| 风漂移系数CW | 对流 | 0.02 |
| 油的最大含水率 | 乳化 | 0.85 |
| 吸收系数K1 | 乳化 | 5E10-7 |
| 释出系数K2 | 乳化 | 1.2E-5 |
| 传质系数Ksi | 溶解 | 2.36E-6 |
| 蒸发系数k | 蒸发 | 0.029 |
| 油辐射率loil | 热量迁移 | 0.82 |
| 水辐射率lwater | 热量迁移 | 0.96 |
| 大气辐射率lair | 热量迁移 | 0.82 |
| 漫射系数（Albedo）a | 热量迁移 | 0.10 |

* + - 1. 船舶溢油风险影响预测

1、施工期

（1）预测方案

本项目船舶柴油泄漏事故按突发性瞬间点源考虑，事故发生后，对事故点上、下游均会造成一定的影响。按照单仓全部泄漏量5.1t计算。

模型计算工况设定

| 事故风险类别 | 物质 | 释放速率（kg/s） | 污染船型 | 排放时间（min） | 排放量（t） |
| --- | --- | --- | --- | --- | --- |
| 码头船舶溢油事故 | 柴油 | 8.33 | 500吨 | 10 | 5.1 |

（2）预测结果

①对取水口影响

施工期船舶溢油事故发生后，1.22h后将到取水口，此时取水口油膜厚度约0.56mm，1.27h后对取水口影响最大，此时取水口油膜厚度为0.58mm，1.37h后将离开取水口，此时取水口油膜厚度为0.55mm。见图5.3-2。

②对袁闸断面影响

施工期船舶溢油事故发生后，21.15h后将到达袁闸断面，此时袁闸断面油膜厚度约0.135mm，21.18h后对袁闸断面影响最大，此时袁闸断面油膜厚度为0.136mm，21.3h后将离开袁闸断面，此时袁闸断面油膜厚度为0.135mm。见图5.3-3。

2、运营期

（1）预测方案

本项目船舶柴油泄漏事故按突发性瞬间点源考虑，事故发生后，对事故点上、下游均会造成一定的影响。结合工程实际情况，考虑船舶发生碰撞导致漏油现象，船方会立即启动应急程序，对柴油进行位图、蘸、吸，并通过海事、航道等部门应急救援。本次预测考虑发生事故后采取和未采取措施，设置两种预测工况，确定船舶溢油预测方案见表5.3-11。

模型计算工况设定

| 方案 | 事故风险类别 | 物质 | 释放速率（kg/s） | 污染船型 | 排放时间（min） | 排放量（t） |
| --- | --- | --- | --- | --- | --- | --- |
| 方案一 | 码头船舶溢油事故（未采取措施） | 柴油 | 51 | 1000t级船 | 10 | 30.6 |
| 方案二 | 码头船舶溢油事故（采取措施） | 柴油 | 5.1 | 1000t级船 | 10 | 3.06 |

（2）预测结果

1）方案一风险影响预测分析

①对取水口影响

船舶溢油事故发生后，在未采取措施的情况下，1.22h后将到取水口，此时取水口油膜厚度约1.23mm，1.27h后对取水口影响最大，此时取水口油膜厚度为1.28mm，1.37h后将离开取水口，此时取水口油膜厚度为1.23mm。见图5.3-4。

②对袁闸断面影响

船舶溢油事故发生后，在未采取措施的情况下，21.15h后将到达袁闸断面，此时袁闸断面油膜厚度约0.296mm，21.18hh后对袁闸断面影响最大，此时袁闸断面油膜厚度为0.297mm，21.3h后将离开袁闸断面，此时袁闸断面油膜厚度为0.296mm。见图5.3-5。

2）方案二风险影响预测分析

①对取水口影响

船舶溢油事故发生后，在采取措施的情况下，1.22h后将到取水口，此时取水口油膜厚度约0.57mm，1.27h后对取水口影响最大，此时取水口油膜厚度为0.58mm，1.37h后将离开取水口，此时取水口油膜厚度为0.57mm。见图5.3-6。

②对袁闸断面影响

船舶溢油事故发生后，在采取措施的情况下，21.15h后将到达袁闸断面，此时袁闸断面油膜厚度约0.137mm，21.18hh后对袁闸断面影响最大，此时袁闸断面油膜厚度为0.138mm，21.3h后将离开袁闸断面，此时袁闸断面油膜厚度为0.137mm。见图5.3-7。

3、小结

根据预测结果，施工期舶溢油事故发生后，1.22h后将到取水口，1.37h后将离开取水口，取水口油膜厚度为0.58mm；21.15h后将到达袁闸断面，21.3h后将离开袁闸断面，袁闸断面油膜厚度为0.136mm。运营期舶溢油事故发生后，在未采取措施的情况下，1.22h后将到取水口，1.37h后将离开取水口，取水口油膜厚度为1.28mm；21.15h后将到达袁闸断面，21.3h后将离开袁闸断面，袁闸断面油膜厚度为0.297mm。运营期舶溢油事故发生后，在采取措施的情况下，1.22h后将到取水口，1.37h后将离开取水口，取水口油膜厚度为0.58mm；21.15h后将到达袁闸断面，21.3h后将离开袁闸断面，袁闸断面油膜厚度为0.138mm。

由于溢油事故本身对水环境的影响较大，因此应加强管理，合理调配，尽可能避免溢油事故的发生，在船舶施工作业时要及时布设围油栏，防止可能出现的泄漏风险事故对周边水环境的影响；在作业时严格执行事故风险防范措施，在作业前布设围油栏，把溢油事故污染控制在围油栏所包围水域内。

* + 1. 次生/伴生环境风险分析

本项目主要的伴生/次生污染事故为由于可燃物发生火灾爆炸时，燃烧会产生有毒有害气体扩散至周边大气环境中，从而对周边环境空气质量及居民造成不良影响，火灾燃烧废气污染物对周围大气环境的影响是短时间的，且本项目选址所在区域空旷，场地内建筑构物少，最近的居民点与码头距离超过500m，总体上，火灾产生的污染物对周边居民点的环境影响较小，主要是码头工作人员在发生火灾时暴露于一氧化碳中，会导致中毒、休克，甚至死亡。

如果码头发生火灾事故后，若在相应时间内未能及时扑灭火灾并引发连锁事故，消防废水产生量有可能会超过厂区事故池容积，从而导致部分消防废水未经处理直接排入外环境，从而对码头附近的盐河水质造成不利影响。

柴油泄漏进入自然水体中，会对水中鱼类及微生物的生长、代谢带来危害，破坏水生生态环境。

* + 1. 风险评价结论

根据上述分析，本项目装卸物质无有毒有害物质，发生事故类型主要为船舶碰撞油污排放入盐河污染盐河水体，在及时采取拦油设施，控制表面油层扩散，反复吸油等措施的情况下，21.15h后将到达袁闸断面，在水文和气象条件不变的情况下，最大油膜厚度约0.138mm。

所以当溢油事故发生时，企业应及时通知相关取水公司，在油膜到达取水口断面前停止取水。盐河为航道，根据调查，本项目上下游未设置饮用水取水口，沿线主要为工业取水，无应急水源，在发生环境风险事故时，工业取水暂停，采取自来水用水。同步开展应急监测，直至事故满足应急终止条件后方可恢复取水口取水。采取以上措施后，本项目发生的环境风险可以控制在较低的水平，风险发生概率及危害也较低，本项目的事故风险处于可接受水平。

本项目建设项目环境风险简单分析内容表见表5.3-12。

建设项目环境风险简单分析内容表

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 建设项目名称 | 淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程 | | | | |
| 建设地点 | （江苏）省 | （淮安）市 | （）区 | （涟水）县 | 朱码街道高台村 |
| 地理坐标 | 经度 | 119.31262985 | 纬度 | 33.82972009 | |
| 主要危险物质及分布 | 油污，航运船舶 | | | | |
| 环境影响途径及危害后果（大气、地表水、地下水等） | 船舶溢油事故发生后，在及时采取应急措施的情况下，21.15h后将到达袁闸断面，在水文和气象条件不变的情况下，最大油膜厚度约0.138mm。 | | | | |
| 风险防范措施要求 | 编制应急预案、加强管理。 | | | | |
| 填表说明 | 本项目属于码头项目，共设置3个1000吨级泊位，其中2个燃煤散货泊位、1个燃煤散货待泊泊位，运营过程中涉及的危险物质为柴油，涉及的危险物质数量与临界量的比值Q小于1，项目风险潜势为I，可开展简单分析。 | | | | |

1. 环境保护措施及其可行性论证
   1. 施工期污染防治措施
      1. 大气污染防治措施

在施工过程中，大气污染物主要为扬尘、船舶、施工车辆排放的尾气、水下土方干化场恶臭废气、临时堆场扬尘、运输砂石料粉尘。施工期间对大气污染物的主要防治措施有：

1、扬尘污染防治措施

为加快改善环境空气质量，国务院颁布了《国务院关于印发打赢蓝天保卫战三年行动计划的通知》（国发〔2018〕22号），省政府颁布了《江苏省打赢蓝天保卫战三年行动计划实施方案》（苏政发〔2018〕122号），对照上述文件要求，提出加强扬尘综合治理的要求，将施工工地扬尘污染防治纳入文明施工管理范畴，建立扬尘控制责任制度，做到施工工地周边100%围挡、物料堆放100%覆盖、出入车辆100%冲洗、施工现场地面100%硬化、拆迁工地100%湿法作业、渣土车辆100%密闭运输，具体建议采取措施如下：

（1）施工场地周边封闭围挡。建筑工地应采用硬质封闭围挡，鼓励采用装配式围挡。围挡下方设置不低于20厘米高的防溢座。围挡应环绕工地四周连续设置，按规定布设符合标准的公益广告。施工工地内应设置车辆清洗设施以及配套的排水、泥浆沉淀设施，运输车辆应在除泥、冲洗干净后方可驶出工地。

（2）裸土与物料堆放覆盖。对易干燥起尘的裸露场地和堆放土方，超过4小时的，必须采取覆盖（六针以上密目网）、绿化或固化等防尘措施。施工现场料具堆放整齐，产生扬尘的材料露天堆放时，应采取定期洒水、防尘网覆盖等措施。施工现场应分类设置建筑垃圾堆放场地和垃圾池，上部应有覆盖密闭措施，起尘时应及时湿润。建筑垃圾宜日产日清，严禁凌空抛掷和现场焚烧。参照类似码头施工期如图6.1-1。

|  |  |  |
| --- | --- | --- |
| 街道边的轨道上行驶  中度可信度描述已自动生成  施工现场主要道路硬化处理 | 公路上的卡车  描述已自动生成  施工现场道路洒水作业 | 卡车停在路边  中度可信度描述已自动生成  施工现场车辆自动冲洗 |

图6.1-1 施工期防尘措施参照图

（3）施工现场土方作业时，应在喷淋降尘系统无法覆盖的区域布设满足抑尘需要的雾炮机并正常使用；按要求配足保洁人员，及时对工地内建筑垃圾运输车辆行进路线等进行打扫、洒水、保洁。建（构）筑物拆除，桩头、路面破碎，材料切割、打磨或钻孔，本项目桥梁拆除施工进行铣刨时，应设置专用封闭式作业空间。

（4）路面与场地硬化。施工现场出入口、场内主要道路、脚手架底部、主要操作场地以及生活、办公区主要道路必须进行硬化处理，及时洒水降尘，保持路面湿润、清洁。基坑边坡车辆出入通道采用混凝土浇筑或满铺钢板（钢板铺设道路可在底部铺设碎石和防尘网）等硬化措施，并及时打扫清洁。

（5）出入车辆有效清洗。建筑工地主出入口处应设置成套定型化自动冲洗设施，场地狭小不具备设置条件的应配备高压水枪进行冲洗，配套浇筑符合标准的排水沟和沉淀池，确保车身、车轮、牌照及混凝土搅拌车出料口冲洗干净、泥浆水有序排放，排水沟和沉淀池应及时清理。

（6）水泥和其他易飞扬的细颗粒散体材料，应严密遮盖，运输时防止洒漏、飞扬，卸运尽量在仓库内进行并洒水湿润。施工中尽量使用商品混凝土。

（7）施工垃圾应及时清运、适量洒水，以减少扬尘。

（8）在平整场地陆域形成后，尽快铺设遮盖设施，减小土方形成和场地铺砌之间的时间间隔，减少施工期间的场地风力扬尘对环境空气的影响。各类推土施工作业应做到随土随压、随夯，减少水土流失。

（9）针对在土石方作业过程中产生的扬尘污染，评价要求施工单位在大风天气应停止土方开挖等容易产生扬尘的施工作业，禁止在施工现场焚烧有毒有害物质。

2、车辆及运输机械尾气

（1）尽量选用低能耗、低污染排放的施工机械和车辆，选用有环保合格和车辆检验合格标志、排气达标的车辆，不得使用不符合排放标准的车辆。

（2）加强机械和车辆的管理和维护，减少因机械和车辆状况不佳造成的空气污染。

（3）使用品质高的汽油和柴油作为燃料。

3、水下土方堆存废气

本项目水下土方干化场设置一定的围堰或围挡。水下土方堆放时间很短，沉淀排水后的水下土方主要用于临时用地恢复。加强挖泥船和泥驳船作业管理，加快水下土方回填作业。

* + 1. 水污染防治措施

1、疏浚作业对水体的减缓措施

（1）减少挖泥量：要求施工单位配备GPS定位系统，准确确定需要开挖区域的范围、深度，减少疏浚作业中不必要的超宽、超深挖泥量，从而减少悬浮物产生量。

（2）采用环保的疏浚设备及疏浚方式：水下施工中SS发生量取决于施工机械、施工方法等因素，本项目工程疏浚采用反铲式挖泥船疏浚技术，其原理见图6.1-2。



图6.1-2 反铲式挖泥船

反铲挖泥船是一种安装在轮船或者驳船上的机器，也叫水上挖机平台。它被用来浚挖河床，从而能够使大型的船舶能够在河道上航行。反铲挖泥船和陆地上使用的反铲挖掘机很相似，并且，可以通过在轮船或者驳船上安装挖掘机来制造这种挖泥船。具体措施如下：

（1）本次疏浚应选择在枯水季节进行，合理安排疏浚计划，疏浚和围堰等施工作业尽量缩短施工期，集中安排施工期。在满足建设进度的情况下，尽量减少在同一水域的挖泥船数量，减少施工对水体的扰动。施工结束后施工场地应及时清场，建筑垃圾不得弃至航道中。

（2）疏浚前应开展河道底泥摸底性调查，切实掌握底泥分布特点和核实污染状况，科学确定疏浚深度和土方量，合理安排疏浚作业方法，疏浚、挖泥作业采用产生悬浮泥沙较少的反铲式挖泥船，严格到指定水下土方干化场堆放。

（3）疏浚泥沙应严格按照施工方案确定的地点抛弃，禁止乱抛乱弃进入淮河入海水道和苏北灌溉总渠。

（4）施工期间不得向淮河入海水道和苏北灌溉总渠排放任何污水。

（5）疏浚土开挖及运输过程中的措施

①泥驳必须在疏浚施工水域溢流完成后才能启航运输，防止运输环节发生溢流污染。②在泥驳从挖泥点到指定的抛泥区运输过程中，泥舱不能过于装满，避免溢舱泥浆对航行过程中的水污染，避免大风期的作业，保障船只安全和减少泥浆洒落对水环境的影响。泥驳需安装GPS系统及视频监控系统，确保运泥路线正确以及便于对运泥船抛泥过程进行实时监控。③疏浚过程中，应保证泥舱处于密封状态。施工单位应加强泥驳日常维护与保养，确保其良好性能，尤其是泥舱密封条的严密性能和控制泥门开启与关闭的传动部分，及时更换箱门封条和液压杆上的密封圈，以免液压系统失控或密封条失灵而导致泥门关闭不严的现象发生。

2、水下土方干化场场余水

本项目运至水下土方干化场土方量共约2.4万m3，根据工程分析可知，经围堰内初期沉淀后，其主要污染物为SS，若直接排入盐河，对盐河水质影响较大，为进一步减少对地表水的影响，水下土方干化场采取以下措施：

（1）围堰

水下土方堆场直接利用挖掘机开挖，将中间挖方堆在四周并夯实，并利用基坑开挖土方，制成土围堰，围堰堆高需高出水面，以防起风时水浪外溢。

（2）泄水口

泄水口又称水门，是泥浆在堆场内沉淀后余水的排泄口门，它的作用是调节泥浆流程，控制排泄流量，改善泥沙沉淀效果，减少流失及提高平整度等。

根据工程实际情况，考虑到施工容易、易于拆迁、经济耐用等方面因素，本工程选用闸式泄水口，且在泄水口内侧筑一封闭式溢流堰以调节泄流水位。

（3）后续沉淀池

疏浚的污泥余水中存在大量细小污染物，为保证余水达标排放，将污泥堆场设计分为排泥池、沉淀池、澄清池三块连续区域，且在各池内设置数条隔梗，以增加水力停留时间，增强悬浮颗粒物自身重力沉降的作用。

疏浚水下土方经过泥驳运入水下土方堆场，利用悬浮固体颗粒物的自然沉淀性能，使泥浆在底泥堆场自然沉淀，通过控制疏浚余水水力停留时间、沉降有效水深、流速等达到去除固体悬浮物（SS）及其他污染物的目的。在排泥池里产生的余水通过泄水口进入沉淀池，向余水中均匀投加絮凝药剂，通过水力混合在沉淀池内形成初沉，经过初沉的余水再通过第二道泄水口进入澄清池，悬浮物及其他污染物随絮凝体沉积在澄清池后，满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河。其处理工艺流程设计如图6.2-1所示。



图6.2-1 疏浚污泥余水处理工艺图

当泄水口流量增大、SS浓度增高时，可下放木闸板抬高排泥场内的水位，使得排泥场内的水流处于暂时的静止状态，同时减少了泄水口余水流量，使淤泥悬浮颗粒有充分的沉淀区域，并可起到增加余水水力停留时间的效果，减轻余水处理的压力。

施工后期排泥场内没有足够数量的水体，不能为施工余水中的土颗粒提供充分的沉淀区域和时间，这样会导致余水排放超标，可向余水中投加絮凝药剂，加速余水中泥土颗粒絮凝，使悬浮颗粒迅速沉淀，达到泥水快速分离的效果。

张志芳等采用以上处理方案对梅梁湖生态清淤余水进行处理（*张志芳，《内陆河湖生态疏浚余水处理工程设计运用》*），实施过程抽样监测，余水主要控制因子SS最高监测值仅为18mg/L，达到地表水II类水质标准要求。

本项目通过以上处理方案，将疏浚水下土方进行预处理，处理后的余水满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河。

3、施工船舶污水、施工车辆及机械冲洗废水

（1）严格管理施工船舶和施工机械，严禁油料泄漏或倾倒废油料，严禁施工船舶向水域排放未经过处理的机舱水、生活废水、施工车辆及机械冲洗废水。

（2）禁止施工船舶直接将含油废水直接排入水体，施工船舶生活污水、洗舱废水、舱底油污水均由船舶带走，不在本河段排放。

4、陆域形成施工悬浮物污染防治措施

①陆域回填区设置临时分级围堰，陆域回填应在码头及护岸水工结构基本完成后进行，严格按照先围后填的施工工艺进行。

②合理安排溢流口，应设置在回填区的末端，并在溢流口增设防污栏。

③疏浚物通过泥驳送到后方电厂水下土方干化场，经围堰、泄水口及多级沉淀后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河，对周边地表水环境影响较小。

5、陆域生活污水的污染防治措施

本项目施工现场设置施工营地，施工人员产生少量的生活污水，其中生活污水主要含有COD、BOD5、SS、氨氮等污染物，生活污水和垃圾也是施工过程中临时排放的污染物。务必要加强管理，避免对环境造成污染。施工营地产生的生活污水经临时化粪池预处理后接管排入国能涟水一期热电联产项目厂区内处理。

* + 1. 噪声污染防治措施

1、合理布局施工场地，优化作业方案和运输方案，尽量降低施工现场附近敏感点噪声强度，避免噪声对周围环境的干扰。

2严格控制作业时间，尽量避免夜间施工，以避免对周围施工现场周边动物的休息；对环境的污染不能控制在规定的范围内的，要尽量采取措施降低噪声。

3、夜间运输材料的车辆进入施工现场，严禁鸣笛和乱轰油门、装卸材料要做到轻拿轻放。

4、进入施工现场不得高声喊叫和乱吹哨、不得无故甩打模板、钢筋和工具设备等，严禁使用高音喇叭、机械设备空转和不当地碰撞其他物件（如混凝土振捣器碰撞钢筋或模板等），减少噪声对周围环境的干扰。

5、加强各种机械设备的维修保养，缩短维修保养周期，尽可能降低机械设备噪声的排放。

6、施工现场超噪声值的声源，采取如下措施降低噪声或转移声源：

（1）尽量选用低噪声设备和工艺来替代高噪声设备和工艺（如用电动空压机代替柴油空压机；用静压桩施工方法代替锤击桩施工方法等），降低噪声。

（2）在声源处安装消声器消声，即在鼓风机、内燃机、压缩机各类排气装置等进出风管的适当位置设置消声器（如阻性消声器、抗性消声器、阻抗复合消声器、穿微孔板消声器等），降低噪声。

（3）加工成品、半成品的作业（如预制混凝土构件、制作门窗等），尽量放在工厂车间生产，以转移声源来消除噪声。

7、在施工现场噪声的传播途径上，采取隔声屏障、利用现有绿化带等声学处理方法来降低噪声。

8、建筑施工过程中场界环境噪声不得超过《建筑施工场界环境噪声排放标准》（GB12523-2011）规定的排放限值。夜间噪声最大声级超过限值的幅度不得高于15dB(A)。

* + 1. 固废污染防治措施

施工期固废主要是生活垃圾、建筑垃圾和弃方。

1、施工现场设立专门的固体废弃物临时贮存场所，用砖砌成池，废弃物应分类存放，对有可能造成二次污染的废弃物必须单独贮存、设置安全防范措施且有醒目标识。对储存物应及时收集并处理，可回收的废弃物做到回收再利用。

2、固体废弃物的运输应采取分类、密封、覆盖、避免泄漏、遗漏，并送到政府批准的单位或场所进行处理。

3、施工现场应使用环保型的建筑材料、工器具、临时设施、灭火器和各种物质的包装箱袋等，减少固体废弃物污染。

4、提高工程施工质量，减少或杜绝工程返工，避免产生固体废弃物的污染。

5、施工中及时回收利用落地灰和其他施工材料，做到工完料尽，减少固体废弃物污染。

6、施工场地设置干化场地，港池和水工结构开挖的土方用于回填水工结构；疏浚开挖的土方在水下土方干化场沉淀处理后用于后方临时用地恢复，本项目无弃方产生，不会对区域环境造成影响。

土方利用的合理性分析：本项目港池及水工结构挖方经简单翻干后用于陆域回填，表层素土及疏浚后的干化水下土方均作为后方场地回填。疏浚开挖的土方在水下土方干化场沉淀处理后用于后方电厂项目临时用地回填。

根据报告4.3.4底泥环境质量现状监测和评价章节，本项目拟开挖港池处河道底泥的重金属指标能够满足《土壤环境质量 农用地土壤污染风险管控标准（试行）》（GB15618-2018）中其他类标准，其余指标均能够满足《土壤环境质量 建设用地土壤污染风险管控标准（试行）》（GB36600-2018）中表1中第二类用地筛选值。因此，本项目港池和水工结构开挖的土方用于回填项目水工结构合理可行。疏浚水下土方用于后方电厂项目临时用地回填合理可行。

项目土方再利用过程中需重点关注施工粉尘对周边环境的影响，土方临时堆放场需设置围挡、排水沟、防尘网苫盖并及时洒水降尘。另外，水下疏浚水下土方运至水下土方干化场沉淀产生的废水采取的主要措施详见报告6.1.2章节，经围堰、泄水口及多级沉淀后用于场地洒水抑尘，不外排，对周边地表水环境影响很小。

* + 1. 生态保护措施

根据项目建设对生态的影响分析，提出有针对性地控制措施，以减少和降低对生态环境的影响。

* + - 1. 缩减岸线使用、保护自然岸线

自然岸线是一种独特的不能替代的资源，它对维持生态安全、维护生物多样性具有不可忽视的价值，同时自然岸线对水体周期性变化起到缓冲作用。

2020年江苏省交通运输厅印发《江苏内河航运高质量发展实施方案》，方案提出：内河港口宜采用挖入式港池，减少自然岸线的使用量。为此，本项目采取挖入港池方式在陆域开挖，形成宽约90m，长约196m的港池，可布置3个泊位，泊位长度达220m。不仅如此，本项目在方案设计时不断优化，尽可能地把场地布置在后方陆域，将使用岸线长度由原方案246m缩减至182m，减少对盐河生态环境的影响。

* + - 1. 陆域生态保护措施

（1）陆域生态保护措施

①做好土石方挖填平衡工作，注意时序的衔接，争取挖填方一次到位，尽量减少临时堆放及土石搬运带来的水土流失。

②对临时土石方堆放点应有遮盖物。

③根据项目的施工进度及时对地面进行硬化处理和绿化工作；

④土方搬运堆填过程应避开雨季施工。

⑤剥离并保存好占地范围内的表土，并做好临时堆放遮挡措施。待施工完成后，可用作厂区绿化用土。在表土临时堆放场四周设排水沟，排水进入临时沉淀池沉淀处理后回用于周边绿化。表土堆放场采用苫布遮盖。

⑥打桩泥浆晒干后应作为填方土使用，不宜在河边永久弃置，以免引起新的水土流失。

（2）临时工程优化设计措施

合理布置施工场地，尽量布置在码头永久占地范围内。

①进一步优化地基方案减少土石方量

做好地基土石方平衡和建设场地位置设计，避免大填大挖，保护好环境，减少水土流失。

②施工场地选址原则要求及调整建议

施工场地选址应充分考虑生态破坏和不良影响，布置于热电及码头占地范围内，尽可能远离水体及河滩地。同时对临时占地设置合理的生态保护和恢复方案，采取植物恢复措施，尽量恢复原地貌和景观。施工场地应尽量利用项目本身已征用建设场地占地区。

工程依托热电项目设置的1处施工场地，居民点距离场地最近距离超过1000m，施工场地扬尘或沥青烟对居民影响较小；办公生活污水收集后定期由环卫部门清运，不得外排，施工生产废水经处理后回用，亦不得外排；施工生产废水经处理达标后应优先回用。在落实上述措施的前提下，工程设置的施工场地环境可行。

③施工场地、临时表土堆场在施工结束一年内进行土地平整，进行场地绿化。弃土场、排泥场进行土地平整由热电项目使用。

（3）施工期水保措施

根据项目水保方案，本项目在施工期采取的水保措施如下：

①施工场地

施工场地四周设置临时排水沟，为避免在降雨对临时堆放的建筑材料冲刷造成水土流失，在施工过程中采用一定的防尘网在降雨时对临时堆料进行苫盖，减少雨水冲刷造成水土流失，拦挡的雨水汇入临时排水沟，经沉淀后回用。

②临时表土堆土场

本项目临时堆土场位于项目红线内，主要堆放表土，基础施工完成后及时回填，由于本项目工期紧凑，土方临时堆放时间较短，因此采用防尘网对堆土场进行苫盖，并在坡脚开挖临时排水沟，连通场地排水沟，排水沟末端设置沉淀池。施工结束后进行场地绿化。

③临时堆土场

临时堆土场采用二级放坡，边坡按1:1.5~1:2进行控制，堆土高度控制在4～6m左右，并在堆土坡脚用填土编织袋进行防护，填土编织袋采用梯形断面，顶宽 0.6m，高1.0m，底宽1.0m。考虑到堆土结构松散，遇雨日易造成水土流失，因此对堆土场坡面苫盖防尘网，以减弱降雨对堆土坡面的侵蚀。

④水下土方干化场

工程热电项目占地范围内设置1处水下土方干化场，四周采用土围堰拦挡，拦挡长度为260m，水下土方干化场围堰采用充填袋堤心结构，围堰内边坡取1:1.5，外边坡取1:3。围堰吹泥侧斜坡采用袋装土填隙，其上铺设防渗土工膜，土工膜下铺至现状泥面以下4m，坡面防渗土工膜沿围堤轴线方向每 20m 长用 0.3m 厚袋装土压护。外坡侧采用袋装土填隙与护面，护面厚0.2m。土方就地取土，待水下土方自然晾晒干化后就地平整，剩余部分回填于热电项目厂区内。

* + - 1. 施工期水域生态保护措施

①加强生态环境保护的宣传和管理力度

工程建设管理部门应充分认识到保护水生保护动物的重要性，加大对《中华人民共和国野生动物保护法》《中华人民共和国渔业法》等法律法规的学习和宣传力度，加强对承包商、施工人员的宣传教育工作，严禁施工人员利用水上作业之便非法捕捞。

建设和施工单位应加大对《中华人民共和国野生动物保护法》《中华人民共和国渔业法》等法律法规的宣传力度。建设单位与施工单位所签订的承包合同中应有环境保护方面的条款，并附有环保要求的具体内容。

②科学选择施工期，水域作业选择枯水季节（12月～3月）进行，避开鱼类产卵繁殖期及鱼苗摄食育肥期（4月～6月），尽量减少对水生生物的影响。加强对承包商、施工人员的宣传教育工作，严禁施工人员利用水上作业之便捕捞。

③施工期间，应严禁施工人员随意将各类废弃物，如生活垃圾等，禁止直接抛入水体之中，尤其禁止向水体抛弃有毒有害物质；施工结束后，所有建筑垃圾不得弃于航道中。同时，生态补偿也需考虑。

④水下施工中 SS 发生量则取决于施工机械、施工方法、土石质量和粒度分布情况及河段水文条件等。施工中应尽量采用先进的施工技术，合理安排施工挖掘进度，缩短施工时间，最大限度地控制水下施工作业对底泥的搅动范围和强度，减少悬浮泥沙的发生量。

* + 1. 施工期环境事故风险防范和应急措施

为避免事故的发生或减少事故后的污染影响，建设单位应在项目建设时，项目建成投产前制定事故防范措施，配备相当数量的应急设备和器材，做好施工期风险防范措施。

1、在疏浚施工时，施工单位应随时准备吸附材料和隔离拦截材料，若发生泄漏事故，在有关单位指导和配合下，及时采取浮油拦截和吸附措施，直至油污消除。同时，建立应急救援队伍。

2、施工期施工船舶底舱封闭运输水下土方，不开口施工。

3、施工前期，建设单位将施工水域及作业计划呈报当地海事和航道维护部门批准，并会同航道、海事、船舶等相关单位商讨施工期间的通行处理措施。比如临时移动航标改变通行路线，或者确定临时断航时间、地点等，并由各自主管部门发布航行通告和航道通告，以引起各游船单位的重视。严禁无关船舶进入施工作业水域，按规定设置相应标识便于船舶导航，从源头上规避风险。

4、施工前应与当地水务局、防汛局等部门沟通，与相关管理部门研究划定施工界限，获得施工许可，并发布施工通告；未经同意，不得擅自开工，不得擅自扩大施工作业安全区；加强施工质量和进度管理，严格按既定的施工要求和施工进度进行施工。

5、施工船舶选择有丰富经验的驾驶人员，船舶驾驶人员上岗前进行统一的岗前培训，使其明确熟悉相关操作规程和准确掌握通行避让规则。加强对船舶操作人员的技术培训，增强施工人员的安全意识和环境保护意识，严格操作规程，避免人为操作失误引起船舶碰撞，杜绝船舶供油作业中溢油事故的发生。

6、施工期间，作业船只悬挂灯号和信号，灯号和信号应符合国家规定，以避免各施工船舶之间发生相撞从而引起溢油事故的发生，也避免危化品船只误入施工水域。施工作业船舶在施工期间加强值班瞭望，施工作业人员应严格按照操作规程进行操作。

7、施工船舶燃油实行一日一加，减少船舶自备载油量；船舶舱底含油一日一清，减少含油污水存放量，尽量减少事故污染源。

8、施工期间，施工单位应定期检查和维护施工船舶，使船舶维持良好的工作状态；同时，合理安排施工作业面，减少运砂船舶的碰撞概率。施工期间遇恶劣天气必须将工程船舶及时撤离，保证船舶安全。

9、建设单位和施工单位制定施工期船舶泄漏等事故应急预案，预案应包括应急事故组织机构、应急救援队伍、应急设施及物资的配备、报警系统、应急处理措施、应急培训计划等内容；施工场所应张贴应急报警电话。应急预案应与沿线各地市环境风险应急预案相衔接。疏浚、围堰施工时段提前10天通知下游水厂，使其做好必要的取水、水处理安全防范安排。

9、一旦发生船舶碰撞溢油环境风险事故，船方与建设单位应及时沟通，及时报告主管部门（海事部门、生态环境局、公安消防部门等），并实施溢油应急计划，同时要求施工单位、船方共同协作，及时用隔油栏、吸油材等进行控制、防护，使事故产生的影响减至最小，最大程度减少对取水口等水环境保护目标的影响。

10、相关部门接到污染事故报告后，应根据事故性质、污染程度和救助要求，迅速组织评估应急反应等级，并同时组织力量，调用清污设备实施救援，拟建工程业主应协助有关部门清除污染。

11、除向上述公安、生态环境等部门及时汇报外，应委托环境专业人员和监测人员到场工作，对水体污染带进行监测和分析，并视情况采取必要的公告、化学处理等措施。

* 1. 营运期污染防治措施
     1. 大气污染防治措施

根据营运期废气源强分析，码头建成后产生的大气污染物主要为船舶停靠水域下卸作业产生粉尘和船舶废气等。本次评价结合项目散货装卸特点，提出如下大气污染防治措施。

* + - 1. 码头装载过程防尘措施

本项目装卸货物为煤炭，通过料斗进入皮带输送机，然后经传送皮带密闭输送至T0转运站，经密闭式管式输送机输送至国能涟水一期热电联产项目的封闭式煤场。桥式抓斗卸船机的防尘、抑尘系统： 每台桥式抓斗卸船机装备1套干雾加高压水雾的抑尘系统，并对桥式抓斗卸船机在运转过程中的起尘部位采取密闭防尘措施。桥式抓斗卸船机漏斗上口设挡风板，漏斗至码头皮带转运处设密闭溜槽和密闭导料槽，卸船接料斗下口应设闸板、出料溜筒，进、出口设橡胶帘。带式输送机的防尘、抑尘措施： 带式输送机设置皮带机罩，混凝土栈桥两侧设置防风板，在带式输送机卸料处回程皮带头部设置自动洗带装置。

煤炭进入料斗时，通过上述干雾抑尘，料斗防尘帘，皮带机增加导料槽等措施来减少粉尘的产生及排放。喷雾过程中大部分水量被货物带走，其余在生产过程中蒸发损耗，不产生废水。可满足《大气污染物综合排放标准》（DB32/4041—2021）中无组织排放监控浓度限值要求。

* + - 1. 燃油废气防治措施

①装卸机械及来往船舶产生的燃油尾气的防治措施主要从管理入手，如要求进入本项目码头的船舶性能符合《船舶发动机排气污染物排放限值及测量方法（中国第一、二阶段）》（GB15097-2016），不符合上述性能的船舶禁止进入码头。

②使用合格的燃油，在燃柴油机械的燃料中添加助燃剂，使燃料油燃烧充分，降低尾气中污染物的排放量。

③对码头机械及来往船舶进行定期保养，保证其处于良好的运转工况，可减少废气污染物的排放。

④进港船舶应利用岸电作为能源，以减少船舶大气污染物排放。

* + - 1. 岸电设施（船舶废气）

新建码头同步规划、设计、建设岸电设施。根据江苏省生态环境厅、江苏省交通运输厅、中华人民共和国江苏海事局《关于印发江苏省港口与船舶大气污染防治工作方案的通知》苏环办〔2022〕258号，本项目在码头泊位建设时同步建设岸电设施，进港船舶应利用岸电作为能源，以减少船舶大气污染物排放。

本项目船舶停靠码头的时候，停止使用船舶上的自备辅助发电机，转而使用陆地电源向主要船载系统供电。其操作方式如下：靠泊船舶放下受电系统接头线缆，港口工作人员将船舶与船舶岸电系统连通，启动船舶岸电系统为靠泊船舶提供辅助动力，使用岸电系统。泊岸电系统包括三个部分：岸上供电系统、船岸连接设备、船舶受电系统 。

1）岸上供电系统：由前沿港区变电所供电，经过变压器、变频将输入电源转化为满足船舶要求的电源，供应到靠近船舶的连接点。

2）船岸连接设备：连接岸上连接点及船上受电装置间的电缆和设备。电缆连接设备必须满足快速连接和存储的要求，不使用的时候存储在船上、岸上或者驳船上。

3）船舶受电系统：在船上固定安装受电系统，可能包括电缆绞车、船上变压器和相关电气管理系统。

根据《码头岸电设施建设技术规范》（JTS155-2019），本工程在每个泊位分别设置30kVA船用岸电箱1台，供电电压等级为400V，50Hz。船舶靠岸后全部利用岸电取代船舶辅机。码头配置岸电系统后能够极大减少氮氧化物、二氧化硫、一氧化碳、二氧化碳、碳氨和悬浮物（PM）等的排放量。

室外岸电箱的结构应具有不低于防护等级IP65的防护措施，应具备接地故障指示、报警和保护等安全功能，设置可靠的接地和避雷措施。低压供电的接插件应符合现行国家标准《工业用插头插座和耦合器》（GB/TII9I8）的有关规定，岸基供电接口的插座、插头应参照《低压岸电连接系统（LVSC系统）用插头插座和船用耦合器》（T/CEC198-2019）相关条款，码头单位应配备与自身岸电设施相匹配的电缆（电缆一端为与自身岸基供电插座相匹配的插头，另一端为接线鼻子），电缆放置在岸电设施附近易于取用的位置，电缆数量应与岸电供电插座数量相一致。码头岸电设施应加装专用电能表，便于岸电使用电量读取和统计。低压岸电设施投入使用前，应对照检测规范对岸电设施检测合格，检测报告留存备查并报备属地交通主管部门。建立健全码头岸电设施管理、使用、维护保养制度和操作规程，设立岸电使用公示牌，建立岸电设施公示制度，建立岸电使用台账，及时登记靠泊船舶岸电使用情况。

* + - 1. 监督管理措施

（1）对各类防尘、除尘设施应建立相应的管理制度，并设专人负责设备的使用、养护及维修。设备完好率应达到90％以上，利用率应达到80％以上。除尘设备除尘效果差，达不到除尘要求的，应予报废或改进。

（2）港口安环部门应安排专人负责粉尘防治的监督工作，检查防尘设施的除尘效果，发现问题应及时与有关技术管理部门研究解决。

（3）在粉尘浓度严重超标，气象条件恶劣的情况下，监督管理人员有权要求停止作业。

综上所述，本项目采取上述大气污染防治措施之后，营运期污染物排放量较少，对大气环境的影响不明显，因此本项目营运期大气污染防治措施可行。

* + 1. 水污染防治措施
       1. 船舶舱底油污水、船舶生活污水处理措施

根据《73/78国际防污公约》《中华人民共和国防止船舶污染海域管理条例》《江苏省内河水域船舶污染防治条例》等法律法规的要求，到港船舶不得直接向码头所在水域直接排放污染物。

船舶生活污水经1套码头前沿接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理，项目船舶生活污水产生量为1470.2m3/a（4.46m3/d）。

国能涟水一期热电联产项目建设1套处理能力均为3m3/h（72 m3/d）的地埋式一体化生活污水处理装置，在处理电厂生活污水和码头陆域生活污水后，剩余7.2 m3/d的处理能力，能够满足船舶生活污水的处理。处理工艺为二级生物接触氧化，能够满足船舶生活污水水质要求，经处理后的生活污水回用于厂区绿化。故后方电厂船舶生活污水接收装置规模可容纳收集船舶生活污水。经处理后的生活污水回用于厂区绿化，不外排。

船舶生活污水回用可行性引用国能热电项目环评相关内容：

根据《火电厂污染防治可行技术指南》（HJ2301-2017）表 21 废水处理与回用可行技术路线中的生活污水可行技术包括（1）二级生化处理，（2）膜生物反应器工艺，去向或回用途径为“绿化、集中处理站”。热电项目生活污水处理站采用二级生物接触氧化工艺，属于可行技术，处理后的水全部回用于全厂绿化用水，属于可行技术指南中推荐可行去向。类比国家能源集团宿迁发电有限公司的例行监测数据：生活污水处理后pH7.5~7.9、氨氮3.99～4.36mg/L、BOD6.7~9.2mg/L，能够满足《城市污水再生利用―城市杂用水水质》（GB/T 18920-2020）回用要求。

船舶舱底油污水由1套码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器（接收装置规模1m3），配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，均不向盐河直接排放污染物。

* + - 1. 陆域生活污水处理措施及可行性分析

本项目陆域生活污水接管至国能涟水一期热电联产项目厂区污水处理设施处理（处理能力为3m3/h的地埋式一体化生活污水处理装置），本项目陆域生活污水产生量为1336.5m3/a（0.17m3/h），故后方电厂生活污水接收规模可接纳处理陆域生活污水。经处理后的生活污水回用于厂区绿化，不外排。

生活污水回用可行性引用国能热电项目环评相关内容：

根据《火电厂污染防治可行技术指南》（HJ2301-2017）表 21 废水处理与回用可行技术路线中的生活污水可行技术包括（1）二级生化处理，（2）膜生物反应器工艺，去向或回用途径为“绿化、集中处理站”。热电项目生活污水处理站采用二级生物接触氧化工艺，属于可行技术，处理后的水全部回用于全厂绿化用水，属于可行技术指南中推荐可行去向。类比国家能源集团宿迁发电有限公司的例行监测数据：生活污水处理后pH7.5~7.9、氨氮3.99～4.36mg/L、BOD6.7~9.2mg/L，能够满足《城市污水再生利用―城市杂用水水质》（GB/T 18920-2020）回用要求。

* + - 1. 初期雨水处理措施及可行性分析

码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。初期雨水过滤装置处理能力50t/h，电厂区域初期雨水产生量为18960t/a（2.4t/h），根据营运期废水源强计算，本项目初期雨水产生总量为1725.12t/a（0.22t/h），故后方电厂初期雨水处理能力可接纳本项目产生的初期雨水。

初期雨水回用可行性引用国能热电项目环评相关内容：

根据《火电厂污染防治可行技术指南》（HJ2301-2017）表 21 废水处理与回用可行技术路线中的初期雨水可行技术包括不处理或混凝、澄清，去向或回用途径为“集中处理站”。热电项目初期雨水采用过滤+澄清工艺处理，属于可行技术，处理后的初期雨水排至电厂集中污水处理站回用水池，属于可行技术指南中推荐可行去向。燃煤电厂初期雨水水质简单，污染因子主要为SS，经过滤后可以满足城市污水再生利用和工业用水水质要求。

* + - 1. 码头及中转站冲洗废水及雨水防治措施

本项目营运期码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。

码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。

含煤废水回用可行性引用国能热电项目环评相关内容：

根据《火电厂污染防治可行技术指南》（HJ2301-2017）表 21 废水处理与回用可行技术路线中的含煤废水可行技术包括混凝、澄清、过滤，去向或回用途径为“重复利用”。热电项目含煤废水采用沉煤池+电子絮凝沉淀+澄清、过滤处理，属于可行技术，处理后的含煤废水直接回用于厂区煤场喷淋和输煤栈桥冲洗，不外排，属于可行技术指南中推荐可行去向。燃煤电厂含煤废水水质简单，污染因子主要为SS，经处理后可以满足城市污水再生利用和工业用水水质要求。

本环评提出主要水污染防治对策措施见表 6.2-1。

水污染防治对策措施一览表

| **阶段** | **污染**  **物** | **污染物排放** | **环保措施** | **预期效果** |
| --- | --- | --- | --- | --- |
| 施工期 | 含油污水 | 船舶机舱含油污水 | 施工船舶安装油水分离器，以减少对周围水环境的影响；无油水分离器的必须集中收集和贮存，交由有资质单位处理达标排放。 | 处理达标/集中处理达标，不排入盐河 |
| 船舶及其他施工机械作业期间漏油或者维修产生的油污 | 交有危险化学品处理资质的单位安全处理。 | 交由资质的单位安全处理 |
| 必要时可考虑使用备用的溢油回收设施。 |
| 船舶、机器等清洗 | 每周定期上岸请有资质的单位清洗并检修。 | 不在项目区进行 |
| 生活污水 | 船舶生活污水 | 交船舶污染物接收单位处置。 | 有资质的单位接收，禁止排入盐河 |
| 施工人员生活污水 | 依托热电项目临时施工场地内设置的临时生活污水处理设施，经处理后回用于场地绿化，不外排 | 综合利用，禁止排入盐河 |
| 施工废水 | 拌和系统废水、砂石料冲洗废水，污染物主要是SS | 挖临时沉淀池，生活污水经过滤和沉淀后，重复利用。工程结束后应将其填埋并绿化。 | 重复利用 |
| 混凝土养护废水 | 自然蒸发和无组织排放 | 污染物含量少，不会对周边水体产生明显影响 |
| 建材堆放造成雨水径流污染 | 合理安排土石方运输的进度，减少陆上堆存土石方量，减少堆存的材料或暴雨径流携带的泥沙等污染水域。 | 与冲洗废水一同收集重复利用 |
| 营运期 | 生活污水 | 工作人员生活污水 | 依托热电项目生活污水处理设施，经处理后回用于场地绿化，不外排 | 综合利用，禁止排入盐河 |
| 含油污水 | 到港船舶舱底油污水 | 由海事部门认可的船舶污染物接受船有偿接受处理 | 码头水域不  得排放舱底油污水 |
| 机械设备冲洗废水 | 依托热电项目汽水分离装置，经处理后排至回用水池，不外排 | 综合利用，禁止排入盐河 |
| 船舶生活污水 | 到港船舶生活污水 | 依托热电项目生活污水处理设施，经处理后回用于场地绿化，不外排 | 码头水域不得排放生活污水 |
| 码头及中转站冲洗废水雨水 | 码头及中转站区域 | 经雨水管网收集至集水池，经泵抽至电厂现在的污水处理系统集中处置后综合利用 | 综合利用，禁止排入盐河 |
| 事故废水 | 溢油事故 | 业主单位应在有关部门的组织下，编制事故预防与溢油应急计划，成立专门小组，并配备必要的应急反应设备，定期开展应急反应培训，使其具有处理溢油事故的能力。 | 预防、处理船舶事故性污染 |

* + 1. 噪声污染防治措施

项目营运期间的噪声主要来源于主要来自码头各类机械如皮带输送机和装载机等发出的噪声以及来往船舶鸣号产生的交通噪声等。港区各类机械作业的噪声源强一般在80～90分贝，船舶发动机噪声源强可达95～100分贝，一般停靠港后不开动发动机，所以影响不大。船舶鸣笛为突发性噪声，主要采取船舶按照规定进行鸣笛的措施来减轻船舶鸣笛噪声影响。

1、噪声源控制

（1）选用低噪声机械设备；

（2）设专人对机械设备进行定期保养和维护，并负责对工作人员进行培训，严格按操作规范使用各类机械；

（3）船舶进入港区禁止鸣笛，并安排专人通过通信设施或其他设施方法引导，确保船舶航行安全；

（4）高噪声设备配套隔声降噪设施，码头后方空地种草植树或设置绿化带等方式减小对环境的影响。对岸边门座式起重机等露天放置设备设置减振底座，接点处设置橡皮软垫，降噪量大于5dB(A)。

（5）流动性设备尽可能远离厂界运行，以增大其噪声衰减距离；

（6）加强港区附近交通管理，避免交通阻塞而增加车辆噪声；

（7）营运期运输路线沿线交通管理，对运输路线车辆经过居民区时，运输车辆应限速行驶，昼间控制在60km/h以内，夜间控制在50km/h以内，禁鸣高音喇叭，并合理安排运输时间，尽量避免夜间运输。

2、采用距离防护和隔声措施

（1）合理平面布置。与最近敏感目标距离大于100m，相距较远，因此生产噪声对敏感点影响很小；

（2）加强隔声设施及绿化建设，建议建设实体围墙及绿化（乔木），高约2m，阻隔噪声向外传播。降噪效果约5dB~10dB，在采取以上噪声污染防治措施后，营运期噪声可以做到达标排放。

3、装卸产生的瞬时突发噪声

日常工作中对装卸设备等做好维护工作，保持设备低噪音水平。码头陆域周围种植绿化带等方式减小对环境的影响。可以通过绿化带、围墙隔声减噪5～10dB，且建议采取以下管理控制措施：

（1）严格遵守设备及装卸操作规范，防止因误操作而产生异常噪声，做到轻拿轻放。

（2）定期对设备的主要部件进行维修和保养，保持其技术性能良好，使其排放的噪声符合有关技术标准。

（3）检查设备的状态时，注重对其噪声的监测，对超过噪声排放标准的设备及时采取控制措施。

（4）加强设备的检查工作，遇到突发情况时，及时修理产生异常噪声的车辆、机械设备，缩短异常噪声的排放时间。

（5）船舶噪声主要有船舶发动机的移动噪声和船舶的汽笛声，均为间歇性噪声源，其中汽笛声为突发性噪声。主要采取的措施有：船舶发动机噪声源可达85~90dB，主要采用停港即停机，减少停靠时间等方法减少发声时间，船舶汽笛按照规定进行鸣笛。

通过采取上述治理措施后，可确保所有厂界噪声排放均达到《工业企业厂界环境噪声排放标准》（GB12348-2008）相应的3类、4类标准要求。噪声治理措施容易实施，所需费用较少，在经济上是可行的，其防治措施可行。

* + 1. 固废污染防治措施
       1. 固废产生及处置情况

本项目营运期固体废物可分为船舶垃圾、陆域垃圾和工业固体废物。固体废物种类、数量及拟采取的处理处置方式见表6.2-2。

固体废物储存处置方式表

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **序号** | **固废名称** | **产生工序** | **形态** | **主要成分** | **产生量** | **处置方式** |
| 1 | 陆域生活垃圾 | 港口员工生活 | 固态 | 食品、杂物、纸屑等 | 299.5 | 委托环卫部门定期清运 |
| 2 | 船舶生活垃圾 | 船员生活 | 固态 | 食品、杂物、纸屑等 | 103.0 | 委托环卫部门定期清运 |
| 3 | 装卸作业产生的固体废物 | 装卸过程 | 固态 | 废包装等 | 1107.6 | 委托环卫部门定期清运 |
| 4 | 沉淀池污泥 | 废水处理 | 固态 | 污泥 | 29.8 | 委托环卫部门定期清运 |
| 5 | 含油污泥 | 废水处理 | 固态 | 污泥 | 1.26 | 委托有资质单位处置 |
| 6 | 机修废油 | 设备维修 | 液态 | 废油 | 1 |
| 7 | 含油抹布及手套 | 设备维修 | 固态 | 废油、抹布等 | 1 | 委托环卫部门定期清运 |

* + - 1. 陆域生活垃圾、工业固体废物和船舶垃圾收集转运方案及污染防治措施

（1）收集过程污染防治措施

码头生活垃圾及接收的船舶生活垃圾设置垃圾箱（桶），委托环卫部门集中收集处理。

危险废物在收集时，应清楚废物的类别及主要成分，以方便委托处理单位处理，根据危险废物的性质和形态，可采用不同大小和不同材质的容器进行包装，所有包装容器应足够安全，并经过周密检查，严防在装载、搬移或运输途中出现渗漏、溢出、抛洒或挥发等情况。最后按照对危险废物交换和转移管理工作的有关要求，对危险废物进行安全包装，并在包装的明显位置附上危险废物标签。

（2）运输过程的污染防治措施

①厂内运输

本项目生产过程中产生的危险废物均于厂区内经容器收集后使用推车经指定路线运输至后方电厂危废暂存库内暂存。

厂内危险废物收集过程

a.应根据收集设备、转运车辆以及现场人员等实际情况确定相应作业区域，同时要设置作业界限标志和警示牌。

b.作业区域内应设置危险废物收集专用通道和人员避险通道。

c.收集时应配备必要的收集工具和包装物，以及必要的应急监测设备及应急装备。

d.收集结束后应清理和恢复收集作业区域，确保作业区域环境整洁安全。

e.收集过危险废物的容器、设备、设施、场所及其他物品转作他用时，应消除污染，确保其使用安全。

厂内危险废物转运作业要求

a.危险废物内部转运应综合考虑厂区的实际情况确定转运路线，尽量避开办公区。

b.危险废物内部转运作业应采用专用的工具，危险废物内部转运应填写《危险废物厂内转运记录表》。

c.危险废物内部转运结束后，应对转运路线进行检查和清理，确保无危险废物遗失在转运路线上，并对转运工具进行清洗。

②厂外运输

企业危险废物外部运输均由危险废物处置单位委托有资质的运输单位运输，不在本项目的评价范围内。

（3）贮存场所污染防治措施

本项目固态危废袋装或桶装后送危废库暂存，再委托有资质单位处理；液态、半固态危废桶装后送危废站暂存，暂存区设置围堰，如有泄漏可有效收集。

（1）一般固体废物管理要求

1）一般固废仓库按照《一般工业固体废物贮存和填埋污染控制标准》（GB18599-2020）中标准要求进行管理；

2）对固体废物实行从产生、收集、运输、贮存直至最终处理实行全过程管理，按照有关法律法规的要求，对固体废弃物全过程管理应报当地生态环境行政主管部门等批准。

3）加强固体废物规范化管理，固体废物分类定点堆放，堆放场所远离办公区和周围环境敏感点，为了减少雨水侵蚀造成的二次污染，临时堆放场地要有防渗漏设施，并加盖顶棚。

4）固体废物要及时清运，避免产生二次污染。

（2）危险废物管理要求

1）危废仓库按照《中华人民共和国固体废物污染环境防治法》《危险废物贮存污染控制标准》（GB 18597-2023）、《省生态环境厅关于印发2023年全省固体废物环境管理工作要点的通知》（苏环办〔2023〕84号）等要求进行管理，并注意加强日常的“防风、防雨、防晒，防渗漏”等措施；

2）固废暂存场所应有隔离设施、报警装置；

3）根据《环境保护图形标志固体废物贮存（处置）场》（GB15562.2-1995）（含2023修改单）和危险废物识别标识设置规范设置标志，配备通讯设备、照明设施和消防设施，设置气体导出口及气体净化装置，确保废气达标排放；在出入口、设施内部、危险废物运输车辆通道等关键位置按照危险废物贮存设施视频监控布置要求设置视频监控，并与中控室联网。鼓励有条件的企业采用云存储方式保存视频监控数据。

4）地面须设置泄漏液体和地面冲洗废水的收集渠。仓库门口须有围堰（缓坡）或截流沟，防止仓库废物向外泄漏。仓库地面应保持干净整洁。

5）不同类的危险废物须分区贮存，不同分区应设置矮围墙或在地面划线并预留明显间隔（如过道等）。每一分区的墙体须悬挂危险废物贮存分区标志，尺寸按照《危险废物识别标志设置技术规范》（HJ1276-2022）表2的要求设置。

6）危险废物必须进行包装（袋装、桶装），不得散装。容器应完好无损。每一个包装桶（袋）均须悬挂或张贴危险废物标签，尺寸按照《危险废物识别标志设置技术规范》（HJ1276-2022）表1的要求设置。

7）仓库室内须悬挂《（国家能源集团江苏电力有限公司）危险废物污染防治责任制度》、每一种废物的《工业固体废物台账记录本》。

8）本项目应制定好固体废物特别是危险废物转移运输途中的污染防范及事故应急措施。严格执行《危险废物收集 贮存 运输技术规范》（HJ2025-2012）和《危险废物转移联单管理办法》，危险废物转移前向生态环境行政主管部门报批危险废物转移计划，经批准后，向生态环境行政主管部门申请领取联单，并在转移前三日内报告移出地生态环境行政主管部门，并同时将预期到达时间报告接收地生态环境行政主管部门。同时，危险废物装卸、运输应委托有资质单位进行，编制《危险废物运输车辆事故应急预案》，杜绝包装、运输过程中危险废物散落、泄漏的环境影响。项目厂区内危险废物由专业人员操作，单独收集和贮运，严格执行转移联单管理制度及国家和省有关转移管理的相关规定、处置过程安全操作规程、人员培训考核制度、档案管理制度、处置全过程管理制度等，并制定好危险废物转移运输途中的污染防范及事故应急措施，严格按照要求办理有关手续。

企业应按照《江苏省固体废物污染环境防治条例》《省生态环境厅关于印发2023年全省固体废物环境管理工作要点的通知》（苏环办〔2023〕84号）、《省生态环境厅关于印发江苏省危险废物贮存规范化管理专项整治行动方案的通知》（苏环办〔2019〕149号）要求进行危险废物的贮存和管理，加强危险废物申报管理，落实信息公开制度，规范危险废物收集贮存，强化危险废物转移管理。

* + 1. 生态保护措施
       1. 陆生植物保护措施

（1）工程完工后，通过采取适宜的植被恢复措施，尽快恢复施工迹地，加快陆生生态恢复，以补偿植被损失。

（2）利用码头空地进行绿化，港区绿化应遵循“适地适树、适地适草”的原则下，可采用“乔、灌、花、草”相结合的多层次复合绿化系统，合理分配高大与低矮植物的布设。绿化树种以地方树种为主，同时增加吸收粉尘和降低噪声树种比例。通过绿化发挥滞尘作用，根据相关资料，绿化树木地带对飘尘的减尘率为37%～60％。

建议厂内道路两侧种植灌木带，灌木外种植常绿乔木，树下铺植草坪厂界绿化隔离带的宽度应不低于10m。

绿化植物应按照以下原则进行选择：有较强的抗污染能力；有较好的净化空气能力；不妨碍环境卫生；适应性强，易栽易管，容易繁殖；以乡土植物为主；草皮应选择适应性强、耐践踏、耐修剪、生长期长、植株低矮、繁殖快、再生能力强的草种。

（3）本评价建议相关管理部门对外来种应予以足够关注，采取相应措施予以清除，保护区域生物多样性。

* + - 1. 营运期水环境保护措施简述

（1）营运期码头装卸作业完成后及时对码头面进行清扫，防止码头面雨水可能形成的污染，各种固体废物均进行收集处理，不得随意抛弃至盐河中。

（2）禁止停靠船舶直接向水体排放生活污水和垃圾。码头生活污水和初期雨水统一收集处理，降低对盐河石油类和悬浮物的贡献，保护水生生物的生存环境。码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。

* + - 1. 营运期生态减缓措施

本工程总占地32.5亩，现状国能涟水一期热电项目预留建设用地。为保护宝贵土地资源，在工程设计阶段应注意节约用地，将工程永久性占地控制在最低限度内。

①合理规划设计，尽量利用已有道路，尽量少建施工便道；

②严格规定施工车辆的行驶便道，防止施工车辆在有植被的地段任意行驶；

③严格划定施工作业范围，限制施工人员及施工机械在施工带内施工。严禁超挖深挖；

④在开挖过程中对地表上层15cm厚的高肥力土壤腐殖质层进行剥离和保存，作为建设工程后期地表植被补偿恢复或景观绿化工程所需的耕植土；

⑤水上挖方堆置后结合码头货物外运道路建设进行弃土综合利用。

本项目干土弃方用于后方陆域场地填筑、平整，可以解决弃土综合利用的问题，符合清洁生产的有关要求。

⑤水下方利用堆土场堆存，经沉淀自然干化后满足《农用污泥中污染物控制标准》（GB4284-2018）的要求直接作为绿化、农用土。

1、水土保持措施

①加强预防措施。本工程水土流失的预防，应从设计、施工过程中到工程竣工后都给予充分的重视，设计时尽量使挖填方平衡，提高土、砂、石料利用率，减少弃渣量；施工时应尽量减少破坏地貌及植被；施工过程中拟采用环保型的施工机械进行疏浚作业，减轻疏浚悬浮物泥沙扩散造成污染；必须严格按照有关规定将弃渣弃土运至规定地点存放，并采取一定的保护措施，不允许随意丢弃，以便最大限度地减少泥渣对河流水质及防洪的不利影响。工程竣工时应搞好护坡造林和种草，使之具有一定的稳定性并满足防冲要求。

②禁止污水直接排放到河流水体中，船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置；船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水处理，初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。

③做好防治措施的系统规划。合理安排施工季节和作业时间，尽量避免在雨季进行大量动土和开挖工程，减少区域水土流失。以施工区两侧为重点防治区域，采取系统的防治措施。施工中尽量减少临时占地面积，采取护坡、挡土墙等防护措施，减少雨水直接冲刷裸露地表，减少施工过程中开挖面的水土流失。开挖过程中要做到随挖、随运、随填、随夯。

④工程措施护坡以上青坎及两岸圩堤需植被保护。选用耐旱、耐湿、速生、根系密集的草皮或树种，在土方工程完成后立即栽种，既防止水土流失，又加强绿化景观。临时占用的林地和滩地等，在施工完成后，应及时进行复耕或恢复植被，以确保土层不裸露。

2、水域生态保护措施

①加强生态环境及生物多样性保护的宣教和管理力度，做好对水上施工作业人员环境保护、生物多样性保护方面的宣传教育，严禁施工人员利用水上作业之便捕杀鱼类等水生生物。

②优化施工管理和施工工艺，尽量缩短水域施工的工期和施工范围。疏浚作业选用悬浮物发生量较少的施工机械，最大限度地控制水下施工作业对底泥的搅动范围和强度，减少悬浮泥沙的发生量。

③严格管理施工船舶，施工船舶垃圾、废水严禁随意排放，按相关要求交送垃圾收集站和油废水回收站处理。

④施工期间各种固体废物不得向水域排放或堆放在水域附近，应进行统一收集，交由环卫部门和施工单位处理。

⑤物料应远离水域集中堆存并设置围挡、遮盖等防护措施，防止雨水冲刷入河。

* + - 1. 营运期生态补偿措施

1、由于码头前方作业区和堆场基本是混凝土铺砌场地，不能进行绿化，所以基地的绿化主要在作业区及生产辅助区进行。在生产辅助区与码头前方工作间应选择树形美观，挺拔高大，装饰性强，观赏价值高的乔木、灌木，同时再适当配置花坛、水池和绿篱等。在综合楼等生活办公区可选用庭荫树或种植一定观赏价值的树木和花卉，并可选用一些藤本植物，如爬山虎、常青藤等，进行垂直绿化。

与码头外公路连接处的空地种植大面积草坪，其间铺设绿化自动洒水管道系统，草坪中局部种植黄杨球和其他灌木及花卉。对基地周国的防护林带，应选用常青针叶树和速尘阔叶树种，组成带状的混交林带。适于该地区生长，又具有防尘、降呆功能的绿化植物主要有：梧桐、垂柳、侧柏、悬铃木等。

2、码头施工将对水下底栖生物造成一定影响，根据有关资料，施工结束几个月后水生生物种类将恢复正常，水域生态环境将逐渐恢复。周围水域的底栖生物、浮游生物将很快繁衍过来进行补偿。

3、本项目全厂可绿化区域主要为陆域、堆场和辅助生产设施、道路两侧可适宜绿化的区域，经测算可绿化面积约8000m2，本项目新增绿化面积8000m2，能满足《水运工程环境保护设计规范》（JTS149-2018）中关于绿化面积不低于可绿化面积85%的要求，项目建成的同时要予以落实。考虑到保持和恢复水生生态环境，本工程应投入一定的资金用于增殖放流，建议根据受影响河段鱼类损失量和底栖动物损失量，进行适当的放流补偿。

* 1. 环境风险管理

建设单位需组建安全环保管理机构，配备管理人员，通过技能培训，承担全厂的安全环保工作。安全环保机构组建后，将根据相关的环境管理要求，结合具体情况，制定各项安全生产管理制度、严格的生产操作规则和完善的事故应急计划及相应的应急处理手段和设施，同时加强安全教育、培训工作，以增强职工的安全意识和安全防范能力。根据江苏省《企事业单位和工业园区突发环境事件应急预案编制导则》（DB32/T3795-2020）及《省生态环境厅关于印发江苏省环境影响评价文件环境应急相关内容编制要点的通知》编制应急预案（苏环办〔2022〕338号），雨污水、事故废水收集排放管网情况见图3.2-8。

* + 1. 环境风险防范措施
       1. 淮安港应急管理现状调查

淮安内河港环境风险应急组织体系见下图，淮安内河港行政主管部门为环境风险事故应急的责任主体。淮安内河港行政主管部门成立应急办公室作为内部环境风险应急领导机构，领导各部门在职责范围内开展应急处置工作，建立与各港区企业应急单位的联系，与港口上下游水厂及周边村镇形成联动机制，及时向上报告事故情况，接受淮安市市级环境风险应急体系的领导。

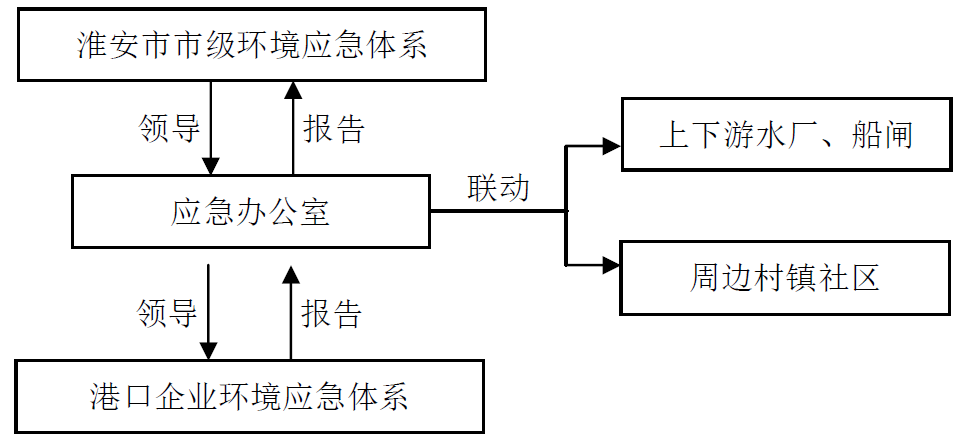


图6.3-3 淮安内河港环境风险应急组织体系图

（2）淮安港应急办公室

应急办公室为淮安内河港行政主管部门内部环境风险应急领导机构。淮安内河港行政主管部门负责人为应急办公室主任和环境风险事故负责人。应急办公室职责如下：

①负责淮安内河港环境风险应急预案在淮安内河港的贯彻落实，建立单位内部环境风险应急管理体系，负责本单位职责范围内的环境风险应急处置工作的组织管理和协调。

②监督检查港口企业的环境风险防范与应急工程设施并检查其有效性。

③监督检查港口企业的环境风险应急预案、人员和设备配置、培训演练制度的落实情况和有效性。

④接收港口企业或其他公众的环境报警信息，迅速勘查现场，判断事故的严重程度，依据市级环境风险应急预案规定，及时向淮安市环境保护主管部门报告。

⑤发生环境风险事故后，第一时间组织港口企业应急处置队伍和设备，控制污染蔓延，并根据事故类型通知事故点上下游水厂、港区周边村镇采取相应的保护措施。

⑥接受淮安市环境风险应急体系的领导，在上级应急体系的规范下，与各级应急单位协同合作开展环境风险应急处置工作。

⑦总结本单位在事故应急处置工作中的经验教训，配合政府有关部门调查事故。

* + - 1. 船舶交通事故的风险防范措施

船舶交通事故的发生与船舶航行和停泊的地理条件、气象条件、运输装载的货种、船舶密度、导/助航条件以及船舶驾驶等因素有关。本工程发生航道及码头附近船舶交通事故造成环境污染的可能性是存在的，一旦发生船舶交通事故特别是进港航道上的交通事故，将会造成事故区域环境资源的严重损失，且其应急反应的人力物力财力消耗大，因此采取有效的措施预防船舶交通事故的发生意义重大。

船舶交通事故预防措施包括：

（1）在码头附近区域配备必要的导助航等安全保障设施

为了保障码头附近船舶的航行安全，码头经营者要接受该辖区内海事局对船舶交通和船舶报告等方面的协调、监督和管理，在码头前沿和船舶掉头区设置必要的助航等安全保障设施。工程建设方案规划过程中已经根据本项目的工程和项目区域环境特点在码头前沿和船舶掉头区配备了必要的导助航等安全保障设施。

（2）推进船舶交通管理系统（VTS）建设

建设VTS是为了保障船舶安全航行，避免船舶碰撞事故的发生，辅助大型船舶在单向航道内安全航行，避免大型船舶过于靠近航道边缘或其他浅水区域而发生搁浅或触礁事故，此外还可以提高港口效率，方便组织有效江上搜救行动和事故应急反应等。同时推进本项目到港船舶逐步配置”船载自动识别系统（AIS）”，减少事故发生概率。

（3）加强航道内船舶交通秩序的管理

为避免港区航道内船舶发生碰撞事故而造成污染，港区航道交通管理部门应加强对航道内船舶交通秩序的管理，及时掌握进出航道船舶的动态，尽量在危险品船通过时，其他船舶尽量采取避让措施等。

制定严格的船舶靠泊管理制度，码头调度人员应熟悉到港船舶速度要求及相应的操作规范，从管理上最大限度地减少船舶碰撞事故的发生。

* + - 1. 溢油事故污染应急措施

（一）溢油事故应急政策

（1）恶劣气况下

溢油面积大且气况恶劣的情况下，一旦码头前沿水域发生泄漏事故，应当首先临近水域敏感区布设围油栏，避免保护目标受损。建议应当在保护目标设置应急设备配置点，储存岸滩围油栏，并在保护目标附近水域布设围油栏挂靠桩基，一旦出现泄漏事故，立即将岸滩围油栏或吸附拖栏挂于桩基，有效保护敏感目标。

（2）重大事故、严重事故

风和浪的影响势必影响溢油回收作业，这时应该选用能抵御风浪的溢油回收器材，应当具有的功能是回收能力大、抵御风浪能力强。为了防止溢油的扩展，可以使用船舶以“U、V、J”形来牵引拖曳围油栏，协同污油回收装置。船只拖拽围油栏时既要保持正确的形状，还要维持特定的拖拽速度以保证污油不流失。围油栏选择操作性强、抗风等级高的充气式围油栏，污油回收装置选用抗风浪较强的倾斜板式或吸附式回收装置。

此外，当发生事故溢油时，污油将在较短时间内到达临近水域敏感区，然而一般应急行动前有动员、吊装设备时间，到达现场后，还需装卸设备、布放围油栏等时间。因此，一旦发生溢油事故，应当根据事故地点、规模，优先对周边环境敏感目标采取必要的保护措施。

（3）较严重事故、重大事故

水域发生泄漏事故一般规模相对较小，泄漏量相对较小，因此可根据水动力条件，采用锚泊方式布放围油栏，选用固体浮子式围油栏。该围油栏有一定的缓冲能力。其优点是能将污油完全回收，可长期滞留水上，相对节省财力。可在浮箱上装设快速连接头，打开可让船只进入工作，围护栏布设形状不定，按照水流方向布设，以达到最佳抗风效果。

（4）一般事故

船舶在加油作业时均布设围油栏，污油被限制在围油栏内，可采用小型回收装置或者吸油材料进行回收。

（二）水上溢油防范措施应该从以下几个方面制定和实施溢油事故应急防范措施。

①依据《中华人民共和国内河交通安全管理条例》《船舶载运危险货物安全监督管理规定》《中华人民共和国船舶安全检查规则》《船舶检验工作管理暂行办法》《关于建立水上交通险情报告制度的请示》等有关法律法规，加强对船舶日常管理，杜绝事故隐患。合理安排码头内各船舶的装卸作业以及其他船只的作业，使船舶间的间距尽可能大，防止发生碰撞事故，以保证作业安全。应根据船舶装载状态、水文、气象和码头作业状况，合理安排船期，使船舶进出港时，进出港和回旋水域设计底高程能够满足航行水深要求。船舶在加油时，应严格按照有关规定操作，杜绝由于麻痹大意而导致溢油事故的发生，同时在加油时，也应注意当时当地的水文、气象条件，尽量避免在大风雨天时进行加油。加速推进船舶标准化，逐步淘汰老旧船，提高安全性，不符合要求的船舶不得进港。

②码头须配备一定的应急设备，如围油设备（充气式围油栏、浮筒、锚、锚绳等附属设备）、消防设备（消油剂及喷洒装置）、收油设备（吸油毡、吸油机）等。同时，建立应急救援队伍。当发生重大溢油事故时，本区内的应急队伍和设备不能满足应急反应需要时，应迅速请求上级部门支援。码头前沿应设有存放围油栏和其他回收、清除溢油的设备、器材的专用库房。

③溢油监控报警系统

《防治船舶污染海洋环境管理条例》第十二条规定，港口、码头、装卸站以及从事船舶修造的单位应当配备与其装卸货物种类和吞吐能力或者修造船舶能力相适应的污染监视设施和污染物接收设施，并使其处于良好状态。《港口码头溢油应急设备配备要求》（JT/T451-2009）要求装卸油品的码头应配备溢油监视报警装置。《海港总平面设计规范》（117211-99）第11.8.2条也规定油品码头应有溢油检测的设备与器材。提出以下配置建议：按照法规要求配备溢油监控系统。在码头下方水域设置溢油报警浮标。一旦溢油大量扩散，可以向水面抛投溢油跟踪浮标，待应急队伍到位时能及时进行清污作业。从加强监管的角度，安装一套固定式水面油膜监控系统，结合配备的溢油监控系统，就能实现对港区全方位全天候的溢油监控网络。

建议海事处的指挥中心安装一套溢油监控报警系统，同时把码头的终端信息传入报警监控平台，通过使用一套监控软件实现对整个港区水域的全天候的溢油实时监控。

④一旦发生船舶碰撞溢油环境风险事故，船方与港方应及时沟通，及时报告主管部门（海事部门、环保局、海事局、公安消防部门等）并实施溢油应急计划，同时要求业主、船方共同协作，及时用隔油栏、吸油材等进行控制、防护，使事故产生的影响减至最小，最大程度减少对水环境保护目标的影响。

⑤本项目上下游未设置饮用水取水口，沿线主要为工业取水，无应急水源，在发生环境风险事故时，工业取水暂停，采取自来水用水。同步开展应急监测，直至事故满足应急终止条件后方可恢复取水口取水。

⑥相关部门接到污染事故报告后，应根据事故性质、污染程度和救助要求，迅速组织评估应急反应等级，并同时组织力量，调用清污设备实施救援，拟建工程业主应协助有关部门清除污染。除向上述公安、环保等部门及时汇报外，应同时派出环境专业人员和监测人员到现场工作，对水体污染带进行监测和分析，并视情况采取必要的公告、化学处理等措施。

⑦码头应制定应急预案。为防止和及时处理各种事故，建设单位应根据码头装卸作业环节及可能出现的事故情况编制码头事故应急预案。

* + - 1. 火灾事故的风险防范应急措施

环境保护者赶赴现场，并及时通知切断着火部位的电源，扑救火灾的原则：救人第一，先控制、后消灭。扑救火灾采取的措施：

（1）停止作业，通知船方停泵，关闭接卸口阀门，拆卸接卸口；

（2）就近人员立即抢救或搜寻可能的受伤、被困人员；

（3）发现者向调度和班长报告，调度接报后立即向公安消防队报警和海事部门报告，同时向公司应急指挥部报告，通知动力班启动消防水泵，通知各码头通过单位；

（4）如着火面积较小，就地使用灭火器材灭火，转移附近所有可燃、易燃物品，视情对周边设备设施射水冷却；

火势较大时操作启动泡沫灭火系统，用消防炮喷射泡沫灭火，开启水幕喷淋，视情组织人员对受火势威胁的工艺设备、管线；

（5）组织疏散、撤离码头无关人员、车辆（如火势较大威胁人员时，撤离所有人员）；

（6）通知接卸船舶离开码头，视情况通知其他船只立即离开码头；

（7）视情加强河堤保安人员，维持进出口秩序，阻止无关车辆人员出入。

（8）船舶起火时：

a.立即停泵、停止接卸，关闭切断输油管线阀门，尽可能拆除接卸软管；

b.报告海事部门，通知船舶服务公司增援；

c.立即开启水幕喷淋，协助救援船舶人员；

d.启动（用）泡沫灭火设施、器材，协助船方灭火；

e.组织库区人员增援与运送消防应急器材；

f.视情通知船舶离开码头，必要时砍断缆索；

g.密切关注船舶火势，遇有燃爆迹象时立即通知现场人员车辆撤离。

严格服从组织指挥，控制人员情绪，阻止人员返回火场，做好眼睛和呼吸道的防护；

一般情况下疏散的先后顺序是：

a.先从着火楼层开始，然后是以上楼层再是以下各层；

b.要优先安排受火势威胁最严重、最危险区域的人员疏散，避免造成严重的伤亡后果。

c.疏散引导工作在发生火灾时，应先疏散被火势围困的人员，其次再进行火势周围的物资疏散，同时要注意疏散人员自己的安全，疏散后的物资要放在不影响消防车通道和利于火灾扑救的安全地点，物资的放置点要留有1至2名人员看守，防止形成新的火点。并立即向有关领导报告；

d.公安消防队或海事/港航救助艇到达火场后，应听从公安消防人员/主管部门的指挥进行疏散工作。

e.值班人员在火灾事故期间，严格控制出入人员。

* + - 1. 大气污染事件保护目标的应急措施

对于因火灾事故已经进入空气的气态污染物，根据气态污染物性质的不同，采取不同的防范措施。

根据中华人民共和国公安部消防救援局与国家化学品登记注册中心编写的《危险化学品应急处置速查手册》（2002年10月第1版）提供的数据，确定初始隔离距离和防护距离如下：

泄漏：污染范围不明的情况下，初始隔离至少100m，下风向疏散至少800m。大口径输气管线泄漏时，初始隔离至少1000m，下风向疏散至少1500m。然后进行气体浓度检测，根据有害气体的实际浓度，调整隔离、疏散距离。

火灾：火场内如有储罐、槽车或罐车，距离1600m。

考虑撤离隔离区内的人员、物资；疏散无关人员并划定警戒区；在上风处停留。

码头应急救援指挥部根据对事故发展趋势的预测和事故控制情况，请示上级指挥部同意后作出区域撤离决定，发出警报，利用广播、电视等传媒通知指定区域内居民，企业员工及人群迅速撤离至指定地点。

* + - 1. 水污染事件保护目标的应急措施

**（1）船舶柴油事故排放**

当船舶发生柴油溢油事故，已经造成地表水污染时，采取的应急措施如下：

当发现船舶柴油泄漏时，现场人员第一时间立即围堵泄漏油品，尽可能避免油品跑入河面，与此同时应向单位领导报告，单位领导接到报告后立即启动应急预案。

当油品泄漏较少时，利用围油栏、吸油毯，棉布等材料进行吸附油品回收。

当油品泄漏较大时，应及时报告海事部门以及水上交通及消防部门请求支援。通知热电公司迅速布置围油栏，围栏水面油品，利用吸油毯及防爆抽油泵进行油品回收。

设定危险区域，对地面及水面实行隔离和管制，禁止无关人员及过往船只进入危险区域。

在回收油品过程中，全过程做好消防灭火准备。

油品回收完后，向海事部门申请用化油剂清理水面及地面现场。

**（2）消防废水收集及处理**

为了防止引发火灾爆炸和环境空气污染事故，采用消防水对泄漏区进行喷淋洗涤，部分转移至消防水，若消防水不予处理或经有效控制即外排可能导致周围水环境污染事件的发生，故应采取相应的措施进行治理。

根据本项目设计，码头发生火灾时，最大一次消防废水产生量约180m3/次，当发生火灾爆炸时首先应迅速封堵码头设置的雨水收集口，将消防废水收集后通过管道汇至后方国能热电厂区事故池，后方厂区事故池容量为1500m3，可以满足消防废水的收集需要，确保本项目发生火灾时不会有消防废水进入盐河中。

* + - 1. 装卸安全防范措施

本项目装卸的物料为货种燃煤，在装卸过程中可能会产生泄漏，甚至破舱等事故，具有一定的危险性以及环境风险，因此必须采取必要的防范措施加以预防。

（1）破舱泄漏会严重污染盐河，因此，船舶靠泊应选择视线好、能见度高的白天进行，保证靠泊安全，可杜绝破舱事故对地表水体的影响。

（2）定期对输送皮带、装卸设备进行必要的安全监测和维护保养，杜绝设备安全隐患。

（3）合理规划装卸作业时间，避免在车流和人流高峰时间运输。

（4）若泄漏的物料进入盐河，则当班人员必须立即通知取水相关单位关注水质变化，采取相应应急措施。污染物超标时停止取水等方法，确保取水安全。

* + - 1. 装卸工艺技术设计防范措施

（1）按相关规范设置紧急切断、紧急停车系统等安全设施，并对安装质量进行跟踪，与主体工程同步验收后方可投入使用。

（2）选用先进技术和设备，完善装卸工艺流程中防火、防爆等方面的设施设计。

（3）按相关规范和要求设置应急救援通信设施，在沿线取水口设置专线报警电话，一旦码头发生泄漏事故，可在第一时间通知取水单位采取相应措施。

* + - 1. 选址、总图布置和建筑安全防范措施

（1）选址安全防范措施

选址地区应具备满足生产、消防、生活所需的水源和电源的条件，还应具备排水的条件。

（2）总图布置安全防范措施

码头的总平面布置应符合《水运工程建设项目环境影响评价指南》（JTS/T 105-2021）、《河港总体设计规范》（JTS 166-2020）、《生产过程安全卫生要求总则》（GB/T12801-2008）的要求。

（3）建筑安全防范措施

建筑安全应严格参照《建筑设计防火规范》（GB50016-2014）的要求进行设计和施工。码头前沿高程应考虑或参照邻近已建码头高程，并考虑历年极端高水位和极端低水位，确定拟建码头的高程和底高程，以防极端高水位无法靠船作业、极端低水位时船舶搁浅。

（4）消防及火灾报警系统

要有完善的安全消防措施，配备完善消防系统，设有固定泡沫灭火系统及冷却水喷淋系统。各重点部位设备应设置自动控制系统控制和设置完善的报警联锁系统，以及水消防系统和ABC 类干粉灭火器等。对消防系统做定期检查。

码头要求配置完善的消防设施，包括泡沫消防设施和水泡消防设施，制定严格的作业制度。

* + - 1. 事故废水收集、截留和处置方案

事故池容积计算如下：

本评价根据《中国石油化工集团公司水体环境风险防控要点（试行）》和《水体污染防控紧急措施设计导则》计算消防废水及其影响。

事故应急池的大小计算如下：

事故储存设施总有效容积：

V总＝（V1＋V2－V3）max＋V4+V5

注：（V1＋V2－V3）max是指对收集系统范围内不同罐组或装置分别计算。（V1＋V2－V3）取其中最大值。

V1——收集系统范围内发生事故的一个罐组或一套装置物料量。储存相同物料的罐组按一个最大储罐计，装置物料量按存留最大物料量的一台反应器或中间储罐计。

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；

t消——消防设施对应的设计消防历时，h；

V3——发生事故时可以传输到其他储存或处理设施的物料量，m3；

V4——发生事故时仍必须进入该收集系统的生产废水量，m3；

V5——发生事故时可能进入该收集系统的降雨量，m3；

V5=10q·F

q——降雨强度，mm；按平均日降雨量；

q=qa/n

qa——年平均降雨量，mm；n——年平均降雨日数。

F——必须进入事故废水收集系统的雨水汇水面积，ha。

计算结果如下：

本项目事故废水产生量

|  |  |  |  |
| --- | --- | --- | --- |
| 符号 | 取值依据 | 取值说明 | 取值 |
| V1 | 收集系统范围内发生事故的物料量，m3 | 本项目为码头项目，运输的物品为煤炭，由本港进出的货物均为煤炭，不含油品等易燃易爆货种，也没有有毒有害的化学品等，不存在贮罐区等，故V1为0m3。 | 0 |
| V2 | 发生事故的储罐、装置的消防水量，m3 | 根据《建筑设计防火规范》，该项目码头消火栓用水量按25L/s。按火灾延续时间为2小时计，消防水用量为180m3。 | 180 |
| V3 | 发生事故时可以传输到其他储存或处理设施的物料量，m3 | 事故状态下项目无可以传输到其他储存或处理设施，取0m3。 | 0 |
| V4 | 发生事故时仍必须进入该收集系统的生产废水量，m3 | 项目生产过程中无生产废水产生，取0m3。 | 0 |
| V5 | 发生事故时可能进入该收集系统的降雨量，m3 | 本项目已设置1座污水池，码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，故不再考虑事故状态下雨水的收集容量，V5取0m3。 | 0 |
| V事故废水 | (V1 + V2 - V3)+ V4+ V5 | | 180 |

因此，本项目码头区域需要设置180m3的事故水池，方可满足码头区域消防废水的收集要求。后方电厂厂区设置事故应急水池1座，设计有效容积1500m3，事故应急水池位于热电项目东侧，紧邻码头工程边界，码头陆域及热电项目地坪平均标高+6.8m，码头前沿设计高程为+7.20m，事故应急水池为地下池体，在事故状况下，事故废水能够通过自流形式进入事故水池。因此，本项目事故水池依托后方电厂事故应急水池，可以满足码头区域消防废水的收集要求。

为防范和控制发生事故时和事故处理过程中产生的物料泄漏，造成事故污水对周边水体环境污染和危害，本项目建立了“单元一厂区一园区”事故废水风险防控体系。确保在发生突发事件时，事故废水不外流出园区，最大程度地降低园区外水环境受到污染的风险。

项目事故废水截留采用“单元一厂区一园区”事故废水风险防控体系：

（1）单元级防控措施

主要是将事故废水控制在事故风险源所在区域单元，该体系主要是由危废仓库集液槽等配套基础设施组成，防止污染雨水和轻微事故泄漏造成的环境污染；

（2）厂区级防控措施

建设厂区应急事故水池及其配套设施（如事故导排系统），防止消防废水造成的环境污染；

事故应急池应在突发事故状态下拦截和收集厂区范围内的事故废水，避免其危害外部环境致使事故扩大化，因此事故应急池被视为企业的关键防控设施体系。事故应急池应必须具备以下基本属性要求：专一性，禁止他用；自流式，即进水方式不依赖动力；池容足够大；地下式，防蚀防渗。本项目核算事故废水180m3，依托后方电厂容积为1500m3的应急事故池，地下式，满足以上要求。

（3）园区级防控措施

第三级水环境风险防控体系是针对企业厂内防范能力有限而导致事故废水可能外溢出厂界的应急处理。可与其他临近企业实现资源共享和救援合作，增强事故废水的防范能力。现阶段本厂区与园区消防事故水池之间尚未建成联通设施，因此本次评价建议建设单位及时与相关管理部门请示，尽早实现本厂区事故废水与园区事故废水应急系统的联防、联控，在项目正式投入运营前应该完成相关工程的建设，并确保废水排放通道通畅、可用，为极端事故状态下厂区废水的应急调蓄及有效截留提供有力保障。经调查，本项目南侧设置有防洪堤，能够有效拦截极端事故工况下的污染废水。

总体而言，极端事故状态下，本项目厂区内事故废水排放与园区/区域环境风险防范体系形成联动机制，能够保障事故废水的应急调蓄及有效截留。在严格的事故预警管理调控下，事故废水影响范围及影响程度可控，对区域地表水体基本不会构成威胁。

* + 1. 环境应急管理制度建设要求
       1. 突发环境应急预案编制、备案、修订要求

**（一）应急预案编制要求**

本项目为国能涟水热电配套新建码头工程，为了在发生突发环境事件时，能够及时、有序、高效地实施抢险救援工作，最大限度地减少人员伤亡和财产损失，尽快恢复正常生产、工作秩序，建设单位应按照《企业事业单位突发环境事件应急预案备案管理办法（试行）》（环发〔2015〕4号）等文件要求，并依据江苏省地方标准《企事业单位和工业园区突发环境事件应急预案编制导则》（DB32/T3795-2020）编制厂突发环境事件应急预案并及时备案、修订。应急预案主要内容如下：

突发环境事件应急预案

| **序号** | **项目** | **内容及要求** |
| --- | --- | --- |
| 1 | 总则 | / |
| 2 | 危险源概况 | 详述危险源类型、数量及其分布 |
| 3 | 应急计划区 | 装卸区、储存区、邻区 |
| 4 | 应急组织 | 厂指挥部——负责现场全面指挥  专业救援队伍——负责事故控制、救援、善后处理 |
| 5 | 应急状态分类  及应急响应程序 | 规定事故的级别及相应的应急分类响应程序 |
| 6 | 应急设施设备与材料 | 生产装置：  ⑴防火灾、爆炸事故应急设施、设备与材料，主要为消防器材  ⑵防有毒有害物质外溢、扩散，主要是喷淋设备等  ⑶防火灾、爆炸事故应急设施、设备与材料，主要为消防器材  ⑷防有毒有害物质外溢、扩散，主要是喷淋设备等 |
| 7 | 应急通讯、通知和  交通 | 规定应急状态下通讯方式、通知方式 |
| 8 | 应急环境监测  及事故后评估 | 由专业队伍负责对事故现场进行侦察监测，对事故性质、参数与后果进行评估，为指挥部门提供决策依据 |
| 9 | 应急防护措施、消除泄漏措施方法和器材 | 事故现场：控制事故，防止扩大、蔓延及连锁反应。清除现场泄漏物，降低危害，相应的设施器材配备  邻近区域：控制防火区域，控制和清除污染措施及相应设备配备 |
| 10 | 应急剂量控制、撤离组织计划、医疗救护与公众健康 | 事故现场：事故处理人员对毒物的应急剂量控制规定，现场及邻近装置，人员撤离组织计划及救护 |
| 11 | 应急状态终止与恢复措施 | 规定应急状态终止程序  事故现场善后处理，恢复措施 |
| 12 | 人员培训与演练 | 应急计划制定后，平时安排人员培训和演练 |
| 13 | 公众教育和信息 | 对工厂邻近地区开展公众教育、培训和发布相关信息 |
| 14 | 记录和报告 | 设置应急事故专门记录，建立档案和专门报告制度，设专门部门负责管理 |
| 15 | 附件 | 与应急事故有关的多种附件材料的准备和形成 |

应急预案编制完成后及时报当地生态环境主管部门备案。

（二）应急预案的修订

在下列情况下，应对应急预案及时修订：

①危险源发生变化（包括危险源的种类、数量、位置）；

②应急机构或人员发生变化；

③应急装备、设施发生变化；

④应急演练评价中发生存在不符合项；

⑤法律法规发生变化。

预案修订应建立修改记录，包括修改日期、页码、内容、修改人等。

（3）应急预案的备案

应急预案编制完成后企业应按照《企业事业单位突发环境事件应急预案备案管理办法（试行）》（环发〔2015〕4号）、《关于企业事业单位突发环境事件应急预案备案管理有关事项的通知》（苏环办〔2015〕224号）等文件要求，将编制或修订的最新版本应急预案报当地生态环境主管部门进行备案。

企业环境应急预案应当在环境应急预案签署发布之日起20个工作日内，向企业所在地县级生态环境主管部门备案。县级生态环境主管部门应当在备案之日起5个工作日内将较大和重大环境风险企业的环境应急预案备案文件，报送市级生态环境主管部门，重大的同时报送省级生态环境主管部门。

* + - 1. 应急监测能力建设

本项目突发环境事件类型有配套的过往船只溢油事件等，主要特征因子为石油类，建议企业成立应急监测小组，或者兼顾应急监测的应急小组，配备采样瓶、石油类快速测定仪等应急监测设备，制定应急监测计划，如自身不具备监测能力，则与第三方有资质单位签订应急监测协议，确保突发环境事件发生时，应急监测能顺利进行。

* + - 1. 本工程应急物资配备要求

根据《港口码头溢油应急设备配置要求》（JT/T451-2009）和《港口码头水上污染事故应急防备能力要求》（JT/T451-2017），建议本项目配置以下设备（见表6.3-4）以满足本项目事故应急需求，同时配备报警系统及必要的通信器材，以便及时与淮安海事局溢油应急指挥中心建立联系，及时采取应急措施。码头前沿应设有存放溢油应急器材的专用库房，其中围油栏放置在码头前沿，一旦发生溢油事故，可以及时实施拦截。同步开展应急监测，应急监测物资配备可依托涟水县生态环境局，直至事故满足应急终止条件后方可恢复取水。当事故规模、气候条件使码头人员、设备无法满足要求时，码头应立刻报告淮安海事局海事监管中心并联系上下游码头，请求提供外部力量支援，实现区域联动应急。通过以上应急能力建设的加强，若出现溢油事故，在事故发生的水域及时施放围油栏包围，投放吸油材料进行人工回收减缓溢油影响。

（1）码头应急设备配备原则

① 根据《港口码头水上污染事故应急防备能力要求》（JT/T451-2017）和《船舶溢油应急能力评估导则》（JT/T877-2013）可知，1000~5000吨级（含）河港其他码头溢油应急配置要求见下表6.3-3。

1000~5000吨级（含）河港其他码头溢油应急设备配备要求

| 设备名称 | | 配备量 |
| --- | --- | --- |
| 围油栏 | 应急型（m） | 不低于最大设计船型设计船长的3倍 |
| 收油机 | 总能力（m3/h） | 1 |
| 油拖网 | 数量（套） | 1 |
| 吸油材料 | 数量（t） | 0.2 |
| 储存装置 | 有效容积（m3） | 1 |

② 设备配备方案主要应对码头区船舶操作性溢油事故，建设目标应与码头风险情况和应急能力目标相适应，同时与港区外溢油事故应急资源共享，并适当考虑现有设备；

③ 设备的数量与选型要与采用的船舶污染物回收处理方法及当地水文气象条件相适应，并充分考虑可能采取的环保措施和方法；

④ 设备选型要体现先进性、实用性，有利于应急行动的快速开展，设备配备质量可靠，技术先进，性价比高，产品升级能力强。

（2）本项目应急物资配备要求

本项目码头为筒体结构，根据《水运工程环境保护设计规范》（JTS149-2018）围油栏采用半包围式敷设，围油栏长度的计算应满足下列要求：

L=L1 +2(B+50)

式中：L—围油栏长度（m）；

L1—码头泊位长度（m）；本次取220m；

B—设计船型的型宽（m）；根据表3.2.4-2，本次保守取最大船宽10.8m；

根据上表计算可知，本项目围油栏长度为341.6，本次拟配置不低于342m的围油栏。对照《港口码头水上污染事故应急防备能力要求》（JT/T451-2017）和《船舶溢油应急能力评估导则》（JT/T877-2013）相关要求，本次取严。本项目溢油应急设备配置情况见下表6.3-4。本项目拟在生产厂房内单独划设一间应急库，用于暂存应急设备。

本项目溢油应急设备配备方案

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 序号 | 设备名称 | 标准 | 数量 | 单位 | 贮存位置 |
| 1 | 溢油围控设备 | | | | |
| 1.1 | 应急型围油栏 | 180(60×3) | 342 | m | 码头前沿 |
| 2 | 溢油回收设备 | | | | |
| 2.1 | 收油机 | 1 | 1 | m3/h | 码头前沿 |
| 3 | 溢油吸附物质 | | | | |
| 3.1 | 吸油毡 | 0.2 | 1 | t | 码头前沿 |
| 3.2 | 油拖网 | 1 | 1 | 套 | 码头前沿 |
| 4 | 溢油储存与转运设备 | | | | |
| 4.1 | 储油囊 | 1 | 1 | m3 | 码头前沿 |
| 5 | 船舶 | | | | |
| 5.1 | 围油栏布放艇 | 1 | 1 | 艘 | 码头前沿 |

* + - 1. 突发环境事件隐患排查制度

建设单位应根据《企业突发环境事件隐患排查和治理工作指南（试行）》（生态环境部公告 2016年第74号）等要求建立并完善隐患排查管理机构，配备相应的管理和技术人员，按照下列要求建立健全隐患排查治理制度：

（1）建立隐患排查治理责任制。企业应当建立健全从主要负责人到每位作业人员，覆盖各部门、各单位、各岗位的隐患排查治理责任体系；明确主要负责人对本企业隐患排查治理工作全面负责，统一组织、领导和协调本单位隐患排查治理工作，及时掌握、监督重大隐患治理情况；明确分管隐患排查治理工作的组织机构、责任人和责任分工，按照各功能单元划分排查区域，明确每个区域的责任人，逐级建立并落实隐患排查治理岗位责任制。

（2）制定突发环境事件风险防控设施的操作规程和检查、运行、维修与维护等规定，保证资金投入，确保各设施处于正常完好状态。

（3）建立自查、自报、自改、自验的隐患排查治理组织实施制度。

（4）如实记录隐患排查治理情况，形成档案文件并做好存档。

（5）根据企业可能发生的环境事件类型，确定隐患排查频次，建议一季度一次。

（6）定期对员工进行隐患排查治理相关知识的宣传和培训。

（7）应当建立与企业相关信息化管理系统联网的突发环境事件隐患排查治理信息系统。

* + - 1. 应急培训与演练

一、应急培训

（1）操作人员

针对应急救援的基本要求，系统培训厂区操作人员，发生船舶溢油事故时报警、紧急处置、逃生、个体防护、急救、紧急疏散等程序的基本要求。

采取的方式：课堂教学、综合讨论、现场讲解等。

培训时间：每季度不少于4小时。

（2）应急救援队伍

对厂区应急救援队伍的队员进行应急救援专业培训，内容主要为船舶溢油事故应急处置过程中应完成的抢险、救援、灭火、防护、抢救伤员等。

采取的方式：课堂教学、综合讨论、现场讲解、模拟事故发生等。

培训时间：每月不少于 6 小时。

（3）应急指挥机构

邀请国内应急救援专家，就厂区船舶溢油事故的指挥、决策、各部门配合等内容进行培训。

采取的方式：综合讨论、专家讲座等。

培训时间：每年 4～6 次。

（4）周边群众的宣传

针对疏散、个体防护等内容，向周边群众进行宣传，使事故波及的区域都能对船舶溢油事故应急救援的基本程序、应该采取的措施等内容有全面了解；并掌握紧急疏散程序、步骤等。

采取的方式：口头宣传、应急救援知识讲座、疏散联系等。

时间：每年不少于2次。

二、应急演练

1、演练分类及内容

（1）演练分类

①组织指挥演练：由指挥组的领导和各专业队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；

②单项演练：由各队各自开展的应急救援任务中的单项科目的演练；

③综合演练：由应急指挥组按照应急救援预案要求，开展全面演练。

（2）演练内容

①船舶溢油事故及危废泄漏的应急处理；

②应急事故池和雨水池阀门的应急操作；

③通信及报警信号的联络；

④急救及医疗；

⑤防护指导，包括专业人员的个人防护及员工的自我防护；

⑥各种标志、设置警戒范围及人员控制；

⑦公司交通控制及管理；

⑧污染区域内人员的疏散撤离及人员清查；

⑨向上级报告情况及向友邻单位通报情况；

⑩事故的善后工作。

2、演练范围与频次

（1）组织指挥演练由指挥组负责人每年组织一次；

（2）单项演练由每专业组负责人每年组织一次；

（3）综合演练由指挥领导小组组长每年组织一次。

3、演练记录

每次演练由专人负责记录全程，包括演练时间、地点、演练内容、参与人员、演练过程及结果，并归档。

每次应急演练均需要明确考核指标，包括人员到位情况、物资到位情况、协调组织情况、演练效果、支援部门有效性等，对这些指标赋予权重，根据演练情况进行打分，根据最终得分进行评价和总结。

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，并通过定期演练不断总结完善应急预案。

* + - 1. 环境风险防范设施及环境经济处置卡标识牌

（1）企业应在厂区内显著位置张贴厂平面图，并标识环境风险单元、应急物资装备物资位置、疏散路线。

（2）企业应在涉及环境风险的地方张贴有环境应急处置措施、安全标识、环境风险物质标识等。

* + 1. 区域现有应急能力及机制

（1）淮安市应急体制机制已建立全市目前水上应急体制日臻完善，根据《淮安市水上突发事件应急预案》相关要求，建立了以分管副市长为指挥长，分管市政府副秘书长、市交通运输局局长、市公安局局长为副指挥长，市安监、交通、公安、环保等单位为成员单位的应急组织体系，初步形成了“政府主导、部门联动、企业主责、社会参与”的船舶防污染应急管理机制，提升了淮安市防治船舶及其有关作业活动污染水域环境应急管理水平。淮安市根据污染事故预案启动级别，分别成立了应急启动决策部门、事故现场指挥部等指挥领导体制机制，加强了宣传、交通、环保、消防、公安、安监、经信委、农委、气象、水利、民政、卫生、财政等部门协调联动，基本形成了跨部门的协调工作机制。

（2）淮安市应急预案体系已建成目前，淮安市环境突发应急预案体系基本形成，《淮安市船舶污染事故应急处置预案》（淮政办发〔2016〕155号）已经正式发布，建立了政府领导、成员单位联动、技术机构及专家支撑、社会志愿者参与的应急组织网络，构建了预警预防、险情分析与上报、应急响应和处置等机制，并且在各环境污染事故中都有涉及交通运输环境污染事故应急工作程序，涵盖了环境污染事故的应对措施，并针对预案进行多次演练，因而环境污染事故的应对工作有据可依、有章可循。

淮安涉及船舶污染事故应急预案统计表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 序号 | 类别 | 预案名称 | 牵头部门 | 实施时间 |
| 1 | 总体应急预案 | 淮安市突发事件总体应急预案 | 市政府 | 2019年 |
| 2 | 涟水县突发事件总体应急预案 | 县人民政府 | 2018年 |
| 3 | 专项应急预案 | 淮安市突发环境事件应急处置预案 | 市环保局 | 2017年 |
| 4 | 淮安市交通运输突发事件应急预案 | 市应急管理局 | 2020年 |
| 5 | 淮安市水上交通突发事件应急预案 | 地方海事局 | 2016年 |
| 6 | 淮安市港口和船舶污染物接收、转运及处置设施建设方案 | 市政府 | 2016年 |
| 7 | 淮安市船舶污染事故应急处置预案 | 地方海事局 | 2016年 |
| 8 | 淮安内河港环境风险应急预案 | 自发布之日起 | |
| 9 | 涟水县交通运输局突发事件应急预案 | 县交通运输局 | 2023年 |

（3）应急设备设施的配备“十三五”以来，淮安市地方海事局为了应对辖区水上交通突发险情事故，陆续在市区和辖区内6个县、区陆续配套了一批应急设备实施。共建设了7处应急物资储备库，包括淮安水上交通应急物资储备库、淮阴水上交通应急物资储备库、淮安区水上交通应急物资储备库、洪泽区水上交通应急物资储备库、涟水县水上交通应急物资储备库、金湖县水上交通应急物资储备库、盱眙县水上交通应急物资储备库。按照应急物资储备类型划分，全市应急物资主要分为防护类、防污清污类、救生类、通信类、消防类和其他等。

目前，由于各个辖区港口规模、航道通航条件不同，辖区应急物资储备库设备设施标准、库房面积、类型和数量上都不统一，淮安内河港环境风险应急装备及布置初步方案见表6.3-6。同时，淮安港其他油品和危化品码头企业较为重视环境风险防范工作，均制订有企业环境风险应急预案和配置了应急物资。

淮安内河港环境风险应急装备及布置初步方案

| 设备名称 | 需求数量及布置方案 | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 市区港区 | 淮安港区 | 淮阴港区 | 洪泽港区 | 盱眙港区 | 金湖港区 | 涟水港区 |
| 应急型围油栏 | 1200m，6个作业区各不少于200m | 1600m，位于京杭大运河的作业区、苏淮高新区作业区、上河作业区、林集作业区各不少于200m | 1000m，城西作业区、城东作业区、废黄河工业作业区、许渡作业区、淮阴工业园作业区各不少于200m | 200m，三河作业区各不少于200m | 400m，盱眙新港作业区、观音寺作业区不少于200m | 400m，新港作业区、金湖港口物流园作业区各不少于200m | 200m，新港作业区不少于200m |
| 收油机 | 总能力不少于20m³/h，布置在里运河工业作业区 | 总能力不少于20m³/h，布置在苏淮高新作业区 | 总能力不少于20m³/h，布置在城西作业区 | 总能力不少于1m³/h，布置在三河作业区 | 总能力不少于1m³/h，布置在盱眙新港作业区 | 总能力不少于1m³/h，布置在新港作业区 | 总能力不少于1m³/h，布置在新港作业区 |
| 吸油材料 | 不少于2.2t | 不少于2.2t | 不少于2.2t | 不少于0.2t | 不少于0.2t | 不少于0.2t | 不少于0.2t |
| 围油栏布放艇 | 1套，里运河工业作业区 | 1套，布置在苏淮高新作业区 | 1套，布置在城西作业区 | 1套，布置在三河作业区 | 1套，布置在盱眙新港作业区 | 1套，布置在新港作业区 | 1套，布置在新港作业区 |

突发环境事件外部应急救援部门联系方式

| **序号** | **政府部门及有关单位** | **联系电话** |
| --- | --- | --- |
| 1 | 淮安市政府值班室 | 12345/0517-83943499 |
| 2 | 淮安市生态环境局值班室 | 12345/0517-83674771 |
| 3 | 涟水县政府值班室 | 12345/0517-82380800 |
| 4 | 涟水生态环境局 | 12345/0517-82396827 |
| 5 | 涟水县应急管理局 | 12345/0517-82381995 |
| 6 | 涟水县环境监测站 | 0517-82396817 |
| 7 | 淮安市应急管理局 | 12345/0517-83508069 |
| 8 | 涟水县水利局 | 0517-2381074 |
| 9 | 淮安市环境监测中心站 | 0517-83673516 |
| 10 | 公安 | 110 |
| 11 | 消防 | 119 |
| 12 | 交通事故 | 112 |
| 13 | 国家化学事故应急咨询 | 0532-83889090 |
| 14 | 化学事故应急救援中心上海抢救中心 | 021-62533429 |
| 15 | 国家中毒控制中心 | (010)63131122（中继线），83163338（备用） |

④应急队伍的建立

经过近年来的不断建设，以海事、交通运输、公安、渔业、安监及其他政府部门和事业单位的专业应急力量在人员搜救、事故抢险、治安维护、交通疏导等方面发挥了重要作用，以港口企业职工组成的兼职溢油及危化品泄漏应急队伍在溢油回收、危化品处置等方面具有专业优势，以过往船只、民间救援队等组成的社会救援力量在人员搜救方面提供了良好的补充。目前，淮安市拥有的水上船舶防污染应急队伍主要由两方面组成，一方面是由辖区属地海事处的海事行业管理人员组成；另一方面由港口码头企业和蓝天志愿者救援队组成。总体上来看，现有的应急队伍构成能够应对一般水上突发事件，降低船舶污染事故造成水域环境污染的概率。

⑤监视监控跟踪水平近年来，淮安市应急信息系统基础设施初具规模，淮安市地方海事局在淮阴区、淮安区、洪泽区建设“水上交通指挥中心”，利用VITS系统、CCTV系统，现有的海巡船艇日常巡航、重点水域执勤点、VITS、AIS监控系统、VHF甚高频等。在巡航检查过程中及时发现船舶污染事故，船舶污染监视监测系统初步建立。现有监控设备仅能做到对重点水域、重点航段、重要渡口等通航水域进行在线实时监控。根据省级文件精神，未来淮安市要求对全断面、全流域进行实时监控。

⑥后方厂区及周边企业应急物资

根据热电项目环评，热电项目配备了环境风险应急物资，可在本项目发生风险事故时应急使用。具体见下表。

后方厂区环境风险应急物资一览表

| **物资名称** | **规格型号** | **单位** | **数量** | **存储地点** |
| --- | --- | --- | --- | --- |
| 铁锹（尖锹） | FT0222 | 把 | 20 | 办公区 |
| 塑料布 | 3米\*100米 | 卷 | 3 | 办公区 |
| 移动电源盘 | QF—C4 | 只 | 3 | 办公区 |
| 编织袋 | 75 kg | 只 | 500 | 办公区 |
| 雨靴 | 42码 | 双 | 15 | 办公区 |
| 雨衣 | XXL | 套 | 15 | 办公区 |
| 安全带 | XGD—2 | 根 | 5 | 办公区 |
| 强光远射灯 | D08—A | 台 | 2 | 办公区 |
| 麻绳 | 直径20mm | 米 | 100 | 办公区 |
| 潜水泵 | BQW15-22-3 | 台 | 3 | 办公区 |
| 全塑软管 | 直径80mm | 米 | 40 | 值班室 |
| 全塑软管 | 直径65mm | 米 | 120 | 值班室 |
| 涂塑软管 | 直径40mm | 米 | 40 | 值班室 |
| 潜水泵软管 | 直径50mm | 米 | 100 | 值班室 |
| 铅丝 | #12 | kg | 10 | 值班室 |
| 彩条尼龙布 | 50m×8m | m2 | 1600 | 值班室 |
| 特制泥浆专用袋 |  | 只 | 12 | 值班室 |
| 防毒面具 | 防止伤害和气体中毒 | 套 | 6 | 值班室 |
| 重型防护服 | 防止接触皮肤伤害 | 套 | 2 | 值班室 |
| 正压式呼吸器 | 防止伤害和气体中毒 | 套 | 2 | 值班室 |
| 便携式漏氨监测仪 | 检测浓度 | 套 | 1 | 值班室 |
| 防护服 | 防止接触皮肤伤害 | 套 | 4 | 值班室 |
| 防护手套 | 防止伤害 | 副 | 4 | 值班室 |
| 防酸碱雨鞋 | 防止伤害 | 双 | 4 | 值班室 |
| 毛巾 | 擦拭、清理伤害部位 | 条 | 若干 | 值班室 |
| 肥皂 | 清理伤害部位 | 块 | 若干 | 值班室 |
| 手提灭火器 | 灭火 | 个 | 6 | 办公区、 |
| 手推式灭火器 | 灭火 | 个 | 10 | 柴油储罐区、锅炉房、汽机房 |
| 黄沙 | 灭火 | 吨 | 1 | 柴油储罐区 |
| 消防水带 | 灭火 | 米 | 200 | 锅炉房、办公区、点火油罐区 |

根据调查，巨石集团淮安有限公司高性能特种玻纤新材料项目配套码头根据《港口码头溢油应急设备配置要求》（JT/T451-2009）和《港口码头水上污染事故应急防备能力要求》（JT/T451-2017），配置以下设备（见表6.3-9）以满足其应急需求，该码头位于本项目下游，距离本项目约500m，可供本项目发生风险事故时的应急使用。

巨石集团淮安有限公司码头配置的设备

| **编号** | **设备名称** | **靠泊能力：1000吨级-5000吨级** |
| --- | --- | --- |
| 1 | 围油栏 | 不低于最大设计船型的3倍设计船长 |
| 2 | 收油机 | 1台（1m3/h） |
| 3 | 油拖网 | 1套 |
| 4 | 吸油材料（吸油毡） | 0.2t |
| 5 | 应急设备库 | 1座 |
| 6 | 溢油分散剂 | 0.11吨 |
| 7 | 溢油分散剂喷洒装置 | 1套 |
| 8 | 围油栏布放艇 | 1艘 |
| 9 | 储存装置 | 1m3 |
| 10 | 应急设备库 | 1座 |
| 11 | 通讯设施等 | / |

* + 1. 环境风险应急预案区域联动

本项目码头项目水污染事件风险防范与应急在立足“自救”的基础上，主要做好与《淮安市突发环境污染事件应急处理预案》《淮安市水上突发事件应急预案》《淮安市船舶污染事故应急处置预案》《淮安内河港环境风险应急预案》等应急预案的衔接，将码头事故风险应急纳入淮安市的应急系统中，设立应急响应与报告制度，形成联动机制。当事故规模、气候条件使码头人员、设备无法满足要求时，码头应立刻报告上级启动上述应急预案，要求提供外部力量支援，实现区域联动应急。上级应急队伍接到事故发生报告后，视事故性质立即决定是否派救助船舶及设施到现场，如发生船舶相撞漏油事故，将视情况立即调派围油栏、清油队、消防船等赴现场救助并采取应急措施。

根据以上分析，各层级应急预案中关于与上下级应急预案的衔接内容尚不完善。考虑到在组织、人员、设备等方面应急能力和应急物资有限，将本项目的应急预案纳入淮安市、各区县以及园区、淮安内河港应急系统，使本项目码头环境风险应急预案与区域应急预案相衔接，一旦发生泄漏事故后采取区域联动，控制溢油事故产生的环境风险。

发生轻微突发事件，内部就可快速控制住事件发展态势，应在第一时间启动应急预案，应急领导小组按照相应的预案全力以赴组织救援。发生超出应急领导控制能力的突发环境事件时，应急领导小组在接到事故报警后，及时向上级政府部门进行汇报和请求紧急救援，由上级部门甄别事件级别，适时启动市、县、园区突发环境事件应急预案，采取相应级别的应急响应，迅速调集救援力量。当事故扩大化需要外部力量救援时，淮安市及涟水县地方海事处、淮安市及涟水县生态环境局等上级部门可以发布支援命令，调动相关政府部门进行全力支持和救护，可以联系环保、海事、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、应急物资的支持。上级应急队伍接到事故发生报告后，视事故性立即决定是否派救助船舶及设施到，如发生船舶相撞漏油事故，视情况立即派油、清油、消防船等赴救助并采取应急措施。

* + 1. 与上级及社会区域风险防范与应急响应机制

（1）与后方厂区应急预案的衔接

①信息共享：码头项目应与后方厂区建立常态化的信息沟通机制。通过建立共享数据库或信息平台，实时共享可能影响环境风险的各类信息，包括货物种类及存储量、运输计划、设备运行状况、气象条件、水文数据等。后方厂区的原材料采购信息、生产工艺变更情况以及港区内其他码头的作业动态等，都对码头项目的环境风险评估和应对策略制定具有重要参考价值。这样，各方能够全面了解整个区域的潜在环境风险因素，提前做好应对准备。

②进行联合环境风险评估工作。码头项目和后方厂区在开展风险评估时，相互协作，综合考虑各方的工艺流程、设施布局、人员活动等因素对区域环境的整体影响。评估码头装卸作业与后方厂区生产过程中可能产生的污染物叠加效应。

③对环境风险应急资源进行统筹调配。包括应急救援设备（如消防器材、泄漏控制工具、防护装备等）、应急物资（如吸附材料、中和剂、沙袋等）、应急救援人员（如消防队员、专业抢险队伍、医疗救护人员等）以及应急资金等。根据码头项目、后方厂区和港区的实际需求和资源储备情况，制定资源共享和调配计划，明确在不同环境风险情景下，各方资源的调配流程和优先顺序。

④构建统一的应急指挥体系。在港区层面设立环境风险应急指挥中心，作为整个港区环境风险应急处置的最高指挥机构，码头项目和后方厂区的应急指挥部门作为其分支或下属机构。在发生环境风险事件时，应急指挥中心根据事件的性质、规模和影响范围，迅速启动相应的指挥机制，统一调配各方资源，下达应急处置指令。建立应急指挥通信网络。确保码头项目和后方厂区之间的通讯畅通无阻。采用多种通讯手段，如固定电话、移动电话、无线电对讲机、卫星通信等，构建多层次、多渠道的通讯网络。在应急处置过程中，各方指挥人员能够及时沟通信息、协调行动，保证应急指挥的高效性和准确性。

⑤制定联合应急响应流程。明确在不同级别环境风险事件发生时，码头项目和后方厂区的响应顺序、响应措施和响应时间要求。当码头发生小规模危险物质泄漏时，码头项目首先启动自身的应急响应程序，进行初步的泄漏控制和人员疏散，并及时向港区应急指挥中心和后方厂区通报情况。后方厂区做好可能受到影响的防护准备工作。如果事件升级为较大规模的环境风险事故，各方则按照预先制定的联动响应流程，全面启动应急响应，共同开展事故抢险、环境监测、人员救援、交通管制等工作。

⑥开展联合应急演练。定期组织码头项目、后方厂区共同参与的环境风险应急演练，模拟不同类型的环境风险事件场景，检验各方应急响应联动机制的有效性和协调性。通过演练，发现问题并及时进行整改完善，提高各方在实际应急处置中的联动配合能力和应急处置水平。

（2）与园区风险应急预案的衔接

①应急组织机构、人员的衔接当发生风险事故时，项目综合协调小组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有关部门汇报，并将上级指挥机构的命令及时向建设项目应急指挥小组汇报；编制环境污染事故报告，并将报告向上级部门汇报。

②预案分级响应的衔接

⑴一般污染事故：在污染事故现场处置妥当后，经应急指挥小组研究确定后，向当地生态环境部门事故应急处理指挥部报告处理结果。

⑵较大或严重污染事故：应急指挥小组在接到事故报警后，及时向淮安市应急处理指挥部报告，并请求支援；生态环境部门应急处理指挥部进行紧急动员，适时启动区域的环境污染事故应急预案迅速调集救援力量，指挥区域成员单位、相关职能部门，根据应急预案组成各个应急行动小组，按照各自的职责和现场救援具体方案开展抢险救援工作，应急小组听从生态环境部门现场指挥部的领导。现场指挥部同时将有关进展情况向淮安市应急处理指挥部汇报；污染事故基本控制稳定后，现场应急指挥部将根据专家意见，迅速调集后援力量展开事故处置工作。现场应急处理结束。当污染事故有进一步扩大、发展趋势，或因事故衍生问题造成重大社会不稳定事态，现场应急指挥部将根据事态发展，及时调整应急响应级别，发布预警信息，同时向淮安市应急处理指挥部和省环境污染事故应急处理指挥部请求援助。

（3）与港口部门风险应急预案的衔接、联动

1、先期处置

港口突发事件发生后，港口企业应立即启动相关应急预案，采取应急救援行动，控制事态发展，避免事件升级，同时立即报告事发地港口管理部门、港口应急办和其他相关部门。

事发地港口管理部门根据职责和规定的权限启动应急预案，开展应急救援工作，并收集现场动态信息随时报告港口应急办。

2、应急启动

港口应急办对收集到的港口突发事件信息，经初步评估确定为Ⅲ级以上突发事件的，向港口应急指挥部提出启动Ⅲ级应急响应的建议。港口应急指挥部总指挥决定启动Ⅱ级应急响应后，立即向市政府报告。

3、指挥协调

Ⅲ级应急响应启动后，港口应急指挥部根据实际需要，组织成立现场应急指挥部确定现场指挥长，同时由港口应急办通知相关成员单位赶赴现场，现场指挥长由港口应急指挥部总指挥指定，未指定前，一般由事发现场的港口企业负责人担任。

市应急指挥部具体负责现场应急处置工作，及时向港口应急指挥部报告情况，请示重大问题的处置。

参与突发事件处置的成员单位，在现场应急指挥部的统一指挥下，按照各自职责，开展现场应急处置和救援工作。

4、扩大应急

当港口突发事件超出港口应急指挥部的应急处置能力，需要实施扩大应急行动时，港口应急指挥部应及时向市政府报告，建议启动市级相关应急预案。

5、安全防护

应急救援人员在接近危险区域或有潜在危险的区域时，必须做好充分防护的准备，经现场指挥部同意方可进入现场，并严格按照安全防护要求和相关操作规程进行处置。

现场指挥部要密切监视险情，做好受到突发事件威胁群众的疏散撤离工作，如果需要大规模疏散居民，应由当地政府负责，拟定撤离计划，确定撤离路径、备用路线及交通工具，车流量控制，疏散目的地的接纳条件，通知撤离方式，告诉有关人员自身保护的注意事项或预防措施，及时公开相关信息，保持社会秩序和公众情绪稳定。

6、信息发布

港口突发事件的信息发布应当统一、及时、准确、事件发生的第一时间向社会发布简要信息，随后发布初步核实情况，政府应对措施和公众防范措施等，并根据事件处置情况做好后续发布工作。

7、应急结束

港口突发事件的威胁和危害已得到有效控制或消除时，由现场应急指挥部向港口应急指挥部提出Ⅱ级应急响应结束的建议。港口应急指挥部决定结束Ⅲ级应急响应的，可委托现场应急指挥部宣布解除应急状态。

（4）与海事部门风险应急预案的衔接、联动

8、信息处置

（1）报告：船舶、设施发生故障，首先应采取一切有效措施组织自救，必要时发出求救信号，并应迅速使用一切有效手段向搜救中心或下属机构报告，下属机构接获该信息后，应立即向搜救中心办公室报告。事故现场附近的船舶，在获悉信息后，在当事船无法报告的情况下应协助报告。搜救中心办公室接到报告后，判断是否需要启动应急预案；如果需要启用，则应立即报告指挥长决定。

（2）通知：根据执行指挥长的指示精神，搜救中心办公室立即通知应急处置有关的单位、人员按预案要求各就各位。

（3）启用应急预案：根据事故发生的时间、地点、人员及船货情况，当事船的人员的危险程度，须由搜救中心决定启用应急预案。

9、应急预案启用后，搜救中心办公室操作要领：

（1）根据指挥长指令通知救助成员单位及有关部门。

（2）专人处理上报，传达指令。

（3）处理来电、来函，接待来人，并做好相关记录。

（4）通知搜救区域的监督处站密切配合工作。

（5）根据指挥长的指令通知港监有关部门发布航行通电通知。

（6）督促有关专业小组人员到位、工作到位，执行。指挥长指令到位。

（7）配合现场工作组，随时提供现场需要的各种资料。

（8）协助指挥长协调各有关专业小组的工作。

（9）设置VHF专用频道。

* + 1. 环境风险防范措施“三同时”要求

环境风险防范措施应与主体工程同时设计、同时建设、同时验收，即环境风险防范措施应纳入环保投资和建设项目竣工环保验收。

* + 1. 环境风险防范措施分析结论

本项目环境风险物质主要有船舶用油。危险单元为码头水域区域。风险事故类型有船舶溢油等。通过环境风险预测和评价可知，采取相应的风险防范措施及建立完善的应急管理制度后，不仅可以将风险事故发生概率降至最低，同时可降低环境风险，确保本项目环境风险可防控。

1. 环境影响经济损益分析
   1. 环境损益分析
      1. 环保投资

本项目总投资：5942.36万元，其中环保投资70万元，占总投资的1.52%环保投资估算及“三同时”验收清单见表7.1-1。

本项目环保投资估算及“三同时”验收一览表

| **项目名称** | | **淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程** | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **类别** | | **污染源** | **污染物** | **治理措施（设施数量、规模、处理能力等）** | **处理效果、执行标准或拟达要求** | **投资**  **（万元）** | **完成时间** |
| 施工期 | 废气 | 施工粉尘（汽车扬尘、临时堆场扬尘、运输砂石料粉尘） | 粉尘 | 施工现场及临时堆场四周设置2.5—3m的围幛；道路硬化；堆料加盖篷布、施工运行车辆行驶道路定时洒水；建筑材料及施工垃圾配套覆盖措施；禁止在大风天气开挖土方。 | 减少施工扬尘量 | 2 | 与主体工程同步 |
| 施工船舶、车辆和机械废气 | CO、NOx、CnHm | 选择优质燃料，定期对车辆、运卸机械进行保养和维护，加强管理。 |  | 1 |
| 水下土方干化场恶臭废气 | NH3、H2S、臭气浓度 | 围堰、围挡 | - | 1 |
| 废水 | 疏浚作业 | SS | GPS定位系统、环保疏浚技术、跟踪监测 | - | 2.5 |
| 水下土方干化场余水 | SS | 经围堰、泄水口及后续沉淀池等预处理后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河 | 满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河 | 2.5 |
| 港池及基坑排水 | SS | 港池内沉淀2h以上。 | 石油类指标参照执行《污水综合排放标准》（GB8978－1996）表4中三级标准。 | 1 |
| 船舶含油污水 | COD、SS、石油类 | 船舶自行带走 | 不外排 | 0.5 |
| 船舶生活污水 | COD、SS、NH3-N、TN、TP | 船舶自行带走 | 不外排 |
| 陆域生活污水 | COD、SS、NH3-N、TN、TP | 依托国能涟水一期热电联产项目施工生活区临时生活污水处理站进行处理，不外排。 | 石油类指标参照执行《污水综合排放标准》（GB8978－1996）表4中三级标准。 | 1 |
| 施工车辆及机械冲洗废水 | COD、SS、石油类 | 施工车辆及机械冲洗废水经沉淀池预处理后用作场地洒水抑尘不外排。 | 1 |
| 噪声 | 施工噪声 | 高噪声设备 | 合理安排施工时间，选用低噪声设备 | 《建筑施工场界环境噪声排放标准》（GB 12523－2011） | 1 |
| 固废 | 施工垃圾 | 生活垃圾、建筑垃圾 | 设置固体废弃物临时贮存场所等 | 有效处置 | 1.5 |
| 弃方 | 弃方统一运送至淮安市管理行政执法局和城市管理局核准的工程渣土弃置场统一处理 |
| 生态 | 打桩、护岸 | 水域生态 | 宣传教育、设置围堰、施工营造区和水下土方干化场生态补偿，采取土地整治绿化覆土、撒播植草。 | 减少SS扩散，减轻对水域生态环境影响 | 2 |
| 营运期 | 废气 | 道路扬尘 | 粉尘 | 除尘炮雾车 | 达到《大气污染物综合排放标准》（DB32/4041-2021）表3 | 2 |
| 煤炭卸船废气、煤炭转运粉尘 | 粉尘 | 桥式抓斗卸船机的防尘、抑尘系统： 每台桥式抓斗卸船机装备1套干雾加高压水雾的抑尘系统，并对桥式抓斗卸船机在运转过程中的起尘部位采取密闭防尘措施。桥式抓斗卸船机漏斗上口设挡风板，漏斗至码头皮带转运处设密闭溜槽和密闭导料槽，卸船接料斗下口应设闸板、出料溜筒，进、出口设橡胶帘。  带式输送机的防尘、抑尘措施： 带式输送机设置皮带机罩，混凝土栈桥两侧设置防风板，在带式输送机卸料处回程皮带头部设置自动洗带装置。 | 20 |
| 车辆和机械废气 | CO、NOx、SO2、CnHm | 选择优质燃料，定期对车辆、装卸机械进行保养和维护，加强管理。 | 2 |
| 废水 | 船舶油污水 | COD、石油类 | 船舶舱底油污水经码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置； | / | 1.5 |
| 船舶生活污水 | COD、SS、NH3-N、TN、TP | 船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目污水处理厂处理 | 其中石油类指标参照执行《污水综合排放标准》（GB8978－1996）表4中三级标准。 | 2 |
| 陆域生活污水 | COD、SS、NH3-N、TN、TP | 陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排 | 1 |
| 初期雨水 | COD、SS、石油类 | 码头初期雨水经排水沟收集后汇入码头面污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。 | 2 |
| 车辆及机械冲洗废水、码头冲洗废水 | COD、SS、石油类 | 码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。车辆及机械冲洗废水、维修废水经电厂隔油池处理后排至回用水池回用。 | 2 |
| 噪声 | 各类机械、船舶 | 高噪声设备 | 采用低噪声设备、减震隔声、消音等 | 厂界达《工业企业厂界环境噪声排放标准》（GB12348-2008）中3、4类标准 | 8 |
| 固废 | 船舶 | 船舶生活垃圾 | 由环卫部门定期清运 | 满足环保要求 | 5 |
| 陆域 | 陆域生活垃圾、装卸作业生产的固体废物、含油抹布及手套 | 由环卫部门定期清运 |
| 含油污泥、机修废油 | 委托有资质的单位处置 |
| 危废暂存仓库 | - | 依托国能涟水一期热电联产项目危废暂存仓库，占地50m2 | 按《危险废物贮存污染控制标准》（GB18597-2023）要求进行设置 |
| 生态、防洪 | - | 水生生态 | 对码头区实施加固工程，以保证码头结构及岸坡的稳定 | 减少对水生生态系统的影响，降低地区受洪灾影响的危险程度 | 10 |
| 陆域生态 | 选择适宜当地气候生长的常绿乔木和灌木等进行绿化 | - | 4 |
| 风险应急措施 | | 事故应急人员培训，引导助航等安全保障设施、建设VTS、围油设备、事故应急池、收油设备、吸油毡及其他防护设备，制定污染应急计划，通信报警设备 | | | - | 8.5 |
| 环境管理（机构、监测能力等） | | 本项目建成后，应设立专门的环境管理机构和专职或兼职环保人员1～2名，负责环境保护监督管理工作。本工程施工期和营运期的环境保护和防治污染设施由建设单位实施，安装粉尘在线监测设备。 | | | - | 5 |
| 施工期和营运期环境监测（含生态） | | | 满足环境监测计划 |
| 清污分流、排污口规范化设置 | | 清污分流，雨污分流管网铺设 | | | 符合相关规范 |
| 总量平衡具体方案 | | 建设项目废气排放均无组织排放。无组织：颗粒物（TSP）3.715t/a，SO20.00056t/a，NOx0.046t/a。  建设项目建成后生活污水（陆域、船舶）全部处理后回用不外排 | | | | - | - |
| 卫生防护距离设置（以设施或厂界设置，敏感保护目标情况等） | | 建设项目不设置大气环境防护区域。项目建成后全厂卫生防护距离是以码头厂界为执行边界的50m范围，卫生防护距离范围内无医院、居民等敏感保护目标，可满足建设项目卫生防护距离的要求 | | | | - | - |
| 共计 | | | | | | 90 | - |

* + 1. 环境效益

本项目环境保护投资约为90万元，通过采取可行的环境保护措施，项目建设的环境影响可以接受，环保投资效益比较明显。

项目采取的废水、废气、噪声、固废等污染治理及清洁生产措施，达到了有效控制污染和保护环境的目的。本项目环境保护投资的环境效益主要表现在以下几方面；

（1）废水处理环境效益：本项目将分别建设生产、生活废水处理系统、初期雨水系统，实行清污分流、雨污分流制，分类处置，可减少废水处理量和处置费用，环境效益显著。

（2）废气治理环境效益：采用喷洒水抑尘防尘，路面上的积尘应及时清理，加强码头周围环境的绿化，减轻大气环境的污染，环境效益明显。

（3）噪声治理的环境效益：噪声治理措施落实后可减小对居民点的影响，有良好的环境效益。

（4）固废处置的环境效益：本项目基本无工业固废，生活垃圾送环卫部门处理，完全没有排放。

（5）绿化建设的环境效益：本项目在控制污染、治理污染的同时，绿化起到净化空气、降噪等作用，同时美化了厂区环境，为企业职工提供良好的厂区环境。防护林的建设，可有效保证码头的正常运行。

由此可见，本项目环保工程投入的环境效益显著。

* 1. 工程环境经济损益分析

（1）直接效益

项目在营运期间的机动车尾气、装卸设备废气、粉尘排放等和生产噪声辐射会对厂区内工作人员生活质量产生不利影响，对当地生态环境产生一定的负面影响，但这些负面影响必将是复杂的、多方面的。采取操作性强的、切实可行的环保措施后，每年所挽回的经济损失，亦即环保投资的直接效益是显而易见的。但目前很难用具体货币形式来衡量，只能对若不采取措施时，项目导致的生态环境、水环境、声环境和环境空气质量的变化所引起的人体健康、生活质量等方面的经济损失作粗略计算或定性分析用以反馈环保投资的直接经济效益。

（2）间接效益

在实施有效的环保措施后，会产生以下的间接效益：保证项目厂区内工作人员的生活质量和正常生活秩序，维护工作人员的环境心理健康和减轻居民的烦躁情绪，减少社会不稳定的诱发因素等。所有这些间接效益在目前很难用货币形式来度量，但可以肯定的是，它应是环保投资所获取的社会效益的主要组成部分。

总之，本项目所产生的环境经济的正效益占主导地位，从环保角度来看该项目是可行的。

1. 环境管理与监测计划
   1. 环境管理

环境管理是以环境科学理论为基础，运用经济、法律、技术、行政、教育等手段对经济、社会发展过程中施加给环境的污染和破坏影响进行调节控制、实现经济、社会和环境效益的和谐统一。本环境管理计划依据环评报告书提出的主要环境问题、环保工程措施及省、地市环保部门对企业环境管理的要求，提出该项目的环境管理和监测计划，供各级环保部门对该项目进行环境管理时参考，并作为企业项目设计、建设及运营阶段环境保护管理工作的依据。

* + 1. 环境管理任务

（1）贯彻执行国家有关环境保护方针、政策及法规条例；

（2）制定年度项目环境保护工作计划，整编相关资料，建立环境信息系统，编制年度环境质量报告，并呈报上级主管部门；

（3）加强项目环境监测管理，审定监测计划，委托具有相应资质的环境、卫生监测等专业部门实施环境监测计划；

（4）组织实施项目的环境保护规划，并监督、检查环境保护措施的执行情况和环保经费的使用情况；

（5）协调处理项目引起的环境污染事故和环境纠纷；

（6）加强环境保护的宣传教育和技术培训，提高工程建设、管理人员的环境保护意识与环境保护技术水平。

* + 1. 环境管理机构

环境保护管理机构的主要工作职能

| **管理内容**  **项目阶段** | **工程建设内容** | **环境管理内容** |
| --- | --- | --- |
| 项目前期工作 | 1. 编制项目建议书  2. 编制可行性研究报告  3. 编制设计任务书 | 委托环评单位编制环境影响报告书 |
| 设计阶段 | 1. 工程初步设计  2. 工程施工图设计 | 1. 协助设计单位落实环评报告书中提出的各项环境保护措施 |
| 施工阶段 | 1. 编制施工文件及施工报告  2. 施工安装、提出竣工报告 | 1. 监督施工单位落实环境保护措施  2. 环保设备施工及竣工验收 |
| 运营阶段 | 1. 生产装卸作业  2. 环保设施运行 | 1. 检查环保设施运行情况  2. 做好内部环境监测和管理工作，并定期与当地环境保护管理部门汇报 |

生态环境局负责对项目保护工作实施监督管理，组织协调有关机构为项目环境保护工作服务，监督项目环境管理计划的实施，项目环保设施的竣工验收、运行情况的检查和监督管理。工程施工实行监理制度，按工程质量和环保要求对项目进行全面质量管理。

* + 1. 环境管理制度

（1）“三同时”制度

在项目筹备、实施和建设阶段，应严格执行“三同时”制度确保各项环保设施能够和生产工艺“同时设计、同时施工、同时投产使用”。

（2）报告制度

企业排污发生重大变化、污染治理设施改变或企业改、扩建等都必须向当地环保部门申报，改、扩建项目，必须按照《建设项目环境保护管理条例》的要求，报请有审批权限的环保部门审批。

（3）污染治理设施的管理、监控制度

项目建成后，必须确保污水处理设施长期、稳定、有效地运行，不得擅自拆除或者闲置污染处理设施，不得故意不正常使用污水处理设施。污水处理设施的管理必须与生产经营活动一起纳入公司日常管理工作的范畴，落实责任人、操作人员、维修人员、运行经费、设备的备品备件和其他原辅材料。同时要建立岗位责任制、制定操作规程、建立管理台账，对危险废物进厂、存放、处理以及设备运行情况进行日常记录。

（4）环保奖惩条例

本项目建设期以及建成后，各级管理人员都应树立保护环境的思想，公司设置环境保护奖惩条例。对爱护环保设施、节能降耗、改善环境者实行奖励；对环保观念淡薄，不按环保要求管理，造成环境设施损坏、环境污染及资源和能源浪费者一律予以重罚。

（5）环境保护人员培训计划

对专、兼职环境管理人员进行环保业务知识的培训，并在全公司范围内进行环保知识的宣传和教育，树立全员的环保意识

（6）其他制度

本项目建成后，除上述一般企业均须有的通用规章制度外，还必须制定以下几个方面的制度：

①风险事故应急救援制度；

②危险废物安全处置有关的规章制度，包括安全操作规程、岗位责任制、车辆设备保养维修等规章制度；

③工业危险废物处置全过程的管理制度；

④转移联单管理制度；

⑤职业健康、安全、环保管理体系（HSE）；

⑥参加环保主管部门的培训制度；

⑦档案管理制度。

（6）公众开放

配备环保公益宣传的场所和设施。

* + 1. 施工期环境管理计划

施工期环境管理计划

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 项目 | 监督内容 | 监督单位 |
| 1 | 废气 | 施工场所围挡；出入口及厂内道路硬化；堆料覆盖；车辆冲洗；使用商品混凝土；洒水抑尘等 | 地方生态环境部门 |
| 2 | 废水 | 施工船舶污水严禁直接排入水体；港池及基坑排水沉淀后用于洒水抑尘；疏浚废水：采用环保疏浚技术及设备，SS跟踪监测，控制疏浚作业强度等，疏浚污泥余水经围堰、泄水口及后续沉淀池等预处理后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河 | 地方生态环境部门 |
| 3 | 噪声 | 加强各种机械设备的维修保养；控制作业时间，尽量避免夜间施工等 | 地方生态环境部门 |
| 4 | 固废 | 施工固体废物集中收集等 | 地方生态环境部门 |
| 5 | 生态 | 植物群落变化、生境质量变化 | 地方生态环境部门 |

* + 1. 营运期环境管理计划

营运期环境管理计划

| 序号 | 项目 | 监督内容 | 监督单位 |
| --- | --- | --- | --- |
| 1 | 废气 | 配备洒水车，对道路面进行洒水抑尘；装卸船皮带头部密闭，装卸区域配备雾炮机、厂区边界设置围墙，防护林等 | 地方生态环境部门 |
| 2 | 废水 | 本项目船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置；船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目污水处理厂处理；陆域生活污水接管至国能涟水一期热电联产项目污水处理厂处理；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。 |
| 3 | 噪声 | 机械设备定期保养和维护；安装减震垫等 |
| 4 | 固废 | 分类处理收集，危险废物交由资质单位处理处置。 |
| 5 | 生态 | 群落变化、生境质量变化 |

* + 1. 污染物排放清单

本项目主要污染物排放清单

| **污染物类别** | **生产工序** | **污染源名称** | **治理措施** | **排污口信息** | | **排放状况** | | | | **执行标准** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **排污口参数** | | **浓度mg/m3** | **速率kg/h** | **排放量t/a** | **排放方式** | **-** | |
| 无组织废气 | 卸料扬尘 | TSP | / | / | | / | 1.022 | 3.715 | 间断 | 0.4mg/m3 | 《大气污染物综合排放标准》（DB32/4041-2021）表3标准 |
| 车辆和运输机械尾气 | SO2 | / | / | | / | 0.0010 | 0.00056 | 0.4mg/m3 |
| CO | / | / | | / | 0.59 | 0.33 | 10mg/m3 |
| NOx | / | / | | / | 0.082 | 0.046 | 0.12mg/m3 |
| 废水 | 综合废水（陆域生活污水、机械冲洗废水、初期雨水、码头地面冲洗水、船舶生活污水、船舶含油污水） | 水量 | 本项目船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置；船舶生活污水经岸上接收装置接收后接管至国能涟水一期热电联产项目污水处理厂处理；陆域生活污水接管至国能涟水一期热电联产项目污水处理厂处理；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。 | | | / | 2806.7 | 2806.7 | 全部回用不外排 | / | 石油类指标参照执行《污水综合排放标准》（GB8978－1996）表4中三级标准。 |
| COD | 142.1 | 0.12 | 0.89 | 370 |
| SS | 125.2 | 0.11 | 0.78 | 270 |
| NH3-N | 9.0 | 0.008 | 0.056 | 30 |
| TN | 11.2 | 0.010 | 0.070 | 40 |
| TP | 2.2 | 0.002 | 0.014 | 8 |
| 石油类 | 8.1 | 0.007 | 0.05 | 30 |
| 噪声 | 生产 | 噪声 | 合理布局、隔声、减震、距离衰减 | 1 | 东厂界N1 | / | | | 连续 | 南厂界噪声，昼间≤70dB(A)，夜间≤55dB(A)；南厂界噪声，昼间≤65dB(A)，夜间≤55dB(A) | 《工厂企业厂界环境噪声排放标准》（GB12348-2008）3、4类标准 |
| 2 | 西厂界N2 |
| 3 | 南厂界N3 |
| 4 | 北厂界N4 |
| 固废 | 危险固废 | 含油污泥废油、机修废油 | 委托有资质单位处置 | / | / | / | / | / | / | / | 全部处理，  零排放 |
| 一般固废 | 陆域生活垃圾、船舶生活垃圾、沉淀池污泥、装卸作业生产的固体废物、含油抹布及手套 | 环卫部门 | / | / | / | / | / |  |

* + 1. 总量排放要求

1. 废气污染物总量

建设项目废气排放均无组织排放。

无组织：颗粒物（TSP）3.715t/a，SO20.00056t/a，NOx0.046t/a。

1. 废水污染物总量

建设项目建成后生活污水（陆域、船舶）全部经处理后回用不外排。

* 1. 环境监测计划
     1. 监测目的

环境监测是环境保护中最重要的环节和技术支持，开展环境监测的目的在于：

（1）检查项目施工期存在的对裸露施工面的保护以及施工扬尘、施工废水等环境问题，以便及时处理；

（2）检查、跟踪项目投产后运行过程中各项环保措施的实施情况和效果，掌握环境质量的变化动态；

（3）了解项目环境工程设施的运行状况，确保设施的正常运行；

（4）了解项目有关的环境质量监控实施情况；

（5）为改善项目周围区域环境质量提供技术支持。

* + 1. 施工期监测计划

（1）大气监测计划

施工期间的废气主要为施工作业扬尘和运输车辆产生的尾气、水下土方干化场恶臭废气、扬尘等。

检测项目：TSP、NO2、CO、SO2、H2S、NH3、臭气浓度

监测位置：施工场区四周、水下土方干化场四周。

监测频率：施工期间每两个月监测一次，每次连续监测两天，每天四次。重污染天气加密监测。

监测方法：按照相关环境监测技术规范进行。

（2）水质监测计划

监测项目：COD、SS、石油类。

监测位置：施工现场上游500m及下游500m。

监测频率：施工期间每两个月监测一次，每次连续监测两天。

监测方法：按照相关环境监测技术规范进行。

（3）声环境监测计划

施工期间，作业机械设备和施工车辆向周围环境排放噪声。

检测项目：等效连续A声级，Leq(A)。

监测位置：在施工场区四周、施工车辆经过的路段设置噪声监测点。

监测频率：施工期每两个月监测一期，每期一天（昼夜各一次）。

监测方法：按照相关环境监测技术规范进行。

（4）固体废物监督计划

严格监督和落实施工期各固体废物和危险废物的处置情况，记录各危险废物的产生量及处理方式、去向等信息。

（5）生态环境监测

监测项目：植物群落变化、生境质量变化

监测位置：在施工场区四周、盐河。

监测频率：施工期。

监测方法：按照相关环境监测技术规范进行。

（6）底泥监测

监测项目：pH、《建设用地土 壤污染风险管控 标准（试行）》中表1所列45项基本项目、石油烃；《土壤环境质量 农用地土壤污染风险管控标准（试行）》的锌、铬。

监测位置：疏浚区域。

监测频率：施工期。

监测方法：按照相关环境监测技术规范进行。

* + 1. 营运期监测计划

根据《排污单位自行监测技术指南 总则》（HJ819-2017）、《排污许可证申请与核发技术规范 码头》（HJ1107-2020）及《江苏省港口粉尘综合治理专项行动实施方案》（苏交港〔2017〕11号）制定项目监测计划，监测计划主要包括污染源监测以及环境质量监测，其中环境质量监测应纳入淮安市环境监测计划。见下表：

营运期监测计划

| **项目** | **监测点位** | **监测指标** | **监测频次** | **执行标准** |
| --- | --- | --- | --- | --- |
| 废气 | 码头四周边界（无组织） | SO2、NOX、CO、非甲烷总烃 | 每半年一次 | 《大气污染物综合排放标准》（DB32/4041-2021）表3中标准 |
| 颗粒物 | 在线监测 | 《大气污染物综合排放标准》（DB32/4041-2021）表3中标准 |
| 噪声 | 码头四周  边界 | LWECPN、LAmax | 每季度一次 | 《工业企业厂界环境噪声排放标准》（GB12348-2008）中3/4类标准 |
| 废水 | 在项目码头上下游两端0.5km各布设一个点。 | COD、石油类、氨氮、总磷、总氮， | 枯水期、平水期和丰水期各监测一期，一期两次 | 《地表水环境质量标准》（GB3838－2002） |
| 水生生态 | 盐河水域 | 水生动物、高等水生植物、浮游生物与底栖生物的种类、数量、分布 | 每5年开展一次 | - |

* 1. 排污口规范化设置

废水排放口、固定噪声源、固体废物贮存和排气筒必须按照国家和云南省的有关规定进行建设，应符合“一明显、二合理、三便于”的要求，即环保标志明显，排污口设置合理，便于采集样品、便于监测计量、便于公众参与和监督管理。同时要求按照生态环境部制定的《环境保护图形标志实施细则（试行）》的规定，设置与排污口相应的图形标志牌。

（1）排污口管理。

建设单位应在各个排污口处竖立标志牌，并如实填写《中华人民共和国规范化排污口标记登记证》，由环保部门签发。环保主管部门和建设单位可分别按以下内容建立排污口管理的专门档案：排污口性质和编号；位置；排放主要污染物种类、数量、浓度；排放去向；达标情况；治理设施运行情况及整改意见。

（2）环境保护图形标志

在场区的废气排放源、固体废物贮存处置场应设置环境保护图形标志，图形符号分为提示图形和警告图形符号两种，分别按《环境保护图形标志-排放口（源）》（GB15562.1-1995）、《环境保护图形标志固体废物贮存（处置）场》（GB 15562.2-1995）修改单执行。环境保护图形标志的形状及颜色见表8.3-1，环境保护图形符号见表8.3-2。

环境保护图形标志的形状及颜色表

|  |  |  |  |
| --- | --- | --- | --- |
| 标志名称 | 形状 | 背景颜色 | 图形颜色 |
| 警告标志 | 三角形边框 | 黄色 | 黑色 |
| 提示标志 | 正方形边框 | 绿色 | 白色 |

环境保护图形符号一览表

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 序号 | 提示图形符号 | 警告图形符号 | 名称 | 功能 |
| 1 | 图片包含 游戏机, 画, 标志  描述已自动生成 | 黑白色的标志  描述已自动生成 | 一般固体废物 | 表示一般固体废物贮存、  处置场 |
| 2 | 图标  描述已自动生成 | 黑白色的标志  中度可信度描述已自动生成 | 噪声排放源 | 表示噪声向外环境排放 |
| 3 | / | 黑白色的标志  中度可信度描述已自动生成 | 危险废物 | 表示危险废物贮存、处置场 |

* 1. 建设项目“三同时”验收一览表

建设项目竣工环境保护验收清单见表7.1-1。

1. 环境影响评价结论
   1. 项目概况

国家能源集团江苏电力有限公司拟投资5942.36万元，于淮安市涟水县朱码街道高台村国能涟水一期热电联产项目厂区内建设“淮安港涟水港区薛行作业区国能涟水一期热电联产项目配套码头工程”。

本项目采用顺岸凹入式港池型式，拟布置3个1000吨级散货泊位，平行于航道方向布置2个1000吨级煤炭卸船泊位；西南侧布置1个1000吨级待泊泊位。本项目码头泊位长度为220m，距离航道中心线120m。本项目设计通过能力为118t，设计吞吐量为112t，主要货种是煤炭。在码头上游端部设转运站一座（9m×9m），码头密闭式带式输送机直接接入该转运站内；水平运输采用直径为65mm的管状带式输送，将煤直接运输至后方电厂封闭煤场。项目配套建设相应的码头前沿铺面结构、生产辅助建筑物、供电照明、通讯、环保、给排水、消防等设施。

职工定员及构成：职工定员45人，作业按三班制，码头年作业天数为330天。

* 1. 产业政策与相关规划符合性
     1. 与相关政策的符合性分析

对照《产业结构调整指导目录（2024年本）》，本项目属于第一类（鼓励类）第二十五项（水运）第1款“2．港口枢纽建设：码头泊位建设”的范畴，因此本项目符合国家产业政策要求。

* + 1. 与规划符合性分析

本项目符合《江苏省内河港口布局规划（2017-2035）》《江苏省干线航道网规划（2017-2035 年）》《淮安港总体规划（2020-2035）》《淮安市城市总体规划（2009-2030）》《清江浦区国土空间规划近期实施方案》《淮安市大运河文化遗产保护条例》《大运河（淮安段）遗产保护规划》《大运河淮安段清口枢纽保护总体规划（2012-2030）》《省政府关于印发大运河江苏段核心监控区国土空间暂行办法的通知》《大运河淮安段核心监控区国土空间管控细则》。

* + 1. 与“三线一单”符合性分析

建设项目所在区域不涉及生态红线，本项目建设不突破区域环境质量底线、资源利用上线，不属于环境准入负面清单中所列的行业，符合“三线一单”要求。

* 1. 环境质量现状
     1. 大气环境质量现状

根据《2023年淮安市生态环境状况公报》：“2023年，淮安市细颗粒物（PM2.5）可吸入颗粒物（PM10）、二氧化硫（SO2）、二氧化氮（NO2）年均浓度分别为36微克/立方米、58微克/立方米、8微克/立方米、25微克/立方米；一氧化碳（CO）和臭氧（O3）浓度分别为1毫克/立方米、158微克/立方米。”“各县区中，PM2.5、PM10、NO2、CO、SO2均达标，各县区PM2.5年均浓度在31-36微克/立方米之间，其中金湖县最低，清江浦区最高，PM10年均浓度介于52~62微克/立方米之间，金湖县浓度最低，淮阴区浓度最高。”

本次收集了距离本项目7.2km处涟水县环境监测监控站点2023年的全年例行监测数据，统计了各因子的百分位日均值数据，具体如下表，除PM2.5保证率日均值外，其余各因子年均值和保证率均满足环境空气质量标准要求，PM2.5保证率日均值占标率为110.7%。根据《环境影响评价技术导则 大气环境》（HJ2.2-2018）达标区判定要求，项目所在区域为不达标区。

涟水县发布了《涟水县2024年生态环境基础设施建设重点项目计划》，淮安市发布了《淮安市空气质量持续改善行动两年实施方案》，随着计划和方案的实施，本项目区域空气质量将得到持续改善。

补充监测的TSP、非甲烷总烃、氨、硫化氢能够满足标准限值要求。

* + 1. 地表水环境质量现状

根据《2023年度淮安市环境状况公报》，纳入“十四五”国家地表水环境质量考核的11个国考断面达标率为100%，水质优良（达到或优于Ⅲ类标准）的断面有9个（Ⅱ类断面5个），占比81.8%。

2023年，淮河、京杭大运河、苏北灌溉总渠、盐河、淮河入江水道、分淮入沂水道水质状况为优；入海水道南偏泓浔河、黄河故道、金宝航道、维桥河、利农河、南淮泗河张福河、团结河、高桥河、南六塘河、跃进河、汪木排河草泽河、唐响河、头溪河、运西河－新河、周桥灌区总干渠一帆河、铜龙河、池河水质状况为良好；入海水道北偏泓赵公河、公兴河水质状况为轻度污染。根据监测结果，地表水环境渠西河、盐河均满足《地表水环境质量标准》（GB3838-2002）中的相应水质标准，说明地表水环境质量好。

* + 1. 噪声环境质量现状

现状监测结果表明，拟建项目所在地的声环境质量较好，拟建址区域内昼、夜间噪声均满足《声环境质量标准》（GB 3096–2008）中3类和4a类区要求。

* + 1. 生态环境质量现状

根据现场踏勘并结合遥感影像数据解析，本项目生态环境评价范围内土地利用类型主要为水工建筑用地、果园、旱地、水田、水浇地、农村宅基地、林地、水系、公园与绿地。

本项目沿线植被基本以人工植被为主，主要为农田作物和河岸防护林，自然植被有田间、河边分布的灌木杂草和水域中的芦苇等。评价范围内无保护植物，本项目沿线区域受人类活动影响，地表植被已由人工植被替代，大型野生动物已相继绝迹，区域内现有野生动物以两栖爬行动物、鸟类和小型哺乳动物为主。根据对渔政人员及水利人员的调研结果，评价范围内未发现鱼类散场和洄游通道。

* 1. 主要环境影响
     1. 大气环境影响分析

本项目施工期废气主要为施工扬尘、施工船舶、车辆和机械废气、水下土方干化场恶臭废气、运输砂石料粉尘等。项目无组织排放NOx的占标率最大为8.799%，根据《环境影响评价技术导则－大气环境》（HJ2.2-2018），大气评价等级为二级，不需进行进一步预测与评价，只对污染物排放量进行核算。

* + 1. 地表水环境影响分析

本项目施工期废水主要为疏浚污泥余水、施工船舶舱底油污水、施工船舶生活污水、陆域施工生活污水、施工车辆及机械冲洗废水。

其中施工船舶舱底油污水和施工船舶生活污水由船舶带走；疏浚污泥余水经围堰、泄水口及后续沉淀池等预处理后满足《污水综合排放标准》（GB8978-1996）表4一级标准就近排入盐河；陆域施工生活污水经临时沉淀池预处理后接管至四季青污水处理厂处理；施工车辆及机械冲洗废水经临时沉淀池预处理后接管至四季青污水处理厂处理。

拟建码头营运期废水包括：船舶舱底油污水、船舶生活污水、陆域生活污水、初期雨水、码头冲洗废水等。

其中，船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置；船舶生活污水经岸上接收装置接收后接管至四季青污水处理厂处理；陆域生活污水经管道进入港区化粪池预处理后接管至四季青污水处理厂处理；码头初期雨水经排水沟收集后汇入码头污水池，经潜污泵提升至国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排；码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。

* + 1. 声环境影响分析

本项目施工期噪声主要为施工机械固定噪声源和运输车辆流动噪声，因此，本工程施工过程中应尽量避免夜间施工，如因特殊情况必须夜间施工，施工单位应按规定及时办理相关手续，并做好相应的防护措施。在施工期夜间打桩机、搅拌机、振捣机等高噪声应禁止。其他机械的施工应合理安排，限制夜间施工的时间。尽管施工噪声将对环境产生一定的不利影响，但是通过加强管理，严禁部分机械夜间施工等措施可将其影响降低到最低程度。而且施工期噪声是短暂的，一旦施工活动结束，施工噪声及其环境影响也随之结束。

营运期的噪声污染主要来源于码头装卸机械噪声、码头车辆和船舶鸣笛产生的交通噪声等。在采取装卸设备加装减振垫、车辆限速及禁止鸣笛等措施的情况下，营运期昼、夜厂界噪声满足《工业企业厂界环境噪声排放标准》（GB12348-2008）3、4类标准。

* + 1. 固体废物环境影响分析

本项目施工期产生的固废废物主要有建筑垃圾、生活垃圾、机修废油、沉淀池含油污泥等。生活垃圾收集后由当地环卫部门统一处置；建筑垃圾经收集后用作筑路材料或其他用途综合利用；施工场地附近低洼地区设置干化场地，港池和水工结构开挖的土方除部分无法利用的素填土作为弃方外，其余的土方经翻晒后回填水工结构和陆域；工程产生的水下方干化后弃方全部用于临时用地恢复。不会对区域环境造成影响。机修废油和沉淀池污泥委托有资质单位处置。

本项目营运期产生的固废废物主要有陆域生活垃圾、船舶生活垃圾、装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套、含油污泥和机修废油。其中陆域生活垃圾、船舶生活垃圾、装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。

各种固体废弃物均得到有效处理或处置，不会造成二次污染。

* + 1. 环境风险分析

本项目通过风险分析可知在采取风险防范措施后，可以将风险影响控制在场区范围内，影响可接受。

* 1. 公众意见采纳情况

根据生态环境部令第4号《环境影响评价公众参与办法》相关要求，本项目环评采用网站公示、报纸公示等方式征求公众意见。

接受环评委托后7个工作日内于2023年7月14日在涟水新闻网网站（https://www.lsxw.net.cn/site/index.html）进行了首次公示。

本项目公示期间，建设单位、环评单位均未收到任何反馈意见。

* 1. 环境保护措施
     1. 大气污染防治措施

施工现场及临时堆场四周设置2.5—3m的围幛；道路硬化；堆料加盖篷布、施工运行车辆行驶道路定时洒水；建筑材料及施工垃圾配套覆盖措施；禁止在大风天气开挖土方。水下土方干化场与最近的村庄居民点的距离应不小于100m，并通过遮盖等方式减缓异味气体逸散。

营运期间废气主要为桥式抓斗卸船机卸煤粉尘、带式输送机输送粉尘、道路扬尘和机械及汽车燃油废气。桥式抓斗卸船机的防尘、抑尘系统： 每台桥式抓斗卸船机装备1套干雾加高压水雾的抑尘系统，并对桥式抓斗卸船机在运转过程中的起尘部位采取密闭防尘措施。桥式抓斗卸船机漏斗上口设挡风板，漏斗至码头皮带转运处设密闭溜槽和密闭导料槽，卸船接料斗下口应设闸板、出料溜筒，进、出口设橡胶帘。带式输送机的防尘、抑尘措施： 带式输送机设置皮带机罩，混凝土栈桥两侧设置防风板，在带式输送机卸料处回程皮带头部设置自动洗带装置。

道路扬尘和机械及汽车燃油废气均为无组织排放废气，对环境质量影响较小。道路扬尘采取道路硬化，并且配备除尘喷雾车，对道路面、码头面进行洒水抑尘等措施；车辆及运输机械尾气采取尽量选用低能耗、低污染排放的施工机械和车辆，选用有环保合格和车辆检验合格标志、排气达标的车辆，不得使用不符合排放标准的车辆，加强机械和车辆的管理和维护等措施，减少因机械和车辆状况不佳造成的空气污染。

本项目以项目边界向外设置50m卫生防护距离。考虑国能热电项目未设置卫生防护距离，本项目建成后全厂的卫生防护范围为码头岸线向盐河侧50m范围。本项目无组织排放源卫生防护距离内均无居民点分布。

* + 1. 废水污染防治措施

本项目码头前沿配置船舶生活污水接收设施和船舶油污水接收设施，接收后接管至国能涟水一期热电联产项目厂区污水处理设施处理；陆域生活污水依托国能涟水一期热电联产项目厂区污水处理设施处理，不外排。码头初期雨水经排水沟排入国能涟水一期热电联产项目厂区初期雨水池，容积约1500m3，初期雨水池设置过滤装置，过滤能力为50t/h。初期雨水经过滤处理达回用水标准后排至全厂回用水池，回用于后方电厂的灰渣系统用水、锅炉房冲洗、汽机房冲洗、暖通用水、输煤栈桥及煤场喷洒用水补水等，和码头的设备冲洗用水、道路洒水、卸船喷淋用水等，不外排。码头冲洗废水经排水沟收集排入国能涟水一期热电联产项目含煤废水处理系统处理后用作厂区煤场喷淋和输煤栈桥冲洗，不外排。船舶舱底油污水由码头前沿接收装置收集，用不锈钢水箱作为船舶含油污水收集容器，配备自吸排污泵，标准法兰盘以及铜丝软管收集船舶含油污水。水箱盛满后，委托有资质单位处置，不外排。

* + 1. 噪声污染防治措施

施工过程中应尽量避免夜间施工，如因特殊情况必须夜间施工，施工单位应按规定及时办理相关手续，并做好相应的防护措施。在施工期夜间打桩机、搅拌机、振捣机等高噪声应禁止，并设置隔声屏障。其他机械的施工应合理安排，限制夜间施工的时间。

营运期采取装卸设备加装减振垫、车辆限速及禁止鸣笛等措施降低噪声。

* + 1. 固体废物污染防治措施

施工期生活垃圾收集后由当地环卫部门统一处置；建筑垃圾经收集后用作筑路材料或其他用途综合利用；施工场地设置干化场地，港池和水工结构开挖的土方除部分无法利用的素填土作为弃方外，其余的土方经简单翻晒后回填水工结构和陆域；工程产生的水下方干化后弃方全部用于临时用地恢复。不会对区域环境造成影响。机修废油和沉淀池污泥委托有资质单位处置。

营运期陆域生活垃圾、船舶生活垃圾、装卸作业生产的固体废物、沉淀池污泥、废含油抹布及手套委托环卫部门定期清运；含油污泥和机修废油暂存于危废仓库，委托有资质单位处置。

* + 1. 生态保护措施

施工期主要通过缩减岸线使用、保护自然岸线；不在管控区设施工场地，减少生态影响；同步施工，减小对生态多次损害；优化施工管理和施工工艺；严格管理施工船舶，施工船舶垃圾、废水严禁随意排放；施工期各种固体废物不得向水域排放或堆放在水域附近；加强生态环境及生物多样性保护的宣教和管理力度等生态保护措施减小施工期间对生态环境的影响。

营运期间主要通过禁止直接向水体排放废水和固体废物，物料堆存远离水域；在工程设计阶段合理规划设计，采取水土保持等生态减缓措施；绿化、增殖放流等生态补偿措施以及加强生态环境及生物多样性保护的宣教和管理力度等生态保护措施减小营运期间对生态环境的影响。

* + 1. 风险防范措施

施工期采取施工前与相关管理部门研究划定施工界限并发布施工通告，设置标识；施工期间严格规范施工作业船舶及操作人员，增强施工人员的安全意识和环境保护意识，严格操作规程；配备相当数量的应急设备和器材，制定施工期事故应急预案等风险防范措施避免或减小施工期可能造成的事故污染影响。

营运期通过采取配备必要的导助航等安全保障设施、推进船舶交通管理系统（VTS）建设、加强航道内船舶交通秩序的管理等措施防范船舶交通事故的影响；采取配备围油栏、拖油网等应急设备以及制定各项溢油应急反应对策防范溢油事故污染；采取防渗及防漏措施、加强码头巡检、源头控制等措施对危废暂存库及地下水进行风险防范；采取设置事故应急池及其配套设施（如事故导排系统），防止消防废水或污染雨水和轻微事故造成的环境污染以及合理选址，规范总体布置及建筑设计，完善安全消防措施；编制环境事件应急预案等措施对本项目营运期进行风险防范。

* 1. 环境经济损益分析

通过以上对本项目建设的经济、社会和环境效益分析可知，在落实本评价所提出各项污染防治措施的前提下，本项目的建设能够达到经济效益、社会效益和环境效益相统一的要求，既为地方经济发展做出贡献，又通过环保投资减少了污染物排放量，使污染物排放量在环境容量容许的范围内。本项目的建设满足可持续发展的要求，项目建设是可行的。

* 1. 环境管理与监测计划

本工程制定了污染物排放管理要求和环境管理制度要求，根据《排污单位自行监测技术指南 总则》（HJ819-2017）、《排污许可证申请与核发技术规范 码头》（HJ1107-2020）等环评相关导则中要求制定了自行监测方案，给出了排污口规范化设置要求，项目符合环境管理及监测计划要求。

* 1. 总结论

项目符合国家和地方有关环境保护法律法规、标准、政策、规范及相关规划要求；生产过程中遵循清洁生产理念，所采用的各项污染防治措施技术可行、经济合理，能保证各类污染物长期稳定达标排放；预测结果表明项目所排放的污染物对周围环境和环境保护目标影响较小；通过采取有针对性的风险防范措施并落实应急预案，项目的环境风险可控。在环评公众参与调查期间，未收到公众对本项目的反馈意见。

因此，项目在建设和运行过程中，切实落实报告书提出的各项污染防治措施及“三同时”制度的前提下，从环境影响角度，本项目建设可行。