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Subject	Puerto Rico Landfill Initiative	Location	Street Address: City: State: Zip Code:
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Issue

Most operating landfills in Puerto Rico have been in significant non-compliance with Federal and Commonwealth solid waste landfill regulations for over 12 years and are considered open dumps that present an ongoing risk to human health and the environment. The Solid Waste Management Authority (SWMA) and the Environmental Quality Board (EQB) have not been effective in correcting this non-compliance from a planning perspective (SWMA-lead) or a program implementation perspective (EQB-lead). In part, this has been attributable to the lack of an integrated Solid Waste Management Plan. In addition, Puerto Rico's Solid Waste Management Regulations have been amended and are no longer adequate to administer and enforce the approved program.

Current Status

Planning and Program Issues

Puerto Rico received program approval for its Municipal Solid Waste Landfill (MSWLF) permit program in 1994. The Puerto Rico Environmental Quality Board (EQB) is responsible for permitting the landfills and enforcing the landfill regulations. The Puerto Rico Solid Waste Management Authority (SWMA) is responsible for developing its solid waste management program and infrastructure (e.g., source reduction, reuse, recycling, disposal) and assisting the landfills. Most of PR's 32 landfills are owned and managed by the municipalities in which they are located.

SWMA:

The SWMA continues to develop the solid waste management infrastructure and over the years has produced several long-term solid waste management plans. However, administration changes and changes in perspectives related to possible thermal treatment technology scenarios has resulted in considerable inertia with respect to moving forward with a definitive solid waste management plan and associated technology. EPA has been working closely with SWMA over the years to improve its solid waste management infrastructure. In 2003, with the assistance of grant funds from EPA, SWMA performed a comprehensive island-wide waste characterization to better categorize their waste streams and to analyze which management options would be most effective for those wastestreams. Since that time, SWMA has completed several other studies and plans including a long-term source reduction/recycling plan, a landfill capacity study and an integrated solid waste management plan (called the Dynamic Itinerary for Infrastructure Projects, or DIIP). EPA drafted comments on the DIIP and sent the comments to the SWMA in September of 2007. The PR SWMA has held a series of public hearings on the Draft DIIP and solicited public comment in January of 2008. EPA subsequently met with the PR SWMA in February of 2008 to discuss the Draft DIIP. A response to EPA's comments on the DIIP were submitted by the SWMA in June of 2008. In March of 2008, EPA cosponsored a Recycling Conference in PR with SWMA which was very well attended. In addition, EPA is funding a RGI project, the Puerto Rico Material Exchange website, scheduled to launch late this year, which will facilitate materials reuse and waste diversion throughout the Commonwealth.

EQB:

Compliance with landfill regulations has remained a pressing problem for Puerto Rico and the failure of EQB to take adequate enforcement action has led Region 2 to use its authority under RCRA 7003 Imminent and Substantial Endangerment to Human Health and the Environment to order the closure of several critically substandard landfills, setting a national precedent.

In addition, the Region learned that EQB substantively modified its solid waste management regulations without the notification to EPA required under 40 CFR Part 239 (In addition to outlining the procedures for program approval, disapproval, and withdrawal, 40 CFR Part 239 also requires that approved states report to EPA any changes in their permitting program). EPA retained the services of a contractor to perform a comprehensive comparison of the revised regulations against the 1993 regulations upon which PR's program approval was based. The review revealed severe deficiencies in the revised regulations to the extent that, had the revised regulations been part of Puerto Rico's original Part 239 MSWLF permit program approval applications package, its MSWLF permit program would not have been considered adequate to receive program approval.

The consequences of failure to re-amend the regulations to be consistent with federal requirements could include withdrawal of program approval status which would result in EPA having direct enforcement authority for the 40 CFR Part 258 landfill requirements. However, EPA would not have permitting authority and consequently Puerto Rico would lose the flexibility afforded to approved states which allows construction of new landfills or expansion of existing ones in seismic zones (in which the entirety of Puerto Rico lies). However, EPA could possibly issue specific rules to accomplish this.

Although Region 2 has sent several letters to the Governor of Puerto Rico and EQB expressing concern regarding the regulatory changes and potential jeopardy of Puerto Rico's program approval status, EPA has not received a written response from any level or agency within the government. EPA drafted and

sent correspondence to EQB in September, 2007 identifying the changes and deficiencies in PR's regulations that need to be corrected. EQB has subsequently agreed to discuss updating the regulations with the EPA. Arrangements are being made to conduct conference calls with EQB and EPA staff to discuss the issue.

RCRA Enforcement:

EPA has negotiated and executed 4 RCRA 7003 Administrative Orders on Consent (AOC) to close the Florida, Vega Baja, Santa Isabel and Aguadilla landfills and has issued 2 Unilateral Administrative Orders against Respondents who would not sign the Florida and Vega Baja Consent Orders. Negotiations have been successfully completed with the municipalities of Toa Baja and Bayamon as well as Landfill Technologies concerning the closure of the Toa Baja Landfill.

Status of RCRA Section 7003 Order Issuance to Puerto Rico Landfills:

The initial Vega Baja proposed Order was sent to the Municipality on May 12, 2006. Subsequent negotiations resulted in the development of a final draft order completed the first week of February 2007. The Municipality of Vega Baja and AR Waste Disposal Enterprises indicated their intention to enter into this Order on Consent with EPA, encompassing the phased closure of the existing landfill cell(s) concurrent with construction of a new compliant cell. The agreement calls for the landfill to stop receiving solid waste no later than December 31, 2009 and complete final closure no later than May 1, 2010. A public notice announcing the AOC was published on March 7, 2007 and a public meeting was held in Vega Baja on March 20, 2007. No comments were received requiring modification of the proposed Order. The final Order was signed by Respondents Vega Baja and AR Waste Disposal Enterprises on May 3, 2007. The Consent Order was signed by the Regional Administrator on June 20, 2007. A unilateral RCRA 7003 Order was signed by the Regional Administrator on June 26, 2007 against the Puerto Rico Land Authority, the owner of the land on which the landfill is situated, due to their refusal to sign the AOC. The Consent Order became effective on July 5, 2007. The effective date of the Unilateral Order was July 23, 2007.

The initial Florida landfill proposed closure Order was sent to the Municipality on May 12, 2006. Subsequent negotiations resulted in the development of a final draft order completed the first week of February 2007. Florida indicated its intention to enter into this Order on Consent with EPA, encompassing the phased closure of the existing landfill cell(s). The Municipality has agreed to stop receiving solid waste no later than December 31, 2009 and complete final closure no later than April 1, 2010. A public notice announcing the AOC was published on March 7, 2007 and a public meeting was held in Florida on March 21, 2007. No comments were received requiring modification of the proposed Order. The Order was signed by Respondent Florida on May 9, 2007. The Consent Order was signed by the Regional Administrator on June 20, 2007. A unilateral RCRA 7003 Order was signed by the Regional Administrator on June 26, 2007 against Waste Disposal Management Inc., the former landfill operator, due to their refusal to sign the AOC. The Consent Order became effective on July 5, 2007. The effective date of the Unilateral Order was September 30, 2007.

The Santa Isabel proposed Order was mailed to Respondents on August 21, 2006. Subsequent negotiations resulted in the development of a final draft order completed in June 2007. The Municipality of Santa Isabel, and former operators LM Waste Service Corp. and VA Waste Management Corp. indicated their intention to enter into this Order on Consent with EPA. The Order calls for the landfill to stop receiving solid waste no later than February 1, 2010 and complete final closure no later than July 1, 2010. A public notice announcing the AOC was published on July 16, 2007 and a public meeting was held in Santa Isabel on August 3, 2007. No comments were received requiring modification of the proposed Order. The Order was transmitted to Respondents for signature on Monday, August 13, 2007. The Order was signed by the Regional Administrator on September 20, 2007. The Consent Order became effective on October 5, 2007.

The initial proposed Aguadilla Order was sent to Respondents on October 6, 2006. Several rounds of

negotiations resulted in development of a final Order on Consent with the Municipality and Landfill Technologies, the landfill operator. The Order called for the cessation of solid waste acceptance for disposal on August 31, 2007 (in compliance) and final closure of the landfill to be completed no later than April 1, 2010. A public meeting to allow comment on the Order was held on April 18, 2007. The public comment period ended on April 29, 2007. No comments were received requiring modification of the proposed Order. The final Order was sent to Respondents for signature on May 7, 2007. Both Respondent signed the Order on July 2, 2007. The Order was signed by the Regional Administrator on August 6, 2007., The Consent Order became effective on August 21, 2007.

The Order for closure of the Toa Baja Landfill was agreed to by Toa Baja, Bayamon and Landfill Technologies, Inc. and public noticed on June 23, 2008. A public meeting was held on the order on July 2, 2008. The order will be sent to respondents for signature in July after we review the comments raised at the public meeting as well as those received during the public comment period. Bayamon has reached an agreement with Toa Baja to pay a portion of the closure and will not be a party to the Order. We expect that the Regional Administrator will have the Order for his signature in August or early September. Negotiations for this Order took longer than originally anticipated due to the size of the landfill, the large number of Respondents and their complex interrelationships, requiring extensive internal negotiations amongst themselves to allocate responsibility under the proposed Order, the past perceived need to acquire a portion of the former Sabana Seca Naval Installation to facilitate closure, and a recent designation of a large portion of this former Naval facility, by the Puerto Rico Department of Natural Resources, as "critical and essential habitat" for a species of tree frog, Coqui llanero, that has necessitated changing previous conceptual designs for closure. The conceptual closure design now hinges upon the use of an area of available capacity in the southwestern portion of the existing landfill facility, commonly called the Hoyo de Minga and excludes the use of any portion of the areas subject to the critical essential habitat designation. Despite these complexities, negotiations were successfully completed. We received a letter dated May 23, 2008 from the Mayor of Toa Baja indicating his willingness to enter into the Order with EPA.

CAA Enforcement:

Approximately 23 landfills are believed to be subject to New Source Performance Standards (NSPS) and Emissions Guidelines (EGs). Some 12 landfills are believed to meet, or possibly meet, the criteria for Major Source. Of these, none have permits, 10 have submitted applications, and 2 have not submitted applications. The five RCRA Orders have incorporated compliance requirements for NSPS/EGs. In addition to this, civil referrals to the Department of Justice are projected for three additional landfills in FY 08. We are evaluating options for obtaining compliance at the remaining landfills.

Wetlands

Vega Baja's consultant has developed a wetlands jurisdictional determination (JD) for an adjacent parcel which the Municipality believes is critical to its continued future solid waste management. This determination has been submitted to the U.S. Army Corps of Engineers (Corps) for review but, given a recent decision by the U.S. Supreme Court, and the fact that the JD is not accompanied by a permit application, it is highly unlikely that the Corps will take any action to verify the accuracy of the JD. DEPP has followed-up with the Corps and the Corps has indicated that they may request a more detailed JD from Vega Baja before they inspect the site. Discussion with DEPP on October 2, 2006 indicate that it is highly unlikely that either EPA or the Corps will take any action regarding Vega Baja until jurisdictional issues raised by the Supreme Court are resolved.

Interest from Elected Officials

Resident Commissioner Fortuno and RA have discussed the seriousness of this problem.

Options & Recommendations

Continue the current plan to issue and finalize all 5 Orders on Consent for the most egregious open dumps and proceed unilaterally if unsuccessful.

Press the Governor's office to intervene with SWMA to ensure that funding is provided to the affected municipalities to help offset the cost of closure of the MSWLFs, and to push for specific implementation plans and timeframes which build on the "Dynamic Program Implementation Plan" (DIPP) with the Municipalities.

Follow-up on EPA's September 2007 correspondence to EQB concerning deficiencies in its current Solid Waste Regulations.

Withdraw program approval.

Background

In 1978, the Solid Waste Management Authority (SWMA) was created to address what was called then, "the critical problem related to the production of solid waste in Puerto Rico, which threatens to overwhelm the Commonwealth's economic and environmental resources."

In 1989, EQB found that only two existing landfills were "well-operated," while 80-88% were termed "a disaster." This led SWMA to undertake a review of solid waste management as well as strategies to pursue. Subsequently, 37 landfills were closed.

DECA-RCB has inspected all but two of the open dumps since March, 2003, and found widespread long-term non-compliance with municipal landfill requirements consistent with past EQB findings (78% found substantially out of compliance). Most significantly, none of the landfills had required liners or leachate controls, few had adequate placement of daily cover, and some of the landfills were situated in karst sink holes (risking direct groundwater contamination).

To summarize, the Puerto Rico MSWLF system's recent history:

- The 1991 Solid Waste Management Plan, issued in 1993, addressed the most significant problems by construction of modern, environmentally protective regional landfills and subsequent closure of most of the smaller landfills and all of the remaining environmentally high risk sites. In 1994, EPA accepted Puerto Rico's 1991/93 solid waste management plan;
- In 1994, EPA conducted an adequacy determination and found EQB's RCRA Subtitle D Solid Waste Management Program, covering permitting and enforcement, to be adequate, thereby constituting an approved program (as of August 17, 1994):
- In 1997, Puerto Rico amended their Solid Waste Management Regulations. EQB modified their lateral expansion definition, making it inconsistent with Federal regulations, and exempted municipalities and municipal landfills from complying with financial responsibility requirements, undermining the Federal landfill regulatory program and allowing continuing operation and expansion of poorly engineered landfills; and
- EQB has been unable to achieve compliance through their permitting and enforcement programs. Only some 60% of the active landfills are permitted. Orders were regularly issued against landfills by EQB (but not enforced) and never achieved compliance or collected penalties.

Section 4007 of the Resource Conservation and Recovery Act (RCRA) provides for EPA to review a state's plan from time to time, and if revisions are needed, to bring the plan into compliance with the minimum requirements in Section 4003 of RCRA. EPA may withdraw approval of the plan until such time as it becomes acceptable again. EPA may, in its discretion, consider use of other enforcement and program options, including RCRA 7003 and withdrawal of EPA's adequacy determination, as necessary, in order to remedy the solid waste situation in Puerto Rico.
