



GUAM ENVIRONMENTAL PROTECTION AGENCY • AHENSIAN PRUTEKSIÓN LINA'LA' GUÅHAN
LOURDES A. LEON GUERRERO • GOVERNOR OF GUAM | JOSHUA F. TENORIO • LIEUTENANT GOVERNOR OF GUAM
MICHELLE C. R. LASTIMOZA • ADMINISTRATOR

FORM F: APPLICATION FORM FOR COMMERCIAL / INDUSTRIAL HOLDING TANK PERMITS

Per 22 GAR Division 2 Chapter 12 (§ 12106, § 12115, § 12118, & § 12125), International Plumbing Code (IPC / IPSDC Chapter 8), and Recommended Standards for Wastewater Facilities

IMPORTANT NOTICE: Holding tanks are **not** considered a viable or sustainable long-term wastewater disposal solution for commercial or industrial operations due to high pumping costs, operational risks, and potential public health hazards. Approval is strictly restricted to very limited circumstances where public sewer is unavailable and subsurface soil absorption systems are impossible due to site hydrology, geology, or soil conditions. Specific written approval from the GEPA Administrator is required prior to permit issuance.

I. APPLICATION TYPE & FEE SCHEDULE

Please select the appropriate application category (Payable to " Treasurer of Guam C/O Guam EPA (e.g., Water Pollution) "):

Permit Category	Application Type	Regulatory Fee
☐ New Construction / Conversion Review	Commercial / Industrial / Other	\$1,000
☐ Initial Operating Permit (1-Year Term)	Commercial / Industrial / Other	\$250
☐ Annual Operating Permit Renewal	Commercial / Industrial / Other	\$200



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Permit Category	Application Type	Regulatory Fee
<i>Additional Review Fee (if applicable)</i>	Per hour (after 2nd GEPA review)	\$180 / hr
<i>Additional Inspection Fee (if applicable)</i>	Deficiency Re-inspection / Failure	\$100

II. APPLICANT, FACILITY & PLUMBING CONTRACTOR DETAILS

☐ New ☐ Existing System

1. Owner & Facility Information

- **Commercial / Industrial Entity Name:** _____
- **Property Owner / Authorized Official:** _____
- **Expenditure Authority Title:** _____
- **Mailing Address:** _____
- **Contact Phone / Email:** _____ / _____
- **Site Address / Location:** _____
- **Lot / Block / Tract Numbers:** Lot: _____ Block: _____ Tract: _____
- **Zoning Designation / Total Area:** Zone: _____ Area: _____ sq. ft. / sq. m
- **Nature of Industrial / Commercial Operations:** _____
- _____

☐ **TYPE OF WASTEWATER:**

☐ Residential ☐ Commercial ☐ Industrial ☐ Other: _____

☐ **IS THE PROPERTY LOCATED WITHIN A FLOOD ZONE?**

☐ Yes ☐ No

If yes, buoyancy-control requirements shall be incorporated into the system design.

☐ **DISTANCE FROM THE NEAREST BODY OF WATER:** _____ ft



☐ IS THE PROPERTY LOCATED WITHIN THE SEASHORE RESERVE?

☐ Yes ☐ No

☐ CONTRACTOR INFORMATION:

Name: _____

Address: _____

Phone No.: _____

2. Design Engineer & Plumbing Contractor Credentials

- **Registered Professional Engineer (PE):** _____ License #: _____
- **Master Plumber / Contractor Firm:** _____ GCLB License #: _____
- **Certified Operator (Requirement prior to occupancy-22 GAR Ch. 11):** _____ Certification #: _____

III. APPLICABLE PLUMBING CODES & ENGINEERING STANDARDS

The design, sizing, piping, materials, and construction of commercial and industrial holding tanks must strictly comply with the following codes:

1. **22 GAR Division 2 Chapter 12:** Guam EPA Onsite Wastewater Treatment and Disposal System Regulations.
2. **21 GCA § 67101.4 & 2009 IPC / IPSDC (Chapter 8):** International Plumbing Code & International Private Sewage Disposal Code standards for holding tanks, vents, high-level alarms, and manholes.
3. **ASTM C 1227 / ASTM C 478:** Standard Specifications for Precast Concrete Water and Wastewater Structures.
4. **GLUMRB Recommended Standards for Wastewater Facilities:** Ten-State Standards for sewage pumping, wet wells, pipe slopes, and material isolation.

IV. TECHNICAL & PLUMBING DESIGN SPECIFICATIONS

(To be completed, signed, and stamped by the Guam-Registered Professional Engineer)

1. Wastewater Flow & Sizing Criteria

- **Peak Daily Wastewater Flow (Q_{peak}):** _____ Gallons Per Day (GPD)
- **Basis of Flow Calculation:** ☐ IPC Fixture Units (dfu) ☐ Metered Water Use Data ☐ Process Discharge Calculations



- **Holding Tank Total Effective Volume:** _____ Gallons
(Note: Must provide adequate capacity for peak flows between scheduled pumping trips without risk of overflow).

2. Tank Construction & Structural Parameters

- **Material:** ☐ Pre-cast Monolithic Concrete ☐ Site-constructed Monolithic Concrete
(Hollow block / CMU masonry construction is strictly prohibited. Minimum 28-day concrete compressive strength must be **4,000 psi** per ASTM C1227).
- **Buoyancy / Flotation Protection:** ☐ Concrete Anti-Flotation Ballast / Slab ☐ N/A
(High GW Table Check Passed)
☐ Buoyancy Calculations
☐ water table elevation
- **Setbacks & Truck Access:**
 - Distance from Servicing Manhole to Accessible Truck Driveway: _____ ft. (Min. **10 ft.** per IPSDC § 805.4).
 - Distance from Water Service Mains / Supplies: _____ ft. (Min. **10 ft.** horizontal separation per IPC § 603.2).
 - Distance away from production wells: _____ ft.

3. Piping, Venting, Alarm & Appurtenance Details

- **Building Drain / Influent Pipe:** Diameter: _____ inches (Min. 4" per IPC § 710); Material: _____; Slope: _____ %.
- **High-Level Alarm System (IPSDC § 805.5):** Dual visual (illuminated) and audible alarm set to activate when tank reaches **75% of liquid capacity**.
 - Alarm Power Circuit: Connected to an independent electrical circuit separate from any pumping equipment.
 - Attach standard operating procedure for high-level alarm system during power outages.
- **Ventilation (IPSDC § 805.8):** Tank provided with an independent vent line.
 - Vent Diameter: _____ inches (Min. 2" per IPC Chapter 9); Terminated with a 24-mesh corrosion-resistant insect screen.
- **Manhole Access (IPSDC § 805.6):** Watertight, gas-tight 24-inch minimum diameter access manhole extended to finished grade with lockable cover.

☐ The holding tank shall be installed at least six (6) inches above ground level and protected from flooding. Stormwater drainage shall be directed away from the system.

V. SUBMITTAL CHECKLISTS

☐ NEW CONSTRUCTION / CONVERSION APPLICATION CHECKLIST

- ☐ **Completed Form F Application** signed by Owner and Design Engineer.
- ☐ **Approved Property map**, signed by DLM in list of submittals
- ☐ **\$1,000 Application Review & Inspection Fee**.



- ☐ **20-Year Engineer's Economic Analysis (PE Stamped):** Present-value calculation factoring inflation comparing the total 20-year lifecycle cost to construct, maintain, and pump the holding tank against the cost of connecting to public sewer.
- ☐ **Proof of Sewer Unavailability & Hydrogeological Impossibility:**
 - Letter from Guam Waterworks Authority (GWA) verifying public sewer is unavailable (>200 ft) or gravity connection is obstructed.
 - Engineering Soils & Hydrology Report stamped by a Registered PE demonstrating that subsurface soil absorption systems cannot function due to high groundwater, impermeable rock, or severe site constraints.
- ☐ **Three (3) Complete Sets of PE-Stamped Construction Plans:**
 - **Vicinity Map:** Showing adjacent streets, landmarks, and nearest public sewer mains.
 - **Plot & Grading Plan (DWG-C-1):** Showing lot lines, easements, utility lines, building layout, holding tank location, 10-foot pump truck driveway access, and site contours.
 - **Cross-Section & Structural Plan (DWG-C-2):** Profile grade, inlet invert elevations, tank wall thickness, rebar schedule, manhole details, and high-level alarm schematic.
- ☐ **Valid 1-Year Hauling/Pumping Contract:** Executed contract with a GEPA-registered wastewater hauler specifying "as needed" pumping and immediate reporting of leaks or alarm failures to GEPA.

☐ **ANNUAL OPERATING PERMIT RENEWAL CHECKLIST** *(Due 30 days prior to expiration)*

- ☐ **Completed Operating Permit Renewal Application with \$200 Fee.**
- ☐ **New 1-Year Pumping Contract** with a GEPA-registered wastewater hauling service.
- ☐ **Annual Pumping Log & Manifest Receipts:** Certified summary report from the registered hauler documenting trip dates, volumes pumped (gallons), and disposal manifests for the preceding 12 months.
- ☐ **GWA Water Service Billing Statements:** Copies of water utility bills for the preceding 12 months (utilized by GEPA to cross-check water consumption against pumped waste volume for leak detection).
- ☐ **Updated Statement of Financial Commitment (Section VI).**

VI. STATEMENT OF FINANCIAL COMMITMENT & LEGAL ACKNOWLEDGMENT

(Must be signed by the commercial facility owner or official with expenditure authority)

I/We, the undersigned, certify and acknowledge the following statutory obligations:

1. **Economic Evaluation Acknowledgment:** I/We have reviewed the 20-year present-value economic analysis prepared by our Registered Professional Engineer comparing holding tank operating expenses against public sewer connection.



2. **Financial Obligation:** The commercial/industrial entity hereby confirms full financial commitment to pay all costs associated with constructing, pumping, and maintaining the holding tank in accordance with 22 GAR Chapter 12.
3. **Operational Compliance & Reporting:** I/We will maintain an uninterrupted pumping contract with a registered wastewater hauler. Any observed leaks, structural degradation, alarm failures, or overflows will be reported immediately to Guam EPA.
4. **Water-Tightness Testing:** The facility agrees to subject the holding tank to a 24-hour hydration and 1-hour water-tightness test (ASTM C 1227) witnessed by GEPA inspectors prior to operation.
5. **Non-Transferability & Mandatory Connection:** Operating permits are non-transferable. If public sewer becomes available or if GEPA determines continued holding tank operation threatens public health or the Northern Guam Lens Aquifer, the Administrator may order immediate sewer connection or request building condemnation by the Department of Public Works.

Signature of Owner / Authorized Official with Expenditure
 Authority Date

Printed Name & Title

Entity Name

VII. MANDATORY INTER-AGENCY CLEARANCES

Signatures must be secured prior to GEPA plan approval:

1. **Guam Waterworks Authority (GWA):** Verification of public sewer non-availability and water service approval.
Signature: _____ *Date:* _____
2. **Department of Land Management (DLM):** Property boundary, ownership, and zoning verification.
Signature: _____ *Date:* _____
3. **Wetland Clearance (if applicable):** Approvals from DLM, BSP, ACOE, and Dept. of Agriculture.
Clearance Status: ☐ Approved ☐ N/A

VIII. GUAM EPA COMPLIANCE INSPECTION & FIELD VERIFICATION

(For Internal Guam EPA Inspector Use Only)

1. Construction Phase Inspections

- **Pre-Pour Concrete Inspection (24-hr advance notice required):**
 - ☐ Tank dimensions, rebar, and monolithic pour forms verified.*Date:* _____ *Inspector Initials:* _____



- **Pre-Covering Interior Dimension & Coating Inspection:**

- ☐ Monolithic walls, 4000 psi concrete strength, 24" manhole build-up, and anti-corrosion coating verified.

Date: _____ Inspector Initials: _____

2. ASTM C 1227 Water-Tightness Test

- **24-Hour Hydration Hold:** Tank filled to invert level and held for 24 hours.

Start Date/Time: _____ End Date/Time: _____ Initials: _____

- **1-Hour Hydrostatic Test:** Refilled to invert level; water level held with **zero drop** for 1 hour.

Start Date/Time: _____ End Date/Time: _____ Initials: _____

Result: ☐ PASSED ☐ FAILED

3. Final Functional & Alarm Inspection

- ☐ High-level visual and audible alarm tested and verified operating on independent circuit.
- ☐ Vent insect screen (24-mesh) and 10 ft. truck access verified.

Date: _____ Inspector Initials: _____

IX. ADMINISTRATIVE ACTION & PERMIT ISSUANCE

(For Internal Guam EPA Use Only)

- **Engineering Review Status:** ☐ Approved ☐ Disapproved

Comments/Deficiencies:

- **GEPA ADMINISTRATIVE DECISION:**

☐ **APPROVED FOR COMMERCIAL HOLDING TANK OPERATING PERMIT (1-YEAR VALIDITY)**

☐ **DISAPPROVED / REJECTED**

GEPA Chief Engineer Signature

Date

GEPA Administrator Signature

Date

