

City of Greensboro
North Carolina



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Winston-Salem
Regional Office

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North Carolina Department of Environment
and Natural Resources
Winston Salem Regional Office
Division of Waste Management
585 Waughtown Street
Winston Salem, North Carolina 27107-2241

Attention: Tim Jewette, P.E.
Western Area Engineer

Reference: Request for Operation Extension
Construction and Demolition Landfill
City of Greensboro - White Street Landfill
Permit Number: 41-03

Dear Mr. Jewette:

The City of Greensboro is submitting a request to continue the operations of the construction and demolition landfill in accordance with the allowances noted in correspondence dated April 1, 2002 from the NC DENR Waste Management Division. In accordance with this documentation, "the owner/operator, who proposes to extend their existing permit, shall submit a written request to the Section at least 90 days prior to the expiration of the current permit".

The City of Greensboro had been previously approved to operate the C&D landfill per the transition plan modification permit issued on January 7, 1998. One condition of the approved permit states, "This permit will be subject to review every five years, on or before 7 January 2003, as per 15A NCAC 13B .0201(c) or sooner, according to the issuance date of this permit. Modification to the facility may be required in accordance with rules in effect at the time of review."

The following request was additionally completed in accordance with the guidance from our meeting on Friday, September 6, 2002. As mentioned, the volume computations for the expansion area are provided by the Terra model version 8.41 (Spectra Precision software). As such, these computations, and portions of this request that have been referenced as re-submitted information and previously certified by others are requested to

be considered independent of the coverage allowable by the engineering seal. It should be noted that the software package calculated volumes by the end area method.

If following your review of this request, additional information is required to authorize this request for continuation, please do not hesitate to contact my office.

Very truly yours,



Jeryl W. Covington, P.E.



enclosure

Continued Operation of Demolition Landfills on Top of Closed MSW Landfills

Introduction

The City of Greensboro originally submitted a Transition Plan for Phase II of the White Street Landfill in April 1994. The original and subsequent submittals were developed through contractual arrangements with the professional engineering firm, HDR Engineering of Charlotte, North Carolina. The Transition Plan was approved by the Division of Waste Management on July 30, 1996. Sections of this request covering operational methods and compliance maintenance proposed for this continued operation of the construction and demolition landfill are taken from previously approved plans and guidance and the engineering certification is not intended to cover these sections of this request.

The City of Greensboro is currently operating the construction and demolition landfill under permit number 41-03. This operation is placed above a certified closed municipal solid waste landfill. The operational area is approximate 25 acres and has an approximate volume of 850,000 cubic yards. Annually estimated waste receipts at the time of the originally permitted operation were determined to be 64,300 cubic yards of material. The waste receipts for construction and demolition material for fiscal year July 2001 through June 2002 are as follows:

Month	Volume
July	15,125.37
August	20,327.75
September	12,149.91
October	12,925.21
November	16,896.82
December	21,018.34
January	18,560.62
February	16,658.81
March	13,458.09
April	23,492.28
May	16,590.93
June	14,651.52

The annual volume of waste for this period is approximately 201,855.65 tons which is approximately 33% of the total waste amount for the operating landfill.

Operating Plan

By definition, the construction and demolition waste stream is originated solely from the construction, remodeling, repair or demolition operations of pavement, buildings or other structures. In addition, the Division may approve other inert waste for disposal in these units if it can be demonstrated to be inert through the toxicity characteristic leaching procedure. Current waste screening applications will continue to be utilized by the landfill staff for the determination of accurate disposal areas for each waste receipt. These applications are described within the facility's approved operating and transition plans.

The City of Greensboro proposes to expand the operating footprint area for the construction and demolition landfill to the portion of the site utilized as the haul road. This region does comply with the regulatory requirement for closure consideration in being that the footprint area is within the areas considered as a closed MSWLF unit subject to the appropriate section of the .1600 rules. In addition, regulatory closure of this area had been previously certified as closed in accordance with promulgated guidelines.

Waste is proposed to be placed vertically over existing constructed demolition material and closed MSW area. The final contours of the existing operation are identified on the enclosed map number CD-76. The proposed area for expansion is identified on map number CD-78. Construction and demolition waste will be placed in a manner to comply with the 4:1 regulatory side slopes. Waste will be placed to achieve these contours and to address differential settlement areas across the approximate 25 acre area. The operating face will be maintained in a fashion to reduce visual nuisances, reduce the potential of fire hazard, minimize blowing waste, eliminate disease vectors and reduce infiltration into the operating cell. Cover material will be utilized to manage the site and shall consist of a minimum six-inch lift of soil or an approved alternative cover material and will be applied on a weekly basis or whenever the active area reaches one-half acre in size. Sedimentation and erosion control devices will be placed in a fashion similarly to the existing landfill operation to address and eliminate the ponding of water and/or the infiltration into the operating cell.

The proposed expansion area is estimated to be able to provide a total volumetric capacity of approximately 900,000 cubic yards. These volumetric calculations were generated by computer interpolations between final contours utilizing the Terramodal Program (version 8.41). The basis of this program is end area method. Engineering certification for these proposed expansion activities do not include estimations generated from this computer format.

Closure Plan

In accordance with the waste management policies, the City of Greensboro proposes to construct a regulatory cap upon achievement of the final satisfactory contours. The cap system will be designed and constructed at least to the minimum standards prescribed by

the current guidelines prescribed by NCAC T15A:13B.1627. The proposed cap system will minimize infiltration with the use of a low permeability barrier that contains a minimum 18-inches of earthen material. The proposed permeability barrier will be less than or equal to the permeability of any base liner system or in-situ subsoils underlying the landfill, or a permeability specified for the final cover in the effective permit, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less. Additionally, an erosion cap system will be constructed with the placement of six inches of earthen material that is capable of sustaining native vegetative growth. This six inch layer will assist in the reduction of root penetration and protect the low-permeability layer.

Materials utilized to construct the cap will originate from on-site sources or off-site materials that satisfy the permeability requirements. Closure of the construction and demolition area will be initiated within 30 days of the final known receipt of waste and the satisfactory completion of meeting the planned contours as identified on map number CD-78.

The City of Greensboro will have the closure procedures and the regulatory cap construction certified by a professional engineer. A construction quality assurance report will be prepared in accordance with the prescribed rules identified in NCAC T15A:13B.1624(b) (15).

The City of Greensboro proposes to utilize the cap system designed by HDR Engineering, Inc. and as approved by the Division of Waste Management in the White Street Transition Plan (revised July 16, 1996). Currently utilized municipal solid waste landfill requirements exceed the requirements of the construction and demolition operation but will be employed as the standard operating procedures for this unit. No additional measures will be incorporated into this operation to address leachate collection and/or treatment.

The post closure plan for the landfill operation will continue to be utilized for the proposed expansion area. Maintenance of the gas collection system and groundwater monitoring will continue in conjunction with the MSW closure requirements. Furthermore, the City of Greensboro proposes to continue the utilization of existing erosion control measures previously designed in conjunction with the site. If needed, these systems will be upgraded utilizing the standard typical sections from the North Carolina Erosion and Sedimentation Control Planning and Design Manual. Existing and upgraded landfill equipment will be incorporated into the operating and perpetual care of this operating unit.