



April 1, 2009

Ms. Heidi Firstencel  
Department of the Army  
New York District, Corps of Engineers  
Upstate Regulatory Field Office  
1 Buffington St.  
Watervliet, NY 12189

**RE: CITY OF ALBANY RAPP ROAD LANDFILL EASTERN EXPANSION  
RESPONSE TO EPA COMMENTS  
CHA PROJECT NO. 12206**

Dear Heidi:

The following are our responses to comments on a letter by letter basis from the Public Notice (No. NAN-2005-01137-WFI) issued on January 20, 2009. Please note that responses to the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service comments were submitted to you in separate letters dated March 17, 2009 and March 20, 2009, respectively.

**COMMENT LETTER #1:**

On February 18, 2009 a letter was received from Mr. Bertil K. Schou, Albany, N.Y. His comments and concerns are summarized below:

**Comment #1:** *The Albany Landfill is located on a protected Principal Aquifer which is protected. 6 NYCRR 360-2.12 prohibits the siting of a landfill (or expansion over a primary water supply or principal aquifer. NYSDEC has stated that a double liner system is not adequate to protect the State's water resources.*

**Response:** In accordance with 360-2.12(2), the Department can allow expansion of landfills operating after November 4, 1992 in compliance with a Part 360 Permit in areas where unconsolidated deposits are less than 20 feet. In accordance with subparagraph

360-2.12(2)(ii), a minimum of 10 feet of unconsolidated deposits (with no permeability requirement) must exist; and this is the case within the Eastern Landfill Expansion area.

Additionally, Part 360 Regulations require a 5-foot separation between high groundwater elevations and the bottom of the landfill liner system. Based on historic water elevations at the site, the landfill expansion has been designed to maintain the minimum 5-foot separation.

The City has applied for a variance to allow landfilling beyond December 31, 1995 over an area identified as a principal aquifer. The proposed double liner system has proven to be successful in eliminating impacts from the landfill. The Hydrogeologic Report that was submitted with the Part 360 Permit Application provides a summary of the water quality associated with the existing Rapp Road Landfill and documents that there have been no adverse impacts to groundwater that are attributable to a failure of the liner at the Rapp Road Landfill.

**Comment #2:** *It has been documented that since the last expansion, there have been a number of liner leaks requiring significant repairs along with major long term pump failures resulting in the installation of a separate test well. The City continues to press their view that the potential groundwater contamination is inconsequential.*

**Response:** The proposed double liner system has proven to be successful in eliminating impacts from the Rapp Road Landfill. The Hydrogeologic Report that was submitted with the Part 360 Permit Application provides a summary of the water quality associated with the existing Landfill and documents that there have been no adverse impacts to groundwater that are attributable to a failure of the liner at the Rapp Road Landfill.

As noted by the comment, there have been documented pump failures associated with the secondary leachate collection layer and the Action Leakage Rates (ALR) for several cells have exceeded the regulatory limit. Corrective actions taken by the City have reduced the ALR below the regulatory limit. The City of Albany has implemented procedures to ensure immediate replacement of damaged pumps. As noted above, however, there has been no adverse impacts to groundwater that are attributable to the Rapp Road Landfill.

**Comment #3:** *Characteristics such as the presence of sizable wetlands, location of Rensselaer Lake tributaries, shallow water table (<2 feet from surface), presence of an existing leachate plume, and documentation of groundwater flow show the site is actually part of the Patroon Creek watershed and should be under federal jurisdiction.*

**Response:** It is assumed that USACE will take jurisdiction over the wetlands and the tributary flowing through the expansion area. The City has assumed so and submitted a Joint Application for Permit to address both federal and State permits.

**Comment #4:** *A research study published June 19, 2006, indicates that the leachate plume from the landfill has already reached the southern tributary of Rensselaer Lake, and/or runoff coming from one of the two culverts connecting with the landfill side.*

**Response:** Water quality issues that may be occurring in Lake Rensselaer cannot be directly attributable to the landfill. The southern tributary to Lake Rensselaer passes through a large wetland complex that has been ditched and fed by drain tiles located throughout this wetland. The resulting dewatering of the wetland accelerates the decomposition of organic material (peat) built up in the wetland. This in turn can provide a significant nutrient source to the stream that feeds the lake. High nutrient load results in poorer water quality and accelerated eutrophication.

However, based on a similar technical comment that was provided by NYSDEC in response to the original Part 360 Permit review, the Environmental Monitoring Plan has been revised to include monitoring of the surface water quality of the drainage ditch/unnamed tributary that flows to Rensselaer Lake. The revisions are documented in CHA's April 3, 2008 response letter to NYSDEC's comments, which included a revised version of the report and is included with the Part 360 documents previously provided for public review and available on the project web site ([capitalregionlandfill.com](http://capitalregionlandfill.com)).

**Comment #5:** *The City of Albany sold the water rights to Rensselaer Lake to the Water Authority as an emergency water supply. This action should have automatically reversed the DEC's decision to grant the variance.*

**Response:** The response to Comment 1 addresses specific conditions where a variance may be granted.



**Comment #6:** *As part of the last expansion environmental review the City touted an “Environmental Benefit of the last expansion if approved”- a feasibility study of the existing leachate plume - the result of which was a “DO NOTHING” alternative. How this could be considered an Environmental Benefit?*

**Response:** Pursuant to Special Condition 25 of the City’s 6 NYCRR Part 360 Permit (effective date 2/29/00) for the P-4 Expansion, the City conducted a Feasibility Study in February-July 2002 to determine if it was feasible to implement remediation of all or part of the groundwater plume associated with the unlined Greater Albany Landfill (GAL). The study concluded that no further action was necessary regarding the remediation of groundwater plume due to the fact that active collection and treatment was not expected to have overall long-term effectiveness and would only result in nominal improvements to the groundwater quality. The results of the study are documented in C.T. Male’s July 31, 2002 report entitled *Feasibility Study; Environmental Benefit Project for the P-4 Project*.

**Comment #7:** *Environmental concerns such as the impact on the Pine Bush Preserve which abuts the landfill and on a rare and endangered species – the Karner Blue Butterfly need to be addressed.*

**Response:** The environmental impacts and mitigation for the proposed project are thoroughly discussed throughout the Supplemental Draft Environmental Impact Statement (SDEIS). The project will impact approximately 8 acres of existing forested land that has been degraded by past agricultural activities and active draining via ditching and drain tiles. These impacts are being compensated through a comprehensive Habitat Plan discussed in SDEIS Section 2.8. This plan will provide much higher quality habitat than currently present and will help to advance important goals for the Albany Pine Bush Preserve.

The SDEIS included a survey of the habitat in and around the landfill (SDEIS Section 3.3). The proposed expansion site was not identified as critical habitat for the Karner blue butterfly. As noted in the SDEIS, approximately 7 acres of the expansion area is already developed and occupied by a detention basin, an existing building, roadways, staging areas for trucks, and road margins. The remaining area is dense overgrown brush and forest cover habitat that would not be used during any life cycle stage by the Karner blue butterfly.

**Comment #8:** *Fumes from the landfill have reached into homes and businesses for over a decade. The many reports of illnesses, (including by Thruway workers) and the impact on use of homes and yards demonstrates there has been a Negative Impact on the Health Safety and Welfare of the Public as a direct result of the operation of this landfill.*

**Response:** Odors from the landfill are being controlled by the collection of landfill gas. The City of Albany has implemented a number of measures to reduce off site odor impacts that have resulted in a significant decrease in the complaints to the City regarding odors from the landfill. These efforts are discussed in SDEIS Section 3.8.2.2, beginning on page 3-104 and restated here.

Several practices/policies have been instituted at the Albany Landfill in order to minimize impacts due to odor. These include placement of daily cover and placing impermeable capping on filled/closed areas. The landfill has also established an odor hotline for use in reporting any odor complaints. These complaints will be investigated and logged to provide insight into causes of specific odors and methods to better address them. As noted above, the City's efforts have resulted in a decrease in odor levels over the course of the air sampling period. There has also been a marked decrease in the number of reported odor complaints.

In addition to the above mentioned practices/policies, the City no longer accepts processed construction and demolition (C&D) debris and will not do so again in the future as long as the material continues to contain gypsum-based drywall. Processed C&D typically includes such materials as ground wood, brick, asphalt, concrete, roofing materials, and drywall, which has been approved by NYSDEC as ADC. Gypsum based drywall can generate hydrogen sulfide gas as it decomposes, resulting in potential odors to the surrounding area.

The decomposition process for processed C&D containing drywall will vary depending on a variety of conditions present at the actual location of the material. In general, it will take approximately 2 years for the material to decompose during which time the hydrogen sulfide gas can be produced. The City's recently enacted program of placing temporary

capping material over approximately 17 acres of un-capped landfill area has significantly reduced the potential for the release of landfill gas containing hydrogen sulfide from the landfill surface. Evidence of the success of this practice is shown in the significant reduction in the number of calls received concerning off-site odor impacts.

Further air testing may be appropriate if odor again becomes a problem, despite the measures taken above. The scope of future odor tests, frequency of testing and duration would be based on the odors being observed and potential sources. The objective of the testing would be to identify the odor source and determine the level of control necessary to mitigate the off-site odor issue. This information would then be provided to the City and its consultants to design a solution for the problem.

In the past, some of the odor problems have been a result of the ownership of the gas collection system. Until recently, NEO Albany, LLC owned major portions of the gas collection system, and operated the system with the view towards maximizing electricity production, not minimizing odors. The City now owns the entire gas collection system, so now control of odors can be better managed.

Odor causing constituents are a subset of the VOC and HAP emissions that were evaluated. These evaluations, which were included in the SDEIS Section 3.8, indicated that worst case concentrations of all contaminants, including odor causing contaminants, were below both short term (SGC) and annual (AGC) guideline concentrations that have been established by the state for protection of public health and the environment.

Nonetheless, the City of Albany included in the SDEIS a year-long ambient air quality and odor assessment, which was prepared by RTP Environmental Associates, Inc for the facility between May 2007 and January 2008. A copy of the report is provided in SDEIS Appendix I. That report concludes that air emissions from the landfill do not present a health risk.

**Comment #9:** *The Albany Landfill, Rensselaer Lake and the Patroon Creek are within a densely urbanized area, the long-term impacts from ground and surface water resources must not be allowed to be increased from further expansion.*

**Response:** The proposed double liner system has proven to be successful in eliminating impacts from the Rapp Road Landfill. The Hydrogeologic Report that was submitted with the Part 360 Permit Application provides a summary of the water quality associated with the existing Landfill and documents that there have been no adverse impacts to groundwater that are attributable to a failure of the liner at the Rapp Road Landfill.

**Comment #10:** *The City maintains it has been adequately looking for alternative sites, but has focused its attention on land it purchased in the Town of Coeymans which they have known for many years would not be a suitable site due to wetland concerns. It seems the revenue stream from the existing site is too desirable for real alternatives.*

**Response:** The Planning Unit has been very active in seeking a viable solution since the first solid waste management plan (SWMP) was adopted in 1992. The SWMP determined that a regional solid waste management facility should be identified for long term waste management. A siting study was undertaken that looked at several parcels. The Coeymans site was ultimately chosen as the preferred alternative. The Coeymans site was investigated in detail in 1994 but the process was bogged down by a number of lawsuits filed by the Town of Coeymans and others that prevented the City from preparing a complete permit application for the site. This delay resulted in the need to expand the landfill (P-4 Expansion) to meet the pressing need of dwindling landfill capacity. Meanwhile, the City continued to successfully defend these lawsuits. In 2004, with the lawsuits behind them and the P-4 expansion constructed, the Planning Unit's efforts and resources were once again refocused on the Coeymans site, consistent with the SWMP recommendations to construct a new landfill. These efforts, that included key agency meetings, revealed that the site could not be permitted in its entirety within the time frame of the P-4 expansion and that the potential for full use of the site from a regulatory perspective was questionable and dependent on the success of future mitigation. This was considered an unacceptable risk for the City due to the significant investment in resources and infrastructure to develop a new landfill. It should also be noted that the Coeymans site results in far greater wetland impacts than the proposed expansion and is therefore not a least damaging practicable alternative pursuant to the Section 404(b)(1) guidelines.

**Comment #11:** *Although the City had prepared quarterly groundwater reports, the consistent comments for increases in contaminants from test wells for the lined landfill expansions never consider the impacts of the landfill, the documented leaks, nor pump*



*failures. Significant increases are not attributed to impacts from the AIL, but rather a number of other factors.*

**Response:** There have been documented pump failures associated with the secondary leachate collection layer and the Action Leakage Rates (ALR) for several cells have exceeded the regulatory limit. Corrective actions taken by the City have reduced the ALR below the regulatory limit. The City of Albany has implemented procedures to ensure immediate replacement of damaged pumps. However, there have been no adverse impacts to groundwater that are attributable to the lined portions of the Rapp Road Landfill.

**Comment #12:** *Landfill space should be conserved for the eleven communities that make up the ANSWERS wasteshed that depend on this landfill. Instead the City chose to maximize revenues by lowering tipping fees significantly to obtain the maximum possible wastes along with the decision to bring in as much Alternative Daily Cover Material, C&D Wastes and Petroleum Contaminated Soils for additional revenues.*

**Response:** DEIS Section 2.3 provides extensive discussion and documentation of waste generated in the Capital Region Solid Waste Management Partnership (CRSWMP) wasteshed and brought to the Rapp Road landfill. This information shows that the landfill supports the population and businesses of the wasteshed. The City does not “import” garbage to balance the City’s budget. Although it is very difficult to determine the origins of all solid waste entering the landfill due to the use of private waste collection companies by most of the CRSWMP communities and by all the commercial and institutional uses, as demonstrated in SDEIS Section 2.3, the amount of waste arriving at the landfill is consistent with the population and workforce within CRSWMP.

**Comment #13:** This time, the expansion is going to sit on or just two feet from the water table (protected Principal Aquifer), will further drain into the tributaries that are part of the Patroon Creek Watershed, and will be just a few hundred feet from the southern end of Rensselaer Lake.

**Response:** These statements are incorrect and unfounded and represent a misunderstanding of the project elements. Part 360 Regulations require a 5-foot separation between high groundwater elevations and the bottom of the landfill liner system. Based on historic water elevations at the site, the landfill expansion has been



designed to maintain the minimum 5-foot separation. Runoff from the landfill cells does not drain into adjacent tributaries. It is collected internally as leachate and is treated and discharged to the City sewer system.

**Comment #14:** *The public use of the Pine Bush Preserve has been negatively impacted by fumes, blowing litter and is a visual nuisance. The landfill is the prominent feature visitors see when they hike just a short way into the Preserve.*

**Response:** Odors from the landfill are being controlled with the collection of landfill gas. The City of Albany has implemented a number of measures to reduce off site odor impacts that have resulted in a significant decrease in the complaints to the City regarding odors from the landfill.

Blowing wastes will be addressed through the construction of tall fencing to the north and east of the landfill expansion area. This will result in a significant reduction of trash blown into the Preserve.

Photosimulations for the locations within the Pine Bush Preserve are provided in SDEIS Appendix H. The location of these photosimulations was determined through a field visit with a representative from the Albany Pine Bush Preserve Commission where it was felt there would be the greatest potential sensitivity. Photosims 7 – 11 show the existing condition photograph (landfill currently visible), the approved P-4 expansion height and the proposed expansion height. The visual difference between the P-4 height and the proposed height is not significant. In photosimulations 12-15, the landfill is not visible in its current state nor will it be visible once the expansion is completed. In addition, please note that the Habitat Plan will turn the landfill surface, including the expansion area, into Pine Bush habitat.

## **COMMENT LETTER #2**

A letter dated February 22, 2009 was received from Sally Cummings, Albany, NY. Responses to her comments and concerns are as follows:

**Comment #15:** *Odors of the landfill have become increasingly stronger over the past 3 years. If the landfill expands there is fear that homes within proximity of the landfill (commenter's residence is approximately 2 miles from landfill) will be in an air and water polluted environment and noxious odors will make it impossible for people to live there.*

**Response:** See response to Comment #8. The City has implemented several important measures to reduce landfill gas emissions. Evidence of the success of this practice is shown in the significant reduction in the number of calls received concerning off-site odor impacts.

**Comment #16:** *Wells within neighborhoods surrounding the Landfill may be contaminated with heavy metals in the leachate. Many people water vegetable plants with water from those wells and there is concern that these plants which are used as food might be poisoned.*

**Response:** There are no residential wells located down-gradient of the landfill. Furthermore, the extensive groundwater monitoring has proven that there are no significant impacts associated with the lined portions of the landfill. Based on the historical monitoring data collected for the lined AIL, the existing double liner system that was used in the construction of the AIL has proven to be effective in eliminating impacts to groundwater. The proposed Eastern Expansion will also be constructed using a double liner system that will be as protective to groundwater as the existing AIL liner system and as a result, the Eastern Expansion is not expected to adversely impact groundwater quality.

**Comment #17:** *Groundwater in the area is connected with the aquifer that runs under the landfill and out to the Six Mile Waterworks, Patroon Creek and then the Hudson River. How was the City able to get a variance to pollute the aquifer?*

**Response:** The response to Comment 1 addresses specific conditions where a variance may be granted. The only plume of contamination in the vicinity of the landfill is thought to originate from the old unlined GAL. The GAL, like most landfills of its time was unlined and not subject to today's regulations. The important point is that groundwater data has shown that the lined portions of the landfill have not leaked and are performing as anticipated.

**Comment #18:** *The Pine Bush is home to the Karner blue butterfly which is an endangered species and other endangered amphibians. A new Discovery Center has been built with the intent for children to learn about the unique Pine Barrens environs, but the odor makes the area undesirable.*

**Response:** The response under Comment #7 indicates that the proposed expansion site was not identified as critical habitat for the Karner blue butterfly or any other listed species. Furthermore, the Habitat Plan is intended to greatly improve the habitat for important Pine Bush species, including the Karner blue butterfly.

The City of Albany has implemented a number of measures to reduce off site odor impacts that have resulted in a significant decrease in the complaints to the City regarding odors from the landfill (see response to Comment #8). The City maintains a complaint hotline to receive and respond to complaints regarding the landfill. Each complaint is investigated and any gas collection system issues identified are immediately corrected.

**Comment #19:** *The City should have been preparing for the closing of the landfill ever since they built the last expansion. Better recycling programs, more reuse of discarded usable items and composting should be implemented. More public education is needed to reduce the amount of waste deposited in the landfill and encourage recycling.*

**Response:** The policy of the City of Albany and the State of New York, as embodied in the Solid Waste Management Plan (SWMP) and the SWMP Modification, is to minimize waste requiring land disposal by maximizing waste reduction and recycling, to the extent economically practicable. The recent SWMP Modification identifies a number of measures that will be implemented in the short term to increase the level of recycling at commercial, industrial, and institutional waste generators. However, this anticipated increase in recycling will not eliminate the need for the landfill expansion.

As part of the SWMP Modification a modern recycling/waste to energy facility is under consideration. If such a facility is determined to be feasible and desirable as part of the new SWMP, it will take many years to have such a facility developed, and thus would not displace the need for the Eastern Expansion.

### **COMMENT LETTER #3**

Mr. John Wolcott, a member of Save the Pine Bush provided comments on December 15, 2008 and again on December 19, 2008, forwarded to USACE by Linda Becker via email. The following are an overview of those comments and our response.

**Comment #20:** *The City should have a zero waste management program with a recycling center and completely abandon their landfill in the Pine Bush. The responsibility of waste management should be returned to the local municipalities as it formerly was. Taking waste from outside the City should cease.*

**Response:** This alternative is not feasible at this time. While the concept of zero waste (equivalent to total waste reduction and recycling) has been suggested elsewhere before, it represents a significant shift from the current paradigm of solid waste management in the United States and has not yet been demonstrated to be fully effective. The policy of the City of Albany and the State of New York, as embodied in the SWMP and the SWMP Modification, is to minimize waste requiring land disposal by maximizing waste reduction and recycling, to the extent economically practicable. The comment regarding returning solid waste management responsibility to local municipalities and ceasing to take waste from outside the City is inconsistent with New York State policy which promoted the regionalization of solid waste management. The current arrangement provides economic, social and environmental benefits to both the City and the surrounding communities. As pointed out in section 5.5 of the SDEIS, there will be significant adverse economic consequences if the proposed landfill expansion is not approved.

**Comment #21:** *The original landfill destroyed a portion of “The Kings Highway” and the last expansion bisected the best example of an echeloned line of parabolic sand dunes in the Pine Bush. The proposed restoration only involves one dune. This one dune would be mediocre compared to the echeloned line.*

**Response:** The Habitat Plan is not intended as mitigation for the Albany Interim Landfill, the Wedge, or the P-4 Expansion, each of which incorporated substantial mitigation measures which benefitted the Pine Bush. Rather, the Habitat Plan is intended to take the existing conditions, and restore and enhance those conditions to the extent possible. The proposed restoration involves the restoration of multiple dune areas. First, in the existing mobile home park, a truncated dune along the east property line of the trailer park will be reconstructed and extended westward to again form the drainage divide between the two streams that used to traverse this trailer park area. Secondly, in the northwestern areas of the existing landfill, the truncated dunes currently present outside the margins of the perimeter haul roads at the toe of the landfill, will be reconstructed and extended to match grades and form dune systems that merge with the landfill slopes. Thirdly, on the landfill surface itself, low relief dunes will be constructed on the relatively level areas of the final landfill surface to establish habitat variability on this large restored surface.

**Comment #22:** *To the east of the landfill entrance road, where landfill facilities are proposed to be relocated, are areas sensitive to cultural resources. Flint chips were discovered in that area back in 1973. Testing in this area should be at frequent intervals and deeper than the first “sterile sub-soil” encountered because of the wind blown sand deposits. Furthermore, two early 18th century taverns were located nearby.*

**Response:** The City’s archaeological consultant’s work in this vicinity located a small precontact archeological site that will be avoided by the project. The methods used were standard NYAC-approved hand-excavated shovel test pits at a 50-foot interval. In the vicinity of the small precontact site, the interval was narrowed to a lesser interval to determine the bounds of the site. This is standard practice that has been approved by OPRHP. Deeper testing in this vicinity was not warranted since the precontact finds were not deeply buried. The eighteenth-century taverns were located nearby and were covered in the literature review. No evidence of the taverns or similar historic sites were encountered in the project area during Phase IB testing. Historic map overlays were used to determine the positions of map-documented structures and we found no evidence in that examination of a tavern *in* the project area. Cultural resources reports for the project area are provided in SDEIS Appendix J.

## **COMMENT LETTER #5**

An email was received on March 6, 2009 from Mr. Lynne Lyons that stressed the following concerns.

**Comment #23:** *The landfill is responsible for horrific toxic odors that are reducing the quality of life to residences surrounding the landfill. Although the City has received violations and ordered to clean it up, the odor is still very bad at times. These odors are also responsible for various health problems such as cancer, ulcerative colitis and emphysema. The landfill is also releasing pollutants into the air that one cannot smell that are extremely dangerous. The main reason for the bad odors is there is too much garbage taken in.*

**Response:** See response to Comment #8.

**Comment #24:** *The City should implement a zero waste policy and increase re-purposing and recycling of materials.*

**Response:** As explained in the response to Comment #19 zero waste is not a feasible option at this time.

## **COMMENT LETTER #6**

*Lynn Jackson, a volunteer for Save the Pine Bush, emailed on March 5, 2009*

**Comment #25:** *Requests that the Corps hold a public hearing in order allow people that are affected by the landfill expansion to speak. The proposed landfill expansion has many aspects including a rare ecosystem, water pollution, solid waste management, the fiscal health of the City, the odors from the landfill etc. Only by having a public hearing can all of these issues be brought out and discussed.*

**Response:** The City's applications have been publicly available for months, and the City held multiple meetings with members of the public, Common Council, the members of the Planning Unit and the Albany Pine Bush Preserve Commission to discuss the application, the Habitat Restoration Plan, the status of the Solid Waste Management Plan for the Planning Unit, and the results of air testing in the vicinity of the landfill.

Members of the public participated in those meetings, and Department Staff were available to answer questions at some of these meetings as well. The Department's applicable regulations, 6 NYCRR §§ 617.9(a)(3) and 621.7(b)(6) provide for a minimum public comment period of 30 days. The Notice of Completion/Notice of Public Hearing was issued by NYSDEC on October 6, 2008, and provided for an approximately 31 day public comment period, expiring on November 7, 2008. Despite the multiple meetings, the Department determined, via a revised Notice of Completion/Notice of Public Hearing, to extend the close of the public comment period November 7, 2008 to December 15, 2008. This is a total of 70 days for the public to review the application, well in excess of the Department's regulatory requirements, and more than reasonable to provide comments. A formal public hearing was held on December 3, 2008. Significant opportunity for public input has been provided. As evidence of this, the comments received for the Public Notice are nearly identical to those received during the SEQR comment period. It should also be noted that the Public Notice expired February 19, 2009 but was held open for an additional two weeks for those who requested additional time.

#### **COMMENT LETTER #7**

Barbara Warren, Executive Director of the Citizens Environmental Coalition responded to the public notice on February 5<sup>th</sup> and 18<sup>th</sup>, 2009 with the following concerns.

**Comment #26:** *The minimum factor of safety for bearing capacity at full load conditions under DEC regulations is 2.0 not 1.5. This proposed expansion violates numerous siting restrictions in DEC's landfill regulations, including the requirement for stable ground or foundation conditions.*

**Response:** The City has demonstrated that the site for the proposed expansion meets Part 360 stability requirements. Section 2.6.1 of the Engineering Report for the Eastern Landfill Expansion summarizes the stability analysis that was performed for the proposed project. Detailed stability calculations are included in Appendix B of the Engineering Report. The stability calculations include all input parameters used in the analysis. Based on the degree and height of the proposed landfill slopes, the resulting factors of safety meet the applicable requirements of 6 NYCRR Part 360.

## **COMMENT LETTER #8**

Volunteers from Save the Pine Bush, Bert Schou and Lynne Jackson submitted a letter addressing their concerns on March 5, 2009. The following is an overview of those concerns and our corresponding responses.

**Comment #27:** *According to the Hydrogeologic Investigation Report acetone, 2-butanone, 1,1-dichloroethene, benzene, chloroform and chloromethane and other chemicals were found in monitoring wells. More investigation of the source of these chemicals is needed.*

**Response:** It is recognized that relatively low concentrations of the referenced volatile organic compounds have been detected at very low concentrations on at least one occasion in a few monitoring wells. However, these compounds are not derived from the lined portion of the AIL. With the exception of acetone and 2-butanone, the Hydrogeologic Report does not indicate that the presence of the remaining chemicals is anomalous, as suggested by the comment by Save the Pine Bush, Inc. These compounds are addressed in additional detail below:

### ***Benzene and 1,1-Dichloroethene***

As outlined on Page 35 of the Hydrogeologic Report, the compounds benzene and 1,1-dichloroethene are considered contaminants of concern associated with the unlined Greater Albany Landfill, which is located immediately adjacent to the existing AIL. Due to the fact that these compounds have only been detected in well MW-9I, which is located immediately adjacent to the unlined GAL (currently closed), these compounds are considered attributable to the GAL. This is further supported by the fact that both of these compounds have not been detected in well cluster MW-12, which is located closer to the AIL waste mass. It should also be emphasized that over 10 years of monitoring data has been collected from the well clusters associated with the AIL. To date, these parameters have only been detected during one monitoring event (September 2003) and in only one monitoring well. There has been no pattern of detection or trend in concentration associated with benzene and 1,1-dichloroethene.

### ***Acetone and 2-Butanone***

The Hydrogeologic Report notes that both acetone and 2-butanone are extremely common laboratory contaminants. Based on the volume of environmental data that has been collected in association with the landfill monitoring wells for the past 10-15 years, it



is not uncommon to detect these compounds on routine occasions. However, these compounds have only been detected during one monitoring event and only in one monitoring well. Since there is no consistent pattern of detections or trends associated with these compounds in any of the AIL monitoring wells, the presence of both acetone and 2-butanone is not considered a result of impacts from the AIL. Rather, their presence is considered an artifact of the laboratory. It should also be noted that the level of acetone and 2-butanone was below groundwater quality standards during the one monitoring event in which they were detected.

### ***Chloroform and Chloromethane***

It is recognized that chloroform has been detected on a sporadic basis in a few monitoring wells as noted in the Hydrogeologic Report. Chloromethane has also been detected during one monitoring event and in only one monitoring well. However, historical sampling of the leachate associated with the AIL demonstrates that both chloroform and chloromethane are not considered contaminants of concern relative the AIL leachate. Page 34 of the Hydrogeologic Report clearly identifies the two potential sources of both chloroform and chloromethane. Both chloroform and chloromethane are disinfection byproducts that are often produced from the chlorination of drinking water sources. The addition of chlorine reacts with available organics within the water supply, which results in the formation of these compounds. The City routinely applies potable water to the roadways to minimize dust as a result of vehicle traffic. The potable water is spray applied via water truck or directly from on-site hydrants. Two of the hydrants are located immediately adjacent to well clusters MW-9 and MW-12, which are the only two well clusters which have exhibited detectable levels of chloroform and chloromethane. Both of these clusters are also located adjacent to site access roads. A second potential source of the elevated chloroform, especially in well MW-12S can also be a result of runoff from the recycling building. The recycling building is used for the storage of appliances containing refrigerants (e.g. refrigerators, air conditioners, etc.), which are also a source of chloroform. Wash waters from the building operations, combined with the application of potable water for dust suppression could have a cumulative effect on the level of chloroform in this well. With the exception of well MW-12S, chloroform has only been detected on a sporadic basis and at very low levels. It is only in well MW-12S (closer to the recycling building) where slightly higher levels of chloroform have been detected. Again, the presence of both chloroform and chloromethane are not considered attributable to the AIL.

**Comment #28:** *The City conducted a feasibility study to evaluate remediation of groundwater pollution and concluded that no remediation is needed, largely due to clean up costs. Yet the City claims that if remediation is needed, it will conduct a feasibility study. The City cannot have it both ways.*

**Response:** The Feasibility Study that was performed in early 2002 to evaluate the potential of implementing remediation of all or part of the groundwater plume was associated with the unlined Greater Albany Landfill (GAL) and not the lined Albany Interim Landfill (AIL). The results of the study are detailed in C.T. Male's July 31, 2002 report entitled *Feasibility Study; Environmental Benefit Project for the P-4 Project*. Although cost was considered in the recommendations presented in the Feasibility Study (as noted by the comment), the report concluded that the groundwater collection/remediation system would not be effective in the long-term. In addition, it was also concluded that the remediation system would result in only a nominal groundwater quality improvement. These factors, in addition to cost, were considered in evaluating the feasibility of remediating the groundwater impacts associated with the unlined GAL.

**Comment #29:** *Groundwater is at or near the surface in the expansion area. How can a landfill be approved when it is almost floating on top of the water?*

**Response:** See response to Comment #13.

**Comment #30:** *The landfill is at the headwaters of the Patroon Creek, which flows into the Hudson River. Leachate from the landfill is already polluting Rensselaer Lake and there are no test wells east of Rapp Road. Additionally, the ground water table where the expansion is proposed is at or near the surface. It is clear that the landfill leaks, polluting the groundwater. It is not possible to build a liner for a landfill that does not leak. Test wells should be installed east of Rapp Road to monitor the leachate coming from the landfill.*

**Response:** Impacts from the landfill to the aquifer and surface water have been thoroughly discussed in the responses to Comments #1, 5, 9, 11, and 15.

**Comment #31:** *Instead of the City conserving the landfill, they increased the amount of garbage brought in to increase revenues. This resulted in the current landfill filling up six and a half years early. There are much better ways to handle municipal solid waste, such as zero waste policy.*

**Response:** See response to Comments #12 and #19.

**Comment #32:** *Hundreds of complaints about the odor are documented. We are concerned for residents living with the stench in their yards and houses and are concerned about the health consequences.*

**Response:** See Response to Comment #8.

### **COMMENT LETTER #9**

Neil A. Gifford, Conservation Director of Albany Pine Bush, submitted a letter to Andy Marcuccio, NYSDEC, on December 8, 2008 which outlined concerns of the Albany Pine Bush Preserve Commission. This letter was forwarded to USACE in response to the issued Public Notice.

**Comment #33:** *The Restoration Plan does not replace lost acreage or easement for access at a 2:1 ratio of equal or greater habitat and/economic value.*

**Response:** Although the replacement of land for impacts to the Preserve has been a standard, it is only one possibility for mitigation. The project site consists of degraded habitat that is not currently nor has it been viable pine barrens for a long time. Drainage tiles placed in the adjacent wetlands suggest the area was farmed long ago. Although the 2002 Management Plan identifies this area for Full Protection, its primary purpose is to serve as a buffer as stated in the Management Plan. The surrounding lands have also been degraded by numerous activities including residential uses, utility ROW, and past farming. Significant restoration effort is required to bring these areas back to viable pine barrens and wetlands. The proposed habitat plan far exceeds any mitigation, restoration and enhancement proposal for past projects in the Preserve by any public or private entity. Furthermore, it represents the single greatest investment in the Preserve since its establishment.

What should also be considered is the fact that the City began discussions with NYSDEC, APBPC, the Nature Conservancy and others beginning in late 2005 on the identification of a suitable expansion option. As a result of this effort, the least environmentally damaging alternative was selected by the City at greater cost to the City resulting from the need to relocate buildings and facilities. Early consideration was given to the use of State lands to the east to accommodate the relocated buildings but concerns with the use of State land and the presence of wetland prompted the City to move towards the purchase of adjacent private properties to accommodate these facilities, thus increasing the costs further.

The City has made concessions at every critical point in this process, each time adding significant costs to the project. In addition, the City retained the services of a highly regarded and nationally respected ecological restoration firm with particular experience in pine barren communities to develop the proposed habitat plan. What this plan envisioned would likely never be realized without a project such as this. The cost to the environment is approximately 8 acres of previously disturbed lands. The cost to the City will amount to approximately \$15 million. It is difficult for the City to justify the purchase of additional lands or other costly mitigation when a comprehensive plan of this magnitude has been offered to address some significant needs in the Pine Bush.

Lastly, in 6-7 years the Eastern Expansion will be closed and the final phase of restoration will occur that will essentially convert the entire landfill into pine barrens. Although the City will retain ownership of the landfill for liability and maintenance purposes, it will become part of the preserve and thus essentially become a 100 acre donation of restored lands to the Preserve.

**Comment #34:** *A transfer, dedication or conveyance of an Article 49 NYS conservation easement is needed to prevent any future expansions to City-owned lands adjacent to the landfill site.*

**Response:** The City intends to use an Article 49 NYS Conservation Easement for City-owned lands adjacent to the landfill. Some of those lands are in other Towns and may be deeded over to the Albany Pine Bush Preserve Commission instead of using a conservation easement so that the City will no longer have to pay taxes on those lands.

**Comment #35:** *The SDEIS assertion that the project will have no significant impact on rare, threatened or endangered species is not supported by the information provided.*

**Response:** Surveys throughout the expansion and restoration areas were conducted to determine whether or not habitat for listed threatened and endangered species as well as species of greatest conservation need is present. Based on very detailed assessment of the vegetative communities within all areas proposed for impact or restoration, habitat for the species of concern is not present. Limited systematic surveys throughout the expansion and restoration areas were conducted and revealed no occurrences of listed species or species of greatest conservation need. Specific to federal species, documentation has been provided to the U.S. Fish and Wildlife Service (FWS) for review. We anticipate that federal issues will be resolved through consultation.

**Comment #36:** *Mitigation is needed to offset short-term impacts associated with the expansion and operation of the landfill*

**Response:** The short term impacts to wildlife are envisioned to be minor and likely not measurable. Both short term and permanent impacts (expansion area) are more than compensated for through the very large investment in restoration.

Temporal loss of wetland function will be minimal as a result of the project approach, phasing and mitigation plans. The first phase of the landfill expansion will avoid wetland impacts. During this phase, restoration projects will begin, most involving upland areas but also including preparation for vegetation and soil salvage from the expansion area. Phase 2 will involve most of the wetland restoration and enhancement work and will be carefully coordinated with landfill expansion timing. Therefore, wetland restoration will occur concurrently with landfill expansion into the wetlands. It is not intended to spread the wetland mitigation out over the 7-10 period. Later phases will focus on pine barrens restoration with the final phase involving the restoration of the then closed expansion area itself.

The plan to salvage the existing soils and existing root masses of trees from the forested wetland and upland areas to be impacted by the landfill expansion will result in a quick establishment of habitat within the restoration areas. Applied Ecological Service's (AES) experience in other similar projects has demonstrated that because many of the species of trees and shrubs, and ground story species present in the impact location are vigorous

root and stump sprouters, the forest canopy closure is often reached in 10-15 years, and because of the native species response from seed banks along with additional seeding and planting, ground story vegetation composition and structure can be re-established even more quickly. For these reasons, AES is confident that the USFWS statement on the temporal loss of habitat will not be significant. Typical logging operations in NY in forested wetlands of the same general type may be a better example of the temporal lag that may be associated with this restoration program element than attempting to compare the temporal loss to planting tree seedlings and waiting 100 years or so for forest development. In addition, data from the increment cored trees included with the on-site data collected as a part of the site characterization and restoration planning process in this location suggests that a majority of the red maples, silver maples, basswoods, and even oaks present in the forested wetland are less than 40 years of age. Less than a dozen are believed to be older than this. This would suggest that worse case a temporary canopy loss of ~ 40 years would result. The restoration plan intends and is designed (by salvaging existing root and stump sprouting trees, shrubs and soil seed banks) to reduce this temporary lag by more than half, to 15-20 years as a worse-case scenario.

In conclusion, the restoration of the trailer park and western end of the existing closed landfill to dry prairie, wetlands and riparian forested wetlands will occur within the first two phases of the Habitat Plan implementation timeline and will within a period of less than one growing season after construction begin to provide substantially more habitat values for wildlife, perhaps including special status species, than the existing degraded habitat conditions have provided for many years on end. The project is expected to have a very fast overall net benefit to wildlife and thus only minor temporal loss of wetland function. This wildlife response will be documented against baseline conditions contributed by data collected to data in the project area, and to be collected under the monitoring program as the project progresses.

**Comment #37:** *Restoration contractor qualifications should be identified. In addition, a Habitat Management Plan Team should be established, consisting of the Commission, NYSDEC, and the City's scientists/representatives to review and select habitat restoration contractors. A Habitat Management Plan coordinator should also be established to provide supervision during construction and post-construction monitoring.*

**Response:** The City of Albany has committed to only considering restoration contractors with a demonstrated experience in the successful restoration of Pine Bush habitat types.



Qualifications are provided in the Plan. Because of their unique qualifications and experience in this specific project the existing design team will oversee final design and may build the restoration project. Discussions on establishing the equivalent of a habitat management team to participate in the review are currently underway.

**Comment #38:** *The restoration plan should focus on restoring Karner blue butterfly habitat in all applicable upland areas. Closed canopy forest is only desirable as a buffer along the Thruway. Areas 10 and 4-B should be thinned and restored to pitch pine-scrub oak barrens. Eliminate the stepping stones in area 1-E.*

**Response:** The stepping stones have been eliminated and applicable upland areas with suitable dry to dry mesic soil settings. Closed canopy forest and dense shrub understory will be restored through thinning and prescribed burning resulting in valuable Karner blue butterfly habitat.

**Comment #39:** *One single, large Pine Barrens vernal pond is preferred to the two small bogs currently proposed.*

**Response:** The plans were revised to include a single Pine Barrens vernal pond with varying depths

**Comment #40:** *The City should be required to identify bonding or establish an escrow to ensure funds will be available for the Habitat Plan.*

**Response:** The City will provide sureties to the federal and state agencies as a part of permit approvals, to demonstrate that funding for the habitat plan is available and secure during the entire life of the project remedial and long term maintenance phases of the projects. Contractors involved in construction will also likely be required to provide sureties to secure their participation and performance in the restoration and implementation of the Habitat Plan.

**Comment #41:** *The Habitat Management Plan Team should also oversee the final detailed plans. These plans need to clarify all logistical and scientific details necessary to successfully implement and maintain the restoration work.*

**Response:** The habitat management plan team is anticipated to be directly involved in the final detail plan review to ensure successful implementation, management and monitoring occurs through the life of the project.

**Comment #42:** *The Habitat Management Plan should include an invasive species management plan and should identify short and long-term management strategies.*

**Response:** A separate document entitled “Integrated Pest and Invasive Species Management Plan” has been developed and provided to the agencies for review.

**Comment #43:** *All plant species used to implement the plan must be native to the Pine Bush and all plant material must originate from northeastern genetic stock, preferably within a 50 mile radius of the Preserve.*

**Response:** The design team’s stated goal in the plan is to have all native plant species origin be the Pine Bush preserve, except for cover crops (e.g. barley, oats, annual rye grass, smartweed, etc) which are short lived and used for initial soil stabilization

**Comment #44:** *The Habitat Plan should address how the existing residents and infrastructure of the mobile home park including the life estate will impact the Restoration Plan*

**Response:** The trailers are permitted to remain in the mobile home park until 2015, when the park must be entirely vacated. During the extended stay within the park, the City has the right to relocate the trailers as needed to accommodate use of the park with landfill and restoration activities. Relocated trailers are shown on the plans. Restoration plans have been designed around the life estate and have assumed that the parcel will remain.

**Comment #45:** *Mitigation should be provided for the impact to the dune within the expansion area*

**Response:** The restoration plan includes dune restoration in four specific locations in the proposed restoration project. The dune expansions and restoration will more than compensate on an acreage basis for the loss of the remnant slope. Soils and plant



materials from the dune slope will be salvaged and used in restoration of the proposed dunes in the restoration plan.

**Comment #46:** *The City's long term responsibilities for the closed landfill should be identified*

**Response:** The city has a 30 year ground water monitoring and annual reporting requirement and is perpetually responsible for slope failures and other structural maintenance needs on the closed landfill. This land will remain City property and the City will maintain responsibility

**Comment #47:** *The proposed expansion will have impacts on Preserve visitors. Final grades will be visible from Karner Barrens East, Karner Barrens West, Kings Road Barrens, Rapp Road Barrens, and Blueberry Hill sections of the Preserve. Currently, the landfill is only visible from Karner Barrens East. Landfill odors also remain a concern.*

**Response:** Photosimulations for the locations within the Pine Bush Preserve are provided in SDEIS Appendix H. The location of these photosimulations was determined through a field visit with a representative from the Albany Pine Bush Preserve Commission where it was felt there would be the greatest potential sensitivity. Photosims 7 – 11 show the existing condition photograph (landfill currently visible), the approved P-4 expansion height and the proposed expansion height. The visual difference between the P-4 height and the proposed height is not significant. In photosimulations 12-15, the landfill is not visible in its current state nor will it be visible once the expansion is completed. In addition, please note that the Habitat Plan will turn the landfill surface, including the expansion area, into Pine Bush habitat.

The City's efforts to date to control odors resulted in far fewer and much less intensive odor problems. Efforts to control off site odor impacts from the landfill will continue. The implementation of daily monitoring and bi-monthly tuning of the gas collection system will ensure that the landfill gas collection system is operating effectively and identifies any problems with the system. Problems identified will continue to be addressed immediately.

**Comment #48:** *The tipping fee provided to the Commission as mitigation has fluctuated over the years. This rate needs to be tied to the landfill's gross receipts. A rate of 3-4% is a reasonable request.*

**Response:** The proposed Habitat Plan represents the largest single investment in the preserve by any municipality or private entity. This is a very significant and costly project that will have far reaching benefits. To put this in perspective, using a total estimated capacity of 2,150,282 tons for the Eastern Expansion and a cost for the Habitat Plan of \$15,000,000 (low end of range), the equivalent tipping fee would be \$6.98 per ton. The current tipping fee donated to the Preserve is \$0.75/ton.

Thank you for your consideration of our responses. Should you have any questions, please contact me at (518) 453-4505 or [ceinstein@cha-llp.com](mailto:ceinstein@cha-llp.com).

Very truly yours,

**CLOUGH HARBOUR & ASSOCIATES, LLP**



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