pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

January 6, 2019

Mr. Joseph Klobusicky, Site Manager
Chrin Brothers, Inc.
1225 Industrial Drive
Easton, PA 18042

Re: Major Permit Modification Eastern Expansion and Overlay
Chrin Brothers Inc. Applications
Permit Renewal #100022-A182
APS#979602, Auth#124592
and
Eastern Expansion and Overlay Application#100022-A151
APS#882383, AUTH#1093189
Williams Township, Northampton County

Dear Mr. Klobusicky:

Your applications for a permit renewal and major permit modification for the Eastern Expansion and Overlay are hereby approved. This approval is based on the information in the renewal application, received by the Department on October 22, 2018, and the application entitled "Eastern Expansion and Overlay", received by the Department on July 14, 2015. Supplemental information for the expansion application was received on the following dates: September 21, 2016, November 21, 2016, June 8, 2017, December 26, 2017, September 9, 2019 and December 13, 2019. The application for the Eastern Expansion and Overlay was prepared by EarthRes, Inc.

Enclosed as part of this approval is a permit modification Form 13-A. Any conditions stated in the Form 13-A modifies and replaces permit conditions regarding your operating permit. All other items and conditions from your permit shall remain in force and effect.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa. C.S., Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in Braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions concerning this permit modification, please contact me at (570) 826-2201.

Sincerely,

Roger Bellas
Environmental Program Manager
Waste Management Program

Enclosure: Form 13-A
Comment Response Document

cc: David Horvath, P. G./Martin and Martin, Inc. (w/ enclosure)
Williams Township (w/ enclosure)
Northampton County Council (w/ enclosure)
Lehigh-Valley Planning Commission (w/ enclosure)
City of Easton (w/ enclosure)
Easton Area Neighborhood Center (w/ enclosure)
Easton Area Public Library (w/ enclosure)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

FORM NO. 13-A
MODIFICATION TO SOLID WASTE DISPOSAL AND/OR PROCESSING PERMIT

Under the provisions of Act 97, the Solid Waste Management Act of July 7, 1980, Solid Waste Permit Number 100022 issued on (date original permit was issued) April 16, 1990 to

(permittee) Chrin Brothers, Inc.

(address) 1225 Industrial Drive
Easton, PA 18042

is hereby modified as follows:

1. This permit modification is being issued pursuant to the Pennsylvania Solid Waste Management Act of July 7, 1980, and the Municipal Waste Management Regulations effective September 14, 2002.

2. This permit modification authorizes the following:

   - The permit boundary will be increased from the current permitted 108.7-acre disposal area to 138.2 acres.

   - The new disposal footprint will total approximately 32.7 acres with a peak final elevation of 672 feet above mean sea level (msl). The expansion area will occur within the eastern portion of the new permit boundary as well as the northern portion along Industrial Drive.

   - The expansion will include approximately 4,975 linear feet of mechanically stabilized earth wall at the northern face of the landfill along Industrial Drive.

   - Approximately 2.75 million cubic yards of waste will be relocated to the active disposal working face and approximately 15.2 acres of the existing liner system will be replaced to accommodate the overlay of new waste.

3. This permit modification is based on the information in the application package received by the Department on July 14, 2015 entitled "Major Permit Modification – Eastern Expansion and Overlay". Supplemental information was received on September 21, 2016, November 21, 2016, June 8, 2017, December 26, 2017, September 9, 2019 and December 13, 2019. The application included the following documents:

4. The permit modification application, as prepared by Earthres Group Inc., included the following documents:

   VOLUME I
   1. Introduction
   2. Checklist
   3. Form GIF – General Information Form
   4. Form A – Application for a Municipal or Residual Waste Permit
   5. Form B – Professional Certification

6. Form B1 – Application Form Certification
7. Form C1 – Compliance History Certification
8. Form D – Environmental Assessment Process for Municipal Waste Management Facilities
9. Form E – Contractual Consent of Landowner
10. Form F – Soil Information
11. Form 1 – Facility Plan
12. Form 2 – Map Requirements – Phase I
13. Form 6 – Geologic Information – Phase I
14. Form 7 – Hydrogeological Information – Phase I

VOLUME II

15. Form 8 – Municipal Waste Landfills Baseline Ground Water Analysis
16. Form 11 – Mineral Deposits Information
17. Form 12 – Alternative Water Supply – Phase I
18. Form G(A) – Air Resources Production/Dust Emissions Estimate and Control Plan
19. Form G(B) – Air Resources Protection/NMOC Emissions Estimate and Control Plan
20. Form H – Revegetation
21. Form I – Soil Erosion and Sedimentation Controls

VOLUME III

22. Form J – Soil Information – Phase II
23. Form K – Gas Management
24. Form L – Contingency Plan for Emergency Procedures
25. Form 3 – Map Requirements – Phase II
26. Form 14 – Operation Plan – Phase II

VOLUME IV

27. Form 24 – Liner System Phase II

VOLUME V

28. Form 25 – Leachate Management – Phase II
29. Form 28 – Closure – Post Closure Land Use Plan
30. Form 45 – Protection of Capacity
31. Form 46 – Relationship Between Municipal Waste

VOLUME VI

32. G-01 – Cover Sheet
33. C-01 – Existing Site Plan
34. C-02 – Form 2 Base Topographic Map – Key Map
35. C-03 to C-06 – Form 2 Base Topographic Map
36. C-07 – Form 2 Soils Map
37. C-08 – Form 2 500' Scale Map
38. C-09 – Form 6 Bedrock Contour Map
39. C-10 – Form 6 Geology Map
40. C-10A – Supplemental Geologic Sections
41. C-10B – MSE Berm Supplemental Subsurface Investigation Plan
42. C-11 – Boring Location Plan

43. C-12 – Proposed Site Plan
44. C-13 – Subgrade Plan with Existing and Groundwater Contours
45. C-14 – Subgrade Plan without Existing Contours and Groundwater Contours
46. C-15 – Final Grade Plan without Existing Contours
47. C-16 – Industrial Drive Map Panel No. 1 (50 scale)
48. C-17 – Industrial Drive Map Panel No. 2 (50 scale)
49. C-18 – Industrial Drive Map Panel No. 3 (50 scale)
50. C-19 – Industrial Drive Map Panel No. 4 (50 scale)
51. C-20 – Industrial Drive Map Panel No. 5 (50 scale)
52. C-21 – Leachate Detection Plan
53. C-22 – Leachate Collection Plan
54. C-23 – Stage Sequence Plan and Material Balance
55. C-24 – Phase 1 Development Plan
56. C-25 – Phase 2 Development Plan
57. C-26 – Phase 3 Development Plan
58. C-27 – Phase 4 Development Plan
59. C-28 – Phase 5 Development Plan
60. C-29 – Phase 6 Development Plan
61. C-30 – Phase 7 Development Plan
62. C-31 – Final Development Plan
63. C-32 to C-36 – Landfill Cross Sections

VOLUME VII

64. C-37 – Stormwater Management Plan
65. C-38 – Gas Management Plan on Final Grades
66. C-39 to C-40 – Liner System Locations and Details
67. C-41 to C-43 – Liner System Tie-In Details
68. C-44 to C-47 – Landfill Construction Details
69. C-48 – Leachate Conveyance Plan
70. C-49 to C-53 – Leachate Management Details
71. C-54 to C-55 – Leachate Conveyance Details
72. C-56 to C-57 – Leachate Conveyance Plan and Profile
73. C-58 to C-64 – Stormwater Management Details
74. C-65 – Temporary Erosion Control Details and Notes
75. C-66 – Stormwater Channel and Culvert Profiles
76. C-67 to C-70 – Gas Management Details

5. The information submitted with the renewal application, received on October 22, 2018, was reviewed and considered in this major modification approval.

6. This modification allows Chrin Brothers Inc. to continue operation of this facility per the approved applications and the existing terms and conditions of this permit until January 6, 2030.

7. The permittee shall provide to the Department, within 90 days of issuance of this permit modification, 2 hard copies and an electronic copy of the final comprehensive application, including full sized drawings and revisions in their correct sections. Also, provide 1 reduced set of final drawings as part of this submission.

8. The permittee shall provide in each annual report submitted, a breakdown of the approved benefits realized for this expansion along with a description addressing details for each. The approved benefits are as follows:
    a. Recycling drop-off containers
    b. Operating expenditures
    c. Direct employment and tax revenue
    d. Host fees
    e. Free tire and leaf waste disposal and recycling

9. The permittee shall implement and comply with all mitigation described in the application and the William Township Host Community Agreement which includes, but is not limited to, conservation easements, covenants against use of various adjacent landfill owned parcels for landfill activities, imposing additional setback distances from landfill site property lines, setting special requirements for screening and landscaping along landfill properties, and establishing a landfill committee and requirements for cooperation.

10. In areas where intermediate cover has been installed, because additional waste is not intended to be placed for at least six (6) months, Chrin will initiate enhanced monitoring and nuisance management practices as described in their approved Nuisance Minimization and Control Plan ("NMCP"). These enhanced monitoring and nuisance management practices include among other things the collection of monthly surface emission monitoring (SEM) data, the logging of collected data into mapping software to color code SEM data for evaluation, and monthly evaluation of the data and observations collected during these monthly SEM events to evaluate and assess the effectiveness of the landfill gas collection system.

11. The temporary geosynthetic cap material used will be as specified in Form 24 Attachment 24-16 and will be a non-white color (e.g. black, green and earth tones). As described in the approved NMCP, Chrin will initiate temporary geosynthetic cap construction activities on intermediate grades within eighteen (18) months of establishing the intermediate cover. The temporary geosynthetic cap will remain in place until the area receives additional waste or the area is to be final capped.

12. Chrin shall update and submit to the Department for approval the Groundwater Sampling and Analysis Plan for the landfill every five years or sooner, if site conditions warrant.

13. Groundwater Monitoring Reports shall include all field logs, Form 19s, Form 50s and Form 52s in the same document and shall be submitted within 60 days of sampling or 15 days after completion of analysis whichever is sooner.

14. Construction of the facility shall be in accordance with the approved landfill sequencing plans. (drawing numbers C-23 through C-31). A minor modification application is required in order to deviate from these sequence plans.

15. The permittee shall submit a construction schedule ten (10) days prior to the commencement of construction. This schedule should be updated as needed to accurately reflect the progress of the construction activities.

16. Chrin shall notify the department at least 10 days prior to commencement of the MSE investigative boring plan.

17. The permittee shall notify the Department upon commencement and completion of each phase of construction listed below. The completed phases of construction shall be certified using the Department's Form 37 – Certification of Facility Construction Activity submitted by a registered Professional engineer.

    The construction certification phases include the following:

    a. Construction of each stage of the Eastern Expansion areas (32.7 acres) and Overlay area (15.2 acres) that includes construction of a new liner system in the following construction segments:

        1. Construction of subbase,
        2. Construction of liner and leachate detection zone,
        3. Construction of protective cover and leachate collection system.

    b. Completion of the MSE investigative boring project to include the data obtained and supporting analysis of the data verifying the suitability of the subgrade for construction of the MSE wall. Chrin shall not commence construction of the MSE wall without approval of the construction certification by the Department.

    c. Construction of each section of the MSE wall.

18. This permit modification approves the revisions to the Form R, Waste Analysis and Classification Plan, originally approved on November 3, 1992, and revised on November 1, 2002. This revised Form R included:

    a. Form R Attachment 1: Residual Waste Codes

    b. Form R Attachment 2: Waste Acceptance Criteria Table

    c. Form R Attachment 3: Waste Compatibility Chart

    d. Form R Attachment 4: Liner Compatibility, 9090 Test Information

    e. Form R Attachment 5: Leachate Treatability

    f. Form R Attachment 6: Industrial User Permit

    g. Form R Attachment 7: Previously Approved Wastes

19. Waste streams with approved Form U's will be considered active as long as the waste stream has been received within 5 years and the generator has submitted the 26R with analysis as appropriate. Waste streams that are inactive will require a new Form U to be submitted.

20. A list of active Forms U's shall be submitted as part of the permit renewal application.

This modification shall be attached to the existing Solid Waste Permit described above and shall become a part thereof effective on (date) January 6, 2020.

FOR THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

Comment-Response Document

Chrin Brothers Sanitary Landfill
Eastern Expansion and Overlay
Permit No. 100022
Williams Township, Northampton County
January 17, 2017 Public Hearing

Prepared by:
Pa. Department of Environmental Protection
Northeast Regional Office
Waste Management – Facilities Section

January 2020

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

PROJECT DESCRIPTION

The Chrin Brothers Sanitary Landfill (Chrin) is comprised of an existing 108.7-acre landfill located at 1225 Industrial Drive in Williams Township, Northampton County. The area in the immediate vicinity of the landfill consists of commercial properties to the north and wooded and residential areas to the south, east and west. Industrial Drive and Interstate 78 run along the north and west sides of the landfill. The Lehigh River is located approximately ½ mile to the west. On July 14, 2015, the Department of Environmental Protection (DEP) received a major modification application for Chrin's Eastern Expansion and Overlay project. The proposed expansion area is located within the current permit boundary and consists of an overlay on the existing disposal area and a new disposal area of approximately 32.7 acres located to the east of the existing landfill. The existing mechanically stabilized earthen (MSE) berm would be extended toward the east and west and increased in total height to generally between 30 to 40 feet. Included in the design of the overlay is a waste excavation project to facilitate liner replacement for the purpose of enhancing slope stability. Approximately 1.9 million cubic yards of waste will be relocated to the active disposal area and approximately 15.2-acres of current liner system will be replaced. The peak final elevation will increase by approximately 40 feet to 672 feet above mean sea level. The project does not propose to increase the daily maximum and quarterly average waste acceptance rates for the landfill. Chrin has indicated that the expanded landfill will allow the landfill to continue operating for approximately 8.7 additional years.

A public hearing regarding the Eastern Expansion and Overlay application was held on January 17, 2017. The Municipal Waste regulations require DEP to prepare a summary of the written and oral comments submitted at a public hearing and provide responses to the comments. This Comment-Response Document summarizes public comments received by DEP, including public comments received at the January 17, 2017 Public Hearing and provides DEP's responses to those comments.

LIST OF COMMENTERS

1. Tom Heilman
   Citizen

2. Josh Weinstein
   Citizen

3. Chris Wessner
   Citizen

4. Dan Cwynar
   Citizen

5. Kathleen Larkin
   Citizen

6. Katherine Lilley
   Citizen

7. Heidi Huettner
   Citizen

8. Jennifer Petrozzo
   Citizen

9. Ellen Cwyner
   Citizen

10. Matthew Johnson
    Citizen

11. Betsy Dziedzic
    Citizen

12. Jim Dziedzic
    Citizen

13. Ed Dietrich
    Citizen

14. Elisa Baratta
    Citizen

15. Robert Berger
    Berger Sanitation, Inc.

16. James Suell
    Citizen

17. Richard and Elaine Larkin
    Citizens

18. Raymond Makoski
    Citizen

19. Lynn and Paul Glazar
    Citizens

20. A. Lee and Patricia Roberts
    Citizens

COMMENTS AND RESPONSES

1. Environmental Impact

Comment: The landfill is a significant contributor to pollution and has a negative impact on the land and community.

Response: Regulations and permits are developed to be protective of public health and safety. DEP's oversight of the landfill to insure compliance with these regulations and Chrin's permit insures that the public health and safety is being protected. An evaluation of the potential negative impacts (odors, dust, litter, aesthetics, groundwater, etc.) on the land and the community was conducted by DEP and it was determined that the benefits of the project outweigh the harms.

2. Odors

Comment: The landfill has a history of causing off-site odors including documented violations and fines.

Response: The potential for landfill gas emissions and associated odors are potential harms of active landfill disposal operations, Chrin has struggled in the past to completely control odors associated with landfill gas emissions. While operational controls and Chrin's response to incidents have likely minimized the intensity of these instances, off-site odors have occurred in the recent past. However, Chrin's current additional efforts to increase and improve mitigation of odors is expected to limit the number, duration and intensity of future off-site odor occurrences. Additional measures to control odors have been included for this project. Specifically, enhanced surface monitoring and surface emission mitigation measures in areas of intermediate slope soil cap and a commitment to use geosynthetic cap in areas where an intermediate slope is expected to remain for more than 18 months. DEP believes that these new measures for monitoring the facility, coupled with rapid mitigation of any issues found will reduce the potential for off-site odors even further.

3. Property Values

Comment: The expansion of the landfill will result in a decrease in property value for homes in the vicinity.

Response: The landfill is an existing facility that has operated at the present location since 1955. Residential development around the landfill has occurred despite the presence of the landfill, demonstrating that the landfill did not deter the sale of existing homes, or the construction of new residential development nearby. The proposed landfill expansion could potentially impact property values; however, property devaluation is difficult to prove because of the many factors that affect the value of a property, perception being one of those factors. DEP considers the protective/screening measures

proposed by Chrin to be adequate mitigation to address any potential impacts to property values.

4. Slope Stability

Comment: In 2013 a slope failure occurred at the landfill. There is a concern that additional slope failures could occur at the site in the future. A future slope failure could potentially impact I-78.

Response: The March 2013 slope failure is believed to be an isolated incident and the application for reconstruction of the affected area has been approved, through the stage 3D/3E minor modification permit. DEP has determined that slope failure should not be considered a known or potential harm of the proposed project.

As with all proposed landfill construction projects, slope stability is addressed in the design of the project and was fully evaluated by DEP during the technical review. Slope stability analysis was evaluated across the entire landfill to include the existing constructed areas as well as the expansion and overlay areas. Conservative estimates of liner system interface strengths were used in this study. In a worst-case scenario, slope stability analysis results exceeded factors of safety for both seismic and static conditions.

Comment: Licensed Geologists should review all boreholes and ground failures in order to certify that the area is safe for the expansion activities.

Response: In April of 2017, DEP received the final report detailing the geologic review of a Professional Geologist hired by DEP to evaluate the geologic formations underlying the Chrin facility. This 3rd party Professional Geologist reviewed all bore logs available for the site. DEP also has a Licensed Professional Geologist (LPG) assigned to the site. All boreholes and other data related to geology and the stability of the area have been evaluated. Future borings and other geologic data required for the construction of the landfill will also be evaluated by DEP's LPG.

Comment: This permitting process should not be taking place before a final conclusion is reached regarding the inquiry into the slide that occurred on the old landfill.

Response: On March 12, 2013 a slope failure occurred in the closed and capped Stage 3D and 3E portions of the landfill. The proposed project includes an overlay which will extend over a large portion of the existing landfill including portions of the reconstructed Stages 3D and 3E. Following the 2013 slope failure, Chrin began clean-up of the affected area and was directed to prepare an assessment of the root cause of the slope failure. A Slope Failure Report detailing the root cause of the slope failure was submitted to DEP in July 2014. On September 30, 2014 Chrin submitted an application for minor permit modification to reconstruct Stages 3D and 3E. DEP contracted with a third-party consultant to evaluate Chrin's Slope Failure Report, data collected during removal of waste from the slide area, the minor modification application for reconstruction of Stages

3D and 3E, as well as an evaluation of the underlying geology of the site. DEP's consultant prepared two separate reports, one of which focused on the underlying geology of the site. This geologic report was completed on April 11, 2017. The evaluation of Chrin's Slope Failure Report and the 3D/3E reconstruction minor modification application was completed on December 6, 2017. DEP approved the Stage 3D portion of the minor permit modification application on June 30, 2017. Following the completion of the third-party party consulting firm's report evaluating Chrin's slope failure report and the 3D/3E reconstruction minor modification, and upon receipt and review of supplemental information provided to DEP by Chrin, the Stage 3E portion of the application was approved on August 9, 2018. The March 2013 slope failure is believed to be an isolated incident.

Comment: The wall along Industrial Drive may not be safe/stable and could eventually collapse.

Response: The existing MSE wall construction was designed by a professional engineer (PE) to insure it is constructed utilizing sound engineering practices. The subgrade for the existing MSE wall was evaluated for stability. Chrin completed installation of five subsurface borings within the MSE wall footprint, to determine saprolite thickness, and to provide supplementary information to reconstruct Stage 3D and 3E. A summary of the boring investigation was provided. No waste was encountered and saprolite thickness ranged from 33 feet to 255 feet. Similar boring investigations will be completed for all additional PE designed MSE wall construction associated with the expansion. The results of the investigations will be reviewed and approved by DEP.

Comment: Sinkholes could potentially affect the stability of the landfill and may have contributed to the 2013 slope failure.

Response: A thorough evaluation of the subgrade and geology in the slide area revealed no sinkholes existed in the slide area and that the geology meets the criteria for landfill construction. A similar evaluation of the subgrade and geology has been conducted on the proposed expansion area. The expansion area also meets the criteria for landfill construction.

Comment: Using removable tarps rather than dirt for daily cover decreases the stability of the landfill.

Response: Chrin has approval from the DEP to utilize tarps as alternate daily cover. The DEP is not aware of any studies indicating the use of tarps decreases the stability of a landfill, in fact the opposite may be true. Studies have shown that municipal waste actually provides greater slope stability than soil.

5. Air Quality

Comment: A DEP air quality study in 2009 found 23 compounds toxic to humans.

Response: Chrin's 2009 air emission study concluded that there was no risk to the surrounding community due to air emissions from the site. DEP concurred with the 2009 air emission study. DEP's Waste Management program consults and coordinates with the Air Quality program during landfill permit application reviews. The information contained in both the municipal waste application and air quality application are reviewed to ensure the project meets applicable regulations.

Comment: The change in geography (eastern expansion) could potentially affect wind patterns sending odors, gases and particulate east over into the Delaware River Valley and New Jersey.

Response: The potential for landfill gas emissions and associated odors are potential harms of active landfill disposal operations, Chrin has struggled in the past to completely control odors associated with landfill gas emissions. While operational controls and Chrin's response to incidents have likely minimized the intensity of these instances, off-site odors have occurred in the recent past. However, Chrin's current additional efforts to increase and improve mitigation of odors is expected to limit the number, duration and intensity of future off-site odor occurrences. Additional measures to control odors have been included for this project. Specifically, enhanced surface monitoring and surface emission mitigation measures in areas of intermediate slope soil cap and a commitment to use geosynthetic cap in areas where an intermediate slope is expected to remain for more than 18 months. DEP believes that these new measures for monitoring the facility, coupled with rapid mitigation of any issues found will reduce the potential for off-site odors even further. Although significant changes in wind patterns would not be expected as a result of this project, the implementation of Chrin's Nuisance Minimization and Control Plan should minimize the potential for odors, gases, and particulate from leaving the site regardless of any changes to wind patterns.

Comment: DEP should consider requiring long-term monitoring devices or programs in the expansion area and surrounding neighborhoods.

Response: Regulations and permits are developed to be protective of public health and safety. DEP's oversight of the landfill to insure compliance with these regulations and Chrin's permit insures that the public health and safety is being protected.

Comment: What is the mist that is continually sprayed from along the fence line?

Response: The mist that is sprayed along the fence line contains odor neutralizing agents employed to mitigate garbage odors at the property line. These neutralizing agents are approved for use to insure compliance with Air Quality regulations. MSDS sheets for the odor neutralizing agents are available and were submitted with Chrin's major permit modification application.

6. Water Quality

Comment: The Chrin Landfill is on the National Priorities list as a Superfund site for groundwater contaminated with hazardous organic compounds.

Response: Groundwater monitoring data shows there is no evidence that Chrin's current municipal waste landfill operation is impacting groundwater. There is existing contamination from the Industrial Lane superfund site which is a historic unlined landfill that Chrin took over and closed. Chrin operates the current landfill above and adjacent to this superfund site. The contaminants of concern are volatile organic compounds (VOCs) vinyl chloride, trichloroethene, perchloroethene, and benzene from the past disposal activities. A groundwater treatment system has been operating since 1999 to address this contamination. Groundwater monitoring, private well monitoring and landfill closure maintenance activities are routinely conducted and reported to DEP and the U.S. Environmental Protection Agency (EPA). The properties affected by the groundwater contamination associated with this superfund site are serviced by public water.

Comment: The landfill's leachate discharge had excessive levels of arsenic in 2013 and 2014 according to information from the Easton Area Joint Sewer Authority.

Response: Chrin Landfill's leachate discharge did not suddenly contain excessive levels of arsenic in 2013 or 2014. The arsenic levels in the leachate discharge remained relatively stable, based on historic concentrations of arsenic in the leachate discharge, with a slight increase during this timeframe due to drought conditions. In April 2012, the Easton Area Joint Sewer Authority (EAJSA) lowered the discharge limits for arsenic for Chrin Landfill from 0.32 mg/L to 0.08 mg/L for the weekly average and from 0.48 mg/L to 0.12 mg/L for the daily maximum. Due to EAJSA's revised standard for arsenic, the landfill intermittently exceeded the weekly average for arsenic, beginning around July 2013. Chrin proposed blending effluent from their groundwater treatment plant with leachate before discharging to the EAJSA. EAJSA approved Chrin's proposed remedy and the blending process is still in use before leachate is discharged to the EAJSA.

Currently, the EAJSA has proposed a Local Limits Evaluation to the United States Environmental Protection Agency (US EPA) to increase the current arsenic limit they will accept from Chrin Landfill. Upon approval, Chrin will likely avoid any further exceedances of the EAJSA's arsenic limits, if approved by US EPA.

Comment: There is a potential for substances to leak into groundwater.

Response: Chrin uses a double liner and associated leachate collection system to prevent the release of leachate to the groundwater. These systems composed of primary and secondary liners and drainage layer systems, collects, and removes leachate from the landfill. A leachate detection zone monitors whether leachate is getting through the primary liner. A network of groundwater monitoring wells is utilized to evaluate whether the current landfill operations are impacting groundwater.

Based on DEP's review of this groundwater monitoring data, there is no evidence that Chrin's current municipal waste landfill operation is impacting groundwater. Controls and groundwater monitoring systems are design features required by regulation. Their functions are to minimize, to the best extent practicable, some of the potential harms associated with the operation of the landfill. There will always be a potential harm associated with their failure to work as intended, their failure to work because of improper operation or maintenance, or their failure to work because natural events exceed the minimum/maximum standards used for design purposes.

Comment: Drinking water in homes near the landfill has at times had a bad odor and taste.

Response: Chrin is required to periodically test ground water at properties that share a property line with the landfill. Based on DEP's review of this data, there is no evidence that Chrin's current municipal waste landfill operation is impacting neighboring properties' groundwater.

There are three properties that are contiguous to the landfill (1195 Morvale Road, 1205 Morvale Road and 1420 Morvale Road), two of which Chrin Landfill owns (1195 and 1205 Morvale Road). The third property (1420 Morvale Road) is privately owned. All three contiguous properties are hydraulically upgradient of the landfill. The 1205 Morvale Road property is currently vacant and the well is non-functional at present time. Chrin samples the well water at 1195 Morvale Road and 1420 Morvale Road on a quarterly basis and reports results to DEP. Because both properties are upgradient of the landfill, coupled with their analytical results from groundwater sampling, which indicate no impacts from the landfill, any odors or tastes present in these wells are likely from some other source. Additionally, analytes found in groundwater that would typically contribute to bad odors or tastes are not elevated in either properties well water. There are no contiguous properties with wells in a downgradient direction from the landfill.

7. Health and Safety

Comment: The high population density of the area exposes a large number of people to the health and safety risks a landfill poses.

Response: The location of the existing Chrin landfill and the proposed expansion comply with DEP regulations regarding landfill siting criteria.

Comment: The landfill adds toxicity and emissions to the community's air, water and land creating a health and safety risk.

Response: Regulations and permits are developed to be protective of public health and safety. DEP concurred with Chrin's 2009 air emission study, which concluded that there was no risk to the surrounding community due to air emissions from the site.

Comment: There is a risk of potential respiratory problems associated with the odors from the landfill.

Response: While it's possible sensitive populations may experience respiratory effects associated with odors, regulations and permits are developed to be protective of public health and safety. DEP's oversight of the landfill to insure compliance with these regulations and Chrin's permit insures that the public health and safety is being protected.

8. **Quality of Life**

Comment: The landfill has a negative impact on the quality of life of those living in working in the area.

Response: Potential impacts from the landfill that could affect the quality of life in the surrounding community have been evaluated. DEP determined the benefits of the Eastern Expansion and Overlay project outweigh any remaining harms of the project.

Comment: The landfill has a negative impact on the economic growth and potential of the Easton area.

Response: DEP has not been presented with any evidence of negative economic impacts directly related to the project.

Comment: A new landfill should not be built on virgin land in a densely populated area.

Response: This project involves the expansion of the existing Chrin landfill. The location of the existing Chrin landfill and the proposed expansion comply with DEP regulations regarding landfill siting criteria.

Comment: The landfill is the only landfill in Pennsylvania located within 1 mile of a major interstate, major waterway, school, and more than 5,000 people.

Response: While the DEP cannot verify the accuracy of this comment, the location of the existing Chrin landfill and the proposed expansion comply with DEP regulations regarding landfill siting criteria.

Comment: The 2013 slope failure closed Industrial Drive for a year and the landfill has had to close Industrial Drive to do clean up work on other occasions. These road closures adversely affect residents and businesses.

Response: The DEP is aware of the road closing that occurred as a result of the 2013 slope failure, as stated elsewhere in this document, the root cause of the slope failure was determined, and all proposed future construction adequately addresses the root cause to insure a similar slope failure will not occur again. DEP cannot verify any other instances

where Industrial Drive was closed to traffic, due to landfill activities, for any significant amount of time to adversely affect residents or businesses in the area.

9. Visual Impacts

Comment: The landfill is not aesthetically pleasing, and the expansion will extend the duration and increase the intensity of this harm.

Response: The scope of DEP's review is limited to the Eastern Expansion and overlay project. Visual impacts associated with the current landfill were addressed during previous applications. Chrin performed an updated and expanded visual impact analysis in connection with the Eastern Expansion and overlay project. The height of the proposed expansion has been limited pursuant to the Host Community Agreement. Chrin will discontinue the use of white geomembrane for future temporary capping and use other colors (e.g. black, green and earth tones) instead. Visual impacts associated with the landfill slopes will be managed by continuing the current practice of placing cover soil and vegetating as intermediate grade slopes are attained. Final capping will be performed based on attainment of final grade slopes. Landscaping along the MSE berm was required and will be implemented as part of the Williams Township Land Development approval. Chrin has proposed adequate mitigation to address visual impacts associated with the project.

Comment: The landfill and proposed expansion causes visual impacts to the Delaware and Lehigh National Heritage Corridor.

Response: The scope of DEP's review is limited to the Eastern Expansion and overlay project. Visual impacts associated with the current landfill were addressed during previous applications. Chrin performed an updated and expanded visual impact analysis in connection with the Eastern Expansion and overlay project. This analysis included the areas mentioned above. Also, the landfill is located in the upstream drainage area that flows to the Lower Delaware River, a National Wild and Scenic River. Responses from the U.S. Department of Interior and PADCNR were provided and indicate the project will have no adverse impacts to the applicable resources.

Comment: The expansion will make the landfill more visible specifically it will be visible to portions of the Morgan Hill development where it currently is not visible. It is also highly visible to everyone entering Easton and Williams Township.

Response: Chrin has proposed adequate mitigation to address visual impacts associated with the Eastern Expansion and overlay. There will still be some limited visual impacts to those in the immediate vicinity of the landfill; however, DEP determined in its harms/benefits analysis that the benefits of the project clearly outweigh any remaining harms related to the project.

10. Environmental Justice Community

Comment: The landfill causes visual impacts and odors in the neighboring Environmental Justice (EJ) community. Many residents of this community do not have the time or wherewithal to oppose the landfill.

Response: Visual impacts and odors are addressed in response # 9 and #2. Regarding the neighboring EJ community, DEP followed the appropriate guidelines of the EJ policy regarding enhanced public participation.

11. Limestone or Carbonate Formations

Comment: Drill holes extending to bedrock should be reviewed to rule out limestone formations below the surface and a licensed geologist should determine the topmost geological layer to rule out limestone.

Response: All boreholes drilled at Chrin Landfill were reviewed by both a third party Licensed Professional Geologist (LPG), hired by DEP to evaluate the geologic formations underlying the Chrin facility, and DEP's LPG assigned to the site. This 3rd party Professional Geologist reviewed all bore logs available for the site. Through this review it has been determined that carbonate formations are not the topmost geologic unit underlying the landfill. Rather, the first geologic unit underlying the landfill consists of either non-carbonate rock or a very thick saprolite unit.

Comment: If the landfill was permitted in error due to the presence of limestone or carbonate, how will DEP ensure the safety of and what are the rights of the surrounding population?

Response: Through extensive subsurface investigations, it has been determined that the topmost geologic unit underlying the landfill is either non-carbonate rock or a very thick saprolite unit. The landfill was not permitted in error, based on underlying geology, and any future areas where waste would be placed have been investigated through drilling and core logging to determine the topmost geologic unit.

12. Traffic

Comment: When was the last traffic study for the proposed area of change done? The area has changed significantly (new development) in the past several years and there is a concern that these changes have not been considered relative to traffic.

Response: A traffic study was completed for the project in 2016. The traffic study concluded that implementation of the expansion will not adversely affect the health, safety and welfare of the study area from a traffic engineering perspective (with respect to both construction activities and operation of the site).

Comment: Trucks are causing wear and unsafe conditions on the roads specifically Island Park Road.

Response: DEP provided local municipal officials with opportunity to voice any concerns regarding the project. No concerns regarding wear and unsafe conditions on Island Park Road were raised. The project will not result in an increase in daily volume. During construction activities there will be an increase in truck activity; however, any potential impact associated with this traffic is expected to be minimal and temporary. Chrin indicates the host fees paid under the Host Community Agreement is enough to cover the cost of maintenance and repair of all roadways in Williams Township.

13. Waste Types

Comment: What percentage of the new landfill material is expected to be sewage sludge or other non-household waste?

Response: Historic data indicates that Chrin receives approximately 68% municipal waste, 24% construction/ demolition waste, 4% residual waste and 3% sewage sludge. The remaining 1% is comprised of processed medical waste, asbestos waste and municipal waste incinerator ash. This application does not propose any changes to these historic waste acceptance values.

Comment: Chrin Landfill collects a disproportionate amount of asbestos from New Jersey when compared to total waste collected.

Response: An evaluation of the data for the last 5 years indicates that Chrin is in line with the rest of PA landfills regarding acceptance of out of state asbestos waste. Approximately 55% of the asbestos waste accepted by Chrin for disposal comes from out of state. Over the same timeframe, the statewide PA landfill average for acceptance of out of state asbestos waste versus in state asbestos waste was 52%.

14. Noise

Comment: Residents are exposed to the nuisance of noise from landfill trucks and equipment and the cannons used for bird control.

Response: The expansion should not exacerbate the existing potential for off-site noise, but it will extend the operating life of the landfill. Chrin's mitigation measures to minimize noise include: ensure all vehicles are equipped with the proper muffler systems and functioning properly; onsite speed limit of 15 mph; and operating vehicles according to the manufacturers operating instructions. Furthermore, Chrin uses "smart alarms" on some equipment to minimize noise and Chrin has ceased the use of the "bird cannon" at the request of Williams Township. Chrin currently uses Bird Screamers, Bird Bangers and a Bird Chase recording unit. These measures have had minimal to no appreciable

increase in noise levels. Chrin will also need to comply with all local nuisance ordinances related to noise.

15. Support

Comment: The landfill is an economic benefit to the state of Pennsylvania, Northampton County and Williams Township.

Response: The benefits of the landfill were evaluated during the Environmental Assessment review. DEP determined the benefits of the Eastern Expansion and Overlay project outweigh any remaining harms of the project.

16. Litter

Comment: Litter accumulates along Route 78 across from the landfill.

Response: Chrin has proposed adequate mitigation measures to prevent litter from being unsightly or leaving the site. DEP's experience based on inspections and oversight is that Chrin generally operates in compliance and has effective mitigation measures in place to control litter. However, because the mitigation depends on proper implementation of various measures there is always a potential for liter to leave the site. Chrin is responsible for the clean-up of any such occurrences.

17. Vectors

Comment: Birds frequenting the landfill are a nuisance and a health and safety hazard to the community.

Response: Chrin utilizes proper operational procedures and placement of daily, intermediate and final cover to minimize the attraction and breeding of vectors. Inspections and observations determine if additional corrective action is required and Chrin will contract with a licensed extermination service if necessary. Currently only bird "screamer" pyrotechnics are used at the site. At the request of the Township, Chrin has ceased use of the bird cannon. Chrin will integrate several options for managing the nuisance bird population at the landfill. Those options include: pyrotechnics, audio (i.e., bird chase recording unit), and visual (i.e., Terror Eyes Holographic Balloon, Bird-X Prowler Owl, Bird-B-Gone Hawk Decoy, Eye Spot Balloon and Bird-X 3D Coyote Replica). Chrin has proposed adequate mitigation measures to prevent nuisances from vectors. DEP's experience based on inspections and oversight is that Chrin generally operates in compliance and has effective mitigation measures in place to control vectors.