Phase I Environmental Site Assessment

Former Buffalo Lake Ethanol Plant

Buffalo Lake, Minnesota

RENVC 161956 | September 22, 2021

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September 22, 2021

RE: Former Buffalo Lake Ethanol Plant
Phase I Environmental Site Assessment
Buffalo Lake, Minnesota
SEH No. RENVC 161956

Mr. Marc Iverson
Renville County
500 E Depue, Suite 202
Olivia, Minnesota 56277

Dear Mr. Iverson:

Please find enclosed the Phase I Environmental Site Assessment (ESA) for the property located at 777 Borden Avenue in Buffalo Lake, Minnesota. I have also included the full document, tables, figures and appendices on CD. Thank you for choosing SEH to complete this assessment. Please feel free to contact me or Melanie Niday, PG at 320.229.4346 if you have any questions.

Sincerely,

Melanie Niday

Melanie Niday, PG
Project Manager
(Lic. MN, WI)

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Certification

Phase I Environmental Site Assessment
Former Buffalo Lake Ethanol Plant
Buffalo Lake, Minnesota

SEH No. RENVC 161956

September 2021

Melanie Niday, PG
Project Manager

Robert Hawkins
Graduate Scientist

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Distribution

No. of Copies	Sent to
1	Marc Iverson Renville County 500 E Depue, Suite 202 Olivia, Minnesota 56277

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Executive Summary

Phase I Environmental Site Assessment

Short Elliott Hendrickson Inc. (SEH®) was retained by Renville County to conduct a Phase I Environmental Site Assessment (ESA) of the property located at 777 Borden Avenue in Buffalo Lake, Minnesota (herein referred to as "site" or "subject property"). The subject property is depicted on **Figure 1**.

This Phase I ESA was completed in general accordance with American Society of Testing and Materials (ASTM) Standard Practice E 1527-13. The purpose of this Phase I ESA was to identify, to the extent feasible pursuant to the processes described in E 1527-13 and in a manner consistent with good commercial or customary practice, Recognized Environmental Conditions (RECs), Controlled RECs (CRECs) and Historical RECs (HRECs) in connection with the subject property.

The subject property is located in the northwest quadrant of the southwest quadrant of Township 115N, Range 31W, Section 30. The subject property includes both Renville County parcel numbers 29-01570-00 and 29-01556-00. The subject property is depicted on **Figure 1 and Figure 2**.

According to previous investigations and well logs, minimal fill material is anticipated to be present on-site. Native soils consist of silt clay and sandy lean clay of the New Ulm Formation (MGS, 2019). Unconsolidated deposits are expected to extend approximately 650 feet below ground surface (bgs) where bedrock is present (MGS, 2013).

The subject property and surrounding area have been primarily agricultural since the late 1930s. The subject property was initially developed as an ethanol plant in the mid-1990s. The facility was in and out of operation until 2019, when demolition of the site structures began. The facility was listed as a minimal quantity hazardous waste generator of laboratory wastes, parts washer solvent, acids/bases, spill cleanup wastes, oil-based paint, latex paint and aerosols from 1998 through 2017. One violation was issued to the facility in 2002. The history of hazardous waste generated on-site is considered a de minimis condition for the subject property.

Twenty-eight listings from the MPCA Spills database were identified for the subject property. The listings range in size between 10 gallons and 35,000 gallons of various substances including gasoline, ethanol blends, alcohol blends, sewage, and firefighting water. All Spill listings are listed as closed or completed. The Spill listings represent an **CREC** for the subject property.

MPCA Leak ID# LS0013240 is listed for the site. On July 31, 2000, a ruptured fuel line caused a release of 100 gallons of ethanol within the diked tank farm area. The Minnesota Duty Officer report states the released material was within the secondary containment area and impacted soils were removed and placed inside a cement bunker. The MPCA performed a site walk in August of 2000, and subsequently issued site closure on September 5, 2000. The closure letter states "The MPCA reserves the right to reopen this file and to require additional investigation and/or cleanup work if new information or changing regulatory requirements make additional work necessary." This listing is considered an **CREC** for the subject property.

MPCA Leak ID# LS0019062 is listed for the subject property. In December of 2012 the MPCA issued an administrative order to the facility in response to an apparent release of denatured ethanol, causing white coloration and odors from Judicial Ditch (JD) 15. The MPCA traced the source of the release to the existing stormwater pond that occupies the eastern portion of the subject property.

Executive Summary (continued)

Analytical samples collected from within the stormwater pond identified Chemical Oxygen Demand (COD) (up to 14,000 mg/L). In response to the administrative order the facility abandoned the drain tile line, located beneath of the pond, that was resulting in unauthorized discharges to JD 15. In the winter and spring of 2013, the facility pumped all the liquid out of the pond and removed approximately 2,500 cubic yards of sludge. The sludge material was stockpiled on-site, south of the pond, to dry out. The stockpiled material was eventually removed from the site and land applied at a separate agricultural facility under MPCA approval. Investigations were completed at the site in 2013 and 2016 to satisfy the requirements of the administrative order. Elevated PID readings (up to 375 ppm), and petroleum odors were reported within the 0-16 range on-site however, no analytical detections were identified. It was assumed that soil contamination was present in the form of weathered ethanol, manifested as methane. Groundwater analytical results identified methane (up 230 ug/L), which exceeds the lower explosive limit (LEL), and arsenic up to 138 ug/L). Soil vapor analytical results identified 1,2,4-trimethylbenzene (up to 49.6 micrograms per cubic meter [ug/m^3]) and 1,3,5-trimethylbenzene (up to 40.0 ug/m^3); these concentrations are below the current, January 2021 33 times the residential Intrusion Screening Values. The MPCA issued site closure on November 10, 2016. The MPCA closure letter states "If new evidence of contamination from the facility is found during future work, the MPCA must be notified immediately. The MPCA reserves the right to require additional investigation and/or cleanup if new information, regulatory requirements, or changed land uses justify additional work." Additionally, the MPCA requested the monitoring wells installed at the site be maintained for possible future use. This listing is considered an **CREC** for the subject property.

Site reconnaissance of the subject property was completed on August 19, 2021. Multiple pools of liquid, debris consisting of insulation, metal scrap, concrete, and electrical equipment appeared to be wind-blown throughout the subject property. Concrete foundations were stained and corroded and general housekeeping after demolition of the on-site structures was very poor. Numerous empty containers formerly used for general processing were observed throughout of site. Chemicals listed in the Tier II inventory include denaturant (natural gasoline), gasoline, denatured ethanol, 190 - 200 proof ethanol, sulfuric acid, ammonium hydroxide, ammonia, chlorine, and propane. Multiple drums, tanks, and containers of the Tier II chemicals were observed throughout the site and either punctured or dented. The potential release from improperly stored hazardous wastes is considered a **REC** for the subject property.

Stressed vegetation and an apparent chemical odor was observed adjacent to the south of the former water cooling system in the northwest portion of the site. Staining and dark liquid were observed adjacent to the broken valve on the tank and appeared to be the source of the stressed vegetation. Photographs of the are included in the photolog as Appendix J. The apparent release from the water-cooling system is considered a **REC** for the subject property.

Existing drainage and sumps were observed throughout the foundations on-site and were observed to be filled with water and/or demolition debris. An apparent sheen and container of hydraulic fluid was observed in the former Dry DDG/Corn Mash area. Information gathered from the interview indicated all drainage on-site discharged into the existing stormwater pond to the east. The potential release of hazardous materials from onsite drainage is considered a **REC** for the subject property.

MDA AgVIC ID# 101039167, MDA AgSpill ID#'s 92-0072, Case File (CF)-2693, CF-3256, CF-3431, CF-8216, and MPCA Leak Site ID#'s LS0018061 and LS0018062 are listed for the Central Region

Executive Summary (continued)

Agricultural Cooperative site adjacent to the north of the subject property (Site **[2]**). The site has been occupied by an agricultural chemical storage and distribution facility for over 50 years. Bulk storage of grain, seed, fertilizers, pesticides, and liquid chemicals have been documented for the site. The MDA AgSpill listings include various releases of pesticides, surpass, roundup ultra, anhydrous, ammonia, and rinsate. All MDA AgSpill listings were subsequently closed following MDA approved containment and removal of the released material. On December 10, 2012, the MDA issued a Contingent Closure for no Further Action Letter for AgVIC ID# 101039167. The letter states that the contingency was based on the presence of nitrogen contamination above soil cleanup goals identified below the current bulk dry fertilizer building, west equipment storage building, and underground natural gas line. The letter also states that current and future owners and/or operators of the site, are required to notify the MDA prior to the removal of the current bulk dry fertilizer building, west equipment storage building and underground natural gas line so that the areas beneath can be investigated, and if necessary, removed. A Phase II Investigation was completed in July of 2010, under the AgVIC listing and identified two sperate areas of petroleum contamination in the eastern portion of the site, near the intersection of West Milwaukee Road and 3rd Street Northwest. Two separate Leak Site Listings were created (MPCA Leak ID#s LS0018061 and LS0018062). Multiple investigations were performed to define the extent of contamination on-site and identified the highest concentrations of petroleum contamination to exist adjacent to the railroad corridor along the southern boundary on the site. No remedial activities were performed and the MPCA issued site closure for both listings in December of 2012. Due to the proximity of the Central region Agricultural Cooperative to the subject property, and the documented presence of nitrogen and petroleum contamination, this is considered a **CREC** for the subject property.

Active railroad tracks are present along the northern boundary of the subject property and have been present since at least the 1930s. Railroad corridors present environmental concerns from property uses directly associated with railroad activities and surrounding industry. Facilities adjacent to railroad corridors have a greater risk of spills where loading/unloading of hazardous materials may have historically taken place. Historically, railroad property is known for heavy metals and polycyclic aromatic hydrocarbons (PAHs) associated with transport of coal and other industrial products. Additionally, railroads are known to sometimes use chemicals associated with controlling encroaching vegetation along the railroad. The Central Region Agricultural Cooperative has multiple load-in and out structures for transportation of grain, fertilizers, and chemicals. The potential for historic releases associated with the railroad corridor is considered a **REC** for the subject property.