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Secretary's Order No.: 2019-WH-0032

**RE: Approving the Proposed Plan of Remedial Action for the General Motors
Wilmington Assembly Plant - Operable Unit 5**

Date of Issuance: August 9, 2019

Effective Date: August 9, 2019

Under the authority vested in the Secretary of the Department of Natural Resources and Environmental Control ("Department" or "DNREC"), pursuant to 7 *Del.C.* §§6006 and 6010, 7 *Del.C.* Chapter 91, the *Delaware Hazardous Substance Cleanup Act*, and all other relevant statutory authority, the following findings of fact based on the record, reasons and conclusions are entered as an Order of the Secretary in the above-referenced regulatory proceeding.

Background, Procedural History and Findings of Fact

This Order relates to the Department's Proposed Plan of Remedial Action for the General Motors Wilmington Assembly Plant - Operable Unit 5 ("Proposed Plan"). The Proposed Plan is issued pursuant to the statutory authority granted to the Department in 7 *Del.C.* Chapter 91, the *Delaware Hazardous Substance Cleanup Act* ("HSCA"). Specifically, 7 *Del.C.* §9107(e)(1), *Remedies*, directs that the Department shall "... before conducting a remedial action, propose a plan of remedial action based on any investigation or study conducted by or for the Secretary, the potentially responsible party, or others."

The Proposed Plan summarizes the clean-up (remedial) actions that the Department is proposing to address contamination found at the General Motors Wilmington Assembly Plant (“Site”), specifically, at Operable Unit 5 (“OU-5”). The Site is located at 801 Boxwood Road in Wilmington, Delaware, and consists of two tax parcels (07-042.10-055 and 07.042-20.010), totaling approximately 142 acres. The nearest intersection to the Site is Boxwood Road and Centerville Road.

The Site Investigation and Remediation Section of the Department’s Division of Waste and Hazardous Substances issued its Proposed Plan in this matter on January 6, 2019, pursuant to the statutory requirements referenced above. On January 23, 2019, a member of the public expressed concerns with the Department’s Proposed Plan as referenced above, and requested a public hearing. Accordingly, the Department held its public hearing regarding this matter on March 13, 2019.

This Site was originally developed in 1945 by General Motors Corporation for the purpose of automobile assembly. Prior to 1945, the Site was undeveloped land. General Motors Corporation began operations at the Site in 1946, and continued automobile assembly operations until July 2009, at which time the plant was idled. The Site was sold to Fisker Automotive, Inc., in July 2010. On March 31, 2011, the Revitalizing Auto Communities Environmental Response Trust (“RACER Trust”) became effective, and began conducting, managing, and funding cleanup at 89 sites, including this former Wilmington Assembly Plant. In April 2014, the Site was purchased by Wanxiang Delaware Real Estate Holdings. Most recently, Boxwood Industrial Park, LLC, purchased the Site in October 2017.

The Site consists of a 3.2 million square foot Main Assembly Building, Waste Water Treatment Plant, Pump Houses, and Powerhouse, and is zoned heavy industrial. The Site contained operations for the manufacturing of automobiles, including, but not limited to, petroleum products for fueling and heating, painting, wastewater treatment plant processes, cleaning parts, and hazardous waste storage. Each of these operations used various chemicals. Releases occurred at the Site likely as a result of these historic operations, which impacted the soil and groundwater beneath the Site.

In particular, OU-5 was also used historically as a “burn area” to dispose of extra wooden pallets (a routine operational task which utilized chemical accelerants such as acetone). Subsequently, that same area became known as the “Test Track area” while the property remained under the ownership of General Motors.

Due to the Department’s concerns regarding contamination at OU-5, it was determined that a Remedial Investigation was necessary, in order to (1) fully understand the nature and extent of any soil and groundwater contamination; (2) evaluate risks to public health, welfare, and the environment associated with such identified contamination; and (3) perform a Feasibility Study that would identify and recommend a remedial action for OU-5.

The Remedial Investigation completed in 2015 found that the soil in OU-5 tested positive for the presence of metals (antimony, arsenic, cadmium and lead) over DNREC risk criteria for commercial use of the property (both outdoor and indoor workers, and utility workers). To fully evaluate all risk pathways, the risk assessment assumes that the soil is not capped, and is fully accessible. Residential reuse of the entire Site is restricted by previous Proposed Plans for areas identified on the Site as OU-1, OU-2, and OU-3. The areas of impacted soil are identified on Site maps as Monitoring Well 29 (“MW-29”), Bore Hole 34 (“BH-34”), BH-27, and the aforementioned Test Track area.

Groundwater sampling in OU-5 obtained during the 2015 Remedial Investigation revealed contamination as follows: (1) Metals, consisting of arsenic, barium, cobalt, iron and manganese; (2) Volatile Organic Compounds (“VOCs”), consisting of benzene and ethylbenzene; and (3) the Semi-VOC (“SVOC”) naphthalene, which are above the standards for potable use. It should be noted that use of the groundwater is restricted for the entire Site by previous Proposed Plans for OU-1, OU-2, and OU-3. A previous ecological evaluation indicated that the groundwater contamination would not impact surface water. Two new wells, MW-112 and MW-113, were installed to determine if leaching was occurring and metals were potentially migrating offsite. Results from these new monitoring wells, along with other monitoring wells, indicated that metals were not migrating offsite at concentrations that would present an ecological concern or a human health risk.

In June 2017, the Department prepared its OU-5 Focused Feasibility Study, at which time four remedial alternatives were evaluated for this location:

Alternative 1 (serving as a Baseline Condition): No action

Alternative 2: Excavation and offsite disposal of soil

Alternative 3: Capping with limited excavation and offsite disposal of soil

Alternative 4: In Situ/Ex Situ treatment of soil (mix soil with various treatments)

Alternative 3 was chosen as the best course of action, as it met the Department's remediation goals, was the most cost effective alternative, and would be protective of human health and the environment.

In 2018, the risk for vapor intrusion from OU-5 soil and groundwater into indoor air was re-evaluated by the Department, based on the potential for a new commercial building construction within OU-5. The December 2018 Vapor Intrusion Re-Evaluation revealed contamination at BH-27. Thus, the Department decided to add BH-27 as an area for soil removal in its Proposed Plan for OU-5, to eliminate the risk of vapor intrusion above the Department's acceptable standards. It should be noted that the re-evaluation for vapor intrusion did not indicate a risk to indoor air above DNREC standards.

Currently, no interim clean-up actions have been conducted in OU-5. The present property owner is evaluating commercial re-development options. No re-development plans have been finalized, but a new building may be constructed in the future.

The Department's Proposed Plan for OU-5 contains a six-part plan of remedial action. The Proposed Plan, which was presented in detail at the public hearing held on March 13, 2019, can be summarized as follows:

1. **A Remedial Action Work Plan for the four (4) impacted soil areas identified must be prepared within 120 days of the issuance of the Final Plan of Remedial Action.** The soil from the three (3) smaller areas will be excavated and backfilled with DNREC-approved clean fill. A temporary cap will be placed over the Test Track Area to prevent contact with the impacted soils until a building or permanent cap is constructed. A permanent cap or building will be constructed within five (5) years.

2. **An Environmental Covenant, consistent with Delaware's Uniform Environmental Covenants Act (7 Del.C., Ch. 79, Subchapter II), must be recorded with the New Castle County Recorder of Deeds within 90 days of the issuance of the Final Plan of Remedial Action.** The Environmental Covenant must include descriptions of the following activity and use restrictions: (a) Use Restrictions; (b) Limitation of Groundwater Withdrawal; (c) Compliance with Contaminated Materials Management Plan; and (d) Compliance with the Long Term Stewardship Plan.

3. **A Long-Term Stewardship Plan, updated with OU-5 requirements, must be submitted to DNREC within 60 days of the issuance of the Remedial Action Work Plan.** This will detail (1) the temporary cap and the cap inspection process for the Test Track Area; (2) the site-inspection schedule to be followed in order to ensure the long-term integrity of the remedy; and (3) the groundwater monitoring program, to ensure that groundwater is not migrating offsite to impact receptors. The temporary cap inspection must be conducted on a quarterly basis until a permanent cap or building is constructed.

4. **A Contaminated Materials Management Plan (“CMMP”), updated with OU-5 requirements, must be submitted to DNREC within 60 days of the issuance of the Remedial Action Work Plan.** The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated soil, prevent soil migration (soil and airborne dust) and groundwater at OU-5.

5. **A Remedial Action Completion Report must be submitted to DNREC within 60 days of the completion of the remedial actions required in the Proposed Plan.** This report will document all remedial actions that have been performed at OU-5.

6. **A Request for Certification of Completion of Remedy must be submitted to DNREC within 60 days of approval of the Remedial Action Completion Report.** This is the certification that the Department will give to the property owners to verify that all remedial actions have been successfully completed.

As noted previously, the Department has the statutory basis and legal authority to act with regard to this Proposed Plan, pursuant to 7 *Del.C.* Ch. 91, specifically, at §9107(e)(1), *Remedies*. Members of the public attended the hearing held on March 13, 2019, with comment being received by the Department at that time. The hearing record formally closed for comment in this matter on March 28, 2019, with no additional comment having been received by the Department during the post-hearing phase of this matter.

Subsequent to the close of the public comment period, the Department performed a thorough review of the record, including all of the comments received on the Proposed Plan. It should be noted that all noticing requirements concerning this matter were met by the Department. Proper notice of the hearing was provided as required by law.

At the request of the presiding Hearing Officer, a Technical Response Memorandum (“TRM”) was prepared by the Department’s Division of Waste and Hazardous Substances, Site Investigation and Remediation Section staff, to serve as a comprehensive summary of the comment received in this matter. The Department’s TRM not only provides a thorough discussion of the comment received in this matter, but also provides the Department’s responses and recommendations concerning the same.

Hearing Officer Vest prepared a Hearing Officer’s Report dated June 10, 2019 (“Report”), which expressly incorporated the aforementioned TRM into the hearing record generated in this matter. The Report documents the proper completion of the required administrative procedures necessitated by this process, establishes the record, and recommends the adoption of the Department’s Proposed Plan as the Final Plan of Remedial Action for the General Motors Wilmington Assembly Plant – Operable Unit 5.

Reasons and Conclusions

Based on the record developed by the Department’s experts and established by the Hearing Officer’s Report, I find that the Department’s Proposed Plan of Remedial Action for the General Motors Wilmington Assembly Plant – Operable Unit 5 is well-supported. Therefore, the recommendations of the Hearing Officer are hereby adopted, and I direct that this Proposed Plan, as set forth above, be adopted as the Department’s Final Plan of Remedial Action in this matter. I further find that the Department’s experts in the Division of Waste and Hazardous Substances, Site Investigation and Remediation Section staff, fully developed the record to support adoption of this Proposed Plan.

In conclusion, the following reasons and conclusions are entered:

1. The Department has the statutory basis and legal authority to act with regard to its Proposed Plan of Remedial Action for the General Motors Wilmington Assembly Plant - Operable Unit 5, pursuant to 7 *Del.C.* Ch. 91, specifically, at §9107(e)(1), *Remedies*;

2. The Department has jurisdiction under its statutory authority, pursuant to 7 *Del.C.* Ch. 60, to issue an Order adopting this Proposed Plan as a Final Plan of Remedial Action for OU-5;

3. The Department provided adequate public notice of this Proposed Plan, and of all proceedings in a manner as required by the law and regulations. The Department also provided the public with an adequate opportunity to comment on the same, including at the time of the public hearing held on March 13, 2019, and during the days subsequent to the hearing (through March 28, 2019), before making any final decision;

4. The Department considered all timely and relevant public comments in the Record, as established in the TRM provided by the Division of Waste and Hazardous Substances;

5. The Department has carefully considered the factors required to be weighed with regard to the implementation of the aforementioned Proposed Plan, and finds that the Record supports adoption of the same as its Final Plan of Remedial Action in this matter;

6. Adoption of the aforementioned Proposed Plan as the Department's Final Plan of Remedial Action for the General Motors Wilmington Assembly Plant OU-5 will enable the Department to ensure continued improvement of environmental quality at OU-5, as referenced above;

7. The Department has an adequate Record for its decision, and no further public hearing is appropriate or necessary; and

8. The Department shall serve and publish its Order on its internet site, provide legal notice of the Order in the same manner that the Department provided legal notice of its original Proposed Plan in this matter, and provide such other notice as the law requires and the Department determines is appropriate.



Shawn M. Garvin
Secretary