

MEMORANDUM

TO: Anne Capra, AICP, Director
Planning & Conservation, South Hadley, MA
M. James Riordan, AICP, LEED AP, Team Leader

FROM: James Pearson, PE, Technical Leader
Daron Kurkjian, PE, Senior Project Manager

DATE: March 11, 2022

SUBJECT: E Ink Expansion: Special Permit Peer Review

Introduction

Weston & Sampson was requested by the Town of South Hadley (the Town) to provide a review of the Special Permit and Stormwater Permit application for the proposed expansion of the E Ink facility at 7 Gaylord Street in South Hadley. The project site is fully developed as an existing industrial facility with an existing building, curbs, paving and utilities. The applicant proposes to remove a portion of the existing building and construct a new building and covered loading dock. Construction is approximately within the same footprint as the existing building. Other site improvements are also proposed, including storage tanks, drainage improvements, utility relocation and paving/cub replacement.

This memorandum summarizes the results of our peer review. The peer review has been prepared pursuant to our February 18, 2022 contract with the Town. In general, materials that we reviewed to prepare this memorandum include those submitted with the Special Permit application as of February 14, 2022 as listed below:

- E Ink Corporation Facility Expansion, 7 Gaylord Street, South Hadley, Massachusetts, Application for Special Permit (Two Pages, No Author, January 5, 2022)
- E Ink Corporation Facility Expansion, 7 Gaylord Street, South Hadley, Massachusetts, Project Narrative (Two Pages, No Author, Revised February 9, 2022)
- E Ink Corporation Facility Expansion, 7 Gaylord Street, South Hadley, Massachusetts, Drawing Set (Nine Sheets, BSC Group, January 5, 2022, Revised February 2, 2022)
- E Ink Corporation Facility Expansion, 7 Gaylord Street, South Hadley, Massachusetts, Application for Stormwater Permit (Two Pages, No Author, January 5, 2022)

- E Ink Corporation Facility Expansion, South Hadley, Massachusetts, Stormwater Management Report (41 Pages, BSC Group, January 2022)
- E Ink Corporation Hazardous Waste/Material Contingency Plan for South Hadley 950-1028 REVE (34 Pages, Tony Vinciguerra, June 18, 2021)
- Summary of E Ink South Hadley – Flammable and Combustible Chemicals (One Page, No Author, January 31, 2022)
- Safety Data Sheets (SDS) provided as of February 14, 2022 (142 Pages, No Author, No Date)
- E Ink Pigment Functionalization Process Overview (One Page, E Ink, No Date)
- First and Second Floor Area Control Drawings (Two Pages, IF Design, No Date)
- Letter from Troccoli to Captain Houle with attachments regarding tank farm questions at the E Ink facilities (Nine Pages, February 4, 2022)
- Letter from Troccoli to Capra regarding Special Permit and NOI Application at the E Ink facilities, attachments listed but not included with letter (Seven Pages, February 4, 2022)
- E Ink Permits Required (Two Pages, No Author, February 4, 2022)

Per our contract with the Town, our peer review includes the following:

- Peer review of the Stormwater Report and Application for Stormwater Permit for compliance with Chapter 200 Stormwater Management (Town of South Hadley, MA Stormwater Management (ecode360.com)), paying particular attention to containment of the industrial chemicals and relationship to the storm sewer on site.
- Peer review of Stormwater Report for compliance with the Wetlands Protection Act and South Hadley Wetlands Bylaw Chapter 240 as submitted with the Notice of Intent.
- Peer review of project plans and supplemental materials related to the containment, handling, and transport of industrial chemicals. This review includes review of management practices from onsite delivery of virgin materials, spent materials, and any emissions (air quality) associated with these processes.
- Written peer review report with findings for #1-3 above, which addresses how the proposed project meets the Special Permit standards as outlined in the South Hadley Zoning Code 255-129 (ecode360.com).

Overview of the Proposed Facility Expansion

The applicant proposes to demolish an existing administrative building and replace it with an expansion to its chemical processing facility. Work outside of the building will include relocation of sewer and storm drain infrastructure within the footprint of the expansion, replacement of pavement and curb, installation of chemical storage tanks, a chemical delivery spill containment system, and stormwater quality structures.

The applicant proposes to install stormwater structures to improve stormwater management at the site. Proposed structures include deep-sump, hooded catch basins and proprietary hydrodynamic separator stormwater treatment units. The applicant has indicated that one of the units will be installed on the main storm drain line that collects runoff from an abutter.

Peer Review

This peer review is provided under the following general review topics:

- Stormwater Management
- Environmental Management

Our review provides a section for each area of concern. The sections are structured to include a listing of review standards, our findings for the review standard, and then additional review findings.

Stormwater

Review Findings for Stormwater

We reviewed the application materials as listed above. Below, we provide a review, standard by standard:

Section 200-20

We reviewed the applicant's stormwater management permit submission pursuant to requirements of Section 200-20 of the Town's Bylaws and find that it has been prepared in conformance with the requirements therein, except for certain items for which additional information has been requested as further described below.

Section 200-17, 200-18, and 200-19

We reviewed the applicant's submission pursuant to requirements of Section 200-17 to 200-19 of the Town's Bylaws and find that it to be prepared in conformance with the stormwater elements except as provided below:

1. *Section 200-17: To prevent the adverse impacts of stormwater runoff, the stormwater performance standards in this Article VI must be met at new development sites.*

To prevent the adverse impacts of stormwater runoff, the Town requires that new developments must adhere to Massachusetts Stormwater Management Standards. Section 200-18(A) of the Town's bylaws specifies this requirement. Our comments related to the Massachusetts Stormwater Management Standards our provided below, under our findings related to Section 200-18(A).

2. *Section 200-18 (A): Projects must meet the standards of the Massachusetts Stormwater Management Standards as promulgated by the Massachusetts DEP.*

The Massachusetts Stormwater Standards are established in Volume 3 of the Massachusetts Stormwater Handbook. There are 10 standards, which include:

- *Standard 1 - No new stormwater conveyances may discharge untreated stormwater to or cause erosion in wetlands or water of the Commonwealth*

Untreated stormwater is not being discharged to wetlands or waters of the Commonwealth. The applicant proposes to install stormwater quality management

BMPs which are expected to improve stormwater quality in comparison with existing conditions. Adequate riprap protection for a new outfall has been provided to prevent erosion to the receiving waterbody. This standard has been met.

- *Standard 2 - Peak Rate Attenuation*

The proposed development will result in less impervious area onsite than existing conditions. The applicant asserts that this fact, on its face and without computational analysis, is evidence that peak stormwater discharge rates will not increase. We concur with this assessment and believe that this standard has been met to the maximum extent practicable.

- *Standard 3 – Recharge*

The proposed development will result in less impervious area on site than existing conditions. The applicant asserts that there is, therefore, no loss to groundwater recharge because of this development, and that in fact the development will result in a slight increase in recharge. We concur with this assessment and believe that this standard has been met to the maximum extent practicable.

- *Standard 4 - Required Water Quality Volume.*

The applicant has provided calculations for water quality volume and equivalent water quality flow for purposes of sizing one of the stormwater-quality structures (CS-4 on the plans) that is being proposed. We offer the following comments related to these calculations and to conformance with this standard in general:

- The calculation for CS-4 appears to use 0.5 inches of rainfall depth for purposes of calculating water quality volume. This site appears to meet the definition of a land use with higher potential pollutant load under Standard 5; therefore, water quality volume should be calculated based on 1 inch of rainfall. We recommend that the applicant revise this calculation.
- No calculation was found for water quality volume/water quality flow for the proposed STC1200 structure. This structure appears to be handling a fairly sizable area including paved areas and rooftops. We recommend that the applicant provide a water quality volume/flow calculation to allow for sizing of this structure.
- The calculations claim a TSS removal rate of 77% for both the CS-4 and STC1200 stormwater treatment units. We recommend that the applicant provide backup neutral third-party testing information that supports this TSS removal rate.
- In both the calculations and the plans, reference is made to a “LeBaron Snout” product to be used on the catch basins. We recommend that the applicant update this reference as LeBaron is no longer in business.

- *Standard 5 - Land Uses with Higher Potential Pollutant Loads*

The applicant's statement in the stormwater report narrative under this standard is ambiguous. Based on our review we believe that the site is occupied by a land use with a higher potential pollutant load.

- *Standard 6: Standards concerning discharges within Zone II, Interim Wellhead protection areas of public water supplies, and stormwater discharges near or to any other critical areas*

The site does not appear to be within critical areas under this standard.

- *Standard 7: Computations demonstrating that peak rate attenuation, recharge, and water quality treatment is provided to maximum extent practicable for redevelopment projects.*

We agree that this project is correctly classified as a redevelopment project. As such, we believe that the project approach generally meets the standards to the maximum extent practicable, but the applicant should address the comments identified herein.

- *Standard 8: Development of an Erosion and Sediment Control Plan*

The applicant has shown erosion and sediment control measures on their plans and has included a comprehensive erosion and sediment control plan as part of their stormwater report. The measures proposed appear to be appropriate to address Standard 8; however, see our review of Standard 9 (below) regarding operation and maintenance of erosion and sediment control measures.

- *Standard 9: Operation and Maintenance*

The applicant has provided an operation and maintenance plan for stormwater best management practices. The narrative under this standard appears to primarily include language about construction-period measures that properly belongs under Standard 8. We recommend revising this accordingly and that the applicant revise the narrative to identify long-term operations and maintenance considerations that are more applicable to this standard.

- *Standard 10: Illicit Discharge Compliance Statement*

The applicant states that there are “no known illicit discharges to the stormwater drainage system, and no new ones are proposed.”

Low Impact Development

The Massachusetts Stormwater Handbook indicates that proponents of projects subject thereto must consider environmentally sensitive site design and low impact development (LID) techniques to manage stormwater.

The Massachusetts Stormwater Standards list specific credits for LID that the applicant may pursue for compliance in lieu of installing dedicated stormwater management BMPs. We understand that the applicant is not seeking LID credit. We find that the applicant has complied with standards 3 and 4 to the maximum extent practicable and is, therefore, not required to achieve LID credit standards.

3. *Section 200-18 (B): When the proposed discharge may have an impact upon a sensitive receptor, including streams, storm sewers, and/or combined sewers, the Planning Board may require an increase in these minimum requirements, based on existing stormwater system capacity and standards of other Town boards, including, but not limited to, the Board of Health and the Conservation Commission.*

To our knowledge, the Town has required no increase in the minimum standards. Stormwater quality treatment at the proposed development is to be primarily provided by stormwater quality structures. We find the selected best management practice to be appropriate for the proposed project. As noted above, additional information is requested to verify that the system is sized and designed in accordance with MassDEP standards.

Section 200-19

We reviewed the applicants Stormwater Management Permit submission pursuant to requirements of Section 200-19 of the Town's Bylaws and found it to be prepared in general conformance with the stormwater elements, provided that the applicant furnishes the information requested herein.

Special Permit Review

Review Standards for the Special Permit

Standards for special permits are included in the Town Bylaws § 255-129. These are reproduced below with comments:

A. Except in the case of a special permit for changing a nonconforming use or structure, which is governed by § 255-7B, the SPGA must make written findings on the following mandatory standards, requiring that a proposed use will:

(1) Comply with all applicable land use district, overlay district, and other specific requirements of this and other bylaws and regulations, and be consistent with the purpose and intent of this bylaw and of the land use district in which it is located.

The applicant's special permit modifies the existing manufacturing facility usage by the inclusion of a tank farm for chemical storage. The additional chemical storage and processes are presented in a "Pigment Functionalization Process Overview Diagram." We recommend clarification on the new tank farm and chemical loading/unloading area including:

- a) There are eight rectangular features shown adjacent and northeast to the proposed storage tanks that are not labelled. Please label these features to indicate their nature.
- b) Please provide more details of the secondary containment system around the tanks. At a minimum this should include the surface type, grading, berms and drains (if any).
- c) Secondary contaminant is present at the truck loading/unloading area. What will be the connection of hosing or pipes to the new tanks? If piped with a hose connection no secondary containment is required. Otherwise, please describe the secondary containment planned and provide sizing calculations.
- d) Note 9.a on Drawing Sheet C 3.0 states that hoses shall be taken inside the building to be drained, cleaned, and sealed for next use. Please indicate where the hoses will be drained too. What controls are in place for the cleaning processes for the hoses? Please clarify how rinsate water will be managed.
- e) In the event of a spill to the "Unloading Spill Containment Area," will the area be cleaned prior to opening the valve to the stormwater system to prevent residual chemicals from entering the stormwater system? How will wash water be handled if it is generated as part of the cleaning process?
- f) Text on the site plan C-3.0 notes "Tank Farm (see Arch. Plans)." Please provide the referenced architectural plans.
- g) Text within tank outlines is not legible on PDF, please provide legible labeling.
- h) We recommend that Sheet C-3.0 include an alternate plan view excluding the truck vehicle to show fixed structures only. It is unclear if the rectangular area outside the vehicle outline is a separate concrete/asphalt pad or other structure.

(2) Be suitable to the surrounding neighborhood and the "Land Use Area" in which it is located. Land Use Areas are identified and described in the section of South Hadley's Master Plan entitled "Land Use Area Vision Statements" (pages 1-10 through 1-19). In making this determination, the Planning Board shall take into consideration any guidance provided by the land use goals articulated in South Hadley's Master Plan, goals articulated in South Hadley's open space and recreation plan, and input from relevant boards, Town officials, and the public.

(3) Be compatible with existing uses and uses allowed by right in the neighborhood, Land Use Area, and zoning district.

(4) Be compatible with the existing character of the neighborhood and Land Use Area, and/or zoning district. "Character" shall be understood to include prevalent patterns of: site design; setbacks from property lines; amount and location of parking; amount, type, location and quality of open spaces and landscaped areas; amount, type, and location of impervious surfaces; distances and relationships between buildings; density of building(s) relative to land area; building massing; architectural style and detailing; materials; buffering from adjacent uses; traffic volume and timing; noise; odors; and light.

(5) Be suitable for the property on which it is proposed, considering the property's, scenic, cultural and historic significance, and its ability to be buffered or screened from neighboring properties and public roads.

Bylaw items 2 through 5 refer to zoning and land use. The applicant's narrative, dated February 9, 2022, notes that the tank farm will be screened and the building will include landscaping and a vegetative buffer. Plan C-3.0 indicates a limited area of loam and seed (i.e., grass). Architectural plans are requested to allow for review of the aesthetics of the proposed renovations. These will be compared to existing, large-scale manufacturing activities of the existing E Ink facility.

(6) Provide safe access for fire, police, and other emergency vehicles.

The applicant has engaged with the Town Fire Department. These files are included in the peer review and provide additional useful information on the nature of the proposed tank farm. We have no further comments on this issue currently.

(7) Provide adequate water, drainage and waste disposal systems without causing significant harm to any natural water system or overloading any public water, drainage, or sewer system, or any other municipal facility.

Please refer to the stormwater peer review comments related to stormwater handling. The February 4, 2022 letter from IFDesign addresses questions from the Town of South Hadley Planning board regarding the water-quality (i.e., stormwater) unit and coordination with the abutting property for an agreement and easement. The letter notes that E Ink and Fuel Services (an abutter) will coordinate to maintain a stormwater quality treatment unit. The applicant has indicated that "E Ink intends to memorialize the easement after discussions with the Planning Board and Conservation Commission." We recommend that a written agreement regarding any easements, operations, maintenance and management be ratified prior to permit approval.

We request the applicant provide details about the stormwater to be treated by this system and the type of stormwater quality unit for review and confirmation of bylaw compliance.

(8) Not cause significant traffic congestion, impair pedestrian or bicycle safety, or overload existing roads, sidewalks and trails, considering their current width, surfacing, and condition, and any improvements proposed to be made to them by the applicant.

This peer review did not include a review of traffic. The applicant has noted that, by providing a turn radius, the existing configuration includes trucks backing into the driveway to access the loading dock; the proposed new configuration notes that backing into to the driveway will no longer be required. That is, trucks will pull into the driveway of the applicant's shared driveway rather than needing to back-in from the street. We would note that the shared driveway

arrangement does present some risk as E Ink trucks, loaded with hazardous materials, will potentially be maneuvering in the same area with vehicles from the other facility. It is not clear how this risk will be managed.

(9) Not result in excessive air, water, noise, or light pollution, or create any other public or private nuisance.

The applicant has listed a closed loop system with minimal air exposure. We understand that the proposed project will require permit review for air quality. Since our review overlaps with air quality, we offer the following air related questions and comments:

- a) What vapor/emissions controls will be in place for the new tank farm? What are the components of this closed loop system?
- b) Please describe the emissions control system described in the applicant's Hazardous Waste Material Contingency Plan to include a Regenerative Thermal Oxidizer (RTO) and how vapors from the tank farm or other new processes will be routed to this RTO.
- c) Will air monitoring be performed and will air monitoring data shared with the Town as the system start-up begins? Based on wind direction, residential properties may be within 500 feet of the tank farm. The Hazardous Waste Materials Contingency Plan includes Oxygen and Lower Explosive Limit (LEL) monitors in interior spaces.
- d) Does the applicant plan to include vent ports for the 8,500-gallon precast concrete tank? If a limited release of toluene occurred how would this concrete tank be managed to both avoid vapor migration if venting is present or build-up of vapors.
- e) Has the applicant performed a Hazardous Building Materials Inventory (HBMI) of the Administrative Building to be demolished? The MassDEP will require under the AQ-06 Construction/Demolition Notification completion of hazardous material survey and abatement during partial demolition/renovation activities.
- f) Please specify any odor controls and air monitoring to be performed during toluene and pigment deliveries.
- g) Does the applicant propose an inspection plan and schedule for tanks storing hazardous wastes (310 CMR 30.686 and 310 CMR 30.696)?
- h) Does the applicant plan to submit a written assessment to MassDEP attesting that proposed tank system has sufficient structural integrity and is acceptable for the storing of hazardous wastes (310 CMR 30.693(1))?

- i) Does the applicant plan to perform tightness tests prior to putting the tanks into use (310 CMR 30.693(5))?

(10) Not degrade the scenic, rural, or historic character of the Town with structures or other lot features which are deemed visually objectionable in light of prevailing community as reflected in the goals articulated in South Hadley's Master Plan.

(11) Be consistent with the South Hadley Master Plan, provided that the Comprehensive Plan provides legally sufficient guidance and that the applicable provision of the Master Plan is not inconsistent with any specific provision of this bylaw.

(12) Comply with applicable criteria for site plans under § 255-148.

Bylaw items 10, 11 and 12 will require a set of architectural plans for review. The requested architectural plans will provide information needed to review the visual nature of proposed construction and review criteria of § 255-148.

Thank you for the opportunity to assist the Town of South Hadley with this review. If you should have questions related to this review, please contact me at (401) 497-6705 (mobile) or by email at riordanj@wseinc.com.