

Doc ID: 004591980010 Type: MISC
Recorded: 03/19/2019 at 02:38:46 PM
Fee Amt: \$17.00 Page 1 of 10
Putnam County Clerk
Brian Wood County Clerk
BK 81 PG 957-966

Great Lakes Chemical Corporation
EPA ID #: WVD005005087

ENVIRONMENTAL COVENANT

This is an environmental covenant executed pursuant to the Uniform Environmental Covenants Act, West Virginia Code Chapter 22, Article 22B, to restrict the activities on, and uses of, the following described property:

Great Lakes Chemical Corporation (GLCC) Main Plant Area (hereinafter referred to as the "Property"), located at 200 Pickens Road in Nitro, Putnam County, West Virginia. The Property is located in a commercial/industrial area in Nitro and consists of two parcels of land, approximately 15.83 acres in size. Attachment 1 is a property boundary map of the Property and Attachment 2 is a metes and bounds description of the property.

Activities on and uses of the above-described property that may result in excessive human exposure or in the release of a contaminant that was contained as part of the remedial action related to this covenant are prohibited. Those activities and uses include, but are not limited to:

- a. Groundwater use for potable purposes while monitoring indicates that groundwater Contaminants of Concern (COCs) concentrations remain above Maximum Contaminant Levels (MCLs), unless it is demonstrated to West Virginia Department of Environmental Protection (WVDEP) and/or Environmental Protection Agency (EPA) that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and WVDEP and/or EPA provides prior written approval for such use;
- b. New well installations on the Property unless it is demonstrated to WVDEP and/or EPA that such wells are necessary to implement the final remedy and WVDEP and/or EPA provides prior written approval to install such wells;
- c. Any residential use of the Property unless it is demonstrated to WVDEP and/or EPA that such use will not pose a threat to human health or the environment or adversely affect or interfere with the final remedy and WVDEP and/or EPA provides prior written approval for such use;
- d. Excavation of the area beneath the engineered concrete cover at Areas of Interest (AOIs) 11, 12, 13 and 32 (as shown on Attachment 2), unless it is demonstrated to WVDEP and/or EPA that such excavation will not pose a threat to human health or the environment or adversely affect or interfere with the selected remedy, and WVDEP and/or EPA provides prior written approval for such excavation.

In addition to the prohibited activities and uses, the following actions are required of any users of the Property:

- a. A vapor mitigation system shall be installed and maintained in any new structures constructed within 100-foot of Monitoring Wells (MW) MW-11S, MW-12S or

Return to: Div. of Water & Waste Mgmt.
Attn: Harold D. Ward, Director
601 57th Street SE
Charleston, WV 25304

MW-16S (as shown on Attachment 2) unless it is demonstrated to WVDEP and/or EPA that vapor intrusion (VI) does not pose unacceptable risk to human health and WVDEP and/or EPA provides written approval that no vapor mitigation system is needed. The vapor intrusion system shall be maintained until it is demonstrated to WVDEP and/or EPA that vapor intrusion of contaminants does not pose a threat to human health. For the relatively small area of the 100-foot VI buffer zone located beyond the Property boundary, because construction of a building there is unlikely, the Property owner shall notify the adjacent property owner of the potential risks due to vapor intrusion and recommendations for safely using the property;

- b. All earth moving activities, including excavation, drilling and construction activities, in the areas at the Property where any contaminants remain in groundwater above their maximum contamination levels (MCLs) or EPA Region III's Tap Water Regional Screening Levels, shall be conducted in accordance with the EPA-approved Soil and Groundwater Management Plan (S&GMP) dated December 21, 2017;
- c. Compliance with the EPA-approved Operation and Maintenance Plan (O&M Plan), dated December 21, 2017, specific to the enhanced concrete cover at AOCs 11, 12, 13 and 32 to be inspected on an annual basis.

The owner of record of the property, and its contact information, is:

Great Lakes Chemical Corporation
2 Armstrong Rd.
Shelton, CT 06484
ATTN: Ramin Ansari, M.S., L.P.G. Corporate Manager, Environmental Affairs & Remediation

The following entity is the holder of this covenant:

Great Lakes Chemical Corporation
2 Armstrong Rd.
Shelton, CT 06484
ATTN: Ramin Ansari, M.S., L.P.G. Corporate Manager, Environmental Affairs & Remediation

The facts regarding the remediation response project at this property are:

The former facility produced a range of phosphorus-based specialty chemicals, including phosphorus chlorides and phosphate esters between 1950 and July 2002, when operations ceased. FMC Corporation (FMC) owned and operated the facility between 1950 and July 1999. GLCC, a wholly-owned subsidiary of Chemtura Corporation (Chemtura), operated the facility from July 1999 until July 2002. GLCC currently owns the Property. The majority of the on-site buildings were demolished to grade in 2003. The Property is

covered with concrete slabs, foundations, and asphalt pavement, and includes areas of exposed soil. The Property is currently inactive and zoned as industrial.

The Property, referred to as the Main Plant Area, abuts the Kanawha River to the west. It consists of 15.83 acres and formerly housed administrative offices and manufacturing operations.

In accordance with the Final Administrative Order on Consent (AOC) Docket No. RCRA-3-022-AM, issued to GLCC and FMC (Respondents) by EPA on June 3, 2002, a RCRA Facility Investigation (RFI) was conducted between May 2003 and August 2006, and an RFI Report was submitted to EPA in April 2007. The RFI investigation focused on soil and groundwater. A supplemental RFI was conducted in 2009, which focused on sampling the adjacent Kanawha River. The results of the supplemental RFI demonstrated that contamination at the Property is not adversely impacting the Kanawha River

Soil data were collected from 37 Areas of Interest (AOIs) on the Property during implementation of the RFI. Based on results of the soil samples, multiple constituents detected in soil were identified as Contaminants of Potential Concern (COPCs) when screened against the USEPA regional screening levels in the HHRA. Surface and subsurface soil COPCs include benzene, 1,2,4,5-tetrachlorobenzene, select SVOCs (including PAHs), select metals, PCBs (Aroclor 1254), kepone (organochlorine pesticide), and dioxins/furans Overall, the results of the HHRA indicated that potential exposure to the presence of white phosphorus creates an unacceptable risk to future workers and future construction workers. The HHRA Report was submitted to USEPA in August 2014, and approved in August 2015. There is the potential to encounter soil contamination not previously identified during removal of slabs and foundation during future redevelopment.

Five groundwater sampling events were conducted between 2003 and 2009. The sampling events included sampling of on and off-site monitoring wells screened in both the shallow and deep aquifers. Comparison of the results across the sampling events indicates that concentrations of COCs have shown relatively similar or slightly decreasing trends. The data indicate that COCs in the shallow zone are not migrating vertically into the deep zone.

An interim measure (IM) was implemented prior to issuance of EPA's Statement of Basis (SB). The IM consisted of the placement of a concrete cover over AOIs 11, 12, 13 and 32 where the white phosphorus was managed on the Main Plant Area. The white phosphorus area is beneath existing concrete slabs and soil. The IM included placement of a six-inch thick concrete cover on top of the existing concrete slab and soil over 10,400 square feet. The concrete cover IM was completed in July 2017. The concrete cover prevents contact with the underlying phosphorus-impacted soil, and effectively mitigates human health risk.

EPA issued the Final Decision and Response to Comments on August 31, 2017. EPA's final remedy is a combination of No Further Action for 34 AOIs, engineering controls and institutional controls. Some contaminants remain in the soil and groundwater at some areas above levels appropriate for residential uses; therefore, the final remedy requires the compliance with and maintenance of land and groundwater use restrictions in this Environmental Covenant. Specific elements of the remedy include the following:

- **Soil.** The final remedy for surface and subsurface soil includes the concrete cover at the white phosphorous area and land use restrictions. The concrete cover needs to be maintained into perpetuity. Institutional controls restrict future residential development and include implementation of a Soil and Groundwater Management Plan (S&GMP). The S&GMP describes how excavated soil and extracted groundwater will be managed during any future subsurface activities.
- **Groundwater.** The final remedy for groundwater is monitored natural attenuation pursuant to the EPA-approved Groundwater Monitoring Plan, combined with groundwater use restrictions to prevent exposure to contaminants while concentrations remain above MCLs.
- **Vapor Intrusion.** The final remedy includes a requirement to protect future site workers from potential vapor intrusion derived from volatile organics present in groundwater. The institutional control requires installation of a vapor mitigation system in new structures constructed within 100 feet of selected wells unless it is demonstrated that vapor intrusion does not pose unacceptable risk to human health.

The owner of the property shall provide written notice to the holder, the Secretary of the West Virginia Department of Environmental Protection (WVDEP), the United States Environmental Protection Agency, Region III (EPA Region III) and FMC within ten (10) days following transfer of a specified interest in the property subject to this covenant, changes in use of the property, application for building permits regarding the property, or proposals for any site work affecting the contamination on the property.

The owner shall conduct inspections of the property to monitor compliance with this covenant at least one time per year and shall submit two (2) signed copies of the inspection monitoring report to the WVDEP, Division of Water and Waste Management (DWWM) headquarters in Charleston, WV, EPA Region III and FMC within thirty (30) days of the inspection.

This covenant shall not be amended, modified, or terminated except by written instrument executed in accordance with W.Va. Code §22-22B-9 or §22-22B-10, by and between the owner(s) at the time of the proposed amendment, modification, or termination; the Secretary of WVDEP; EPA Region III; and the holder of this covenant. Additionally, the then current owner(s) of the property shall provide the Secretary of WVDEP and EPA Region III written notice of the pendency of any proceeding or any proceeding that could lead to a foreclosure, as referred to in W.Va. Code §22-22B-9(a)(4), within seven (7) days of the owner's receiving notice of the pendency of such proceedings. Within five (5) days of executing an amendment, modification, or termination of this environmental covenant, the owner shall record such

amendment, modification, or termination with the Clerk of the County Commission, and within five (5) days thereafter, the owner shall provide a true copy of the recorded amendment, modification, or termination to the Secretary of WVDEP.

The administrative record for the environmental response project reflected in this covenant is maintained in the United States Environmental Protection Agency, 1650 Arch Street, Philadelphia, PA 19103-2029 and is entitled:

Great Lakes Chemical Company
[sic Great Lakes Chemical Corporation]
EPA ID #WVD005005087

WVDEP and EPA Region III are granted full right of access to the property for the purpose of implementation or enforcement of this covenant and FMC is granted full right of access to the property to carry out its obligations under the U.S. Asset Purchase and Framework Agreement between FMC Corporation and Great Lakes Chemical Corporation dated May 4, 1999.

Pursuant to W.Va. Code §22-22B-11(a), a civil action for injunctive or other equitable relief for violating this covenant may be maintained by EPA.

All restrictions and other requirements described in this covenant shall run with the land and shall be binding upon all holders and the current owner and their grantees, lessees, authorized agents, employees, or persons acting under their direction or control.

IN WITNESS WHEREOF, the following owner and holder has executed this covenant on the date indicated.

Great Lakes Chemical Corporation

Printed Name: Robert M. Trozenski

Title: Head of HSEQ

[Signature] 2/22/19
Signature Date

I, Sherri Sempf, a Notary Public in and for the County of Allegheny, State of Pennsylvania, do hereby certify that the above individual whose name is signed above as the representative of owner and holder, this day executed this document in my presence or this day acknowledged same to be true act and deed of said owner and holder.

Given under my hand this the 22 day of February, 2019.
My commission expires January 15, 2023.

[Signature]
Notary Public

Commonwealth of Pennsylvania - Notary Seal
Sherri E. Sempf, Notary Public
Allegheny County
My commission expires January 15, 2023
Commission number 1287841
Member, Pennsylvania Association of Notaries

(SEAL)

West Virginia Department of Environmental Protection

Printed Name: Harold D. Ward

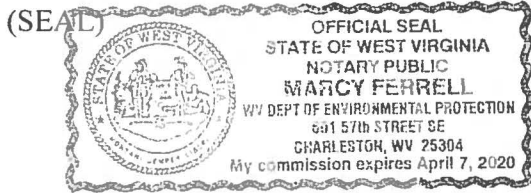
Title: Acting Director, Division of Water & Waste Management

Harold D. Ward _____ 2-28-19
Signature Date

I, Marcy Ferrell, a Notary Public in and for the County of Kanawha, State of West Virginia, do hereby certify that Harold D. Ward, whose name is signed above as the representative of the agency, this day executed this document in my presence or this day acknowledged same to be true act and deed of said holder(s).

Given under my hand this the 28th day of February, 20 19.
My commission expires April 7, 2020.

Marcy Ferrell
Notary Public



Prepared by: Great Lakes Chemical Corporation

The Clerk will return the recorded document to:

Mr. Harold D. Ward, Acting Director
WVDEP, DWWM
601 57th Street SE
Charleston, WV 25304

ATTACHMENT 1

METES AND BOUNDS DESCRIPTION
OF
THE GREAT LAKES CHEMICAL CORPORATION MAIN PLANT AREA

BEGINNING AT A 5/8" REBAR FOUND, COMMON CORNER TO GREAT LAKES CHEMICAL CORPORATION AND AC&S, INC., SAID POINT BEING FURTHER IDENTIFIED AS HAVING THE FOLLOWING GEOGRAPHICAL COORDINATES: N38.4343307, W81.8452743;

THENCE N68°19'00"W 300.03' TO A 5/8" REBAR AND CAP HAVING GEOGRAPHICAL COORDINATES: N38.4346281, W81.8462511;

THENCE S52°15'04"W 43.26' TO A NOTCH IN CONCRETE, HAVING A GEOGRAPHICAL COORDINATE OF N38.4345545, W81.8463697;

THENCE N69°29'51"W 115.59' TO A 3/4" IRON PIPE FOUND, HAVING A GEOGRAPHICAL COORDINATE OF N38.4346630, W81.8467490;

THENCE N72°58'02"W 11.98' TO A 1" IRON PIPE HAVING A GEOGRAPHICAL COORDINATE OF N38.4346724, W81.8467891;

THENCE S36°44'27"W 115.59' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4344163, W81.8470275;

THENCE N68°18'56"W 294.22' TO A 1" IRON PIPE, HAVING A GEOGRAPHICAL COORDINATE OF N38.4347079, W81.8479854;

THENCE N21°45'57"E 111.38' TO A 1" IRON PIPE, HAVING A GEOGRAPHICAL COORDINATE OF N38.4349930, W81.8478445;

THENCE N68°24'27"W 123.89' TO A 1" IRON PIPE, HAVING A GEOGRAPHICAL COORDINATE OF N38.4351153, W81.8482482;

THENCE N20°44'13"E 19.28' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4351650, W81.8482249;

THENCE N67°45'53"W 282.64' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4354521, W81.8491417;

THENCE N21°25'03"E 19.05' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4355010, W81.8491179;

THENCE N14°05'03"E 141.32' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4358782, W81.8490023;

THENCE N17°26'03"E 329.55' TO A POINT HAVING A GEOGRAPHICAL COORDINATE OF N38.4367440, W81.8486676;

THENCE N33°11'03"E 50.18' TO A POINT HAVING A GEOGRAPHICAL
COORDINATE OF N38.4368600, W81.8485731;

THENCE S68°22'57"E 1213.65' TO A POINT HAVING A GEOGRAPHICAL
COORDINATE OF N38.4356606, W81.8446198;

THENCE S21°41'00"W 519.31' TO THE PLACE OF BEGINNING, CONTAINING
15.83 ACRES, MORE OR LESS.

**ATTACHMENT 2
PROPERTY CORNERS AND WELL LOCATIONS
GREAT LAKES CHEMICAL CORPORATION SITE
NITRO, WEST VIRGINIA**



LEGEND

- AREA WITHIN 100 FOOT RADIUS FROM WELL REQUIRING A VAPOR MITIGATION SYSTEM
- SITE BOUNDARY
- VERTEX
- CONCRETE COVER
- VERTIX COORDINATES

-81.845274
38.434331

COORDINATE SYSTEM
GCS: WGS_1984
WKID: 4326 AUTHORITY: EPSG
ANGULAR UNIT: DEGREE (0.0174532925199433)
PRIME MERIDIAN: GREENWICH (0.0)
DATUM: D. WGS_1984
SPHEROID: WGS_1984
SEMI-MAJOR AXIS: 6378137.0
SEMI-MINOR AXIS: 6356752.314245179
INVERSE FLATTENING: 296.257223563

