

ENVIRONMENTAL ANALYSIS AND DECISION ON THE NEED
FOR AN ENVIRONMENTAL IMPACT STATEMENT (EIS)

Resources

Form 1600-1

Rev. 6-2010

Department of Natural

Region or Bureau Bureau of Waste and Materials Management
Type List Designation (Type II) NR 150.03(8)(e) 5.a., Wis. Adm. Code

Contact Person: Michael Ellenbecker
Title: Licensing & Policy Review Coordinator
Address: 9531 Rayne Rd, Suite IV Sturtevant, WI 53406
Phone: 262-884-2342 Email: michael.ellenbecker.wisconsin.gov

NOTE TO REVIEWERS: This document is a DNR environmental analysis that evaluates probable environmental effects and decides on the need for an EIS. The attached analysis includes a description of the proposal and the affected environment. The DNR has reviewed the attachments and, upon certification, accepts responsibility for their scope and content to fulfill requirements in s. NR 150.22, Wis. Adm. Code. Your comments should address completeness, accuracy or the EIS decision. For your comments to be considered, they must be received by the contact person before 4:30 p.m., November 1, 2012.
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Applicant: Hydrite Chemical Company

Address: 114 N. Main Street
Cottage Grove, WI 53527

Title of Proposal: Feasibility and Plan of Operation Report (FROP)
Request to relicense a hazardous waste storage and treatment facility

Location: County: Dane
City/Town/Village: Village of Cottage Grove
NW 1/4 of the NE 1/4 of Sec 16, T7N, R11E
Latitude: 43.077483 Longitude: -89.199779

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PROJECT SUMMARY

1) Brief overview of the proposal including the DNR action (include cost and funding source if public funds involved)

Introduction

The purpose of this assessment is to evaluate the potential environmental risks and alternatives associated with a request by Hydrite Chemical Company (Hydrite) located at 114 N. Main Street, Cottage Grove, WI 53527. Hydrite is requesting to relicense their hazardous waste storage and treatment facility. There are no public funds involved with the relicensing of their hazardous waste storage and treatment facility.

Hydrite is a chemical manufacturing company (NAICS Code 32518) established in 1929 with company headquarters located in Brookfield, Wisconsin. Hydrite has nine chemical manufacturing plants in the United States – with five of the plants being located in Wisconsin. Hydrite's chemical manufacturing expertise is in chemical distribution, food and dairy sanitation, food ingredients, organic processing, liquid sulfur salts, water treatment, foam control and compliance management. The Hydrite facility in Cottage Grove (located at 114 N. Main Street) specializes in the manufacturing of flammable solvents and the storage, treatment and recycling of hazardous wastes (these operations are described in more detail below).

The Village of Cottage Grove has a total population of 6,192. Cottage Grove is located in the County of Dane and is the first municipal area east of Madison, WI. The town of Cottage Grove, which includes the village, includes a mixture of farms and farmettes, wetlands, rural subdivisions, scattered residences, commercial properties and rural family businesses. The town of Cottage Grove is bordered by the City of Madison, the Village of Cottage Grove, and the towns of Blooming Grove, Sun Prairie, Deerfield, and Pleasant Springs. The Town is bisected by CTH N, which interchanges with I-90 and I-94. US Hwy 12/18 is a major east-west route leading to and from the Madison area. Most of the workers in Cottage Grove commute to the Madison area for employment. Dominant employment sectors include public administration, health care, education and retail trade. Most of the town of Cottage Grove is within the Monona Grove School district, but portions of Cottage Grove also fall in the Deerfield, Sun Prairie, Marshall, Stoughton and McFarland school districts.

In 1970, Hydrite acquired the Cottage Grove facility when it was purchased from North Central Chemical (NCC). In 1976, Hydrite built a recycling facility at the Cottage Grove facility. In 1986, the Cottage Grove facility became Avganic Industries, Inc. (Avganic) and was a wholly-owned subsidiary of Hydrite. In 1992, the ownership of the Cottage Grove facility was transferred back to Hydrite.

Hazardous wastes generated on-site from the chemical manufacturing operation are stored in tanks and/or containers until they can be processed. Hazardous wastes received from off-site are stored in containers (primarily 55 gallon drums) and are delivered by truck. Hazardous waste generated off-site is tested in Hydrite's on-site laboratory to determine pH, polychlorinated biphenyl (PCB) content and volatile organic compound content (for liquid wastes) when it is received. Wastes that contain PCB's are routed to an approved Toxic Substances Control Act (TSCA) facility as a service to the original generator, because Hydrite does not process PCB containing wastes. Other hazardous wastes that cannot be processed by Hydrite are sent to a licensed Treatment/Storage /Disposal (TSD) facility for proper treatment and disposal.

An interim hazardous waste operating license was issued to the facility on August 23, 1983. The initial Feasibility and Plan of Operation Report (FPOR) was approved by the Wisconsin Department of Natural Resources (Department) on May 17, 1988. The Department issued the initial hazardous waste operating license with an effective date of April 1, 1989. The U.S. Environmental Protection Agency (EPA) issued a Federal Hazardous Waste Operating Permit on June 30, 1989. The Department's hazardous waste operating license was re-issued on May 7, 2002.

The entire plant associated with the hazardous waste operations is surrounded by a chain link fence. The hazardous waste operations are located at least 200 feet from the property line, except for the rail corridor that runs between two sections of property owned by Hydrite.

Since the original license was issued in 1989, Hydrite will be decreasing their allowable hazardous waste tank storage capacity from 80,000 to 66,500 gallons and decreasing their container storage capacity from 231,000 gallons to 110,000 gallons. The complete list of the designated hazardous waste codes for the hazardous waste that can be handled at Hydrite can be found in the most recent Hazardous Waste Permit Application, Part A, submitted to the Department with a cover letter dated May 31, 2012 (see attachment 1).

An analysis of the need for an environmental impact statement was performed by the Department as part of the initial facility hazardous waste licensing in 1989. The analysis of the expected impacts of the proposal for the initial facility concluded that it was not a major action that would significantly affect the quality of the environment. As such, an environmental impact statement was not required for the initial license issuance for the current facility. This document updates the original environmental assessment completed on April 8, 1987 (see attachment 2).

Waste Generated from Chemical Manufacturing

Hydrite's chemical manufacturing operations located at 114 N. Main Street result in Hydrite being classified as a Large Quantity Generator (LQG) of hazardous waste. The wastes generated are a by-product of the manufacturing processes and are recycled on-site for re-use, blended on-site for use as a secondary fuel or sent off-site for proper disposal. The chemical manufacturing operation is not included in the relicensing review, but the storage and processing of the hazardous wastes generated by the chemical manufacturing operations are included in this review. Note that some of the hazardous waste generated on-site is stored in a 16,000 gallon generator accumulation tank (Hydrite position number 405) and two 19,750 gallon license tanks (Hydrite position numbers 401 and 402) that are used for fuel blending. The hazardous waste that is generated on-site is shipped off-site within 90 days. The accumulation of hazardous waste for less than 90 days is exempt from licensing per s. NR 662.034(1), Wis. Adm. Code and is not part of this relicensing.

Waste Generated from Distribution Operations

Most of Hydrite's distribution operations are located across North Main Street at 150 W. Donkle St. This location is called Hydrite Chemical Company – West Facility (Hydrite West) and is used to store and ship out manufactured chemicals and recycled solvents. The waste generated at Hydrite West includes line flushes, obsolete products, rags, and personal protective equipment (PPE). The Hydrite West Facility is currently listed as a LQG (EPA ID # WID080509359, FID # 113110250) and is also operating as a transporter (license number 11782) and as a ten day transfer facility. Hydrite West facility's operation is considered a separate hazardous waste facility and so is not included in the relicensing review. Note that the term "facility" is defined in s. NR 660.10(43), Wis. Adm. Code and means (in part) "All contiguous land and structures, other appurtenances, and improvements on the land, used for treating, storing or disposing of hazardous waste." Hazardous waste is not treated, stored or disposed of at the West Facility operation.

Recycling Operation

Hazardous wastes that are recycled by Hydrite include wastes received from off-site and hazardous wastes generated on-site by Hydrite's chemical manufacturing processes. Non-chlorinated liquid hazardous wastes are processed through thin film evaporators to reclaim solvents. Some of the reclaimed solvents are further purified with distillation columns. The recovered solvents are returned to the original generator or sold for re-use. As noted in a letter from Hydrite dated May 9, 2000, the equipment included under the recycling exemption are: distillation column 3, thin film evaporator LUWA 1 and thin film evaporator LUWA 3. Hydrite has included in their Title V Air Emissions Operation permit the option of processing hazardous waste received from off-site in the three processes listed in the May 9, 2000 letter and in distillation column 1, distillation column 2, distillation column 4, reactor 5, reactor 6 and the Vacuum Pot. Five tanks (Hydrite position numbers 204, 205, 222, 228 and 235) are also associated with the recycling operation. Tanks 204 and 205 are called "day tanks" and temporarily store material before the recycling process. Tanks 222, 228 and 235 are used to store the solvent after the solvent has been recycled. The waste solvent is never stored for more than 24 hours, so the tanks do not need to have a license. Air emissions from hazardous waste sources are the drum line, thin film evaporators, distillation columns, reactors and vacuum pot are controlled by a thermal oxidizer. The five tanks associated with the recycling process are controlled by carbon adsorption canisters. Hydrite has committed to including the equipment in the hazardous waste monitoring

and inspections programs prior to actually processing any hazardous waste in these additional units. The recycling operations are exempt under s. NR 664.001(b), Wis. Adm. Code from the requirement to obtain a hazardous waste operating license. The recycling operations are separate from the hazardous waste license and are only included in this document as part of the description of facility operations.

Hazardous Waste Treatment (license # 4437)

In a letter dated June 13, 2006, the Department informed Hydrite that the April 22, 1988, recycling exemption for fuel blending would no longer exist under the new hazardous waste rules which went into effect on August 1, 2006. Fuel blending would be regulated as a treatment activity subject to the licensing requirements under chapter NR 670, Wis. Adm. Code. On October 27, 2008, the Department issued a class 2 plan modification to Hydrite to conduct fuel blending activities.

Waste materials that are not suitable for recovery, excess material, still bottoms from on-site distillation processes and tank bottoms are blended into a supplemental fuel used primarily by cement kilns. Other waste materials falling below the minimum BTU values or falling outside certain specifications are sent off-site for disposal. Prior to blending, the waste is sampled and analyzed for compatibility and other parameters as outlined in Hydrite's approved waste analysis plan, Section VII of the approved Feasibility and Plan of Operation Report (FPOR). The waste is blended in two, 19,750 gallon stainless steel tanks (Hydrite position numbers 401 and 402). The tanks are provided with top-mounted mixers to maintain any solid particulate in suspension and the tanks are located within secondary containment. The blended fuel is considered Hydrite generated waste and may be stored no more than 90 days in tanks 401 and 402. A December 21, 2007, letter from Spectrum Engineering Incorporated verified that the calculations and design details are consistent with the requirements of Underwriter's Laboratories, Inc. (UL-142) as the standard for 'Steel Aboveground Tanks for Flammable and Combustible Liquids' for joints and the thickness calculations of the ends, shell, manhole, fittings and testing. The tanks are provided with secondary containment and are equipped with emission controls.

The hazardous waste treatment tanks, and the other tanks at Hydrite, are covered under Hydrite's existing Title V air pollution control facility-wide permit (113063390-P12) which includes enforceable conditions for units subject to Subchapter AA and CC requirements (ss. NR 664.1030 through 1036 and NR 664.1080 through 1090, Wis. Adm. Code). Subchapter AA deals with process vents from specific types of hazardous waste (with organic content greater than 10 ppm by weight) recycling units and Subchapter CC deals with tank and container systems in contact with hazardous waste having an average VO content at the point of waste origination greater than 500 ppm by weight. In general, there are no process vents at Hydrite which are not controlled by the thermal oxidizer. Hydrite has chosen to use Subpart BB in lieu of an air permit to determine compliance, because the facility is not yet subject to any type of leak detection and repair program by air rules or air permit condition.

Hazardous Waste Storage in Containers (license # 6006)

The storage of hazardous waste in containers occurs in the CE 100 Warehouse, which is a totally enclosed building. The dimensions of the CE 100 Warehouse are 200' by 80' and the adjoining process building is 106' by 60' for a total of 22,360 square feet. The CE 100 Warehouse floor is constructed of 4000 psi concrete and reinforced with 6" x 6" No. 6 wire mesh, is maintained to be free of cracks and has an impervious coating to prevent hazardous wastes from migrating into the concrete. The secondary containment system for the CE 100 Warehouse is achieved by six-inch high curbs or ramps at all the wall openings. Empty, the total secondary containment is 80,671 gallons. The CE 100 Warehouse and process building is sprinkled for fire protection and the building containment is sufficient to contain a release of the wastes and materials stored in the building and the water used for firefighting. The possibility of a total release of all containers is very remote, since only one or two drums of material would normally be involved in a spill. Hydrite is decreasing their license container storage capacity from 231,000 gallons to 110,000 gallons, which is equivalent to 2,000 55 gallon drums. Hydrite is required to maintain at least three (3) feet of aisle space between drum rows and drums that are stacked are limited to three (3) high and are required to be on pallets

The Facility conducts a weekly visual inspection of the CE 100 Warehouse, looking for evidence of leaking containers, proper container management (dated, labeled, closed, etc), and signs of corrosion or deterioration

that would threaten the integrity of the system. The inspections are then reviewed by a supervisor to determine if corrective action (CA) is required.

On May 1, 2012, the Department issued a closure determination for the South Warehouse Hazardous Waste Container Storage Area, the Department performed closure inspections on February 16, 2012, and March 14, 2012. The Department's inspections verified that all containers affiliated with the South Warehouse Hazardous Waste Container Storage Area were removed from the site. The information provided by Hydrite and the Department's closure inspections verified that the South Warehouse Hazardous Waste Container Storage Area was closed in substantial conformance with the facility's approved closure plan and conditions of the operating license. Hydrite will need to submit documentation to the Department to close out North Warehouse Hazardous Waste Container Storage Area which ceased storing hazardous waste in 2010. This documentation is expected to be submitted by Hydrite in the fall of 2012.

Hazardous Waste Storage in Tanks (license # 3200)

The storage of hazardous waste in tanks occurs in an outdoor tank farm and is limited to the '200' tank farm. The dimensions of the '200' tank farm is 104' by 78' for a total of 8,112 square feet. Hazardous wastes are stored in ten above ground unpressurized hazardous waste storage tanks (Hydrite position numbers 212, 213, 214, 215, 218, 219, 220, 221, 241 and 242). Each of these hazardous waste storage tanks has a capacity of 6,650 gallons. The hazardous waste storage tanks are constructed in accordance with the UL 142 standards - sides are 3/16" carbon steel and bottoms are constructed of 1/4" thick carbon steel plate with significant steel bracing to support the tank. For pressure control, the tanks are operated at atmospheric pressure and are provided with a minimum of one two-inch diameter vent pipe fitted with a flame arrestor, a vent to the thermal oxidizer, and a conservation vent. A September 29, 1998, letter from James R. Meverden, an independent, qualified, registered PE verified the structural integrity and suitability of the ten (10) hazardous waste tanks for the handling of hazardous waste. The hazardous waste tanks are provided with secondary containment and are equipped with emission controls.

These hazardous waste storage tanks are covered by a Department's Air Management program Title V Operating Permit that certifies that these hazardous waste storage tanks are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act (40 CFR part 60) and 40 CFR part 63 Subpart DD).

The secondary containment system for the '200' tank farm consist of steel reinforced concrete slabs and walls that are coated with a polyurethane sealant. The '200' tank farm's secondary containment system rest on a 12" compacted clay base. The soils in the '200' tank farm are reported to have a minimum design load bearing capacity of 3,000 psi. Including the weight of the concrete slab and the worst case liquid specific gravity of 1.6, the waste tanks impose less than 10.42 psi over the area under the tank. The '200' tank farm was built in 1986 and since then, there has been no unusual cracking, heaving or stress failure. There has been no indication of frost heave since installation. The capacity of the secondary containment system is 55,621 gallons and is sufficient to contain a release from that largest tank and contain the precipitation from a 25-year, 24-hour rainfall event.

The Facility conducts a daily visual inspection of the tank systems, looking for evidence of leaking equipment, signs of corrosion or deterioration that would threaten the integrity of the system. The inspections are then reviewed by a supervisor to determine if corrective action is required.

Solid Waste Storage (license # 3774)

A Plan of Operation Approval for the storage of solid waste (non-hazardous waste) was issued by the Department on February 7, 1995. This approval is for the storage of non-hazardous waste solvents. Solid wastes may be stored in tanks and in the warehouse areas permitted as hazardous waste storage areas. The solid waste approval is separate from the hazardous waste license and is only included in this document as part of the description of facility operations.

Solid Waste Processing (license # 3775)

A Plan of Operation Approval for the processing of solid waste (non-hazardous waste) was also issued by the Department on February 7, 1995. This approval is for the processing of non-hazardous waste solvents. The solid waste approval is separate from the hazardous waste license and is only included in this document as part of the description of facility operations.

Title V (operating permit # 113063390-P12)

The Title V Operating Permit certifies that all hazardous waste storage tanks and fuel-blending tanks are equipped with operating air emission controls in accordance with the requirements of an applicable Clean Air Act (40 CFR part 60) and 40 CFR part 63 Subpart DD).

Hydrite performs stack testing for various hazardous waste constituents to validate emissions from new or modified air pollution control equipment or when significant process equipment or rate changes occur. Stack testing performed by Hydrite is for the hazardous air pollutants (HAPs), which includes the volatile organic compounds (VOCs) generated by Hydrite. The most recent stack tests conducted at Hydrite were performed in December of 2008. The average destruction efficiency demonstrated during the test was 99.92%. This destruction efficiency may be assumed for all HAPs with an autoignition temperature of 1319° F or less, when the thermal oxidizer chamber temperature is 1419° F or greater.

2) Purpose and Need (include history and background as appropriate)

Facilities like Hydrite provide the necessary services for other businesses that generate hazardous waste solvents (solvents). Solvents are used by facilities to manufacture coatings, adhesives, degreasing/cleaning agents, dyes, polymers, plastics, textiles, printing inks, agricultural products and pharmaceuticals. In 2011, Wisconsin industries generated about 39,000 tons of waste solvents (F001 – F005). Of this amount, Hydrite recycled 8,910 tons of the waste solvents and WRR in Eau Claire, the only other TSD solvent recycler in Wisconsin, recycled another 14,049 tons of these waste solvents. Facilities like Hydrite are therefore critical to properly manage waste solvents and keep the solvents out of the environment as improperly managed solvents can pose a very real health risk to people when soils and groundwater are impacted.

Exposure to solvents can cause cancers, tumors and impair the functions of the central nervous system. Solvent neurotoxicity symptoms can be characterized by fatigue, memory impairment, irritability, difficulty in concentrating, mild mood disturbance, sustained personality or mood change and impairment in intellectual function, global deterioration in intellectual and memory functions (dementia). Exposure to solvents typically occurs through inhalation, ingestion and dermal contact.

Hydrite provides generators with an efficient and economical means to manage their waste solvents in an environmentally sound manner. Alternatives for managing these waste solvents would include having the individual generators recycle their own waste solvents on-site or shipping the waste solvents to an out-of-state TSD facility for handling. Wisconsin and federal law forbids the land filling of any hazardous waste solvents that have not been treated to the regulatory standards identified in ch. NR 668, Wis. Admin. Code.

3) Authorities and Approvals (list local, state and federal permits or approvals required)

Local

The main facility parcel is currently zoned industrial. The history regarding the original zoning of this facility is found in the original environmental assessment that was conducted as part of the initial licensing process. As required by s. 289.23(2), Wis. Stats., Hydrite has met the statutory requirements on obtaining any local approvals from the affected municipalities prior to Department review of the FPOR. In a letter dated May 10, 2011, Hydrite notified the Village of Cottage Grove, Dane County and the Waste Facility Siting Board of the local approval process and provided a copy of the Standard Notice that outlines the time limits and requirements for participation in local negotiations. On November 4, 2011, Hydrite held a public meeting. As required by s. 289.23(2), Wis. Stats., the Department notified the Village of Cottage Grove in a February 2, 2012, letter that the FPOR has been received by the Department.

State

This environmental analysis (EA) and decision on the need for an Environmental Impact Statement (EIS) has been written in accordance with ch. NR 150, Wis. Adm. Code. This chapter requires the Department to review proposed licenses for potential environmental impacts.

The Department has reviewed the FPOR which was submitted by Hydrite for the re-licensing of their hazardous waste storage and treatment facility to determine compliance with the applicable hazardous waste management requirements of ch. NR 660 to 679, Wis. Adm. Code, for the storage of hazardous waste in containers and tanks, and for treating waste in tanks.

Federal

EPA issued a hazardous waste management permit to the facility that became effective June 30, 1989. This permit covers hazardous waste regulations for which Wisconsin was not authorized to implement. Wisconsin is currently authorized for these regulations and all of the hazardous waste regulations applicable to the proposed facility; therefore, a federal hazardous waste permit will not be re-issued.

PROPOSED PHYSICAL CHANGES (more fully describe the proposal)

4) Manipulation of Terrestrial Resources (include relevant quantities - sq. ft., cu. yard, etc.)

No changes to terrestrial resources are expected.

5) Manipulation of Aquatic Resources (include relevant quantities - cfs, acre feet, MGD, etc.)

No changes to aquatic resources are expected.

6) Buildings, Treatment Units, Roads and Other Structures (include size of facilities, road miles, etc.)

The existing facility consists of an office building, a manufacturing building containing the CE 100 Warehouse, four outdoor tanks, a laboratory building, an employee center building and a maintenance building. With the exception of the most eastern parking area, all roads and parking areas are covered with either asphalted or concrete. Hydrite is planning to pave the most eastern parking area during the fall of 2012.

7) Emissions and Discharges (include relevant characteristics and quantities)

There should be no changes related to emissions from the hazardous waste storage and treatment areas. To minimize the potential for releases and demonstrate limited impacts to the surrounding areas, Hydrite has implemented several practices and procedures since the initial license was issued and the original EA was conducted. These practices and procedures include: daily, weekly, monthly, and quarterly facility inspections, a preventative maintenance program on all major equipment, a plant-wide ventilation system designed to collect and minimize fugitive emissions, bonding and grounding equipment to limit static discharges and stack testing of the Thermal Oxidizer Unit.

Impacts to the Environment

Waste activities are conducted in contained storage and treatment areas, so there is a minimal risk of adverse affects to terrestrial plant and animal species that are native to this area. The Facility is not located on or near any ponds, lakes or bodies of water where aquatic life would be affected. Note that there is a pond located east-south-east and approximately 500 feet the south east corner of the facility. This pond is part of Arrowwood Estates and was constructed in 1994. The maximum depth of the pond is approximately 14 feet which is maintained by a weir located at its southern end. The pond is recharged by shallow groundwater discharge and a stormwater sewer discharge outlet located at its northern end. The stormwater sewer system receives runoff from the residential development located north of the pond, and is also connected to the Village of Cottage Grove stormwater sewer system along West Ridge Road. Outflow from the pond is southward to an eastward running drainage ditch that discharges to Koshkonong Creek.

Stack Testing

Hydrite performs stack testing for various hazardous waste constituents to validate emissions from new or modified air pollution control equipment or when significant process equipment or rate changes occur. Stack testing performed by Hydrite is for the hazardous air pollutants (HAPs), which includes the volatile organic compounds (VOCs) generated by Hydrite. The most recent stack tests conducted at Hydrite were performed in December of 2008. The average destruction efficiency demonstrated during the test was 99.92%. This destruction efficiency may be assumed for all HAPs with an autoignition temperature of 1319° F or less, when the thermal oxidizer chamber temperature is 1419° F or greater.

8) Other Changes

No other changes are anticipated.

9) Identify the maps, plans and other descriptive material attached

Attachment 1: Part A application

Attachment 2: April 8, 1987 EA

Attachment 3: Endangered Resources Review Documentation

Attachment 4: 2010 Census Data

Attachment 5: Cottage Grove Demographic Data

AFFECTED ENVIRONMENT (describe existing features that may be affected by proposal)

10) Information Based On (check all that apply):

Literature/correspondence (specify major sources)

- November 7, 2011, FPOR
- April 8, 1987, EA
- November 28, 2001, EA

Personal Contacts (list in item 26)

Field Analysis By: Author Other (list in item 26)

Past Experience with Site By: Other (list in item 26)

11) Physical Environment (topography, soils, water, air)

The topography of the site is nearly level with a slight downward slope to the east. Vertical relief on the 6 acre site is approximately three to four feet. The surrounding area is characterized by numerous long ridges or oval shaped hills (drumlins) aligned in a northeast-southeast orientation. Within one-quarter mile of the site approximately 80 feet of vertical relief is present. Between the hills are slightly concave lowlands, often poorly drained, and occupied by marshes and wetlands. The surface water flows primarily to a drainage ditch located on the eastern side of the large hill southeast of the facility. Water flows into the ditch from a drainage tile system; water in the ditch flows into the Koshkonong Creek at a location of about one mile east of the facility. The Koshkonong Creek drains much of eastern-central Dane County and is a tributary to the Rock River. The second nearest flowing stream is Door Creek, a tributary of the Yahara River. Door Creek is located about 4,000 feet west of the property. Hydrite manages surface water drainage from the permitted area of the property via its Stormwater Pollution Prevention Plan.

Soil is mapped as Virgil Silt Loam and McHenry Silt Loam. Both allow moderate to low, chance for water to infiltrate the soil. The area is characterized by glacial till underlain by dolomite and sandstone bedrock at depths ranging from 52 to 86 feet below the land surface. The depth to groundwater ranges 10-15 feet below the land surface but varies from one foot northwest of the plant to 40-45 feet southeast of the plant. Annually the water table fluctuates 2 to 4 feet with a hydraulic gradient of 0.01-0.001 ft/ft. A groundwater divide appears

to be about one-half mile west of the site but the groundwater pumping in central Dane County likely caused the divide to shift eastward.

The Hydrite site is underlain by a layer of unconsolidated deposits (40 to 90 feet), which overlies bedrock, First; however, is a layer of fill (up to ten feet in depth) that has been brought in to elevate and even out the soil foundation under the production and storage areas. The unconsolidated material under the fill layer consists of up to five feet of silty clay till (Horicon Formation). Sand and gravel outwash deposits are found beneath the Horicon till. This unconsolidated layer serves as an aquifer beneath the Hydrite facility. The uppermost bedrock unit at the Hydrite site is the St. Peter Sandstone, which primarily consists of sandstone with interbedded conglomerates, siltstone and shale. The St. Peter Sandstone is approximately fifty feet thick beneath the site, although it disappears about a half mile south of Hydrite. Beneath the St. Peter Sandstone is the Prairie du Chien Group, which is principally a hard dolomite. The Prairie du Chien layer is estimated to be 25 to 35 feet thick beneath Hydrite.

A second major aquifer is found beneath the Prairie du Chien Group. At the deepest known levels, an ancient layer of sandstone is found that may be 660 to 1100 feet thick. These layers of sandstone are primarily composed of sandstone with shale, siltstone and dolomite. Ground-water flow in the major aquifers is primarily to the southeast of the Hydrite facility. The two major aquifers are not isolated from each other; the dominant vertical flow is generally downward, although local geological or meteorological conditions can cause ground water to flow upward.

12) Biological Environment (dominant aquatic and terrestrial plant and animal species and habitats including threatened/endangered resources; wetland amounts, types and hydraulic value)

A NHI Portal review has been conducted by the Department that indicated no element occurrences within the search area and the surrounding 1-mile buffer (see attachment 3)

13) Cultural Environment

a) Land use (dominant features and uses including zoning if applicable)

Hydrite is located in the General Industrial District of Cottage Grove East of County N, the main artery of the Village of Cottage Grove. West of County N, an additional Industrial zone is being developed. North and east of the facility is residential property and south is the Wisconsin Drumlins Bike Trail and a developing residential area. Hydrite owns approximately 40 acres, which provides a buffer between the facility and other land uses within the immediate area.

b) Social/Economic (including ethnic and cultural groups)

Hydrite is located in the Village of Cottage Grove that has a total population of 6,192. Cottage Grove is located in the County of Dane and is the first municipal area east of Madison, WI. Madison is the capital of the State and is also home to the University of Wisconsin. Cottage Grove is considered a bedroom community to Madison. The Village of Cottage Grove website reports, "*Cottage Grove enjoys the benefits of small town Wisconsin, as well as the metropolitan culture and advantages of nearby Madison*". For detail information on census data (see attachment 4 and 5).

Cottage Grove includes a mixture of farms and farmettes, wetlands, rural subdivisions, scattered residences, commercial properties and rural family businesses. Cottage Grove is bordered by the City of Madison, the Village of Cottage Grove, and the towns of Blooming Grove, Sun Prairie, Deerfield, and Pleasant Springs. The Town is bisected by CTH N, which interchanges with I-90 and I-94. US Hwy 12/18 is a major east-west route leading to and from the Madison area. Most of the workers in Cottage Grove commute to the Madison area for employment. Dominant employment sectors include public administration, health care, education and retail trade. Cottage Grove is within the Monona Grove School district, but portions of Cottage Grove also fall in the Deerfield, Sun Prairie, Marshall, Stoughton and McFarland school districts.

Hydrite employs over 120 employees, many from the local area and surrounding communities. The January, 2010 unemployment rates for Dane County and the city of Madison were 6.3% and 5.9% respectively, compared to 9.6% for the State and 10.6% for the Country.

Hydrite contracts with local business for a variety of needs, including, but not limited to, electrical and mechanical needs, office supplies, safety supplies, catering, landscaping and well as hiring summer interns from the University for work as engineers, chemists and clerical work. Hydrite has supported local groups such as Little League, purchased specialized camera equipment for the Fire Department, donated to community projects and festivals and has offered scholarships to students pursuing degrees in natural or environmental sciences. The facility has opened its laboratory for class trips.

c) Archaeological/Historical

There are no special resources such as archeological, historical, state natural areas, or prime agricultural lands on or in the vicinity of the Hydrite facility.

14) Other Special Resources (e.g., State Natural Areas, prime agricultural lands)

There are no other special resources that would be impacted by the operation of this facility.

ENVIRONMENTAL CONSEQUENCES (probable adverse and beneficial impacts including indirect and secondary impacts)

15) Physical (include visual if applicable)

Potentially negative effects include the visuals of the tanks, industrial buildings and the chain link fence. In addition there are noises generated from facility operations and from trucks entering and leaving the facility, odors generated from facility operations and contamination of the soil and ground water from past facility operations.

16) Biological (including impacts to threatened/endangered resources)

The facility is not located in a critical habitat area for threatened or endangered species.

17) Cultural

a) Land Use (including indirect and secondary impacts)

This site is zoned for industrial use. This zoning classification is suitable for the facility.

b) Social/Economic (including ethnic and cultural groups, and zoning if applicable)

There should be no groups adversely impacted when this facility is properly operated. Note that residents around the facility have complained of odor issues related to manufacturing activities. Also review item 13.b.

c) Archaeological/Historical

There are no identified impacts to archaeological or historical sites.

18) Other Special Resources (e.g., State Natural Areas, prime agricultural lands)

There are no other special resources that would be impacted by the operation of this facility.

19) Summary of Adverse Impacts That Cannot Be Avoided (more fully discussed in 15 through 18)

Area residents have expressed displeasure with facility odors and the psychological stigma associated with having a chemical manufacturing plant in their community (see attachment 6). Continued incidental chemical discharges to paved surfaces will likely occur and are not necessarily considered a violation to Hydrite's hazardous waste license.

DNR EVALUATION OF PROJECT SIGNIFICANCE

20) Environmental Effects and their Significance

a) Discuss which of the primary and secondary environmental effects listed in the environmental

consequences section are long-term or short-term.

The only long term impact to the environment after the facility ceases to operate is the soil and groundwater contamination caused by past facility operations.

- b) Discuss which of the primary and secondary environmental effects listed in the environmental consequences section have effects on geographically scarce resources (e.g. historic or cultural resources, scenic and recreational resources, prime agricultural lands, threatened or endangered resources or ecologically sensitive areas).**

The proposed expansion is not expected to affect any historical or cultural resources, scenic and recreational resources, threatened or endangered resources or ecologically sensitive areas.

- c) Discuss the extent to which the primary and secondary environmental effects listed in the environmental consequences section are reversible.**

No new significant impacts are anticipated provided that the facility is operated and maintained in an environmentally sound manner. If the soil and surface waters are impacted from future facility operations the damage is likely reversible given time and resources; however, releases to the atmosphere are not likely to be reversible as there are no economical means to capture these releases. The purpose of the hazardous waste rules, licensing review process and license conditions is to set minimum standards to help ensure that the facility is operated and maintained in an environmentally safe manner.

21) Significance of Cumulative Effects

Discuss the significance of reasonably anticipated cumulative effects on the environment (and energy usage, if applicable). Consider cumulative effects from repeated projects of the same type. Would the cumulative effects be more severe or substantially change the quality of the environment? Include other activities planned or proposed in the area that would compound effects on the environment.

No significant cumulative effects are anticipated provided that the facility is operated and maintained in an environmentally sound manner. Any future projects will be examined at the appropriate time. With each new operation or proposed expansion, cumulative effects are considered. Unless these facilities are poorly sited or concentrated in a small area, the cumulative impacts to the environment should not be significant.

22) Significance of Risk

- a) Explain the significance of any unknowns that create substantial uncertainty in predicting effects on the quality of the environment. What additional studies or analysis would eliminate or reduce these unknowns?**

The hazardous waste relicensing is for the continuation of an existing facility and operation. This is not for a new facility or process that may have greater uncertainty and unknowns.

- b) Explain the environmental significance of reasonably anticipated operating problems such as malfunctions, spills, fires or other hazards (particularly those relating to health or safety). Consider reasonable detection and emergency response, and discuss the potential for these hazards.**

The primary environmental risk from facility operations are spills of hazardous wastes or chemical product, fires and explosions. Most spills are contained in the secondary containment areas, which are designed to prevent spilled materials from impacting the environment (other than incidental loss from evaporation). For fire, explosions or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil or surface waters, Hydrite has a contingency plan to minimize these hazards to human health and the environment.

The contingency plan will be evoked and carried out immediately whenever there is a fire, explosion or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment. During an emergency, all reasonable measures will be taken to ensure that fires, explosions and releases do not occur, reoccur or spread to other areas of the facility. Operators are trained in emergency shut-down procedures of processing equipment. Overhead fire doors are used to close off additional oxygen supplies. Other measures may include removing tankers or containers from

the area and containing any released waste.

All employees are trained to perform their duties in a way that ensures the facility's operations are done in a safe and compliant manner. This includes, but is not limited to, daily operations, inspections, training, contingency plan and safety practices. The facility utilizes Hands-On training by a member of the EHS Department or qualified facility personnel, Web-Based Training modules and contacting with outside organizations to meet all the training requirements.

The level of training an employee receives is dependent upon the employee's level of involvement in hazardous waste management. For example, Administrative positions may be trained on shipping documents or recordkeeping procedures, but are not trained as responders to emergency response to fires or chemical releases. All Operators, Maintenance, Engineering and their Supervisors receive hazwoper training. Lab personnel receive additional training in Emergency Communications and Chemical Release Reporting.

When the facility is closed, the closure plan includes procedures to test the soil under the secondary containment areas to confirm that spilled material did not escape into the environment. If contaminated soil is discovered, procedures and financing is provided to clean up the area.

23) Significance of Precedent

Would a decision on this proposal influence future decisions or foreclose options that may additionally affect the quality of the environment? Describe any conflicts the proposal has with plans or policy of local, state or federal agencies. Explain the significance of each.

No. A favorable decision should not significantly influence any future decisions or foreclose options that may additionally affect the quality of the environment when the facility is operated and maintained in an environmentally sound manner. The Department is not aware of any conflicts with federal, state and local governments regarding this project.

24) Significance of Controversy Over Environmental Effects

Discuss the effects on the quality of the environment, including socio-economic effects, that are (or are likely to be) highly controversial, and summarize the controversy.

The Department is not expecting the re-licensing to be highly controversial.

ALTERNATIVES

25) Briefly describe the impacts of no action and of alternatives that would decrease or eliminate adverse environmental effects. (Refer to any appropriate alternatives from the applicant or anyone else.)

Taking No Action

The option is not a feasible alternative since the Department is required under s. NR 670.415(1) Wis. Admin. Code to make a final determination on Hydrite's submittal of the FPOR. Failure to take an action could result in legal actions against the Department.

Not Issuing the License Renewal

The option is not a feasible alternative since it would greatly diminish Wisconsin's ability to manage waste solvents generated by facilities in Wisconsin and neighboring states. In addition closing Hydrite's hazardous waste storage and treatment facility would likely result in the loss of jobs. This option is not expected to significantly affect the environment, historical or cultural resources, scenic and recreational resources, threatened or endangered resources or ecologically sensitive areas.

Expand the Storage and Treatment Capacity

The option is not a feasible alternative because Hydrite is requesting a reduction in hazardous waste storage capacity. Hydrite is decreasing their license container storage capacity from 231,000 gallons to 110,000

gallons, which is equivalent to 2,000 55 gallon drums. Hazardous waste storage tanks capacity will remain the same at 66,500 gallons. This option is not expected to significantly affect the environment, historical or cultural resources, scenic and recreational resources, threatened or endangered resources or ecologically sensitive areas.

Reduce the Storage and Treatment Capacity

The option is not a feasible alternative because it will not provide Hydrite with adequate storage capacity to address the amounts of waste solvents now being generated by Hydrite's customers. This option is not expected to significantly affect the environment, historical or cultural resources, scenic and recreational resources, threatened or endangered resources or ecologically sensitive areas.

Move Hazardous Waste Operations to another Location

The option is not a feasible alternative because Hydrite is not requesting a relocation of their hazardous waste operations. In addition the economic costs to move the hazardous waste operations would be significant and could result in the loss of local jobs. The relocation of the hazardous waste operations could also impact an environment that has not been previously impacted from hazardous waste and hazardous waste constituents.

SUMMARY OF ISSUE IDENTIFICATION ACTIVITIES

- 26) List agencies, citizen groups and individuals contacted regarding the project (include DNR personnel and title) and summarize public contacts, completed or proposed).

Table 1: Entity Contact

Date	Contact	Comment Summary
09/18/2012	DNR Data Review	Review of DNR Natural Heritage Inventory data, DNR Historical and Archeological Maps, 2010 US Census Data
Numerous	Cynthia English, DNR	Document gathering and general knowledge of Hydrite
Several	David Panofsky, DNR	Information on AA/BB/CC
Numerous	Jan Housley, Hydrite	General knowledge of Hydrite
10/11/2012	Linda Hanefeld, DNR	Review of EA from RR program
10/12/2012	Jennifer Hamill, DNR	Review of EA from Air program

PRELIMINARY DECISION

In accordance with s. 1.11, Wis. Stats., and Ch. NR 150, Wis. Adm. Code, the Department is authorized and required to determine whether it has complied with s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code.

The proposed project is not anticipated to cause significant adverse environmental effects. The Department has made a preliminary determination that an Environmental Impact Statement will not be required for this action. This recommendation does not represent approval from other DNR sections, which may also require a review of the project. Copies of the Department's Environmental Assessment that led to this preliminary determination can be obtained from: Michael Ellenbecker, 262-884-3242, DNR, 9531 Rayne Road, Suite 4, Sturtevant, WI 53177.

Signature
of
Evaluator:

Mike Ellenbecker
Michael Ellenbecker 262-884-2342

Date

Signed: November 1, 2012

FINAL DECISION

The public review process has been completed. The Department received and fully considered the responses to the news release or other notice.

Pursuant to s. NR 150.22(2)a., Wis. Adm. Code, the attached analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action, and therefore the environmental impact statement process is not required prior to final action by the Department.

The Department has determined that it has complied with s. 1.11, Wis. Stats., and ch. NR 150, Wis. Adm. Code. This decision does not represent approval from other DNR sections which may also require a review of the action/project.

Signature of Environmental Analysis Program Staff  Eric Heggelund 608-275-3301	Date Signed <u>12-19-12</u>
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NOTICE OF APPEAL RIGHTS

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.