North Carolina Department of Environment and Natural Resources
Division of Waste Management

Beverly Eaves Perdue
Governor

Dexter R. Matthews
Director

Dee Freeman
Secretary

FACT SHEET AND FINAL PERMIT DECISION
SOLID WASTE PERMIT NUMBER: 7304-MSWLF-1997
Doc Id No: 14636

FACILITY:	Upper Piedmont Regional Landfill
COUNTY:	Person
CITY:	9650 Oxford Road Rougemont, North Carolina 27572
OWNER / OPERATOR:	Republic Services of North Carolina LLC, a wholly owned subsidiary of Republic Services, Inc. d/b/a Upper Piedmont Regional Landfill

NOTIFICATION OF FINAL PERMIT ACTION

On August 4, 2011, the Division of Waste Management (Division) issued Solid Waste Permit No. 73-04, Part 1: Permit to Construct to Republic Services of North Carolina, LLC. The Division has determined that the proposed facility plan, engineering plan, construction quality assurance plan, operation plan, closure and post-closure plan, and monitoring plans, as identified in the application, satisfies the requirements and intent of the North Carolina Solid Waste Management Rules as codified in 15A NCAC 13B .1600. The permit expires on August 4, 2016.

DESCRIPTION

In accordance with the Solid Waste Management Rules, specifically Rule 15A NCAC 13B .1603(a)(1)(B), the proposed expansion of an existing municipal solid waste landfill (MSWLF) facility's unit boundary requires a new facility permit. This permit reflects the request by Republic Services of North Carolina, LLC to expand the total landfill area from approximately 69.52 acres to 109.05 acres of disposal area, and expand to a total gross capacity of approximately 17,400,000 cubic yards from approximately 8,500,000 cubic yards. The proposed facility boundary, including buffer areas will not change from the currently approved 479.69 acres permitted and identified in the permit to construct application. This permit does not authorize changes to the service area, daily volume limit (tons per day) or characteristics of waste stream established in the previous permit.

The Upper Piedmont Regional Landfill is owned and operated by Republic Services of North Carolina, LLC, a wholly-owned subsidiary of Republic Services, Inc and under a franchise from Person County. The facility is accessed via NC State Highway 158, East of Roxboro, North Carolina.

The Division has determined that the facility plan, engineering plan, construction quality assurance plan, operation plan, closure and post-closure plan, and the water quality monitoring plan, as identified in the application, satisfy the requirements and intent of the North Carolina Solid Waste Management Rules, codified as 15A NCAC 13B .1600.

PUBLIC HEARING

A public hearing was held on December 13, 2010 at 6:30 PM. The hearing was held at the Person County Office Building located at 304 South Morgan Street, Roxboro NC 27573. Interested parties submitted oral or written statements and data concerning the proposed new facility permit. A tape recording of the hearing was made.

PUBLIC COMMENT PERIOD

North Carolina Solid Waste Management Rules require that the public be given an opportunity to comment on a draft permit for a municipal solid waste management facility. This 45-day comment period began on November 17, 2010 and ended on January 3, 2011 at 5:00 PM. The draft permit was available for review by appointment from 9 AM to 4 PM, Monday-Friday, at the Mooresville Regional Office.

The administrative record including the application, fact sheet, and permit were/are available online at http://portal.ncdenr.org/web/wm/sw. Persons who had wished to comment on either this permit or the proposed permit conditions or to object to the permit issuance could have submitted their comments in writing by January 3, 2011 at 5:00 PM.

RESPONSE TO COMMENTS

Upper Piedmont Regional Landfill, Person County, Permit #73-04.
Summary of comments made at public hearing and submitted by mail during public comment period and responses to those comments.

Comment No.1: Comment that the application does not consider viable alternatives to the proposed new landfill area. Comment from speaker stating that jurisdictional wetlands will be impacted and that US Army Corps of Engineers Notification of Jurisdictional Determination (wetland delineation) is expired. Comment that there is no valid 401 certification. Comment that nationwide Permit No. 26 is expired. Comment that there have been no biotic studies to determine impact on an endangered species of mussels. Comment that there is no monitoring or testing done to determine impact to water quality. Comment that Senate Bill 1492 passed in 2007 imposes additional health and safety considerations.

Response:
The Department of Environment and Natural Resources (DENR) does not choose the site for proposed municipal solid waste landfill facilities (MSWLFs). The location is subject to approval from the unit of local government having jurisdiction over the property. DENR ensures that the proposed solid waste activity meets the Solid Waste Rules and is protective of public health and the environment The Division of Waste Management does not

consider alternate sites. That is the responsibility of local governments having jurisdiction over the property.

The Upper Piedmont Regional landfill was originally permitted in 1996 on a 479.69 acre tract of land in Person County. The currently proposed expansion of this facility is within the previously approved and permitted boundaries of this 479.69 acre tract of land. No new property has been added to the permit. At the time the original permit was submitted, the applicant thoroughly evaluated the property for jurisdictional wetlands, jurisdictional waters of the U.S. and Threatened and Endangered Species. These evaluations covering the entire property were used for the original permit application and they remain valid for this tract of property and for the Conceptual Facility Plan made part of the current application.

Environmental Services Inc. (ESI) completed a wetland and stream delineation in December 2000 and the US Army Corps of Engineers reviewed the delineation and approved the conclusions. Several drainage features were identified and determined to be exempt from the Tar-Pamlico Buffer Rules due to lack of diagnostic features. Three pond features were identified and not claimed as jurisdictional by the US Army COE.

The extent of wetlands were determined by professionals competent and trained in such activities. The U.S. Army Corps of Engineers concurred with the delineation. Wetlands are incorporated into the minimum 300-feet buffer established along the landfill property boundary, and a 50-foot buffer was established in the previous permit between the existing and proposed waste disposal areas and known streams, rivers, lake, pond, or other water of the state as defined in G.S. 143-212. These evaluations covering the entire property were used for the original permit application and remain valid for this tract of property and the Conceptual Facility Plan submitted as part of the current application. The documents submitted in 1996 as part of the original application do not relieve the facility owner from complying with all applicable federal and state laws, including those associated with wetlands, waters of the U.S. or threatened and endangered species. A permit condition has been written into the existing draft permit requiring the permittee to obtain all permits and approvals necessary for the development of this project including approval from appropriate agencies.

Prior to any further designs for land disturbances beyond those in the original 1996 Conceptual Facility Plan, the applicant will be required to update or obtain any applicable federal and state permits for these areas. These approvals are typically obtained in conjunction with five-year permit renewals associated with Permits to Construct for the next five year phase of the solid waste facility. Consequently, as construction of the next phase is several years away, a wetlands delineation will be conducted closer to the timeframe of proposed construction. At that time, if wetlands are defined in the area of proposed landfill construction, measures will be implemented to ensure applicable buffers are in place to protect the wetlands or appropriate offsets are obtained. Therefore, the landfill facility meets the landfill siting requirements in Rule 15A NCAC 13B .1622(3)(a)(b).

The facility conducts semi-annual groundwater monitoring and surface water sampling in accordance with an approved Water Quality Monitoring Plan. A network of groundwater monitoring wells and two surface water sampling points are designed to provide early detection of any release, so the release could be remediated if necessary The network of groundwater monitoring wells will be expanded with an increased number of monitoring wells adjacent to the proposed landfill expansion to provide extensive coverage of the groundwater in the vicinity of the landfill. If contamination occurs due to a verified release, the facility operator is required to implement the assessment and/or corrective action procedures contained in Solid Waste Rules .1634-.1637. The procedures include notification of affected parties, determination of the nature and extent of the release, extensive additional monitoring requirements, assessment of corrective measures and remedies, taking actions that are protective of human health and the environment, implementation of selected remedy, providing long-term financial assurance to provide continuous funding of the corrective actions, and finally operation and maintenance of the corrective action remedy until completion or otherwise approved as allowed under the Rules.

Surface water sampling and monitoring has documented exceedances of cadmium, chromium, iron, turbidity, and zinc in the upstream water samples. Iron, turbidity, and zinc have exceeded 2B Standards in downstream surface water samples. The NC Solid Waste Section sent a letter to Republic on February 16, 2011. The letter requested the investigation of the surface water exceedances for Appendix I metals. Republic responded to the request with a detailed analysis of historical surface water sampling results. Historical data indicate that there has been one exceedance of cadmium and chromium for the upstream sampling point but they were not detected above standards in the downstream monitoring point. Since these constituents have not been detected above standards in the downstream monitoring point, they appear to be unrelated to landfill activities. Historically there have been exceedances of zinc in the upstream and downstream monitoring points, but none since 2004. Since the concentrations in upstream and downstream monitoring points were similar, the zinc appears to be unrelated to landfill activities. There have also been exceedances for iron and turbidity, which are not required parameters in the facility's approved Water Quality Monitoring Plan. However similar concentrations in upstream and downstream monitoring points indicate that they are not related to landfill activities. The Solid Waste Section will monitor the sampling results closely to ensure that the surface water sampling results meet applicable surface water standards.

Senate Bill 1492 was passed in 2007 and is applicable for new facilities seeking permits to construct and operate landfills in North Carolina. In instances where the requirements of 130 A 295 (6) are more stringent that existing rules it is not applicable to facilities which had received a permit prior to June 2006.. This facility was originally permitted on 479.69 acres in Person County in 1996.

Comment No. 2: One person commented on airborne vectors, particularly bacterial spores and mold spores, resulting from dust on landfill cells which are being built so high that they are

subject to some rigorous buffeting by winds. Dust blows from that site and might spread through several counties.

Response: When observed by the NC SWS personnel, dust from the landfill roadways appears well controlled by sprinkling water from one of their ponds with the water truck. Dust has not been observed leaving the facility property. The height of the landfill cells is constructed in accordance with Rule 15A NCAC 13B .1620, ENGINEERING PLAN.

Comment No. 3 (2 speakers): All landfills will eventually leak allowing toxins to migrate into aquifers and creeks. Wells around the landfill are polluted.

Response: The comment that all landfills will eventually leak is overly broad and without a timeframe for reference. Further, to assume that "toxins" in whatever form they might be will migrate to aquifers and wells presumes that water gets into and out of the lined landfill. The landfills are constructed with the best available technology and are protective of public health and the environment. When finished, the landfill will be capped with an impervious cap to prevent rainwater infiltration, and monitored for thirty years. If no water infiltrates the waste then no leaking can occur. The purpose of the permit is to ensure the protection of the environment. It is the responsibility of the rules and the permittee to ensure that permit compliance is maintained at all times, that all non-compliance is reported immediately and all contamination is remedied as well. The Division's Solid Waste Compliance and Enforcement Branch is charged with regular inspection of permitted facilities for compliance with all permit conditions, rules, and regulations. The Compliance and Enforcement Branch also has the ability to enforce these regulations with issuance of civil penalties as deemed necessary. The landfill has a liner and leachate collection system to prevent groundwater contamination, as well as a 300-foot buffer from the waste to the property line. A groundwater monitoring well network is in place around the landfill and groundwater samples are collected semi-annually from these wells to ensure that any potential contamination originating from the landfill does not migrate off-site to adjacent properties and wells.

If wells around the landfill are "polluted" then an alternate source should be searched for. The monitoring network indicates that there is no off site contamination from the landfill.

Comment No. 4 (8 speakers): The landfill is a burden to residents in the form of increased traffic, noise from heavy equipment, litter, foul odors.

Response: The NC SWS enforcement and compliance staff has been called many times for odor issues around the facility. They have never been able to detect any odors on any adjacent properties. However, due to the numerous complaints, Republic has implemented an Odor Control Management Plan (OCMP) designed to verify, identify, resolve and document odor complaints received as a result of facility operations. Notification of the OCMP was mailed to 45 residents living within one-quarter mile of the landfill on January 31, 2011. The OCMP will work as follows: when an odor complaint is received from one of the neighbors, representatives from Republic will meet with them,

verify the odor and begin an investigation to identify the source of the odor. Once the source is identified, measures will be taken to eliminate the odor. Follow-up will occur to ensure the problem has been resolved. The process will be documented and kept as part of the operating record. In the event that the odor cannot be verified, an inspector from the Solid Waste Section will be contacted for assistance.

The cover on the landfill has been observed by Solid Waste Section representatives to be adequate at all times for the deterrence of birds and other scavengers. Dogs have never been observed at the landfill or on adjacent properties during numerous site visits by the SWS enforcement and compliance staff. Traffic is regulated by the Department of Transportation and the Highway Patrol.

With respect to the equipment sound and truck noise, NC Solid Waste Section staff have been at the facility pre-opening (opens a 7:00 am) and after closing (4:30pm). In the morning, they do start up some of the equipment prior to opening to allow the equipment to warm up and to help in removing daily cover (either tarps or intermediate soil). NC SWS (staff) once stood at the working face from opening at 7:00am to observe the first few trucks and observe a waste screening by facility personnel. It was about 7:40when the first truck came into the facility. The first few trucks were local collection trucks. The first transfer trailers did not come into the facility until after 8:00am. The operator stated that it was normally like this. Operations cease at approximately 5:00 pm, 30 minutes after the facility stops accepting waste. The facility is approved for two types of alternate daily cover (ADC) materials tarps and Posi-shell. They would allow for complete cover of the waste in a short amount of time. When NC SWS personnel have been there to observe closing and cover, the workers usually start applying daily cover around 4:00, to reduce the size of the working face. Cover may even occur earlier in the day if it is being covered with soil. By the time the last truck unloads at the working face, the face size is very small and the waste is quickly spread and compacted. The smaller size of the exposed waste is then sprayed with Posi-Shell and/or covered with the tarps. Cover with these alternative materials does not take as long as spreading soil cover and it is reasonable to expect that cover could be completed by 5:00 pm

The regulatory authority of the NC Division of Waste Management does not extend to litter-related issues. However, residents are encouraged to contact the NC Department of Transportation Swat-A-Litterbug Program to report littering incidents by either e-mail at:

http://www.ncdot.org/doh/Operations/dp_chief_eng/roadside/Beautification/Litterbug/salform.html
or by calling the Customer Service Office at 1-877-DOT-4YOU (1-877-368-4968).

Comment No. 5: The landfill has an adverse impact on a low-income community and violates Civil Rights Act of 1964.

Response: The Civil Rights Act of 1964 (Pub.L. 88-352, 78 Stat. 241, enacted July 2, 1964) was a landmark piece of legislation in the United States that outlawed major forms of

discrimination against blacks and women, including racial segregation. It ended unequal application of voter registration requirements and racial segregation in schools, at the workplace and by facilities that served the general public ("public accommodations"). The comment does not appear to apply to the draft permit for landfill expansion. Further, impacts have not been defined nor has the affected community been identified.

Comment No. 6: Two major feeder springs which formed Cub Creek have now been blocked by Cell 2. Cells 7, 8, 9, 10 will be close to the third stream. Water from a spring is being discharged by a pipe into a holding pond. Testing wells have not been active. Thallium was found in groundwater. Water table is mounding underneath the cells. Fish kills have occurred in an adjacent pond.

Response: Two perennial streams, as identified in the 1995 Site Hydrogeological Report, converge with Cub Creek about 2.5 miles east of the site. From that location, Cub Creek flows eastward approximately 0.75 miles to its confluence with the Tar River. To ensure that the surface water quality of Cub Creek is not adversely impacted by the landfill operation, the landfill conducts semi-annual detection monitoring in accordance with the approved Water Quality Monitoring Plan.

Since 1997, the facility has only exceeded 2L Standards of Appendix I constituents twice. Elevated iron and manganese concentrations were reported in Cub Creek surface water samples collected by DWQ in 2007. At the request of DWQ, the NC SWS instructed the facility to add iron and manganese to the parameter list and concentrations of both constituents have exceeded the 2L Standards in upgradient and downgradient wells. The consultant has concluded the exceedances are the result of natural occurrences. If water quality samples test above 2L Standards, the Solid Waste Rules provide detailed procedures for corrective action that is protective of human health and the environment and would be implemented should monitoring results exceed the standards established by the NC DENR Division of Water Quality for groundwater. Such response actions would include sampling and testing of off-site groundwater wells.

Please see more detailed surface water monitoring information in the response to Comment 1.

Comment No. 7: Applicant has a history of violations in other landfills across the country.

Response: The landfill's compliance history in North Carolina has been investigated in accordance with the statute. Nothing in the report would indicate that the permit should not be issued.

Comment No. 8: (2 speakers). Contaminated soil was brought in from Wake County. PCB-contaminated soil from Ward Transformer site was disposed in Person County.

Response: Soil from the cleanup of the Ward Transformer site was sent to the landfill The soil was tested and the levels of PCB were below the regulatory threshold of 50 ppb and

thus was eligible for use at the landfill. According to the NC SWS Compliance and Enforcement Branch, there is no record of the landfill accepting PCB-contaminated waste.

Comment No. 9 (3 speakers). Person County does not need to needlessly increase landfill tonnage. Person County needs comprehensive and recycling programs so that we do not need the landfill.

Response: The location of solid waste facilities is approved through issuance of a franchise by the local government having jurisdiction over the site [NCGS 130A-294(b1)]. Documentation of the franchise award must be included in the application to the DWM for a landfill permit. DWM reviewed and confirmed that the application and documentation (i) complies with the franchise requirements, and (ii) complies with the location and siting requirements found in the NC Solid Waste Section Rules. The draft permit does not authorize changes to the daily volume limit (tons per day) established in the previous permit.

Comment No. 10: Cub Creek tributary is a rare plant site containing the state's only extant population of the globally rare and federal species of concern, the Virginia quillwort. Cub Creek aquatic habitat contains five rare mussel species.

Response: .1622(9) Water Supply Watersheds states that a new MSWLF unit or lateral expansion shall not be located in the critical area of a water supply watershed or in the watershed for a stream segment classified as WS-I. According to the NC Division of Water Quality, the site is not located in the watershed of a stream segment classified as WS-1. Creeks near the site (Cub Creek and its sources) have water quality designations of WS-IV NSW (Nutrient Sensitive Waters). Counties and municipalities with land use jurisdiction within water supply watersheds are required to implement ordinances that, at a minimum, meet the state's watershed management guidelines.

The proposed facility boundary, including buffer areas, will not change from the currently approved 479.69 acres permitted and identified in the Permit to Construct application.

Comment No. 11: Person County needs comprehensive recycling programs so that we do not need the landfill.

Response: Person County residents may pursue recycling programs and initiatives with their county and/or city solid waste leaders.

Comment No. 12: (2 speakers). Formaldehyde-tainted soil has been used as daily cover.

Response: The landfill accepted soils this past summer for cover, some of these soils had traces of formaldehyde. Republic did require testing of the material prior to accepting it and compared the results to health/risk-based limits. The levels of formaldehyde were well below these limits. After hearing about the formaldehyde from many complaint calls, the NC Solid Waste Section inquired as to what the facility was accepting. Republic shared the

testing results with the NC SWS. The levels were not considered hazardous and were deemed acceptable to use as cover soil.

Comment No. 13: Several speakers commented on the destruction of a large family graveyard.

Response: A letter from the NC Department of Cultural Resources, State Historic Preservation Office, stated that the landfill site "did not have sufficient density of materials to contribute to understanding of prehistory and that the modern cemetery does not have unusual features and contains a maximum of two graves which is insufficient for any sort of meaningful physical anthropological study." This letter may be found in the Site Application and Facility Plan dated August 2003 and revised February 2004.