APPENDIX E ROUTINE SERVICES

'Routine Services' means all Services and maintenance, including preventive maintenance and the monitoring of all equipment and systems required to assure the continuous and effective operation of the Ordot Closure Facility meeting or exceeding all of the environmental requirements for a closed disposal facility. Routine Services shall also include complete documentation of all Routine Services and Non-Routine Services.

Task 1 – General Administrative Services

The Operator shall be responsible for the following:

- Paying all necessary operational, maintenance costs and regulatory fees;
- Paying all costs of hauling leachate and condensate for treatment and disposal, as applicable, except for those costs that are direct-billed to RECEIVER/TRUSTEE;
- Providing and maintaining all necessary operations equipment;
- Maintaining service of all site utilities (water, electricity, and sewer);
- Maintaining of internal water supply and electrical systems and all tankage and pumping equipment;
- Maintain, repair, and operate as needed the backup power generation system.
- Providing housekeeping for all site and work areas;
- Performing litter control throughout the site and along Dero Drive adjacent to the Ordot Closure Facility property boundary;
- Maintaining all structures, infrastructure and other site improvements;
- Performing general administration and management tasks, including engineering and planning incidental to complete operations, and submitting annual Post Closure Care operation plan updates and cost updates to the RECEIVER/TRUSTEE and GEPA/EPA;
- Assuming environmental responsibility related to operations and maintenance of the Ordot Closure Facility;

Task 2 – Site Security Operations and Maintenance Services

On continuous basis, the contractor shall monitor the Site Security and shall immediately repair any defect that compromises the security of the site. On a QUARTERLY basis, the Operator shall conduct a comprehensive inspection of Site Security elements, including the perimeter fence, lighting, gates, and all locks. The Operator shall note the condition and integrity of the fence, presence of signage, damage from weather, earthquakes, plants, and animals, and evidence of vandalism. The Operator shall inspect the gate and locks and test their operation.

On an ongoing basis, the Operator shall maintain the perimeter fence, including maintenance of vegetation growth (grasses less than 12 inches high, no vines on fence, and removal of woody plants by the root) on and within 25 feet of each side of the perimeter fence. The Operator is responsible for all disposal costs associated with the removal of the vegetation.

Site security inspection forms, maintenance activities, and repairs shall be documented and included in QUARTERLY reports to the RECEIVER/TRUSTEE and GEPA/EPA.

On an AS-NEEDED basis, following natural disasters (typhoons and other large storms, earthquakes, wildfires, etc.) the Operator shall inspect and document damage to the site as soon as it is safe to do so. The Operator shall report to the RECEIVER/TRUSTEE the types and extent of damage. Inspections are routine services, however, the preparation of cost estimates for repairs, and execution of repairs are non-routine services per the general requirements of the Agreement.

Task 3 – Operations and Maintenance of the Cover System

The 43.5 -acre closure cover system over the waste pile is comprised of five layers of materials over the waste and are listed from top to bottom as:

- 6 and 8 inch High Density Polyethylene Geocell infilled with coralline limestone gravel/soil mixture (2 feet of coralline limestone gravel/soil mixture on top slopes where geocell does not exist)
- 300 mil Geo-composite drainage layer (for stormwater)
- 60 mil Linear Low Density Polyethylene (LLDPE) impermeable membrane
- 250 mil Geo-composite drainage layer (for leachate)
- 18 inches coralline limestone gravel/soil foundation layer

The cover system includes concrete anchoring structures for the geocell as well as Kevlar and Polyester tendons used during construction to hold the geocell in place until the geocells were filled. Geocells infilled with concrete serve as the stormwater swales on each bench of the cover system and concreted chutes or downdrains are spaced at regular intervals to convey stormwater to the four stormwater management ponds, with associated engineered inlet and outlet control structures. To slow stormwater velocities there are multiple energy dissipaters located at each level of the cover system. Conveyance of stormwater off the cover consists of box culverts and 60-inch High Density Polyethylene (HDPE) pipe with precast box manholes at regular intervals.

Inspection of the cover system is required to be conducted as needed but on no less than a QUARTERLY basis. During each inspection, the Operator shall document areas of the cover exhibiting the following:

- Damage
- Settlement
- Erosion
- Evidence of ponded water
- Odors
- Exposed wastes
- Cracks
- Slope failure or slippage
- Leachate seeps

The Operator shall document areas exhibiting the preceding conditions and shall investigate the cause of the condition before repairs are attempted.

Maintenance of the final cover system will be conducted on an as-needed basis, and includes, but is not limited to, the following:

- Maintain the Closure Cover System and associated stormwater conveyance and management system;
- Maintain the entire surface areas of the Cover System, associated roadways, slopes and stormwater pond berms through landscape management to include slope management, grass cutting, woody bush and tree removal, and other vegetation removal work to maintain the function, volume, capacities, and performance of the Ordot Closure Facility on at least monthly basis, with exception of grass cutting which will require continuous maintenance to keep it at no more than 12 inches high and on average, approximately 6 inches high (the Operator is responsible for the proper disposal of all vegetation removed);

- Maintaining all grades and slopes;
- Making any other repairs, as needed.

Use of Roads and Roadways – The Operator shall use the roads and roadways on the Ordot Closure Facility only for their designated purpose. The concreted swales on the facility shall primarily be crossed by small utility, pickup trucks or tractors performing maintenance activities.

Track-mounted equipment such as dozers and excavators are prohibited from traveling on concrete paved areas of the Ordot Closure Facility or roads unless the Operator makes provisions to cover the paved surface to protect it from damage. When necessary, the Operator shall construct and maintain separate soil or gravel-surfaced roadways for mobile equipment to provide access between perimeter roads, berm roads and maintenance or repair work areas on the cover system.

Task 4 – Groundwater and Surface Water Monitoring System Operations, Maintenance, and Monitoring Services

Task 4.1 - Groundwater Monitoring System Inspections and Maintenance

On a SEMIANNUAL basis, coincident with semiannual sampling events, the Operator shall inspect and document the condition of the groundwater monitoring network, including the following:

- Surface monument; including lid, lock, casing, concrete pad, and bollards
- Well cap, pump, and tubing
- Paint condition and wellhead identification
- Dedicated bailer and bailing twine, if applicable
- Encroachment of vegetation

The condition of each monitoring well shall be documented on groundwater sampling forms. If a condition at a well prevents the collection of a sample, or will likely prevent the collection of a sample in the near future, the Operator shall notify the RECEIVER/TRUSTEE immediately. Routine maintenance issues are included and shall consist of the repair or replacement of any wellhead cap feature or appurtenance at Operator cost. If conditions in the water table beneath the Ordot Dump change in such a manner that water samples can no longer be collected from a well, the Operator shall notify RECEIVER/TRUSTEE immediately.

Upon award of the contract, the Operator shall install eight (8)-foot-tall t-bar (or reasonable alternative) stakes adjacent to each monitoring well that is not along the main access road or on Dero Road (four (4) wells). The t-bar stakes shall be driven approximately 2 feet into the ground adjacent to each well to provide an approximately six (6)-foot-tall, high visibility marker at each well site. The stakes shall be similarly painted using high-visibility colors, and fitted with weather-resistant, high visibility flagging.

On a MONTHLY basis, the Operator shall maintain vegetation clearances within the area of the bollards surrounding each well and along the access routes to each well. Vegetation removal shall be conducted using grading equipment and/or hand tools. Defoliants, weed killers, gasoline, stump removers, and other chemicals shall not be used to remove vegetation. The Operator is responsible for the disposal of all removed vegetation. While

grass and grassy vegetation, vines and the like may be cut to be maintained, woody plants, bushes and trees must be uprooted and removed.

On an As-Needed basis, the Operator shall maintain the painted surfaces of the wellhead casing and bollards as needed to prevent the development of rust on any surface.

On an As-Needed basis, maintain wellhead in proper well operating condition according to the individual well operating permits issued by GEPA.

Task 4.2 - Groundwater and Surface Water Monitoring Services

On a semiannual basis, during the months of January and July (unless otherwise approved by the RECEIVER/TRUSTEE), the Operator shall conduct groundwater and surface water monitoring services to comply with the provisions in Section 5.5.3 of the Final Post Closure Monitoring Plan ("FPCMP").

The site is equipped with 10 groundwater monitoring wells and 4 surface water sampling locations which are required to be sampled on a semiannual basis. Wells are constructed on nominal 2-inch diameter PVC casing and screen, with depths ranging from 16 to 69 feet. Monitoring wells are not equipped with pumps, and the Operator shall purchase and install a 1-inch diameter PVC bailer equipped with a check valve for each site monitoring well. The bailers shall be attached to the well cap using PVC bailing twine.

Well monitoring and sampling procedures are as follows:

- Upon arrival at a well, the Operator shall measure the static water level using a decontaminated, weighted electronic sounding tape.
- The Operator shall bail the wells using a well-dedicated bailer. The Operator shall discharge purge water to the ground surface near the well in a manner that does not result in ponding or erosion.
- For wells that recover quickly, the Operator shall purge at least three well volumes prior to sampling. During purging, the Operator shall record field parameters of temperature, pH, specific conductance, and turbidity. A well shall be considered ready to sample when at least three well volumes of water are removed, and when field parameter readings meet the stabilization criteria outlined in the FPCMP.
- When stabilization criteria are met, the Operator shall collect a sufficient volume of water to completely fill all required sample containers.
- For wells that purge dry and recover slowly, the Operator shall purge at least one well volume, measuring field parameters periodically during purging. When the water level has recovered to at 85 percent of the previously-measured static water level, the Operator shall collect a sufficient volume of water to completely fill all required sample containers.
- The Operator shall collect one duplicate sample for every 20 groundwater samples collected during each monitoring event, or a minimum of one duplicate sample per event.
- The Operator shall collect at one field (ambient) blank per sampling event.
- If non-dedicated sampling equipment is used, the Operator shall collect at least two equipment rinsate blanks during each sampling event.
- The Operator shall provide one travel/trip blank per cooler per sampling event.

- The Operator shall properly seal, label, and store groundwater samples in a cooler filled with ice. Each cooler shall be accompanied by completed chain-of-custody documentation provided by the Operator.

Each groundwater sample shall be analyzed for the following parameters using the test methods outlined in Table 5 of the FPCMP:

- General Chemistry Parameters:
  - Ammonia as Nitrogen
  - Chloride
  - Nitrate as Nitrogen
  - Nitrite as Nitrogen
  - Phosphate as Phosphorus
  - Sulfate
  - Total Dissolved Solids
  - Total Suspended Solids
- Metals:
  - Aluminum
  - Chromium
  - Iron
  - Lead
  - Nickel
  - Selenium
  - Thallium
- Semivolatile Organic Compounds:
  - Benzo(a) anthracene
  - Benzo(k) fluoranthene
  - Benzo(a) pyrene
  - Chrysene
  - Dibenzo(a,h) anthracene
  - Indeno(1,2,3-cd) pyrene

The Operator shall contract with an analytical laboratory certified through the National Environmental Laboratory Accreditation Program (NELAP) for the required analyses (the "Operator's Laboratory"). The Operator shall be responsible for ordering sample containers and ensuring that they are properly stored in an area that is free of measurable contamination. The Operator shall ensure that the Operator's Laboratory has the capability to analyze the preceding parameters using the test methods, meet the detection limits and data quality objectives prescribed in Table 5 of the FPCMP, and provide the information in an electronic data deliverable (EDD) format suitable for submittal to the GEPA.

The Operator shall be responsible for all environmental sampling equipment, labor, laboratory analytical fees, and shipping fees.

Task 4.3 - Semiannual Groundwater Monitoring Report Preparation

Within 60 days following each sampling event, the Operator shall submit a draft semiannual report to the RECEIVER/TRUSTEE for review. The RECEIVER/TRUSTEE will provide review and comment to the Operator within 15 days, and the Operator shall incorporate or address these comments in the final submittal to GEPA.
Each semiannual report shall include the following:

- Discussion of field sampling

- Discussion of findings
- Comparison of findings to local and federal water quality protection standards
- Cumulative results of laboratory analyses, tabulated by method
- Laboratory EDD package
- Groundwater potentiometric surface maps
- Recommendations
- Field sampling forms

The Operator shall finalize and submit, providing three (3) hard copies and electronic formats of the report to the RECEIVER/TRUSTEE, GEPA and EPA within 90 days of the sampling event.

Task 5 – Landfill Gas Monitoring System Operations, Maintenance and Monitoring Services

The Landfill Gas Monitoring System consists of eighteen (18) perimeter LFG monitoring wells ('LFGMW'). All wells are located within the perimeter security fence with wellheads averaging approximately 3 to 4 feet above grade with a concrete slab in accordance with regulations.

Task 5.1 – Landfill Gas Monitoring Wellhead Inspections, valves, fittings and components

Bid Item Definition for Task 5.1

This requires the Operator on a QUARTERLY basis to manually visually inspect the LFGMWs around the facility and record and document for future reporting.

General Scope of Work for Task 5.1

On a QUARTERLY basis, coincident with LFG monitoring activities, the Operator shall inspect the following LFGMS components:

- Surface monument; including lid, lock, casing, concrete pad, and bollards
- Sample tubing and/or labcock valve
- Encroachment of vegetation

The condition of each Landfill Gas monitoring probe shall be documented on a sampling form during each monitoring event. If a condition at a probe prevents the ability to collect a sample, the Operator shall notify RECEIVER/GSWA immediately.

Task 5.2 – Landfill Gas Monitoring Well Vegetation Removal/Disp. and Wellhead and Access Maintenance

Bid Item Definition for Task 5.2

The removal and disposal of vegetative growth in the wellhead area of each LFGMW by means of cutting, or grubbing out from the soil the vegetation (grass, woody bushes and trees) in each

wellhead area. Vegetation growth shall be maintained at a height of no more than 8 inches above grade and only grasses shall remain. Well Access maintenance is the cutting or grubbing of vegetation (grass, wood bushes and trees) along the LFGMW access path from facility roadways to the wellhead.

On an As-Needed basis, the Operator shall maintain the painted surfaces of the wellhead casing and bollards as needed to prevent the development of rust on any surface.

On an As-Needed basis, maintain wellhead in proper well operating condition according to the individual well operating permits issued by GEPA.

General Scope of Work for Task 5.2

The removal and disposal of vegetative growth on at least a monthly interval in the wellhead area. The average maximum height the vegetation can reach within the month must not be more than 8 inches. The only vegetative growth allowed to remain upon each maintenance event are grasses and vines – no wood vegetation, either bush or tree, is allowed and must be entirely removed – roots and all. Removed vegetation must be removed from the Ordot Closure Facility and properly reused or disposed of. Alternatives to removal from the property are acceptable provided the material is mulched, composted and spread on non-cover system areas and not within the 50-foot fire break area of the facility. Maintenance of LFGMW access consists of vegetative removal as described above at least 10 feet wide (max area 500 square feet) and any minor regrading (up to 6 inches in depth over 500 square feet).

Operator shall install 8-foot-tall metal t-posts (or reasonable alternative) adjacent to each LFGMW that is not along the site access road or Dero Drive (8 wells). The t-posts shall be installed to a depth of 2 feet and similarly painted using high-visibility colors, fixed with weather-resistant, high visibility flagging, and installed within the area of the bollards surrounding each probe. The color of the paint and flagging shall be different than the colors used to identify groundwater monitoring well locations.

Task 5.3 – Landfill Gas Monitoring Well Sampling and Reporting

Bid Item Definition for Task 5.3

Operator shall provide staff with an experience and skill level defined above for the performance of Landfill Gas monitoring well sampling and reporting. Operator's services shall include Administration/Management/Supervision/Office Support Staff time necessary for the work.

The bid shall include a lump sum monthly fee for providing the services on a quarterly (four time per year) basis.

General Scope of Work for Task 5.3

Operator shall collect and analyze samples at 18 perimeter Landfill Gas monitoring wells (LFGMW) for the parameters listed below:

- Percentage of CH_4, carbon dioxide (CO_2), balance gas and oxygen (O_2)
- Percentage of lower explosive limit (CH_4)

- Barometric pressure
- Static pressure.

Sample collection and analysis shall be performed using a CES-LANDTEC GEM™2000 Plus gas analyzer or equivalent instrument.

After the gas analyzer results have been recorded, remove the monitoring well cap, measure the water level (if present) and the depth of the well.

Operator shall provide results of monitoring to RECEIVER/TRUSTEE in the form of a report within 10 days after each monitoring event.

Proposers should refer to Appendix D for details of the Post Closure Care Plan which contains a detailed description of the operation and maintenance of the LFGMW to be provided under this RFP.

Task 6 - Gas Collection and Control System

The closure system Gas Collection and Control System (GCCS) will be operated, managed and maintained by the Operator. The GCCS is a conventional active gas collection, flare and blower system. The collection system consists of four basic components needed to deliver gas to a flare for combustion treatment:

- A network of 13 horizontal gas collectors and 26 vertical extraction wells;
- A piping network (gas header pipe) to collect gas from the wells and deliver it to the flare;
- Central dual blower and flare station; and
- A system for collecting condensate and transferring it to the leachate disposal system.

The collection system delivers gas to a central blower and flare station located on the east side of the Ordot Closure Facility.

The GCCS will be operated in accordance with all the operational, maintenance and compliance reporting requirements of the Title V Permit No. GEPA-2015-F-1, issued December 11, 2015 and is in Appendix D of this RFP. Compliance reporting to be included with Task 10 Quarterly and Annual Consolidated Report Preparation.

The Operator will pay for all costs associated with the operation and maintenance and repair of the GCCS. Operator shall provide all necessary services, labor, tools, materials, equipment, Vehicles, and instrumentation for the routine scope of services under this agreement including, but not limited to, fusion welder for joining high-density polyethylene (HDPE) pipe, monitoring equipment for detecting LFG and any other equipment necessary to perform the routine scope of work contained herein. These items of equipment are considered necessary items for Operator, and separate charges for use of these items in the course of the routine work, will not be paid by RECEIVER/TRUSTEE.

Task 6.1 – Routine LFG System Operation and Maintenance, Well-Head Monitoring, and Surface Monitoring and Reporting

Bid Item Definition for Task 6.1

Operator shall provide staff with an experience and skill level defined in Section 2.2 for the performance of routine LFG collection system operation, maintenance, well-head monitoring and reporting.

Operator's services shall include Administration/Management/Supervision/Office Support Staff time necessary for the work.

The bid shall include a lump sum monthly fee for providing the services on a once per week basis and a lump sum monthly fee for providing the services on a once per month basis.

General Scope of Work for Task 6.1

Unless otherwise specified by RECEIVER/TRUSTEE, a date-specific schedule or a set day of

the week schedule shall be submitted by Operator for approval by RECEIVER/TRUSTEE, and will specify when the LFG collection system services are to be performed by Operator. Generally, for each year of this agreement Task 6.1 services will include the following:

- Record meteorological data for the day of each site inspection. The data shall include ambient temperature, precipitation, wind speed and direction, and barometric pressure. There is a present weather station onsite for this purpose. It will need to be installed, maintained, and replaced as needed at Operator Cost.

- Inspection of all vertical and horizontal LFG well-heads, perimeter LFGMWs, and valves, fittings and components;

- Measurement of LFG flow, methane, oxygen concentration, balance gas, temperature and vacuum (line side and wellhead side) at each well-head (Landfill Gas wells which are connected to the gas collection system). The Operator shall document, make adjustments and perform routine maintenance (if necessary) for maintaining operation of the LFG system and compliance with the GCCS and permit requirements. It is anticipated that some follow up visits will be necessary for the purpose of monitoring and adjusting wells. Operator shall make recommendations to RECEIVER/TRUSTEE for further repairs if necessary. Operator shall compile the wellhead information, including all follow-up monitoring results and submit monthly reports to RECEIVER/TRUSTEE, within 5 days from the end of each month.

- Adjust/balance and optimize the vacuum on the individual extraction wells in order to maximize methane extraction while minimizing oxygen intrusion through the Cover System.

- Measurement of vacuum at each access/monitoring port in the LFG collection system.

- Perform routine maintenance on LFG collection system including, but not limited to, clearing vegetation around extraction wells, valves, access/monitoring ports and monitoring wells; clean sample ports; adjust/tighten hose clamps; and exercise valves.

- Provide all data in Excel format or such other format as the RECEIVER/TRUSTEE may reasonably require.

- Prepare a monthly report describing work completed and provide the report to RECEIVER/TRUSTEE within five (5) days after the end of each calendar month.

Task 6.2 – Routine Flare Station and Condensate Collection System Operation, Maintenance, Monitoring, and Reporting

Bid Item Definition for Task 6.2

Operator shall provide staff with an experience and skill level defined in Section 2.2 for the performance of routine LFG flare station and condensate collection system operation, maintenance, monitoring and reporting. Operator's services shall include Administration/Management/Supervision/Office Support Staff time necessary for the work.

The bid shall include a lump sum monthly fee for providing the services on a once per week basis.

General Scope of Work for Task 6.2

Unless otherwise specified by RECEIVER/TRUSTEE, a date-specific schedule or a set day of the week schedule shall be submitted by Operator for approval by RECEIVER/TRUSTEE, and will specify when the LFG flare station and condensate collection system services are to be performed by Operator. Generally, for each year of this agreement Task 6.2 services will include the following:

- Inspection of flare station and condensate collection system;
- Measurement of the data and information indicated below. The Operator shall document, make adjustments and perform routine maintenance (if necessary) for maintaining operation of the flare and compliance with the GCCS and permit requirements. It is anticipated that some follow up visits will be necessary for the purpose of monitoring and adjusting wells. Operator shall make recommendations to RECEIVER/TRUSTEE for further repairs if necessary. The monitoring requirements are located in the GCCS and Post Closure Care Plan.
    - Date, time, and monitoring personnel.
    - Knockout pot inlet and outlet pressure, and differential pressure reading across the demister.
    - Knockout pot condensate level.
    - Extraction blower operating inlet and outlet temperatures and pressures.
    - Extraction blower running hours.
    - Methane, oxygen, carbon dioxide and balance gas concentrations at flare station inlet.
    - Flare exit gas temperature.
    - Check nitrogen gas supply for flame arrestor fail-close valve.
    - Check pilot ignition system propane storage tank level.
- Document and report shut-downs and malfunctions as required in the GCCS plan and permit.
- Check condensate drop-out structure (upstream of knockout pot), condensate sump and condensate manhole on leachate collection system.
- Check vegetative growth in the vicinity of the flare station and cut as necessary to maintain 6 inches of height (from ground to top of vegetation) or less between cuttings.
- Record meteorological data for the day of each site inspection. The data shall include ambient temperature, precipitation, wind speed and direction, and barometric pressure.
- Operator shall perform weekly, monthly, quarterly, annual or other maintenance in performing required or recommended Operation and Maintenance requirements. O & M requirements may include:
    - Weekly: record blower running hours and rotate the use of blowers;
    - Every two months: change lubricant in blowers;

- Three months: check ignitor gap, inspect ignitor wiring, check pilot, check thermocouple voltage, check compressor and flare shutdown valves, check blowers, zero pressure on vacuum gauges, inspect & test demister/clean if needed, check/test louvers, test pilot shutdown, test flame fail shutdown, test low temperature shutdown, and document O & M.
- Annually: check for loose bolts, check configuration sheets for chart recorder against actual settings, and document O & M.

- Prepare a monthly report describing work completed and provide the report to RECEIVER/TRUSTEE within five (5) days after the end of each calendar month.

Task 6.3 – Surface Emissions Monitoring and Reporting

Bid Item Definition for Task 6.3

Operator shall provide staff with an experience and skill level defined above for the performance of surface emission monitoring and reporting. Operator's services shall include Administration/Management/Supervision/Office Support Staff time necessary for the work.

The bid shall include a lump sum monthly fee for providing the services on a quarterly (four time per year) basis and a lump sum fee for providing the services on a once per year basis.

The bid shall include a lump sum fee for performing rechecks as may be required as a result of the monitoring.

General Scope of Work for Task 6.3

Perform surface emission monitoring in accordance with 40 CFR 60.753d surface scan requirements, 40 CFR 60.755C surface scan compliance provisions, 40 CFR 60 Appendix A Method 21 – Equipment performance provisions and the GCCS plan. This monitoring will follow a survey path at 30-meter intervals as described in the GCCS. In addition, all ground penetrations will be monitored on the Dump.

Report the need for rechecks, based on the results of the monitoring, to RECEIVER/TRUSTEE and perform follow-up 10 day and 30 day rechecks as may be necessary.

Provide a report to the RECEIVER/TRUSTEE which shall include:

- Cover letter with a surface scan summary and surface scan results
- Attachment – Instrument evaluation with Response factor and calibration precision
- Attachment – Daily site conditions; Temperature, Wind speed and direction, Precipitation, and Ground conditions. Include background readings and locations and calibrations records
- Attachment – Summary Table of exceedances and follow-up readings
- Attachment – Calibrations Gas certificate of analysis
- Factory calibration certificate for monitor if required by manufacturer's recommendations.

This report is required to be submitted to the RECEIVER/TRUSTEE within 10 days of the completion of each monitoring event.

Task 7 – Settlement Survey and Monitoring

As part of site closure, three settlement monuments have been installed on the top deck of the landfill. On an ANNUAL basis, the Operator will have an annual topographic survey performed for the purposes of evaluating the settlement of the cover system year to year.

Once ANNUALLY for the first five (5) years and EVERY FIVE (5) YEARS thereafter, the Operator shall conduct an aerial and/or field survey of the entire Ordot Closure Facility, by a licensed Professional Land Surveyor. to identify areas of settlement or potential ponding not apparent by on-ground annual visual inspections. It shall indicate all areas where visually noticeable differential settlement may have been obscured by grading operations. The map shall be drawn to the same scale and contour interval as the initial as-built topographic map, but showing the current topography of the final cover and featuring overprinted isopleths indicating the total settlement to-date. **For purposes of this proposal, the Operator shall assume to conduct one annual survey of the site.** The RECEIVER/TRUSTEE will provide the Operator with and recent annual survey and the closure as-built survey, and the Operator shall be responsible for comparing the as-built survey with the annual surveys, and five (5)-year post-closure surface to identify areas of differential settlement that could affect site drainage or create areas of ponding.

Routine maintenance of the three settlement monuments includes the repainting of bollards as needed to prevent the development of rust.

Task 8 – Surface Water Drainage System Monitoring and Maintenance

Stormwater management consists of a complete stormwater conveyance and control system of swales, down drains, energy dissipaters, box culverts, manholes and a pipe network to discharge stormwater to ponds that receive all storm flow from the cover system. The Four ponds consist of wet and dry ponds, with forebays, controllable outlets, and littoral shelves planted with semi-aquatic plants. The Ordot Closure Facility is surrounded by wetland resources so it is essential that maintenance of the stormwater management system occur for health of the environment downstream. See Appendix D Plan Set and Post Closure Care Plan for cover system detailed description of the maintenance efforts.

Task 8.1 - Surface Water Drainage System Monitoring and Reporting

Prior to the rainy season and on a QUARTERLY basis, the Operator shall inspect and document the condition of all site drainage facilities, including benches, swales, sedimentation basins, and inlet and outlet structures. Additional inspections shall be conducted after each significant rain/storm event. Inspections shall note breaches, settlement, collapse, siltation, vegetation accumulation, and other conditions that affect site drainage. Following each inspection, the Operator shall transmit to the RECEIVER/TRUSTEE a summary report documenting the condition of the stormwater drainage system and outlining repairs that are needed to maintain the function of the system as designed.

Task 8.2 - Surface Water Drainage System Maintenance and Cleaning

On a QUARTERLY basis (or as needed to maintain the flows and capacities of drainage system facilities), the Operator shall remove and dispose of vegetation or earthen material that accumulates in stormwater drainage channels, piping and ponds. The Operator shall provide all labor, tools, and equipment to provide this service.

Should the accumulation of sediment in the stormwater basins exceed 1 foot in depth from one stormwater event ($\geq$ 20 year storm event), the Operator shall provide a proposal to the RECEIVER/TRUSTEE for approval to clean each sedimentation basin and remove accumulated sediments. The Operator's costs for this service shall include all equipment, tools, labor, transportation, and disposal needed to provide this service.

Task 9 - Leachate Collection and Removal System Operations, Monitoring, and Maintenance

The Operator shall monitor, manage, and maintain the Leachate Collection and Removal System (LCRS), which consists of the following components:

- A perimeter leachate trench and pipe collection system
- Leachate seep drains installed with a collection pipe and trench that conveys leachate down the slope to the perimeter leachate trench and pipe collection system
- Leachate interceptor trench at the western Dump boundary to collect and remove concentrated leachate seeps
- Three leachate storage tanks
- A pump station and force main to convey leachate to a nearby sewer for treatment at the Hagatna Wastewater Treatment Plant (operated by the Guam Waterworks Authority [GWA]).
- Standby Generator System

The leachate collection system intercepts both leachate and Landfill Gas condensate. See the Post Closure-Care Plan for system details and description of the operation and maintenance.

Task 9.1 - Leachate Collection and Removal System Monitoring

On a DAILY basis, the Operator shall read and record the flow of leachate to GWA at the totalizer meter.

On a QUARTERLY basis, the Operator shall collect a composite sample from the leachate system and will submit the sample for analyses in accordance with the Leachate Quarterly Sampling Analysis Plan in Appendix D. The Operator shall prepare a technical memorandum submitted quarterly (within 45 days from the end of each quarter) that includes the analytical results from leachate samples , monthly leachate flows, and montly precipitation data .

Task 9.2 - Leachate Collection and Removal System Operations and Maintenance

The Operator shall maintain and operate (see Standard Operating Procedures – Leachate Collection and Removal System in Appendix D) the LCRS in good working order at all times during the Term of the Operation Agreement from the point where leachate is collected into the Perimeter Leachate Collection Trench through the leachate storage tanks and leachate pumps and transmission force main to the point at which the line enters the GWA Receiving Manhole on Dero Road (after it leaves the Ordot Closure Facility property boundary just after the Guam Waterworks Authority (GWA) Meter). GWA provides wastewater service to the Facility to treat leachate and submits a monthly bill. At the commencement of Operator

responsibility for the site, this GWA account will be put in the Operators' name. This billing will be provided as part of the Operators' monthly billing as pass through cost to the RECEIVER/TRUSTEE.

As a contingency, in the event the force main is not operational or GWA cannot take the flow into their system, the Operator shall have a contract with one or more licensed sewage haulers capable of transporting leachate from the site to the Hagatna WWTP or other designated GWA facility – on call availability 24 hours a day, 7 days a week, holidays and weekends at a rate of not less than 4,800 gallons per hour. The Operator shall provide a unit cost for the hauling and removal of leachate by truck to the RECEIVER/TRUSTEE for approval at the start of the project.

On a QUARTERLY basis, the Operator shall conduct visual observations of the entire leachate collection and removal system, including: pipes, pumps, tanks, leachate manholes, and other system components. The Operator shall note the presence of leachate seeps, obstructions, of vegetation inhibiting direct observation of the system components. The Operator shall repair damage to system components, and correct conditions that prevent the system components from operating in accordance with design specifications. A proposal from the Operator for all such repairs shall be submitted to the RECEIVER/TRUSTEE as necessary for approval.

Typical QUARTERLY maintenance of the leachate collection and removal system to be performed by the Operator shall include:

- Repairs to pipes and fittings that are leaking or broken (LRCS pump and force main)
- Cleaning of leachate collection and removal lines, manholes, and sumps
- Repairs to faulty or damaged equipment and leachate conveyance system

On an ANNUAL basis, the Operator shall calibrate the leachate flow meter and other system instruments.

PRIOR TO STORM EVENTS, the Operator shall undertake any and all measures to prepare for oncoming tropical storms and typhoons, including but not limited to the following:

- Drain and clean all debris from containment area and surroundings after ensuring that leachate or contaminants are not present
- Close containment drain valve
- Check all level gauges, tanks, pumps, valves, controllers and related equipment for proper operation
- Contact sewage hauler to confirm availability
- Adjust the western leachate interceptor trench (WLIT) inlet valve for anticipated flows
- Respond to GWA requests or directives related to pumping and discharging the leachate into the GWA sewer system.

DURING STORM EVENTS, the Operator shall maintain full operation of the leachate collection and removal system, and shall undertake the following:

- Periodically inspect the containment area, level gauges, tanks, pumps, valves, controllers and related equipment to ensure proper operation

- Maintain contact with sewage hauler(s) to confirm availability

- Drain or properly maintain levels in containment area, ensuring that no leachate or contaminants are discharged

- Adjust WLIT inlet valve if inflow is too high

- Respond to GWA requests or directives related to pumping and discharging the leachate in the GWA sewer system.

Physical presence is not required during high winds or dangerous conditions, however, physical presence is required prior to and as soon as possible after significant storm events (defined as winds in excess of 40 MPH or rains greater than 1 inch in 24 hours).

As soon as it is safe to do so, FOLLOWING STORM EVENTS, the Operator shall monitor, clean up and repair the following:

- Clean all debris from containment area and surroundings

- Open containment drain valve and drain containment area after ensuring that leachate or contaminants are not present

- Check operation of the level gauges, tanks, pumps, valves, controllers and related equipment for proper operation

- Open WLIT inlet valve when inflow subsides to acceptable levels

- Prepare and submit report documenting the Pre-storm Preparation, Storm Operation, and Post Storm Monitoring & Cleanup.

Task 10 – Quarterly and Annual Consolidated Report Preparation

All monitoring results and maintenance records will be filed and kept in the operating record to be maintained by the RECEIVER/TRUSTEE. In addition, the Operator will scan or pdf all documents and reports, organized in quarterly and annual consolidations, and upload to a secured website Records will be kept throughout the post-closure period. The results of the leachate, Landfill Gas, surface water, and groundwater monitoring will be submitted to GEPA and appropriate agencies on a quarterly, semi-annual, and annual basis, as appropriate and consistent with the current or approved monitoring program for the Dump. In addition, reports will include descriptions of the maintenance activities at the site which would include all maintenance of the final cover, the vegetation around the site, security fencing, the leachate collection system, groundwater wells, LFG wells and collection system, and the surface water drainage system. Results of all monitoring, inspection, and maintenance will be submitted in a consolidated report on a quarterly basis. Use of Access (Microsoft TM) type databases will be required to be used extensively and uniformly used for all data by the Operator. These quarterly reports will then be consolidated into an annual report and submitted to GEPA. The annual report will include trend charts for leachate flow rate and key constituent concentrations from the weekly sampling events. In addition, monthly general inspection reports (including drainage system inspections) along with general inspection

reports following major storm events or earthquakes will be included in the consolidated quarterly and annual reports.

The Proposer shall provide services for the execution of all routine compliance monitoring and reporting required under the approvals and regulations which govern the Post Closure Care period. The Post Closure Care Maintenance Plan and associated documents, Appendix D, describe these compliance monitoring and reporting requirements. These requirements will be modified from time to time depending on operational performance and regulatory changes that may be implemented.

In addition to the Ordot Closure Facility environmental monitoring for compliance, the Western Channel Relocation, a US Army Corps of Engineers federally permitted project, requires monitoring and reporting for compliance with permit conditions. This monitoring and reporting is part of the services to be provided. See Appendix D for the US Army Corps of Engineers Nationwide Permit for requirements.