



TOWN OF PERINTON

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4th Update: 7/16/19

5th Update: 2/5/20

EXECUTIVE SUMMARY OF ACTION ITEMS ASSOCIATED WITH HIGH ACRES

The Town of Perinton continues to work proactively with WM on the implementation of specific, relevant, actionable, and time bound improvements to the landfill that will, to extent feasible, control off-site gas and garbage odors and safeguard our resident's health, safety and quality of life. We continue to stress with WM the importance of continued operational improvement at High Acres. We understand that periodic off-site odors remain, but recognize that progress has been made and we will remain vigilant in this effort. The Town will make every effort to improve its communication with residents regarding progress at High Acres landfill.

LANDFILL MONITORING

High Acres Landfill is a highly engineered facility with environmental protection systems that are subject to strict monitoring and reporting requirements. These systems include engineered liners and cover systems, leachate collection and transmission systems, landfill gas collection and control systems, as well as on-site and perimeter groundwater and air quality monitoring. **Although the NYSDEC defines the type and frequency of monitoring through its permit requirements and regulatory standards, the Town of Perinton has directed WM to monitor the landfill with much greater regularity than what is required by its current permit and applicable regulatory standards. The Town has also lowered the exceedance thresholds that trigger the need for WM to make repairs or improvements to the landfill's gas collection & cover systems.** High Acres Landfill is the **only landfill in the state** that has this level of monitoring and control. The Town of Perinton has spearheaded this effort and arguably has the most input and/or influence of any community that hosts a landfill. These enhanced requirements help all parties, including the public, better understand the landfill because you can't control what you don't measure or monitor.

1st Update: The 2018 4th Quarter Surface Monitoring Report as well as the most current perimeter H2S Monitoring Reports are now available for review by the public and are located on our website at the following link: www.perinton.org/surface-emission-monitoring-data.

2nd Update: The most current perimeter H2S Monitoring Reports, through February 5th, 2019, are now available for public review by accessing our website at www.perinton.org/surface-emission-monitoring-data. Also, the field data collection portion of the 2019 1st Quarter Surface Monitoring Report is complete. The final report is expected by mid-May and will be posted on our web-site for review by the public.

3rd Update: The 2019 1st Quarter Landfill Surface Monitoring Report as well as the most current perimeter H2S Monitoring Reports, through March 19th, 2019 (including a 52-week summary from March, 2018 through March, 2019) are now available for public review by accessing our website at www.perinton.org/surface-emission-monitoring-data. Also, the field collection portion of the 2019 2nd Quarter Landfill Surface Monitoring Report is expected to start mid-June.

4th Update: The 2019 2nd Quarter Landfill Surface Monitoring field data collection effort is complete and the finalized monitoring report is expected to be provided to the Town in early August. Based on the initial field work, there are approximately 20 locations over the entirety of the landfill's surface that need some level of repair and/or maintenance. These repair activities have, in the past, included the installation of, or repair to, the geo-synthetic liner, the placement of additional soil cover, utilization of expanding foam plugs, and adjustments to the vacuum of adjacent gas wells. This effort to monitor the surface of the landfill at a threshold lower than that required by outside regulatory agencies only serves to improve the integrity of the cover system associated with the surface of the landfill.

5th Update: The final 2019 4th Quarter Landfill Surface Monitoring Report as well as the most current perimeter H2S Monitoring Reports, including the Northside / Dudley School Monitoring Reports, are now available for public review by accessing our website at www.perinton.org/surface-emission-monitoring-data. Based on the results of this report, there are approximately 16 locations over the entirety of the landfill's surface that needed some level of repair and/or maintenance. These repair activities included the installation of, or repair to, the geo-synthetic liner, the placement of additional soil cover, utilization of expanding foam plugs, and adjustments to the vacuum of adjacent gas wells. Each of the 16 locations were re-evaluated 10-days and again 1-month following the completion of the corrective repair or maintenance activity and found to be substantially below the Town initiated threshold of 200ppm of methane (versus the higher permitted regulatory threshold of 500 ppm).

The field work associated with the 1st Quarter Landfill Surface Monitoring Report is currently ongoing.

CURRENT LANDFILLING OPERATIONS

Presently, the landfiling operation at High Acres is almost exclusively taking place in the Town of Macedon, not the Town of Perinton. Perinton does not have the ability to restrict operations that occur in the Town of Macedon, even though the odors from this operation can impact our residents.

1st Update: WM continues to evaluate a new daily cover technique that provides a complete closure of the working face without the need to place large amounts of soil overtop of the waste at the end of each operating day. This new technique uses a geo-synthetic plastic film placed on top of the daily waste to create a continuous impermeable barrier that more effectively traps odors. The advantage of this system is that it does not require removal and provides continuous coverage until the landfill operation begins on the next day. In effect, it eliminates the need to strip daily soil cover to place new waste, which typically results in the escape of undesirable odors. This product is showing promise and could be an effective tool to use in controlling operational odors as well as minimizing water infiltration into the landfill.

2nd Update: Presently, the landfiling operation at High Acres is taking place along or near the municipal boundary of the Towns of Perinton and Macedon. WM continues to minimize the size of the working area inside the landfill as well as utilize a geo-synthetic plastic film called Enviro-cover (described above) and soil as daily cover. The Enviro-cover material is proving to be a positive alternative to the traditional soil cover placed daily. In fact, WM has submitted a request to the NYSDEC to allow for an extension of the trial period for this product in order to provide ample data on its effectiveness so that it can be used without limitation as an approved daily cover material.

The Enhanced Cover System on top of Cells 10 & 11 is scheduled to be complete by mid-May, but remains dependent on dry weather. This cover will consist of an additional 2 to 3-foot thick layer of compacted soil overtop of the cover placed in those cells now. In addition and per the Town's request, WM is also adding a new horizontal gas collection pipe on top of Cells 10 & 11 to better control gas emissions in this area of the landfill as an added safeguard.

3rd Update: The Enhanced Cover System on top of Cells 10 & 11 is now 90% complete and is expected to be fully complete, including topsoil and seed by the end of June. In addition, the new horizontal gas collection pipe on top of Cells 10 & 11, as described above, is also complete.

The Enviro-cover material, which continues to perform well and be an effective alternative to traditional soil cover, has been included in the modification to the Operations and Maintenance (O&M) Plan for High Acres. In our conversations with the NYSDEC, it appears this material will be approved as a daily cover material.

4th Update: Presently, the landfiling operation at High Acres is taking place in cell 12b2, which is adjacent to the municipal boundary of the Towns of Perinton and Macedon and south of cell 12a. WM continues to minimize the size of the working area inside the landfill as a best management practice to help control odors.

The Enhanced Cover System on top of Cells 10 & 11 is now complete, including the placement of topsoil and seed. The initiation of this enhanced cover system was a result of the Town compelling WM to suspend all municipal solid waste disposal operations in cells 10 & 11 in January of 2018. This was further supported by the NYSDEC, which prohibited WM from using the top of cells 10 & 11 for wastes placement until July of 2023. A certification report of the Enhanced Cover System was sent to the NYSDEC on June 24th, 2019 and is also available for public review by accessing our website at www.perinton.org/highacres-landfill.

In addition, WM has recently completed the installation of 19 new gas wells to replace underperforming wells and improve the efficiency of the landfill gas collection system. In total, 9 of these new wells are located in the active working area and the remaining 10 wells were drilled throughout the site, including non-active areas of the landfill.

On July 9th, 2019, the NYSDEC issued an approval of WM's Operations and Maintenance Manual for High Acres Landfill, which allows WM to use Enviro-Cover System as an alternate to soil for daily cover. The advantage of the Enviro-Cover is that it does not require removal and provides continuous coverage until the landfill operation begins on the next day. In effect, it eliminates the need to strip daily soil cover to place new waste, which typically results in the escape of undesirable odors.

5th Update: The landfiling operation at High Acres continues to take place at the interface of cells 11 & 12 as well as in the lower portions of cell 13. These locations are predominately located in Macedon, but adjacent to the municipal boundary of the Towns of Perinton and Macedon. WM continues to minimize the size of the working area inside the landfill as a best management practice to help control odors. WM has also, at the direction of the Town, implemented additional odor control practices at the working face, including directly spraying the waste with liquid neutralizer, utilization of Enviro-cover, and applying additional soil cover beyond what is required by current permit requirements.

ODOR NEUTRALIZATION SYSTEM

The Town of Perinton has secured a commitment from WM to design and install an enhanced perimeter and internal odor neutralizing system that will help mitigate operational odors overall; whether the landfiling is taking place in Perinton or in Macedon. This system will not simply mask odors, but it will biologically react with the odor causing molecules, rendering them near odorless. It is being designed as an odor barrier that uses natural ingredients, like fruit, vegetable and other plant extracts & oils without

harsh chemicals to help reduce off-site landfill odors. The odor control material is formulated to be used with a high-pressure water and/or oil-based atomization system that sprays a fine mist into the air that attracts and absorbs airborne odor molecules.

1st Update: The Design Report for the permanent enhanced Mist Barrier System, which describes and evaluates site odors, assesses current odor abatement (neutralization) technologies and provides recommendations for a comprehensive odor control network is complete. WM has started the detailed design of this system, which will include a combination of portable and stationary, as well as temporary and permanent misting equipment that will be installed to help neutralize and minimize odors. This system will be able to adjust as the operation moves from cell to cell over the next five (5) years.

WM, at the request of the Town, is also developing a public service message that describes the science behind odor neutralization and how the proposed mist barrier system is intended to work.

2nd Update: WM and their design consultant for the Enhanced Mist Barrier System is currently working with the NYSDEC on the final scope for this project. The details of this project must be approved by the NYSDEC prior to finishing the design effort.

WM has recently completed a drone flight of its property and captured aerial imagery of the various operational activities inside the landfill. They plan on using this imagery to develop interactive graphics that will be incorporated into their website and used as an educational tool for the public, including a public service message that describes the science behind odor neutralization.

3rd Update: WM is currently working with their design consultant and the NYSDEC to advance the design plans for the enhanced Mist Barrier System. The system will be constructed in three (3) phases, with the 1st phase starting construction in late June and the last phase being constructed in the late fall of 2019.

4th Update: On July 9th, 2019, the NYSDEC issued an approval of the Comprehensive Landfill Odor Control Plan, Evaluation, and Design Basis Report (Odor Neutralization System), and directed WM to develop and submit a detailed schedule and timeline for implementing the proposed odor control improvements. It also indicated that priority should be given to the both the proposed systems at NYS Route 31F and along the northern landfill perimeter, which the NYSDEC directed WM to install this year.

5th Update: Based on the current schedule for the implementing the Enhanced Odor Neutralization System, the north-side system was installed and operational in November, 2019, the east-side system will be installed in June of 2020, and the south-side system will be installed by December of 2020. In the interim, WM will to deploy additional portable misting units on the south-side of the working face until the permanent system is operational. These units are in addition to the current portable system that includes misting sticks and an Odor Boss unit deployed on the north-side of the working face, near the perimeter road. The Town continues to coordinate with WM and request that they take a more proactive approach of source control by way of direct application of odor neutralization materials / technology (granular, liquid, etc.) at the working face, while the waste material is being landfilled.

ODOR /WASTE MATERIAL STUDY

In addition to the enhanced odor control misting system, the Town of Perinton has also required WM to undertake a detailed study of material waste streams that enter the landfill by both truck and rail. At the Town's directive, the intent of this study is to determine if and to what extent odors differ, either in strength or type, between waste materials that are trucked into the facility versus waste material that are delivered via rail. Based on the results of this evaluation, WM has committed to implement additional odor control measures that will reduce excessive odors that may be the result of extended travel time.

1st Update: The sampling and evaluation of in-coming waste from various transfer stations and modes of transport continues. WM expects the initial results and follow-on recommendations will be ready for review by the Town and the NYSDEC for the phase I (winter) portion of the study in mid-March.

2nd Update: The Phase I portion of the Waste Characterization Study is complete and was submitted to the Town and NYSDEC on March 15th, 2019 for review. Although the Town has asked WM to prepared an Executive Summary of this report for the public to review, the findings of the full study conclude that, at least during the colder temperature months, there are no significant differences in the make-up/content of the waste between the various incoming MSW waste streams, regardless of its geographic region, mode of transport, or whether the waste was routed through a transfer station. Further, the study also found that there was no discernable difference in the intensity of odors associated with the various incoming MSW waste streams that enter High Acres Landfill; whether the waste was generated locally, regionally or from New York City or whether the waste was transported by truck or rail container. Lastly, based on the chemical analysis of the various incoming waste streams, there does not seem to be a common odor causing compound or specific waste stream that contains particularly odorous compounds.

The Phase II portion of this study, which will examine the same waste streams and modes of transport during the summer months, is expected to begin in June.

3rd Update: The phase II portion of the Odor/Waste Material Study, which is intended to evaluate various waste streams & modes of transportation during the warmer summer months is scheduled to begin on June 24th. The scope of work associated with this portion of the study is identical to the phase I portion of the Odor/Waste Material Study that was conducted during the winter.

4th Update: The field work and analytical/olfactory sampling of various waste streams & modes of waste transportation associated with the Phase II portion of the Odor/Waste Material Study was completed during the 1st week of July. The draft report is due to the Town of Perinton and the NYSDEC in early October.

WM also provided the Town with a draft Executive Summary of the Phase I Portion of the Odor/Waste Characterization Study. This summary document will be made available for public review by accessing our website at www.perinton.org/highacres-landfill.

5th Update: The pre-final draft of the Phase II portion of the Odor/Waste Material Study is complete and the results of this study are being evaluated by the Town and the NYSDEC. The document is also available for public review by accessing our website www.perinton.org/highacres-landfill. Again, the intent of this study is to determine if and to what extent odors differ, either in strength or type, between waste materials that are trucked into the facility versus waste materials that are delivered via rail. Based on the results of this evaluation, WM has committed to implement additional odor control measures that will reduce excessive odors that may be the result of extended travel time/aged waste.

PROGRESS MEETINGS / ODOR NOTIFICATION

The Town of Perinton regularly meets with WM staff to discuss operations, odor complaints, NYSDEC Inspection Reports, etc. This bi-weekly meeting also serves as a progress meeting to review the milestone / time bound goals of the various obligations that WM has committed to complete at the request of the Town. The Town also monitors and evaluates, on a daily basis, all in-coming complaints associated with High Acres Landfill. This information is then shared with Town Board and Conservation Board members weekly. We encourage our residents to utilize the Odor Complaint Hotline, which is (585) 453-2416. The information gathered during this phone call and more importantly, the follow-up by third party responders who are trained to characterize and gauge the intensity of odors will only serve to better assess odor impacts and the need to make improvements at the landfill.

1st Update: The Town and WM continue to meet bi-weekly to discuss operations, planned improvements, odor complaints, and NYSDEC Inspection Reports. Our next meeting is scheduled for the week of 2/18/19.

2nd Update: The Town and WM met again on February 22nd, March 7th and April 1st to discuss various engineering, planning and operational items. These items include, but are not limited to, current odor complaints/notifications, Critical Event Communication, Fill Progression Planning, Perimeter Ambient Monitoring, schedule for the placement of the Enhanced Cover System, Alternative Cover Evaluation, Phase I of the Waste Characterization Study, Gas Collection (vacuum) Data, Surface Scan Overlay Data, Web-site Interactive Graphics, and the design schedule of the Enhanced Mist Barrier / Odor Control System.

3rd Update: The Town and WM met again on May 8th to discuss a variety of engineering, planning and operational items. These included, but were not limited to, new/enhanced website inter-active graphics that will be used as a public education tool, fill progression plans (including verification of lower cell capacities), enhanced mist barrier system design status (including the anticipated construction / implementation schedule), gas well monitoring/tuning, landfill surface scanning and ambient air / H₂S monitoring, cells 10 & 11 enhanced cover status and completion schedule, the benefit of & continued use of Enviro-cover, the anticipated schedule for completing phase II of Odor Waste/Material Study, as well as a number of other operational items.

4th Update: The Town and WM met again on June 27th to discuss a variety of engineering, planning and operational items. These included, but were not limited to, new/enhanced website inter-active graphics that will be used as a public education tool, fill progression plans (including verification of lower cell capacities), enhanced mist barrier system design status/approval from the NYSDEC (including the anticipated construction / implementation schedule), landfill gas collection system data, landfill surface scanning and ambient air / H₂S monitoring status/updates, the status of NYSDEC approval for the revised Operations & Maintenance Manual, a progress update on the phase II portion of the Odor Waste/Material Study, as well as a number of other operational items.

5th Update: The Town and WM continue routine coordination, including meetings on September 3rd, October 9th, November 21st and January 30th to discuss a variety of engineering, planning and operational items. The meetings focused primarily on the recent uptick in odor complaints and what odor control best management practices are being implemented to reduce the impact; specifically, the design (and implementation schedule) for the enhanced odor control mist barrier system, including ensuring that this system accounts for very specific wind directions and weather conditions, and on-going preventative maintenance, repair, & improvements to the gas collection system.. The meetings also covered topics that included the construction schedule associated with the development of cell 13 and the verification of at least 18-months of constructed cell capacity to allow for waste placement options, and the evaluation of the landfill gas collection system data (percent methane, oxygen levels, vacuum, etc.). We also continue to review/evaluate the science behind the products and technology used to neutralize, absorb, and alter odors.

BENEFIT AGREEMENT

We are currently drafting a new Benefit Agreement. We anticipate that a draft agreement will be complete in the coming months and will be made available ready for public comment. What is different from previous agreements is that the Town is taking a stronger stance on safeguards that will hold WM accountable for odor events as well as protect the surrounding community with a property value protection plan.

1st Update: The Town continues to develop the draft Benefits Agreement. Contrary to some misinformation that is being portrayed in the community, the Town's intent has always been and will continued to be its desire to engage the public for input and comment on the new agreement with WM.

2nd Update: The Town continues to develop a Benefits Agreement that offers additional protections to the community, while benchmarking our document against other Benefit Agreements in the region.

3rd Update: The Town continues to develop a Benefits Agreement that offers additional protections to the community, while benchmarking our document against other Benefit Agreements in the region.

4th Update: The Town continues to develop a Benefits Agreement that offers additional protections to the community, while benchmarking our document against other Benefit Agreements in the region.

5th Update: The Town continues to develop a Benefits Agreement that offers additional protections to the community, while benchmarking our document against other Benefit Agreements in the region. We are contemplating several enhancements over are current agreement including an enhanced monitoring & notification program (using ASTM detection standards); a new citizens advisory committee; a new property protection plan; as well as enhanced and new revenue/royalties for MSW, landfill gas, and other capital improvements.

LIST OF "OTHER" ACTION ITEMS

For more detailed information regarding these and other action items the Town is working on with WM, please access our website www.perinton.org/highacres-landfill to the for information related to the Progress at High Acres Landfill.

2nd Update: As a result of the NYSDEC's Petition Response, WM will be submitting a modification to its Operation & Maintenance (O&M) Manual to include at least 18-months of constructed cell capacity to allow for waste placement options, in part, on weather conditions as well as the submission of a Comprehensive Odor Control Study. Further, the Petition Response also directed WM to not use the top of cells 10 and 11 in the Town of Perinton for the placement of waste for the duration of their permit, which is set to expire on July 8, 2023. After that time, the placement of waste in those cells will only be allowed upon demonstration to the NYSDEC that it can occur with causing off-site odor concerns.

The Town of Perinton is also working with WM to include with its O&M revision, specific engineering details for tying into the membrane covered upper side-slopes of cells 10 & 11 as well as other action items that were listed in WM's commitment letter to the Town. The revised O&M Manual is due to the NYSDEC by April 30th, 2019 and once approved, it becomes an enforceable part of WM's Part 360 permit.

3rd Update: WM submitted its' revised O&M plan to the NYSDEC on April 30th, 2019 as per the requirements set-forth in the NYSDEC Petition Response. Included in the revised O&M plan are those items described above in the 2nd Update as well as the following additional items that have been requested by the Town directly:

1. an improved/enhanced mist barrier odor neutralization system,
2. continuation of quarterly landfill surface emission monitoring with lower regulatory action thresholds,
3. continuation of ambient air monitoring at the Dudley/Northside Elementary School campus,
4. continuation of quarterly ambient air monitoring at the property boundary of High Acres, and
5. increased gas wellfield monitoring/balancing.

The Town of Perinton continues to advocate for industry leading monitoring and control measures at HAL, which arguably now has the most stringent requirements of any landfill in the state. These enhanced requirements help all parties, including the public, better understand and manage the landfill because you can't control what you don't measure or monitor. Again, once approved, these additional requirements included in the revised O&M plan become an enforceable part of WM's Part 360 and Title V Permit at High Acres Landfill. We remain committed to the Perinton community by ensuring that HAL remains a good neighbor.

WM is holding their annual Open House on July 25th from 3pm to 7pm. This is an opportunity for residents to tour the facility and ask questions about how landfills are constructed, operated, and maintained.

4th Update: On July 9th, 2019, the NYSDEC approved WM's revised Operations and Maintenance Manual. As described in Updates #2 & #3 above, the new action items and enhanced operational modifications described above will better serve WM in managing and operating the landfill because you can't control what you don't measure or monitor. Again, now that these additional requirements are included in the revised O&M manual, they have become an enforceable part of WM's Part 360 and Title V permit at High Acres Landfill.

A reminder that WM is holding their annual Open House on July 25th from 3pm to 7pm. This is an excellent opportunity for residents to tour the facility and ask questions about how the landfill is constructed, operated, and maintained.

5th Update: Town of Perinton continues to periodically observe the operation of landfill as well as conduct field investigations of odor complaints. The intent of this effort is to allow the Town to independently observe and evaluate the effectiveness of implemented mitigative measures as well as bring very specific operational questions/ concerns to our meetings with WM Staff.