

Galapagos Industrial Park LLC

Chattanooga, Tennessee

EPA Identification Number: TND061314803

Permit Number: TNHW-161

Draft Class 3 Modification for Permit TNHW - 161

Public Notice

Fact Sheet

Draft Modification

Comment Period

January 15, 2023 – March 1, 2023

Public Notice

Draft Class 3 Modification
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

NOTICE OF PUBLIC HEARING ON THE INTENT TO MODIFY GALAPAGOS INDUSTRIAL PARK HAZARDOUS WASTE PERMIT

The Tennessee Department of Environment and Conservation (TDEC) Division of Solid Waste Management (DSWM) will conduct a public hearing to receive comments on its draft modification to the Hazardous Waste Permit TNHW-161, as requested by Galapagos Industrial Park (Galapagos). Galapagos (EPA ID No. TND061314803) is located in Hamilton County at 4902 Central Avenue, Chattanooga, TN 37410. TDEC invites the public to submit comments on this proposal during a 45-day comment period ending on **Wednesday, March 1, 2023**.

The public hearing will be held on Wednesday, February 8, 2023, at The Bethlehem Center, 200 W 38th St, Chattanooga, TN 37410, as well as via video teleconference. From 5:30 p.m. to 6:00 p.m. EDT, an informational session will be held. The public may inspect and discuss the draft modification, the fact sheet, and other materials with the DSWM and with representatives of the applicant. There will also be an opportunity for comments to be recorded or written and submitted during this time. The formal hearing will begin at 6:00 p.m. First, DSWM will explain its tentative decision to issue the permit. Then the applicant's representative will describe the proposed facility operation. DSWM will then receive oral comments on the draft permit from the public.

Those who wish to join the public hearing virtually can do so by using the following link tn.gov/environment/notices/galapagos/hearing. Information regarding how to join by computer will be posted to this website at least 3 days prior to the public hearing. Online participants will be able to view maps, pictures, and other content that will be shared.

The Class 3 Modification will parcel the property into three separate properties. This will include the main plant site (Track 3), the Change House (Track 2), and the Semi Works (Track 1). On Track 3 and Track 2, Galapagos will plug and abandon certain monitoring wells that have had no contamination above relevant action levels in three years or more. On Track 3, Galapagos will also plug and abandon piezometers that are no longer required as part of the monitoring program. Changes to site inspection schedules have been updated to reflect changes within the program as part of this modification.

DSWM has determined that the proposed modifications are protective of human health and the environment. As contamination remains in soil and groundwater, the proposed permit modification requires Galapagos to continue to operate and maintain the groundwater containment and extraction system, as well as maintain controls that will prevent exposure to those contaminants in soil and groundwater. Galapagos will continue long-term care of the former manufacturing facility property, including site security and inspections; restrictions on digging and drilling, groundwater monitoring, and notification of any new releases to the environment.

The permit is proposed to be modified under the authority of the Tennessee Hazardous Waste Management Act of 1977, as amended, Tennessee Code Annotated, Section 68-212-101 et seq., and Rule Chapter 0400-12-01, Hazardous Waste Management. In accordance with Rule 0400-12-01-.07(9)(c)5.(iii)(VII) and -.07(7)(e), DSWM is providing a 45-day comment period beginning on the date of this publication and a public hearing to be held on Wednesday, February 8, 2023.

Electronic copies of the draft modification, application, and fact sheet are available online at tn.gov/environment/notices/galapagos and at the DSWM Central Office on the 14th Floor of the Tennessee Tower, 312 Rosa L. Parks Avenue, Nashville, TN 37243 (615-532-0780). Paper copies may be reviewed at the South Chattanooga Library, 925 W 39th St, Chattanooga, TN 37410 (423-643-7780) and the TDEC

Chattanooga Environmental Field Office, 1301 Riverfront Parkway, Suite #206, Chattanooga, TN 37042 (423-634-5745).

To comment on the proposal, contact Beverly Philpot in DSWM's Central Office at the TN Tower, 312 Rosa L. Parks Avenue, 14th Floor, Nashville, TN 37243 (615-795-1188), email Beverly.Philpot@tn.gov, or fax 615-532-0938. **Comments must be received by 4:30 p.m. CDT, Wednesday, March 1, 2023, to ensure consideration.**

After considering all comments, DSWM will make a final decision to either issue or deny the permit modification. Notice will be given to the applicant and to each person who has submitted written comments or requested notice of the final decision. At the time of a final decision, a Response to Comments addressing all significant input received on the proposed modification will be made available to the public. The final decision shall become effective upon signing by the Director of DSWM.

TDEC is an Equal Employment Opportunity/Affirmative Action (EEO/AA) employer. TDEC does not unlawfully discriminate on any basis prohibited by applicable law in any of its programs, services, or activities.

EEO/AA/ADAAA inquiries or complaints may be directed to the ADAAA Coordinator, TDEC HR Division, at 615-532-0200. Hearing-impaired callers may use the Tennessee Relay Service (800-848-0298).

If it is hard for you to read, speak, or understand English, TDEC may be able to provide translation or interpretation services free of charge. Please contact Janelle Starke at 615-906-2950 for more information.

If you would like to receive notices like this directly, contact the DSWM's Central Office for a Mailing List Request Form. Email Solid.Waste@tn.gov or call 615-532-0780.

NOTICE ISSUED: January 17, 2023

This notice was published in the *Chattanooga Times Free Press* on Sunday, January 15, 2023.

Fact Sheet

Draft Modification to Permit
Number TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

FACT SHEET

DRAFT CLASS 3 PERMIT MODIFICATION INTENT TO PARCEL PROPERTY AND CHANGE SAMPLING AND INSPECTION REQUIREMENTS

Facility Name: Galapagos Industrial Park LLC (Galapagos)

Location: 4902 Central Avenue
Chattanooga, Tennessee 37410

EPA Identification Number: TND061314803

Permittee: Galapagos Industrial Park LLC

Waste Management Units: Corrective Action

Facility Owner/Operator: Galapagos Industrial Park LLC

Facility Contact: Maureen Handler
Sr. Environmental Specialist
Southern Environmental Technologies
900 Old Sewanee Road
Sewanee, Tennessee 37375
Phone: 423-605-5569

Comment Period: Begins: January 15, 2023
Ends: March 1, 2023

PURPOSE

This Fact Sheet and the Statements of Basis are prepared pursuant to Tennessee Rule 0400-12-01-.07(7)(d) for the draft permit amendment (modification) developed by the Tennessee Department of Environment and Conservation (TDEC) Division of Solid Waste Management (DSWM). The purpose of this modification process is to afford all interested persons the opportunity to review and comment on the selected final remedies and to evaluate the ability of the Respondent to apply the applicable hazardous waste management (corrective action) requirements. The proposal is for the Class 3 Permit Modification to be issued under the authority of the Tennessee Hazardous Waste Management Act of 1977, as amended, Tennessee Code Annotated, Section 68-212-101 et seq., and Rule Chapter 0400-12-01, Hazardous Waste Management. The permit modification is prepared in accordance with the provisions of Rule 0400-12-01-.07.

FACILITY OPERATIONS HISTORY

The Galapagos Industrial Park LLC is located at the former Velsicol Chemical LLC (Velsicol) Facility approximately 3.5 miles south of downtown Chattanooga, in Hamilton County, Tennessee. The original Velsicol manufacturing plant was constructed in 1948 on the site by Tennessee Products Corporation as an expansion of its adjacent to-the-north coke plant operations. Velsicol purchased the plant site, including the Semi-Works Plant and the Change House areas, in 1963. Velsicol subsequently purchased the Reilly

Tar Area in 1971. The installation of an asphalt cap and groundwater remediation system at Reilly Tar was completed in 1999. Velsicol operated the Facility to produce benzoic acid and its derivatives and chlorinated toluene-based products. Herbicides and insecticides were also produced, and a ferro-alloy plant operated at the Facility for a number of years. All manufacturing operations ceased in March of 2007. Site demolition to remove the manufacturing equipment and most ancillary facilities started in 2007 and was completed in 2010. Installation of a soil cover as a final remedy was completed in 2016. Velsicol sold the property and transferred the permit to Galapagos in 2020. Galapagos intends to redevelop the site. During Velsicol's operation of the site, waste materials have been stored, treated and disposed of on-site. These past practices contaminated soil and groundwater, which require the implementation of Corrective Measures and the continuation of on-going remedial operations.

PERMITTING HISTORY

The current hazardous waste permit, TNHW-161 (the Permit), was issued to Velsicol Chemical Corporation on September 3, 2015. The permit is effective until September 3, 2025 and requires the Facility to perform corrective action and monitoring.

During 2020, the Permit was modified to reflect a change of ownership and transfer of the permit from Velsicol Chemical Corporation to Galapagos Industrial Park LLC.

PROPOSED PERMIT MODIFICATION

In addressing the Permittee's request to parcel the property into three tracts and to change sampling and inspection requirements, DSWM has drafted an amendment to Hazardous Waste Permit TNHW-161. The Modification proposes the following changes to the permit:

1. Attachment 7 Schedule of Compliance and Drawing 20004E were added to the Table of Contents on Page ii. Figure 12 (Worksheet 2 was removed)
2. Separate the Galapagos property into three tracts to complete the separation Semi Works (Tract 1) (SWMU 2A is located on Tract 1) and the Change House (Tract 2) from the Main Manufacturing Plant which contains the solid waste management units (SWMUs) and areas of concern (AOCs) (Tract 3). This parceling will facilitate the development of the Semi Works and the Change House, while Galapagos retains permit responsibility and property ownership of the Tract 3 containing the SWMUs and AOCs.

Attachment 1 Site Description (Page 1-1), the second paragraph was re-drafted as follows:

The Property Survey (Drawing Number 20004E), shows the current layout of the facility, including parceling of the site into three separate tracks. Track 3 is the Main Manufacturing Plant parcel of approximately 36.5 acres. Track 1 is the Semi Works parcel of about 4.4 acres that is across Central Avenue from the main plant site. One solid waste management unit (SWMU) is located on Tract 1 (SWMU 2A – Laboratory Waste Disposal Pit). A removal action was performed at SWMU 2A which removed all soil above Preliminary Remediation Goals Industrial Levels with no further action being granted by the Division of Solid Waste Management in May of 2002. Tract 1 currently has deed restrictions addressing groundwater use restrictions and designating the parcel as industrial use only. Tract 2 is the Change House parcel of about 4.1 acres that is separated from Track 3 by a railroad right of way and separated from Track 2 by Central Avenue. Track 2 will contain deed restrictions as described in section Attachment 7. Tract 3, which contains the

SWMUs and Areas of Concern that require final remedies, shall be retained by Galapagos LLC the current owner of the property.

3. Added the following paragraph to Attachment 1 Site Description (Page 1-1):

The main facility address (Tract 3) is 4902 Central Avenue, Chattanooga, Tennessee 37410. The Semi-Works site (Tract 1) is located 4801 Central Avenue, Chattanooga, Tennessee 37410, and the Change House (Tract 2) is located at address 5004 Central Avenue, Chattanooga, Tennessee 37140.

4. Attachment 3 Inspections (Page 3-1), the first sentence of the first paragraph was re-drafted as follows:

In accordance with the conditions in permit Subsection II.B and this attachment, the permittee is required to perform monthly inspections at SWMUs 39, 40, and 41 (the Riley Tar Asphalt Cap) located on Table 4.1-6 of Attachment 4 and quarterly inspections on the remaining SWMUs on Table 4.1-6 of Attachment 4.

5. Attachment 3 Inspections (Page 3-1), second paragraph first sentence changed to Monthly, Quarterly and Annual Inspection Log Removed references to Worksheet 2 and Figure 12. Removed the following language:

Worksheet 2 is only for off-site water elevation calculations. Worksheet 2 only requires the permittee to determine off-site groundwater elevations at Piney Woods Spring. and does not require the permittee to inspect or maintain the off-site wells. However, if any off-site well is in poor condition or unlocked, the permittee should note the details on the Monthly and Quarterly Inspection Log and report correctable problems to off-site owners or contacts.

6. Attachment 4.1 Corrective Action Requirement Tables, Table 4.1-1 List of SWMUs and AOCs That Require No Further Action Under The Corrective Action Conditions Of This Permit (Page 4.1-1):

In column five of SWMU 2A the following language was added:

Restrictions placed on deed for no groundwater use and industrial use only.

Added an * to SWMU 2A.

Added the following footnote at the bottom of the page:

* SWMU 2A, is located on the Tract 1 parcel (Semi-Works Plant) that is being parceled as a separate property and removed from this permit as of execution of the Class 3 permit modification dated ~~XXXXX~~. SWMU 2A requires no further action in accordance with Permit Section III, Specific Conditions for Corrective Action. Deed Restrictions must be maintained in perpetuity.

7. Attachment 4.5 Corrective Action Remedies II.A (Page 4-1), changed quarterly to annually in the last paragraph.
8. Attachment 4.5 Corrective Action Remedies II.G (Page 4-2), changed monthly to quarterly.

9. Attachment 4.5 Corrective action Remedies II (Page 4-2), added “J”:

- J. Prior to any re-development of the main plant property (Tract 3), the permittee will submit a Permit Modification request which will include certified engineering drawings and a workplan. The workplan must be approved by DSWM prior to any field activity.

10. Attachment 4.5 Corrective Action Remedies IV.A (Page 4-3), changed to read as follows:

The permittee is required to measure free product semi-annually and remove DNAPL as needed from piezometers P-9, P-11, and P-13.

The Permittee shall maintain the following 10 DNAPL recovery wells: P-1, P-2, P-3, P-5, P-6, P-7, P-8, P-10, P-12, and MW-13 for potential future use. No sampling or water level measurements are required at this time.

11. Attachment 4.5 Corrective Action Remedies, Media Monitoring V.B. (Page 4-3), changed semi-annually to annually and removed “and Worksheet 2 (Figure 12).”
12. Attachment 4.5 Corrective Action Remedies, Media Monitoring, Table 4.5-1 ON-SITE WELL CONSTRUCTION DETAILS (Page 4-4). Removed the following monitoring wells: MW-14, MW-22, MW-34, MW-15, MW-38 and PW-3. Removed the following piezometers: MW-16, MW-18, MW-19, MW-20, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, and MW-31.
13. Attachment 4.5 Corrective Action Remedies, Media Monitoring TABLE 4.5-2: OFF-SITE WELL CONSTRUCTION DETAILS, Tennessee Products and Piney Woods Spring Sites, Chattanooga (Page 4-5). Removed the following monitoring wells: MW3-17, MW6-14, MW7-SH, MW3-IN, MW3-112, MW6-73, MW7-IN, and piezometer PW-3.
14. Attachment 4.5 Corrective Action Remedies, Media Monitoring TABLE 4.5-3: Groundwater Quality Monitoring Requirements (Page 4-5). Removed the following monitoring wells: MW-14, MW-22, MW-34, MW-15, and MW-38, and PW-3.
15. Attachment 4.5 Corrective Action Remedies, Media Monitoring V.C. (Page 4-3). Added, “RW-1 will be sampled semi-annually.”
16. Attachment 4.5 Corrective Action Remedies, Plugging and Abandonment Procedures VII (Page 4-8). Added the following paragraph:

Table 4.5-6 provides the monitoring well and piezometer construction details for those wells that the Commissioner is approving for decommissioning under the requirements of this attachment. The permittee shall submit a workplan according to Attachment 7 Schedule of Compliance and implement the plugging and abandonment procedures for all the wells and piezometers listed on Table 4.5-6 and as located on Figure 5 Well Locations.

Added TABLE 4.5-6. CONSTRUCTION DETAILS FOR WELLS SCHEDULED FOR PLUGGING AND ABANDONMENT.

17. Added Attachment 7 Schedule of Compliance.
18. Added Drawing 20004E Property Survey.
19. Changed the Title of Figure 10 from Velsicol Chattanooga Facility to Galapagos Industrial Park.
20. The title of Figure 10 was changed to:

“Galapagos Industrial Park”
Monthly, Quarterly, and Annual Inspection Log

21. Figure 10 Monthly, Quarterly, and Annual Inspection Log was updated.
22. Figure 11 (Worksheet 1) was updated to remove all wells listed in Table 4.5-6 Construction Details for Wells Scheduled for Plugging and Abandonment.
23. Removed Worksheet 2, Figure 12, Water Calculation Form for Off-Site Wells.
24. Based on previous modification 1(A1082), that was issued by DSWM on June 26, 2020, all references to Velsicol Chemical LLC were changed to Galapagos Industrial Park LLC throughout permit.

DSWM has determined the modifications to the permit are protective of human health and the environment. As contamination remains in the groundwater, Galapagos will continue to operate RW-1 (groundwater recovery well) at the Reilly Tar area. The modification allows Galapagos to lower the frequency of inspections and plug abandon monitoring wells that have not had contamination detected for three years or more. Additionally, the modification allows Galapagos to plug and abandon piezometers that are no longer necessary to determine groundwater flow direction. However, Galapagos is still required to provide for long-term care, including requirements for maintenance of established site security measures; regular inspections; maintenance of landfill caps; restrictions on digging and drilling; and notification of any new release to the environment. To monitor the effectiveness of the groundwater remediation system, Galapagos will maintain a site-wide groundwater monitoring program. Galapagos is required to submit an annual report to the DSWM that includes groundwater flow rate and direction, analytical results, results of the DNAPL recovery operations, review of the groundwater recovery system, and a discussion of the effectiveness of the final remedies at the site. The report will also include conclusions and any recommendations.

PUBLIC PARTICIPATION

Galapagos conducted a public meeting on May 13, 2021, at the South Chattanooga Park Pavilion, as announced in the April 30, 2021, Chattanooga Times Free Press, the purpose of the meeting was to inform the communities of Galapagos' planned modification request to modify the groundwater monitoring requirements, reduce free product recovery, modify inspection requirements and the parceling of the Change House and the Semi-Works into separate properties. 23 members of the public attended the meeting. Comments received were summarized in two questions: 1) Why was there a proposal to limit the remediation being performed and 2) Would Piney Woods Spring continued to be monitored. DSWM has determined that the remediation system at Reilly Tar will continue to operate as required in the permit. Additionally, there was no plans to discontinue monitoring at Piney Wood Spring. No other comments were received during the 60-day comment period which ended on July 2, 2021.

DSWM has made a preliminary determination to issue the Amendment to the Hazardous Waste Permit. Pending consideration of any contrary information received, it is the present intent of DSWM to amend the permit to incorporate the modifications to the Galapagos facility. DSWM has drafted the modification with the necessary supporting data and documentation and published a public notice announcing a public hearing for February 8, 2023 and a 45-day comment period to review and comment on the remedies ending on March 23, 2023.

DOCUMENTS AVAILABLE FOR REVIEW

Electronic copies of the draft modification, application, and fact sheet are available online at tn.gov/environment/notices/galapagos and at the DSWM Central Office on the 14th Floor of the Tennessee Tower, 312 Rosa L. Parks Avenue, Nashville, TN 37243 (615-532-0780). Paper copies may be reviewed at the South Chattanooga Library, 925 W 39th St, Chattanooga, TN 37410 (423-643-7780) and the TDEC Chattanooga Environmental Field Office, 1301 Riverfront Parkway, Suite #206, Chattanooga, TN 37042 (423-634-5745).

COMMENTS

The public hearing will be held on February 8, 2023 at the Bethlehem Center, 200 W 38th St, Chattanooga, TN. From 5:30 p.m. to 6:00 p.m. EDT, an informational session will be held. The public is invited to inspect and discuss the draft modification, the fact sheet, and other materials at this time. The informational session will have a question-and-answer format where the public can ask one-on-one questions of DSWM staff and Galapagos (the applicant). There will be an opportunity for public comments to be recorded or written and submitted during this time. Once the formal public hearing begins at 6:00 p.m. EDT, the question-and-answer format will end. DSWM will begin the hearing by explaining its tentative decision to modify the permit, after which Galapagos will describe the facility. DSWM will then receive oral comments from the public. During the hearing, all public comments will be received as part of the hearing record without response from DSWM.

Those who wish to join the public hearing virtually can do so by using the following link tn.gov/environment/notices/galapagos/hearing. Information regarding how to join by computer will be posted to this website at least 3 days prior to the public hearing. Online participants will be able to view maps, pictures, and other content that will be shared.

To comment on the proposal, contact Ms. Beverly Philpot Hazardous Waste Program Manager , TN Tower, 312 Rosa L. Parks Avenue, 14th Floor, Nashville, TN 37243 (615-796-1188), email Beverly.Philpot@tn.gov or fax 615-532-0938. **Comments must be received by 4:30 p.m. CDT, March 23, 2023, to assure consideration.**

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ENCLOSURE

REPLACEMENT PAGES

CLASS 3 PERMIT MODIFICATION

**GALAPAGOS INDUSTRIAL PARK LLC
PERMIT NUMBER TNH-161**

Effective as of [REDACTED], 2023

CLASS 3 MODIFICATION OF HAZARDOUS WASTE MANAGEMENT PERMIT

Permittee: Galapagos Industrial Park LLC
Owner/Operator: Galapagos Industrial Park LLC
Location: 4902 Central Avenue, Chattanooga, Tennessee 37410
EPA ID Number: TND061314803
Permit Type: Corrective Action
Type: Corrective Action
Units: Solid Waste Management Units (SWMUs) and
Areas of Concern (AOCs)
Permit Number: TNHW-161
Modification Type: Class 3
Modification Number: 1 (D-49)

Pursuant to the Tennessee Hazardous Waste Management Act of 1977, as amended (Tennessee Code Annotated 68-212-101 et seq.) and the regulations (Chapter 0400-12-01) promulgated thereunder by the Underground Storage Tanks and Solid Waste Disposal Control Board, a hazardous waste management facility permit, number TNHW-161, issued to Galapagos Industrial Park LLC (Galapagos) of Chattanooga, Tennessee, is now hereby modified as summarized below:

1. Attachment 7 Schedule of Compliance and Drawing 20004E were added to the Table of Contents on Page ii. Figure 12 (Worksheet 2 was removed)
2. Separate the Galapagos property into three tracts to complete the separation Semi Works (Tract 1) (SWMU 2A is located on Track 1) and the Change House (Tract 2) from the Main Manufacturing Plant which contains the solid waste management units (SWMUs) and areas of concern (AOCs) (Tract 3). This parceling will facilitate the development of the Semi Works and the Change House, while Galapagos retains permit responsibility and property ownership of the Tract 3 containing the SWMUs and AOCs.

Attachment 1 Site Description (Page 1-1), the second paragraph was re-drafted as follows:

The Property Survey (Drawing Number 20004E), shows the current layout of the facility, including parceling of the site into three separate tracks. Track 3 is the Main Manufacturing Plant parcel of approximately 36.5 acres. Track 1 is the Semi Works parcel of about 4.4 acres that is across Central Avenue from the main plant site. One solid waste management unit (SWMU) is located on Tract 1 (SWMU 2A – Laboratory Waste Disposal Pit). A removal action was performed at SWMU 2A which removed all soil above Preliminary Remediation Goals Industrial Levels with no further action being granted by the Division of Solid Waste Management in May of 2002. Tract 1 currently has deed restrictions addressing groundwater use restrictions and designating the parcel as industrial use only. Tract 2 is the Change House parcel of about 4.1 acres that is separated from Track 3 by a railroad right of way and separated from Track 2 by Central Avenue. Track 2 will contain deed restrictions as described in section Attachment 7. Tract 3, which contains the

SWMUs and Areas of Concern that require final remedies, shall be retained by Galapagos LLC the current owner of the property.

3. Added the following paragraph to Attachment 1 Site Description (Page 1-1):

The main facility address (Tract 3) is 4902 Central Avenue, Chattanooga, Tennessee 37410. The Semi-Works site (Tract 1) is located 4801 Central Avenue, Chattanooga, Tennessee 37410, and the Change House (Tract 2) is located at address 5004 Central Avenue, Chattanooga, Tennessee 37140.

4. Attachment 3 Inspections (Page 3-1), the first sentence of the first paragraph was re-drafted as follows:

In accordance with the conditions in permit Subsection II.B and this attachment, the permittee is required to perform monthly inspections at SWMUs 39, 40, and 41 (the Riley Tar Asphalt Cap) located on Table 4.1-6 of Attachment 4 and quarterly inspections on the remaining SWMUs on Table 4.1-6 of Attachment 4.

5. Attachment 3 Inspections (Page 3-1), second paragraph first sentence changed to Monthly, Quarterly and Annual Inspection Log Removed references to Worksheet 2 and Figure 12. Removed the following language:

Worksheet 2 is only for off-site water elevation calculations. Worksheet 2 only requires the permittee to determine off-site groundwater elevations at Piney Woods Spring. and does not require the permittee to inspect or maintain the off-site wells. However, if any off-site well is in poor condition or unlocked, the permittee should note the details on the Monthly and Quarterly Inspection Log and report correctable problems to off-site owners or contacts.

6. Attachment 4.1 Corrective Action Requirement Tables, Table 4.1-1 List of SWMUs and AOCs That Require No Further Action Under The Corrective Action Conditions Of This Permit (Page 4.1-1):

In column five of SWMU 2A the following language was added:

Restrictions placed on deed for no groundwater use and industrial use only.

Added an * to SWMU 2A.

Added the following footnote at the bottom of the page:

* SWMU 2A, is located on the Tract 1 parcel (Semi-Works Plant) that is being parceled as a separate property and removed from this permit as of execution of the Class 3 permit modification dated XXXXX. SWMU 2A requires no further action in accordance with Permit Section III, Specific Conditions for Corrective Action. Deed Restrictions must be maintained in perpetuity.

7. Attachment 4.5 Corrective Action Remedies II.A (Page 4-1), changed quarterly to annually in the last paragraph.

8. Attachment 4.5 Corrective Action Remedies II.G (Page 4-2), changed monthly to quarterly.
9. Attachment 4.5 Corrective action Remedies II (Page 4-2), added “J”:
 - J. Prior to any re-development of the main plant property (Tract 3), the permittee will submit a Permit Modification request which will include certified engineering drawings and a workplan. The workplan must be approved by DSWM prior to any field activity.
10. Attachment 4.5 Corrective Action Remedies IV.A (Page 4-3), changed to read as follows:

The permittee is required to measure free product semi-annually and remove DNAPL as needed from piezometers P-9, P-11, and P-13.

The Permittee shall maintain the following 10 DNAPL recovery wells: P-1, P-2, P-3, P-5, P-6, P-7, P-8, P-10, P-12, and MW-13 for potential future use. No sampling or water level measurements are required at this time.
11. Attachment 4.5 Corrective Action Remedies, Media Monitoring V.B. (Page 4-3), changed semi-annually to annually and removed “and Worksheet 2 (Figure 12).”
12. Attachment 4.5 Corrective Action Remedies, Media Monitoring, Table 4.5-1 ON-SITE WELL CONSTRUCTION DETAILS (Page 4-4). Removed the following monitoring wells: MW-14, MW-22, MW-34, MW-15, MW-38 and PW-3. Removed the following piezometers: MW-16, MW-18, MW-19, MW-20, MW-24, MW-25, MW-26, MW-27, MW-28, MW-29, MW-30, and MW-31.
13. Attachment 4.5 Corrective Action Remedies, Media Monitoring TABLE 4.5-2: OFF-SITE WELL CONSTRUCTION DETAILS, Tennessee Products and Piney Woods Spring Sites, Chattanooga (Page 4-5). Removed the following monitoring wells: MW3-17, MW6-14, MW7-SH, MW3-IN, MW3-112, MW6-73, MW7-IN, and piezometer PW-3.
14. Attachment 4.5 Corrective Action Remedies, Media Monitoring TABLE 4.5-3: Groundwater Quality Monitoring Requirements (Page 4-5). Removed the following monitoring wells: MW-14, MW-22, MW-34, MW-15, and MW-38, and PW-3.
15. Attachment 4.5 Corrective Action Remedies, Media Monitoring V.C. (Page 4-3). Added, “RW-1 will be sampled semi-annually.”
16. Attachment 4.5 Corrective Action Remedies, Plugging and Abandonment Procedures VII (Page 4-8). Added the following paragraph:

Table 4.5-6 provides the monitoring well and piezometer construction details for those wells that the Commissioner is approving for decommissioning under the requirements of this attachment. The permittee shall submit a workplan according to Attachment 7 Schedule of Compliance and implement the plugging and abandonment procedures for all the wells and piezometers listed on Table 4.5-6 and as located on Figure 5 Well Locations.

Added TABLE 4.5-6. CONSTRUCTION DETAILS FOR WELLS SCHEDULED
FOR PLUGGING AND ABANDONMENT.

17. Added Attachment 7 Schedule of Compliance.
18. Added Drawing 20004E Property Survey.
19. Changed the Title of Figure 10 from Velsicol Chattanooga Facility to Galapagos Industrial Park.
20. The title of Figure 10 was changed to:

“Galapagos Industrial Park”
Monthly, Quarterly, and Annual Inspection Log
21. Figure 10 Monthly, Quarterly, and Annual Inspection Log was updated.
22. Figure 11 (Worksheet 1) was updated to remove all wells listed in Table 4.5-6 Construction Details for Wells Scheduled for Plugging and Abandonment.
23. Removed Worksheet 2, Figure 12, Water Calculation Form for Off-Site Wells.
24. Based on previous modification 1(A1082), that was issued by DSWM on June 26, 2020, all references to Velsicol Chemical LLC were changed to Galapagos Industrial Park LLC throughout permit.

This modification is further subject and conditioned upon the terms, conditions, limitations, standards and schedules contained in or specified in the attachments which are a part of this modification. This modification is hereby made a part of TNHW-161 and is effective as of [REDACTED], 2022 and shall remain in effect unless continued, revoked and reissued, or terminated under Rule 0400-12-01-.07(9). Failure to comply with the terms of this transfer shall constitute a violation of the Order.

DRAFT

Lisa A. Hughey, CHMM
Director, Division of Solid Waste Management

[REDACTED], 2023
Date

Draft Modification

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

EPA ID Number: TND061314803
Permit Number: TNHW-161

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Attachment 1
Site Description
Draft Replacement Pages

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

EPA ID Number: TND061314803
Permit Number: TNHW-161

ATTACHMENT 1. SITE DESCRIPTION

The Galapagos Industrial Park LLC site is located about 3.5 miles south of downtown Chattanooga, in Hamilton County, Tennessee at latitude 34° 59' 34" N and longitude 85° 18' 50" W. Galapagos Industrial Park LLC is bordered by industrial properties, open space and residential areas. The Tennessee Products Federal Superfund Site is adjacent to the north side of the facility and the Residue Hill Site is adjacent to the east side of the facility, as shown on Figure 1, General Site Plan. The entire site is outside the 500-Year Flood Plain.

The Property Survey (Drawing Number 20004E), shows the current layout of the facility, including parceling of the site into three separate tracks. Track 3 is the Main Manufacturing Plant parcel of approximately 36.5 acres. Track 1 is the Semi Works parcel of about 4.4 acres that is across Central Avenue from the main plant site. One solid waste management unit (SWMU) is located on Tract 1 (SWMU 2A – Laboratory Waste Disposal Pit). A removal action was performed at SWMU 2A which removed all soil above Preliminary Remediation Goals Industrial Levels with no further action being granted by the Division of Solid Waste Management in May of 2002. Tract 1 currently has deed restrictions addressing groundwater use restrictions and designating the parcel as industrial use only. Tract 2 is the Change House parcel of about 4.1 acres that is separated from Track 3 by a railroad right of way and separated from Track 2 by Central Avenue. Track 2 will contain deed restrictions as described in section Attachment 7. Tract 3, which contains the SWMUs and Areas of Concern that require final remedies, shall be retained by Galapagos LLC the current owner of the property.

The main facility address (Tract 3) is 4902 Central Avenue, Chattanooga, Tennessee 37410. The Semi-Works site (Tract 1) is located 4801 Central Avenue, Chattanooga, Tennessee 37410, and the Change House (Tract 2) is located at address 5004 Central Avenue, Chattanooga, Tennessee 37140.

The original manufacturing plant was constructed in 1948 by Tennessee Products Corporation as an expansion of its adjacent coke plant operations. Velsicol purchased the plant site, including the Semi-Works Plant and the Change House areas, in 1963. Velsicol subsequently purchased the Reilly Tar Area in 1971. Velsicol operated the facility to produce benzoic acid and its derivatives and chlorinated toluene-based products. Herbicides and insecticides were also produced and a ferro-alloy plant operated at the facility for a number of years. All manufacturing operations ceased in March of 2007 and the site underwent demolition to remove the manufacturing equipment and most of the ancillary facilities. During the operational history of the site, waste materials were stored, treated and disposed of on-site. Past practices contaminated soil and groundwater, which requires long-term corrective action for many of the site's solid waste management units and areas of concern.

After a thorough investigation of the site, interim corrective actions, and a remedy selection process that included public participation, the Division made a final decision to approve a Class 3 Permit

Modification for final remedy of the site. The July 5, 2011 modification added a site-wide final remedy to Velsicol's permit requiring Velsicol to implement the remedy to address environmental contamination at their closed plant site. The remedy included installing and maintaining a 24-inch soil cover (Figure 2) over residual soil contamination, which remains after waste removal activities. In addition, the corrective action remedy has provisions for collecting contaminated groundwater and routing it to the Chattanooga sewer system for disposal. Galapagos Industrial Park LLC is also required to continue to monitor and collect and dispose of coal tar from the asphalt-capped Reilly Tar Area. Galapagos Industrial Park LLC has filed financial assurance with the Division in an amount that covers the long-term costs of maintaining the soil cover, required remedial actions, site monitoring, site security and inspection activities.

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Attachment 3
Inspections
Draft Replacement Pages

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

EPA ID Number: TND061314803
Permit Number: TNHW-161

ATTACHMENT 3. INSPECTIONS

In accordance with the conditions in permit Subsection II.B and this attachment, the permittee is required to perform monthly inspections at SWMUs 39, 40, and 41 (the Riley Tar Asphalt Cap) located on in Table 4.1-6 of Attachment 4 and quarterly inspections on the remaining SWMUs on Table 4.1-6 of Attachment 4. The permittee is required to make necessary repairs at all the SWMUs and the AOCs described in Table 4.1-6 of Attachment 4.1, Corrective Action Requirement Tables, and as located on Figure 1, General Site Plan. The inspections shall include verification of the security measures and institutional controls in permit Subsection II.A and Attachments 2, Security, and 4.5, Corrective Action Remedies. During inspections, the permittee shall use the Main Plant Site Inspection Diagram (Figure 7) to identify the location of required fencing, signs, gates, and other necessary controls. The inspections shall also include an evaluation of groundwater monitoring wells, Dense Non-Aqueous Phase Liquid (DNAPL) recovery wells, piezometers, and security and integrity of all wells listed on Table 4.5-1 of Attachment 4. This inspection activity will only be required to be performed on an annual basis. The permittee will inspect RW-1 on a monthly basis.

The permittee shall complete the required Monthly, Quarterly, and Annual Inspection Log (Figure 10) as listed in the permit. Worksheet 1 (Figure 11) will be used to record the well inspections and groundwater elevation calculations.

If “NO” is checked on any line on the Galapagos Facility Monthly, Quarterly And Annual Inspection Log or “N” is noted for any monitoring well or piezometer on Worksheet 1: Inspection And Water Level Calculation Form for On-site Wells, the permittee shall describe the problem, its specific location, and describe actions initiated to correct the problem on the inspection log. Records and results of inspections, including the full nature of any repairs and the response times for remedies not immediately completed and recorded during the scheduled inspection, shall be reported and kept in the facility operating record, as specified in permit Paragraph II.E.1.

Attachment 4.1
Corrective Action Requirement Tables
Draft Replacement Page

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

ATTACHMENT 4.1. CORRECTIVE ACTION REQUIREMENT TABLES

Table 4.1-1 List of solid waste management units (SWMUs) and areas of concern (AOCs) that require no further action under the corrective action conditions of this permit:				
SWMU/ AOC	SWMU/AOC Name	Unit Comment	Dates of Operation	No Further Action Documentation
2A*	Laboratory Waste Disposal Pit	Located at the Semi Works Plant	Unknown-1990	Construction Completion Report for Removal; Approved on 5/6/02. Restrictions placed on deed for no groundwater use and industrial use only .
4	Abandoned Tank #1	Initially Stored Trichlorobenzene, Later Stored Wastewater from Decontamination Process	1965-1987	1990 RCRA Facility Assessment
5	Abandoned Tank #2	Initially Stored Methanol, Later Stored Wastewater from Decontamination Process	1965-1987	1990 RCRA Facility Assessment
6	Tank Foundation Area #1	20,000-Gallon Tank Foundation, Handled 73% Caustics	1965-1980	1990 RCRA Facility Assessment
7	Tank Foundation Area #2	20,000-Gallon Tank Foundation, Handled Methanol/Water Mixture	1965-1980	1990 RCRA Facility Assessment
11	Abandoned Tank #3	20,000-Gallon Tank, Handled Xylene	1965-1980	1990 RCRA Facility Assessment
12	Caustic Tank Foundation	20,000-Gallon Tank, Handled 50% Caustics	1965-1980	1990 RCRA Facility Assessment
13	Flute Dust Storage Area	Initially, Containment Area for Tank Holding Methyl Chloride, Subsequently Stored Flute Dust	1965-2007 or earlier	1990 RCRA Facility Assessment
14	Abandoned Tank Storage Area	Containment Area for Tank Holding Dimethyl Amine	1965-2007 or earlier	1990 RCRA Facility Assessment
15	Caustic Unloading Area	Unloading Area for Caustics	1965-2007	Phase III RFI Report & Phase III RFI Report Re-Screening; Approved on 2/20/08 and 8/25/08
16	Laydown Area South of pH Adjustment Basin	Storage Area; Concrete Floor Area, Backfilled with Clean Soil and Gravel in 2000	1965-2008	Phase III RFI Report Re-Screening; Approved on 8/25/08
24	Solid Waste Pile/Sludge Bed	Storage Area for Activated Carbon	1982-2007 or earlier	1990 RCRA Facility Assessment

* SWMU 2A, is located on the Tract 1 parcel (Semi-Works Plant) that is being parceled as a separate property and removed from this permit as of execution of the Class 3 permit modification dated **XXXXX**. SWMU 2A requires no further action in accordance with Permit Section III, Specific Conditions for Corrective Action. Deed Restrictions must be maintained in perpetuity.

Attachment 4.5
Corrective Action Remedies
Draft Replacement Pages

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

ATTACHMENT 4.5. CORRECTIVE ACTION REMEDIES

This attachment provides the corrective action requirements for the solid waste management units (SWMUs) and areas of concern (AOCs) that require implementation of the selected final remedy at the Galapagos Industrial Park LLC property. The site is owned by Galapagos Industrial Park LLC (permittee). All units requiring implementation of a corrective action remedy in accordance with this permit are listed in Attachment 4.1, Table 4.1-6, with the locations depicted on Figure 6.

The following sections describe the controls and procedures that the permittee must follow to implement the remedies at Galapagos Industrial Park LLC facility. In general, all the SWMUs requiring implementation of a corrective action remedy will be capped. An asphalt cap, about 2.6 acres, already caps the Reilly Tar Area. When the soil cover construction is completed in the fall of 2015, a 24-inch vegetated soil barrier will cover most of the remaining 34 acres of the Main Manufacturing Plant parcel and less than one-third of the 4.4-acre Semi-Works Plant parcel. In addition to the cap, engineered and institutional controls are included as part of the final remedy to ensure the protection of human health and the environment. The controls are designed to prevent the possibility of exposure to contaminated soils and onsite groundwater by limiting site access, controlling land use, and by enforcing other administrative/security measures as detailed in Attachment 2. The facility will be required to maintain the land use controls and, in accordance with Attachment 3, perform inspections to verify that the controls are maintained. Groundwater contaminated with semi-volatile organics (SVOCs) and volatile organic compounds (VOCs) require remediation and/or long-term monitoring to help ensure that human health and the environment remain protected. Dense non-aqueous phase liquids (DNAPL) require removal.

I. SOIL BARRIER

Except for removing the stormwater collection and distribution system, the demolition work and most of the site capping at the site has already been completed. The primary method of remediation is to install and maintain a clean soil cover over contaminated soils and sediments. This soil cover will serve as a barrier to human exposure and will contain underlying contaminated soil. Details on the remedial construction methods are presented in Attachment 6, Soil Cover Construction.

II. ENGINEERED AND INSTITUTIONAL CONTROLS

Permit Subsections II.A and II.B and Attachments 2 and 3, provide the basic security and inspection requirements for maintaining the engineered and institutional controls, which limit access to the site and prevent exposures. This section summarizes and provides additional inspection and maintenance requirements for the site's SWMUs. As these units have exposure concerns, the permittee shall be required to maintain the following controls for those SWMUs that require implementation of the corrective action remedy.

- A. A fence with locked gates and "Danger, No Trespassing, Authorized Personnel Only" signage will be maintained around the main plant site to control access. Contact information will be provided at the front gate. The security fence will be a minimum 6-foot tall barrier with three strands of barbed wire and the signage will be installed at about 100-foot intervals. All monitoring wells will be secured with locking covers or caps and inspected annually.

- B. The permittee shall maintain, in good condition, the perimeter fence that surrounds the facility. Access and egress to the facility shall be controlled as described in Attachment 2, Security.
- C. The permittee shall maintain maps or provide other means, as necessary, to readily identify the location of the SWMUs that require implementation of a corrective action remedy.
- D. Without prior written permission from the Commissioner, the permittee shall not allow any digging, construction activity or other action that disturbs the soil within the SWMUs listed in Table 4.1-6 of Attachment 4.1, or at areas downgradient of those units, if such activities may alter migration of any associated groundwater contaminant plume. During sampling, inspection, or any other activity in these areas, workers are required to adhere to established safety measures in order to minimize exposure risks.
- E. The soil barrier and its vegetated cover shall be inspected quarterly and maintenance work will be performed as necessary to minimize and repair erosion and to maintain the vegetated cover. The cap shall be maintained in accordance with the construction designs in Figures 3 and 4. Routine maintenance will include mowing and control of noxious weeds.
- F. The permittee must perform inspections on an annual basis at all monitoring wells listed in Table 4.5-1 of this attachment. Monitoring well and piezometer inspection is included in the Monthly and Quarterly Inspection Log (Figure 10). Worksheet 1: Inspection and Water Level Calculation Form For On-Site Wells (Figure 11) is included to facilitate the recording of each well's condition.
- G. The asphalt cap covering the Reilly Tar Area (SWMUs 39, 40, and 41) will be inspected monthly and maintenance will be performed as necessary to maintain the integrity of the asphalt. The cap consists of a 4-inch base course and 2-inch surface course over a crushed stone sub-base. The extent of the cap is shown on Figure 2, Soil Cover Plan. If any tar bleeds through the asphalt cap, the material shall be shoveled into a bucket and treated as hazardous waste. Prior to removal, the tar may be temporarily maintained (a maximum of two weeks) by covering the area with polyethylene. Any occurrence of "bleeding tar" shall be immediately entered into the facility log, to include a follow-up summary of the remedial action taken.
- H. The permittee shall maintain in the facility record, copies of all corrective action inspection reports for a period of three years from the date of the inspection.
- I. The permittee shall notify the Commissioner within 15 days of discovery that any institutional control required by this permit does not remain in place.
- J. Prior to any re-development of the main plant property (Tract 3), the permittee will submit a Permit Modification request which will include certified engineering drawings and a work plan. The workplan must be approved by DSWM prior to any field activity.

III. GROUNDWATER REMEDIATION

- A. The permittee shall continue operation of well RW-1 for groundwater recovery at the Reilly Tar Area and to prevent off-site migration of a contaminant plume to the northeast of the Galapagos Industrial Park LLC site.
- B. The permittee must insure that the springbox and pipeline at the Piney Woods Spring are maintained so that the system continues to properly function by collecting the groundwater and conveying that groundwater to the City of Chattanooga's sanitary sewer.

IV. DENSE NON-AQUEOUS PHASE LIQUIDS (DNAPL) MEASUREMENT AND RECOVERY

The DNAPL recovery system consists of DNAPL removal from three piezometers and one monitoring well.

- A. The permittee is required to measure free product semi-annually and remove DNAPL as needed from piezometers P-9, P-11, and P-13.

The permittee shall maintain the following DNAPL recovery wells: P-1, P-2, P-3, P-5, P-6, P-7, P-8, P-10, P-12, P-14, and MW-13 for potential future use. No sampling or water level measurements are required at this time.

- B. DNAPL thickness will be measured by use of common environmental industry equipment and methods such as weighted string, dipstick, weighted bailer, oil/water interface probe or other equivalent methods approved by the Commissioner. Field personnel will record the initial thickness measurement on the DNAPL Recovery Log or other logbook.
- C. DNAPL is initially placed into a graduated bucket for measurement purposes and then transferred to a 55-gallon drum.
- D. The permittee must dispose of the DNAPL at a permitted hazardous waste facility.

V. MEDIA MONITORING

This section provides the conditions for groundwater monitoring. As follows, the permittee is required to perform corrective action groundwater compliance monitoring.

- A. The permittee must maintain the groundwater monitoring wells for AOC GW in accordance with the specifications in Table 4.5-1 of this attachment, at the locations shown on Figure 5.
- B. The permittee must annually determine the elevation of groundwater for each monitoring well and piezometer listed on Tables 4.5-1 and 4.5-2. Worksheet 1

(Figure 11), will be used to document depth to water and to record the calculated water elevations.

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TABLE 4.5-1: ON-SITE WELL CONSTRUCTION DETAILS
Galapagos Industrial Park LLC Chattanooga Facility

Well	Matrix	Northing	Easting	Elevation (Top of Casing)	Total Depth (BGS*)	Screened Interval (BGS*)	Well Diameter	Completion Date
MW-10 ⁺	Soil	2038.51	542.76	691.51	19.0	9.5 - 19.0	2-inch	9/23/1993
MW-12	Soil	2150.74	1409.02	679.48	20.5	10.5 - 20.0	2-inch	9/28/1993
MW-32	Soil	2172.92	1664.40	678.41	12.4	2.5 - 11.8	2-inch	3/21/1995
MW-36	Soil	1865.27	1450.85	675.75	12.7	0.7 - 10.2	2-inch	3/20/1995
MW-37	Soil	267.27	2314.36	652.91	12.7	2.7 - 12.7	2-inch	10/30/1997
P-14*	Soil	2158.46	1779.97	671.71	10.0	4.5 - 9.5	2-inch	4/19/1995
RW-1	Rock	~1805.00	~2148.00	673.91	65.5	15.8 - 65.5	2-inch	4/17/1995
MW-11 ⁺	Rock	2037.36	536.50	691.69	34.0	29.0 - 34.0	2-inch	10/14/1993
MW-13*	Rock	2152.87	1402.33	679.72	52.0	42.0 - 51.5	2-inch	10/22/1993
MW-17 ⁺	Rock	1807.85	1816.29	661.53	33.4	27.5 - 33.4	2-inch	10/21/1993
MW-21 ⁺	Rock	1634.06	1809.10	680.09	45.0	40.0 - 45.0	2-inch	10/31/1993
MW-23	Rock	1183.09	1818.07	680.49	43.1	38.5 - 43.1	2-inch	10/19/1993
MW-33	Rock	2173.60	1660.14	678.54	31.5	22.0 - 31.0	2-inch	4/3/1995
MW-35	Rock	2388.34	2265.88	664.56	43.0	33.0 - 42.4	2-inch	4/14/1995
P-1*	Rock	2178.39	1399.99	675.54	32.8	23.0 - 32.4	2-inch	3/5/1995
P-2*	Rock	2153.71	1377.58	676.49	49.0	34.8 - 49.6	2-inch	3/1/1995
P-3*	Rock	2128.27	1401.37	675.66	33.1	28.1 - 32.9	2-inch	3/17/1995
P-5*	Rock	2078.11	1639.05	675.80	50.1	30.1 - 49.5	2-inch	3/21/1995
P-6*	Rock	1991.67	1608.33	676.88	82.4	36.2 - 55.7	2-inch	3/8/1995
P-7*	Rock	2083.79	1737.67	670.98	22.8	12.8 - 22.2	2-inch	3/18/1995
P-8*	Rock	2148.75	1788.50	671.53	49.5	35.0 - 49.3	2-inch	3/19/1995
P-9	Rock	2038.51	1595.17	680.18	73.2	58.4 - 72.6	2-inch	4/10/1995
P-10*	Rock	1983.65	1579.60	676.63	74.2	53.5 - 73.5	2-inch	4/3/1995
P-11	Rock	1962.82	1615.68	675.71	36.7	43.5 - 62.8	2-inch	4/11/1995
P-12*	Rock	1954.55	1586.63	675.10	55.0	39.5 - 54.5	2-inch	4/13/1995
P-13	Rock	1918.24	1625.60	675.34	55.0	45.3 - 54.8	2-inch	4/12/1995
P-15 ⁺	Rock	875.14	1061.23	691.37	13.0	6.5 - 13.0	1-inch	6/27/1997

*Maintain only. Water level measurements and groundwater sampling not required at this time.

+Collect water levels only. No groundwater sampling required at this time.

TABLE 4.5-2: OFF-SITE WELL CONSTRUCTION DETAILS
Tennessee Products and Piney Woods Spring Sites, Chattanooga

Well	Matrix	Northing	Easting	Elevation (Top of Casing)	Total Depth (BGS*)	Screened Interval (BGS*)	Well Diameter	Completion Date
Piney Woods Spring		~578.00	~2140.00	~658.11	~3.6	NA	Concrete Pipe	~1980

TABLE 4.5-3: Groundwater Quality Monitoring Requirements

Galapagos Industrial Park LLC

Monitoring Location	Monitoring Program Purpose	Chemical Analyses
MW-12	Reilly Tar aquifer restoration monitoring	SVOC
MW-32	Reilly Tar aquifer restoration monitoring	SVOC
MW-36	Reilly Tar aquifer restoration monitoring	SVOC
MW-37	Southeast Trough monitoring	VOC, SVOC
RW-1	Groundwater recovery; aquifer restoration	VOC, SVOC
MW-23	Southeast Trough monitoring	VOC, SVOC
MW-33	Reilly Tar aquifer restoration monitoring	SVOC
MW-35	Reilly Tar aquifer restoration monitoring	SVOC
Piney Woods Spring	Southeast Trough monitoring	VOC, SVOC

- C. As specified in Attachment 5, Sampling and Analyses Procedures, the permittee must annually collect groundwater samples for all monitoring wells listed in Table 4.5-3, and chemically analyze those samples for the constituents specified in that table. RW-1 will be sampled semi-annually.
- D. The permittee shall analyze the monitoring well samples collected for the evaluation of AOC GW following analytical methods in Table 6 of Attachment 5, Sampling and Analyses Procedures.
- E. The permittee shall comply with all reporting requirements of this permit, including the submittal of the annual corrective action effectiveness reports. Annual reports shall be submitted within 90 days of receipt of analytical results. The report shall contain the analytical results, groundwater sampling information, a description of groundwater flow based on semi-annual water level measurements, a summary of the monitoring data evaluations, a summary of groundwater and DNAPL recovery operations, asphalt cap condition inspections and maintenance, barrier soil and vegetation condition inspections, maintenance and site security system inspections and maintenance and any other information or recommendations pertinent to system performance and maintenance.

VI. ASSURANCE OF COMPLIANCE

The Permittee shall assure the Commissioner that groundwater monitoring and corrective action measures necessary to achieve compliance with the groundwater protection

standards in Table 4.5-4 of this attachment are taken during the term of the permit. If the permittee determines that the groundwater monitoring or corrective action program in this permit no longer satisfy the requirements of Rule 0400-12-01-.06(6)(l), he shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program which will satisfy Rule 0400-12-01-.06(6).

TABLE 4.5-4: Groundwater Protection Standards for Volatile Organic Compounds
Galapagos Industrial Park LLC

Volatile Organic Compound	GWPS (µg/l)	Volatile Organic Compound	GWPS (µg/l)
Acetone	14,000	cis-1,3-Dichloropropene	.47
Acrylonitrile	0.052	trans-1,2-Dichloropropene	--
Benzene	5	Ethylbenzene	700
Bromodichloromethane	80	2-Hexanone	38
Bromoform	80	Methylene Chloride	5
Bromomethane	7.5	4-Methyl-2-pentanone	1,200
2-Butanone (MEK)	5,600	Pentachloroethene	--
Carbon Disulfide	810	Styrene	100
Carbon Tetrachloride	5	1,1,2,2-Tetrachloroethane	0.076
Chlorobenzene	100	Tetrachloroethene	5
Chloroethane	21,000	Toluene	1,000
Chloroform	80	1,1,1-Trichloroethane	200 ⁴
Chloromethane	190	1,1,2-Trichloroethane	5
1,1-Dichloroethane	2.7	Trichloroethene	5
1,2-Dichloroethane	5	Vinyl Chloride	2
1,1-Dichloroethene	7	Vinyl Acetate	410
cis-1,2-Dichloroethene	70	m/p-Xylene	10,000
trans-1,2-Dichloroethene	100	o-Xylene	10,000
1,2-Dichloropropane	5	Reserved Table Cell	--

TABLE 4.5-5: Groundwater Protection Standards for Semi-Volatile Organic Compounds
Galapagos Industrial Park LLC

Semi-Volatile Organic Compound	GWPS (µg/l)	Semi-Volatile Organic Compound	GWPS (µg/l)
Acenaphthene	530	Diethylphthalate	15,000
Acenaphthylene	--	Dimethyl phthalate	--
Acetophenone	1,900	4,6-Dinitro-2-methylphenol	--
Anthracene	1,800	2,4-Dinitrophenol	39
Benzaldehyde	1,900	2,4-Dinitrotoluene	0.24
Benzoyl chloride	--	2,6-Dinitrotoluene	0.048
Benzo(a)anthracene	0.034	Di-n-octyl phthalate	--
Benzo(b)fluoranthene	0.034	Fluoranthene	800
Benzo(k)fluoranthene	0.34	Fluorene	290
Benzoic acid	75,000	Hexachlorobenzene	1
Benzo(g,h,i)perylene	--	Hexachlorobutadiene	0.3
Benzo(a)pyrene	0.2	Hexachloroethane	0.9
Benzotrichloride	0.0029	Indeno(1,2,3-cd)pyrene	0.034
Benzyl alcohol	2,000	Isophorone	78
Benzyl chloride	4	2-Methylnaphthalene	360
Bis(2-chloroethoxy)methane	59	2-Methylphenol	930
Bis(2-chloroethyl)ether	0.014	4-Methylphenol	1,900
Bis(2-chloroisopropyl)ether	0.36	Naphthalene	0.17
Bis(2-ethyhexy)phthalate	6	2-Nitroaniline	190
4-Bromophenyl phenyl ether	--	3-Nitroaniline	--
Butyl benzyl phthalate	16	4-Nitroaniline	3.8
4-Chloroaniline	0.36	Nitrobenzene	0.14
2-Chloronaphthalene	750	2-Nitrophenol	--
2-Chlorophenol	91	4-Nitrophenol	--
4-Chloro-3-methylphenol	--	N-Nitroso-di-ethylamine	0.00017
4-Chlorophenyl phenyl ether	--	N-Nitroso-di-phenylamine	12
Chlorotoluene	250	N-Nitroso-di-n-propylamine	0.011
Chrysene	3.4	Pentachlorobenzene	3.2
Dibenzo(a,h)anthracene	0.0034	Pentachlorophenol	1
Dibenzofuran	--	Phenanthrene	--
Di-n-butyl phthalate	900	Phenol	5,800
1,2-Dichlorobenzene	600	Pyrene	120
1,3-Dichlorobenzene	--	1,2,4,5-Tetrachlorobenzene	1.7
1,4-Dichlorobenzene	75	2,3,4,6-Tetrachlorophenol	240
3,3-Dichlorobenzidine	0.12	1,2,4-Trichlorobenzene	70
2,4-Dichlorophenol	46	2,4,5-Trichlorophenol	1,200
2,6-Dichlorophenol	--	2,4,6-Trichlorophenol	4
2,4-Dimethylphenol	360	Reserved Table Cell	--

VII. PLUGGING AND ABANDONMENT PROCEDURES

When the permittee closes and abandons monitoring and recovery wells, the work shall be performed in accordance with a Director-approved well abandonment procedure. The method chosen for well plugging and abandonment must be protective of human health and the environment. The Director shall be notified, in writing, 30 days prior to implementing well closure procedures. No well shall be closed unless prior written approval is granted. Written certification of the proper completion of the closure action shall be submitted to the Director within 30 days of actual closure activities.

Table 4.5-6 provides the monitoring well and piezometer construction details for those wells that the Commissioner is approving for decommissioning under the requirements of this attachment. The permittee shall submit a workplan according to Attachment 7 Schedule of Compliance and implement the plugging and abandonment procedures for all the wells and piezometers listed on Table 4.5-6 and as located on Figure 5 Well Locations.

**TABLE 4.5-6. CONSTRUCTION DETAILS FOR WELLS SCHEDULED FOR
PLUGGING AND ABANDONMENT**

Well	Matrix	Northing	Easting	Elevation (Top of Casing)	Total Depth (BGS*)	Screened Interval (BGS*)	Well Diameter	Completion Date
MW-14	Soil	2159.59	1911.30	673.71	17.0	7.0 - 16.5	2-inch	10/15/1993
MW-15	Rock	2156.51	1902.87	673.98	42.0	Open Hole	6-inch	10/18/1993
MW-16	Soil	1814.98	1813.10	680.35	17.5	8.0 - 17.5	2-inch	9/23/1993
MW-18	Soil	1790.10	1260.07	681.84	15.0	5.5 - 15.0	2-inch	9/27/1993
MW-19	Rock	1787.63	1271.90	681.59	55.0	45.5 - 55.0	2-inch	10/15/1993
MW-20	Soil	1647.45	1806.74	680.26	19.5	9.5 - 19.5	2-inch	9/23/1993
MW-22	Soil	1178.33	1809.93	680.53	19.0	9.5 - 19.0	2-inch	9/28/1993
MW-24	Soil	1003.54	1140.15	692.02	26.5	16.5 - 26.5	2-inch	9/27/1993
MW-25	Rock	998.75	1129.33	692.16	62.0	51.5 - 61.0	2-inch	10/21/1993
MW-26	Soil	944.22	573.25	702.84	17.0	7.0 - 17.0	2-inch	9/21/1993
MW-27	Rock	952.64	572.36	702.65	36.0	31.0 - 36.0	2-inch	10/18/1993
MW-28	Soil	1218.19	1214.11	687.26	21.5	11.5 - 21.5	2-inch	9/28/1993
MW-29	Soil	1282.00	1038.47	687.83	30.0	20.0 - 30.0	2-inch	9/24/1993
MW-30	Soil	1560.76	543.48	698.52	33.0	24.0 - 33.0	2-inch	10/12/1993
MW-31	Rock	1562.08	534.04	698.71	55.0	Open Hole	4-inch	10/20/1993
MW-34	Soil	2384.61	2269.93	665.47	11.4	1.5 - 11.0	2-inch	3/21/1995
MW-38	Rock	262.92	2320.48	652.92	37.6	27.6 - 37.6	2-inch	10/30/1997
PW-3	Rock	~293.00	~2260.00	653.40	17.0	8.0 - 17.0	2-inch	5/16/2000

Attachment 7
Schedule of Compliance
Draft New Attachment

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023

EPA ID Number: TND061314803
Permit Number: TNHW-161

ATTACHMENT 7. SCHEDULE OF COMPLIANCE

1. Closure of Monitoring wells

The permittee will submit for review, a work plan to DSWM to close all wells listed in Table 4.5-6 within 45-days of issuance of this Class 3 Modification.

The permittee will submit for review, a well closure report to DSWM for all wells listed in Table 4.5-6 within 45-days of completion of all field activity.

2. Land Use Restrictions – Change House Property

Within 45 days of issuance of this Class 3 Modification, the permittee will file with the Register of Deeds with Hamilton County a Notice of Land Use Restrictions for the Change House Property known as Tract #2 located at 5004 Central Avenue. These Land Use Restrictions shall include the following.

Galapagos shall manage and limit the use of the Semi Works Property to industrial and/or commercial use. Any residential or agriculture use of the change house property is prohibited. No groundwater underlying the change house property shall be used as a drinking water source or for human consumption or agriculture uses. Prior to any part of the Change house property being used for any purpose other than industrial or commercial uses, Galapagos must notify TDEC and must demonstrate to the satisfaction of TDEC that any such proposed new use will not pose a danger to public health, safety, or the environment. Any new use (other than industrial or commercial) may proceed only upon written approval from DSWM. Any approval granted by TDEC will be in writing and filed the Hamilton County Register of Deeds. Additionally, no drinking, water supply, or other domestic water well shall be installed or used at the change house property without prior notice to and approval by TDEC. Any such approval shall be in writing and filed with the Hamilton County Register of Deeds.

The permittee will submit a draft copy of the land use restrictions to DSWM for review within 15 days of issuance of this Class 3 Modification. Once approved by DSWM the permittee will have 45-days to file the document with the Hamilton County Register of Deeds. Galapagos will submit a copy the final deed to the DSWM within 30 days of filing the document.

Figures
New and Draft
Replacement Figures

Draft Class 3 Modification to
Permit TNHW - 161

Galapagos Industrial Park LLC
Chattanooga, Tennessee

January 15, 2023



FIGURE 10
GALAPAGOS INDUSTRIAL PARK LLC
MONTHLY, QUARTERLY, AND ANNUAL INSPECTION LOG

Inspectors: _____

Date: _____

Time: _____

MONTHLY INSPECTIONS		YES	NO
1.	Is the asphaltic pavement at the former Reilly Tar Area in good condition with no changes, such as large cracks, heavy equipment track indentations or worn seal coat?		
2.	Is the stormwater drainage system functioning properly with no erosion and in good structural condition?		
3.	Is RW-1 Recovery Wellhead above-ground piping in good condition?		

QUARTERLY INSPECTIONS (SEE WORKSHEET 1)		YES	NO
1.	Is the barrier soil in good condition with no problematic erosion, burrowing rodents, un-approved excavations or exposure of the underlying marker?		
2.	Is the vegetation in good condition, given the time of year?		
3.	Are noxious weeds under control?		
4.	Are the Facility's security fence, gates and signage in good condition with no signs of damage or trespassing and are gates locked while unattended?		
5.	Is the DNAPL drum in good condition?		

ANNUAL INSPECTIONS (SEE WORKSHEET 1)		Y	N
1.	Are all monitoring wells and the benchmark in place and in good condition?		
2.	Are all monitoring wells secured by lock systems?		

If "NO" is checked on any line above or "N" is noted for any monitoring well or piezometer on the "WORKSHEET 1: WELL INSPECTION AND WATER LEVEL CALCULATION," describe the problem, its specific location, and describe actions initiated to correct the problem on the lines below.

Inspector Signature _____

FIGURE 11
WORKSHEET 1: INSPECTION AND WATER LEVEL
CALCULATION FORM FOR ON-SITE WELLS

<u>ANNUAL</u> Well Condition Inspection			<u>ANNUAL</u> Water Level Calculation			
Well	Good Condition (Y/N)	Well Locked (Y/N)	Elevation of Casing	Depth to Water (to the .01 Foot)	Elevation of Water Casing – Water Depth	Well
MW-10			691.51			MW-10
MW-12			679.48			MW-12
MW-32			678.41			MW-32
MW-36			675.75			MW-36
MW-37			652.91			MW-37
MW-11			691.69			MW-11
RW-1*			673.91			RW-1
MW-13			679.72			MW-13
MW-17			661.53			MW-17
MW-21			690.09			MW-21
MW-23			680.49			MW-23
MW-33			678.54			MW-33
MW-35			664.56			MW-35
P-1			675.54			
P-2			676.49			
P-3			675.66			
P-5			675.80			
P-6			676.88			
P-7			670.98			
P-8			671.53			
P-9			680.18			P-9
P-10			676.63			
P-11			675.71			P-11
P-12			675.10			
P-13			675.34			P-13
P-14			671.71			
P-15			691.37			P-15

* Designates semi-annual sampling is required.