DESIGN AND OPERATION PLAN TURKEY RUN MSW LANDFILL

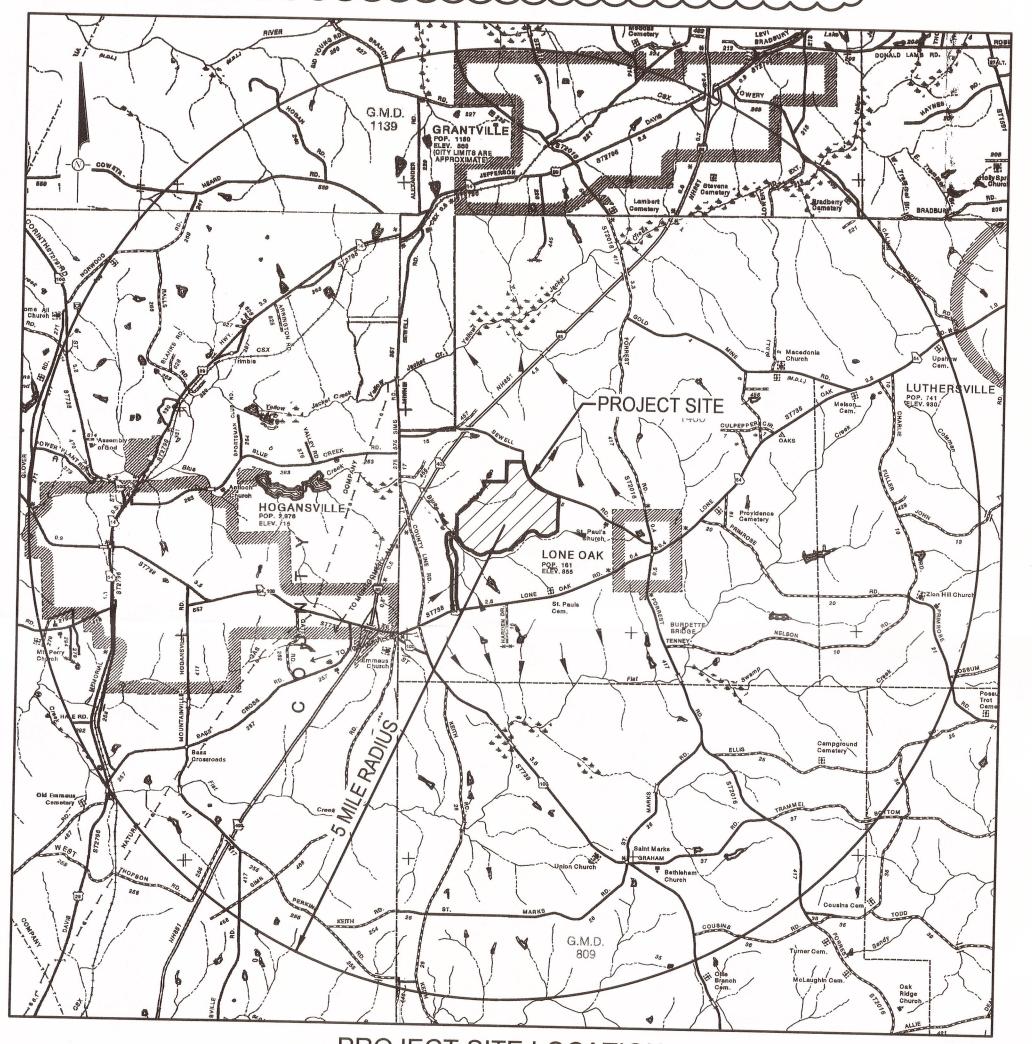
FOR

GREENBOW, LLC MERIWETHER COUNTY, GEORGIA

APRIL, 2007 REVISED: APRIL, 2017

OWNER / OPERATOR / PERMITTEE

GREENBOW, LLC 3001 SOUTH PIONEER DRIVE SMYRNA, GA 30082 (404) 898-9252



PROJECT SITE LOCATION SCALE: 1" = 1 MILE

HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.

484 MULBERRY STREET, SUITE 265 - MACON, GEORGIA 31201 P.O. BOX 974 - MACON, GEORGIA 31202 (478) 743-7175

Geosyntec 1255 ROBERTS BOULEVARD, N.W., SUITE 200 KENNESAW, GEORGIA 30144 USA PHONE: 678.202.9500



RESPONSIBLE OFFICIAL

GENE BARNES, DIRECTOR OF DISPOSAL GREENBOW, LLC 1850 PARKWAY PLACE SUITE 600 MARIETTA, GA 30067 (770) 590-3307



GEORGIA **Environmental Protection Division** Solid Waste Management Program MINOR MODIFICATION APPROVAL SOLID WASTE PERMIT NO. 099 - 019 D (MSWL)



THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY WILLIAM F. HODGES, P.E. #15689 ON 09/20/10 AND R. BRANT LANE, P.E. #27185 ON 09/20/10. THIS MEDIUM SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT

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ИOD. No.	REV. DESCRIPTION	MOD. TYPE	AFFECTED SHEETS	PREPARED BY (FIRM)	APPROVAL DATE
1	Alignment change to access road by pond #1	Minor	Shts. 5 thru 10, 15 thru 25 & 27	HHNT	10/21/2008
2	Transfer of ownership from Greenbow, LLC to Georgia Waste Systems, Inc.	Minor	NONE	Greenbow	1/22/2009
3	Addition of 125,000 gal temporary leachate tank	Minor	Title sheet, 7 & 32	HHNT	6/9/2009
4	Revision to mound leachate stone above protective cover	Minor	Title sheet & 41	HHNT	2/11/2010
5	Addition of 4-inch underdrain	Minor	Shts. 7 & 41	HHNT	3/11/2010
Addition of 4-inch underdrain Addition of non-potable water well & supply system, rumble strip facility for sediment removal, revised groundwater well schedule, revised methane monitoring well design, amended marker post detail, revised groundwater monitoring sampling procedures (low flow w/pumps)		Minor	Title sheet, 1,6, 27 thru 31 & 42	HHNT	2/11/2010
7	Addition of a landfill gas collector along the perimeter cell sideslope	Minor	Title sheet, 7 & 41	HHNT	2/11/2010
8	Use of synthetic tarps as ADC, removal of intermediate cover between lifts, clarification that slope berms are constructed during final closure, allow facility operator to implement additional e&s measures, optional grass seeding, remove GA. PE rqmt for special waste protocol, addition of filter bays in pond #1.	Minor	Shts. 6,32,42	HHNT	11/2/2010
9	Allow second working face to help bring new cells online	Minor	NONE	WM	10/26/2011
10	Remove scale pits from MM monitoring, revised lab analysis to use SW-846 & other GW sampling & analysis changes, elimination of fence and removal of soil stockpile volume.	Minor	Shts. 28,30 thru 32 & 45	ACC	4/23/2012
11	Added process to apply leachate to working face	Minor	Shts. 0,32	ACC	2/8/2013
12	Revision to final cover system compacted soil thickness and permeability requirement, closure cost estimate, compacted clay liner and low permeability soil liner permeability test failure retesting requirements, interface friction test frequency and requirements, drainage burrito details, and soil berm and downdrain detail; correction of discrepancy in cap protective cover native soil permeability requirement (k ≥ 1x10 ⁻⁵ cm/s); revised distance between crest of liner and anchor trench to 3 ft and tie-in of final cover and liner membranes; removed requirement of duplicate leachate risers at sump; and added detail for leachate cleanout and riser pipe penetration through final cover for future cells 3A-10B.	Minor	Title sheet, Shts. 0, 1, 11-14, 32-36, 39, 40, 41, & 41A (added)	Geosyntec	6/16/2014
13	Add location of proposed blower/flare station and add language regarding soil for operational purposes	Minor	Title sheet, Shts. 0, 1, 6, 7, 8, 32	Geosyntec	8/4/2015
	Add detail sheet for proposed blower and flare system	Minor	41B (added)	Carlson Environmental Consultants	
14	Add location of proposed compressor building adjacent to the blower/flare station	Minor	Title sheet, Shts. 0, 1, 6, 7, 27	Geosyntec	3/18/2016
15	Add Coal Combustion Residuals (CCR) Management Plan narratives and revisions including revisions to landfill operations in the Operations Plan, revisions to the groundwater monitoring requirements in the Water Monitoring Plan and cost updates to the Closure/Post-Closure Care Plan.	Minor	Title sheet, Shts. 0, 1, 30A (added), 32, 32A (added), 33	Geosyntec	

ACC

ATLANTIC COAST CONSULTING, INC.

630 Colonial Park Dr. Suite 110 Roswell, GA 30075 o 770.594.5998 www.atlcc.net

PROJECT:

TURKEY RUN
LEACHATE
APPLICATION TO
WORKING FACE



1850 PARKWAY PLACE SUITE 600 MARIETTA, GEORGIA 30067 (770) 590~3307

RE	VISIONS	

Drawn by: Checked by:

SP

PROJECT NUMBER:

1002~302

November 2012

MODIFICATION HISTORY

Sheet 0 of 45

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APR 0 6 2017

SOLID WASTE MANAGEMENT PROGRAM

GEORGIA
Environmental Protection Division
Solid Waste Management Program
MINOR MODIFICATION APPROVAL

SOLID WASTE PERMIT NO. 099-019 D (MSWL)

DATE: 5/22/2017 1

REVISED: APRIL 5, 2017 - ADDED MODIFICATION NO. 15
REVISED: OCTOBER 27, 2015 - ADDED MODIFICATION NO. 14

REVISED: JULY 27, 2015 - ADDED MODIFICATION NO. 13

REVISED: DECEMBER 23, 2013 - ADDED MODIFICATION NO. 12

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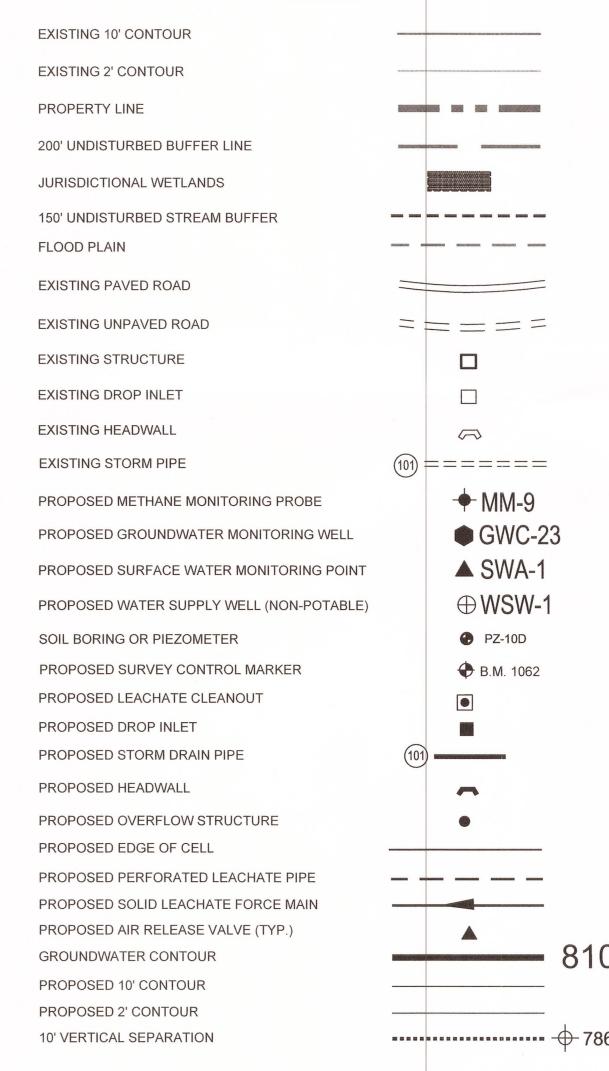




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	4	TOPOGRAPHIC SURVEY OF EXISTING CONDITIONS
	5	TOPOGRAPHIC SURVEY OF ENTRANCE ROAD AND ASSOCIATED FACILITIES PLAN
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LEGEND





APR 0 6 2017

SOLID WASTE MANAGEMENT PROGRAM

REVISED: OCTOBER 15, 2009 - RUMBLE STRIP, MAINTENANCE SHOP & WATER FACILITY

REVISED: NOVEMBER 5, 2007 - ADDRESS EPD COMMENTS

GEORGIA **Environmental Protection Division**

Solid Waste Management Program

MINOR MODIFICATION APPROVAL

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY WILLIAM F. HODGES, P.E. #15689 ON 10/22/09 AND R BRANT LANE, P.E. #27185 ON 10/22/09. THIS MEDIUM SHALL NOT BE CONSIDERED A CERTIFIED DOCUMENT.

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REVISED: APRIL 5, 2017 - REVISED TITLE SHEET, SHEET NOS. 0, 1, 32, AND 33 AND ADDED SHEET NOS. 30A AND

REVISED: JULY 27, 2015 - ADDED SHEET NO. 41B REVISED: DECEMBER 23, 2013 - ADDED SHEET NO. 41A







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PROJECT:

TURKEY RUN LEACHATE APPLICATION TO WORKING FACE



1850 PARKWAY PLACE SUITE 600 MARIETTA, GEORGIA 30067 (770) 590-3307

REVISIONS

Checked by:

PROJECT NUMBER:

I002~302

November 2012

INDEX TO

LEGEND

DRAWINGS AND

NOTE: THE FOLLOWING NARRATIVE IS ADDED TO THE "SAMPLING AND ANALYSIS PLAN" SECTION DESCRIBED ON SHEET 30.

COAL COMBUSTION RESIDUAL GROUNDWATER MONITORING ANALYTE REQUIREMENTS: All groundwater wells, surface water monitoring points, and underdrain sampling point (SWU) at the facility will be sampled semi-annually for the list of parameters included in Appendix III of 40 CFR 257 (In addition to the parameters included in Appendix I/II of the Rules for Solid Waste Management - as documented on Sheet 30). Parameters included in Appendix III of 40 CFR 257 are shown in table below. Appendix III data will be evaluated in accordance with the statistical analysis plan. In the event of a verified SSI for an Appendix III specific compound in a groundwater monitoring well sample, the list of analytes will be expanded to include those listed in Appendix IV of 40 CFR 257.

40 CFR 257 APPENDIX III ANALYTICAL REQUIREMENTS						
PARAMETER SUITE	CONTAINER TEST TYPE METHODS*		PRESERVATIVES	HOLD TIME		
BORON, CALCIUM	Р	6010 OR 6020	HNO ₃	180 DAYS		
CHLORIDE, FLUORIDE, SULFATE	Р	300/9056	4 °C	28 DAYS		
рН	NONE	150.1 ; FIELD MEASUREMENT	NONE	15 MINUTES		
TOTAL DISSOLVED SOLIDS	Р	SM 2540C	4 °C	7 DAYS		

P = Polyethylene °C = degrees Celsius

Assessment monitoring analytes are included in Appendix IV 40 CFR 257. The NELAP certified laboratory performing the analysis should be consulted regarding analytical requirements for the applicable parameter

* Analysis methods from "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" SW-846 Third Ed. USEPA, Sept. 1986. It is noted that analytical methods used and referenced for meeting environmental testing requirements evolve over time due to changes in technology, updates and additions to published methodology, and when regulations change to require reference to different methods. In many instances there are equivalent methods for the same analyte published by different authorities on method development; e.g. the U.S. Environmental Protection Agency (EPA) Office of Water, U.S. EPA Office of Solid Waste, Standard Methods, and ASTM. Analytical methods listed in the plan may be substituted provided that the alternate methods are generally approved for use, provide technically defensible data, and are appropriate for the media being tested. The use of alternative approved methods is considered an acceptable deviation from the prescribed methods in the Water Monitoring Plan and will not be considered a violation of the requirements of the Water Monitoring Plan.

> GEORGIA **Environmental Protection Division** Solid Waste Management Program

DESCRIPTION

WATER MONITORING PLAN (CONTINUED)

DESIGN AND OPERATION PLAN - MINOR MODIFICATION

TURKEY RUN MSW LANDFILL

MINOR MODIFICATION APPROVAL

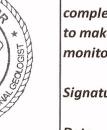
SOLID WASTE PERMIT NO. 099-019 D (mswl)

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SULID WASTE MANAGEMENT PROGRAM

I hereby certify that I am a qualified groundwater scientist, in accordance with the Rules of Solid Waste Management, and 40 CFR Part 258.50(g). A qualified ground-water scientist is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional Certifications, or completion of accredited university programs that enable individuals to make sound professional judgements regarding ground-water nonitoring, contaminant fate and transport, and corrective-action.



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DESIGN BY: MAY 2017 DRAWN BY: RVJ PROJECT NO.: GR6304 CHECKED BY: Turkey-CCR-GW REVIEWED BY: DRAWING NO.: 30A of 45 APPROVED BY:

1850 PARKWAY PLACE MARIETTA, GEORGIA 30067 PHONE: 770.590.3308

DRN

19 May 2017

DATE

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OPERATIONS PLAN 1. VOLUME CALCULATIONS: (A) Total volume of waste & cover 35,151,695 cubic yards (B) Total Cover Material and Earth Fill Required 5,292,676 cubic yards Daily Soil Cover (est) 1,406,108 cubic yards Intermediate Soil Cover (est) 1,406,108 cubic yards Final Soil Cover 1,149,632 cubic yards Earth Fill Required 1,330,828 cubic yards Available (on-site) 2,378,762 cubic yards Imported 2.913.914 cubic vards (C)Total Waste Volume 31.189.847 cubic vards ~~~~~~ Maximum CCR to MSW Ratio By Weight: Estimated CCR Tonnages: TN/day 51,650 TN/year Estimated MSW Tonnages: 1,620 TN/day 464,850 TN/year Estimated Total (MSW+CCR) Tonnages: 1,800 TN/day 516,500 TN/year

Usable Area for Landfilling (E)Estimated Life of Landfill

(D)Area of Site - Total area of Permit

1 \ 3. CCR WASTE CHARACTERIZATION AND COMPATIBILITY:

Municipal Solid Waste (MSW) and Coal Compustion Residuals (CCR) unloading shall be restricted to the working face (Maximum 200' x 200') of the cell in such a manner that waste may be easily incorporated into the solid waste landfill with available equipment CCR and MSW shall be co-mingled at the working face. Scavenging shall be prohibited. With notification to EPD and approval to receive waste, the perator may choose to maintain two working faces for a period of 90 days after entering a newly

±417.54 acres

±192.59 acres

30-40 years

constructed landfill cell. This will enable refuse that could potentially damage the FML liner to be placed in a lift other than the first lift.

For initial placement of waste, the first 10-ft thick lift placed on top of the 24-inch protective cover soil shall be select MSW and shall not contain CCR.

Operators will be trained to identify conditions that may impact CCR compaction and will observe the incoming CCR for excess moisture content.

In the event that CCR waste loads are brought to the facility containing excess moisture, the waste material will be spread in a staging area over intermediate cover and allowed to dry prior to incorporating it into the waste mass.

The facility's source of CCR is Southern Company. MSW to CCR ratios that exceed those defined in Section 1 of this plan shall be permitted through EPD prior to accepting increased ratios. If operations indicate CCR reactivity with MSW, bulk samples of CCR from each source will be obtained for characterization and compatibility. Typically, samples will be tested for Toxicity Characteristic

Leaching Procedure (TCLP) 8 RCRA metals by SW-846 Method 1311 and a Paint Filter Test by SW-845 Method 9095, or current equivalent method. Other analysis may be conducted as requested by Waste Management Technical Service Center (TSC). CCR WASTE ACCEPTANCE PROTOCOL:

CCR is defined by the US Environmental Protection Agency as a solid waste to be regulated under Subtitle D (EO 12866 CCR 2050-AE81). CCR waste accepted for disposal at this facility will not require non-hazardous certification. Routine record keeping procedures as specified under Section 38 of this plan (i.e., Operations Plan) will be followed.

SPREADING AND COMPACTION:

MSW and CCR co-mingled with MSW shall be spread in uniform two foot layers and compacted to its smallest practical volume, by 3 to 5 passes with compaction equipment, before covering with earth. The working face shall have a maximum 4:1 slope when using a compactor and a maximum 3:1 slope when using a track type machine.

6. DAILY COVER:

A uniform compacted 6" thick layer of clean earth shall be spread over all MSW and CCR co-mingled with MSW at the end of the day's operations. Synthetic Tarps, which have been designed and manufactured for use as daily cover in landfills, may be used as an alternate daily cover. Tarps of sufficient size will be utilized to cover the working face, which will not exceed 200' x 200'. The tarps shall be Amoco 2044 and 2006 woven polypropylene tarp or equivalent.

In order to assit with compactive effort, site generated leachate will be applied to the landfill working face throughout the operational day. Leachate will be loaded into a fully enclosed tanker truck at the leachate tank storage area. The tanker will be dedicated to the process of leachate transport, and be of sufficient size to enable easy maneuvering around the working face. Leachate will be sprayed directly onto the active working face in such manner and rate that no runoff from the active disposal area will occur.

- Procedures to be followed with the application process are as follows: (1) Leachate will be applied to the working face at a rate of 25 gallons per ton to minimize the potential of excess liquid application;
- (2) Leachate will not be applied on any day where precipitation is falling, or when the chance of precipitation is equal to or greater than 70%;
- (3) Leachate will not be applied to waste that will make up an outside slope; (4) A record shall be maintained on site to record the daily tons accepted and the volume of leachate philed to the working face.
- All daily and alternate daily covers shall meet the following standards: (1) The daily cover must be capable of preventing attraction of disease vectors, minimizing production of odors, and preventing blowing litter.
- (2) Must be capable of completely covering the solid waste without change in the cover's properties by rain, heat, cold and other climatic conditions. (3) Must be substantially free of rock fragments that are greater than 6" in diameter.
- (4) Material for daily cover shall come from future cell excavation and borrow areas.

Cover material shall be excavated from on-site borrow areas. Any off-site cover material used shall come

If more than one lift is required in a cell, a uniform compacted layer of clean earth cover not less than one foot in depth shall be placed over each intermediate lift. One foot of intermediate cover shall be placed on all MSW and CCR co-mingled with MSW disposal areas exposed more than one month. This cover material shall meet the same criteria for daily cover plus be capable of supporting the germination and propagation of vegetative cover.

Intermediate and daily cover may be removed from the top of each lift of waste prior to the placement of the next lift of waste in order to promote the downward migration of leachate. Cover soil shall only be removed from the landfill area that will be re-covered with the same day's receipt of incoming waste. This cover removal shall be performed at the Operator's discretion.

8. FINAL COVER The final cover system is designed to reduce infiltration and erosion. The erosion layer will be composed of 24" of soil capable of sustaining native plant growth. The infiltration layer will be composed of a geocomposite drainage layer, a 40 mil FML textured liner, and 12" of compacted soil material. The final cover system is installed on top of the existing intermediate cover. Side slope Drainage Berms as shown on the Final Drainage Plan (Sheet No. 9) shall be installed concurrently with final cover system installation.

Soil, for operational purposes (daily, intermediate and final cover), will be excavated from onsite borrow areas that are within the landfill's permitted waste footprint. The activity will be performed under the Georgia General Storm Water Permit GAR050000 entitled "Authorization to Discharge Under the National Pollutant Discharge Elimination System Storm Water Discharges Associated With Industrial Activity." Erosion and sediment control measures for maintaining compliance with respect to the Industrial Storm Water Permit are included in the Erosion Control Plan within this document and will be enacted prior to and maintained throughout the excavation activity.

GRADING AND DRAINAGE:

The disposal site shall be graded and drained to reduce runoff onto the landfill, to reduce erosion, and to drain water from the surface of the landfill. All construction grades will be a minimum of 3% to promote drainage. Final slopes shall be between 3% and 33%, shall be graded relatively smooth, and shall be

10. FIRE PROTECTION: The disposal site shall be designed, constructed, maintained, and operated to reduce the potential for fire or explosion. Suitable measures to control fires that may start shall be provided. A minimum supply of one day of cover material, minimum 750 cubic yards, must be maintained within 200 feet of the working face for fire fighting purposes.

11. SITE SUPERVISION: Overall site supervision will be accomplished by the Landfill Supervisor. The Landfill Supervisor shall be a Certified Landfill Operator in accordance with O.C.G.A. 12-8-24.1. A copy of the approved Design and Operation Plan shall be kept at the site at all times. EPD shall approve any changes in the approved plans, prior to implementation. The on site supervisor shall be properly trained in the operation of municipal solid waste landfills, the implementation of design and operational plan, and must be present at all times during operation.

12. CONTINUITY OF OPERATION: Access to fill location areas will be maintained to insure continued operation during wet weather. All areas of the site are considered adequate for wet weather operations. Provisions shall be made for

prompt equipment repair or replacement when needed. 13. SILTATION AND EROSION CONTROL: Erosion and sediment control measures and devices shall be installed in accordance with the plans and detail drawings. All erosion and sedimentation control measures or facilities, whether temporary or permanent, shall be continuously maintained by the operator so as to be effective. Runoff from the facility must be directed to permanent sediment control impoundments which are designed to assure discharges meeting the requirements of O.C.G.A. 12-7-6(18). Erosion and sedimentation control measures and facilities will be employed prior to and concurrent with clearing, grading, overburden removal, access or other land disturbing activities for preparation of the site for landfilling. Any construction that is required to be covered under the NPDES Construction Activity Permit, the facility will file a NOI and comply with the permit. Immediate measures must be implemented to establish vegetation on disturbed exposed soil which will not be a part of the waste disposal area or which will remain exposed for more than three (3) months.

Erosion, sedimentation control, and pollution prevention measures in addition to the measures shown in this plan may be installed as directed by the Operator to control erosion and pollution. These measures may include, but are not limited to, practices such as check dams, erosion control matting, polyacrylamide, mulching, diversion berms, downdrain pipes, sediment traps, rip-rap, ditch lining fabric or other ditch protection, and silt fence. Interim drainage berms and structures, if installed, shall be placed at locations determined by the owner, however they will generally be located in the vicinity of the berms and drainage structures shown on the final drainage plan. As may be required by Georgia EPD, construction activities on site will be covered under the NPDES General Permit for Construction Activities. This may also require additional erosion control plans and protection measures.

14. VEGETATIVE PLAN: All disturbed areas shall be grassed and maintained in accordance with the following schedules. Vegetative cover of the final cover must take place within two weeks after final cover placement. Any disturbed areas which will remain exposed for longer than three (3) months and permanent covers which are slow to establish shall receive temporary seeding. The fertilizer requirements are suggested.

Planting dates, fertilizer rates, and seeding rates shall meet the requirements in the Manual for Erosion and Sediment Control in Georgia. Alternate grass types and/or sod may be used at the Landfill Operator's discretion.

SEEDS - PERMANENT	LBS/ACRE	DEPTH OF COVER	DATE OF PLANTING
BERMUDA, COMMON - HULLED FESCUE, TALL	10 50	1/4" - 1/2" 1/4" - 1/2"	3/1 - 6/30 3/1 - 4/15 & 8/15 - 10/31
SEEDS - TEMPORARY	LBS/ACRE	DEPTH OF COVER	DATE OF PLANTING
RYEGRASS, ANNUAL	40	1/4" - 1/2"	8/1 - 4/15
MILLET, PEARL	50	1/4" - 1/2"	4/15 - 8/31

1. All seeding rates are pure live seed rates.

2. All seeding shall be mulched with clean dry hay at the rate of 2.5 tons per acre. Mulch shall be anchored by pressing the mulch into the soil immediately after the mulch is spread using a packer disk or disk harrow or equivalent piece of equipment.

3. Temporary seeding should also complement permanent seeding to produce a suitable cover while the permanent grasses germinate. 4. Disturbed slopes greater than 3%, including soil stockpiles, are to be mulched immediately.

FERTILIZER REQUIREMENTS				
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac.(1)(2) - 30
Cool season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac.(1) - -
Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac.(3)
Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac.(2)(4) 50-100 lbs./ac.(2) 30 lbs./ac.
5. Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac.(4)

- 1. Apply in spring following seeding. 2. Apply in split applications when high rates are used.
- Apply to grass species only. 4. Apply when plants grow to a height of 2 to 4 inches.

15. SURVEY CONTROL:

Survey control will consist of both temporary and permanent control markers. Permanent markers will establish the "permanent", or lifelong horizontal and vertical control such as the edge of each cell, leachate cleanouts, and monitoring points. Horizontal control consists of northing and easting (X-Y) coordinates. The X-Y coordinate establishes a single horizontal point on the earth which can be reestablished at any time based on this single location. Vertical control is an elevation measured above a datum (z). The datum is Mean Sea Level (MSL). Vertical control for this site is determined from a survey to a United States Geological Survey (USGS) control monument. Utilizing survey methods carried out be a Registered Land Surveyor (RLS), the permanent survey control has been

Temporary Survey control consists of monuments and stakes installed by an RLS. Examples of temporary control can include temporary monuments with X-Y-Z coordinates for operator guidance and construction accuracy. This will include survey control markers along the temporary edge of liner and posts within a cell which indicate the extent of fill in a particular lift. Additionally, temporary control can include construction stakeout. Construction stakeout will require the RLS to place stakes and off- set stakes at the location where specific construction elements will be installed. These stakes will be installed to designate the single specific X-Y-Z coordinate point on the earth where that constructed element will be built. The primary purpose of site survey control, as required by the rules is: "Site survey control shall be provided to ensure the operation will be on permitted lands." The rule further states:

"Survey control will be accomplished through use of permanent, accessible benchmarks, survey control stakes, and/or boundary markers which designate and/or delineate all permitted areas. Survey control shall be indicated on the design and operational plan. Where necessary for construction or operational purposes vertical as well as horizontal survey control will be established and maintained to delineate fill boundaries, buffers, and property boundaries. For this site, survey control will be utilized for construction, operations, delineating fill boundaries, buffers, and property boundaries. Also, survey control will be utilized for other items as required by the operator."

16. WATER MONITORING: The surface water and groundwater monitoring wells shall be monitored according to the approved Environmental Monitoring Plan and the Water Monitoring Plan.

17. METHANE GAS CONTROL Methane gas control shall include quarterly sampling for methane gas at the locations shown on the plans and monitoring for possible stressed vegetation due to methane gas movement. Monitoring points are based upon site geology, topography, and location of on-site or adjacent structures. Results of monitoring and sampling shall be submitted to the Atlanta (International Parkway) Office of the EPD (Solid Waste Management Program) within 15 days of a test. The concentration of methane generated by the facility shall not exceed 25% of the lower explosive limit for the gasses in facility structures and shall not exceed the lower explosive limit for methane at the facility property boundary.

The owner/operator shall apply for and obtain air quality permits under TITLE V and NSPS requirements of the Georgia and Federal rules for air quality. The design of the gas system will be submitted to the Air Protection Branch for approval. These permits applications, the permits, and any plans for landfill gas extraction and control shall be placed in the facility operating record, and a letter demonstrating these have been added shall be submitted to the EPD Solid Waste Program.

18. LEACHATE OUTBREAKS: The cause of leachate outbreak(s) will be assessed followed by corrective measures which will include a minimum of 12" of compacted soil and grassed in accordance with the Vegetation plan.

19. SITE EQUIPMENT: Minimum suggested equipment for this site includes: CAT 826 Compactor Road Grader Various Pumps Farm Tractor Off-Road Trucks Water Wagon or Water Truck

Equipment shall be maintained on a regular basis and kept in good working order. From time to time, this equipment may be replaced with similar equipment or additional equipment rented for cleaning sediment from basins.

20. BACKUP EQUIPMENT: Rental equipment shall be used for backup equipment and for cleaning sediment from basins.

21. DIRECTIONAL AND INFORMATION SIGNS:

Directional and informational signs will be located at the site which indicate the days and hours of operation. Temporary information and directional signs shall be used at the operator's discretion to direct vehicles to the active working face. Access to the site will be limited to those times when authorized personnel are on duty.

22. LITTER CONTROL Scattering of wastes by wind shall be controlled by fencing or other barriers and the entire site shall be inspected daily and

23. DUST CONTROL:

Dust control will be provided, if deemed necessary, through the use of a water wagon and shall be limited to site roadways. Water wagon or water truck will be used to spray water in the CCR and MSW co-mingled disposal areas, if necessary. Fugitive dust from the CCR disposal areas will be minimized in accordance with Air Quality Rule 391-3-1-.02(2)(n)1 and wil not exceed the limits defined therein

Fugitive CCR dust complaints from citizens will be logged via Waste Management's 1-800 Public Comment Number and will be placed in the facility's records. The records will be made available to EPD for inspection.

The owner will prepare and submit to EPD an Annual Fugitive Dust Control Report. The report will be submitted every 12 months subsequent to approval of the original CCR Management Plan. The Annual Fugitive Dust Control Report will include the following: . Description of actions taken to control fugitive dust. 3. Record of all citizen complaints related to fugitive dust. . A summary of corrective actions taken and recommendations to improve fugitive dust control measures (if applicable) 24. ON-SITE FIRST AID:

A first aid kit will be available on the site.

25. SITE COMMUNICATIONS: A telephone will be available on site.

26. EMPLOYEE FACILITIES:

Sanitary facilities including a potable water supply will be available on site. 27. THIS ITEM NOT USED.

28. ON-SITE SOLID WASTE PROCESSING PERFORMED:

(See item number 50 for processing). . WASTE REQUIRING SPECIAL HANDLING:

Asbestos waste may be disposed of at this site at the operator's discretion. Listed below are the procedures for its disposal. 1. Asbestos containing waste shall be sealed in leak-proof containers labeled with: "Caution-Contains Asbestos Fibers - Avoid Opening or Breaking Container - Breathing Asbestos is Hazardous to Your Health."

2. Asbestos containing waste shall be disposed of in such a manner as not to destroy the integrity of the asbestos containers prior to the placement of cover material. This waste shall be completely covered immediately after deposition with a minimum of six (6) inches of non-asbestos material.

3. Disposal of asbestos is to conform to applicable sections of 40 CFR Parts 61.140 to 61.156, specifically 61.151 and 61.1(g)(h)(i). Site should only accept asbestos that has been recovered and transported in accordance with the applicable NESHAP regulations (parts 61.140 - 61.156).

4. Asbestos, disposed of in the landfill, shall be located according to cell, site coordinates, and documented in the operating record as well as the amount of asbestos in cubic yards or pounds.

B. Recycle Material - see Item 50

30. SITE CLOSURE: The site will not be closed until all wastes have been covered or disposed of by a adequate method of disposal so that the site will be in full compliance with section 391-3-4-.11 and .12 of the Rules and Regulations for Solid Waste Management, Chapter 391-3-4. The Closure and Post-Closure Care Plan for this site is described in the narrative plans attached.

31. SEPARATE DISPOSAL AREAS FOR WASTE REQUIRING MONTHLY COVER:

32. ZONING:

This site has been appropriately zoned for Meriwether County.

33. SITE ACCEPTABILITY CONDITIONS: The following Site Limitations for the Meriwether County - Greenbow, LLC Turkey Run MSWL, Proposed Municipal Solid Waste Disposal Facility, were issued by the Environmental Protection Division in a letter dated March 6, 2007.

1. The area considered for suitability includes only that 608.24 acre area shown on Donaldson, Garrett & Associates, Inc.'s Boundary Survey dated June 28, 2006.

2. No waste shall be placed south of Blue Creek, as shown on Hodges, Harbin, Newberry & Tribble, Inc.'s Sheet 1 of 1: Topographic Survey, dated September 2006, and edited September 7, 2006. Blue Creek is unnamed on the Survey, however, it enters the site near the middle of the eastern property boundary and exits in the southwestern corner of the site.

3. A minimum 500-foot buffer shall be maintained between the waste disposal area and any adjacent residences and/or water

4. A minimum 200-foot undisturbed buffer shall be maintained between the waste disposal area and the Property Line shown on the above-referenced Boundary Survey.

5. A minimum 150-foot undisturbed buffer shall be maintained between the waste disposal area and all streams shown on the above-referenced Topographic Survey.

6. A minimum 50-foot undisturbed buffer shall be maintained between the waste disposal area and the jurisdictional wetlands shown on the above-referenced Topographic Survey, unless otherwise permitted by the United States Army Corps of Engineers.

No construction activities shall be allowed in the floodplain areas of the site. Since no base flood elevations have been determined for Blue Creek, a minimum 10-foot undisturbed vertical buffer shall be maintained between the waste disposal area and Blue Creek, as shown on the above-referenced Topographic Survey.

8. If, during construction of the site, any springs or seeps are discovered, EPD shall be immediately notified and protective measures shall be incorporated into the facility's design and operations plans to prevent contamination of the spring or seep. Sampling of the spring or seep shall also be incorporated into the facility's surface water sampling plan.

9. A liner and leachate collection system shall be placed beneath all areas proposed for waste disposal. The liner system shall not be placed within 5 feet of seasonal high groundwater elevations. Therefore, a minimum 5-foot separation shall be maintained between the bottom of the liner system and the potentiometric surface depicted on Bunnell-Lammons Engineering, Inc's Figure No.11: Composite Seasonal High Water Table Elevation Contour Map, dated August 16, 2006. The liner system shall not be placed within 5-foot of bedrock. Therefore, a minimum 5-foot separation shall also be maintained

between the bottom of the liner system and the bedrock elevations shown on Bunnell-Lammons Engineering, Inc.'s Figure No.9:

Estimated Top of Bedrock (Auger Refusal) Elevation Contour Map, dated August 16, 2006. If bedrock is encountered above instruction/grading activities at the site, at least 5 feet of clean, rubble-free soil shall be emplaced beneath the liner system in that area. No blasting shall be allowed at the site. 10. All borings and/or piezometers located within the proposed landfill footprint shall be abandoned by overdrilling and filling with a non-shrinking cement/bentonite mix via tremie pipe. A report documenting the abandonment of all on-site borings and piezometers shall be submitted to EPD prior to the cell construction. This documentation shall be signed and stamped by the

responsible professional geologist or professional engineer registered to practice in the State of Georgia. 11. Groundwater, surface water, and methane monitoring systems shall be installed at the site. At least 4 groundwater monitoring wells shall be installed to monitor fracture zones in bedrock at the site. The placement of the rock wells shall coincide with the fracture trace plots and lineament traces apparent at the site. Sampling paraments, sampling schedules, monitoring well construction and spacing shall adhere to the guidelines in EPD's Rules of Solid Waste Management, Chapter 391-3-4.

12. All erosion control measures and/or diversion ditches shall conform to the Erosion and Sediment Control Act and be protective of Blue Creek and its perennial and intermittent tributaries.

13. All recommendations suggested in Section 5.0 - Geotechnical Considerations of the Site Hydrogeologic Assessment Report, Proposed Turkey Run MSW Landfill, Meriwether County, Georgia dated August 16, 2006 and prepared by Bunnell-Lammons Engineering, Inc. shall be followed.

34. LIMITED ACCESS: The Georgia Rules require limited access: a gate or other barrier shall be maintained at potential vehicular access points to block unauthorized access to the site when an operator is not on duty. A fence or other suitable barrier must be provided around the site, including impoundments, leachate collection and treatment systems and gas venting and processing facilities, sufficient

to prevent unauthorized access." At the Turkey Run MSW Landfill, this vehicular access control is accomplished by use of natural manmade structures. The entire perimeter of the site is heavily wooded. Tree spacing and undergrowth are sufficient to prevent vehicular access. In addition, a 6' high chain link fence will be installed along the entire property boundary to limit access into the site. Where roads enter the facility boundary, a gate will be installed to control access. The perimeter of the site will be posted with signs notifying the public that this is a "Municipal Solid Waste Landfill Facility" and that access is prohibited except at the site entrance. The combination of a natural wooded barrier, access control gates, 6' high chain link fence, and adequate signage will provide a suitable barrier around the site.

35. ENVIRONMENTAL PROTECTION: The landfill shall be operated in such a manner as to prevent air, land, or water pollution, and public health hazards.

36. HAZARDOUS WASTE The operator shall have a prohibited waste exclusion plan for excluding prohibited wastes. Excluded wastes include lead acid batteries, radioactive waste, regulated quantities of hazardous waste, polychlorinated biphenyl (PCB) waste as defined in 40 CFR, Part 761, and liquids as allowed in Paragraph 35. The prohibited waste exclusion plan is attached.

37. LIQUID WASTES: (A) No liquid waste, either bulk or containerized, shall be placed in the landfill unless containerized in a container of one (1 gallon capacity or less. No generator may discard in excess of four (4) gallons of liquids in containers.

(B) "Liquid Waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paints Filter Liquids Test), as described in "Test Methods for the Evaluation of Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

NOTE: THE NARRATIVE FOR OPERATIONS PLAN IS CONTINUED ON SHEET 32A.

Environmental Protection Division Solid Waste Management Program

> MINOR MODIFICATION APPROVAL MANAGEMENT PROGRAM SOLID WASTE PERMIT NO. 099-019 D (MSUSE)

PROHIBITED WASTE EXCLUSION PLAN

Pursuant to the Rules for Solid Waste Management, Chapter 391-3-4-.07-(3)-(c)&(m), the Operator has developed this plan to exclude prohibited waste from being disposed at this facility. These prohibited materials include liquids, lead acid batteries, biomedical waste, sewage sludge, radioactive wastes, polychlorinated bipheny (PCB) waste as defined in 40 CFR, Part 761, and regulated quantities of hazardous waste. It shall also be the policy of the Operator to identify quantities of hazardous waste below the regulatory threshold and to exclude these wastes also.

2. NON-CONFORMING WASTE REVIEW: In order to ensure that incoming loads do not contain prohibited wastes, personnel who are trained to recognize prohibited wastes will make random inspections, keep records of such inspections and notify the Director of the Georgia Environmental Protection Division if prohibited wastes are discovered at the facility. These procedures will be made a part of the operating record. The random inspections will be conducted at a minimum every 4,000 tons of waste received or every ten

Also, tipping area personnel trained to recognize prohibited wastes will be designated for the detection of non-conforming hazardous waste. They will observe each load as it is deposited on the tipping area. Records at each inspection will be made and kept as a part of the operating record. Liquid containers larger than 5 gallons in size which are not perforated and drained will be rejected. Likewise, pesticides, herbicides, lead acid batteries, biomedical waste, corrosives, and flammables will be rejected. If the non-conforming hazardous materials are delivered by a private hauler, the inspector will make a record of the materials and the

hauler and report him to the Operator. Private haulers will be required to remove these materials from the facility. The Operator will report the private hauler to the Georgia Department of Natural Resources Solid Waste Management Division. If the same hauler is caught for a second time, he will be banned from bringing any waste to the facility. If the culprit is not caught and identified, the cost of disposition of the waste will be borne by the Owner. The Operator must use a qualified hazardous waste handling company to properly dispose of any non-conforming materials that are brought to the facility. This waste will be immediately transported to an appropriate disposal facility.

In all cases, notification of the Director of the Georgia Environmental Protection Division will be made if a prohibited waste is discovered at the facility.

3. WASTE ACCEPTANCE OR REJECTION: The acceptance or rejection of particular waste is based on the following factors:

*Federal, State and Local regulations, laws, or permit conditions.

*Waste characteristics.

*Operations and equipment limitations Of these three items, the regulations, laws and permit conditions affect most of the waste excluded from this site. Wastes specifically excluded by the regulations, laws, and permit conditions include liquids, lead acid batteries, biomedical wastes, radioactive wastes, and regulated quantities of hazardous wastes.

a. Liquid Waste Restrictions at Facility (1.) Bulk or noncontainerized liquid waste will not be accepted.

(2.) Containers holding liquid waste may not be accepted, unless: a. The container is a small container similar in size to that normally found in household waste;

b. The container is designed to hold liquids for use other than storage; or c. The waste is household waste

(3.) For purposes of this section: a. "Liquid waste" means any waste material that is determined to contain "free liquids" as defined by Method 9095 (Paint Filter Liquids Test), as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Pub. No. SW-846).

Lead Acid batteries are automobile type batteries. These items, whether from an automobile, a truck, a tractor, or other equipment are categorically excluded from this facility.

 Biomedical Waste Biomedical Wastes are any type of pathological waste, biological waste, cultures, infectious wastes, contaminated animal wastes, body parts, chemotherapy waste, discarded medical equipment and parts, and any other contaminated medical device. Disposal of this type of waste is categorically prohibited from

d. Radioactive Waste

Radioactive waste is any material which exhibits radioactive characteristics. This waste is categorically prohibited from this facility.

Per the amended and restated host agreement between Meriwether County and Greenbow, LLC, the solid waste handling permit shall prohibit the disposal of any amount of sewage sludge. Sewage Sludge is defined as solid, semi-solid, or liquid residue generated during the treatment of domestic sewage or a combination of domestic sewage and industrial wastewater in a treatment works, as defined in Section 391-3-6-.17 of the Rules of the EPD.

f. Hazardous Waste Hazardous wastes are those materials with characteristics, either physical or chemical, that could cause harm to health or the environment A waste is hazardous if it is:

disposal at this facility

*Toxic (As defined by the TCLP test procedure) *Is a listed hazardous waste

A waste material is ignitable if it has a flash point of 140 degrees F or less, causes fire by friction under normal conditions, or is an oxidizer. Examples of ignitable waste include solvents, bottom material from solvent recovery, and peroxide. This waste is typically generated by automobile repair shops, machine shops, dry cleaners, and industry

A waste is corrosive if the pH is 2 or less, or 12.5 or greater. An example of corrosive waste is spent pickle liquor from a metal plating operation or battery acid. A waste is reactive if it is unstable under normal conditions, reacts violently with water, forms an explosive mixture with water, contain any quantity of cyanide, contains sulfur which could be released to the atmosphere, or can be easily detonated or exploded. Waste from certain chemical operations, munitions works, or fertilizer plants can be reactive.

A waste is toxic if it so tests by the TCLP procedure. The TCLP test stands for the Toxic Characteristics Leaching Procedure. For this test, a leachate is removed from the waste and this leachate is analyzed for specific constituents as listed in the Code of Federal Regulations, Chapter 40. If a waste checks toxic, then the waste is hazardous based on the TCLP test.

c materials can cause cancer, birth defects, or illness if released to the environment. Examples of toxic waste includes solvents industrial process sludges, emission control wastes.

A waste is characterized as a listed waste if it is listed in the Code of Federal Regulations, Chapter 40 or any amendments of this document. A typical listed waste is one in which the known characteristics of that material will likely endanger the health or environment. The exhaustive list of hazardous

waste is in the Part 261, of Chapter 40 of the Code of Federal Regulations. Recognition of these wastes by the operators is imperative. The operators of the facility have been trained to detect this material and call it to the attention of

management. When material of this type is detected in the daily operation, the material is immediately segregated from the remainder of the waste stream and cordoned off. The hauler who delivered that waste to the facility is then notified to return to the facility and remove the material. All hazardous material inadvertently delivered to the facility is to be removed by the hauler within 24 hours.

5. WASTE ACCEPTANCE PROTOCOL For those generators or haulers with waste which they are unsure of, the facility will use a protocol for testing those wastes. This particular protocol is to be used for all industrial waste and contaminated soil. The protocol includes:

1. Perform the hazardous characteristics tests for ignitability, reactivity, corrosivity, and toxicity.

2. Test the material for PCB, TPH, and pH. 3. Report all testing to the Operator in original form signed by the Laboratory Principal.

4. Provide a certification that the test results represent the waste mass. 5. Identify the waste generator and provide a complete description of the waste.

6. Provide a certification from the generator stating the waste is Non-Hazardous 7. Provide estimates of waste volumes. The Operator will review this data and either approve or disapprove prior to waste being transported to the landfill.

6. OUT OF STATE WASTE No waste shall be received for disposal at the facility from sources outside the State of Georgia. Sources include but are not limited to generators, haulers, and permitted transfer stations.

REVISED: OCTOBER 25, 2010 - OPERATIONAL CHANGES REVISED: SEPTEMBER 17, 2010 - OPERATIONAL CHANGES REVISED: MAY 7, 2009 - REVISE LEACHATE TANKS REVISED: DECEMBER 17, 2007 - ADDRESS EPD COMMENTS REVISED: NOVEMBER 5, 2007 - ADDRESS EPD COMMENTS REVISED: APRIL 30, 2007 - ADD RECYCLING FACILITY

SOLID WASTE

DESCRIPTION

DATE

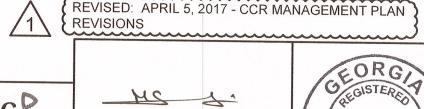
2/06/2012

2/20/2012

REVISED: DECEMBER 23, 2013 - REVISE FINAL COVER COMPACTED SOIL LAYER THICKNESS (SECTION 6, NOW SECTION 8) AND ADD TEMPORARY GEOMEMBRANE COVER OPTION OVER CELL LINER (SECTION 49, NOW SECTION 5 REVISED: APRIL 8, 2015 - ADD LANGUAGE REGARDING SOIL FOR OPERATIONAL PURPOSES

No. PE039753

PROFESSIONAL



Geosyntec D consultants 1255 ROBERTS BOULEVARD, N.W., SUITE 200 KENNESAW, GEORGIA 30144 USA

SIGNATURE 5 April 2017

PHONE: 678.202.9500 OPERATIONS PLAN AND PROHIBITED WASTE EXCLUSION PLAN

DESIGN AND OPERATION PLAN TURKEY RUN MSW LANDFILL

FOR GREENBOW, LLC

MERIWETHER COUNTY, GEORGIA HODGES, HARBIN, NEWBERRY & TRIBBLE, INC.

CONSULTING ENGINEERS

478) 743-7175 484 MULBERRY ST. - STE. 265 REV 0 - INITIAL ISSUE (478) 743-1703(FAX) MACON, GEORGIA 31201 REV 1 - DELETED TEXT PROJ. NO. 8080-016-01 DWG. TURKEY-OP-R5 | EDIT 10-25-10 SCALE NOT TO SCALE 32 OF 45

APRIL, 2007

DATE

THIS DOCUMENT ORIGINALLY ISSUED AND SEALED BY R. BRANT LANE, P.E. #27185 ON 10/25/10 AND WILLIAM F. HODGES, P.E. #15689 ON 10/25/10. THIS MEDIUM SHALL NO T ATLANTIC COAST BE CONSIDERED A CERTIFIED DOCUMENT. CONSULTING, INC. 38. OPERATIONAL RECORDS / DAILY LOGS:

Accurate written, daily records by actual weight shall be kept of all waste received at the landfill. Copies of such records shall be maintained for a period of at least three (3) years and shall be made available to the Division upon request. This facility will meet the record keeping requirements as found in the Georgia Rules for Solid Waste Management, 391-3-4-.07(3)u.

Documentation of Routine Load Inspections conducted for incoming loads of waste shall be maintained at the facility for compliance with the CCR Management Plan.

39. SITE USE AFTER CLOSURE:

Upon closure of the site, all areas will receive vegetative cover. Any post-closure use of the landfill property must be approved by EPD.

40. LEACHATE COLLECTION, TREATMENT AND ANALYSIS: Leachate will be collected and stored in the on-site leachate storage tank.

Leachate shall be disposed by pump and haul or direct discharge to a permitted wastewater treatment facility. The Operator shall record on a weekly basis the volume stored in the leachate tanks, and the volume transported to a wastewater treatment facility. The chemical composition of leachate flowing to the leachate tanks should be analyzed in accordance with the receiving POTW permit requirements. For purposes of this analysis the leachate sample should be collected from the leachate tanks and should

be representative of the average mixed influent leachate quality. 41. LEACHATE SYSTEM MAINTENANCE AND INSPECTION: Leachate Collection and Header Pipes - The continuing operation of the leachate collection system is important to the operations of the overall landfill facility. Therefore, as necessary, leachate collection lines should be cleaned on a periodic basis. Lines shall be cleaned with high pressure water jets passed through the lines from the cleanout entrance to the leachate sump. The high pressure cleaning equipment shall be similar to sanitary sewer cleaning equipment. This equipment

Leachate Storage Tank - The facility will utilize one (1) - 125,000 gallon leachate storage tank inside secondary containment until leachate generation exceeds 4,200 gallons per day on a monthly average. The leachate storage tanks shall be inspected daily for visible leaks. The leak detection system should also be inspected on a daily basis.

shall not utilize cutters capable of damaging the collection lines. Only high pressure water jets on sewer cleaning equipment

42. REMEDIAL ACTION FOR LINER AND LEACHATE COLLECTION SYSTEM:

The operator shall immediately notify the Division and describe remedial steps to be taken if:

1) Operation of the treatment facilities under the approved plan cannot prevent any of the following: Violating the terms of its permits, the Georgia Water Quality Control Act and regulations, thereunder.

(ii) Surface water or groundwater pollution. 2) The facility is generating a quality or quantity of leachate that exceeds the design capacity of any future on-site pretreatment system.

3) Failure of the liner or leachate collection is suspected or documented.

43. CONSTRUCTION CERTIFICATION:

shall be utilized.

Upon receipt of a final and effective solid waste handling permit, construction may commence in accordance with the approved design and operational plan and permit conditions. Prior to receipt of solid waste or CCR the Division must be provided with written certification by a professional engineer licensed to practice in Georgia, that the facility has been constructed in accordance with the approved permit. Unless a self-fit details and the construction of the c with the approved permit. Unless notified otherwise by the Division, within 15 days of receipt by the Division of the written certification, the facility owner or operator may commence disposal of solid waste. This process shall be repeated for each subsequent major construction phase, including but not limited to, ne v cells or trenches, additional monitoring wells, sediment ponds, leachate treatment systems, modifications adding a new solid waste handling process, and application of final cover. The approved CQA Manual and Technical Specifications shall be used for each cell construction and shall not be amended unless approved by the Georgia EPD. No construction changes shall be made unless approved by the Georgia EPD. Borrow soils must come from sites with appropriate land disturbing permits.

The site operator will be certified as required by the Comprehensive Solid Waste Management Act and shall be available 24 hours

45. SEQUENCE OF FILL:

The sequence of fill shall progress as described in the Design and Operation Plan, unless modified.

The owner/operator shall apply for and obtain air quality permits under TITLE V and NSPS requirements of the Georgia and Federal rules for air quality. The design of the gas system will be submitted to the Air Protection Branch for approval. These permits applications, the permits, and any plans for landfill gas extraction and control shall be placed in the facility operating record, and a letter demonstrating these have been added shall be submitted to the EPD Solid Waste Program.

There shall be no opening burning of solid waste at this MSWLF unit. A plan must be submitted to and approved by the Georgia EPD prior to the infrequent burning of agricultural wastes, silvicultural wastes, land clearing debris, diseased trees, debris from

47. OPEN BURNING:

emergency cleanup operations, or debris during construction. 48. DISEASE VECTOR CONTROL: The owner and/or operator of this MSWLF unit will prevent or control on-site populations of disease vectors using techniques

appropriate for the protection of human health and the environment. 49. PROHIBITED ACTS:

The landfill will be operated and maintained to prevent open burning, scavenging, and the open dumping of waste.

The site may construct a 8" thick gravel pad for collection, storage and processing of recycle material (see sheets No. 43 and 44). Initially, the operator will recycle the following:

A. Wood Wastes: Untreated lumber, stumps and timbering slash will be recycled for use as renewable fuel. B. Concrete Wastes: Concrete wastes will be crushed, the reinforcing steel removed, then the concrete will be re-used as an

economy road base material. C. Asphalt Paving Wastes: Broken, cured asphalt paving material will be crushed, then re-used as an economy road base

D. Plastic bottles of various types to be recycled to offset petrochemical processing of raw material.

51. TEMPORARY GEOMEMBRANE COVER OVER CELL LINER

In order to reduce the infiltration of rain water into the leachate collection system, portions of the constructed cell liner system with no waste in place may be covered with temporary geomembrane cover material. The stormwater runoff from the top of the temporary geomembrane cover shall be directed to and handled by the existing surface water management features at the site. The temporary geomembrane cover shall be progressively removed prior to commencing waste placement activities in the cell.

52. CCR MANAGEMENT PLAN RENEWAL, MODIFICATIONS AND LOCAL GOVERNMENT NOTIFICATIONS:

Jpon approval of the CCR Management Plan by EPD, the CCR Management Plan shall be valid for a duration of one year. The facility will submit an Annual CCR Management and Dust Control Review sealed by a professional engineer registered in the State of Georgia. The Annual CCR Management Report may be combined with the Annual Fugitive Dust Control Report described in Section 23 of this Operations Plan.

his CCR Management Plan will be revised and submitted to EPD for approval if changes to the operational procedures or facility design are required due to changes in the CCR waste stream.

The Owner or Operator will provide written notification to Meriwether County informing that the Turkey Run Landfill is accepting CCR waste. Additionally, Meriwether County will be provided with a written notification from the Owner or Operator if the CCR Management Plan is amended.

RECEIVED

APR 0 6 2017

SOLID WASTE MANAGEMENT PROGRAM

REV DATE DESCRIPTION

Geosyntec D

consultants 1255 ROBERTS BOULEVARD, N.W., SUITE 200 KENNESAW, GEORGIA 30144 USA PHONE: 678.202.9500

1850 PARKWAY PLACE MARIETTA, GEORGIA 30067

DRN

APP

REVISED: APRIL 5, 2017 - CCR MANAGEMENT PLAN

OPERATIONS PLAN AND PROHIBITED WASTE EXCLUSION PLAN (CONTINUED)

DESIGN AND OPERATION PLAN - MINOR MODIFICATION

TURKEY RUN MSW LANDFILI

No. PE039753 PROFESSIONAL

DESIGN BY: RVJ DATE: **APRIL 2017** DRAWN BY: PROJECT NO.: GR6304 CHECKED BY: RVJ FILE: Turkey-CCR-OP RVJ DRAWING NO. 32A

GEORGIA Environmental Protection Division Solid Waste Management Program MINOR MODIFICATION APPROVAL SOLID WASTE PERMIT NO. 099-4790 (Ausur)

REVIEWED BY: APPROVED BY:

THIS DRAWING MAY NOT BE ISSUED

FOR PROJECT TENDER OR CONSTRUCTION, UNLESS SEALED.

5 April 2017

CLOSURE PROCEDURES

- 1. GENERAL The owner of this disposal site shall close this site in a manner that minimizes the need for further maintenance and minimizes the potential of post-closure release of contaminants to the ground or surface waters. The closure plan considers partial or contingent closure of the landfill. Facility phasing drawings provide guidance on closure at the end of any cell. Should intermediate closure be required, all components of this plan should be followed.
- 2. CERTIFICATION A Professional Engineer must certify that the site was closed in accordance with the approved Design and Operational Plan and the Rules for Solid Waste Management. Should the facility close prior to reaching permitted elevations the Engineers certification shall include an as-built
- 3. NOTIFICATION The owner shall notify the Environmental Protection Division of final closure within 30 days of receiving the final load of waste, providing E.P.D. with the date of final waste receipt and an accurate legal description of the boundaries of the landfill. The Owner will complete all closure activities of each MSWLF unit in accordance with this Closure Plan within 180 days following the beginning of closure. See Closure Schedule

Signs shall be posted at the entrance gate notifying users of the closure. Upon closure, the property deed and legal description shall be filed at the county courthouse in accordance with O.C.G.A. 8-6-3. All deeds must be recorded and reported as outlined in the Georgia Rules of Solid Waste Management 391-3-4-.11(5).

4. SURVEY CONTROL The complete legal description of the property is shown on the plans. All areas within which solid waste has been disposed shall be located to the best of the owner's ability and surveyed by a Registered Surveyor who shall provide a legal description of the waste management boundaries within 30 days of closure. Should partial closure occur, a topographic as-built survey of the site shall be developed.

5. CLOSURE SUPERVISION Closure of the site shall be under supervision of the current landfill supervisor.

DIRECTIONAL AND INFORMATIONAL SIGNS Signs shall be posted at the entrance gate notifying users of the landfill of the closure and providing the location of the nearest municipal solid waste landfill in the area. A telephone number for emergencies shall be printed on the sign. 7. REMOVAL OF WASTES

If the owner/operator of this facility wishes to remove wastes, waste residues or any contaminated soils, the owner/operator shall request and receive written approval from EPD prior to conducting any such activity.

8. FINAL COVER

Upon closure, all waste received at the site shall be spread, compacted and capped with the final cover system as described on the plans. Should the site be closed prior to attaining final grades, all uncovered and intermittently covered areas shall be capped with the system specified above. The final cap shall be placed within one month of the placement of solid waste in the lift. The minimum slope of the final cap shall be 3% and the maximum slope shall be 33%. One methane gas vent per acre shall be installed as shown on the detail sheet. Final cover shall be secured from on-site excavation of cell areas, stockpiles or other EPD approved borrow source areas as necessary. The final cap system shall meet the following standards:

a) The cover must be capable of preventing attraction of disease vectors, minimizing

production of odors, and preventing blowing litter, and; b) Must be capable of completely covering the solid waste without change in the cover's properties by rain, heat, cold and other climatic conditions; and

c) Must be substantially free of rock fragments that are greater than six inches in

d) Must be capable of supporting the germination and propagation of vegetative cover. e) Must compact well and preclude the excessive infiltration of surface water. The locations, and any design and operational information on landfill gas vents or extraction wells shall be submitted to EPD for review at the time of installation or closure. Installation documentation shall also be provided to EPD at the completion of gas vent construction.

All disturbed areas shall be grassed and maintained in accordance with the following schedules. A vegetative cover shall be established within two weeks after final cover placement. Permanent covers which are slow to establish shall receive temporary seeding. The fertilizer requirements are suggested. The operator will submit soil samples to the County Extension Agent for analysis and determination of proper soil conditioners including

lime. This analysis will become part of the operational records. Planting dates, fertilizer

rates, and seeding rates shall meet the requirements in the Manual for Erosion and Sediment Control in Georgia.

SEEDS - PERMANENT	LBS/ACRE	DEPTH OF COVER	DATE OF PLANTING
BERMUDA, COMMON - HULLED FESCUE, TALL	10 50	1/4" - 1/2" 1/4" - 1/2"	3/1 - 6/30 3/1 - 4/15 & 8/15 - 10/31
SEEDS - TEMPORARY	LBS/ACRE	DEPTH OF COVER	DATE OF PLANTING
RYEGRASS, ANNUAL	40	1/4" - 1/2"	8/1 - 4/15
MILLET, PEARL	50	1/4" - 1/2"	4/15 - 8/31
NOTE:			

All seeding rates are pure live seed rates.

- 2. All seeding shall be mulched with clean dry hav at the rate of 2.5 tons per acre. Mulch shall be anchored by pressing the mulch into the soil immediately after the mulch is spread using a packer
- disk or disk harrow or equivalent piece of equipment. 3. Temporary seeding should also complement permanent seeding to produce a suitable cover while the permanent grasses germinate.

	FE	RTILIZER REQUIRE	MENTS	
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
Cool season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac.(1)(2) - 30
Cool season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0-50 lbs./ac.(1)
Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac.(3)
4. Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac.(2)(4) 50-100 lbs./ac.(2) 30 lbs./ac.
5. Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac.(4) -

- Apply in spring following seeding. 2. Apply in split applications when high rates are used.
- Apply to grass species only. 4. Apply when plants grow to a height of 2 to 4 inches.

10. SITE EQUIPMENT NEEDED

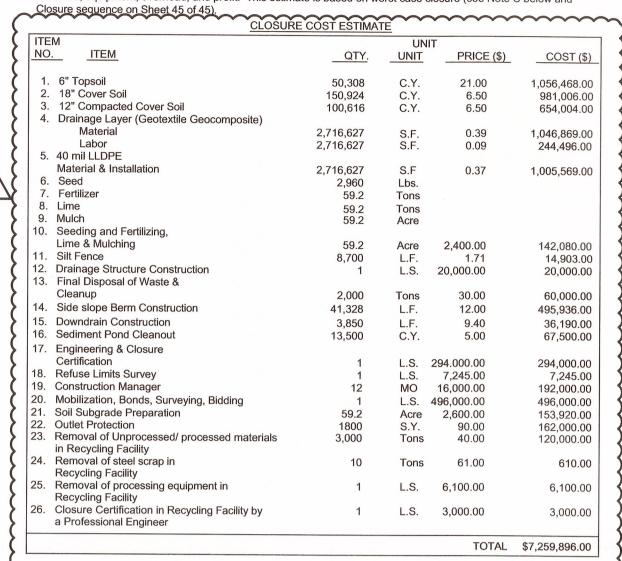
- The owner shall make adequate equipment available at the municipal solid waste landfill to ensure that closure requirements are executed correctly and efficiently. Should said equipment not be available, back up equipment may be obtained from the rental companies. Below is a minimum list of equipment which shall be required.
- A. Dozer/Compactor B. Scraper/Pan
- 11. SEDIMENT REMOVAL Accumulated sediment shall be removed from drop inlets, drainage pipes, diversion ditches, and other drainage structures.

12. EROSION AND SEDIMENTATION CONTROL Upon closure, all ditches, diversion berms, culverts, rip-rap, silt fence and other drainage

structures serving disturbed areas, but not already built, shall be constructed and placed according to the Plan of Operation. 13. COST OF CLOSURE

The estimated third party closure costs of the maximum area of active landfill unclosed at any time is \$7,259,896. This figure is based on 2017 year costs and shall be updated on an annual basis and submitted to EPD. 14. COST LEGEND

The following items were considered in the cost of closure for the site. The unit price of each item includes labor, materials, equipment, overhead, and profit. This estimate is based on worst case closure (see Note C below and



- MATER TO THE TOTAL THE TANK TH a) All costs shown are for in-place quantities and include labor, materials, and equipment.
- b) The cost estimate equals the cost of closing the largest area of all MSWLF unit ever requiring a final cover at any time during the active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan
- c) The site will be filled in order of the cell number sequence. Based on this sequencing, the worst case situation (maximum area unclosed at any time) will be 62.37 acres (see sequence chart on Sheet 45 of 45). d) During the active life of the MSWLF unit, the owner and/or operator must annually adjust the closure cost estimate
- e) Construction and Operation of the Landfill Gas Collection and Control Systems shall be in accordance with 40

) This closure cost is based on 2017 costs and shall be adjusted annually for inflation.

g) See sheet 45 for closure seglected chart) Cost of items 6, 7, 8, and 9 included in unit price of item 10

15. LEGAL DESCRIPTION

CURRENTLY BEING REVISED BY SURVEYOR

LEGAL DESCRIPTION: TRACT "A" BOUNDARY

ALL THAT CERTAIN PIECE, PARCEL OR LOT LAND. LYING AND BEING IN LAND LOTS 71, 72, 89, 90, 103 AND 104 OF THE 11TH DISTRICT, MERIWETHER COUNTY, GEORGIA, BEING MORE FULLY SHOWN AND DESIGNATED ON A BOUNDARY SURVEY FOR TURKEY RUN MSW LANDFILL BY TOOLE SURVEYING COMPANY, INC. DATED APRIL 2007, LAST REVISED SEPTEMBER 19, 2007, AND HAVING THE FOLLOWING METES AND

BEGINNING AT THE INTERSECTION OF LAND LOT 71, LAND LOT 72, LAND LOT 90 AND LAND LOT 89 AT A #4 REBAR FOUND ALSO KNOWN AS THE POINT OF BEGINNING;

N00-23-23**E FOR A DISTANCE OF** 1103.62**: S**89-40-07**E FOR A DISTANCE OF** 963.99; S14-22-24E FOR A DISTANCE OF 494.64; THENCE ALONG A CURVE WITH AN ARC LENGTH OF 1415.70 AND A RADIUS OF 1490.00 WITH A CHORD LENGTH OF: 1363.04 AND A CHORD BEARING OF S 41-35-34 E; S68-48-09E FOR A DISTANCE OF 1031.49; S02-08-09W FOR A DISTANCE OF 836.62; S02-08-09W FOR A DISTANCE OF 274.25; S00-27-18W FOR A DISTANCE OF 389.81; S00-41-13W FOR A DISTANCE OF 267.93; S00-37-03E FOR A DISTANCE OF 99.65; \$53-01-33W FOR A DISTANCE OF 74.96; \$38-45-36W FOR A DISTANCE OF 101.52; S71-09-33W FOR A DISTANCE OF 111.06; S63-54-15W FOR A DISTANCE OF 178.58; S57-30-07W FOR A DISTANCE OF 131.53; S86-31-48W FOR A DISTANCE OF 120.82; S73-53-21W FOR A DISTANCE OF 39.18; N79-43-47W FOR A DISTANCE OF 88.56; THENCE ALONG A CURVE WITH AN ARC LENGTH OF21.84 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 21.79 AND A CHORD BEARING OF N85-59-09W; S87-45-30W FOR A DISTANCE OF 113.09; S80-36-09W FOR A DISTANCE OF 55.32; S78-22-01W FOR A DISTANCE OF 9.26; N30-34-35W FOR A DISTANCE OF 31.09; N49-51-26W FOR A DISTANCE OF 80.71; N64-30-06W FOR A DISTANCE OF 103.75; N25-02-54W FOR A DISTANCE OF 60.85; THENCE ALONG A CURVE WITH AN ARC LENGTH OF36.48 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 36.27 AND A CHORD BEARING OF N 35-29-52 W; N45-56-50W FOR A DISTANCE OF 23.34 THENCE ALONG A CURVE WITH AN ARC LENGTH OF38.63 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 38.39 AND A CHORD BEARING OF N57-00-55W; N68-04-59W FOR A DISTANCE OF 89.62; N83-12-17W FOR A DISTANCE OF 73.50; S81-22-24W FOR A DISTANCE OF 72.67; \$69-38-46W FOR A DISTANCE OF 192.17: \$61-23-23W FOR A DISTANCE OF 73.76; \$52-25-09W FOR A DISTANCE OF 91.09; \$34-01-01W FOR A DISTANCE OF 181.40; \$29-08-25W FOR A DISTANCE OF 84.50; \$23-10-48W FOR A DISTANCE OF 5.21; THENCE ALONG A CURVE WITH AN ARC LENGTH OF62.99 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF: 61.96 AND A CHORD BEARING OF S05-08-01W; \$12-54-47E FOR A DISTANCE OF 19.55; \$53-37-52W FOR A DISTANCE OF 45.34; \$39-59-57W FOR A DISTANCE OF 26.74; \$39-59-57W FOR A DISTANCE OF 10.17; \$71-01-44W FOR A DISTANCE OF 91.47; THENCE ALONG A CURVE WITH AN ARC LENGTH OF31.83 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 31.69 AND A CHORD BEARING OF S61-54-40W; S52-47-36W FOR A DISTANCE OF 46.01; S62-34-17W FOR A DISTANCE OF 100.52; S57-44-40W FOR A DISTANCE OF 49.47; S48-46-55W FOR A DISTANCE OF 96.15; THENCE ALONG A CURVE WITH AN ARC LENGTH OF53.47 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 52.84 AND A CHORD BEARING OF S33-27-48W; \$18-08-41W FOR A DISTANCE OF 11.90; \$53-20-40W FOR A DISTANCE OF 72.61; S47-46-00W FOR A DISTANCE OF 62.15; S54-56-14W FOR A DISTANCE OF 342.42; N71-24-55W FOR A DISTANCE OF 32.86; S86-05-21W FOR A DISTANCE OF 66.65; S70-12-42W FOR A DISTANCE OF 178.42; \$64-23-33W FOR A DISTANCE OF 115.53; \$68-49-53W FOR A DISTANCE OF 116.11; \$89-50-28W FOR A DISTANCE OF 413.25; \$88-09-30W FOR A DISTANCE OF 258.38; THENCE ALONG A CURVE WITH AN ARC LENGTH OF65.35 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 64.19 AND A CHORD BEARING OF \$69-26-16W; \$50-43-03W FOR A DISTANCE OF 55.73; \$64-57-24W FOR A DISTANCE OF 188.98; S71-54-19W FOR A DISTANCE OF 46.90; S84-17-00W FOR A DISTANCE OF 88.14; N74-11-27W FOR A DISTANCE OF 104.72; N69-59-28W FOR A DISTANCE OF 185.61; N56-57-47W FOR A DISTANCE OF 15.63; N55-05-45W FOR A DISTANCE OF 213.90; THENCE ALONG A CURVE WITH AN ARC LENGTH OF32.60 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 32.45 AND A CHORD BEARING OF N64-26-01W; N73-46-18W FOR A DISTANCE OF 38.82; N66-15-40W FOR A DISTANCE OF 274.08; N76-39-25W FOR A DISTANCE OF 112.29; N33-19-28W FOR A DISTANCE OF 91.83; N48-03-34W FOR A DISTANCE OF 83.60; N25-16-47W FOR A DISTANCE OF 71.98; N31-46-10W FOR A DISTANCE OF 65.27; N27-11-07W FOR A DISTANCE OF 203.55; N39-47-25W FOR A DISTANCE OF 162.51; N63-22-30W FOR A DISTANCE OF 72.89; N00-00-00E FOR A DISTANCE OF 1175.73; N36-17-45E FOR A DISTANCE OF 337.46; N44-31-11E FOR A DISTANCE OF 307.16; N57-54-45E FOR A DISTANCE OF 148.42; N85-47-36E FOR A

N71-24-55W FOR A DISTANCE OF 32.86; S86-05-21W FOR A DISTANCE OF 66.65; S70-12-42W FOR A DISTANCE OF 178.42; S64-23-33W FOR A DISTANCE OF 115.53; S68-49-53W FOR A DISTANCE OF 116.11; \$89-50-28W FOR A DISTANCE OF 413.25; \$88-09-30W FOR A DISTANCE OF 258.38; THENCE ALONG A CURVE WITH AN ARC LENGTH OF65.35 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 64.19 AND A CHORD BEARING OF \$69-26-16W; S50-43-03W FOR A DISTANCE OF 55.73; S64-57-24W FOR A DISTANCE OF 188.98; S71-54-19W FOR A DISTANCE OF 46.90; S84-17-00W FOR A DISTANCE OF 88.14; N74-11-27W FOR A DISTANCE OF 104.72; N69-59-28W FOR A DISTANCE OF 185.61; N56-57-47W FOR A DISTANCE OF 15.63; N55-05-45W FOR A DISTANCE OF 213.90; THENCE ALONG A CURVE WITH AN ARC LENGTH OF32.60 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 32.45 AND A CHORD BEARING OF N64-26-01W; N73-46-18W FOR A DISTANCE OF 38.82; N66-15-40W FOR A DISTANCE OF 274.08; N76-39-25W FOR A DISTANCE OF 112.29; N33-19-28W FOR A DISTANCE OF 91.83; N48-03-34W FOR A DISTANCE OF 83.60; N25-16-47W FOR A DISTANCE OF 71.98; N31-46-10W FOR A DISTANCE OF 65.27; N27-11-07W FOR A DISTANCE OF 203.55; N39-47-25W FOR A DISTANCE OF 162.51; N63-22-30W FOR A DISTANCE OF 72.89; N00-00-00E FOR A DISTANCE OF 1175.73; N36-17-45E FOR A DISTANCE OF 337.46; N44-31-11E FOR A DISTANCE OF 307.16; N57-54-45E FOR A DISTANCE OF 148.42; N85-47-36E FOR A DISTANCE OF 28.40; THENCE ALONG A CURVE WITH AN ARC LENGTH OF151.11 AND A RADIUS OF 100.00 WITH A CHORD LENGTH OF 137.14 AND A CHORD BEARING OF N42-30-12E; N00-47-13W FOR A DISTANCE OF 12.26; N21-21-21E FOR A DISTANCE OF 137.98; N18-14-12W FOR A DISTANCE OF 45.36; N77-19-18E FOR A DISTANCE OF 20.29 N70-03-04E FOR A DISTANCE OF 100.68; N58-47-20E FOR A DISTANCE OF 115.24; N26-15-34E FOR A DISTANCE OF 37.45; N87-52-10E FOR A DISTANCE OF 31.86; N75-52-18E FOR A DISTANCE OF 67.82; N47-13-46E FOR A DISTANCE OF 83.82; N14-02-08E FOR A DISTANCE OF 80.23; N10-11-23W FOR A DISTANCE OF 10.77; N42-47-53E FOR A DISTANCE OF 43.72; N55-40-43E FOR A DISTANCE OF 14.12; N78-50-59E FOR A DISTANCE OF 43.35; N57-26-14E FOR A DISTANCE OF 91.57; N28-52-09E FOR A DISTANCE OF 119.00; N29-45-00E FOR A DISTANCE OF 96.11; N40-30-04E FOR A DISTANCE OF 14.57; N49-27-53E FOR A DISTANCE OF 57.33: N25-51-01E FOR A DISTANCE OF 47.13; N31-47-23E FOR A DISTANCE OF 63.21; N12-09-44E FOR A DISTANCE OF 53.26; N07-25-30W FOR A DISTANCE OF 93.78; N16-49-14W FOR A DISTANCE OF 4.96; N17-36-59E FOR A DISTANCE OF 102.53; N02-31-36W FOR A DISTANCE OF 47.68; N19-16-37W FOR A DISTANCE OF 31.48; N89-28-21E FOR A DISTANCE OF 433.89; N89-04-54E FOR A DISTANCE OF 779.94 TO THE POINT OF

LEGAL DESCRIPTION "ACCESS ROAD"

BEGINNING AND CONTAINING 417.54 ACRES

ALL THAT CERTAIN PIECE, PARCEL OR LOT LAND, LYING AND BEING IN LAND LOTS 90,91,102,103 AND 122 OF THE 11TH DISTRICT, MERIWETHER COUNTY, GEORGIA, HAVING THE FOLLOWING METES AND BOUNDS, TO WIT:

BEGINNING AT THE NORTHEASTERN INTERSECTION OF LONE OAK ROAD (GA HWY #54) AND COUNTY LINE ROAD AT A POINT KNOWN AS THE POINT OF COMMENCEMENT; THENCE NORTH 67 DEGREES 07 MINUTES 44 SECONDS EAST (N67°07'44"E) FOR A DISTANCE OF 2,207.22 FEET TO A POINT ALSO KNOWN AS THE POINT OF BEGINNING; THENCE NORTH 09 DEGREES 36 MINUTES 35 SECONDS WEST (N09°36'25"W) FOR A DISTANCE OF 513.50 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 430.00' AND AN ARC LENGTH OF 74.88 WITH A CHORD BEARING OF NORTH 04 DEGREES 37 MINUTES 16 SECONDS WEST (N04° 37'16"W) FOR A DISTANCE OF 74.78 FEET TO A POINT; THENCE NORTH 00 DEGREES 22 MINUTES 13 SECONDS EAST (N00°22'13"E) FOR A DISTANCE OF 1506.10 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 170.00' AND AN ARC LENGTH OF 43.48 WITH A CHORD BEARING OF NORTH 06 DEGREES 57 MINUTES 23 SECONDS WEST (N06° 57'23"W) FOR A DISTANCE OF 43.36 FEET TO A POINT; THENCE NORTH 41 DEGREES 16 MINUTES 58 SECONDS WEST (N41°16'58"W) FOR A DISTANCE OF 436.72 FEET TO A POINT; THENCE NORTH 33 DEGREES 53 MINUTES 44 SECONDS WEST (N33°53'44"W) FOR A DISTANCE OF 151.94 FEFT TO A POINT; THENCE NORTH 14 DEGREES 17 MINUTES 00 SECONDS WEST (N14°17'00"W) FOR A DISTANCE OF 298.58 FEET TO A POINT; THENCE NORTH 05 DEGREES 19 MINUTES 51 SECONDS EAST (N05°19'51"E) FOR A DISTANCE OF 151.94 FEET TO A POINT; THENCE NORTH 14 DEGREES 16 MINUTES 58 SECONDS WEST (N14°16'58"W) FOR A DISTANCE OF 323.72 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 430.00 FEET AND AN ARC

LENGTH OF 107.19 WITH A CHORD BEARING OF NORTH 07 DEGREES 08 MINUTES 29 SECONDS WEST (N07°08'29"W) FOR A DISTANCE OF 106.91 FEET TO A POINT; THENCE NORTH 00 DEGREES 00 MINUTES 00 SECONDS WEST (N00°00'00"W) FOR A DISTANCE OF 398.34 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 200.00 FEET AND AN ARC LENGTH OF 363.67 WITH A CHORD BEARING OF NORTH 52 DEGREES 05 MINUTES 32 SECONDS EAST (N52°05'32"E) FOR A DISTANCE OF 315.60 FEET TO A POINT; THENCE SOUTH 75 DEGREES 48 MINUTES 56 SECONDS EAST (\$75°48'56"E) FOR A DISTANCE OF 23.80 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 200.00 FEET AND AN ARC LENGTH OF 7.04 WITH A CHORD BEARING OF SOUTH 85 DEGREES 53 MINUTES 40 SECONDS EAST (\$85°53'40"E) FOR A DISTANCE OF 7.00 FEET TO A POINT; THENCE NORTH 84 DEGREES 01 MINUTES 36 SECONDS EAST (N84°01'36"E) FOR A DISTANCE OF 103.59 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 330.00 FEET AND AN ARC LENGTH OF 191.88 WITH A CHORD BEARING OF SOUTH 79 DEGREES 18 MINUTES 59 SECONDS EAST (S79°18'59"E) FOR A DISTANCE OF 189.18 FEET TO A POINT; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS WEST (\$00°00'00"W) FOR A DISTANCE OF 191.31 FEET TO A POINT; THENCE SOUTH 63 DEGREES 22 MINUTES 30 SECONDS EAST (\$63°22'30"E) FOR A DISTANCE OF 72.89 FEET TO A POINT; THENCE

SOUTH 39 DEGREES 47 MINUTES 25 SECONDS EAST (\$39°47'25"E) FOR A DISTANCE OF 162.51 FEET TO A POINT; THENCE SOUTH 27 DEGREES 11 MINUTES 07 SECONDS EAST (\$27°11'07"E) FOR A DISTANCE OF 116.56 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 280.00 FEET AND AN ARC LENGTH OF 241.78 WITH A CHORD BEARING OF NORTH 67 DEGREES 14 MINUTES 04 SECONDS WEST (N67°14'04"W) FOR A DISTANCE OF 234.34 FEET TO A POINT; THENCE NORTH 42 DEGREES 29 MINUTES 47 SECONDS WEST (N42°29'27"W) FOR A DISTANCE OF 157.33 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 70.00 FEET AND AN ARC LENGTH OF 65.33 WITH A CHORD BEARING OF NORTH 69 DEGREES 14 MINUTES 06 SECONDS WEST (N69°14'06"W) FOR A DISTANCE OF 62.99 FEET TO A POINT: THENCE SOUTH 84 DEGREES 01 MINUTES 36 SECONDS WEST (S84°01'36"W) FOR A DISTANCE OF 103.59 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 280.00 FEET AND AN ARC LENGTH OF 23.15 WITH A CHORD BEARING OF SOUTH 88 DEGREES 45 MINUTES 09 SECONDS WEST (S88°45'09"W) FOR A DISTANCE OF 46.14 FEET TO A

POINT; THENCE SOUTH 00 DEGREES 00 MINUTES 00 SECONDS EAST (S00°00'00"E) FOR A DISTANCE OF 326.32 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 170.00 FEET AND AN ARC LENGTH OF 42.38 WITH A CHORD BEARING OF SOUTH 07 DEGREES 08 MINUTES 29 SECONDS EAST (S07°08'29"E) FOR A DISTANCE OF 42.27 FEET TO A POINT; THENCE SOUTH 14 DEGREES 16 MINUTES 58 SECONDS EAST (\$14°16'58"E) FOR A DISTANCE OF 191.13 FEET TO A POINT; THENCE SOUTH 37 DEGREES 18 MINUTES 32 SECONDS EAST (S37°18'32"E) FOR A DISTANCE OF 324.41 FEET TO A POINT; THENCE SOUTH 14 DEGREES 37 MINUTES 58 SECONDS EAST (\$14°37'58"E) FOR A DISTANCE OF 377.63 FEET TO A POINT; THENCE SOUTH 05 DEGREES 37 MINUTES 11 SECONDS WEST (S05°37'11"W) FOR A DISTANCE OF 379.53 FEET TO A POINT; THENCE SOUTH 14 DEGREES 16 MINUTES 58 SECONDS EAST (\$14°16'58"E) FOR A DISTANCE OF 121.10 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 429.96 FEET AND AN ARC LENGTH OF 109.97 WITH A CHORD BEARING OF SOUTH 06 DEGREES 57 MINUTES 22 SECONDS EAST (\$06°57'22"E) FOR A DISTANCE OF 109.67 FEET TO A POINT; THENCE SOUTH 00 DEGREES 22 MINUTES 13 SECONDS WEST (\$00°22'13"W) FOR A DISTANCE OF 1506.10 FEET TO A POINT; THENCE ALONG A CURVE WITH A RADIUS OF 170.00 FEET AND AN ARC LENGTH OF 29.60 WITH A CHORD BEARING OF SOUTH 04 DEGREES 37 MINUTES 06 SECONDS EAST (\$04°37'06"E) FOR A DISTANCE OF 29.57 FEET TO A POINT; THENCE SOUTH 09 DEGREES 36 MINUTES 25 SECONDS EAST (\$09°36'25"E) FOR A DISTANCE OF 206.61 FEET TO A POINT; THENCE SOUTH 80 DEGREES 23 MINUTES 35 SECONDS WEST (\$80°23'35"W) FOR A DISTANCE

OF 35.74 FEET TO A POINT; THENCE SOUTH 09 DEGREES 36 MINUTES 25 SECONDS EAST (S09°36'25"E) FOR A DISTANCE OF 101.46 FEET TO A POINT; THENCE NORTH 80 DEGREES 23 MINUTES 35 SECONDS EAST (N80°23'35"E) FOR A DISTANCE OF 35.74 FEET TO A POINT; THENCE SOUTH 09 DEGREES 36 MINUTES 25 SECONDS EAST (\$09°36'25"E) FOR A DISTANCE OF 207.31 FEET TO A POINT; THENCE SOUTH 80 DEGREES 40 MINUTES 41 SECONDS WEST (S80°40'41"W) FOR A DISTANCE OF 260.00 FEET TO A POINT BEING THE POINT OF BEGINNING AND CONTAINING 30.00 +/- ACRES.

16. CLOSURE SCHEDULE

- Once the decision has been made by the Owner to close the landfill, the following schedule shall be followed over a 180 day period:
- Notify EPD of final closure within 30 days of receiving final load of waste.
- Provide EPD with date of final waste receip Prepare accurate legal description of final waste management boundary
- Prepare accurate legal description of entire property Prepare final topographic as-built survey if partial closure occurs.
- 6. Post signs at entrance gate notifying users of closure and location of nearest
- Obtain written permission from EPD to remove waste, if required. Install final cover system. Initiate vegetative plan.
- 10. Remove all accumulated sediments from ponds, ditches and other drainage
- 11. Construct all erosion and sediment control systems serving disturbed areas, but not previously built. 12. Obtain certification from a registered professional engineer, licensed in the State of Georgia verifying that closure of each MSWLF unit has been
- completed in accordance with the Closure Plan 13. Notify EPD that this certification has been placed in the operating records. 14. On all deeds of real property which has been used for landfilling, include notice of landfill operations, the date the landfill operation commenced and terminated, an accurate legal description of the actual location of the landfill, and a description of the type of solid wastes which have been deposited in the landfill.
- 15. Submit to the Director of EPD confirmation that the information required in closure schedule item no. 14 above has been noticed on the property deed.
- 17. WASTE INVENTORY The maximum inventory of wastes ever on-site over the active life of the landfill facility will be calculated at the time of closure.
- 18. METHANE GAS VENT TESTING Gas vents shall be tested as required by 40 CFR part 60 subpart WWW and applicable NSPS standards.

GEORGIA Environmental Protection Division Solid Waste Management Program MINOR MODIFICATION APPROVAL

14. NOTIFICATION OF MONITORING STANDARDS EXCEEDED The owner and/or operator shall be responsible for conducting all monitoring activities. If at any time the monitoring results indicate exceeding of established standards or

> 15. CERTIFICATION Following the closure of all MSWLF units, a professional engineer registered in the State of Georgia, will certify that the post-closure care was completed in accordance with the post-closure care plan and that the certification was placed in the operating

> > (478) 743-7175

PROJ. NO.

SCALE

DATE

The owner of this disposal site shall conduct extended Post-Closure Care for at least 30 years after the completion of closure to adequately protect human health and the environment. Post-Closure shall consist of at least the following:

POST-CLOSURE CARE PROCEDURES

continue as detailed on the plans.

accordance with the Plan of Operation.

1. POST-CLOSURE USE OF THE PROPERTY The owner shall ensure that post-closure use of property shall never be allowed to disturb the integrity of the final cover, liners, or any other components of the containment system or the function of the monitoring systems, unless the Environmental Protection Division determines that the activities are necessary to meet the requirements of chapter 391-3-4-.12. There is no planned use of this property during the Post-Closure Care Period at this time. Prior to any future use, EPD approval is required.

2. WATER MONITORING Water monitoring, which includes groundwater and surface water, shall continue throughout the Post-Closure Care Period as described in the Plan of Operation. Following each semi-annual sampling event, results will be provided to EPD for its review The groundwater monitoring wells shall be maintained throughout this period. An analysis of the groundwater monitoring data shall be submitted to the Solid Waste Compliance Program at the Atlanta Office of EPD every five years after the site is

closed. A recommendation of the next five years of post-closure care procedures shall be submitted with this report. 3. METHANE GAS MONITORING Methane gas monitoring shall continue on a quarterly basis at points shown on the plans for as long as EPD deems necessary. Results shall be submitted to the Solid Waste Compliance Program at the Atlanta Office of EPD within 15 days. If methane gas concentrations are noted to exceed 25 percent of the lower explosive limit on the site in structures or 5% methane by volume (100% LEL) at the property boundary, EPD shall be notified immediately and appropriate safety precautions and venting procedures shall be taken. On-site methane vents will be inspected to insure they are operational. Testing of methane vents will

4. LEACHATE COLLECTION AND TREATMENT The leachate collection shall be maintained and shall collect leachate for a minimum of 30 years or until leachate does not provide a contamination threat. During the post closure care period sampling of the leachate shall continue as described in the approved design and operational plan. The storage and pumping systems shall be monitored with a high level alarm in the tank and an alarm in the secondary containment area which indicates a 6" liquid accumulation from precipitation or a leachate tank leak. These systems shall be maintained in good working order throughout the post closure care period. Leachate, collected during the post-closure care period, shall be disposed of in a POTW approved for this purpose.

5. ROUTINE INSPECTION OF VEGETATIVE/FINAL COVER/DRAINAGE SYSTEM Throughout the Post-Closure Care Period, the site shall be inspected on a quarterly basis to ensure that all waste disposed of in the facility remains covered with a minimum of a 42" final cover system as shown on the design and operation plan. The repair work on the soil cover or synthetic cap liner shall meet or exceed the original construction requirements. Any areas noted to have less than the required cover from the effects of erosion, vehicular traffic, etc., shall have sufficient cover placed over them within ten working days. All areas lacking proper vegetation shall be grassed and maintained according to the vegetation and fertilization plans in this plan. Downdrain systems shall be maintained in proper working condition in

6. SEDIMENT BASIN MAINTENANCE/CLEAN-OUT Throughout the Post-Closure Period, all ditches, diversion berms, culverts, rip-rap, silt fence and other drainage structures shall be maintained according to the Operational Procedures. Sediment ponds shall be cleaned upon the accumulation of the designed depth of silt within the pond. Erosion control structures shall be maintained so as to prevent damage to the final

7. LIMITED ACCESS Access to the site shall be controlled by fencing, gates, buffers, etc. Access shall be limited to those time periods when the site is undergoing maintenance activities.

8. POST-CLOSURE SUPERVISION Post-Closure Care of the site shall be under the supervision of the current landfill supervisor. The person to contact about the facility during the Post-Closure Period is:

> Landfill Operator 229 South Highway Hogansville, Georgia 30230 (706) 637-8431

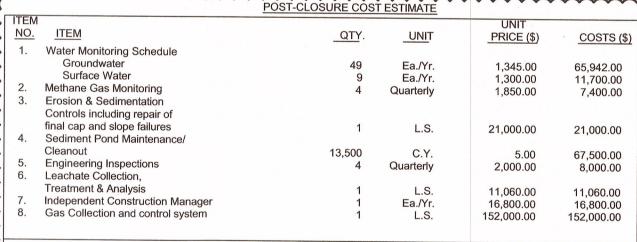
9. SITE EQUIPMENT The owner shall make adequate equipment available to the municipal solid waste landfill to ensure that Post-Closure Care requirements are executed correctly and efficiently. Rental equipment shall be utilized in the event that equipment dedicated to the municipal solid waste landfill should break down during Post-Closure Care procedures.

10. DIRECTIONAL AND INFORMATIONAL SIGNS Signs shall be posted at the entrance gate notifying users of the landfill that the facility is closed and providing the location of the nearest municipal solid waste landfill in the area.

11. REMOVAL OF WASTES If the owner/operator of this facility wishes to remove wastes, waste residue, or any contaminated soils, the owner/operator shall request and receive written approval from EPD prior to conducting any such activity.

12. LEACHATE OUTBREAKS The cause of leachate outbreak(s) will be assessed followed by corrective measures which will include a minimum of 12" of compacted soil and grassed in accordance with the Vegetation plan.

13. POST-CLOSURE CARE COST The third party estimated annual cost for Post-Closure Care of this site is \$361,502.00. This figure is based on 2017 year costs and shall be updated on an annual basis and submitted to EPD.



Total Yearly Post-Closure Cost \$361,502.00 NOTES: a) This post-closure cost is based on 2017 cost. b) All costs shown include labor, materials, and equipment. c) Cost of water & gas monitoring is based on current costs for these services.

d) The above cost estimate is based on the most expensive costs of the postclosure care during the post-closure care period. e) During post-closure, less than 1000 gallons per year of leachate will be produced. This can be disposed at a commercial treatment facility for \$0.06 per gallon or \$60.00 per year. Operation and maintenance of the leachate

collection system, including pumps will cost \$11,000.00 per year, including laboratory analyses. f) During the active life of the MSWLF unit and during the post-closure care period, the owner and/or operator will annually adjust the post-closure cost estimate for inflation.

REVISED: NOVEMBER 5, 2007 - ADDRESS EPD COMMENTS

indicate a threat to human health or the environment, the Owner and/or operator shall

notify the Environmental Protection Division within 5 days of such determination and shall provide a plan for remediation within 30 days of such notice. The plan shall be submitted to the Director of the Environmental Protection Division for approval. Unless notified otherwise by the Division within 30 days of receipt of a complete plan, the plan shall stand approved. Upon approval, the owner and/or operator shall implement the

MAY 2 2 2017 SOLID WASTE

RECEIVED

SHEET 33 OF 45

MANAGEMENT PROGRAM

CLOSURE/POST CLOSURE CARE PLAN

DESIGN AND OPERATION PLAN

TURKEY RUN MSW LANDFILL

REVISED: DECEMBER 23, 2013 - REVISE FINAL COVER COMPACTED SOIL VOLUME AND COST AND TOTAL CLOSURE COST IN CLOSURE COST ESTIMATE TABLE.

EVISED: APRIL 5, 2017 - CCR MANAGEMENT PLAN REVISIONS

REVISED: MAY 19, 2017 - CCR MANAGEMENT PLAN REVISIONS, GAEPD COMMENTS

GREENBOW, LLC MERIWETHER COUNTY, GEORGIA

APRIL, 2007

HODGES, HARBIN, NEWBERRY & TRIBBLE, INC. CONSULTING ENGINEERS

484 MULBERRY ST. - STE. 265 (478) 743-1703(FAX) MACON, GEORGIA 31201 3004-011-01 DWG. TURKEY-CPC-R EDIT 11-5-07 NOT TO SCALE

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Mes SIGNATURE 19 May 2017

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