Initial Site Screening (ISS)

Site Name: Metals- Hawkeye Downs

Project Manager: Matt Culp Date: November 27, 2019

☐ **3931 - Phase II Assessment Review – Brownfield Funded**
Phase II submitted as part of standard real estate development, pre-purchase agreement, or other due diligence, not a part of a community grant project, or

☐ **3837 - Phase II Assessment – Brownfield Grant Funded**
Phase II submitted as part of an EPA grant funded community-wide or targeted assessment project – see Mel Pins if questions on this determination, or

☒ **3321 - Phase II Assessment Review – CERCLA Pre-Remedial Funded**
Phase II submitted that is not part of a real estate transaction

Location: (Decimal Degree format)

Latitude: 41.9363 Longitude: 91.6763 **County**: Linn

USGS Quadrant: Cedar Rapids South

Site Size: 93.98 **Site Dimension:** ☒ Acres ☐ Square Feet ☐ Feet ☐ Square Miles ☐ Miles

Site Alias Name(s): Alliant Fly Ash Disposal site

Congressional District: Iowa 1st

Grant Recipient Name: NA

Grant Recipient Address: NA

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

Current Owner(s): The All Iowa Agricultural Association

Current Owner Address: 4400 6th Street SW Cedar Rapids Iowa 52404

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)

4400 6th Street SW Cedar Rapids, Iowa

Directions to site: From Des Moines travel east on Interstate 80 to interstate 380 north. Travel north to Cedar Rapids and exit on highway 30 west to the 6th Street SW exit and turn north on highway 965 and turn west on Hawkeye Downs Road.

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 (Hawkeye Downs) is located west of Interstate 380 and north of highway 30 in Cedar Rapids, Iowa (See Exhibit 1) and has been utilized as a race track and fair grounds since 1937. The site consists of an oval asphalt racing track, motocross dirt track, and several structures utilized for exhibition space, storage, maintenance, concessions, ticketing, and offices. The east portion of the site is largely vacant and utilized as a camp ground during events. A portion of Prairie Creek transects the southernmost portion of the site. Much of the southern portion of the site bordering Prairie Creek is overgrown and/or dense wooded land. Surrounding properties appear to have initially been utilized for residential and agricultural uses eventually giving way to commercial development to the west, north, and east of the site (Exhibit #2).

Recognized Environmental Conditions (REC):

Recognized Environmental Conditions as reported in the Phase I report include;

- Potential impacts associated with the reported dumping of fly ash at the site.

The Iowa DNR Contaminated Sites Section has a site record (Site #628) of disposal of fly ash used as fill material across multiple properties located in southern Cedar Rapids (see attached map). A February, 2006 Iowa DNRS memo (attached) indicates that fly ash was disposed several locations in the Cedar Rapids area including the Hawkeye Downs site in the vicinity of the dirt track on the southeast portion of the site. Additional information provided on the Contaminated Sites Database indicated that the Iowa DNR conducted soil sampling that consisted of 24 locations (none of which were at the Hawkeye Downs site) across southern Cedar Rapids. Soil samples were collected from the top two centimeters of soil and analyzed for concentrations of various metals using an x-ray fluorescence (XRF) analyzer. Of the metals analyzed, antimony, arsenic, and cobalt were detected above Iowa DNR action levels. Based on the XRF findings the Iowa DNR decided not to pursue further assessment. Due to the lack of information regarding the content of the fly ash specifically placed on the Hawkeye Downs site was still considered a REC for the site.

- Potential impacts associated with fill dirt piles observed on the south portion of the site.

Several piles of fill/dirt were observed on the southeast portion of the site. The origin of the fill dirt is unknown and covers approximately 2.5 acres. The fill dirt piles appeared to consist of sand, crushed rock, asphalt, black dirt, and concrete. Due to the unknown origin, the on-site fill dirt piles constitute a REC.

- Potential impacts from fuel releases from a former on-site fueling station near soil boring B-1.
- Potential impact from former adjoining salvage yard operations.

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.)

Eight soil borings were completed to a depth of 20 feet for the collection of soil and groundwater samples at the locations generally described below:

Soil Boring B-1 was advanced on the southeast corner of the tech barn to address concerns with a potential former on-site fueling station. Soil Borings B-2, B-3, B-4, B-5, and B-6 were advanced along the south and southeast portions of the site to address potential concerns associated with reported historic salvage yard and disposal of fly ash at the site. Soil boring B-7 was advanced to the northwest of the race track to address concerns with historic off-site operations north of the site. Soil Boring B-8 was advanced in the northeast corner of the site to provide general information regarding subsurface conditions in this area (See Exhibit 2A). Soil samples were collected at two-foot intervals to document lithology, color, and relative moisture content. The soil samples were field-screened using a photoionization detector (PID) for the presence of volatile organic vapors (VOCs). Elevated PID results were observed for soils in boring B-1. In borings B-1 B- 7, and B-8, soil samples were collected for laboratory analysis at the interval of the highest PID response or at a depth above the apparent water table. For soil borings B-2 through B-4, soil samples were collected from the first encountered sampling interval within the observed fly ash and from the base of the fly ash above the native soils. Fly ash was not observed in borings B-5 and B-6. Soil Borings B1, B-2, B-3, B-7, and B-8 were converted into temporary monitoring wells for collection of groundwater samples.

Soil from Boring B-1 was analyzed for volatile organic compounds by EPA Method 8260, for total extractable hydrocarbons by Iowa Method OA-2, for poly-nuclear aromatic hydrocarbons by EPA Method 8270 SIM, for polychlorinated byphenyls (PCBs) by EPA Method 8082. Soil from all the other soil boring locations were analyzed by EPA Method 6010/7000 for impacts from fly ash metals.

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

Soil Boring B-1: The VOCs, PAHs, and TEH detected in the soil sample collected from boring B-1, were below the applicable SWSs. 1,2, 4-Trimethylbenzene (0.0629mg/kg) 1,3,5-Trimethylbenzene (0.0249 mg/kg) and the SWS is 760mg/kg, Xylenes, (0.0954) and the SWS is 15,000mg/kg, 2-Methylnaphthalene (0.151mg/kg) and the SWS is 230 mg/kg, Naphthalene (0.216) and the SWS is 1,100 mg/kg and Waste Oil 485mg/kg and the SWS is 9,400mg/kg. The analytical results for metals for all other sample locations indicate elevated arsenic and isolated detections above SWS for cobalt and Thallium. The analytical results for all sample locations are summarized in Table 2.

Table 2 – Metals Results for Soil Samples (mg/kg[2])

Parameter	Soil Boring and Associated Sample Interval											SWS
	B-2 2'-4'	B-2 16'-18'	B-3 6'-8'	B-3 18'-20'	B-4 4'-6'	B-4 10'-12'	B-5 0-2'	B-5 18'-20'	B-6 0-2'	B-6 18'-20'	B-8 6'-8'	
Antimony	7.43	9.77	6.35	3.84	4.25	6.33	<[4]5.01	<1.45	<0.723	<1.52	<0.762	31
Arsenic	**33.1[5]**	**79.6**	**37.7**	**17.8**	**111**	**40.2**	<11.5	**10.1**	**6.08**	**13.9**	<1.74	1.9
Barium	112	131	128	97.9	244	169	45.7	57.5	151	132	36.3	15,000
Beryllium	11.5	13.2	13.0	7.58	11.3	10.0	<1.21	1.42	1.10	2.08	0.397	110
Cadmium	9.22	4.40	6.34	6.73	<0.819	3.49	<1.39	<0.402	<0.200	<0.420	<0.211	70
Calcium	20,400	29,300	32,400	14,700	11,000	32,700	160,000	16,600	2,250	1,710	1,290	NA
Chromium	46.8	73.3	58.5	34.8	53.9	53.2	9.05	17.8	14.9	23.7	10.6	190
Cobalt	20.9	**30.3**	**27.5**	17.6	19.4	22.3	3.36	4.58	18.0	**41.9**	1.26	23
Copper	58.4	81.0	74.7	42.5	62.9	57.6	7.48	17.4	10.4	25.2	5.80	15,000
Iron	61,500	76,900	72,000	48,300	54,800	56,400	9,020	21,300	15,900	37,100	4,680	N/A
Lead	123	208	239	104	249	156	19.3	7.83	12.4	12.7	3.20	400
Magnesium	2,800	4,390	2,560	2,090	4,400	7,620	14,100	4,740	2,340	1,700	951	N/A
Manganese	337	325	832	459	211	494	543	326	1,090	2,060	18.5	10,000
Nickel	92.4	116	119	65.3	89.0	86.2	9.00	12.2	15.8	20.9	4.41	1,500
Potassium	9,820	18,600	5,400	9,320	23,900	19,100	647	788	874	1,150	372	NA
Sodium	549	1,250	823	585	2170	838	<283	<82.2	44.4	<85.8	<43.1	NA
Thallium	**10.7**	<8.24	<7.43	<4.90	<6.76	<6.22	<11.5	<3.32	<1.65	<3.47	<1.74	0.78
Vanadium	120	159	152	84.6	110	113	15.2	36.6	31.6	35.3	12.7	350
Zinc	558	431	471	454	233	391	34.4	39.2	32.0	48.2	21.2	23,000
Mercury	0.0773	0.133	0.147	0.120	0.454	0.139	<0.0215	<0.0198	0.0215	<0.0200	<0.0228	23

Note: that the Method Detection Limits for Thallium are above the SWS

Groundwater Findings:

VOCs, PAHs, TEH and PCBs, were not identified above the laboratory method reporting limits at sample location B-1. Dissolved metals were detected in groundwater samples collected from soil borings B-2, B-3, and B-8. The results were compared to the Iowa DNR SWSs for a protected groundwater. Of the metals detected, only arsenic and manganese were reported at concentrations above the Iowa DNR SWSs for a protected groundwater source in the groundwater samples collected from borings B-2 and B-3. The arsenic concentration were 64.05ug/L, 334.0ug/L respectively and the SWS is 10.0ug/L. The observed manganese concentrations at sample location B-2, B-3 and B-8 were 1,860ug/L, 1,330ug/L, 174.ug/L respectively and the SWS is 300ug/L.

Geophysical Survey:
Following the completing of the soil borings and review of the boring logs and soil and groundwater laboratory analytical data, A geophysical survey was conducted to better determine the lateral extent of the fly ash deposits(See Exhibit 3: Cross Section from B-2 through B-4 and Exhibit 5: Ground Conductivity Map).

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 receptors identified. The nearest off-site potential receptor is Prairie Creek located along the southern border of the site. Two wells identified near the property are incorrectly located. Other potential sources include UST LUST and AST sites in the vicinity (See Potential Sources and Receptors Map).

Rate the site on a scale of 1 to 4, in decreasing order of severity or priority.
Priority 3: Elevated concentrations for arsenic in soil are common across the site and some isolated exceedance for other metals in soil (cobalt and thallium) were observed. Concentrations of arsenic and manganese were also detected in groundwater above the SWS for protected groundwater. As a result, the Iowa NDR is going to require the following:

1.) A Soil Management Plan will be necessary to be developed for Iowa DNR approval to address any material disturbed by construction activity (including conducting leaching TCLP test) to determine waste characteristics. Depending on the waste determination, soil disturbed by construction activities can either be left onsite (buried under slab or clean material or disposed of at landfill). If the soil fails TCLP and is determined to be a hazardous waste, disposal of the soil out of state at a hazardous waste facility would be required.

2.) An Environmental Covenant shall be required to be attached to the site to document the extent of ash/slag area(s) to guide future onsite development with regard to the elevated metals.

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

A risk calculation for exposure to indoor air was not conducted by DNR because the contaminants were not detected in groundwater above laboratory reporting limits. A risk calculation was conducted for exposure to metals in soil. The metals of concern include arsenic, cobalt and thallium. The average arsenic concentration was calculated (38.8mg/kg) and the maximum concentration for cobalt (41.9mg/kg) and thallium (10.7 mg/kg) were entered into the Iowa DNR Cumulative Risk Calculator for the residential and construction worker exposure scenarios. The results indicate that the site fails for the cancer and non-cancer residential soil exposure scenario and fails for the non-cancer construction worker exposure scenario but passes for the cancer exposure scenario for construction worker (See Risk Calculator work sheets attached).

Site recommended for:
☒ No further action under CERCLA Pre-Remedial
☒ Additional investigation under state program (activity code 2824)
☐ Additional investigation under CERCLA (Extended Site Screening)
☐ Transfer to LUST/UST

Form Reviewed: Matt Culp Digitally signed by Matt Culp Date: 2021.07.07 12:44:01 -05'00' **Date Reviewed:** _____