Extended Site Screening (ESS)

Site Name: Metals – Turnwal Property

Project Manager: Matt Culp Date: 1/28/2021

Location: (Decimal Degree format)

Latitude: 42.8483 Longitude: 93.6067 **County**: Wright

USGS Quadrant: Belmond

Site Size: 4.0 **Site Dimension:** ☒ Acres ☐ Square Feet ☐ Feet ☐ Square Miles ☐ Miles

Site Alias Name(s): United Manufacturing Farmers' Cooperative Elevator, Rock Island RR Depot. OCK Lumber Company, Un-named Stock Yard

Congressional District: Iowa 4th

Grant Recipient Name: NA

Grant Recipient Address: NA

Grant Recipient Phone: NA **Grant Recipient Email:** NA

Current Owner: Turnwal Enterprises, Ltd. c/o Larry Turner

Current Owner Address: 1275 Taylor Ave Belmond, IA 50421-7507

If different from current owner:

Responsible Party Name(s): Same

Responsible Party Address: Same

Site Street Address or Tier, Range, Section & Subsections (if street address is unknown)

NW Corner of E. Main Street and 8th Avenue NE Belmond, Iowa

Directions to site: From Des Moines travel north on Interstate 35 to Highway 3 west. Travel west on Highway 3 to Highway 69 North. Take Highway 69 to Belmond where it becomes River Avenue and turn right (east) on 3rd Street NE and travel east to the 8th Avenue NE. The site is on the NW corner of the intersection.

Summarize the site history (past usages, past ownerships, wastes, known or suspected contamination pathways such as tanks, septic tank/tile field, lagoon, land applications, SW burial, etc.)

Site History:

The site is located in the primarily residential section of Belmond, Iowa. Residential structure surround the site on all four sides. The site is bounded by 3rd Street on the north, East Main Street to the south and 8th Avenue NE on the east side and 7th Avenue NE on the west side. What is known regarding previous site use is from historic Sanborn Fire Insurance Maps that describes the property was occupied by several activities including a machine shop and foundry (United Manufacturing Co.,) on the northern portion of the site along 3rd street and other activities describe below.

ESS:

Field work for the assessment of soil and groundwater conducted for the ESS was extended south to E. Main Street to include additional areas of environmental concern that were identified during the ISS review but were not initially investigated. These areas include a former Rock Island Railroad depot and RR lines and coal sheds, an unnamed stockyard, former Farmers Coop (grain sheds), former Lumber Yard, a former off-site bulk oil station with petroleum ASTs, and a former off-site auto repair shop with a gasoline UST. The entire 4 acre site is currently devoid of all structures.

Briefly describe the site assessment that was conducted (number of borings, monitoring wells, number of samples, depth of soil samples and monitoring wells, analysis, etc.)

Three soil borings (TB-1 through TB-3) were completed as part of the initial Phase II assessment conducted in December of 2020. Follow up assessment included five additional soil borings (TB-4, TB-5, TB-6, TB-7, and TB-8) that were completed to depth of 20 feet. The soil borings were located to address those areas not investigated during the Phase II.

- Soil boring TB-4 was located in the former footprint of a stockyard,
- Soil boring TB-5 was located in the former location of a railroad line,
- Soil boring TB-6 was located on the east side of the site (across the street from a former bulk oil station),
- Soil boring TB-7 was located in the former Depot and at the location of a coal shed,
- Soil boring TB-8 was located near the southeast comer of the site within the footprint of a former lumber shed and across the street from a former automotive repair shop.

Soil samples were examined in the field for the presence of discoloration and odors. A photoionization detector (PID) was used to screen soil samples for VOCs. Slight petroleum hydrocarbon odors were noted in soil during drilling. However, no soil discoloration or PID measurements above background levels were observed. Soil samples for RCRA heavy metals were collected at a depth of 1.0 foot below existing grade, and soil samples for organochlorine pesticides were collected from a depth of 2.5 feet. Soil samples for volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and total extractable hydrocarbons (TEH) were collected from near the top of the saturated zone in each soil boring at an approximate depth of 15 feet.

Soil samples were analyzed for volatile organic compounds (VOCs) by EPA Method 8260, for total extractable hydrocarbons (TEH) by Iowa Method OA-2, and for RCRA 8 metals by EPA Methods 6010B and 7471A. Groundwater samples were analyzed for VOCs by EPA method 8260B, for TEH by Iowa Method OA-2, and for dissolved RCRA 8 metals by EPA Methods 601OB and 7417A. In addition, the soil and groundwater samples collected from soil borings TB-5, TB-6, and TB-7 were was analyzed for PAHs by EPA Method 8310 and the soil and groundwater samples collected from TB-4, TB-7 and TB-8 were analyzed for Organochlorine Pesticides by BP A Method 8081.

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

Soil Findings:

- The detected concentrations of the RCRA metals were below the Iowa Land Recycling Program statewide standards, (SWS) with the exception of Arsenic. Arsenic was detected in each of the five soil borings. The arsenic concentrations were ranged from <5.0 mg/kg to 6.9 mg/kg which exceeds the SWS 1.9 mg/kg. The source of the Arsenic in soil is not known, but could be naturally occurring. The Arsenic concentrations are similar to the levels found during the previous Phase II investigation.

- TEH as Diesel was detected at 6 mg/kg at soil boring TB-7(train depot). This concentration is below the Tier 1 Action Level of 3,800 mg/kg and the Iowa SWS of 28,000 mg/kg. No other petroleum hydrocarbons or VOCs were detected in the soil samples.

- Organochlorine Pesticides 4, 4-DDD and 4, 4-DDE were detected at soil boring TB-4, and 4, 4-DDT was detected at soil boring TB-4 and TB-8 (Stockyard and auto repair shop). Organochloride Pesticides were below SWS.

- The PAHs compounds Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Chrysene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Indeno(l,2,3-cd)pyrene, and Phenanthrene were detected in the soil at soil boing TB-7 (train depot). However, the concentrations of the PAHs were below SWSs.

Groundwater Findings:

- Dissolved Barium was detected at concentrations of 79.1ug/L at soil boring TB-4, 83.2ug/L at soil boring TB-5, 71.7ug/L at soil boring TB-6, 62.0ug/L at soil boring TB-7, and 68.5ug/L at soil boring TB-8. These concentrations are all well below the SWS of 2,000ug/L for barium.

- Dissolved Lead was detected at a concentration of 0.80ug/L at one soil boring (TB-6). This concentration is below the SWS for Lead of 15ug/L.

- The Organochlorine Pesticides 4, 4-DDE and 4, 4-DDT were detected at a concentrations of 0.08ug/L and 0.16ug/L respectively at soil boring TB-4. These concentrations are below the SWS of 0.51ug/L.

- Arsenic, PAHs or petroleum hydrocarbons (BTEX diesel or waste oil) were not detected in groundwater.

Identify on-site or off-site potential and actual targets (e.g., municipal wells, private wells, drinking water intakes). What is known of the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there utility lines that could be impacted by site contaminants? Identify any other use/location issues that deserve consideration.

There are no on-site potential or actual receptors.

Off site Receptors:
A active, 300 foot deep, private well is located 120 meters southeast of the site along 8th Avenue NE. There is also a 300 foot deep public water well located 200 meters northeast of the site associated with the Belmond/Klemme School. The Belmond public water facility and two 200 foot deep bedrock aquifer public water supply wells are located 300 meters to the NW of the site

Summarize the reasoning, knowledge or any other information used in determining your recommendation regarding the priority assigned to this site.

Based on the additional soil and groundwater data acquired for the evaluation of potential sources of contamination not addressed during the initial Phase II assessment which was evaluated for this ESS, it is the determination that a hazardous condition does not exist and the residual contamination observed at this site does not pose a significant threat to public health or the environment and does not warrants further action.

Site recommended for:

- [x] No further action under CERCLA
- [ ] Additional investigation under state program (activity code 2824)
- [ ] Additional investigation under CERCLA (Extended Site Screening)
- [ ] Transfer to LUST/UST

Form Reviewed: _____ **Date Reviewed:** 01/28/2021