Attleboro Landfill, Inc. Responses to Public Comments Received On the Attleboro Landfill Conceptual Closure Project

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Responsiveness Summary
for **Public Comments Received** on the **Attleboro Landfill**
Conceptual Closure Plan

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Responsiveness Summary
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This document presents responses to the comments submitted during the public comment period on the Attleboro Landfill Conceptual Closure Plan. Enviro-Cycle, LLC , on behalf of Attleboro Landfill, Inc. (ALI) conducted a community informational meeting on March 10, 2015, in Norton to begin the public comment period on the Attleboro Landfill Conceptual Closure Plan. At this meeting, Enviro-Cycle, LLC , presented information on the proposal and answered questions; staff from the Massachusetts Department of Environmental Protection (MassDEP) participated and presented information on MassDEP's role, regulations, and policies. Comments were submitted to the MassDEP over the course of a 30 day public comment period, which ran from March 10, 2015 to April 10, 2015.

Background

The Attleboro Landfill Conceptual Closure Plan (Conceptual Proposal) was proposed to bring the Phase B portion of the Landfill into compliance with a proper cap, closure, monitoring and maintenance plan under the Massachusetts Solid Waste Management Regulations and Policy. The Phase B portion of the Attleboro landfill, approximately 9.9 acres in size is currently owned by Attleboro Landfill, Inc. (ALI). Between the early 1940s and 1975 it was operated by the City of Attleboro as the City's landfill. From 1975 through 1995 ALI operated a landfill on the Phase A portion of the property. ALI completed landfill closure activities for the Phase A portion in 2002. ALI is under a MassDEP enforcement order issued in 2005 to complete the closure of Phase B. ALI does not have the financial resources to complete the landfill closure actions and/or associated monitoring and maintenance activities for both the Phase A and Phase B areas. ALI and their consultant Enviro-Cycle LLC have submitted conceptual proposals to the MassDEP proposing a means to generate revenue through the use of grading and shaping materials to reshape the site to meet the regulatory requirements for a proper landfill cap and closure plan.

The original proposal to MassDEP consisted of regrading the Phase B area using Re-Crete™. ReCrete™ is a lightweight low strength concrete made by using construction and demolition (C&D) fines mixed with cement. Construction and Demolition debris – known as C&D fines are recycled small particles (less than 3" in any dimension) of construction and demolition debris that pass through screening equipment and conveyor systems at recycling facilities. They consist largely of wood, plaster, unrecyclable plastics, sheetrock, ceramics, metal, brick and concrete remnants and soils particles and are tested for a wide list of constituents to ensure they are acceptable for reuse as grading and shaping at Massachusetts landfills. Several landfills in the state of Massachusetts and throughout the country have been properly closed using a mixture of C&D fines and soil.

In the original proposal to MassDEP the ReCrete™ layer was intended to be covered with sand and loam without a standard final cover system. MassDEP had concerns regarding the potential for cracking since Re-Crete™ is a concrete made with recycled materials. Since no guarantees could be made that

previously buried waste would not settle slightly and cause cracking, the proposal was revised to include the placement of a standard landfill cover over the ReCrete™ to include a gas vent layer and the installation of a standard high density polyethylene liner over the top of the sand; followed by a sand drainage layer and a loam layer. In short, the revision to the original proposal includes constructing a standard landfill cap above the existing waste and the Re-Crete™.

MassDEP reviewed the revised conceptual plan and believed the materials to be used were acceptable for shaping and grading while generating revenue to complete the closure and capping of the landfill and establishing a post closure monitoring and maintenance fund. MassDEP requested the conceptual plan be presented to the community for feedback. In February 2015 MassDEP developed a fact sheet to highlight the major points contained in the conceptual proposal in an effort to present clear and concise information. The fact sheet also provided the site history of compliance issues at the landfill.

A public meeting was held and a public comment period was provided from March 10th through April 10th, 2015 to present the conceptual plan to the community and obtain feedback. Based on comments received, the plan has been modified and is proceeding to the next regulatory step where more detailed information is required as part of a corrective action design permitting process.

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This Responsiveness Summary provides responses to comments received and are grouped by categories as follows:

- Project Changes in Response to Public Comments
- The use of ReCrete™
- Landfill Conditions and on-site Contamination
- Traffic Control Plan, Roads, and Transportation
- Miscellaneous Comments

Project Changes in Response to Public Comments

To be responsive to a majority of the public comments received the Conceptual Proposal has been modified significantly. Major changes involve having the ReCrete™ mixture mixed at an off-site solid waste handling facility rather than at the Attleboro landfill property; another significant change involves the change in traffic routes and transportation considerations. Enviro-cycle has decided to work with New Bedford Waste Services (NBWS), rather than New England Recycling. NBWS operates solid waste transfer and recycling facilities in New Bedford, Rochester and Sandwich, Massachusetts and have the resources to supply the construction and demolition materials (C&D Fines) for this project.

Comments and feedback received both during and after the public information meetings and public comment period fall into 4 key areas: operator/contractor; engineering/environmental consultant; material handling; and traffic control. Please refer to the Traffic Control Plan for details associated with

traffic.

Operator/Contractor

At the March 10th, 2015 public meeting it was announced that G. Lopes Construction Inc. would serve as the site operator and on-site contractor. Since that time this company has found other outlets for its material and will not be involved in this project. C.J. Mabardy, Inc. (CJM) of Cambridge, MA will be the on-site contractor both for daily placement and grading of material and for constructing the final landfill cap. CJM has been in the construction business since 1972 and has extensive construction experience with commercial, industrial, and educational facilities; airport construction; roadway construction; and landfill closure construction. In addition, as a construction contractor they have an excellent bond rating.

Engineering/Environmental Consultant

It was noted that Robert Cummings of Enviro-Cycle will be unable to provide independent engineering services once the project moves from the conceptual stage to the permitting phase. If the project receives conceptual approval and an Administrative Consent Order is issued, Richard R. DeBenedictis, P.E. will be the engineer of record and oversee groundwater assessment studies, final capping system design, construction oversight, and other engineering and environmental services. Mr. DeBenedictis is familiar with the site and worked as the engineer on the Phase A portion of the site between 1975 and 1990. All documents submitted to the MassDEP during the permitting stage of the project are required to be signed and sealed by a Massachusetts Professional Engineer.

Material Handling

In response to the concerns raised about potential dust generation during transport, mixing, and placement of the Re-Crete™, the plan has been modified to have all mixing of Re-Crete™ at the NBWS New Bedford facility. The mixed Re-Crete™ will be slurry with no dust potential. This approach completely eliminates any concern for dust generation during transport or on-site mixing of Re-Crete™. Qualified people will perform this task. MassDEP regulations require the solid waste handling facility inspectors to be trained to identify hazardous waste, suspect asbestos containing material and recyclable waste to prevent these materials from becoming a component of the C&D fines. In addition, the corrective action design permit application will include a quality assurance plan which will include the collection of random sample(s) of the C&D fines prior to mixing at the NBWS recycling facility. In addition NBWS will completely control all traffic to and from the site.

Traffic Control Plan

In response to comments on truck management, the proponent has produced a separate Traffic Control Plan with revised routes. Two suitable traffic routes have been identified; one approaching the site on Peckham Street from the west on a route that would go through Attleboro (Attleboro Route) and the other approaching the site on Peckham Street from the east on a route that would go through Norton (Norton Route). Based on feedback from both communities, the Attleboro route will be used for

incoming deliveries and the Norton route for outgoing empty trucks. Since Re-Crete™ is manufactured with a combination of cement and recycled materials, it will be mixed at NBWS. The wet mixture will be trucked to the site using a standard leak proof tractor trailer dump combination. The tractor trailer trucks can carry a payload of 35 tons per trailer. Based on the transport of between 500 and 600 tons per day of material it is expected that there will be between 15 and 18 truck trips per day (trucks seldom carry exactly 35 tons so the precise number of trucks is an estimate). This represents far fewer trucks involved than with other ALI landfill closure proposals. Truck deliveries will only occur from Monday to Friday. There will be no weekend deliveries. Truck deliveries will be scheduled to avoid early morning hours and hours during school bus routes. The community will have another opportunity to comment on the Traffic Control Plan during the public comment period for the Corrective Action Design permit when issued. Please refer to the Traffic Control Plan for additional detail.

Volume of Materials and Mitigation Fund

The Conceptual Alternative Closure Plan presented at the March 10th pubic meeting included the minimum amount of material, 201,000 cubic yards, to achieve the 5% grade to comply with Solid waste regulations final covers system requirements. . This quantity allows sufficient funds to be generated to pay for final capping of the Phase B area and maintenance and monitoring of the entire landfill after closure. This minimum is adjusted upward slightly to 231,000 cubic yards which allows the project to pay for the cost of additional mitigation funds for the City of Attleboro, and the Town of Norton to cover road reconstruction work requested by both communities. Please refer to the Traffic Control Plan for additional detail.

The Use of Recrete™ Material

Many comments were submitted on the ReCrete™ mixture that is proposed to be used. Many stated it was an experimental product. Other comments noted the material has never been used to cap a landfill. Re-Crete™ will be used for grading and shaping and will not be used as the final capping material. As previously stated the Re-Crete™ material and a standard landfill capping system will be constructed. MassDEP has reviewed the ReCrete™ product and has determined it is suitable as grading and shaping material and not as the final impervious layer of the landfill. Re-Crete is a concrete made with recycled aggregates (C&D fines). The mixing and placing of concrete and expected behavior is not experimental; rather, it is well-established having been used as a building material for well over 100 years. The use of C&D fines as grading and shaping material is not experimental. Several landfills in the state of Massachusetts and throughout the country have been properly closed using a mixture of C&D fines and soil and performance can be predicted.

Some commenters suggested the use of greener quality of material for grading and shaping. The shaping and grading material serves two purposes: 1) to be able to create a surface to support a standard landfill capping system; and 2) to generate the revenue to pay for the capping system, long-term monitoring and maintenance funds and community mitigation benefits requested as part of the project. There are no financially viable materials that would be accepted and used that would be more environmentally friendly than concrete made with recycled building materials.

Many comments were made about gypsum containing a known carcinogen called Crystalline Silica, and some noted that gypsum was a significant component of the C&D fines that originate from wallboard. Please note when the term "significant component" was used in the presentation of the proposal, it was meant to refer to the fact that the gypsum/wallboard content is normally greater than 5% and therefore significant; however it was not meant to indicate that C&D fines to be used would be primarily (usually meaning 90% or greater) gypsum/wall board. C&D fines are not primarily crushed wallboard.

There was a comment noted that there was no indication that C&D Fines will be tested as to the percentage of Crystalline Silica in the ground gypsum. Gypsum wallboard contains a small amount of crystalline silica. There will be no exposure to crystalline silica at the landfill and MassDEP regulations and policy govern testing of C&D fines at recycling facilities. (Crystalline Silica is a common mineral found in the earth's crust. It occurs primarily as quartz and is a major component of sand, clay and stone materials.)

A comment noted that gypsum materials have been banned at many landfills, and where still allowed, the cost is prohibitive. The material coming to the landfill will be C&D fines which contain less than 5% of crushed wallboard. MassDEP has not banned the disposal of non-recyclable gypsum from landfills. C & D recycling facilities spend significant effort to remove wallboard from incoming waste streams due to the negative environmental effects of gypsum from drywall materials causes when reused or disposed of in landfills. Some landfills do not accept C&D fines or accept limited quantities of C&D fines because of its potential to produce hydrogen sulfide gas if not properly managed. When mixed with cement to form concrete, the gypsum is chemically bound and stabilized. Extensive leaching tests have been conducted on Re-Crete™ and it does not present a source of contamination.

The following is a Table from a report prepared by DSM Environmental Services, Inc. entitled '2007 Construction & Demolition Debris Industry Study for the Massachusetts Department of Environmental Protection FINAL REPORT May 16, 2008'. The table illustrates percentages of various materials after sorting and screening.

Characterization of C&D Waste - Literature Review and DSM Data (percent by weight)

Study: / *Year:*	EPA (1997)	Florida (2003)	DSWA (2006 - 07)	Wisconsin (2003)	California (2005)	King Cty, WA (2002)	Ottawa (2005)
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Concrete (and mixed rubble)	40–50	32.4	11.7	12.1	10.8	2.3	9
Wood	20–30	14.8	30.1	26.3	20.2	45.3	26
Drywall	5–15	11.7		4.1			10
Clean drywall			*9.8*		*4.5*	*2.6*	
Painted/demo drywall			(1)		*3.6*	*4.5*	
Roofing			15.3	22.1		11	
Asphalt roofing	*1–10*	*6.1*	(2)	(2)	*4.4*		*12*
Metals	1–5	5.4	2.9	3.9	4	10.9	9
Bricks	1–5		(3)	(3)	(3)	(3)	3
Plastics	1–5		1.6		0.8	3.1	

(1) Painted /demo drywall included in mixed C&D residues and not separately counted

(2) Asphalt roofing included in Roofing
(3) Included in concrete

One commenter noted that other landfills will no longer be accepting C& D materials and asked why ALI was allowed to reopen the landfill to accept these types of materials. The other landfills in MA are closing when they reach full capacity and may accept these materials until such time. The ALI Landfill is not being reopened to accept materials; rather the materials are being used as shaping and grading material for closing.

Most demolition contractors recycle brick and concrete separate from the rest of C&D material and generally there is very little brick and concrete in the incoming stream. Metals are recycled, through use of magnetic separation systems and by manual sorting. Untreated wood is normally removed manually after shredding. The C&D fines that result from the sorting of the incoming stream are similar to the parent stream with the decreases noted. Wood is generally between 15 and 30% of the fines; plastics and minor metals between 1 and 8%; drywall between 5 and 15%; ceramics between 1 and 10%; and other fine aggregates (small concrete and brick remnants and soil particles) between 20 and 40%. Paper coming from the drywall coverings is present in de minims amounts.

NBWS regularly conducts random sampling of the C& D fines it produces and sends those samples to certified laboratories for analysis. These sampling reports are submitted to the MassDEP on a regular basis to document the quality of the material produced. NBWS has a program to remove as much wallboard from its process as possible, thereby minimizing the amount of wallboard/gypsum that ends up in the C&D fines. A chemical measurement that will indicate the amount of gypsum in C&D fines is sulfate. The chemical formula for gypsum is $Ca(SO_4)•2(H2O)$; sulfate (SO_4) comprises 46% of a gypsum molecule by weight. The results of laboratory analysis for NBWS C&D fines for seven months of 2015 show sulfate ranging from 0.17 % to 1.1 % with an average of 0.43 % which corresponds to a gypsum content of 0.4 % to 2.4 % with an average of 0.93 %. This shows that the NBWS fines gypsum content is on the low side of expected averages indicating that they are doing a good job of removing wallboard from their waste stream.

As part of the development of Re-Crete™, chemical and physical testing was conducted to determine how the material behaved. The data indicates the material behaves the same as concrete. Two concerns raised by the public relate to how the finished product prevents the formation of hydrogen sulfide (an odor-causing gas) and whether the constituents contained in the C&D fines would leach from the Re-Crete™. With respect to the formation of hydrogen sulfide, extensive work conducted by the University of Florida on C&D fines determined that in order for the bacteria that decomposes the gypsum and releases the hydrogen sulfide gas to exist, they need an acid environment, an ample supply of water and other organic material. Concrete is alkaline (has a pH between 7 and 14) and is relatively impervious preventing water from traveling through the matrix. In addition, any organic material in the feedstock is physically bound with a concrete mixture and not available for bacterial action. Based on the pure characteristics of concrete the production of hydrogen sulfide gas is not expected. Testing conducted on the Re-Crete™ material showed a lack of hydrogen sulfide production which confirmed the theoretical hypotheses. Extensive leaching testing conducted on the Re-Crete™ material using USEPA

Methods showed that the constituents contained in the C&D fines do not leach and the material is not hazardous.

A request was made for a more detailed evaluation of the logistical considerations of mixing and grading with Re-Crete™. If Re-Crete™ takes a day or two to cure, it was suggested that Re-Crete™ not be spread in wet weather. Another asked if back blading at the end provides for the best cohesion or would back blading in between each layer provide a rougher surface and better overall cohesion. In response, the use of concrete blankets or canvas tarps will be employed during the wet and cold weather if necessary. This will allow the material to cure sufficiently before additional lifts are placed over it. Each layer that is placed is back bladed as part of the process.

There is no indication that the C&D Fines will be tested on site for hazardous materials. The NBWS has testing requirements in place at its facility. As the project moves forward, all activities at the landfill site will be overseen by Richard R. DeBenedictis, P.E.

According to the project proposal, a commenter noted Re-Crete™ can be used to reclaim areas where excavation for sand, gravel and/or rock has created significant depressions in the ground surface. Please note there is no depression at ALI that requires filling. The statement was inserted as an example of another way the material can be used.

The conceptual plan noted Enviro-Cycle tested their product in cylinders and revealed that the product posed no environmental threats. It was noted that crystalline silica and asbestos were not tested for. In response please note the cylinders were standard size cylinders made when testing concrete for compressive strength. MassDEP requires C&D recycling facilities to test the C&D fines for asbestos as part of their permit.

The proponent stated that the Re-Crete™ materials are being used in other parts of the country. There was a request for a video or photographic documentation to view how effective the water method is for grading and shaping the product, including wet weather and fair weather applications. The materials are not presently being used. California has approved Re-Crete™ for use in mining and mineral extraction activities; however, California does not regulate the reuse of C&D fines therefore it does not present a favorable economic condition for Re-Crete at this time. Re-Crete is too expensive compared to other C&D fines management practices. In Pennsylvania, permits to restore a 700 acre coal mine will be issued in February 2017.

Landfill Conditions and On-site Contamination

Commenters were interested in existing conditions at the landfill including information on its topography and elevation. The area to be capped, approximately 9.9 acres is relatively flat with topography undulating from elevation 108 to 110. The land needs to be sloped to meet the requirements for a landfill capping system. When the City left the site, the grading was very irregular, leaving spots for water to pond and percolate through the previously placed waste material. In the late 1980s, the MassDEP required the area to be regraded in order to eliminate the ponded areas.

Someone requested the location of the onsite well and asked if it was free of contaminants. The existing well is located adjacent to 179 Peckham Street. The last time it was tested was 0n April 29, 1993. At that time, the only parameters exceeding drinking water parameters were copper at 8.7 mg/l(1.3 mg/l MCL.), lead at 0.039 mg/l (0.015 mg/l MCL) and manganese 1.33 mg/l (0.05 mg/l SMCL). The existing well is not intended for use in any way.

Some commenters believe the Phase B area is benign. This is not an accurate characterization. There is a continued threat and potential for releases of leachate due to the landfill's history as an unlined municipal solid waste landfill. Test pits conducted in the area and witnessed by MassDEP representatives show waste buried throughout the Phase B area. The proper closure of landfills is viewed as an environmental benefit due to the capping and long term maintenance and monitoring programs associated with proper closure. The Phase B portion must be properly capped, closed, and monitored to be protective of human health and the environment.

Commenters suggested that Phase B has been "dormant" for 40+ years and as a result has become overgrown and is now a prime hiking area with mature trees. Some commenters may have incorrectly identified the Phase B area with a former cover material borrow area located approximately 1500 feet southerly of the southerly Phase B limit in the general direction of Maple Street. For clarification purposes please note the Phase B area is located approximately 2300 feet Northerly of Maple Street and Slater Street and approximately 2000 feet from the property at 39 Maple Street. At its closest point, the high tension line is 1100 feet from the Phase B area, the point on the power line being 2200 feet North of Maple Street.

Someone asked about how much tree and old growth (40 +year) vegetation would be removed. Please note there is no plan to remove mature trees.

Others asked if any site preparation work is needed before the delivery of the ReCrete™ material. There is minimal earthmoving necessary to prepare for landfill capping operations.

Some people stated the area is not zoned for landfill activities. There is no proposal to re-open the landfill. All activities being proposed are directly related to closure in accordance with MassDEP solid waste regulations. Comparison of aerial photos from 1978 to current are consistent with statements made that no operations have been conducted after 1975. All material buried occurred prior to 1975.

Some commenters noted concerns that the Phase A area may be leaching contaminants and hazardous materials into the adjacent Shpack Superfund Site. The existing Phase A has been closed and is stable and groundwater monitoring has been conducted in order to determine if there are any public health concerns. The proposed closure project will generate the funds to complete a Comprehensive Site Assessment of the existing landfill adding to knowledge of the site conditions and providing for ongoing post-closure monitoring. This study will identify whether there is any effect on adjacent properties from the landfill, and will identify potential solutions if necessary.

Another commenter noted that in the Phase A area the process of biodegradation is ongoing and continues to produce methane gas that powers the two generators which produce electricity that is sold

to National Grid. This statement is generally true; however, gas production has dropped significantly and is no longer able to power the generators. Landfill gas is burned in a flare.

Some commenters suggested a hydrological study be performed and analyzed by an independent consultant. Solid waste regulations require that any area previously used as a municipal landfill be capped as part of a proper landfill closure. An independent consultant will be required to conduct a Comprehensive Site Assessment that will encompass both Phase A and Phase B. These studies will incorporate groundwater data collected over the last 30+ years and review groundwater data associated with the adjacent Shpack Superfund site.

A request was made to secure the area and to incorporate physical barriers to unauthorized motorized vehicles from entering power line easement into the post-closure landfill plan. This request will be evaluated as part of the Comprehensive Site Assessment to control the landfill site and limit access. The existing fencing along Peckham Street will be maintained. In addition, cart paths at the rear of the site will be blocked to prevent illegal access and no trespassing signs will be posted.

Wetlands

It was noted that the wetlands surrounding the site should be monitored to detect any increase in pollutants caused by landfill closure activities. Surface water will be monitored as required by the Comprehensive Site Assessment. In addition, a Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented as a means of monitoring and controlling surface water runoff.

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Air

Some commenters requested air quality monitoring, and unannounced inspections during the placement of the Re-Crete™. As previously noted, the off-site pre-mixing of the Re-Crete™ material reduces the potential of fugitive dust emissions and air monitoring will not be necessary. Best management practices will be implemented to prevent and control the generation of dust such as covering all soil loads with tarps; installing wheel washes at the landfill; and street sweeping as needed. Additionally there are plans for re-grading and surface treatment of on-site access roads and placement of crushed stone surface for the last 300 feet of the site road. These best management practices detailed in the operating plan that will be included in the Corrective Design Permit application submitted for MassDEP review and approval. There will be an opportunity for public input on the permit at a later date.

Stormwater

Some local officials requested the opportunity to provide comments that could be incorporated into the MassDEP Administrative Consent Order (ACO) regarding construction means/methods, sediment controls, construction and post construction stormwater management and maintenance as well as temporary and permanent site stabilization. Please know the Administrative Consent Order is an

enforcement instrument the Department develops for the site owner and project proponent that includes the requirements that must be met to properly cap, close, and monitor the landfill. The ACO will outline the required activities and timelines through the permitting process and include specific consequences of failure if not complied with. The conservation commission has its own jurisdiction at the local level and will have an opportunity to comment during the public comment period on the Landfill Corrective Action Design permit application.

*A request was made to have a storm water plan in place that will ensure all runoff from the entire ALI site will be controlled and will not flow onto Peckham Street and Union Road**.** This plan should address breakouts at the toe of slope and include detention basins if necessary.* In response, please note most of the existing Phase A area drains away from Peckham Street and into the wetland areas to the East and West of the landfill. A small section of the slope adjacent to Peckham Street drains onto the street, and due to the location of the slope with respect to the street, stormwater cannot reasonably be directed somewhere else. Stormwater issues will be required and incorporated in the final plan/permit application that is submitted for approval to MassDEP.

Comments were made on the existing condition of Phase A and it was noted that some believe the cap is insufficient and allows dangerous contaminants to leach out. As part of the Corrective Action Design Permit, a Comprehensive Site Assessment will be completed and will evaluate the groundwater and surface water on the entire property and make recommendations for any additional corrective action that needs to be taken.

A request was made that the landfill assessment include an evaluation of known landfill leachate into the Shpack site and to evaluate the potential for using Re-Crete™ to provide a permanent barrier to prevent further leachate onto Town of Norton land. The Comprehensive Site Assessment is required to evaluate groundwater flow paths, surface water flow paths and to identify pathways where contamination is leaving the property. The potential need for impervious barriers, if necessary, will be evaluated as part of the Comprehensive Site Assessment.

Comments were submitted requesting that the landfill assessment include a detailed wildlife habitat evaluation into existing and potential turtle nesting areas on the site; potential for nesting on the new cap or drainage layer; and potential for creating new nesting habitat within a restrictive barrier to prevent turtles from altering the closed landfill. Furthermore it was recommended that the maintenance of a created turtle nesting habitat should be included in the post-closure operation and maintenance plan. While not usually part of a landfill site assessment, evaluation of potential turtle nesting area/s could be included in the Comprehensive Site Assessment. The Comprehensive Site Assessment will be conducted concurrently with grading and shaping activities and prior to final capping.

Landfill Closure and the Height of the Completed Landfill

Commenters asked for clarification on the description of the multi-layered cover system and if the gas vents would be above the Re-Crete. The gas vent layer serves as a subgrade layer for the High Density Polyethylene (HDPE) membrane. This layer is immediately above the Re-Crete ™grading and shaping layer. The gas vents therefore will consist of perforated lines placed in the gas vent layer connected to a header pipe and outlet pipe extending above the finished grade that can be accessed for monitoring purposes.

A commenter asked if there will be any need for burn-off of methane gas occurring on the site. There is little, if any, methane coming from the Phase B portion of the property. Methane from the Phase A portion of the property was collected and was burned in internal combustion engines to generate electricity. Methane production has dropped so low that a flare operates to burn off the small amount being collected. Any gas detected within the Phase B area as part of the Comprehensive Site Assessment or on-going monitoring can be conveyed to the flare system if necessary.

Some commenters believe the conceptual plan would extend the existing landfill boundary closer to neighborhoods and the Shpack Superfund Site. The landfill site is not being extended any closer to any neighborhood.

Many commenters believe the proposal will impact the health of local residents. The proper closure of the landfill will eliminate any potential threats to public health or the environment. Once properly closed a 30 year post-closure monitoring and maintenance plan will be implemented to monitor conditions.

Shaping and Grading

A commenter noted that alternative analyses conducted for landfill closures rank a standard cap with minimal grading highest in all categories: Protectiveness, Compliance, Effectiveness & lmplementability. This statement is correct; and the landfill area needs to be regraded to create a minimum of 5% grade. The conceptual proposal therefore meets the criteria for minimal grading.

Some commenters support using the minimum amount of material necessary to develop a slope no greater than 5:1 ratio. Comment noted. To generate sufficient funds for the landfill closure and mitigation funds requested there will be a 34 foot mound above existing grade. The first 6-8 feet of the mound will have a 3:1 slope (18.3%) and the final 26-28 ft. will have a 20:1 slope (5%) maximum slope plateau above.

Several commenters used the term "180 foot mound" to describe the existing landfill and further stated the closure will create a 140 foot mound in the Phase B area. Please note the project does not create a 140 foot mound. Topographic surveys completed at the property and included in the conceptual closure plan clearly indicate the highest elevation of the existing mound to be at approximately 208 feet MSL (feet above mean sea level) and the lowest adjacent elevation to be approximately 102 feet MSL, with an average elevation of approximately 110 feet MSL. Using the highest and lowest values for elevation puts the height of the existing mound to be 106 feet (208' -102'). The existing ground elevation in the

Phase B area that will be closed is elevation 110 feet MSL. The proposed finished grade will slope from about 114 feet MSL, at a 5% grade, to match the existing side of the landfill at an elevation of about 152 feet MSL. With the configuration of the existing site, the maximum height of any fill material will be approximately 34 feet (not 140 feet).

Costs

Some commenters noted the summary of Post Closure Costs for years 2 through 30 do not reflect any cost increases due to inflation for 28 years. The concern for cost increases is legitimate; however, please note that there is no adjustment for interest on the funds set aside. It is MassDEP's common practice (and requirement under 310 CMR 19.051) to calculate everything in present day dollars and have that amount set aside. Calculating everything in terms of present day dollars has been found to be effective in setting aside ample funds for landfill post closure monitoring and maintenance.

Financial Assurances

A commenter stated MassDEP should require a bond to ensure that the closure process is completed. As required by MassDEP's Solid Waste Management regulations at *310 CMR 19.051,* financial assurance mechanisms will be required to cover the cost of closure and post-closure actions. ALI will establish these financial assurance mechanisms prior to start of any closure construction activity. These financial assurance mechanisms will guarantee the costs of closure as well as establish a post closure monitoring and maintenance fund for the entire landfill.

Some of the written public comments expressed a concern regarding the project proponent's ability to complete the closure and commitment to perform post-closure maintenance. Pursuant to the Solid Waste Regulations for Financial Assurance Requirements (310 CMR 19.051), Enviro-Cycle on behalf of Attleboro Landfill, Inc. will establish and maintain financial assurance instruments to meet MassDEP requirements regarding the capping and post closure monitoring of the facility for 30 years. The Financial Assurance amount and mechanism is established by MassDEP and is meant to ensure that the owner or operator is at all times financially capable of complying with the regulations governing the closure of the facility and its post-closure maintenance. Pursuant to MassDEP's Financial Assurance Requirements, potential financial assurance instruments include trust funds, surety bonds guaranteeing payment, surety bonds guaranteeing performance, closure and post closure insurance and closure and post-closure letters of credit. The amount of the financial assurance will be based on the closure and post-closure plans for the facility required by 310 CMR 19.000 and not less than the cost of closing the facility and providing post-closure maintenance. If at any time during, or for the 30 year post closure period, the owner or operator fails to complete the work or monitoring, MassDEP will liquidate the Financial Assurance Mechanism and use the funds to conduct the monitoring or complete the project. In addition, if the owner or operator is found to violate the regulations, or any approved plans, MassDEP can take enforcement action, including the assessment of penalties.

Traffic & Transportation

Many of the comments received concerned impacts on traffic, wear and tear of the roadways, mitigation measures, and trucking in residential areas. As previously stated the conceptual plan was modified significantly to be responsive to concerns raised. A Traffic Control Plan has been developed for specific responses for most of the concerns raised in this category and the plan is also a requirement once the project proceeds through the permitting process. Please refer to the Traffic Control Plan for additional detail.

Over the life of the project it is expected that 15-18 vehicles will be coming to the landfill every day with either pre-mixed Re-Crete™ or material to be used in the construction of the final capping system. This represents a total of 15-18 vehicular trips through Attleboro and 15-18 empty vehicles through Norton (30- 36 vehicle trips per day on the roadways.) Just for comparison sake and using publicly available information from the MassDOT website, the following table shows a comparison of the total traffic volume to that which would involve this project.

Location (date)	Observed Daily Total Volume (vehicles)	Site Generated Traffic		% of total	
		500 TPD	600 TPD	500 TPD	600 TPD
Union Road (2001)	1300	30	36	2.3	2.7
South Worcester Street (2002)	9100	30	36	0.3	.4
Eddy Street (2001)	5800	30	36	0.5	.6
Route 123 at 140 (2013)	12578	30*	36	0.2	.3

*While the Route 123 delivery route will not be used, the data is presented simply for comparative purposes. The total number of vehicles traveling on any given day relating to the landfill closure project is a small percentage of the total number of vehicles on the roadway network.

On a daily basis, the vehicles associated with the landfill project represent less than 1% of the total traffic on existing roadways (except for Union Road).

It was noted that a left turn from S. Worcester St. onto Union Road would be unmanageable for the truck trailers. In response to this comment a truck test-drove this route and the turn was manageable. The trucks are longer but not wider than normal vehicles. Please note this route is no longer the proposed route for delivery.

The Town of Norton requested agreement on traffic, transportation, and construction issues prior to the start of the landfill closure project moving forward. The proponent has met and will continue to meet with City and town officials as traffic and mitigation measures are discussed and incorporated in a Traffic Control Plan. The City of Attleboro and the Town of Norton have identified employees who will oversee the implementation of the Traffic Control Plan to ensure minimal impacts on both communities. This group of city and town employees will meet on an as needed basis, to adjust delivery schedules to accommodate activities occurring within each community. Please refer to the Traffic Control Plan for details.

Commenters noted concerns with Union Road and the offer to resurface Union Road as part of mitigation to the Town. Please note the mitigation proposed was to reconstruct the sub-base and resurface the roadway in addition to other mitigation measures.

Recent discussions with community officials have resulted in requests to do an overlay on from Park Street following Bishop Street and Pike Avenue to Peckham Street and to the landfill. The volume of Re-Crete will increase by 30,000 cubic yards to cover additional $300,000 mitigation for paving Peckham and Bishop Street (grinding and overlay only of 8500 feet in Attleboro). The current proposal is for 201,000 cubic yards plus 30,000 cubic yards for a total of 231,000 cubic yards. The current conceptual proposal http://www.mass.gov/eea/docs/dep/about/region/ali-proposal.pdf has $201,000 mitigation fund allocated at $1.00 per ton to be distributed to the Town and/or City based on proponent and city/town discussions. There is an additional $125,000 allocated to pave Union Road from the landfill entrance in Attleboro to South Worcester street in Norton (grinding and overlay of approximately 4000 feet of road most of which is in Norton).

Commenters noted road work associated with the nearby Shpack Superfund Site would need to be considered. This comment is noted and the project will be designed to negate any impacts to the Shpack site and surrounding areas.

Some town officials would like to see roadway improvements, wildlife protection, and storm water management practices incorporated into the Administrative Consent Order. The Administrative Consent Order is specific to the requirements under the solid waste regulations and the parties to the Order/s are the proponent, the owner, and MassDEP. The project proponent does support reconstruction of the roadway as a good neighbor gesture upon completion of the project. The proponent is also willing to smooth the existing surface prior to beginning the project to reduce potential noise. It is possible that if the town wants additional improvements to the roadway, the town may decide to use some of the community mitigation money for these types of requests.

Some commenters from Norton noted frustration with having to bear the brunt of traffic effects for a landfill used by Attleboro and not Norton residents. For many years, even before Attleboro Landfill Inc. operated the property, residents and businesses in the town of Norton sent their waste to the facility. While municipal collection in Norton brought all of its waste to the town of Norton landfill, private collection companies brought waste to the Attleboro landfill. The Town of Norton does not operate a landfill to handle waste generated in the Town and has relied on facilities in other municipalities to handle its solid waste. The City and Town have now agreed that traffic will enter from Attleboro and exit through Norton.

Miscellaneous Comments

Some commenters stated the scheduling and rescheduling of the public meeting was designed to reduce public attendance and participation. MassDEP and the project proponent tried to balance the schedules of the MassDEP, the town of Norton, and the city of Attleboro officials in the best way possible working around the holidays to come up with meeting dates. Unfortunately, there was some miscommunication during the process; however, the response was to reschedule the meeting whenever in doubt. The

February meeting was rescheduled to accommodate attendees due to the extreme storm conditions as well as to assist school personnel by not having to plow and shovel out the facility during school vacation week.

Comments were received stating that the Phase B landfill should be removed and lined. This alternative is rarely proposed due to the hazardous situation posed to site workers and because the costs are exorbitant.

Some people asked who would be responsible for maintaining the property after landfill closure. The current property owner is ALI, Inc.

Solar Project

Commenters asked for information relative to plans regarding a solar facility being placed on the landfill. Construction of a solar farm is separate and distinct and not part of the landfill closure project; however the landfill closure plan facilitates potential future uses of the site. At this time, there is a company prepared to present a proposal shortly after the Consent Order is issued for the closure of Phase B. At that time they will proceed with obtaining permits from the city of Attleboro and the MassDEP. As this information becomes available, it will be provided to the town of Norton.

ALI has stated their commitment that proceeds from solar electricity that normally goes to a landowner will be apportioned to Attleboro. This will be formalized in a document and presented to the communities when a proposal to develop a solar site goes forward.

The MassDEP Southeast Region web page for the Attleboro Landfill has been updated and can be found at http://www.mass.gov/eea/agencies/massdep/about/contacts/southeastregion.html#FacilitiesProjectsSitesofInterest.