STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law (Chapter 644 RSMo, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No.	MO-0136760
Owner:	Kemin Industries, Inc.
Address:	1900 Scott Avenue, Des Moines, IA 50317
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Kemin Industries, Inc.
Facility Address:	519 North 3rd Street, Verona, MO 65769
Legal Description:	See following page(s)
UTM Coordinates:	See following page(s)
Receiving Stream:	See following page(s)
First Classified Stream and ID:	See following page(s)
USGS Basin & Sub-watershed No.:	See following page(s)

authorizes activities pursuant to the terms and conditions of this permit in accordance with the Missouri Clean Water Law and/or the National Pollutant Discharge Elimination System; it does not apply to other regulated activities.

FACILITY DESCRIPTION

Food Processing; SIC # 2015; NAICS # 311615, receives raw meat and processes the raw products into dried protein powder used for animal feed supplements. This facility does not require a certified wastewater operator per 10 CSR 20-9.030 as this facility is privately owned. Domestic wastewater is managed by sending to POTW/in a sub-surface system <3000 gallons/day.

July 1, 2024
Effective Date

June 30, 2029
Expiration Date

John Hoke, Director, Water Protection Program

FACILITY DESCRIPTION

OUTFALL #001 – Stormwater

Legal Description:	NW¼, NE¼, Sec.17, T26N, R26W, Lawrence County
UTM Coordinates:	X = 429035, Y = 4091725
Receiving Waterbody:	Tributary to Spring River
First Classified Waterbody and ID:	Spring River (P) WBID# 3165
USGS Basin & Sub-watershed No.:	11070207-0101
Maximum Flow:	16.9 MGD (based on 10-year 24-hour storm event)

PERMITTED FEATURE #002 – Wastewater Holding Structure; discharge is prohibited.
Five concrete storage tanks and two lined aerated earthen storage basins. Wastewater is land applied and can be transferred between storage basins and tanks.

Legal Description:	NW¼, NE¼, Sec.17, T26N, R26W, Lawrence County
UTM Coordinates:	X = 429060, Y= 4091735
Receiving Waterbody:	Tributary to Spring River
First Classified Waterbody and ID:	Spring River (P) WBID# 3165
USGS Basin & Sub-watershed No.:	11070207-0101
Storage Capacity, Maximum Volume:	1.74 MG
Freeboard Minimum:	2.0 foot

OUTFALL #003 – Stormwater

Legal Description:	NW¼, NE¼, Sec.17, T26N, R26W, Lawrence County
UTM Coordinates:	X = 429032, Y = 4091624
Receiving Waterbody:	Tributary to Spring River
First Classified Waterbody and ID:	Spring River (P) WBID# 3165
USGS Basin & Sub-watershed No.:	11070207-0101
Maximum Flow:	0.03 MGD (based on 10-year 24-hour storm event)

Permitted Feature #007 – Land application, Gerald Seitz #1 site.
Legal Description: SW ¼, SE ¼, Sec. 5 T25N, R26W, Barry County
UTM Coordinates: X = 428648, Y = 4083992
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #008 – Land application, Gerald Seitz #2 site.
Legal Description: SE ¼, SW ¼, Sec. 5 T25N, R26W, Barry County
UTM Coordinates: X = 428358, Y = 4083932
Receiving Stream: Tributary to Prairie Run Hollow
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #009 – Land application, Gerald Seitz #3 site.
Legal Description: N ½, S ½, Sec. 5 T25N, R26W, Barry County
UTM Coordinates: X = 428803, Y = 4084369
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11070207–0101

Permitted Feature #013 – Land application, Schellen #1 site.
Legal Description: S ½, NW ¼, Sec. 13 T25N, R26W, Barry County
UTM Coordinates: X = 434603, Y = 4081318
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #014 – Land application, Schellen #2 site.
Legal Description: NW ¼, SE ¼, Sec. 18 T25N, R25W, Barry County
UTM Coordinates: X = 436834, Y = 4080788
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #015 – Land application, Schellen #3 site.
Legal Description: NE ¼, SE ¼, Sec. 18 T25N, R25W, Barry County
UTM Coordinates: X = 437144, Y = 4080870
Receiving Stream: Tributary to West Fork Jenkins Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0405

Permitted Feature #016 – Land application, Mattox #1 site.
Legal Description: NE ¼, NE ¼, Sec. 23 T25N, R26W, Barry County
UTM Coordinates: X = 433960, Y = 4080085
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #017 – Land application, Mattox #2 site.
Legal Description: SE ¼, Sec. 14 T25N, R26W, Barry County
UTM Coordinates: X = 433861, Y = 4080816
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #018 – Land application, Schellen #4 site.
Legal Description: SE ¼, SE ¼, Sec. 7 T25N, R25W, Barry County
UTM Coordinates: X = 437195, Y = 4082057
Receiving Stream: Tributary to Little Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0502

Permitted Feature #019 – Land application, Mattox #4 site.
Legal Description: N ½, Sec. 18 T25N, R25W, Barry County
UTM Coordinates: X = 436588, Y = 4081511
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #020 – Land application, Henson #1 site.
Legal Description: NW ¼, NE ¼, Sec. 4 T25N, R26W, Barry County
UTM Coordinates: X = 430493, Y = 4085116
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11070207–0101

Permitted Feature #021 – Land application, Henson #3 site.
Legal Description: E ½, NE ¼, Sec. 4 T25N, R26W, Barry County
UTM Coordinates: X = 430849, Y = 4085063
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11070207–0101

Permitted Feature #022 – Land application, Henson #4 site.
Legal Description: SW ¼, NE ¼, Sec. 4 T25N, R26W, Barry County
UTM Coordinates: X = 430498, Y = 4084708
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11070207–0101

Permitted Feature #023 – Land application, Henson #5 site.
Legal Description: SE ¼, SE ¼, Sec. 5 T26N, R26W, Barry County
UTM Coordinates: X = 430768, Y = 4085624
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11070207–0101

Permitted Feature #024 – Land application, Williams site.
Legal Description: N ½, Sec. 22 T25N, R26W, Barry County
UTM Coordinates: X = 431724, Y = 4080058
Receiving Stream: Tributary to Flat Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0407

Permitted Feature #026 – Land application, Williams #2 site.
Legal Description: Sec. 23 T25N, R26W, Barry County
UTM Coordinates: X = 433008, Y = 4079480
Receiving Stream: Tributary to Stansberry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0407

Permitted Feature #031 – Stormwater, New Detention Pond South
Legal Description: SW ¼, SE ¼, Sec. 8 T26N, R26W, Lawrence County
UTM Coordinates: X = 429109, Y = 4091933
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (P) (3165)
USGS Basin & Sub-watershed No.: 11070207-0101
Maximum Flow: 0.43 MGD (based on 10-year 24-hour storm event)

Permitted Feature #032 – Stormwater, New Detention Pond East
Legal Description: SW ¼, SE ¼, Sec. 8 T26N, R26W, Lawrence County
UTM Coordinates: X = 429182, Y = 4092042
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (P) (3165)
USGS Basin & Sub-watershed No.: 11070207-0101
Maximum Flow: 0.32 MGD (based on 10-year 24-hour storm event)

Permitted Feature #033 – Stormwater, New Detention Pond North
Legal Description: SW ¼, SE ¼, Sec. 8 T26N, R26W, Lawrence County
UTM Coordinates: X = 429208, Y = 4092069
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (P) (3165)
USGS Basin & Sub-watershed No.: 11070207-0101
Maximum Flow: 0.27 MGD (based on 10-year 24-hour storm event)

Permitted Feature #034 – Land application, New Wastewater Storage Tank
Legal Description: SW ¼, SE ¼, Sec. 8 T26N, R26W, Lawrence County
UTM Coordinates: X = 429154, Y = 4091973
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (P) (3165)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #035 – Land application, Bud Payne #1
Legal Description: SE ¼, SW ¼, Sec. 19 T26N, R25W, Lawrence County
UTM Coordinates: X = 436660, Y = 4088537
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #036 – Land application, Bud Payne #2
Legal Description: NE ¼, NW ¼, Sec. 30 T26N, R25W, Lawrence County
UTM Coordinates: X = 436620, Y = 4088362
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #037 – Land application, Bud Payne #3
Legal Description: E ½, NE ¼, Sec. 23 T26N, R26W, Lawrence County
UTM Coordinates: X = 434154, Y = 4089765
Receiving Stream: Tributary to Chat Creek
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #038 – Land application, Cale Jones #1
Legal Description: SE ¼, SW ¼, Sec. 14 T25N, R26W, Barry County
UTM Coordinates: X = 433269, Y = 4080440
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #039 – Land application, Cale Jones #2
Legal Description: SW ¼, SW ¼, Sec. 14 T25N, R26W, Barry County
UTM Coordinates: X = 432656, Y = 4080512
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #040 – Land application, Colby Mattox #1
Legal Description: W ½, SE ¼, Sec. 31 T26N, R25W, Barry County
UTM Coordinates: X = 436772, Y = 4085507
Receiving Stream: Tributary to Little Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0502

Permitted Feature #041 – Land application, Colby Mattox #2
Legal Description: NE ¼, SW ¼, Sec. 31 T26N, R25W, Barry County
UTM Coordinates: X = 436542, Y = 4085512
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11010207-0101

Permitted Feature #042 – Land application, Colby Mattox #3
Legal Description: SW ¼, SE ¼, Sec. 31 T26N, R25W, Barry County
UTM Coordinates: X = 436840, Y = 4085292
Receiving Stream: Tributary to Little Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0502

Permitted Feature #043 – Land application, Colby Mattox #4
Legal Description: N ½, SW ¼, Sec. 31 T26N, R25W, Barry County
UTM Coordinates: X = 436338, Y = 4085836
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #044 – Land application, Colby Mattox #5
Legal Description: SW ¼, SW ¼, Sec. 17 T25N, R25W, Barry County
UTM Coordinates: X = 437691, Y = 4080525
Receiving Stream: Tributary to West Fork Jenkins Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0405

Permitted Feature #045 – Land application, Cope Barn
Legal Description: SW ¼, SE ¼, Sec. 11 T25N, R25W, Barry County
UTM Coordinates: X = 433661, Y = 4082140
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #046 – Land application, Cope Lake
Legal Description: S ½, S ½, Sec. 12 T25N, R26W, Barry County
UTM Coordinates: X = 435196, Y = 4082108
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #047 – Land application, Cope House
Legal Description: NE ¼, SW ¼, Sec. 12 T25N, R26W, Barry County
UTM Coordinates: X = 434438, Y = 4082528
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #048 – Land application, Cope North Pasture
Legal Description: SE ¼, W ½, Sec. 12 T25N, R26W, Barry County
UTM Coordinates: X = 434891, Y = 4082768
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #049 – Land application, Cope North 40
Legal Description: NE ¼, SW ¼, Sec. 11 T25N, R26W, Barry County
UTM Coordinates: X = 433243, Y = 4082557
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #050 – Land application, Hooton 40
Legal Description: NE ¼, NW ¼, Sec. 14 T25N, R26W, Barry County
UTM Coordinates: X = 433204, Y = 4081774
Receiving Stream: Tributary to Calton Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0403

Permitted Feature #051 – Land application, Gary Evans #1
Legal Description: NW ¼, NW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447081, Y = 4078077
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #052 – Land application, Gary Evans #2
Legal Description: SE ¼, NE ¼, Sec. 30 T25N, R24W, Stone County
UTM Coordinates: X = 446922, Y = 4077687
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #053 – Land application, Gary Evans #3
Legal Description: S ½, NW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447335, Y = 4077826
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #054 – Land application, Gary Evans #4
Legal Description: SW ¼, NW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447050, Y = 4077736
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #055 – Land application, Gary Evans #5
Legal Description: NW ¼, SW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447242, Y = 4077205
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #056 – Land application, Gary Evans #6
Legal Description: E ½, SW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447521, Y = 4077252
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #057 – Land application, Gary Evans #7
Legal Description: SW ¼, SW ¼, Sec. 29 T25N, R24W, Stone County
UTM Coordinates: X = 447255, Y = 4077063
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #058 – Land application, Gary Evans #8
Legal Description: N ½, NW ¼, Sec. 32 T25N, R24W, Stone County
UTM Coordinates: X = 447283, Y = 4076662
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #059 – Land application, Guthrie Sturgell #1
Legal Description: NW ¼, SW ¼, Sec. 14 T25N, R25W, Barry County
UTM Coordinates: X = 442459, Y = 4080799
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #060 – Land application, Guthrie Sturgell #2
Legal Description: NE ¼, SW ¼, Sec. 14 T25N, R25W, Barry County
UTM Coordinates: X = 442738, Y = 4080705
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #061 – Land application, Guthrie Sturgell #3
Legal Description: S ½, NW ¼, Sec. 1 T25N, R26W, Barry County
UTM Coordinates: X = 434481, Y = 4084546
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #062 – Land application, J.D. Geyer
Legal Description: S ½, SE ¼, Sec. 25 T29N, R29W, Lawrence County
UTM Coordinates: X = 407578, Y = 4117018
Receiving Stream: Tributary to White Oak Creek
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0503

Permitted Feature #063 – Land application, Caleb Sparks #1
Legal Description: SW ¼, SW ¼, Sec. 20 T25N, R24W, Stone County
UTM Coordinates: X = 447036, Y = 4078624
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #064 – Land application, Caleb Sparks #2
Legal Description: SE ¼, SW ¼, Sec. 20 T25N, R24W, Stone County
UTM Coordinates: X = 447690, Y = 4078555
Receiving Stream: Tributary to Dry Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0408

Permitted Feature #065 – Land application, Mike Nelson
Legal Description: SW ¼, NW ¼, Sec. 13 T27N, R28W, Lawrence County
UTM Coordinates: X = 416507, Y = 4101321
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0503

Permitted Feature #066 – Land application, Todd Wood #1
Legal Description: SE ¼, SW ¼, Sec. 30 T27N, R25W, Lawrence County
UTM Coordinates: X = 436958, Y = 4096750
Receiving Stream: Tributary to Elm Branch
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0102

Permitted Feature #067 – Land application, Todd Wood #2
Legal Description: SE ¼, SW ¼, Sec. 30 T27N, R25W, Lawrence County
UTM Coordinates: X = 436775, Y = 4096720
Receiving Stream: Tributary to Elm Branch
First Classified Stream and ID: Presumed Use Stream (C) (5079)
USGS Basin & Sub-watershed No.: 11070207-0102

Permitted Feature #068 – Land application, Gerald Evans #1
Legal Description: SW ¼, NW ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 445597, Y = 4079410
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #069 – Land application, Gerald Evans #2
Legal Description: NW ¼, NW ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 445526, Y = 4079863
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #070 – Land application, Gerald Evans #3
Legal Description: NE ¼, NW ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 445957, Y = 4079635
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #071 – Land application, Gerald Evans #4
Legal Description: NE ¼, NW ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 445983, Y = 4079843
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #072 – Land application, Gerald Evans #5
Legal Description: SW ¼, NE ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 446382, Y = 4079389
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #073 – Land application, Gerald Evans #6
Legal Description: NW ¼, NE ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 446264, Y = 4079605
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #074 – Land application, Gerald Evans #7
Legal Description: NW ¼, NE ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 446383, Y = 4079807
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #075 – Land application, Gerald Evans #8
Legal Description: NE ¼, SW ¼, Sec. 19 T25N, R24W, Stone County
UTM Coordinates: X = 446049, Y = 4079153
Receiving Stream: Tributary to Crane Creek
First Classified Stream and ID: Presumed Use Stream (C) (5070)
USGS Basin & Sub-watershed No.: 11010002-0504

Permitted Feature #076 – Land application, Henson #6
Legal Description: NE ¼, NE ¼, Sec. 28 T26N, R26W, Lawrence County
UTM Coordinates: X = 430904, Y = 4087600
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (P) (3165)
USGS Basin & Sub-watershed No.: 11070207-0101

Permitted Feature #077 – Land application, Henson #7
Legal Description: W ½, NE ¼, Sec. 27 T26N, R26W, Lawrence County
UTM Coordinates: X = 431416, Y = 4088174
Receiving Stream: Tributary to Spring River
First Classified Stream and ID: Spring River (C) (3167)
USGS Basin & Sub-watershed No.: 11070207-0101

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL #001, #003, #031, #032, & #033 *Stormwater Only*	**TABLE A-1** **FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on **July 1, 2024** and remain in effect until expiration of the permit. Discharges shall be controlled, limited and monitored by the facility as specified below:

EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
PHYSICAL						
Flow	MGD	*		-	once/quarter ◊	24 Hr Est.
CONVENTIONAL						
Chemical Oxygen Demand	mg/L	**		120	once/quarter ◊	grab
Oil & Grease	mg/L	**		10	once/quarter ◊	grab
pH †	SU	**		6.0 – 9.0	once/quarter ◊	grab
Total Suspended Solids	mg/L	**		100	once/quarter ◊	grab
NUTRIENTS						
Ammonia as N	mg/L	**		12.1	once/quarter ◊	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2024.

PERMITTED FEATURE #002 *no discharge wastewater structure*	**TABLE A-2** **NO DISCHARGE: FINAL MONITORING REQUIREMENTS**

The facility is not authorized to discharge from this feature. The final requirements shall become effective on **July 1, 2024** and remain in effect until expiration of the permit. This feature shall be monitored and operationally controlled by the facility as specified below:

MONITORING PARAMETERS	UNITS	MONITORING REQUIREMENTS			
		DAILY MINIMUM	MONTHLY AVERAGE	MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: OM					
Freeboard	feet	2	*	once/month	measured

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE AUGUST 28, 2024.

PERMITTED FEATURE #002 *Wastewater Land Applied*	**TABLE A-3** **FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations shall become effective on **July 1, 2024** and remain in effect until expiration of the permit. Discharges shall be controlled, limited, and monitored by the facility as specified below:

EFFLUENT PARAMETERS	UNITS	FINAL LIMITATIONS		BENCH-MARKS	MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE		MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
LIMIT SET: Q						
CONVENTIONAL						
Oil & Grease	mg/L	*			once/quarter ◊	grab
pH †	SU	*			once/quarter ◊	grab
NUTRIENTS						
Total Nitrogen	mg/L	*			once/quarter ◊	grab
Phosphorus, Total	mg/L	*			once/quarter ◊	grab
OTHERS						
Chloride	mg/L	*			once/quarter ◊	grab
Sodium	mg/L	*			once/quarter ◊	grab
Percent Solids	%	*			once/quarter ◊	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2024.

Permitted Features #007 - #077 (Except #031, #032 & #033)	**TABLE A-4** **LAND APPLICATION OPERATIONAL MONITORING REQUIREMENTS (LIQUID)** **FOR PERMITTED LAND APPLICATION FIELDS**

The facility is authorized to conduct land application of process wastewater as specified in this permit. The land application of process wastewater shall be controlled, limited, and monitored by the facility as specified below:

PARAMETERS	UNITS	FINAL EFFLUENT LIMITATIONS		MONITORING REQUIREMENTS	
		DAILY MAXIMUM	MONTHLY AVERAGE	MINIMUM MEASUREMENT FREQUENCY	SAMPLE TYPE
Wastewater Land Application Operational Monitoring (See Note 1)					
LIMIT SET: LA					
Land Application	hours	*	-	once/daily	total
Volume Applied	gallons	*	-	once/daily	total
Application Area	acres	*	-	once/daily	total
Application Rate	inches	*	-	once/daily	total

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY FOR PERMITTED FEATURES WHEN LAND APPLICATION OCCURS; THE REPORTS ARE DUE BY THE 28TH OF THE FOLLOWING MONTH.

Note 1 - Reporting is only required if land application occurs during the month. If no land application occurred during the report period, report as "No Discharge".

* Monitoring and reporting requirement only

** Monitoring and reporting requirement with benchmark. See Special Conditions for additional requirements.

† pH: the facility will report the minimum and maximum values; pH is not to be averaged.

◊ Quarterly sampling

MINIMUM QUARTERLY SAMPLING REQUIREMENTS			
QUARTER	**MONTHS**	**QUARTERLY EFFLUENT PARAMETERS**	**REPORT IS DUE**
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated August 1, 2014, respectively, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. Spills, Overflows, and Other Unauthorized Discharges.
   (a) Any spill, overflow, or other discharge(s) not specifically authorized are unauthorized discharges.
   (b) If an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the Department's 24-hour spill line at 573-634-2436.
   (c) If the unauthorized discharge was an overflow from a no-discharge wastewater structure, the report must include all records confirming operation and maintenance records documenting proper maintenance. Operations must demonstrate the ability to meet the no-discharge requirement. This requirement may be met by 1) complying with the design requirements in 10 CSR 20-8.200 or 2) or providing other acceptable documentation.

2. No-Discharge Wastewater Holding Structure(s) Minimum Best Management Practices (BMPs):
   (a) To prevent unauthorized discharges, the no-discharge wastewater structure must be properly designed, operated, and maintained to contain all wastewater plus run-in and direct precipitation.
   (b) During normal and dry weather conditions, the liquid level in the storage structure shall be maintained below the upper operating level, so adequate storage capacity is available for use during adverse and wet weather periods. The liquid level in the storage structure must be lowered on a routine schedule based on the design storage period. Typically, this can be accomplished prior to expected seasonal wet and winter climate periods.
   (c) Maintain liquid level in the no-discharge wastewater structure at least 2.0 feet from the bottom of the discharge pipe, top of the structure, or the bottom of the overflow canal, whichever is lowest.
   (d) Monthly inspection of no-discharge wastewater structures(s) shall occur. Inspection notes will be kept at the facility and made available to the Department upon request. Electronic records retention is acceptable.
   (e) The inspections will note any issues with the no-discharge structure and will record the level of liquid as indicated by the depth marker.

3. Any discharge not meeting permitted limits may be pumped and hauled to an accepting wastewater treatment facility, or otherwise properly disposed.

4. Electronic Discharge Monitoring Report (eDMR) Submission System. The NPDES Electronic Reporting Rule, 40 CFR Part 127, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only Department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the Department. The facility must register in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. All reports uploaded into the system shall be reasonably named so they are easily identifiable, such as "WET Test Chronic Outfall 002 Jan 2023", or "Outfall004-DailyData-Mar2025".

5. Stormwater Pollution Prevention Plan (SWPPP).
   The facility's SIC code or description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) and hence shall implement a Stormwater Pollution Prevention Plan (SWPPP) which must be prepared and implemented upon permit effective date. The SWPPP must be kept on-site and not sent to the Department unless specifically requested. The SWPPP must be reviewed and updated annually or if site conditions affecting stormwater change. The facility shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in: *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002 March 2021) https://www.epa.gov/sites/production/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf The purpose of the SWPPP and the Best Management Practices (BMPs) listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was ineffective at providing the necessary protections for which it was designed. Corrective action describes the steps the facility took to eliminate the deficiency.
   The SWPPP must include:
   (a) A listing of specific contaminants and their control measures (BMPs) and a narrative explaining how BMPs are implemented to control and minimize the amount of contaminants potentially entering stormwater.
   (b) A map with all outfalls and structural BMPs marked.
   (c) If within the boundaries of a regulated Municipal Separate Storm Sewer System (MS4s), list the name of the regulated MS4.

C. SPECIAL CONDITIONS (CONTINUED)

(d) A schedule for at least once per month site inspections and brief written reports. The inspection report must include precipitation information for the entire period since last inspection, and observations and evaluations of BMP effectiveness. A BMP is considered to be disrupted if it is rendered ineffective as a result of damage or improper maintenance. Categorization of a deficiency is reliant on the length of time required to correct each disrupted BMP. Corrective action after discovering a disrupted BMP must be taken as soon as possible. Throughout coverage under this permit, the facility must perform ongoing SWPPP review and revision to incorporate any site condition changes.
   (1) Operational deficiencies are disrupted BMPs which the facility is able to and must correct within 7 calendar days.
   (2) Minor structural deficiencies are disrupted BMPs which the facility is able to and must correct within 14 calendar days.
   (3) Major structural deficiencies (deficiencies projected to take longer than 14 days to correct) are disrupted BMPs which must be reported as an uploaded attachment through the eDMR system with the DMRs. The initial report shall consist of the deficiency noted, the proposed remedies, the interim or temporary remedies (including proposed timing of the placement of the interim measures), and an estimate of the timeframe needed to wholly complete the repairs or construction. If required by the Department, the facility shall work with the regional office to determine the best course of action. The facility may consider temporary structures to control stormwater runoff. The facility shall correct the major structural deficiency as soon as reasonably achievable.
   (4) All actions taken to correct the deficiencies shall be included with the written report, including photographs, and kept with the SWPPP. Additionally, corrective action of major structural deficiencies shall be reported as an uploaded attachment through the eDMR system with the DMRs.
   (5) BMP failure causing discharge through an unregistered outfall is considered an illicit discharge and must be reported in accordance with Standard Conditions Part I.
   (6) Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to Department personnel upon request. Electronic versions of the documents and photographs are acceptable.

(e) A provision for designating a responsible individual for environmental matters and a provision for providing training to all personnel involved in housekeeping, material handling (including but not limited to loading and unloading), storage, and staging of all operational, maintenance, storage, and cleaning areas. Proof of training shall be submitted upon request by the Department.

6. Site-wide minimum Best Management Practices (BMPs)
At a minimum, the facility shall adhere to the following:

(a) Provide good housekeeping practices on the site to keep trash from entry into waters of the state. Dumpsters must remain closed when not in use.

(b) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas, to prevent the contamination of stormwater from these substances.

(c) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

(d) Store all paint, solvents, petroleum products, petroleum waste products, and storage containers (such as drums, cans, or cartons) so these materials are not exposed to stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater. Spill records shall be retained on-site or readily accessible electronically.

(e) The facility shall not discharge substances resulting from an on-site spill.

(f) Ensure adequate provisions are provided to prevent surface water intrusion into the wastewater storage structure(s) and to divert stormwater runoff around the wastewater storage structure(s).

(g) Provide sediment and erosion control sufficient to prevent or minimize sediment loss off of the property, and to protect embankments from erosion.

(h) Remove sediment from stormwater sediment pond(s) no less than every ten years, or more frequently dependent on the amount of sediment received; sediment accumulated shall be no more than 20% total volume or as prescribed in the engineering design, whichever is less. Records must be retained since last cleanout and submitted with the application for renewal.

(i) Wash water for vehicles, building(s), or pavement must be handled in a no-discharge manner (infiltration, hauled off-site, etc.). Describe the no-discharge method used and include all pertinent information (quantity/frequency, soap use, effluent destination, BMPs, etc.) in the application for renewal. If wash water is not produced, note this instead.

(j) Salt and sand shall be stored in a manner minimizing mobilization in stormwater (for example: under roof, in covered container, under tarp, etc.).

C. SPECIAL CONDITIONS (CONTINUED)

7. Stormwater Benchmarks
   This permit stipulates numeric pollutant benchmarks applicable to the facility's stormwater discharges.
   (a) Benchmarks do not constitute direct numeric effluent limitations; therefore, a benchmark exceedance alone is not a permit violation. Stormwater monitoring, numeric benchmark compliance, and visual inspections shall be used to determine the overall effectiveness of the BMPs identified in the SWPPP.
   (b) If a sample exceeds a benchmark concentration, the facility must review the SWPPP and BMPs to determine what improvements or additional controls are needed to reduce pollutant concentrations in future stormwater discharges.
   (c) Every time a numeric benchmark exceedance occurs, a Corrective Action Report (CAR) must be completed. A CAR is a document recording the efforts undertaken by the facility to improve BMPs to meet benchmarks in future samples. CARs must be retained with the SWPPP and be available to the Department upon request. This permit may require CARs be submitted to the Department upon permit renewal; see Renewal Requirements section below.
   (d) Failure to take corrective action to address numeric benchmark exceedance, and failure to make measurable progress towards achieving the numeric benchmark(s), is a permit violation.
   (e) Stormwater benchmarks and required minimum BMPs as described in this permit are enforceable permit conditions. Any requested change(s) to numeric benchmark values or deviation from minimum BMP requirements must be established through the permitting process. Assessment, evaluation, and implementation of specific BMPs to meet numeric benchmarks or minimum BMP requirements, must be addressed through the SWPPPs and CARs.

8. Reporting Non-Detects
   (a) Compliance analysis conducted by the facility, or any contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated. See sufficiently sensitive test method requirements in Standard Conditions Part I, §A, No. 4 regarding proper testing and detection limits used for sample analysis. For the purposes of this permit, the definitions in 40 CFR 136 apply; method detection limit (MDL) and laboratory-established reporting limit (RL) are used interchangeably in this permit. The reporting limits established by the laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter's future limit after an SOC) in the permit unless the permit provides for an ML.
   (b) The facility shall not report a sample result as "non-detect" without also reporting the MDL. Reporting "non-detect" without also including the MDL will be considered failure to report, which is a violation of this permit.
   (c) For the daily maximum, the facility shall report the highest value; if the highest value was a non-detect, use the less than "<" symbol and the laboratory's highest method detection limit (MDL) or the highest reporting limit (RL); whichever is higher (e.g. <6).
   (d) When calculating monthly averages, zero shall be used in place of any value(s) not detected. Where all data used in the average are below the MDL or RL, the highest MDL or RL shall be reported as "<#" for the average as indicated in item (c).

9. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).

10. All outfalls and permitted features must be clearly marked in the field.

11. Report no discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.

12. This permit does not cover land disturbance activities.

13. This permit does not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8, and are land applied in accordance with the exemption.

14. This permit does not allow stream channel or wetland alterations unless approved by Clean Water Act §404 permitting authorities.

15. This permit does not authorize in-stream treatment, the placement of fill materials in flood plains, placement of solid materials into any waterway, the obstruction of stream flow, or changing the channel of a defined drainage course.

16. All records required by this permit may be maintained electronically. These records can be maintained in a searchable format.

17. Changes in Discharges of Toxic Pollutant.
    In addition to the reporting requirements under 40 CFR 122.41, all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director per 40 CFR 122.42(a)(1) and (2) as soon as recognizing:
    (a) An activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:

C. SPECIAL CONDITIONS (CONTINUED)

(1) One hundred micrograms per liter (100 µg/L);
(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
(3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
(4) One milligram per liter (1 mg/L) for antimony;
(5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
(6) The notification level established by the Department in accordance with 40 CFR 122.44(f).

(b) Any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":
(1) Five hundred micrograms per liter (500 µg/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten (10) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7).
(4) The level established by the Director in accordance with 40 CFR 122.44(f).

(c) Authorization of new or expanded pollutant discharges may be required under a permit modification or renewal and may require an antidegradation review.

18. This permit does not authorize the facility to accept, treat, or discharge wastewater from other sources unless explicitly authorized herein. If the facility would like to accept, treat, or discharge wastewater from another activity or facility, the permit must be modified to include external wastewater pollutant sources in the permit.

19. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with Sections 301, 302, 306, 307, and 403 of the federal Clean Water Act, except for standards imposed under Section 307 for toxic pollutants injurious to human health, and with equivalent provisions of the Missouri Clean Water Law, in accordance with Section 644.051.19 RSMo and CWA §402(k). This permit may be reopened and modified, or alternatively revoked and reissued to comply with any applicable effluent standard or limitation issued or approved under CWA §§301(b)(2)(C) and (D), §304(b)(2), and §307(a)(2), if the effluent standard or limitation so issued or approved contains different conditions or is otherwise more stringent than any effluent limitation in the permit, or controls any pollutant not already limited in the permit. This permit may be modified, revoked, and reissued, or terminated for cause, including determination new pollutants found in the discharge not identified in the application for the new or revised permit. The filing of a request by the facility for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

20. Any discharges (or qualified activities such as land application) not expressly authorized in this permit, and not clearly disclosed in the permit application, cannot become authorized or shielded from liability under CWA section 402(k) or Section 644.051.19, RSMo, by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including any other permit applications, funding applications, the SWPPP, discharge monitoring reporting, or during an inspection. Submit a permit modification application, and an antidegradation determination if appropriate, to request authorization of new or expanded discharges.

21. Renewal Application Requirements.
(a) This facility shall submit an appropriate and complete application to the Department no less than 180 days prior to the expiration date listed on page 1 of the permit.
(b) Application materials shall include complete Form A, and Form C. If the form names have changed, the facility must ensure they are submitting the correct forms as required by regulation.
(c) The facility must sample the stormwater outfalls and provide analysis for every parameter contained in the permit at any outfall for at the site in accordance with 10 CSR 20-6.200(2)(C)1.E(I) and (II)
(d) Sufficiently sensitive analytical methods must be used. A sufficiently sensitive method is one that can effectively describe the presence or absence of a pollutant at or below that pollutant's permit limit or water quality standard.
(e) The facility may use the electronic submission system to submit the application to the Program, if available.
(f) This facility must submit all corrective action reports completed for the last permit term if a benchmark exceedance occurred.
(g) This facility must submit all soil testing conducted during the last five years or permit term (whichever is longer) with the application for permit renewal.

D. LAND APPLICATION CONDITIONS

1. Surficial land application of wastewater and/or sludge materials listed in the Facility Description of this permit is authorized and shall be conducted according to the following conditions. These land application conditions do not apply to fertilizer products receiving a current exemption under the Missouri Clean Water Law and regulations in 10 CSR 20-6.015(3)(B)8, and are land applied in accordance with the exemption. The minimum application requirements enumerated here, when followed, exempt stormwater runoff sampling requirements pursuant to 10 CSR 20-6.200(2)(B)3.B.

2. Storage Structure Minimum Best Management Practices (BMPs)
   (a) To maintain structural integrity, structures shall be inspected at least monthly, the berms of the storage structures shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage, any leaks or issues shall be noted and repaired as soon as possible.
   (b) The facility shall ensure adequate berms are provided to prevent surface water intrusion and run-in into the storage structures, will also divert stormwater runoff from around the storage structures, and will protect embankments from erosion.
   (c) The minimum and maximum operating water levels for the storage structures shall be clearly marked.
   (d) Each storage structure shall be operated and maintained to achieve and maintain no discharge status; including maximum water elevations up to the operating level of the 1-in-10 year or 25-year, 24-hour storm events.
   (e) The minimum storage capacity for the structure shall be 75 days per 10 CSR 20-8.200(6)(C)1.A. for Lawrence County facilities.
   (f) Storage structures shall be lowered to the minimum operating level prior to November 30 each year.
   (g) At least one sign shall appear on the fence on each side of each structure. Minimum wording shall be "WASTEWATER – KEEP OUT", in letters at least 2 inches high.
   (h) A least one gate, constructed of materials comparable to the fence, must be provided to access any storage structure for maintenance and mowing. The gate shall remain locked except during maintenance or mowing.
   (i) It is a violation of this permit to place material in the emergency spillway or otherwise cause it to cease to function properly, as this may result in a catastrophic failure of the storage structure.

3. Land Application Equipment Minimum Requirements
   (a) Spray application equipment shall minimize the formation of aerosols.
   (b) Application equipment shall be visually inspected daily during land application to check for equipment malfunctions and leaks. The application system shall be operated so as to provide uniform distribution of wastes over the entire land application site.
   (c) Equipment shall be calibrated at least once per calendar year to ensure even distribution of wastewater.

4. Land Application Field(s) Minimum Requirements
   (a) No land application shall occur when the soil or ground is frosted, frozen, snow covered, or saturated. Daily observation of fields is required. Application activities shall cease if these conditions occur.
   (b) There shall be no application during a precipitation event or if a precipitation event likely to create runoff is forecasted to occur within 24 hours of a planned application.
   (c) Public Access Restrictions; this permit does not authorize application of wastewater to public use areas.
   (d) If land application sites listed in this permit are also included as land application sites in another permit, the wastewater and sludge applications from all sources shall be included in the application rates in the facility description. Records from all sources must be kept for all permits.
   (e) Grazing and Harvesting Deferment.
      (1) May 1 to October 31, the minimum grazing or forage harvest deferment shall be fourteen (14) days from application;
      (2) November 1 to April 30, the minimum grazing or forage harvest deferment shall be thirty (30) days from application;
      (3) If deferment period spans two timeframes, the minimum grazing or forage harvest deferment shall be thirty (30) days from most recent application.
      (4) Lactating dairy animal grazing is generally not recommended for application areas unless there has been a much longer deferment period.
   (f) Land application shall occur only during daylight hours.
   (g) Land application fields shall be checked daily during land application for runoff.
   (h) Sites utilizing spray irrigation shall monitor for the drifting of spray across property lines. Spray drift is not permissible.
   (i) Setback distances from sensitive features per 10 CSR 20-8.200(6)(B). There shall be no land application within:
      (1) The 10-year floodplain;
      (2) 50 feet inside of the property line, public road, or drainage ditch;
      (3) 100 feet of any classified or unclassified gaining perennial or intermittent stream, any wetland, or any public or privately owned pond or lake;
      (4) 150 feet of any dwelling, residence, public building, or public use area (excluding roadways);
      (5) 300 feet of any potable water supply well not located on the property, adequate protections shall be implemented and maintained for any potable water supply well located within the application area;
      (6) 300 feet from any sinkhole, losing stream, or any other physiographic structure with a conduit to groundwater;

D. LAND APPLICATION CONDITIONS (CONTINUED)

5. Application Rate(s) and Loading
   (a) This permit does not authorize application of materials in concentrations known to cause, or having the potential to cause, phytotoxicity in plants per 10 CSR 20-6.015(4)1. If plant stress is observed, the facility may need to reduce application of wastewaters and/or sludge. If phytotoxicity is observed, the facility shall cease land application activities and evaluate the applied substances to determine the cause of phytotoxicity.
   (b) The application rate shall not exceed any design hydraulic loading rate listed in the facility description.
   (c) Wastewater application on slopes exceeding 10%:
      (1) Initial application rate on dry soils may briefly exceed one-half (1/2) the design sustained permeability rate;
      (2) The hourly application rate shall not exceed one-half (1/2) the design sustained permeability;
      (3) In no case shall exceed one-half (1/2) inch per hour.
   (d) Applications shall not exceed any agronomic rates listed in the facility description to ensure plant use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater applied to a field to meet the fertilization needs of the plants.
   (e) Runoff and ponding is prohibited.
   (f) This permit does not authorize land disposal or the application of hazardous waste.
   (g) If hydraulic application rates exceeded or will exceed 24 inches per acre per year, the facility shall calculate nitrogen loading rates and include results in the annual report. The calculation is: (PAN) x (0.226) x (inches per acre irrigated) = pounds total N per acre.
   (h) The facility must maintain a record of all fertilizer products applied to fields; even exempted products, to determine total nutrient loading.
   (i) The fertilizer recommendation shall be based on all of the following:
      (1) The nutrient recommendation (nitrogen or phosphorus) for each crop. Recommendations can be found in University of Missouri Extension Guide EQ202 Crop/Nutrient Considerations for Biosolids or from publications by other land grant universities in adjoining states,
      (2) Realistic yield goal for each crop. Yield goals must be based on actual crop yield records from multiple years for each field. Good judgment must be used to counteract unusually high or low yields. If a field's yield history is not available the USDA county wide average or other approved source may be used, and
      (3) The most recent soil test.
   (j) Application shall be conducted according to one of the following nutrient based management practices. The facility must avoid over-application of both Nitrogen and Phosphorus simultaneously by choosing the more stringent application method of those listed below.
      (1) Nitrogen:
         i. Plant Available Nitrogen (PAN) based application. This method can be used when soil test phosphorus (P) levels are 120 pounds or less per acre using Bray P-1 test method, or if the field has been assessed by Missouri Phosphorus Index (P-index) with a low or medium rating. The amount of wastewater and/or sludge to be applied shall be adjusted annually based on the PAN calculation using the current wastewater and/or sludge nutrient analysis and the following:
         ii. For non-legume crops, the nitrogen fertilizer recommendation shall be adjusted to account for nitrogen credits from a preceding legume crop and residual nitrogen from the previous year's application. Nitrogen removal rates can be found in WQ430.
         iii. For legume crops, the nitrogen removal capacity of the legume crops must be based on the estimated nitrogen content of the harvested crop as defined in WQ430 and a realistic yield goal. The estimated nitrogen content of the crop must be adjusted using nitrogen credits for residual nitrogen fertilizer from the previous year's application.
         iv. PAN = (Ammonia Nitrogen x volatilization factor*) + (Organic Nitrogen x 0.2) + (Nitrate Nitrogen)
         *Volatilization factor is 0.7 for surface application and 1 for subsurface application.
         v. The amount of wastewater and/or sludge applied shall not exceed the nitrogen fertilizer recommendation or the estimated nitrogen removal capacity of the planned crop during the year of the application;
      (2) Phosphorus:
         i. This method must be used when soil test phosphorus (P) levels are above 120 pounds per acre using Bray P-1 test method, or if the P-index rating is high. The amount of wastewater and/or sludge to be applied shall be adjusted annually based the phosphorus content of the current wastewater and/or sludge nutrient analysis and may be applied according to one of the following methods;
         ii. The annual amount of phosphorus applied shall not exceed the planned crop's phosphorus removal estimate from WQ430, or from publications by other land grant universities in adjoining states; or,
         iii. Multi-year phosphorus applications. Wastewater and/or sludge applications can exceed the annual planned phosphate removal estimate for the crop when a multi-year phosphorus application is utilized. The multi-year application must comply with the following conditions:
         iv. The amount of phosphorus banked shall not exceed four years of the estimated crop removal rate for the planned crop rotation;

D. LAND APPLICATION CONDITIONS (CONTINUED)

v. The actual application rate shall not exceed the multi-year application rate; and
vi. No additional applications shall occur until the applied phosphorus has been removed from the field by crop removal or harvest.
vii. No land application can occur if the P-index rating for a field is "very high".

(k) Maximum pollutant concentrations and annual loading for specific parameters:

Parameter	Max application at any time: mg/L	annual loading: kg/ha	annual loading: lbs/ac	cumulative loading♠: kg/ha	cumulative loading♠: lbs/ac
Aluminum		♠♠	♠♠	4000	3567
Arsenic		2.0	1.79	41	37
Boron	4	5	4.5	♠♠	♠♠
Cadmium		1.9	1.7	39	35
Chloride	125	♠♠	♠♠	♠♠	♠♠
Copper	10	75	66.94	1500	1339
Lead	1	15	13.39	300	268
Mercury		0.85	0.76	17	15
Nickel		21	18.74	420	375
Selenium	0.2	5.0	4.46	100	89
Zinc		140	124.96	2800	2499

♠ Before the cumulative loading rate is met for any one parameter, the facility shall cease to apply wastewater/sludge containing such pollutant to all affected areas.
♠♠ Will be re-assessed at the next permit renewal.

6. Soil Monitoring
   (a) Composite soil samples shall be collected every five years from each field listed in this permit where land application has occurred in the last 12 months. No land application shall occur on fields listed in this permit if soil sample results are more the five years old.
   (b) Soil sampling shall be in accordance with University of Missouri (MU) Guides G9215, Soil Sampling Pastures or G9217, Soil Sampling Hayfields and Row Crops or other methods approved by the Department. The recommendation of one composite sample per 20 acres in G9215 and G9217 is not required by this permit, however, this is a useful method to identify soil fertility fluctuations in large fields due to past management practices, soil type, and variability of crop yields. There shall be at least one composite sample per 80 acres.
   (c) Testing shall conform to Recommended Chemical Soil Testing Procedures for North Central Region (North Central Regional Research Publication 221 Revised), or Soil Testing in Missouri (MU Extension Guide EC923), or other methods approved by the Department.

7. Record Keeping. The following record keeping shall occur, be maintained for at least five years, be made available to the Department upon request, and shall be submitted with the application for renewal.
   (a) Daily land application log showing, at a minimum: date(s) of application, field identified, acres used, volume applied, weather condition (sunny, overcast, air temperature, etc), soil moisture condition, days since last precipitation event, and application method;
   (b) Monthly visual storage structure inspections (if applicable);
   (c) Equipment inspections and calibrations;
   (d) Land application field inspections, including runoff, saturation, and ponding;
   (e) Record of maintenance and repairs;
   (f) Description of any unusual operating conditions encountered, narrative summary of any problems or deficiencies identified, corrective action taken, or improvements planned;
   (g) The number of days the storage structure discharged during the year, the discharge flow, reason the discharge occurred, and effluent analysis performed including analytical result laboratory pages and any clean-up actions taken.
   (h) Annual samples for each wastewater source shall be obtained and submitted to the department with the application for renewal materials. The samples required shall contain all parameters listed in the table above and any other parameters sampled. The submission must include the date of sampling and have the wastewater identified. Submission of laboratory results sheets will likely meet this requirement.
   (i) To ensure the soil does not exceed the cumulative loading rate, all records shall be maintained from the initial application date and for at least five years after application activities have ceased.
   (j) Annual summary for each field used for land application showing: number of days application occurred, crop grown and yield, and total amount of wastewater and/or sludge applied (gallons and/or tons per acre).
   (k) For fields where total nitrogen application exceeded 150 pounds per acre, the facility must submit PAN calculations to document the applied nitrogen was utilized.

F. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to 621.250 and 644.051.9 RSMo. To appeal, you must file a petition with the AHC within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal shall be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: https://ahc.mo.gov

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0136760
KEMIN INDUSTRIES, INC.

The Federal Water Pollution Control Act (Clean Water Act (CWA) §402 Public Law 92-500 as amended) established the National Pollutant Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (§301 of the Clean Water Act). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal Clean Water Act and Missouri Clean Water Law 644 RSMo as amended). MSOPs may also cover underground injection, non-discharging facilities, and land application facilities. Permits are issued for a period of five (5) years unless otherwise specified for less.

Per 40 CFR Part 124.8(a) and 10 CSR 20-6.020(1)(A)2 a factsheet shall be prepared to give pertinent information regarding applicable regulations, rationale for the development of limitations and conditions, and the public participation process for the Missouri State Operating Permit (MSOP or permit) listed below. A factsheet is not an enforceable part of a permit.

PART I. FACILITY INFORMATION

Facility Type: Industrial No-Discharge/ Land Application
SIC Code(s): 2015
NAICS Code(s): 311615
Application Date: 09/22/2022
Modification Date: 10/10/2019
Expiration Date: 03/31/2023
Last Inspection: 01/12/2016

FACILITY DESCRIPTION

The Kemin facility receives raw meat products (beef, pork, and chicken) and processes the meat into a dry protein powder that is used as animal feed supplements. Associated with the protein production is generation of animal fats that are collected and shipped from the facility for utilization in manufacturing.

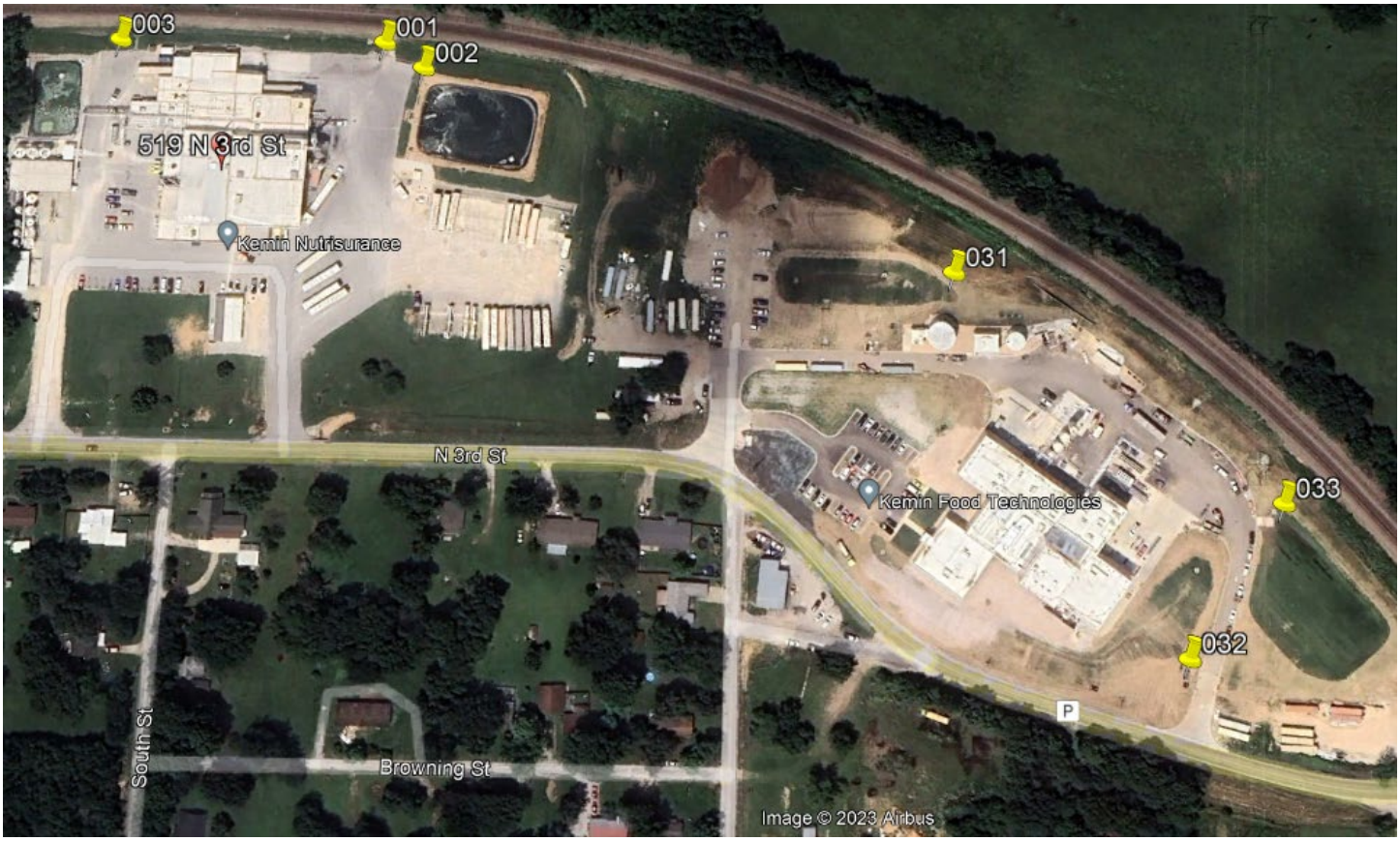
The site consists of a manufacturing building, ancillary storage buildings, and raw product storage tanks. The facility is surrounded by a paved parking lot and an unpaved trailer storage lot. The remainder of the facility surface is grass.

Items listed in the facility (or outfall) description, applicable to the operation, maintenance, control, and resultant effluent quality are required to be enumerated in the facility description. The facility description ensures the facility continues to operate the wastewater (or stormwater) controls listed in the permit to preserve and maintain the effluent quality pursuant to 40 CFR 122.21(e). Any planned changes to the facility (which changes the facility or outfall description) are required to be reported to the Department pursuant to 40 CFR 122.41(l)(1)(ii). If the facility does not or cannot use all of their disclosed treatment devices, this is considered bypassing pursuant to 40 CFR 122.41(m) in the case of wastewater, and BMP disruption in the case of stormwater.

PERMITTED FEATURES TABLE

OUTFALL	MAX FLOW	TREATMENT LEVEL	EFFLUENT TYPE
#001	16.9 MGD	BMPs	Stormwater
#002	N/A	Aerated Earthen Basin	Industrial Wastewater
#003	0.03 MGD	BMPs	Stormwater
#031	0.43 MGD	BMPs	Stormwater
#032	0.32 MGD	BMPs	Stormwater
#033	0.27 MGD	BMPs	Stormwater
#007 - #077	N/A	Land Application	Industrial Wastewater

FACILITY MAP



FACILITY PERFORMANCE HISTORY & COMMENTS

The electronic discharge monitoring reports were reviewed for the last permit term. The daily maximum limit of 120 mg/L for Chemical Oxygen Demand was exceeded at outfall #001 with a value of 173 mg/L.

The latest inspection was reviewed. The facility was found to be in compliance with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit MO-0136760, based upon the observations made at the time of the inspection.

CONTINUING AUTHORITY

Pursuant to 10 CSR 20-6.010(2)(A) and (E), the Department has received the appropriate continuing authority authorized signature from the facility. The Missouri Secretary of State continuing authority charter number for this facility is F01151358; this number was verified to be associated with the facility and precisely matches the continuing authority reported by the facility.

Pursuant to 10 CSR 20-6.010(2)(B)4, this facility is a Level 4 Authority.

- ✓ Pursuant to 10 CSR 20-6.010(2)(D), the facility demonstrated the closest collection system was greater than 2000 feet from the property line per 10 CSR 20-6.010(2)(C)3.

OTHER ENVIRONMENTAL PERMITS

In accordance with 40 CFR 122.21(f)(6), the Department evaluated other environmental permits currently held by this facility. This facility holds no other permits.

PART II. RECEIVING WATERBODY INFORMATION

RECEIVING WATERBODY TABLE:

OUTFALL	WATERBODY NAME	CLASS	WBID	DESIGNATED USES	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC
#001, #002, #003, #031, #032, #034, #076, #077	Tributary to Spring R.	n/a	n/a	n/a	0.4 mi.	11070207 – 0101
	Spring R.	P	3165	GEN, HHP, IRR, LWW, SCR, WBC-A, WWH (ALP)		
#009, #020, #021, #022, #023, #035, #036, #041, #053, #061, #065	Tributary to Spring R.	n/a	n/a	n/a	0.15 – 1.0 mi.	
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#037	Tributary to Chat Creek	n/a	n/a	n/a		
	Presumed Use Stream	C	5079	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#066, #067	Tributary to Elm Branch	n/a	n/a	n/a		11070207-0102
	Presumed Use Stream	C	5079	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#007, #013, #014, #016, #017, #019, #038, #039, #045, #046, #047, #048, #049, #050	Tributary to Calton Cr.	n/a	n/a	General Criteria	0.04 – 1.0 mi.	11010002-0403
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#008	Tributary to Prairie Run Hollow	n/a	n/a	n/a	0.9 mi.	
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#015, #044	Tributary to West Fork Jenkins Creek	n/a	n/a	n/a		11010002-0405
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#024, #026	Tributary to Flat Creek	n/a	n/a	n/a		11010002-0407
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#051, #052, #053, #054, #055, #056, #057, #058, #063, #064	Tributary to Dry Creek	n/a	n/a	n/a		11010002-0408
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#018, #040, #042	Tributary to Little Crane Creek	n/a	n/a	General Criteria	0.25 mi.	11010002-0502
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#062	Tributary to White Oak Creek	n/a	n/a	n/a		11010002-0503
	Presumed Use Stream	C	5079	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		
#059, #060, #068, #069, #070, #071, #072, #073, #074, #075	Tributary to Crane Creek	n/a	n/a	n/a		1101002-0504
	Presumed Use Stream	C	5070	GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)		

* The previous permit identified WBID# 3960 and 100K Extent-Remaining Stream; these changes are due to a new numbering system and new naming convention for streams and lakes based on the HUC8 watershed number, the actual receiving stream has not changed.
Classes are representations of hydrologic flow volume or lake basin size per 10 CSR 20-7.031(1)(E).

Designated uses are described in 10 CSR 20-7.031(1)(F).
WBID: Waterbody Identification Number per 10 CSR 20-7.031(1)(Q) and (S)
HUC: Hydrologic Unit Code https://water.usgs.gov/GIS/huc.html
Water Quality Standards Search https://apps5.mo.gov/mocwis_public/waterQualityStandardsSearch.do

EXISTING WATER QUALITY & IMPAIRMENTS

The receiving waterbody(s) segment(s), upstream, and downstream confluence water quality was reviewed. The USGS https://waterdata.usgs.gov/nwis/sw or the Department's quality data database was reviewed. https://apps5.mo.gov/mocwis_public/wqa/waterbodySearch.do and https://apps5.mo.gov/wqa/ Impaired waterbodies which may be impacted by discharges from this facility were determined. Impairments include waterbodies on the 305(b) or 303(d) list and those waterbodies or watersheds under a TMDL. https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/tmdls Section 303(d) of the federal Clean Water Act requires each state identify waters not meeting water quality standards and for which adequate water pollution controls have not been required. https://dnr.mo.gov/water/what-were-doing/water-planning/quality-standards-impaired-waters-total-maximum-daily-loads/impaired-waters Water quality standards protect beneficial uses of water provided in 10 CSR 20-7.031. The 303(d) list helps state and federal agencies keep track of impaired waters not addressed by normal water pollution control programs. A TMDL is a calculation of the maximum amount of a given pollutant a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards.

✓ There are no upstream or downstream impairments near this facility.

WATERBODY MIXING CONSIDERATIONS

For all wastewater outfalls, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent. For information how this regulation is used in determining effluent limits with or without mixing, see WASTELOAD ALLOCATION in Part III. If the base stream flow is above 0.1 cfs, mixing may be applied if 1) zones of passage are present, 2) mixing velocities are sufficient and stream bank configuration allows, 3) the aquatic life support system is maintained, 4) mixing zones do not overlap, 5) there are no drinking water intakes in the vicinity downstream, 6) the stream or lake has available pollutant loading to be allocated, and 7) downstream uses are protected.

PART III. RATIONALE AND DERIVATION OF PERMIT CONDITIONS

ANTIBACKSLIDING

Federal antibacksliding requirements per CWA §402(o) and 40 CFR § 122.44(l) https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-122#p-122.44(l) generally prohibit a reissued permit from containing effluent limitations that are less stringent than the previous permit, with some exceptions. All renewed permits are analyzed for evidence of backsliding. There are several express statutory exceptions to the antibacksliding requirements, located in CWA § 402(o)(2) and 40 CFR 122.44(l). Parameters are discussed individually in Part IV of the fact sheet.

ANTIDEGRADATION REVIEW

Discharges with new, altered, or expanding flows, the Department is to document, by means of antidegradation review, if the use of a water body's available assimilative capacity is justified. See https://dnr.mo.gov/document-search/antidegradation-implementation-procedure The prescribed minimum BMPs required in the permit for stormwater are developed by the Department pursuant to 10 CSR 20-7.031(3), and BMP use for stormwater discharges is authorized under 40 CFR 122.44(k)(2). The facility must pay for the Department to complete the review. In accordance with Missouri's water quality regulations for antidegradation 10 CSR 20-7.031(3), degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. Per 10 CSR 20-7.015(4)(A), new discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream, or connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

✓ Not applicable; the facility has not submitted information proposing new or expanded discharge; no further degradation proposed therefore no further review necessary.

BEST MANAGEMENT PRACTICES (BMPS)

Minimum site-wide best management practices (BMPs) are established in this permit to ensure all facilities are managing their sites equally to protect waters of the state from certain activities which could cause negative effects in receiving water bodies. While not all sites require a SWPPP because the SIC codes are specifically exempted in 40 CFR 122.26(b)(14) or 10 CSR 20-6.200(2), these best management practices are not specifically included only for stormwater purposes. These practices are minimum requirements for all industrial sites to protect waters of the state. If the minimum best management practices are not followed, the facility may violate general criteria per 10 CSR 20-7.031(4). Statutes are applicable to all permitted facilities in the state; therefore pollutants cannot be released unless in accordance with 644.011 and 644.016 (17) RSMo.

CLOSURE
To properly decontaminate and close a wastewater storage structure, treatment structure, lagoon, basin, or device, the facility must draft a complete closure plan, and include the Closure Request Form #2512 https://dnr.mo.gov/document-search/facility-closure-request-form-mo-780-2512 The publication, Wastewater Treatment Plant Closure - PUB2568 found at https://dnr.mo.gov/print/document-search/pub2568 may be helpful to develop the closure plan. The regional office will then approve the closure plan, and provide authorization to begin the work. The regional office contact information can be found here: https://dnr.mo.gov/about-us/division-environmental-quality/regional-office

CHANGES IN DISCHARGES OF TOXIC POLLUTANT
This special condition reiterates the federal rules found in 40 CFR 122.44(f) for technology treatments and 122.42(a)(1) for all other toxic substances. In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as any pollutant listed as toxic under section 307(a)(1) or, in the case of "sludge use or disposal practices," any pollutant identified in regulations implementing section 405(d) of the CWA." Section 307 of the clean water act then refers to those parameters listed in 40 CFR 401.15 and any other toxic parameter the Department determines is applicable for reporting under these rules in the permit. The facility must also consider any other toxic pollutant in the discharge as reportable under this condition and must report all increases to the Department as soon as discovered in the effluent. The Department may open the permit to implement any required effluent limits pursuant to CWA §402(k) where sufficient data was not supplied within the application but was supplied at a later date by either the facility or other resource determined to be representative of the discharge, such as sampling by Department personnel.

COMPLIANCE AND ENFORCEMENT
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.
✓ Not applicable; the facility is not currently under Water Protection Program enforcement action.

DISCHARGE MONITORING REPORTING – ELECTRONIC (EDMR) SUBMISSION SYSTEM
The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by requiring electronic data reporting. To comply with the federal rule, the Department is requiring all facilities to submit discharge monitoring data and reports online. To review historical data, the Department's database has a publicly facing search engine, available at https://apps5.mo.gov/mocwis_public/dmrDisclaimer.do

Registration and other information regarding MoGEM can be found at https://dnr.mo.gov/mogem. Information about the eDMR system can be found at https://dnr.mo.gov/env/wpp/edmr.htm.The first user shall register as an Organization Official and the association to the facility must be approved by the Department. To access the eDMR system, use: https://apps5.mo.gov/mogems/welcome.action For assistance using the eDMR system, contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082. To assist the facility in entering data into the eDMR system, the permit describes limit sets designators in each table in Part A of the permit. Facility personnel will use these identifiers to ensure data entry is being completed appropriately. For example, M for monthly, Q for quarterly, A for annual, and others as identified.

DOMESTIC WASTEWATER, SLUDGE, AND BIOSOLIDS
Domestic wastewater is defined as wastewater originating primarily from the sanitary conveyances of bathrooms and kitchens. Domestic wastewater excludes stormwater, wash water, animal waste, process, or ancillary wastewater.
✓ Not applicable; this facility discharges domestic wastewater to an off-site permitted wastewater treatment facility (POTW).

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for productive use (i.e. fertilizer) and after having pathogens removed.
✓ Not applicable; the facility does not manage domestic wastewater on-site.

EFFLUENT LIMITATIONS
Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. Permits are required to establish the most stringent or most protective limit per 10 CSR 20-7.015(9)(A) and 40 CFR 122.44(b)(1). Effluent limitations derived and established for this permit are based on current operations of the facility. Any flow through the outfall is considered a discharge and must be sampled and reported per permit requirements. Daily maximums and monthly averages are required for continuous discharges per 40 CFR 122.45(d)(1). Weekly limits are not available for non-POTWs.

FEDERAL EFFLUENT LIMITATION GUIDELINES

Effluent Limitation Guidelines (ELGs) are found at 40 CFR 400-499. https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N These are limitations established by the EPA based on the type of activities a facility is conducting. Most ELGs are for process wastewater and some address stormwater. Effluent guidelines are not always established for every pollutant present in a point source discharge. In many instances, EPA promulgates effluent guidelines for an indicator pollutant. Industrial facilities complying with the effluent guidelines for the indicator pollutant will also control other pollutants (e.g. pollutants with a similar chemical structure). For example, EPA may choose to regulate only one of several metals present in the effluent from an industrial category, and compliance with the effluent guidelines will ensure similar metals present in the discharge are adequately controlled. All are technology-based limitations which must be met by the applicable facility at all times. If Reasonable Potential is established for any particular parameter, and water-quality based effluent limits are more protective of the receiving water's quality, the WQBEL will be used as the limiting factor in accordance with 40 CFR 122.44(d) and 10 CSR 20-7.015(9)(A).

✓ The facility does not have an associated ELG.

FIRE PROTECTION (HYDRANT) TESTING WATER (OUTDOOR)

The regulatory discharge allowance only extends to actual fire-fighting activities. These regulations are only found in 10 CSR 20-6.200(1)(D). Hydrant testing wastewater can be considered a water contaminant source pursuant to 644.016(25), dependent on the management strategies, which is why the Department asks for additional information about these wastewaters. The Federal and State requirements necessitate a reasonable potential determination for all wastewater; hydrant testing is a type of wastewater with intermittent discharge, and is not considered an emergency. Information regarding fire protection is included under illicit discharges for MS4s, and no other regulation allows for any further exemptions, unless the Department makes a finding of de minimis. Missouri Clean Water Law requires the Department to perform due diligence for all wastewater discharges and all permits (general and site specific). Permit conditions now have specific requirements to manage outdoor hydrant testing logically; and relevant to the pollutants contained in the fire protection testing wastewater. If the facility follows the appropriate management strategy, the permit will cover the discharges. If the facility does not use chlorinated water in the fire protection system, then the facility may allow the wastewater to directly enter a stream or storm collection system, given that sufficient energy dissipation strategies are followed to ensure that solids from soils or other sources are not being entrained in the wastewater. For facilities with chlorinated fire protection testing water, the facility must utilize a strategy to ensure chlorinated water is not being introduced into the waterbody. This could be by allowing the water to soak into the surrounding vegetation, or by retaining the water through a permanent or temporary berm for sufficient time to infiltrate, or other appropriate BMP. Other management strategies exist, and it is the responsibility of the facility to operate all systems to minimize pollution to waters of the state and United States.

GENERAL CRITERIA CONSIDERATIONS

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, permit decisions were made by completing a reasonable potential determination on whether discharges have reasonable potential to cause or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). See Part III REASONABLE POTENTIAL for more information. In instances where reasonable potential exists, the permit includes limitations to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, 644.076.1 RSMo, and Part I §D – Administrative Requirements of Standard Conditions included in this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of §§644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission. See Part IV for specific determinations.

GOOD HOUSEKEEPING PRACTICES

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and employee training. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle, and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices is an effective means of ensuring the continued implementation of these measures.

Specific good housekeeping may include:

- ◆ Spill and overflow protection under chemical or fuel connectors to contain spillage at liquid storage tanks
- ◆ Load covers on residue hauling vehicles and ensure gates on trucks are sealed and the truck body is in good condition
- ◆ Containment curbs around loading/unloading areas or tanks
- ◆ Techniques to reduce solids residue which may be tracked on to access roads traveled by residue trucks or residue handling vehicles.
- ◆ Techniques to reduce solid residue on exit roads leading into and out of residue handling areas

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarps) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure. For erosion and sediment control, BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors, are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances trap sediment after it has eroded. Sediment control BMPs should be used to back-up erosion control BMPs.

The SWPPP (if required for this facility) must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures. A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. BMPs schedules must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

GROUNDWATER MONITORING

Groundwater is a water of the state according to 644.016(27) RSMo, is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6), and must be protected accordingly.

✓ This facility is not required to monitor groundwater for the water protection program as there are no sub-surface discharges.

ICE-MELT PRODUCT REMOVAL

The Department is authorized to require BMPs for facilities per 40 CFR 122.44(k)(2). The facility should, to the extent practicable, remove large pieces of salt as soon as possible. After winter weather has ceased for the year, the facility needs to inspect all low-lying areas for extra salt and sand, and remove these as soon as possible. Salt applied to large areas has the potential to cause freshwater salinization which could result in a fish kill of sensitive species. To reduce potential for solids entering a stream, sand or other traction control materials will need to be evaluated against the probability that these materials could cause general criteria violations of solids and bottom deposits per 10 CSR 20-7.031(4).

LAND APPLICATION

Land application, which is surficial dispersion of wastewater or surficial spreading of sludge can be performed by facilities as an alternative to discharging. Authority to regulate these activities is pursuant to 644.026 RSMo. The Department implements requirements for these types of operations pursuant to 10 CSR 20-6.015(4)(A)1 which instructs the Department to develop permit conditions containing limitations, monitoring, reporting, and other requirements to protect soils, crops, surface waters, groundwater, public health, and the environment. Sub-surface dispersion or application of wastewater is typically considered a Class V UIC system; See UNDERGROUND INJECTION CONTROL section below.

✓ Applicable, the facility shall comply with all applicable land application requirements listed in this permit. These requirements incorporated into this permit pursuant to 10 CSR 20-6.015(4) ensure appropriate minimum operational controls of the no-discharge land application systems. When operated correctly these permit conditions will prevent unauthorized and illicit discharges to waters of the state; and will protect soils, vegetation, surface water, groundwater, and public health. These requirements also ensure application activities fall within a productive use demonstration (agricultural use), prevent plant phytotoxicity, and prevent and protect soils loading of specified pollutants. The minimum requirements established in the permit are to meet, not only DNRs requirements, but to also ensure the exemptions for agricultural stormwater runoff in 10 CSR 20-6.200(1)(B)5 or 10 CSR 20-6.300(2)(D)2 continue to be met. When the facility follows all permit requirements, stormwater discharge monitoring requirements from land application sites found at 10 CSR 20-6.200(2)(B)3.B. are excused. The BMPs prescribed in the permit, such as not applying to saturated or frozen soil, or applying outside the setbacks, are specific BMPs appropriate for wastewater and stormwater management from land application areas.

✓ The facility disclosed they apply water using a spray from a water truck or spray with a hose.

- ✓ Pursuant to 10 CSR 20-8.200(6) Surface Irrigation of Wastewater. (B) Wetted Application Area. The wetted application area is the land area that is normally wetted by wastewater application. The wetted application area must be: 1. Located outside of flood-prone areas having a flood frequency greater than once every 10 years; 2. Established— A. At least one hundred fifty feet (150') from existing dwellings or public use areas, excluding roads or highways; B. At least fifty feet (50') inside the property line; C. At least three hundred feet (300') from any sinkhole, losing stream, or other structure or physiographic feature that may provide direct connection between the ground water table and the surface; D. At least three hundred feet (300') from any existing potable water supply well not located on the property. Adequate protection shall be provided for wells located on the application site; E. One hundred feet (100') to wetlands, ponds, gaining streams (classified or unclassified; perennial or intermittent); and F. If an established vegetated buffer or the wastewater is disinfected, the setbacks established in subsections (A)–(E) above may be decreased if the applicant demonstrates the risk is mitigated. 3. Fenced, or if not fenced, provide in the construction permit application or the facility plan, the— A. Method of disinfection being utilized; B. Suitable barriers in place, or C. Details on how public access is limited and not expected to be present. (C) Preapplication Treatment. At a minimum, treatment prior to irrigation shall provide performance equivalent to that obtained from a primary wastewater lagoon cell designed and constructed in accordance with sections (3) and (4) of this rule, except that the lagoon depth may be increased to include wastewater storage in addition to the primary volume.
- ✓ Following is a list of helpful publications; while generally geared to biosolids and domestic sludge, these documents can show operators and facilities specific best management practices which may be important to their own operations.
  - State and EPA Regulations for Domestic Wastewater Sludge and Biosolids https://extension.missouri.edu/publications/eq421
  - Land Application of Septage https://extension.missouri.edu/publications/eq422
  - Standards for Pathogens and Vectors https://extension.missouri.edu/publications/wq424
  - Interpretation of Laboratory Analysis of Samples https://extension2.missouri.edu/wq429
  - Biosolids Glossary of Terms https://extension2.missouri.edu/eq449
- ✓ Operations and Maintenance, and equipment resources:
  - Collection and Storage https://extension2.missouri.edu/eq431
  - Equipment for Off-Site Application https://extension2.missouri.edu/wq432
  - Equipment for On-Site Land Application https://extension2.missouri.edu/wq433
  - Operating Considerations for Equipment https://extension2.missouri.edu/wq434
- ✓ Land application of all pollutants must consider cumulative and average limits based on how the pollutant responds in the soil environment. Limits or monitoring requirements may reflect different monthly calculations based on pollutant behavior.
- ✓ The facility must follow the applicable application loading rates indicated in the permit's facility description and/or special conditions. The facility must follow the applicable loading rates in the permit's facility description for each land application area. This permit dictates the most conservative calculation will be used when determining application rates so that the most abundant pollutant is not over-applied.
- ✓ **Hydraulic Loading Rates** – wastewater must be land applied at rates to allow for proper soil absorption and plant uptake. In accordance with 10 CSR 20-8.200(6)(B), the hydraulic loading rate shall not exceed the soil permeability rate, or result in a discharge of wastewater from the land application field.
- ✓ **Nitrogen Loading Rates** – wastewater application rates must not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater must not exceed 10 mg/L of nitrate nitrogen as N at any time.
- ✓ Fertilizer recommendations can also be obtained by using one of the following tools:
  - Land Applications Considerations (nutrient requirements for plant growth) https://extension.missouri.edu/publications/eq202
  - Crop/Nutrient Considerations https://extension2.missouri.edu/eq430
  - University of Missouri Nutrient Management Home Page: https://nmplanner.missouri.edu/
  - United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Nutrient Management technical resources https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/ecoscience/mnm/?cid=stelprdb1044741
- ✓ **Trace Element Loading Rate** – specific parameters have maximum soil loading rates; limitations are established in this permit to protect sudden phytotoxicity for the short term, future soil use, and overall plant fertility and fecundity over the long term. These requirements are authorized under 10 CSR 20-6.015(4)(A)1. Information used to develop parameter-specific conditions were based on *Design of Land Treatment Systems for Industrial Wastes – Theory and Practice*; by Pal and Overcash (P&O) 1981; and the development document and science-based numeric guidelines pursuant to 40 CFR 503 Subpart B; see also
  - Standards for Metals and Other Trace Substances https://extension.missouri.edu/publications/wq425
  - Activity and Movement of Plant Nutrients and Other Trace Substance https://extension.missouri.edu/publications/wq428
- ✓ Additional citations for specific parameters:
  - Boron is a known toxicant to plant life; per the Land Treatment book (P&O; p. 377-379), using 2 mg/L appropriate to the vegetation at this facility. A cap of 2 mg/L is established at this time to ensure acute plant toxicity is prevented. The Land Treatment book indicates commonly used application rates for crops are between 0.25 and 3 kg/ha/yr. However, it doesn't reference slight crop injury (corn and another unspecified crop) until 5-20 kg/ha. Therefore, the annual loading applied to this facility is 5 kg/ha or 4.5 lbs/ac. This will be reevaluated at the next renewal.
  - Chloride is limited at 125 mg/L to prevent sudden phytotoxicity. (P&O; p. 379)
  - Cobalt is limited at 1 ppm to prevent heavy metal toxicity. (P&O; p. 406)

- Copper dosing was limited to 10 mg/L per application event to prevent abrupt plant phytotoxicity. (P&O; p. 418)
- Lead, considered a heavy metal which will show injurious effects at levels above 1 mg/L (P&O; p. 406)
- Selenium (P&O; P. 384) Selenium does not degrade in soil, water, or sunlight. Selenium can be a plant toxicant and in the form of selenate (SeO_4^{2-}) can be taken up by plants, and bioaccumulate. See also: Hladun, Parker, Tran, and Trumble. *Effects of selenium accumulation on phytotoxicity, herbivory, and pollination ecology in radish (Raphanus sativus L.).* Environmental Pollution 172 (2013) 70-75.

✓ Definitions used in the land application section of the permit can be found at 644.016 RSMo, 10 CSR 20-2, and 40 CFR 503.11.

✓ This permit does not authorize land disposal or the application of hazardous waste.

✓ Soils testing. The permit's special conditions stipulate soil testing for this facility. Soil testing is performed to ensure soil accumulation rates of the specified parameters are below established soil loading rates. By adhering to the soil sampling methodology and frequency, the Department can determine reasonable potential to cause or contribute to plant toxicity required under 10 CSR 20-6.015(4).

✓ Sludge testing. 40 CFR 503.16 indicates sludge testing frequency can be based on the amount of sludge applied annually. The Program has determined these frequencies to be a suitable guideline to other sludge or high-strength wastewater as well. Sludge and/or wastewater sampling frequency for this permit was based on the following:

Amount of sewage sludge (metric tons)	US Tons	Liquid Gallons	Frequency
Greater than zero but < 290	+0 to 319.6	+0 to 76,609.9	once per year
≥ 290 but < 1,500	319.7 to 1653.4	76,610.0 to 396,258.1	once per quarter
≥ 1,500 but < 15,000	1653.5 to 16534.6	396,258.2 to 3,962,580.7	six times per year
≥ 15,000	≥ 16534.7	≥ 3,962,580.7	once per month

LAND DISTURBANCE

Land disturbance, sometimes called construction activities, are actions which cause disturbance of the root layer or soil; these include clearing, grading, and excavating of the land. 40 CFR 122.26(b)(14) and 10 CSR 20-6.200(3) requires permit coverage for these activities. Coverage is not required for facilities when only providing maintenance of original line and grade, hydraulic capacity, or to continue the original purpose of the facility.

✓ Not applicable; this permit does not provide coverage for land disturbance activities. The facility may obtain a separate land disturbance permit (MORA) online at https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance MORA permits may not cover disturbance of contaminated soils, however, site specific permits such as this one can be modified to include appropriate controls for land disturbance of contaminated soils by adding site-specific BMP requirements and additional outfalls.

MAJOR WATER USER

Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. https://dnr.mo.gov/water/business-industry-other-entities/reporting/major-water-users All major water users are required by 256.400 RSMo to register water use annually. https://dnr.mo.gov/document-search/frequently-asked-major-water-user-questions-pub2236/pub2236

✓ Not applicable; this facility cannot withdraw water from the state in excess of 70 gpm or 0.1 MGD.

MODIFICATION REQUESTS

Facilities have the option to request a permit modification from the Department at any time under RSMo 644.051.12. Requests must be submitted to the Water Protection Program with the appropriate forms and fees paid per 10 CSR 20-6.011. It is recommended facilities contact the program early so the correct forms and fees are submitted, and the modification request can be completed in a timely fashion. Minor modifications, found in 40 CFR 122.63, are processed without the need for a public comment period. Major modifications, those requests not explicitly fitting under 40 CFR 122.63, do require a public notice period. Modifications to permits must be completed when: a new pollutant is found in the discharge; operational or functional changes occur which affect the technology, function, or outcome of treatment; the facility desires alternate numeric benchmarks; or other changes are needed to the permit.

Modifications are not required when utilizing or changing additives in accordance with the publication https://dnr.mo.gov/document-search/additive-usage-wastewater-treatment-facilities-pub2653/pub2653 nor are required when a temporary change or provisional discharge has been authorized by the regional office. While provisional discharges may be authorized by the regional office, they will not be granted for more than the time necessary for the facility to obtain an official modification from the Water Protection Program. Temporary provisional discharges due to weather events or other unforeseen circumstances may or may not necessitate a permit modification. The facility may ask for a Compliance Assistance Visit (CAV) from the regional office to assist in the decision-making process; CAVs are provided free to the permitted entity.

NUTRIENT MONITORING

Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8. This requirement is applicable to all Missouri waterways.

✓ This is a stormwater only/no-discharge permit therefore not subject to provisions found in 10 CSR 20-7.015(2)-(9) per 10 CSR 20-7.015(1)(C).

Water quality standards per 10 CSR 20-7.031(5)(N) describe nutrient criteria requirements assigned to lakes (which include reservoirs) in Missouri, equal to or greater than 10 acres during normal pool conditions. The Department's Nutrient Criteria Implementation Plan (NCIP) may be reviewed at: https://dnr.mo.gov/document-search/nutrient-criteria-implementation-plan-july-27-2018 Discharges of wastewater in to lakes or lake watersheds designated as L1 (drinking water use) are prohibited per 10 CSR 20-7.015(3)(C).

✓ Not applicable; this facility does not discharge in a lake watershed, or the lake is less than 10 acres.

OIL/WATER SEPARATOR SYSTEMS AND USED OIL

Oil water separator (OWS) systems are frequently found at industrial sites where process water, wastewater, or stormwater may contain oils, petroleum, greases, oily wastewaters, or other immiscible liquids requiring separation. Food industry discharges typically require treatment prior to discharge to publicly owned treatment works. Per 10 CSR 26-2.010(2)(B), all oil water separators classified as underground storage tanks (UST) which meet the volume requirements, must be operated according to manufacturer's specifications. OWS which are USTs may be authorized in NPDES permits per 10 CSR 26-2.010(2)(B) or otherwise will be regulated as a underground petroleum storage tank under tank rules. A facility may operate an OWS which is not considered a UST for the wastewater or stormwater at any facility without specific NPDES permit authorization. Alternatively, a facility is not required to cover a UST OWS under the NPDES permit if they desire to obtain alternative regulatory compliance. OWS treating animal, vegetable, or food grade oils are not required to be authorized under 10 CSR 20-26-2.020(2)(B). All best management practices for all OWS systems must be adhered. In 2017, field-poured concrete tanks, previously exempted from the tanks rules, lost their exempt status. Facilities must re-evaluate these concrete structures pursuant to these now relevant rules. Adjacent USTs are not covered by these regulations.

Any and all water treatment systems designed to remove floating immiscible oils are termed oil water separators. If a device is intended to capture oil and separate it from water which is to be discharged, this generally qualifies that oil as used oil (if it is petroleum-based in nature). Used oil and oily sludge must be disposed of in accordance with 10 CSR 25-11.279. Pursuant to 40 CFR 279.20(b)(2)(ii)(B), separating used petroleum-based oil from wastewater generated on-site (to make the wastewater acceptable for discharge or reuse pursuant to Federal or state regulations governing the management or discharge of wastewaters) are considered used oil generators and not processors under self-implementing 40 CFR 279 Standards for The Management Of Used Oil. Oily wastes generated by OWS are also generally subject to Spill Prevention, Control, and Countermeasure (SPCC) regulations.

OPERATOR CERTIFICATION REQUIREMENTS

Operators or supervisors of operations at regulated domestic wastewater treatment facilities shall be certified in accordance with 10 CSR 20-9 and any other applicable state law or regulation.

✓ Not applicable; this facility is not required to have a certified operator.

PERMIT SHIELD

The permit shield provision of the Clean Water Act (Section 402(k)) and Missouri Clean Water Law (644.051.19 RSMo) provides that when a permit holder is in compliance with its NPDES permit or MSOP, it is effectively in compliance with certain sections of the Clean Water Act, and equivalent sections of the Missouri Clean Water Law. In general, the permit shield is a legal defense against certain enforcement actions but is only available when the facility is in compliance with its permit and satisfies other specific conditions, including having completely disclosed all discharges and all facility processes and activities to the Department at time of application. It is the facility's responsibility to ensure that all potential pollutants, waste streams, discharges, and activities, including wastewater land application, storage, and treatment areas, are all fully disclosed to the Department at the time of application or during the draft permit review process. Previous permit applications are not necessarily evaluated or considered during permit renewal actions. All relevant disclosures must be provided with each permit application, including renewal applications, even when the same information was previously disclosed in a past permit application. Subsequent requests for authorization to discharge additional pollutants, expanded or newly disclosed flows, or for authorization for previously unpermitted and undisclosed activities or discharges, will likely require an official permit modification, including another public participation process.

REASONABLE POTENTIAL (RP)

Regulations per 10 CSR 20-7.015(9)(A)2 and 40 CFR 122.44(d)(1)(i) require effluent limitations for all pollutants which are (or may be) discharged at a level causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit allowance in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit allowance in mixing zones. A reasonable potential analysis (RPA) is a numeric RP decision calculated using effluent data provided by the facility for parameters that have a numeric Water Quality Standard (WQS). If any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the WQS or derived WQBEL, the permit must contain a WQBEL for the pollutant per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A). The RPA is performed using the *Technical Support Document for Water Quality Based Toxics Control (TSD)* methods (EPA/505/2-90-001) for continuous discharges. See additional considerations under Part II WATERBODY MIXING CONSIDERATIONS and Part III WASTELOAD ALLOCATIONS. Wasteload allocations are determined utilizing the same equations and statistical methodology. Absent sufficient effluent data, WQBELs are derived without consideration of effluent variability and is assumed to be present unless found to be absent to meet the requirements of antidegradation review found in 10 CSR 20-7.031(3) and reporting of toxic substances pursuant to 40 CFR 122.44(f). The Department's permit writer's manual (https://dnr.mo.gov/water/business-industry-other-entities/technical-assistance-guidance/wastewater-permit-writers-manual), the EPA's permit writer's manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment guide each decision. Each parameter in each outfall is carefully considered; and all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, inspection reports, stream water quality information, stream flows, uses assigned to each waterbody, and all applicable site specific information and data gathered by the facility through discharge monitoring reports and renewal (or new) application sampling.

Reasonable potential determinations (RPD) are based on physical conditions of the site as provided in Sections 3.1.2, 3.1.3, and 3.2 of the TSD using best professional judgement. An RPD consists of evaluating visual observations for compliance with narrative criteria, non-numeric information, or small amounts of numerical data (such as 1 data point supplied in the application). Narrative criteria with RP typically translate to a numeric WQBEL, so a parameter's establishment being based on narrative criteria does not necessarily make the decision an RPD vs RP—how the data is collected does, however. For example, a facility with orange discharge can have RP for narrative criteria like color, but a numeric iron limit is established to account for the violation of narrative criteria based on effluent data submitted by the facility. When insufficient data is received to make a determination on RP based on numeric effluent data, the RPD decisions are based on best professional judgment considering the type of effluent discharged, the current operational controls in place, and historical overall management of the site. In the case of iron causing excursions of narrative criteria for color, if a facility has not had iron monitoring in a previous permit, adding iron monitoring would be an RPD, since numeric data isn't being used in the determination, but observable, site-specific conditions are.

When the facility is performing surficial or subsurface land application, the volume of water, frequency of application, type of vegetation, soil type, land slopes, and general overall operating conditions are considered. 10 CSR 20-8 are regulations for the minimum operating conditions for land application; these regulations cannot be excused even if there is no RP. RP is reserved for discharging outfalls given that these outfalls are the only ones which water quality standards apply to, but the process is similar as the site conditions are compared to regulations, soil sampling, pollutant profile, and other site-specific conditions. In the case of non-discharging outfalls, an RPD is instead used to determine monitoring requirements.

The TSD RPA method cannot be performed on stormwater as the flow is intermittent and highly variable. A stormwater RPD consists of reviewing application data and discharge monitoring data and comparing those data to narrative or numeric water quality criteria. For stormwater outfalls, considerations are required per 10 CSR 20-6.200(6)(B)2: A. application and other information supplied by the facility; B. effluent guidelines; C. best professional judgment; D. water quality; and E. BMPs.

RPDs are also performed for WET testing in wastewater. While no WET regulations specific to industrial wastewater exist, 40 CFR 122.21(j)(5) implies the following can be considered: 1) the variability of the pollutants; 2) the ratio of wastewater flow to receiving stream flow; and 3) current technology employed to remove toxic pollutants. Generally, sufficient data does not exist to mathematically determine RPA for WET, but instead compares the data for other toxic parameters in the wastewater with the necessity to implement WET testing with either monitoring or limits. When toxic parameters exhibit RP, WET testing is generally included in the permit as an RPD. However, if all toxic parameters are controlled via limitations or have exhibited no toxicity in the past, then WET testing may be waived. Only in instances where the wastewater is well characterized can WET testing be waived.

WET testing is typically not implemented for stormwater. Stormwater discharges do not adhere to the same principles of wastewater RPAs because stormwater discharges are not continuous, and at the time of precipitation discharge the receiving stream is also no longer at base (0) flow, meaning that using RP to develop WET testing requirements for stormwater is unrepresentative. The Department works with the Missouri Department of Conservation and has understanding of streams already exhibiting toxicity, even without the influence of industrial wastewater or stormwater. Facilities discharging to streams with historical toxicity are required to use laboratory water for dilution, instead of water from the receiving stream when performing WET tests.

TSD methods encountered may be § 3.3.2, § 5.7.3 for metals, and § 5.4.1 for chloride. Part IV EFFLUENT LIMIT DETERMINATIONS provides specific decisions related to this permit. In general, removal of a WQBEL if there is no RP is not considered backsliding, see ANTIBACKSLIDING for additional information.

✓ No statistical RPAs were performed for this permit.

REGIONAL OFFICES (ROS)

Regional Offices will provide a compliance assistance visit at a facility's request; a regional map with links to phone numbers can be found here: https://dnr.mo.gov/about-us/division-environmental-quality/regional-office. Or use https://dnr.mo.gov/compliance-assistance-enforcement to request assistance from the Region online.

RENEWAL REQUIREMENTS

The renewal special condition permit requirement is designed to guide the facility to prepare and include all relevant and applicable information in accordance with 10 CSR 20-6.010(7)(A)-(C), and if applicable, federal regulations. The special condition may not include all requirements and requests for additional information may be made at the time of permit renewal under 644.051.16(5) RSMo and 40 CFR 122.21(h). Prior to submittal, the facility must review the entire submittal to confirm all required information and data is provided; it is the facility's responsibility to discern if additional information is required. Failure to fully disclose applicable information with the application or application addendums may result in a permit revocation per 10 CSR 20-6.010(8)(A) and may result in the forfeiture of permit shield protection authorized in 644.051.19 RSMo. Forms are located at: https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater

✓ This facility shall submit an appropriate and complete application to the Department no less than 180 days prior to the expiration date listed on page 1 of the permit.

✓ The facility may email cleanwaterpermits@dnr.mo.gov to submit the application to the Program. A paper copy is not necessary if submitted via email. For larger applications, a drop-box type service may also be used.

✓ Application materials shall include complete Form A, and Form C. If the form name has changed, then the facility should ensure they are submitting the correct forms as required by regulation.

SAMPLING FREQUENCY JUSTIFICATION

Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges, such as wastewater discharges, shall be permitted with daily maximum and monthly average limits. Minimum sampling frequency for all parameters is annually per 40 CFR 122.44(i)(2).

Sampling frequency for stormwater-only outfalls is typically quarterly even though BMP inspection occurs monthly or more often dependent on site needs. The facility may sample more frequently if additional data is required to determine if best management operations and technology are performing as expected.

A reduction in monitoring frequency is not considered backsliding. A numeric or narrative limit established in the permit is applicable every hour of every day, not only during the day the monitoring occurs, therefore, a reduction in monitoring frequency has no bearing on the numeric limits applied in the permit. Both § 402(o)(1) and the safety clause in § 402(o)(3) prohibit renewed permits from containing effluent limitations that are less stringent. The Department does not read 402(o) to apply to any other non-limiting type of permit conditions.

✓ Reporting of precipitation was removed from the permit. The information is readily available online, therefore reporting this information is not required.

SAMPLING TYPE JUSTIFICATION

Sampling type was continued from the previous permit. The sampling types are representative of the discharges and are protective of water quality. Discharges with altering effluent will consider implementing composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, hexavalent chromium, dissolved oxygen, total phosphorus, volatile organic compounds, and others. For further information on sampling and testing methods see 10 CSR 20-7.015(9)(D)2.

SCHEDULE OF COMPLIANCE (SOC)

A schedule of compliance is time allowed to meet future more stringent limitations. The SOC can also be remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and the terms and conditions of an operating permit. SOCs are allowed under 40 CFR 122.47 and 10 CSR 20-7.031(11) providing certain conditions are met.
An SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed in accordance with 40 CFR 125.3.

- For a newly constructed facility in most cases per 644.029 RSMo. Newly constructed facilities must meet all applicable effluent limitations (technology and water quality) when discharge begins. New facilities are required to install the appropriate control technologies as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site-specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be specifically granted for conducting these activities.

In order to provide guidance in developing SOCs, and to attain a greater level of consistency, the Department issued a policy on development of SOCs on October 25, 2012. The policy provides guidance for standard time frames for schedules for common activities, and guidance on factors to modify the length of the schedule.

✓ Not applicable; this permit does not contain a SOC.

SPILLS, OVERFLOWS, AND OTHER UNAUTHORIZED DISCHARGE REPORTING

Per 260.505 RSMo, any emergency involving a hazardous substance must be reported to the Department's 24-hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest possible moment after discovery. The Department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I.
https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl=

Any other spills, overflows, or unauthorized discharges reaching waters of the state must be reported to the regional office during normal business hours, or after normal business hours, to the Department's 24-hour Environmental Emergency Response spill line at 573-634-2436.

Certain industrial facilities are subject to the self-implementing regulations for Oil Pollution Prevention in 40 CFR 112, and are required to initiate and follow Spill Prevention, Control, and Countermeasure (SPCC) Plans. This permit, as issued, is not intended to be a replacement for any SPCC plan, nor can this permit's conditions be automatically relaxed based on the SPCC plan if the permit is more stringent than the plan.

SLUDGE – INDUSTRIAL

Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process or non-process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and any material derived from industrial sludge. Industrial sludge could also be derived from holding structure dredging or other similar maintenance activities. Certain oil sludge, like those from oil water separators, are subject to self-implementing federal regulations under 40 CFR 279 for used oils.

✓ Applicable; this permit authorizes land application of industrial sludge in accordance with Part D and Special Conditions of this permit; see additional information below in Part IV.

STANDARD CONDITIONS

The standard conditions Part I attached to this permit incorporate all sections of 10 CSR 20-6.010(8) and 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions must be reviewed by the facility to ascertain compliance with this permit, state regulations, state statutes, federal regulations, and the Clean Water Act.

STORMWATER PERMITTING: LIMITATIONS AND BENCHMARKS

Because of the fleeting nature of stormwater discharges, the Department, under the direction of EPA guidance, has determined monthly averages are capricious measures of stormwater-only discharges. The *Technical Support Document for Water Quality Based Toxics Control* (EPA/505/2-90-001; 1991) §3.1 indicates most procedures within the document apply only to water quality-based approaches, not end-of-pipe technology-based controls. Hence, stormwater-only outfalls will generally only contain a maximum daily limit (MDL), a benchmark, or a monitoring requirement as dictated by site specific conditions, the BMPs in place, the BMPs proposed, past performance of the facility, and the receiving water's current quality.

Sufficient rainfall to cause a discharge for one hour or more from a facility would not necessarily cause significant flow in a receiving stream. Acute Water Quality Standards (WQSs) are based on one hour of exposure and must be protected at all times. Therefore, industrial stormwater facilities with toxic contaminants present in the stormwater may have the potential to cause a violation of acute WQSs if toxic contaminants occur in sufficient amounts. In this instance, the permit may apply daily maximum limitations.

Conversely, it is unlikely for rainfall to cause a discharge for four continuous days from a facility; if this does occur however, the receiving stream will also likely sustain a significant amount of flow providing dilution. Most chronic WQSs are based on a four-day exposure with some exceptions. Under this scenario, most industrial stormwater facilities have limited potential to cause a violation of chronic water quality standards in the receiving stream.

A standard mass-balance equation cannot be calculated for stormwater because stormwater flow and flow in the receiving stream cannot be determined for conditions on any given day or storm event without real-time ad-hoc monitoring. The amount of stormwater discharged from the facility will vary based on current and previous rainfall, soil saturation, humidity, detention time, BMPs, surface permeability, etc. Flow in the receiving stream will vary based on climatic conditions, size of watershed, area of surfaces with reduced permeability (houses, parking lots, and the like) in the watershed, hydrogeology, topography, etc. Decreased permeability may increase the stream flow dramatically over a short period of time (flash).

Numeric benchmark values are based on site specific requirements taking in to account a number of factors but cannot be applied to any process water discharges. First, the technology in place at the site to control pollutant discharges in stormwater is evaluated. Other permits are also reviewed for similar activities. A review of the guidance forming the basis of Environmental Protection Agency's (EPA's) *Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity* (MSGP) may also occur. Because precipitation events are sudden and momentary, benchmarks based on state or federal standards or recommendations use the Criteria Maximum Concentration (CMC) value, or acute standard may also be used. The CMC is the estimate of the highest concentration of a material in surface water to which an aquatic community can be exposed briefly without resulting in an unacceptable effect. The CMC for aquatic life is intended to be protective of the vast majority of the aquatic communities in the United States. If a facility has not disclosed BMPs applicable to the pollutants for the site, the facility may not be eligible for benchmarks.

40 CFR 122.44(b)(1) requires the permit implement the most stringent limitations for each discharge, including industrially exposed stormwater; and 40 CFR 122.44(d)(1)(i) and (iii) requires the permit to include water-quality based effluent limitations (WQBELs) where reasonable potential has been found. However, because of the non-continuous nature of stormwater discharges, staff are unable to perform statistical Reasonable Potential Analysis (RPA) under most stormwater discharge scenarios. Reasonable potential determinations (RPDs; see REASONABLE POTENTIAL above) using best professional judgment are performed.

Benchmarks require the facility to monitor, and if necessary, replace and update stormwater control measures. Benchmark concentrations are not effluent limitations. A benchmark exceedance, therefore, is not a permit violation; however, failure to take corrective action is a violation of the permit. Benchmark monitoring data is used to determine the overall effectiveness of control measures and to assist the facility in knowing when additional corrective actions may be necessary to comply with the conditions of the permit.

BMP inspections typically occur more frequently than sampling. Sampling frequencies are based on the facility's ability to comply with the benchmarks and the requirements of the permit. Inspections must occur after large rain events and any other time an issue is noted; sampling after a benchmark exceedance may need to occur to show the corrective active taken was meaningful.

When a permitted feature or outfall consists of only stormwater, a benchmark may be implemented if there is no RP for water quality excursions.

- ✓ Applicable, this facility has stormwater-only outfalls where benchmarks or limitations were deemed appropriate contaminant measures.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

A SWPPP must be prepared by the facility if the SIC code or facility description type is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff.

Pursuant to 40 CFR 122.44(k), Best Management Practices (BMPs) must be used to control or abate the discharge of pollutants when: 1) Authorized under §304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; 2) Authorized under §402(p) of the CWA for the control of stormwater discharges; 3) Numeric effluent limitations are infeasible; or 4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA. A BMP may take the form of a numeric benchmark. In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (EPA 833-B-09-002) published by the EPA in 2015 and again in 2021 https://www.epa.gov/sites/default/files/2021-03/documents/swppp_guide_industrial_2021_030121.pdf BMPs are measures or practices used to reduce the amount of pollution entering waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to 1) identify sources of pollution or contamination, and 2) select and carry out actions which prevent or control the pollution of storm water discharges. Additional information can be found in *Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* (EPA 832-R-92-006; September 1992).

Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the facility can take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

The facility can review the precipitation frequency maps for development of appropriate BMPs. The online map https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=mo can be targeted to the facility location and is useful when designing detention structures and planning for any structural BMP component. The stormwater map can also be used to determine if the volume of stormwater caused a disrupted BMP; and if the BMP must be re-designed to incorporate additional stormwater flows.

Areas which must be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan shall be formulated to best control the amount of pollutant being released and discharged by each activity or source. This must include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action must be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but may be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial-and-error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation per 10 CSR 20-7.031(3). For further guidance, consult the antidegradation implementation procedure (https://dnr.mo.gov/document-search/antidegradation-implementation-procedure).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs which are reasonable and cost effective. The AA evaluation can include practices designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure* (AIP), §II.B.

If parameter-specific numeric benchmark exceedances continue to occur and the facility feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the facility can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which must contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification, which includes an appropriate fee; the application is found at: https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/wastewater

- ✓ Applicable; a SWPPP shall be developed and implemented for this facility; see specific requirements in the SPECIAL CONDITIONS section of the permit.
- ✓ The facility may attach the SWPPP or corrective action reports (CARs) to the application to provide overall knowledge about specific BMPs at the site. If the facility is seeking higher benchmarks, or there is need to inform the permit writer of the steps taken to achieve benchmarks, additional information must be attached to the application.

SUFFICIENTLY SENSITIVE ANALYTICAL METHODS

Please review Standard Conditions Part 1, §A, No. 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 or 40 CFR 136 unless alternates are approved by the Department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in any given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. The reporting limits established by the chosen laboratory must be below the lowest effluent limits established for the specified parameter (including any parameter's future limit after an SOC) in the permit unless the permit provides for an ML or if the facility provides a written rationale to the Department. It is the facility's responsibility to ensure the laboratory has adequate equipment and controls in place to quantify the pollutant. Inflated reporting limits will not be accepted by the Department if the reporting limit is above the parameter value stipulated in the permit. A method is "sufficiently sensitive" when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A facility is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

PART IV. EFFLUENT LIMIT DETERMINATIONS

OUTFALL #001 & #003 – STORMWATER OUTFALLS

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MAXIMUM LIMIT	BENCH-MARK	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FLOW	MGD	*	-	SAME	ONCE/QUARTER	QUARTERLY	24 HR. ESTIMATE
CONVENTIONAL							
COD	mg/L	**	120	120	ONCE/QUARTER	QUARTERLY	GRAB
OIL & GREASE	mg/L	**	15	15	ONCE/QUARTER	QUARTERLY	GRAB
pH †	SU	6.5-9.0	-	SAME	ONCE/QUARTER	QUARTERLY	GRAB
TSS	mg/L	**	100	100	ONCE/QUARTER	QUARTERLY	GRAB
NUTRIENTS							
AMMONIA AS N	mg/L	**	12.1	12.1	ONCE/QUARTER	QUARTERLY	GRAB

* monitoring and reporting requirement only
** monitoring with associated benchmark
† report the minimum and maximum pH values; pH is not to be averaged

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Flow

Per 40 CFR Part 122.44(i)(1)(ii) the volume of effluent discharged from each outfall is needed to ensure compliance with permitted effluent limitations. If the facility is unable to obtain effluent flow, then it is the responsibility of the facility to inform the Department, which may require the submittal of an operating permit modification. The facility will report the total maximum daily flow in millions of gallons per day (MGD), quarterly monitoring continued from previous permit.

CONVENTIONAL:

Chemical Oxygen Demand (COD)
Monitoring with 120 mg/L daily maximum benchmark is included using best professional judgment under 10 CSR 20-6.200(6)(B)2.C. There is no numeric water quality standard for COD; however, increased oxygen demand may impact instream water quality. COD is also a valuable indicator parameter. COD monitoring allows the facility to identify increases in COD may indicate materials/chemicals coming into contact with stormwater causing an increase in oxygen demand. Increases in COD may indicate a need for maintenance or improvement of BMPs. The facility reported from 1 to 173 mg/L in the last permit term. The benchmark value falls within the range of values implemented in other permits having similar industrial activities and is achievable through proper BMP controls.

Oil & Grease
Monitoring with a daily maximum benchmark of 10 mg/L; using best professional judgment under 10 CSR 20-6.200(6)(B)2.C. The facility reported from 1.6 to 10.4 mg/L in the last permit. Oil and grease is considered a conventional pollutant. Oil and grease is a comprehensive test which measures for gasoline, diesel, crude oil, creosote, kerosene, heating oils, heavy fuel oils, lubricating oils, waxes, and some asphalt and pitch. The test can also detect some volatile organics such as benzene, toluene, ethylbenzene, or xylene, but these constituents are often lost during testing due to their boiling points. It is recommended to perform separate testing for these constituents if they are a known pollutant of concern at the site, i.e. aquatic life toxicity or human health is a concern. Results do not allow for separation of specific pollutants within the test, they are reported, totaled, as "oil and grease". Per 10 CSR 20-7.031 Table A1: *Criteria for Designated Uses*; 10 mg/L is the standard for protection of aquatic life. This standard will also be used to protect the general criteria found at 10 CSR 20-7.031(4). 10 mg/L is the level at which sheen is expected to form on receiving waters. Oils and greases of different densities will possibly form sheen or unsightly bottom deposits at levels which vary from 10 mg/L. To protect the general criteria, it is the responsibility of the facility to visually observe the discharge and receiving waters for sheen or bottom deposits. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities. The benchmark this permit applies does not allow the facility to violate general criteria 10 CSR 20-7.015(4) even if data provided are below the benchmark.

pH
6.0 SU minimum to 9.0 SU maximum benchmarks are applicable to the stormwater outfalls. Using RPD, the stormwater has no reasonable potential to negatively impact water quality therefore a benchmark is applied; previous limits removed, see Part III ANTIBACKSLIDING. The facility reported from 6.55 to 7.55 SU in the last permit term at all outfalls. pH is a fundamental water quality indicator. This benchmark serves to provide general information about the stormwater discharges at the site and is included using RPD and under 10 CSR 20-6.200(6)(B)2.C.

Total Suspended Solids (TSS)
Monitoring with a daily maximum benchmark of 100 mg/L. There is no numeric water quality standard for TSS; however, sediment discharges can negatively impact aquatic life habitat. TSS is also a valuable indicator parameter. TSS monitoring allows the facility to identify increases in TSS indicating uncontrolled materials leaving the site. Increased suspended solids in runoff can lead to decreased available oxygen for aquatic life and an increase of surface water temperatures in a receiving stream. Suspended solids can also be carriers of toxins, which can adsorb to the suspended particles; therefore, total suspended solids are a valuable indicator parameter for other pollution. The facility reported from 1 to 54.7 mg/L in the last permit term. The benchmark is achievable through proper operational and maintenance of BMPs and falls within the range of values implemented in other permits having similar industrial activities.

NUTRIENTS:

Ammonia, Total as Nitrogen
Nitrogen is expected to be present in this discharge therefore quarterly monitoring is required per 10 CSR 20-7.015(9)(D)8.B.

PERMITTED FEATURE #002 – NO-DISCHARGE WASTEWATER STRUCTURE

EFFLUENT LIMITATIONS TABLE:

PARAMETERS	UNIT	DAILY MINIMUM	MONTHLY AVERAGE	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
PHYSICAL							
FREEBOARD	FEET	2.0	*	NEW	ONCE MONTH	MONTHLY	MEASUREMENT

DERIVATION AND DISCUSSION OF LIMITS:

PHYSICAL:

Freeboard

2 foot minimum freeboard level pursuant to 10 CSR 20-8.200(4)(A)3 for storage structures exposed to precipitation. Monthly monitoring of the freeboard in the structure is required to ensure proper operational controls. This permitted feature was determined to be no-discharge. As such, an antidegradation review was not conducted and discharge authorization has not been granted. To ensure the structure remains no-discharge, comply with all BMPs listed, monitor freeboard/liquid levels, and report highest reading monthly. Permits only authorize discharges after the facility has documented compliance with state and federal Clean Water laws and regulations, including antidegradation and construction requirements. Freeboard is the distance between the top of the liquid level and the bottom of the discharge pipe or canal. Freeboard is measured to the nearest inch and is reported in tenths of feet.

PERMITTED FEATURES #007-#077 – SURFICIAL LAND APPLICATION OPERATIONAL MONITORING

IRRIGATION OPERATIONS TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
IRRIGATION ACTIVITY							
APPLICATION AREA	ACRES	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	RECORD
APPLICATION RATE	GAL/ACRE	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	RECORD
IRRIGATION PERIOD	HOURS	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	RECORD
VOLUME IRRIGATED	GALLONS	*	*	SAME	ONCE/DAY ♠	ONCE/MONTH	RECORD

♠ Facility will maintain records for each day land application occurred. If no application occurred, a record is not required.

LAND APPLICATION OPERATIONAL MONITORING:

Application Area

Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, reporting the area utilized will allow the Department to ensure compliance with setback distances. Adhering to the required setbacks prevents illicit discharges to waterbodies.

Application Rate

Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, monitoring the rate will allow the Department to ensure appropriate permeability and plant uptake is occurring. Rates of application must be adjusted based on soil saturation; and rate monitoring will prevent soil saturation conditions possibly resulting in runoff or illicit discharges to waterbodies.

Irrigation Period

Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200 monitoring of irrigation period is required. Monitoring the irrigation period will also ensure soils do not get saturated and result in runoff or cause illicit discharges to waterbodies.

Volume Irrigated

Recording and reporting requirement only. In order to determine compliance with 10 CSR 20-6.015 and 10 CSR 20-8.200, monitoring of application activity is required. Monitoring the volume irrigated will allow the Department to ensure over application does not occur, and appropriate hydraulic loading is maintained within design levels. This will also help prevent runoff and illicit discharges due to soil saturation.

PERMITTED FEATURE #002 – IRRIGATION WASTEWATER MONITORING

IRRIGATED WASTEWATER MONITORING TABLE:

PARAMETERS	UNIT	DAILY MAX	MONTHLY AVG.	PREVIOUS PERMIT LIMITS	MINIMUM SAMPLING FREQUENCY	MINIMUM REPORTING FREQUENCY	SAMPLE TYPE
CONVENTIONAL							
OIL & GREASE	mg/L	*		SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PH †	SU	*		SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
NUTRIENTS							
TOTAL NITROGEN	µg/L	*		SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PHOSPHORUS, TOTAL	µg/L	*		SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
OTHERS							
CHLORIDE	mg/kg	*		NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB
SODIUM	mg/L	*		SAME	ONCE/QUARTER	ONCE/QUARTER	GRAB
PERCENT SOLIDS	%	*		NEW	ONCE/QUARTER	ONCE/QUARTER	GRAB

* monitoring and reporting requirement only
† report the minimum and maximum pH values; pH is not to be averaged

IRRIGATION WASTEWATER MONITORING DERIVATION OF REQUIREMENTS:
A sample is required annually even if no irrigation took place.

CONVENTIONAL:

Oil & Grease
Monitoring of the wastewater prior to land application is necessary to ensure soils have the capacity to absorb any oils or greases. Runoff containing any sheen is prohibited by general criteria pursuant to 10 CSR 20-7.015(4).

pH
Monitoring requirement only. In accordance with 10 CSR 20-20-6.015(4)(C)1 monitoring for pH is included to ensure that soil pH is in the optimal range for plant growth and nutrient utilization.

NUTRIENTS:

Total Nitrogen
Monitoring requirement only. Monitoring the area will allow the permittee to ensure compliance with 10 CSR 20-6.015(4)(A)1., and ensure appropriate nutrient utilization.

Phosphorous, Total
Monitoring requirement only. Monitoring the area will allow the permittee to ensure compliance with 10 CSR 20-6.015(4)(A)1., and ensure appropriate nutrient utilization.

OTHER:

Chloride
Monitoring requirement only. Monitoring the area will allow the permittee to ensure compliance with 10 CSR 20-6.015(4)(A)1., and ensure appropriate nutrient utilization.

Sodium. Monitoring requirement only. Monitoring the area will allow the permittee to ensure compliance with 10 CSR 20-6.015(4)(A)1. and ensure appropriate nutrient utilization.

Percent Solids
Monitoring requirement only. Monitoring the area will allow the permittee to ensure compliance with 10 CSR 20-6.015(4)(A)1., and ensure appropriate nutrient utilization.

PART V. ADMINISTRATIVE REQUIREMENTS

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION

Permits are normally issued on a five-year term, but to achieve watershed synchronization some permits will need to be issued for less than the full five years as allowed by regulation. The intent is all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow the Department to explore a watershed based permitting effort at some point in the future.

✓ Industrial permits are not being synchronized.

PUBLIC NOTICE

The Department shall give public notice a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing. https://dnr.mo.gov/water/what-were-doing/public-notices The Department must issue public notice of a draft operating permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wishing to submit comments regarding this proposed operating permit, please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments. All comments must be in written form.

✓ The Public Notice period for this operating permit was from February 2, 2024 to March 4, 2024. No comments were received.

DATE OF FACT SHEET: NOVEMBER 13, 2023

COMPLETED BY:

KYLE O'ROURKE, ENVIRONMENTAL PROGRAM SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
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STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions
Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements**.
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures**. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
   a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
   b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.

c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance**. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information**. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
   a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
   b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance**. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

REC'D 09/22/22

AP 40321

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FORM A – APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
JET PAY CONFIRMATION NUMBER	

PLEASE READ ALL THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.
SUBMITTAL OF AN INCOMPLETE APPLICATION MAY RESULT IN THE APPLICATION BEING RETURNED.

IF YOUR FACILITY IS ELIGIBLE FOR A NO EXPOSURE EXEMPTION:
Fill out the No Exposure Certification Form (Mo 780-2828): https://dnr.mo.gov/forms/780-2828-f.pdf

1. REASON FOR APPLICATION:

☐ a. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____, is submitting an application for renewal, and there is no proposed increase in design wastewater flow. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.

☑ b. This facility is now in operation under permit MO – 0136760, is submitting an application for renewal, and there is a proposed increase in design wastewater flow. Antidegradation Review may be required. Annual fees will be paid when invoiced and there is no additional permit fee required for renewal.

☐ c. This is a facility submitting an application for a new permit (for a new facility). Antidegradation Review may be required. New permit fee is required.

☐ d. This facility is now in operation under Missouri State Operating Permit (permit) MO – _____ and is requesting a modification to the permit. Antidegradation Review may be required. Modification fee is required.

2. FACILITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
Kemin Industries, Inc.		417-498-6683	
ADDRESS (PHYSICAL)	**CITY**	**STATE**	**ZIP CODE**
519 North 3rd Street	Verona	MO	65769

3. OWNER

NAME		TELEPHONE NUMBER WITH AREA CODE	
Kemin Industries, Inc.		515-559-5100	
EMAIL ADDRESS			
libby.nelson@kemin.com			
ADDRESS (MAILING)	**CITY**	**STATE**	**ZIP CODE**
1900 Scott Avenue	Des Moines	IA	50317

4. CONTINUING AUTHORITY

NAME		TELEPHONE NUMBER WITH AREA CODE	
-NA-			
EMAIL ADDRESS			
ADDRESS (MAILING)	**CITY**	**STATE**	**ZIP CODE**

5. OPERATOR CERTIFICATION

NAME	CERTIFICATE NUMBER	TELEPHONE NUMBER WITH AREA CODE	
-NA-			
ADDRESS (MAILING)	**CITY**	**STATE**	**ZIP CODE**

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
Erick Hall	EHS Manager	417-498-6683
E-MAIL ADDRESS		
erick.hall@kemin.com		

7. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary.

NAME			
-NA-			
ADDRESS	**CITY**	**STATE**	**ZIP CODE**

8. ADDITIONAL FACILITY INFORMATION

8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

For Universal Transverse Mercator (UTM), use Zone 15 North referenced to North American Datum 1983 (NAD83)

001 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

002 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____¼ _____¼ Sec _____ T _____ R _____ _____ County
UTM Coordinates Easting (X): _____ Northing (Y): _____

See Attachment E for this information.

Include all subsurface discharges and underground injection systems for permit consideration.

8.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

Primary SIC 2048 and NAICS 311119 SIC 2048 and NAICS 311119
SIC 2048 and NAICS 311119 SIC 2048 and NAICS 311119

9. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION

A. Is this permit for a manufacturing, commercial, mining, solid/hazardous waste, or silviculture facility? YES ☐ NO ☑
If yes, complete Form C.

B. Is the facility considered a "Primary Industry" under EPA guidelines (40 CFR Part 122, Appendix A) : YES ☑ NO ☐
If yes, complete Forms C and D.

C. Is wastewater land applied? YES ☑ NO ☐
If yes, complete Form I.

D. Are sludge, biosolids, ash, or residuals generated, treated, stored, or land applied? YES ☑ NO ☐
If yes, complete Form R.

E. Have you received or applied for any permit or construction approval under the CWA or any other environmental regulatory authority? YES ☑ NO ☐
If yes, please include a list of all permits or approvals for this facility:
Environmental Permits for this facility: MORA20126

F. Do you use cooling water in your operations at this facility? YES ☐ NO ☑
If yes, please indicate the source of the water: _____

G. Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.

10. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data. **One of the following must be checked in order for this application to be considered complete.** Please visit https://dnr.mo.gov/env/wpp/edmr.htmfor information on the Department's eDMR system and how to register.

☐ - I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.

☑ - I have already registered an account online to participate in the Department's eDMR system through MoGEM.

☐ - I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

☐ - The permit I am applying for does not require the submission of discharge monitoring reports.

11. FEES

Permit fees may be paid by attaching a check, or online by credit card or eCheck through the JetPay system. Use the URL provided to access JetPay and make an online payment:
For new permits: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591

For modifications: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596

12. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
Elizabeth A. Nelson-Vice President and General Counsel	515-559-5100
SIGNATURE	DATE SIGNED

BEFORE SUBMITTING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

INSTRUCTIONS FOR COMPLETING FORM A - APPLICATION FOR NONDOMESTIC PERMIT

1. Check which option is applicable. **Do not check more than one item.** Nondomestic permit refers to permits issued by the Department of Natural Resources' Water Protection Program for all **nondomestic** wastewater treatment facilities, including all industry, stormwater, and Class IA Concentrated Animal Feeding Operations (CAFO). **This includes all nondomestic wastewater treatment facilities that incorporate domestic wastewater into the operating permit.**

   For some new or modified permits, a construction permit is required prior to beginning construction at the facility. For other permits, an exemption is provided from construction permit requirements. Please review the requirements at http://dnr.mo.gov/env/wpp/permits/ww-construction-permitting.htm. If the facility is for wastewater treatment and is designed for greater than 22,500 gallons per day, the engineering report must be submitted and approved prior to submittal of the application, fee, plans, and specifications. A summary of design data must be submitted with the engineering plans and specifications.

   For new wastewater facilities, some wastewater permit modifications, and some permit renewals with proposed increase in design wastewater flow, an antidegradation review may be required. Please visit https://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm for more information

2. Facility - Provide the name by which this facility is known locally. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Also include the street address or location of the facility. If the facility lacks a street name or route number, give the names of the closest intersection, highway, county road, etc.

3. Owner - Provide the legal name and address of owner or company.

4. Continuing Authority – A continuing authority is a company, business, entity, or person(s) operating the facility and/or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority's name must be listed **exactly** as it appears on the Missouri Secretary of State's (SoS's) webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS.

5. Operator - Provide the name, certificate number, mailing address and telephone number of the person operating the facility, if required by regulation (10 CSR 20-9.020(2)). Most industrial facilities will not be required to have a certified wastewater operator.

6. Provide the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility, with the facts reported in this application, and who can be contacted by the department, if necessary. This person will need to be available to respond to emails which will include pre-public notice drafts of permits.

7. Please provide the name and address of the first downstream landowner, different from that of the permitted facility, through whose property the discharge will flow. Also, please indicate the location on the map. For discharges that leave the permitted facility and flow under a road or highway, or along the right-of-way, the downstream property owner is the landowner that the discharge flows to after leaving the right-of-way. For no discharge facilities, provide this information for the location where discharge would flow if there was one. For land application sites, include the owners of the land application sites and all adjacent landowners.

8.1 An outfall is the point at which wastewater or stormwater is discharged. Outfalls should be given in terms of the legal description of the facility. Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, please use a mapping system to approximate the coordinates. This section also needs to include any subsurface discharges, discharges to groundwater, sinkholes or subsurface seepage from storage basins. This section also needs to include underground injection into wells, conduits to groundwater and shallow subsurface dispersal fields (leach fields).

8.2 List only your primary Standard Industrial Classification (SIC), and North American Industry Classification System (NAICS) code for each outfall. The SIC system was devised by the U.S. Office of Management and Budget to cover all economic activities. To find the correct SIC code, an applicant may check his or her unemployment insurance forms or contact the Missouri Division of Employment Security, 573-751-3215. The primary SIC code is that of the operation that generates the most revenue. If this information is not available, the number of employees or, secondly, production rate may be used to determine your SIC code. Additional information for Standard Industrial Codes can be found at www.osha.gov/pls/imis/sicsearch.html and for the North American Industry Classification System at www.census.gov/naics or contact the appropriate Department of Natural Resources regional office.

INSTRUCTIONS FOR COMPLETING FORM A - APPLICATION FOR NONDOMESTIC PERMIT (CONTINUED)

9. If you answer yes to A, B, C, D, or E, then you must complete and file the supplementary form(s) indicated. 40 CFR 122.21(f) and (g) requires the facility to submit the information requested herein. For 9.E., please include all permits or approvals, including construction, issued under the Hazardous Waste Management Program (RCRA), the Safe Drinking Water Act, Clean Air Act, or any other permits issued under the Clean Water Act.

   A U.S. Geological Survey 1" = 2,000' scale map must be submitted with the permit application showing all outfalls, the receiving stream and the location of the downstream property owners. This type of map can be obtained from the Missouri Department of Natural Resources' Geological Survey in Rolla at 573-368-2100 or various online mapping applications.

10. Electronic Discharge Monitoring Report (eDMR) Submission System – Visit the eDMR site at http://dnr.mo.gov/env/wpp/edmr.htm and click on the "Facility Participation Package" link. The eDMR Permit Holder and Certifier Registration Form and information about the eDMR system can be found in the Facility Participation Package.

    Waivers from electronic reporting may be granted by the Department per 40 CFR 127.15 under certain, special circumstances. A written request must be submitted to the Department for approval. Waivers may be granted to facilities owned or operated by:
    A. Members of religious communities that choose not to use certain technologies.
    B. Permittees located in areas with limited broadband access. The National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC) have created a broadband internet availability map: http://www.broadbandmap.gov/. Please contact the department if you need assistance.

11. Please visit https://dnr.mo.gov/pubs/pub2564.htm for permit fees. This form must be submitted with the application fee if requesting a new permit, permit modification or permit transfer.

    Fee schedules are listed in regulation at 10 CSR 20-6.011, https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf.

    Incomplete permit applications and/or related engineering documents will be returned by the department if they are not completed in the time frame established in a comment letter from the department to the owner. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

12. Certification/Signature - All applications must be signed as follows and the signature must be **original**:
    A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
    B. For a partnership or sole proprietorship, by a general partner or the proprietor.
    C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

Send completed form and fees (if not submitted electronically) to: :
cleanwaterpermits@dnr.mo.gov or Missouri Department Of Natural Resources Water Protection Program Water Pollution Control Branch ATTN: Operating Permits Section P.O. BOX 176 JEFFERSON CITY, MO 65102-0176

If there are any questions concerning this form, contact the Department of Natural Resources' Water Protection Program, Operating Permits Section at 800-361-4827 or 573-522-4502.

FORM A-APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW
8.1 ADDITIONAL FACILITY INFORMATION[1] (Page 1 of 2)
SEPTEMBER 21, 2022
KEMIN INDUSTRIES, VERONA, MISSOURI
RENEWAL PERMIT MO-0136760

OUTFALL	¼	¼	SEC	TWN	RNG	COUNTY	ACRES	ZONE	UTM (E)	UTM (N)	DESCRIPTOR[1]	RECEIVING STREAM	1st CLASSIFIED STREAM ID	USGS HUC12
1	NW	NE	17	26N	26W	Lawrence	0	15S	429035	4091725	Existing Stormwater Outfall	Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
2	NW	NE	17	26N	26W	Lawrence	0	15S	429060	4091735	Existing Tank & Lagoon Storage	Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
3	NW	NE	17	26N	26W	Lawrence	0	15S	429032	4091624	Existing Stormwater Outfall	Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
4		NW	8	25N	26W	Barry	160	15S	428180	4083305	Chad Kelly	Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
5	SW	NW	4	25N	26W	Barry	40	15S	429681	4084700	Grimm #1	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
6	SW	NW	32	26N	25W	Barry	40	15S	437698	4086251	Bass	Little Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
7	SW	SE	5	25N	26W	Barry	40	15S	428849	4083897	Gerald Seitz #1	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
8	SE	SW	5	25N	26W	Barry	40	15S	428358	4083932	Gerald Seitz #2	Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
9	N/2	SE	5	25N	26W	Barry	80	15S	428803	4084369	Gerald Seitz #3	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
10	W/2	NE	32	26N	26W	Barry	80	15S	428870	4086619	Vaught #1	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
11	E/2	NW	32	26N	26W	Barry	80	15S	428501	4086750	Vaught #2	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
12	N/2	SE	32	26N	26W	Barry	80	15S	428926	4086028	Vaught #3	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
13	S/2	NW	13	25N	26W	Barry	80	15S	434603	4081318	Schellen #1	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
14	NW	SE	18	25N	25W	Barry	40	15S	436834	4080788	Schellen #2	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
15	NE	SE	18	25N	25W	Barry	40	15S	437144	4080870	Schellen #3	West Fork Jenkins Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0405
16	NE	NE	23	25N	26W	Barry	40	15S	433960	4080085	Mattox #1	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
17		SE	14	25N	26W	Barry	160	15S	433861	4080816	Mattox #2	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
18	SE	SE	7	25N	25W	Barry	40	15S	437195	4082057	Mattox #3	Little Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
19		N/2	18	25N	25W	Barry	320	15S	436588	4081511	Mattox #4	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
20	NW	NE	4	25N	26W	Barry	40	15S	430493	4085116	Hanson #1	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
21	E/2	NE	4	25N	26W	Barry	80	15S	430849	4085074	Hanson #3	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
22	SW	NE	4	25N	26W	Barry	40	15S	430498	4084708	Hanson #4	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
23	SE	SE	33	26N	26W	Barry	40	15S	430768	4085624	L. Henson	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
24		N/2	22	25N	26W	Barry	320	15S	431724	4080058	Williams	Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0407
25	SW	SW	2	25N	26W	Barry	40	15S	432831	4083811	Weatherman	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
26			23	25N	26W	Barry	480	15S	433008	4079480	Williams #2	Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0407
27	SW	NW	24	25N	26W	Barry	40	15S	434369	4079849	Newman #1	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
28	SE	NW	24	25N	26W	Barry	40	15S	434712	4079870	Newman #2	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
29	NE	NW	24	25N	26W	Barry	40	15S	434711	4080043	Newman #3	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
30	NE	NW	9	25N	26W	Barry	40	15S	430139	4083518	Grimm #2	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
31	SW	SE	8	26W	26N	Lawrence	0	15S	429109	4091933	New Detention Pond South	Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
32	SW	SE	8	26W	26N	Lawrence	0	15S	429182	4092042	New Detention Pond East	Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
33	SW	SE	8	26W	26N	Lawrence	0	15S	429208	4092069	New Detention Pond North	Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
34	SW	SE	8	26W	26N	Lawrence	0	15S	429154	4091973	New Wastewater Storage Tank	Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
35	SE	SW	19	26N	25W	Lawrence	13	15S	436660	4088537	Bud Payne #1	Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
36	NE	NW	30	26N	25W	Lawrence	10	15S	436620	4088362	Bud Payne #2	Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
37	E/2	NE	23	26N	26W	Lawrence	15	15S	434154	4089765	Bud Payne #3	Douger Branch Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0101
38	SE	SW	14	25N	26W	Barry	14	15S	433269	4080440	Cale Jones #1	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
39	SW	SW	14	25N	26W	Barry	28	15S	432656	4080512	Cale Jones #2	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
40	W/2	SE	31	26N	25W	Barry	36	15S	436772	4085507	Colby Mattox #1	Little Crane Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502

FORM A-APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW
8.1 ADDITIONAL FACILITY INFORMATION[1] (Page 2 of 2)
SEPTEMBER 21, 2022
KEMIN INDUSTRIES, VERONA, MISSOURI
RENEWAL PERMIT MO-0136760

OUTFALL	¼	¼	SEC	TWN	RNG	COUNTY	ACRES	ZONE	UTM (E)	UTM (N)	DESCRIPTOR[1]	RECEIVING STREAM	1st CLASSIFIED STREAM ID	USGS HUC12
41	NE	SW	31	26N	25W	Barry	15	15S	436542	4085512	Colby Mattox #2	Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
42	SW	SE	31	26N	25W	Barry	10	15S	436840	4085292	Colby Mattox #3	Little Crane Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
43	N/2	SW	31	26N	25W	Barry	30	15S	436338	4085836	Colby Mattox #4	Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
44	SW	SW	17	25N	25W	Barry	30	15S	437691	4080525	Colby Mattox #5	West Fork Jenkins Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0405
45	SW	SE	11	25N	25W	Barry	40	15S	433661	4082140	Cope Barn	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
46	S/2	S/2	12	25N	26W	Barry	120	15S	435196	4082108	Cope Lake	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
47	NE	SW	12	25N	26W	Barry	40	15S	434438	4082528	Cope House	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
48	SE	2W	12	25N	26W	Barry	31	15S	434891	4082768	Cope North Pasture	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
49	NE	SW	11	25N	26W	Barry	40	15S	433243	4082557	Cope North 40	Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
50	NE	NW	14	25N	26W	Barry	40	15S	433204	4081774	Hooton 40	Calton Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
51	NW	NW	29	25N	24W	Stone	25	15S	447081	4078077	Gary Evans #1	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
52	SE	NE	30	25N	24W	Stone	25	15S	446922	4077687	Gary Evans #2	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
53	S/2	NW	29	25N	24W	Stone	50	15S	447335	4077826	Gary Evans #3	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
54	SW	NW	29	25N	24W	Stone	13	15S	447050	4077736	Gary Evans #4	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
55	NW	SW	29	25N	24W	Stone	35	15S	447242	4077205	Gary Evans #5	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
56	E/2	SW	29	25N	24W	Stone	80	15S	447521	4077252	Gary Evans #6	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
57	SW	SW	29	25N	24W	Stone	28	15S	447255	4077063	Gary Evans #7	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
58	N/2	NW	32	25N	24W	Stone	50	15S	447283	4076662	Gary Evans #8	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
59	NW	SW	14	25N	25W	Barry	18	15S	442459	4080799	Guthrie Sturgell #1	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0504
60	NE	SW	14	25N	25W	Barry	8	15S	442738	4080705	Guthrie Sturgell #2	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
61	S/2	NW	1	25N	26W	Barry	60	15S	434481	4084546	Guthrie Sturgell #3	Spring River Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0101
62	S/2	SE	25	29N	29W	Lawrence	38	15S	407578	4117018	J. D. Geyer	White Oak Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0503
63	SW	SW	20	25N	24W	Stone	15	15S	447036	4078624	Caleb Sparks #1	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
64	SE	SW	20	25N	24W	Stone	15	15S	447690	4078555	Caleb Sparks #2	Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
65	SW	NW	13	27N	28W	Lawrence	60	15S	416507	4101321	Mike Nelson	Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0505
66	SE	SW	30	27N	25W	Lawrence	15	15S	436958	4096750	Todd Wood #1	Elm Branch	100K Extent-Remaining Streams (C) (3960)	11070207-0103
67	SE	SW	30	27N	25W	Lawrence	15	15S	436775	4096720	Todd Wood #2	Elm Branch	100K Extent-Remaining Streams (C) (3960)	11070207-0103
68	SW	NW	19	25N	24W	Stone	50	15S	445597	4079410	Gerald Evans #1	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
69	NW	NW	19	25N	24W	Stone	22	15S	445526	4079863	Gerald Evans #2	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
70	NE	NW	19	25N	24W	Stone	15	15S	445957	4079635	Gerald Evans #3	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
71	NE	NW	19	25N	24W	Stone	20	15S	445983	4079843	Gerald Evans #4	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
72	SW	NE	19	25N	24W	Stone	32	15S	446382	4079389	Gerald Evans #5	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
73	NW	NE	19	25N	24W	Stone	14	15S	446264	4079605	Gerald Evans #6	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
74	NW	NE	19	25N	24W	Stone	25	15S	446383	4079807	Gerald Evans #7	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
75	NE	SW	19	25N	24W	Stone	70	15S	446049	4079153	Gerald Evans #8	Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504

TOTAL LAND APPLICATION ACREAGE	**3870**
NUMBER OF LAND APPLICATION SITES	**68**

[1] Outfalls 1 through 30 previously permitted under MO-0136760 and previous outfall numbering retained this renewal.

SCHEDULE OF ATTACHMENTS
KEMIN PROTEINS, INC.
MO-013760 RENEWAL
SEPTEMBER 21, 2022

Attachment A: Site Index Map
Attachment B: Construction Plans for New Facility
Attachment C: Narrative
Attachment D: Kemin Plant Process Wastewater Storage Volumes & Inventory
Attachment E: MoDNR Form A-Application for Domestic Permit Under Missouri Clean Water Law
Attachment F: MoDNR Form A Section 8.1 Tabulation of Outfall Characteristics (Excel)
Attachment G: MoDNR Form C Application for Discharge Permit-Manufacturing, Commercial, Mining, Silviculture Operations and Stormwater
Attachment H: MoDNR Form C Section 2 Flow Diagram
Attachment I: MoDNR Form C Table 1 Section 3.0 Items A and B
Attachment J: MoDNR Form I-Permit Application for Operation of Wastewater Irrigation Systems
Attachment K: MoDNR Form I Section 3.0 Exhibits of Land Application Sites
Attachment L: Authorization for Offsite Process Wastewater Disposal from City of Springfield-Southwest Treatment Facility
Attachment M: Process Wastewater Analysis
Attachment N: Land Application Sites Soil Analyses

Original Filing 09-21-22
Future Filing

WASTEWATER CONTRIBUTION PERMIT

Permit No. # 597

In accordance with the provisions of Chapter 120 of the Springfield City Code,

Kemin Industries, Inc
519 N 3rd Street
Verona, MO 65769

is hereby authorized to discharge industrial pretreatment wastewater from the above identified facility and through the outfalls identified herein to the City of Springfield Northwest Wastewater Treatment Plant in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the Permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit.

Noncompliance with any term or condition of this permit shall constitute a violation of the City of Springfield sewer use ordinance. This permit shall become effective on July 1, 2020 and shall expire at midnight on July 1, 2023.

If the Permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of Chapter 120-200, a minimum of 90 days prior to the expiration date.

PART 1 - EFFLUENT LIMITATIONS

A. During the effective period of this permit, the Permittee is authorized to discharge wastewater regulated by to the City of Springfield sewer system from the outfall listed below.

Outfall	Description
001	Rich Waste Collection Pit
002	Wastewater Lagoon

B. During the effective dates of this permit, the discharge from these outfalls shall not exceed the following effluent limitations. Effluent from Outfalls 001 and 002 consist of wastewater generated from production of poultry by product production and equipment cleaning processes.

OUTFALLS 001 & 002

Parameter	**Daily Maximum (mg/L)**
Flow	Monitoring Requirement Only
Arsenic, T	0.51
Cadmium, T	0.13
Chromium, T	2.91
Copper, T	2.44
Cyanide, T	0.33
Lead, T	0.53
Mercury, T	0.02
Nickel, T	5.79
Zinc, T	6.54
Oil & Grease (A/V)	100
Ammonia Nitrogen	Monitoring Requirement Only
Phosphorus, T	Monitoring Requirement Only
pH	12.5 (maximum) 5.0 (minimum)
Flashpoint	>140° F

C. All discharges shall comply with all other applicable laws, regulations, standards, and requirements contained in Article III of Chapter 120, 40 CFR 403, and any other applicable State and Federal pretreatment laws, regulations, standards, and requirements including any such laws, regulations, standards, or requirements that may become effective during the term of this permit.

PART 2 - MONITORING REQUIREMENTS

A. During the effective period of this permit, the Permittee shall monitor the following outfalls for the following parameters, at the indicated frequency:

OUTFALLS 001 & 002

Parameter (units)	Sample Measurement Location	Frequency*	Sample Type
Flow (gpd)		Continuous[2]	
Arsenic, T	See Note [1]	1/ Semiannual	Composite
Cadmium, T	See Note [1]	1/ Semiannual	Composite
Chromium, T	See Note [1]	1/ Semiannual	Composite
Copper, T	See Note [1]	1/ Semiannual	Composite
Lead, T	See Note [1]	1/ Semiannual	Composite
Mercury, T	See Note [1]	1/ Semiannual	Composite
Nickel, T	See Note [1]	1/ Semiannual	Composite
Zinc, T	See Note [1]	1/ Semiannual	Composite
Ammonia Nitrogen	See Note [1]	1/ Semiannual	Composite
Phosphorus, T	See Note [1]	1/ Semiannual	Composite
pH	See Note [1]	1/ Semiannual	Grab[3]
Cyanide T	See Note [1]	1/ Semiannual	Grab
Flashpoint	See Note [1]	1/ Semiannual	Grab
Oil & Grease (A/V)	See Note [1]	1/ Semiannual	Grab

Notes

* Sampling frequencies are based upon the information provided to the City of Springfield during the application process. The semiannual sampling period shall consist of one sample taken during the period of January thru June and another during July thru December.

1- Samples shall be collected at the wastewater collection tank sampling access point or load out area capable of collecting representative wastewater samples.

2- Daily flow shall be based upon the total gallons of wastewater transported to the City of Springfield Southwest Wastewater Treatment Plant, based upon full vehicle tank capacity in gallons. **The Permittee shall report a summary of daily flows to the City of Springfield monthly.**

3- Wastewater pH shall be analyzed on site or within 15 minutes using **40 CFR 136** approved testing methods.

B. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with **40 CFR Part 136** and amendments thereto unless specified otherwise in the monitoring conditions of this permit.

PART 3 - REPORTING REQUIREMENTS

A. Monitoring Reports

Each monitoring report shall indicate the concentration of all pollutants in the effluent for which sampling and analysis were performed during the sampling period and shall be summarized and reported in writing on a self monitoring report form or in a format providing the required information. The reports are due on the 28th day of the month following the completed reporting period.

C. If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by EPA or as specified in this permit, the results of such monitoring shall be reported in the monthly report submitted to the City of Springfield.

C. Automatic Resampling

If the results of the Permittee wastewater analysis indicate that a violation of this permit has occurred, the Permittee **must**:

1. **Inform the City of Springfield of the violation within 24 hours**; **and**

2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of the first violation, except the Permittee is not required to resample if:

   (a) The Control Authority performs sampling at the Permittee at a frequency of at least once per month or,

   (b) The Permittee performs sampling at a frequency of at least once per month.

   (c) The Control Authority performs sampling at the permitted between the time the Permittee performs its initial sampling and the time when the Permittee receives the results of this sampling.

D. Accelerated Sampling Schedule

When the Permittee becomes aware that noncompliance with their permit limitations has occurred, an accelerated sampling schedule shall be implemented until such time that no violations have occurred for a three month period from the last event of noncompliance.

Example:

1. Original permitted sampling frequency - Once semiannually.

2. A violation occurs resulting in a new sampling frequency of once per month consecutively for a period of three months. This accelerated sampling rate only applies to the pollutant that was in violation.

   (a) If no violation occurs during the accelerated sampling period, the sampling frequency then returns to the original permitted frequency.

   (b) If another violation occurs during the accelerated sampling period, then the sampling frequency shall be increased to three times per month for the next three months from the month of the last violation. If violations continue to occur the sampling frequencies could be accelerated incrementally to daily sampling.

   (c) If no violations occur during the accelerated period the sampling frequency reverts back to the original permitted frequency.

In addition to the increased sampling frequency, the User shall remain liable for violations as expressed in Article VIII, "Enforcement" of Chapter 120 of the Springfield City Code.

E. Accidental Discharge Report

1. The Permittee shall **immediately** notify the City of Springfield upon the occurrence of an accidental spill or discharge of substances prohibited by Article III of Chapter 120, or any slug loads or spills that may enter the public sewer. Environmental Services shall be notified by telephone at (417) 864-1923 to report an accidental permit violation, slug load, or spill. In addition, the **Southwest Wastewater Treatment Plant** may be notified by telephone by calling (417) 838-3082 and speaking with a shift supervisor or leaving a recorded message, including name, company name, a phone number, and information relating to the accidental discharge.

Permittee notification of accidental releases in accordance with this section does not relieve the Permittee of other reporting requirements that arise under local, State, or Federal laws. Emergency calls requesting dispatch of fire, police, or ambulance services should be made by calling Emergency Communications at **911**. Within five days following an accidental spill or slug discharge, the Permittee shall submit to the City of Springfield a detailed written report. The report shall specify:

(a) Description and cause of the upset, slug load, or accidental discharge, the cause thereof, and the impact on the Permittee compliance status. The description should also include location of discharge, type, concentration and volume of waste.

(b) Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.

(c) All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

F. All reports required by this permit shall be submitted to the City of Springfield at the following address:

CITY OF SPRINGFIELD
WASTEWATER OPERATIONS
755 N FRANKLIN AVENUE
SPRINGFIELD, MO 65802

PART 4 - SPECIAL CONDITIONS

SECTION 1 - ADDITIONAL/SPECIAL MONITORING REQUIREMENTS

No Special Conditions at this time.

PART 5 - STANDARD CONDITIONS

SECTION A GENERAL CONDITIONS AND DEFINITIONS

1. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

2. Duty to Comply

The Permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

3. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or correct any adverse impact to the publicly owned treatment works (POTW) or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliant discharge.

4. Permit Modification

This permit may be modified for good causes including, but not limited to, the following:

a. To incorporate any new or revised Federal, State, or local pretreatment standards or requirements.

b. Material or substantial alterations or additions to the discharger's operation processes, or discharge volume or character which were not considered in drafting the effective permit.

c. A change in any condition in either the Industrial User or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge.

d. Information indicating that the permitted discharge poses a threat to the POTW collection and treatment systems, POTW personnel or the receiving waters.

e. Violation of any terms or conditions of the permit.

f. Misrepresentation or failure to disclose fully all required reporting.

g. Revision of, or a grant of, variance from such categorical standards pursuant to 40 CFR 403.13.

h. To correct typographical or other errors in the permit.

i. To reflect transfer of the facility ownership and/or operation to a new owner/operator.

j. Upon request of the Permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

k. Incorporate any new or revised requirements and/or Best Management Practices standards or local limits.

l. Incorporate any new or revised requirements resulting from the City of Springfield reevaluation of its local limits.

m. Incorporate any new or revised requirements developed by City of Springfield as are necessary to ensure POTW compliance with applicable sludge management requirements promulgated by EPA (40 CFR 503) and the State of Missouri.

The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Permit Revocation

Any Industrial User who violates the following conditions of Chapter 120 or applicable State or Federal Regulations is subject to having their Wastewater Contribution Permit revoked. The Director shall reinstate such permit upon proof of elimination of the violation. These conditions are as follows:

a. Failure of an Industrial User to factually report the wastewater constituents and characteristics of the discharge.

b. Failure of the Industrial User to report significant changes in operations or wastewater constituents and characteristics.

c. Refusal of reasonable access to the Industrial User's premises for the purpose of inspection or monitoring.

d. Violation of conditions of the permit.

e. Failure of the Industrial User to notify the POTW of an accidental or slug discharge.

f. Failure to pay fines.

g. Failure to pay sewer charges and/or connection fees.

h. Failure to meet compliance schedules.

6. Permit Appeals

The Permittee may petition to appeal the terms of this permit within thirty (30) days of the notice. This petition must be in writing. Failure to submit a petition for review shall be deemed to be a waiver of the appeal. In the petition, the Permittee must indicate the permit provisions objected to, the reasons for this objection, and the alternative condition, if any, it seeks to be placed in the permit.

The effectiveness of this permit shall not be stayed pending reconsideration by the Director. If, after considering the petition and any arguments put forth by Environmental Services, the Director determines that reconsideration is proper, it shall remand the permit back to Clean Water Services for reissuance. Those permit provisions being reconsidered by the Superintendent shall be stayed pending reissuance.

The decision of the Director not to reconsider a final permit shall be considered final administrative action for purposes of judicial review.

7. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of Federal, State, or local laws or regulations.

8. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner and/or operator with prior approval of the Director:

a. The Permittee must give at least ninety (90) days advance notice to the Director.

b. The notice must include a written certification by the new owner which:

(i) States that the new owner has no immediate intent to change the facility's operations and processes.

(ii) Identifies the specific date on which the transfer is to occur.

(iii) Acknowledges full responsibility for complying with the existing permit.

9. Continuation of Expired Permits

An expired Wastewater Contribution Permit will continue to be effective and enforceable until the Wastewater Contribution Permit is reissued if:

a. The Industrial User has submitted a complete Wastewater Contribution Permit application at least ninety (90) days prior to the expiration of the User's existing Wastewater Contribution permit.

b. The failure to reissue the Wastewater Contribution permit, prior to expiration of the previous Wastewater Contribution Permit, is not due to any act or failure to act on the part of the Industrial user.

10. Dilution

No User shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in applicable Pretreatment Standards, or any other specific pollutant limitation developed by the City and/or State of Missouri.

11. Definitions

a. Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be collected either as a time composite sample: composed of discrete sample

aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a flow proportional composite sample: collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.

b. Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow or time.

c. Cooling Water -

1) Uncontaminated: Water used for cooling purposes only which has no direct contact with any raw material, intermediate, or final product and which does not contain a level of contaminants detectably higher than that of the intake water.

2) Contaminated: Water used for cooling purposes only which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials and/or wastewater.

d. Instantaneous Maximum Allowable Discharge Limit - The maximum concentration of a pollutant allowed to be discharged at any time, determined from the analysis of any discrete or composite sample collected, independent of the industrial flow rate and the duration of the sampling event.

e. Monthly Average

1) The arithmetic mean of the values for effluent samples collected during the calendar month or specified 30 day period (as opposed to a rolling 30 day window).

2) Four (4) day average - the arithmetic mean of the values for effluent samples collected over a period of four (4) consecutive days (as opposed to a rolling four (4) day window).

f. Upset - Means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee, excluding such factors as operational error, improperly

designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.

g. Bypass - Means the intentional diversion of wastes from any portion of a treatment facility.

12. Restricted Discharges

These general restrictions apply to all Users of the POTW whether or not the User is subject to National Categorical Pretreatment Standards or any other National, State, or Local Pretreatment Standards or Requirements.

a. No person shall contribute or cause to be contributed, directly or indirectly, any pollutant or wastewater which acting alone or in conjunction with other substances present in the POTW interferes with the operation or performance of the POTW or which causes or contributes to interference or pass through. A person shall not contribute substances to the POTW that may.

1) Create a fire or explosion hazard including, but not limited to gasoline, benzene, naphtha, fuel oil, or other flammable or explosive liquids, solids or gases with a closed cup flashpoint of less than 140° F (60° C) (the RCRA ignitability standard for liquid characteristic waste) using the test methods specified in 40 CFR 261.21. At no time shall two (2) successive readings over a one hour period on any explosion hazard meter, at the point of discharge into the POTW (or at any point in the POTW) be more than five percent (5%) nor shall any single reading be over ten percent (10%) of the Lower Explosive Limit (LEL).

2) Cause corrosive damage or hazard to structures, equipment or personnel of the POTW. In no case shall the discharges have a pH lower than 5.0 or higher than 12.5.

3) Cause obstruction to the flow in the POTW or other interference with the operation of the wastewater facilities due to accumulation of solid or viscous material such as but not limited to: grease, garbage with particles greater than one-half inch (½") in any dimensions, animal tissues, paunch manure, bones, hair, hides or flesh, entrails, blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, rags, plastics, tar, asphalt residues from refining or processing of fuel or lubricating oil, mud, or glass grinding, or polishing wastes.

4) Constitute a rate of discharge sufficient to cause interference with the operation and performance of the POTW.

5) Contain heat in amounts that will inhibit biological activity of the POTW treatment plant. In no case shall the temperature at the point of connection to the POTW exceed 150˚F (65.5˚C) or cause the temperature at the treatment plant influent to exceed 104˚F (40˚C).

6) Contain any garbage that has not been properly shredded.

7) Contain petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through.

8) Contain any noxious or malodorous liquids, gases or solids which either singly or by interaction with other wastes are sufficient to create a public nuisance or hazard to life and property or that result in toxic gasses, vapors, and fumes in a quantity that may cause acute worker health and safety problems.

9) Contain radioactive waste or isotopes of such half life or concentration as may exceed limits defined by applicable State and Federal regulations.

10) Contain any odor, or color producing substances exceeding concentration limits which may be established by Environmental Services for the purpose of meeting the POTW NPDES permit.

11) Contain any substances which may cause the POTW effluent or any product of the POTW such as residues, sludge or scum to be unsuitable for reclamation and reuse or interfere with the reclamation process where the POTW is pursuing a reuse and reclamation program.

12) Contain toxic pollutants in sufficient quantity to injure or interfere with the wastewater treatment process, constitute a hazard to humans or other life forms, create a toxic effect in the receiving waters of the POTW, or exceed the limitation set forth in an applicable categorical pretreatment standard.

13) Contain compatible pollutants of such concentration, quantity or rate of discharge that the POTW treatment efficiency is impaired or

unusual attention or expense is required to handle such materials in the POTW.

14) Contain fats, oils, or grease of animal or vegetable origin greater than one hundred (100) milligrams per liter.

15) Contain any trucked or hauled pollutants, except at points and times designated by the Director in accordance with sections 120-75 and 120-76.

16) Contain any medical wastes, except as specifically authorized by the Director.

17) Contain pollutants, including oxygen-demanding pollutants (BOD, etc.), released in a discharge at a flow rate and/or pollutant concentration which, either singly or by interaction with other pollutants, will cause interference with the POTW.

18) Contain storm water, surface water, ground water, well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, cooling water, and unpolluted wastewater, unless specifically authorized by the Director.

19) Contain sludge, screenings, or other residues from the pretreatment of industrial wastes.

20) Contain wastewater causing, alone or in conjunction with other sources, the treatment plant's effluent to fail a toxicity test.

21) Contain detergents, surface-active agents, or other substances that may cause excessive foaming in the POTW.

13. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the Permittee from its obligations regarding compliance with any and all applicable local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

SECTION B OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes, but is not limited to: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the Permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities

a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, severe property damage, or no feasible alternatives exist.

b) Notification of bypass:

(1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the Director.

(2) Unanticipated bypass. The Permittee shall immediately notify the Director and submit a written notice to the POTW within 5 days. This report shall specify:

(i) A description of the bypass, and its cause, including its duration;

(ii) Whether the bypass has been collected, and

(iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

4. Process Residues and Hazardous Waste

Process residue/hazardous waste shall be handled and disposed of in accordance with Federal and State laws, rules and regulations.

SECTION C MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected, and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and the approval of the Director.

2. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained by the Permittee to ensure that measurement accuracy is consistent with the accepted capability of that type of device.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by this permit, using test procedures listed within 40 CFR 136, the results of this monitoring shall be included in the Permittee self monitoring reports.

5. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative, upon the presentation of proper credentials and identification to:

a) Enter upon the Permittee premises without delay at any reasonable time where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;

d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and

e) Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

6. Retention of Records

a) The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip charge recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the sample, measurement, report or application.

This period may be extended by request of the Director at any time.

b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the Director shall be retained and preserved by the Permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include:

a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;

b) Who performed the sampling or measurements;

c) The date(s) analyses were performed;

d) Who performed the analyses;

e) The analytical techniques or methods used; and

f) The results of such analyses.

8. Transfer of Custody and Shipment

In order to ensure the validity of the self-monitoring sampling data, there must be accurate written records tracing the custody of each sample through all phases of the monitoring program. The primary objective of this chain of custody is to create an accurate written record that can be used to trace the possession and handling of the sample from the moment of collection through analysis.
When transferring possession of samples, the transferee must sign and record the data and time on the chain of custody record. In general, custody transfers are made on each individual sample although samples may be transferred as a group, if desired. Every person who takes custody must fill in the appropriate section of the chain of custody record. The number of transfers should be kept to a minimum.

The sampler is responsible for properly packing and dispatching the samples to the appropriate laboratory for analysis and assuring that the samples have been handled and preserved as necessary. This responsibility also includes fully completing, dating, and signing the appropriate portion of the chain of custody record.

All packages transported to the laboratory must be accompanied by the chain of custody record and other applicable forms. A copy of these forms should be retained by the originating office.

Mailed packages should be sent with return receipt requested. If sent by common carrier, receipts are retained as part of the permanent chain of custody documentation.

Shipped samples should be properly packed to prevent breakage, and the package sealed or locked so that any evidence of tampering may be readily detected.

9. Sampling Quality Control

Control checks should be performed during the actual sample collection to determine the performance of the sample collection system. In general, the most common monitoring errors are usually caused by improper sampling, improper preservation, inadequate mixing during compositing and splitting, and excessive sample holding time. The following types of samples should be used to check the sample collection system:

a) Duplicate Samples - These are separate samples taken from the same source at the same time. These provide a check on sampling equipment and precision techniques.

b) Split Samples - This is a sample that has been divided into two containers for analysis by separate laboratories. These samples aid in identifying discrepancies in analytical techniques and procedures.

c) Spike Samples - This is a sample to which a known quantity of the same substances has been added. These provide a proficient check for accuracy of the analytical procedures.

d) Sample Preservation Blanks - This is a sample of reagent water to which a known quantity of preservative is added. This sample is then analyzed to determine the efficiency of the preservative. These provide a check on the contamination of chemical preservatives.

To obtain meaningful data for the self monitoring program, a properly preserved representative sample must be delivered for analysis. The analysis must be performed in the prescribed fashion according to EPA approved procedures. The calculations should be completed and the results converted to final form so that the analytical data can be permanently recorded in meaningful, exact terms.

10. Falsifying Information

No person shall knowingly make any false statements, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to Chapter 120, nor falsify, tamper with, or knowingly render inaccurate any monitoring device or method required under Chapter 120.

SECTION D ADDITIONAL REPORTING REQUIREMENTS

1. Planned Changes

The Permittee shall give notice to the Director ninety (90) days prior to any facility expansion, production increase, or process modifications that result in new or substantially increased discharges or a change in the nature of the discharge.

2. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

3. Duty to Provide Information

The Permittee shall furnish to the Director, within a specified time, as determined by the Director, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. This Permittee shall also, upon request, furnish to the Director within five (5) working days copies of any records required to be kept by this permit.

4. Signatory Requirements

All applications, reports, or information submitted to the Director must contain the following certification statement and be signed as required in Sections (a), (b), (c) or (d) below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

All samples and measurements taken are to the best of my knowledge representative of the permitted wastewater discharge.

All sampling, measurements, and analyses were conducted in accordance with guidelines prescribed in 40 CFR 136 and the Wastewater Contribution permit obtained from the City of Springfield, Missouri."

a) By a responsible corporate officer, if the Industrial User submitting the reports required by paragraphs (b), (d), and (e) of this section is a corporation. For the purpose of this paragraph, a responsible corporate officer means:

(i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or

(ii) The manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship respectively.

c) The principal Executive Officer or Director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a Federal, State, or local governmental entity, or their agents.

d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:

(i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);

(ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operation of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(iii) the written authorization is submitted to the Director.

e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the Director prior to or together with any reports to be signed by an authorized representative.

5. Operating Upsets

A Permittee that experiences an upset in operations that places the Permittee in a temporary state of noncompliance with the provisions of either this permit or with Article III of Chapter 120 shall inform the City of Springfield within 24 hours of becoming aware of the upset.

Environmental Services shall be notified by telephone at **(417) 864-1923** to report any upset, accidental slug load, or spill. In addition, the **Southwest Wastewater Treatment Plant** shall be notified by telephone by calling (417) 838-3082 and speaking with a plant supervisor or leaving a recorded message, including name, company name, a phone number, and information relating to the accidental discharge.

A written follow-up report of the upset shall be filed by the Permittee with the Director within five days. The report shall specify:

a) Description of the upset, the cause(s) thereof and the upset impact on the compliance status of the Permittee;

b) Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and

c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner. A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the Permittee for violations attributable to the upset event.

6. Annual Publication

A list of all Industrial Users that were in significant noncompliance with applicable pretreatment requirements during the twelve (12) previous months shall be annually published by the City of Springfield in a newspaper of general circulation that provided meaningful public notice within the service area. Accordingly, the Permittee is apprized that

noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

For the purposes of this provision, a Significant Industrial User (or any Industrial User which violates paragraphs (C), (D), or (H) of this section, is in significant noncompliance if its violation meets one or more of the following criteria:

a) Chronic violations of wastewater Discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);

b) Technical Review Criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);

c) Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum, long-term average, instantaneous limit, or narrative Standard) that the POTW determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of POTW personnel or the general public);

d) Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority under 40 CFR 403.8(f)(1)(vi)(B) to halt or prevent such a discharge;

e) Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;

f) Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports, and reports on compliance with compliance schedules;

g) Failure to accurately report noncompliance;

h) Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the City Pretreatment Program.

7. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the Permittee from civil and/or criminal penalties for noncompliance under Article VII of Chapter 120 or State or Federal laws or regulations.

8. Penalties for violations of Permit Conditions

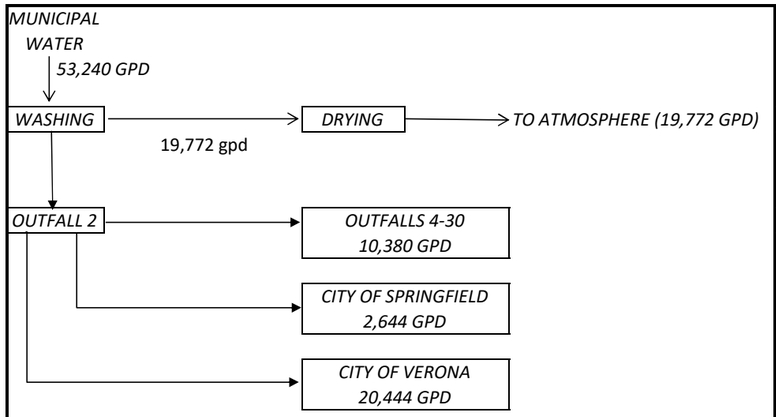
Section 120-296 of Chapter 120 provides that any person who violates a permit condition is subject to a civil penalty of not more than $1,000 per day per violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of not more than $1,000 per day per violation, or by imprisonment for 180 days, or both. The Permittee may also be subject to sanctions under State and/or Federal law.

9. Recovery of Costs Incurred

In addition to civil and criminal liability, the Permittee violating any of the provisions of this permit or Article III of Chapter 120 or causing damage to or otherwise inhibiting the or disrupting the City of Springfield wastewater collection or disposal system shall be liable to the City of Springfield for any expense, loss, or damage caused by such violation or discharge. The City of Springfield shall bill the Permittee for the costs incurred by the City of Springfield for any cleaning, repair, construction, replacement, or all other activities deemed necessary by the City caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 120-296 of Chapter 120.

KEMIN INDUSTRIES
FLOW DIAGRAM FORM C

EXISTING FACILITY

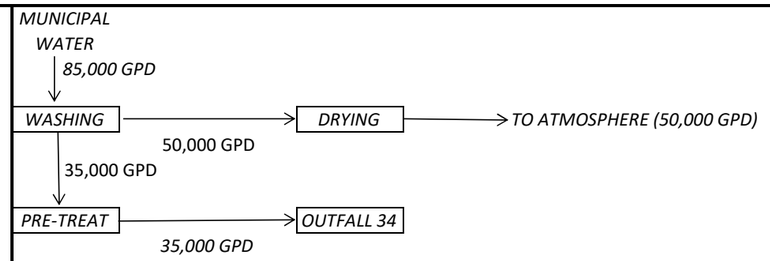


STORMWATER (Q_{10}) → OUTFALLS 1 & 3
5,605,027 GPD*

*Large drainage basin flows through the Kemin site. Q_{10} Storm Event volume.

SANITARY SEWER → MUNICIPAL
215 GPD

NEW FACILITY

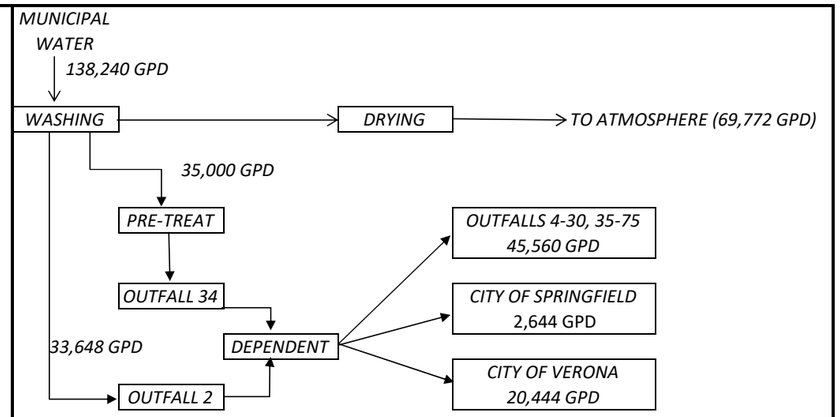


STORMWATER (Q^{10}) → OUTFALLS 31, 32 & 33
415,115 GPD**

**Combination of Q_{10} Storm Event volumes for all three detention ponds.

SANITARY SEWER → MUNICIPAL
3000 GPD

COMBINED FACILITY



STORMWATER (Q_{10}) → OUTFALLS 1, 3, 31, 32 & 33
6,020,142 GPD***

*** Sum of all of Q_{10} Storm Events

SANITARY SEWER → MUNICIPAL
3215 GPD

REV 09-21-22

FORM A-APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

8.1 ADDITIONAL FACILITY INFORMATION[1] (Page 1 of 2)

SEPTEMBER 21, 2022

KEMIN INDUSTRIES, VERONA, MISSOURI

RENEWAL PERMIT MO-0136760

OUTFALL	¼	¼	SEC	TWN	RNG	COUNTY	ACRES	ZONE	UTM (E)	UTM (N)	DESCRIPTOR[1]
1	NW	NE	17	26N	26W	Lawrence	0	15S	429035	4091725	Existing Stormwater Outfall
2	NW	NE	17	26N	26W	Lawrence	0	15S	429060	4091735	Existing Tank & Lagoon Storage
3	NW	NE	17	26N	26W	Lawrence	0	15S	429032	4091624	Existing Stormwater Outfall
4		NW	8	25N	26W	Barry	160	15S	428180	4083305	Chad Kelly
5	SW	NW	4	25N	26W	Barry	40	15S	429681	4084700	Grimm #1
6	SW	NW	32	26N	25W	Barry	40	15S	437698	4086251	Bass
7	SW	SE	5	25N	26W	Barry	40	15S	428849	4083897	Gerald Seitz #1
8	SE	SW	5	25N	26W	Barry	40	15S	428358	4083932	Gerald Seitz #2
9	N/2	SE	5	25N	26W	Barry	80	15S	428803	4084369	Gerald Seitz #3
10	W/2	NE	32	26N	26W	Barry	80	15S	428870	4086619	Vaught #1
11	E/2	NW	32	26N	26W	Barry	80	15S	428501	4086750	Vaught #2
12	N/2	SE	32	26N	26W	Barry	80	15S	428926	4086028	Vaught #3
13	S/2	NW	13	25N	26W	Barry	80	15S	434603	4081318	Schellen #1
14	NW	SE	18	25N	25W	Barry	40	15S	436834	4080788	Schellen #2
15	NE	SE	18	25N	25W	Barry	40	15S	437144	4080870	Schellen #3
16	NE	NE	23	25N	26W	Barry	40	15S	433960	4080085	Mattox #1
17		SE	14	25N	26W	Barry	160	15S	433861	4080816	Mattox #2
18	SE	SE	7	25N	25W	Barry	40	15S	437195	4082057	Mattox #3
19		N/2	18	25N	25W	Barry	320	15S	436588	4081511	Mattox #4
20	NW	NE	4	25N	26W	Barry	40	15S	430493	4085116	Hanson #1
21	E/2	NE	4	25N	26W	Barry	80	15S	430849	4085074	Hanson #3
22	SW	NE	4	25N	26W	Barry	40	15S	430498	4084708	Hanson #4
23	SE	SE	33	26N	26W	Barry	40	15S	430768	4085624	L. Henson
24		N/2	22	25N	26W	Barry	320	15S	431724	4080058	Williams
25	SW	SW	2	25N	26W	Barry	40	15S	432831	4083811	Weatherman
26			23	25N	26W	Barry	480	15S	433008	4079480	Williams #2
27	SW	NW	24	25N	26W	Barry	40	15S	434369	4079849	Newman #1
28	SE	NW	24	25N	26W	Barry	40	15S	434712	4079870	Newman #2
29	NE	NW	24	25N	26W	Barry	40	15S	434711	4080043	Newman #3

30	NE	NW	9	25N	26W	Barry	40	15S	430139	4083518	Grimm #2
31	SW	SE	8	26W	26N	Lawrence	0	15S	429109	4091933	New Detention Pond South
32	SW	SE	8	26W	26N	Lawrence	0	15S	429182	4092042	New Detention Pond East
33	SW	SE	8	26W	26N	Lawrence	0	15S	429208	4092069	New Detention Pond North
34	SW	SE	8	26W	26N	Lawrence	0	15S	429154	4091973	New Wastewater Storage Tank
35	SE	SW	19	26N	25W	Lawrence	13	15S	436660	4088537	Bud Payne #1
36	NE	NW	30	26N	25W	Lawrence	10	15S	436620	4088362	Bud Payne #2
37	E/2	NE	23	26N	26W	Lawrence	15	15S	434154	4089765	Bud Payne #3
38	SE	SW	14	25N	26W	Barry	14	15S	433269	4080440	Cale Jones #1
39	SW	SW	14	25N	26W	Barry	28	15S	432656	4080512	Cale Jones #2
40	W/2	SE	31	26N	25W	Barry	36	15S	436772	4085507	Colby Mattox #1

FORM A-APPLICATION FOR NONDOMESTIC PERMIT UNDER MISSOURI CLEAN WATER LAW

8.1 ADDITIONAL FACILITY INFORMATION[1] (Page 2 of 2)

SEPTEMBER 21, 2022

KEMIN INDUSTRIES, VERONA, MISSOURI

RENEWAL PERMIT MO-0136760

OUTFALL	¼	¼	SEC	TWN	RNG	COUNTY	ACRES	ZONE	UTM (E)	UTM (N)	DESCRIPTOR [1]
41	NE	SW	31	26N	25W	Barry	15	15S	436542	4085512	Colby Mattox #2
42	SW	SE	31	26N	25W	Barry	10	15S	436840	4085292	Colby Mattox #3
43	N/2	SW	31	26N	25W	Barry	30	15S	436338	4085836	Colby Mattox #4
44	SW	SW	17	25N	25W	Barry	30	15S	437691	4080525	Colby Mattox #5
45	SW	SE	11	25N	25W	Barry	40	15S	433661	4082140	Cope Barn
46	S/2	S/2	12	25N	26W	Barry	120	15S	435196	4082108	Cope Lake
47	NE	SW	12	25N	26W	Barry	40	15S	434438	4082528	Cope House
48	SE	2W	12	25N	26W	Barry	31	15S	434891	4082768	Cope North Pasture
49	NE	SW	11	25N	26W	Barry	40	15S	433243	4082557	Cope North 40
50	NE	NW	14	25N	26W	Barry	40	15S	433204	4081774	Hooton 40
51	NW	NW	29	25N	24W	Stone	25	15S	447081	4078077	Gary Evans #1
52	SE	NE	30	25N	24W	Stone	25	15S	446922	4077687	Gary Evans #2
53	S/2	NW	29	25N	24W	Stone	50	15S	447335	4077826	Gary Evans #3
54	SW	NW	29	25N	24W	Stone	13	15S	447050	4077736	Gary Evans #4
55	NW	SW	29	25N	24W	Stone	35	15S	447242	4077205	Gary Evans #5
56	E/2	SW	29	25N	24W	Stone	80	15S	447521	4077252	Gary Evans #6
57	SW	SW	29	25N	24W	Stone	28	15S	447255	4077063	Gary Evans #7

58	N/2	NW	32	25N	24W	Stone	50	15S	447283	4076662	Gary Evans #8
59	NW	SW	14	25N	25W	Barry	18	15S	442459	4080799	Guthrie Sturgell #1
60	NE	SW	14	25N	25W	Barry	8	15S	442738	4080705	Guthrie Sturgell #2
61	S/2	NW	1	25N	26W	Barry	60	15S	434481	4084546	Guthrie Sturgell #3
62	S/2	SE	25	29N	29W	Lawrence	38	15S	407578	4117018	J. D. Geyer
63	SW	SW	20	25N	24W	Stone	15	15S	447036	4078624	Caleb Sparks #1
64	SE	SW	20	25N	24W	Stone	15	15S	447690	4078555	Caleb Sparks #2
65	SW	NW	13	27N	28W	Lawrence	60	15S	416507	4101321	Mike Nelson
66	SE	SW	30	27N	25W	Lawrence	15	15S	436958	4096750	Todd Wood #1
67	SE	SW	30	27N	25W	Lawrence	15	15S	436775	4096720	Todd Wood #2
68	SW	NW	19	25N	24W	Stone	50	15S	445597	4079410	Gerald Evans #1
69	NW	NW	19	25N	24W	Stone	22	15S	445526	4079863	Gerald Evans #2
70	NE	NW	19	25N	24W	Stone	15	15S	445957	4079635	Gerald Evans #3
71	NE	NW	19	25N	24W	Stone	20	15S	445983	4079843	Gerald Evans #4
72	SW	NE	19	25N	24W	Stone	32	15S	446382	4079389	Gerald Evans #5
73	NW	NE	19	25N	24W	Stone	14	15S	446264	4079605	Gerald Evans #6
74	NW	NE	19	25N	24W	Stone	25	15S	446383	4079807	Gerald Evans #7
75	NE	SW	19	25N	24W	Stone	70	15S	446049	4079153	Gerald Evans #8

TOTAL LAND APPLICATION ACREAGE	**3870**
NUMBER OF LAND APPLICATION SITES	**68**

[1] Outfalls 1 through 30 previously
previous outfall numbering reta

RECEIVING STREAM	1st CLASSIFIED STREAM ID	USGS HUC12
Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
Spring River Tributary	Spring River (P) (03165) 303(d)	11070207-0104
Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Little Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
West Fork Jenkins Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0405
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Little Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0407
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0101
Little Flat Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0407
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403

Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
Headwaters Spring River	Spring River (P) (03165) 303(d)	11070207-0104
Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
Douger Branch Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0101
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Little Crane Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502

RECEIVING STREAM	1st CLASSIFIED STREAM ID	USGS HUC12
Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
Little Crane Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0502
Headwaters Spring River	100K Extent-Remaining Streams (C) (3960)	11070207-0101
West Fork Jenkins Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0405
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Calton Creek	100K Extent-Remaining Streams (C) (3960) losing	11010002-0403
Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
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Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408

Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0504
Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
Spring River Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0101
White Oak Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11070207-0503
Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
Dry Hollow Creek Tributary	100K Extent-Remaining Streams (C) (3960)	11010002-0408
Spring River Tributary	100K Extent-Remaining Streams (C) (3960) losing	11070207-0505
Elm Branch	100K Extent-Remaining Streams (C) (3960)	11070207-0103
Elm Branch	100K Extent-Remaining Streams (C) (3960)	11070207-0103
Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504
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Crane Creek Tributary	100K Extent-Remaining Streams (C) (3960) losing	11010002-0504

, permitted under MO-0136760 and

ined this renewal.

Kemin Industries, Inc.
Verona, MO
Plant Process Wastewater Storage Volumes
Renewal of MO-0136760

Existing Plant		
DESCRIPTION	**TYPE**	**VOLUME (gal)**
South Lagoon	Above Ground	600,000
North Lagoon	Above Ground	1,100,000
North Rich Waste "Pit"	Underground	25,000
West Transfer "Pit"	Underground	3,000
South Double"Pits" (2)*	Underground	6,000
Rich Waste Silos (2)*	Above Ground	7,000
	Subtotal	1,741,000

New Plant		
DESCRIPTION	**TYPE**	**VOLUME (gal)**
WWTF Storage Tank	Above Ground	50,000
	Subtotal	50,000

* Dual tanks are plumbed together as one storage unit.

Kemin Site Storage Inventory
Total Process Wastewater Lagoons = 2
Total Process Wastewater Tank Storage = 5
Total Process Wastewater Storage Capacity = 1,791,000 gal

NARRATIVE
KEMIN PROTEINS, INC
MO-013760 RENEWAL

Existing Facility

The existing Kemin facility is located at 519 North 3rd Street, Verona, Lawrence County, Missouri 65769. The facility is currently operating under the above cited wastewater discharge permit that was issued on September 1, 2018 and modified on December 1, 2019. The permit expires on March 31, 2023.

The Kemin facility receives raw meat products (beef, pork and chicken) and processes the meat into a dry protein powder that is used as animal feed supplements. Associated with the protein production is generation of animal fats that are collected and shipped from the facility for utilization in manufacturing.

The site consists of a manufacturing building, ancillary storage buildings, and raw product storage tanks. The facility is surrounded by a paved parking lot and an unpaved trailer storage lot. The remainder of the facility surface is grass.

Sanitary sewer flows are directed to the Verona Municipal wastewater treatment facility by means of an onsite sanitary sewer lift station.

Because the Verona municipal facility lacks in capacity, the facility currently engages in a pump and haul operation. Process wastewater is stored in two earthen lagoons, three underground concrete tanks, and two above ground steel silos for a total storage volume of 1,741,000 gallons. The process wastewater is then applied to 27 permitted land application sites, or during inclement weather when precipitation events or freezing weather occur, the wastewater is trucked to the Southwest Treatment Plant operated by the City of Springfield. Variable volumes of process wastewater can be pumped to the City of Verona municipal treatment facility depending upon current plant capacity.

Stormwater flows from the site are directed to two concrete flumes which discharge to an unnamed tributary of the Spring River.

New Facility

The new facility is sited to the north of the existing Kemin facility. The new facility started construction in April of 2021 and is scheduled to be completed on or about April of 2023. Construction activity is covered by a land disturbance permit MORA20126 issued by MoDNR.

The new facility will consist of a manufacturing facility with an attached office building, a water pump building, and a process wastewater treatment facility and storage tank. The building will have an area of approximately 38,600 square feet and will employ approximately 40 employees per shift. The facility will also include a WWTF with an area of 800 square feet and a water pump house with an area of 450 square feet. The new facility will also receive raw meat products (beef, pork, and chicken) and will grind the meat and then dry the combined product in a dryer tower. The final product will consist of a protein powder which will be FDA approved for human consumption as diet and food supplements. The product will be bagged and stored in a warehouse portion of the facility for shipment by truck.

Process water will be supplied by the local utility and will be piped through a pump plant that will provide for fire flows during emergencies.

Sanitary wastewater flows will be directed to an existing sanitary sewer manhole located south of the new facility by means of a 4-inch PVC service line.

Stormwater from the new site will be collected by means of surface flows and storm drain inlets and piping and directed to one of three grass-lined detention ponds. Pond discharges will be considerably below the existing stormwater discharges for the 2-year, 5-year, 10-year, 25-year, 50-year and 100-year storm events. The residence time in the detention ponds will allow for settlement of silt and sediment and absorption of other contaminants.

Stormwater runoff from the paved parking areas which might receive accidental contamination from drippage and spills during loading and unloading of raw products will be directed to grate inlets that will be operated to be open during operations. Potentially contaminated water will be directed to the gravity process wastewater sewer and ultimately to the storage. When the facility is not loading or unloading products, the spill management sewer system will direct stormwater to an oil and grease separator and then into the south detention pond. The load out location for the process wastewater storage tank will likewise utilize this spill management system.

Because of the previously described intermittent capacity in the Verona municipal wastewater plant, the new Kemin plant will also engage in the pump and haul process. Process wastewater will flow through an 8-inch gravity process wastewater sewer (private) to a lift station in a process wastewater treatment plant. Process wastewater will be pumped through a rotary screen and the screenings and insoluble oils removed for disposition by a licensed disposal vendor at the regional landfill. The pre-treated process wastewater will be pumped to a 50,000 gallon steel tank located directly adjacent to the wastewater treatment plant for storage until it can be land applied, pumped to the City of Verona plant or pumped and hauled to the Springfield facility.

Combined Facility

Kemin Industries desires to bring the existing plant and the new plant under a single operating permit. The appropriate MoDNR forms and supporting documents are attached in support of the permit application. Because of the increased process wastewater flows, an additional 41 new land application sites are part of this renewal. There will be a total of 68 land application sites.

MATCHLINE SEE SHEET C2.02

Missouri Highway P
(60.0' R/W)

Approximate Limits Of Disturbance

Temporary Rock Check Dam (Typ.)
Re: Detail

Ex. 20' Storm Easement
Book 331, Page 502

Silt Soxx
Re: Detail

100 Yr. W.S.E. = 1264.44

Silt Fence
Re: Detail

Approximate Limits Of Disturbance

Total Site Area: 8.76 Acres
Limits Of Disturbance: ±7.99 Acres

Note: The Location And Number Of Concrete Washout Stations Are A Minimum. Other Sites May Be Used Using The Detail On Sheet C2.24.

MISSOURI ONE - CALL SYSTEM
1-800-344-7483
STOP - CALL BEFORE YOU DIG!

Scale in Feet
20 0 20

Key Map
North
Central
South

DATE PLOTTED: 3/9/2022 4:59:30 PM PLOTTED BY: Lowe, Tiffany

C3.22

PROJECT NO. 2102123
ISSUED 12/22/2021
SCALE AS NOTED
DRAWN BY TBL
DRAWING NO.

STATE OF MISSOURI
CALEB C. MELTON
PE-2010010210
PROFESSIONAL ENGINEER

CLIENT KEMIN INDUSTRIES
DES MOINES, IA

PROJECT NEW PROTEIN FACILITY
VERONA, MO

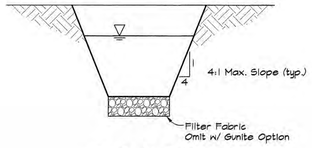
DRAWING TITLE EROSION CONTROL PLAN - NORTH

KEMIN®

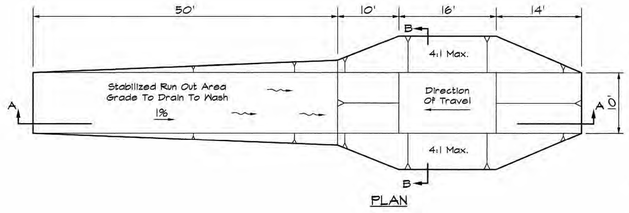
#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

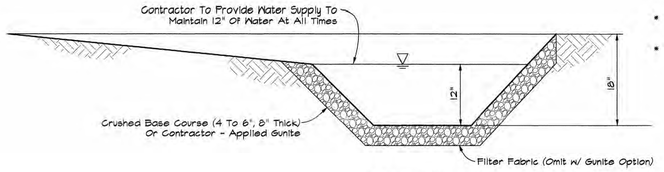
HALFF
HALFF ASSOCIATES, INC. • ENG #2018039265 EXP:12.31.2022 • LS #2021048378 EXP:12.31.2021
2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM



SECTION "B-B"
Scale Exaggerated Vertically



PLAN



SECTION "A-A"
Scale Exaggerated Vertically

Temporary Drive-through Tire Wash

- Minimum Dimensions: 40' By 12' By 1.5' (Length, Width And Sump Depth: 12.2 M By 3.7 M By 0.46 M). The Minimum Length Includes Ingress And Egress From The Sump.
- The Aggregate Size For Construction Of The Pad Shall Be 4-6 Inch (101-152 MM) Stone. Place The Gravel To The Specific Grade And Dimensions Shown On The Plans, And Smooth It.
- The Thickness Of The Pad Shall Not Be Less Than 8 Inches (203 MM). Use Geotextile Fabric Under The Gravel To Improve Stability Of The Foundation.
- Alternatively, Install A 3 In. Asphalt Lift Over A Stable Roadway Base With The Same Dimensions Identified Above.
- The Run Out Pad Should Extend 50' (15.2 M) Past The Egress Ramp And Drain Back Into The Sump Or To A Suitable Collection And Treatment Facility.
- Install Fencing, As Necessary, To Manage Vehicle Traffic.

Minimum BMP Standards Are Provided On The Following Illustrations.

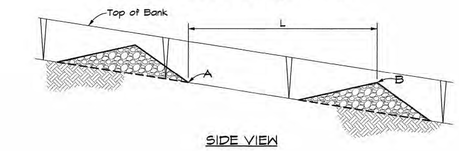
Inspection And Maintenance - Temporary Drive-through Tire Wash:

- Inspect Routinely To Assess The Water Levels Within The Sump, The Depth Of Accumulated Sediment, And Identify Any Areas That Require Maintenance.
- Remove Accumulated Sediment From The Tire Wash Facility To Maintain Tire Wash Sump Depth. Sediment May Be Pumped, Piped Or Vacuumed To A Suitable Collection And Treatment Facility.
- Clean Or Replace Rock When Clogged With Sediment And Re-grade As Needed.
- Maintain The Run-out Pad As Necessary To Prevent Sediment Accumulation.
- Immediately Remove Any Rock That Is Carried From The Pad To The Roadway.
- Ensure That Wash Water Drainage, Collection And Treatment System Is Functioning.

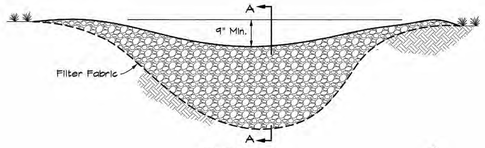
EC-51: ENTRANCE / EXIT TIRE WASH

Not to Scale 12-6-10

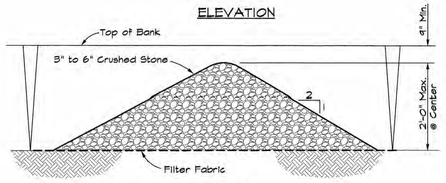
L = The Distance Such That Points A and B Are Of Equal Elevation



SIDE VIEW



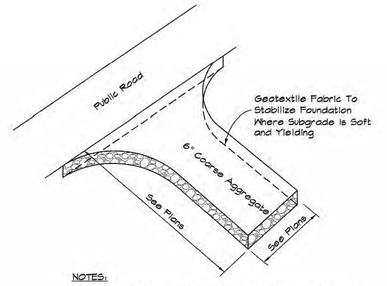
ELEVATION



SECTION A-A

EC-60: TEMPORARY ROCK CHECK DAM

Not to Scale 9-20-10

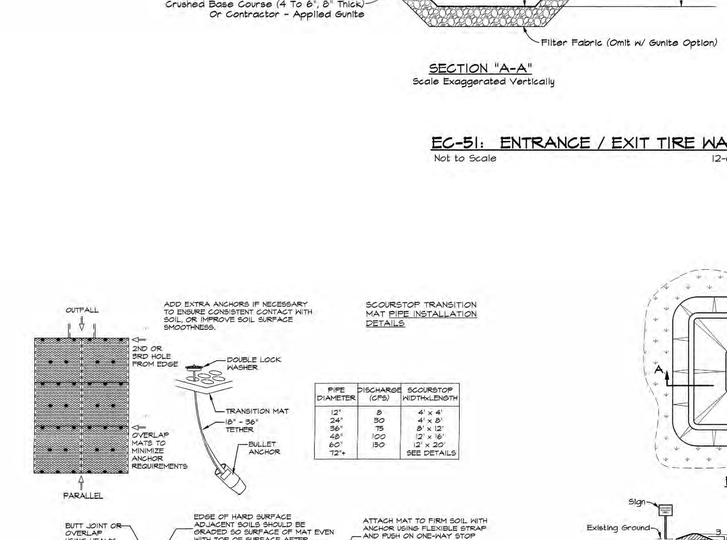


NOTES:

1. Coarse Aggregate Shall be 3" to 6" Crushed Stone.
2. Clear The Entrance Or Exit Area Of All Vegetation, Roots, And Other Objectionable Material And Excavate to Grade.
3. Place The Aggregate to the Grade and Dimensions Shown On The Plans.
4. Maintain The Gravel Pad In A Condition To Prevent Mud Or Sediment From Leaving The Site. Immediately Remove All Objectionable Materials Spilled, Washed, Or Tracked Onto Public Roadways.

EC-30: TEMPORARY CONSTRUCTION ENTRANCE

Not to Scale 12-3-10

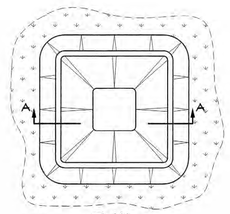


PIPE DIAMETER	DISCHARGE (CFS)	SCOURSTOP WIDTH×LENGTH
12"	8	4' x 4'
24"	30	4' x 8'
36"	75	8' x 12'
48"	100	12' x 16'
60"	150	12' x 20'
72"+		SEE DETAILS

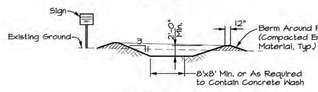
PREFERRED INSTALLATION SPECIFICATIONS:
1. READ AND UNDERSTAND INSTALLATION GUIDE.
2. FOR EACH INSTALLATION, COMPLETE INSTALLER'S CHECKLIST AND PROVIDE TO GENERAL CONTRACTOR FOR PAYMENT.
3. FOR VEGETATION, INSTALL APPROPRIATE SOIL UNDER THESE INSTALLATIONS TO IMPROVE THE GROWING ENVIRONMENT.
4. MINIMUM APPLICATION IS 4 FOOT LENGTH. UTILIZE DESIGNER CHECKLIST FOR PROPER DESIGN AND INSTALLATION MODE.
5. REMOVE AND REPLACE SATURATED SOILS FOR A SOLID BASE. USE SUB-SURFACE DRAIN FOR TRICKLE FLOWS.
6. CAN BE INSTALLED AS A BUTT JOINT, OR PERMANENTLY ATTACHED TO THE HARD SURFACE.
7. AVOID EROSIVE IMPACT CONDITIONS AT SCOUR AREA.
8. ENSURE LOCATION HAS ADEQUATE SUNLIGHT FOR HEALTHY VEGETATION, OTHERWISE UTILIZE THE HP-TRM INSTALLATION.
9. SCOURSTOP SHALL NOT BE INSTALLED OVER BARE SOIL. OPTIONAL SOIL COVERS ARE SOD, TRMS, AND GEOTEXTILES. SOIL COVERS MAY NEED TO EXTEND DOWNSTREAM OF SCOURSTOP INSTALLATION IN AREAS OF HIGHER VELOCITY OR SHEAR (CHECK WITH DESIGNER PRIOR TO INSTALLATION).
10. WHERE EXCESS CONCRETE FROM THE END SECTION FOOTINGS EXTENDS BEYOND THE END SECTION, INSERT A FILLER MATERIAL (LIKE A HIGH-PERFORMANCE TRM OR HEAVY GEOTEXTILE) BETWEEN THE TRANSITION MAT AND THE EXCESS CONCRETE SURFACE TO FILL THE AREA TOO SHALLOW (<4 INCHES) TO SUPPORT SOIL AND VEGETATION GROWTH.
11. CONSTRUCT DOWNSTREAM CHANNEL AT LEAST TWICE THE WIDTH OF THE OUTLET. CONSTRUCT WIDTH AS FLAT AND LEVEL AS POSSIBLE FOR PROPER DRAINAGE.
12. SOIL ANCHORS SHALL BE DRIVEN AT LEAST 18" DEEP, OR DEEPER AS NEEDED INTO FIRM SOIL. USE FLEXIBLE STRAPPING AND DOUBLE-LOCK WASHERS TO ATTACH THE TRANSITION MAT INSTALLATION INTO THE SOIL. FIRMLY PULL STRAP TO SNUG THE TRANSITION MAT DOWN AGAINST THE SOIL WITH THE WASHER AND ONE-WAY STOP. A 3-2-3 ANCHOR CONFIGURATION IS THE MINIMUM ANCHOR QUANTITY.
13. PER NPDES PHASE II, THE DOWNSTREAM CHANNEL (D.C.) MUST BE PROTECTED FOR ITS ENTIRE LENGTH. THIS D.C. IS PART OF THE TRANSITION MAT ENGINEERED SYSTEM. USE SOD TO PROTECT THE D.C. WHEN POSSIBLE. SEE DETAILS PAGE FOR PROPER INSTALLATION. TURF REINFORCEMENT MATS (TRMS) ARE ACCEPTABLE. TRMS HAVE LOW PERFORMANCE RATINGS WHEN UNVEGETATED - DESIGN APPROPRIATELY.
14. ON AREAS OF SLOPE TRANSITION, UTILIZE ANCHORS TO MAINTAIN SOIL CONTACT ACROSS ENTIRE MAT LENGTH. ANCHORS CAN BE USED TO PROVIDE UP TO 14" OF DEFLECTION AT CENTER OF MAT FROM ENDS.
15. TYPE "A" INSTALLATION INSTRUCTIONS
(DESIGN OUTLET VELOCITY < 21 FPS AND DOWNSTREAM SCOUR AREA FLATTER THAN 10%, OR 10:1)
SOD IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS - WIDTH AND LENGTH OF TMS SPECIFIED BY DESIGNER. SOD ELIMINATES GERMINATION RISK, AND IS GREAT PROTECTION FOR SOIL.
17. TYPE "C" INSTALLATION INSTRUCTIONS
(DESIGN OUTLET VELOCITY < 8 FPS AND DOWNSTREAM SCOUR AREA FLATTER THAN 4%, OR 25:1)
A TRM IS THE SOIL COVER PRACTICE UNDER THE TRANSITION MATS. THE WIDTH AND LENGTH OF THE TMS TO BE SPECIFIED BY DESIGNER. TRMS OVER BARE SOIL HAVE LOW-PERFORMANCE UNTIL VEGETATED.
18. TYPE "D" INSTALLATION INSTRUCTIONS
(DESIGN APPLICATIONS: ALL OUTFALLS LOW SUNLIGHT AREAS; SEMI-ARID REGIONS WHERE VEGETATION MAY BE SLOW TO ESTABLISH.)
A 9 OZ. GEOTEXTILE COVERED WITH A HIGH-PERFORMANCE TRM IS THE PREFERRED SOIL COVER PRACTICE. THE WIDTH AND LENGTH OF THE TMS TO BE SPECIFIED BY DESIGNER. THE GEOTEXTILE PROTECTS THE SOIL FROM EROSION, AND THE HP-TRM PROVIDES LONG TERM STABILITY. THIS INSTALLATION CAN BE SOIL-FILLED AND SEEDED, OR LEFT TO FILL-IN WITH SEDIMENTS AND NATIVE VEGETATION. MECHANICALLY-BONDED FIBER MATRIX (MBFM) HYDROMULCH HAS ALSO SHOWN TO BE AN EFFECTIVE FILLER/SEED BASE. FOR INSTALLATIONS ON OUTFALLS > 60 INCHES WITH HIGH VELOCITY FLOWS, AN ADDITIONAL LAYER OF TMS ADJACENT TO THE OUTFALL PROVIDES GREATER PROTECTION.
=> FOR DESIGN INFORMATION, REFER TO "DESIGN METHODOLOGY" DOCUMENT AVAILABLE AT www.scourstop.com.

SCOUR STOP MAT

N.T.S.



PLAN



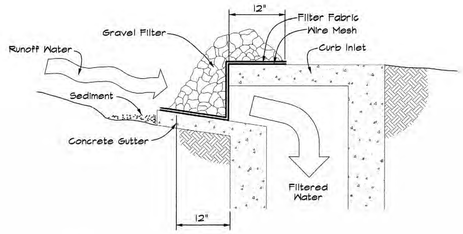
SECTION "A-A"

NOTES:

1. Concrete Washout Area Shall be Installed Prior to Any Concrete Placement on Site.
2. Vehicle Tracking Control is Required at Concrete Washout Entrance If Access to Concrete Washout Area Is Off Pavement.
3. The Concrete Washout Area Shall Be Repaired and/or Enlarged as Necessary to Maintain Capacity for Waste Concrete.
4. Waste Material From Concrete Washout Operations Must Be Removed and Legally Disposed of When It has Accumulated Two-Thirds of the Net Storage Capacity of the Structure.
5. At the End of Construction, All Concrete Shall Be Removed From the Site and Legally Disposed of at an Approved Waste Site.
6. When the Concrete Washout Area Is Removed, the Disturbed Area Shall Be Seeded and Mulched or Otherwise Stabilized.

EC-50: CONCRETE WASHOUT AREA

Not to Scale 4-21-10

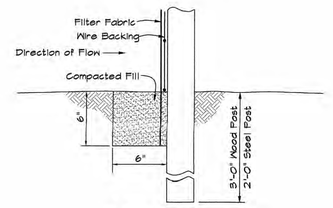


NOTES:

1. This Method of Protection is Applicable at Curb Inlets Where Ponding In Front of the Structure is not Likely to Cause Inconvenience or Damage to Adjacent Structures and Unprotected Areas.
2. Gravel Filter Shall be 3/4" - 2" Stone.

EC-43 TEMPORARY GRAVEL CURB INLET SEDIMENT FILTER

Not to Scale 12-6-10



Extension of Fabric Into Trench

EC-12: SILT FENCE

Not to Scale 4-28-10

filtrexx® LAND IMPROVEMENT SYSTEMS

Section 1: Erosion & Sediment Control - Construction Activities

SWPPP Cut Sheet:
Filtrexx® SiltSoxx™

Sediment & Perimeter Control Technology

PURPOSE & DESCRIPTION
Filtrexx® SiltSoxx™ are a three-dimensional tubular sediment control and storm water runoff filtration device typically used for perimeter control of sediment and other solids pollutants (such as phosphorous and petroleum hydrocarbons), on and around construction activities.

APPLICATIONS
Filtrexx® SiltSoxx™ are to be installed down slope of any disturbed area requiring erosion and sediment control. Applications for soluble pollutants from runoff, SiltSoxx™ are used where when installed correctly, soluble or dissolved pollutants are removed from. Acceptable applications include:
- Site perimeters
- Above and below disturbed areas subject to sheet runoff, interrill and rill erosion
- Above and below exposed and erodible slopes
- Around new drains or inlets located in a 'sump' Or compacted soils where stretching of silt fence is difficult or impossible
- Around sensitive trees where trenching of silt fence is not beneficial for tree survival or may damage currently established vegetation
- On weak ground where stretching of silt fence is impossible
- On paved surfaces where trenching of silt fence is impossible.

INSTALLATION
1. SiltSoxx™ are used for perimeter control of sediment and soluble pollutants in storm runoff shall meet Filtrexx® SiteSpecific Material Specifications and use Certified Filtrexx® FilterMedia™.
2. SiltSoxx™ will be placed or location as indicated on plans as directed by the Engineer.
3. SiltSoxx™ should be installed parallel to the base of the slope or other disturbed area. In severe conditions (i.e., 2:1 slope), a second SiltSoxx™ shall be constructed at the top of the slope.
4. Effective SiltSoxx™ height is the field should be as follows: 8" Diameter SiltSoxx™ = 6.5" high, 12" Diameter SiltSoxx™ = 9.5" high, 18" Diameter SiltSoxx™ = 14.5" high, 24" Diameter SiltSoxx™ = 19" high.
5. Stakes shall be installed through the middle of the SiltSoxx™ (spaced on 10 ft (3m) centers, using 2 × (50mm) by 2 in (50mm) by 3 ft (1m) hard wood stakes. In the event staking is not possible, SiltSoxx™ shall be held in place with weighted heavy concrete blocks shall be used Method of SiltSoxx™ to help stabilize during rainfall/runoff events.
6. Staking depth for steel and silt knee rods shall be 12 in (300mm), and 8 in (203mm) for slop soils.
7. Loose compost may be backfilled along the uphill side of the SiltSoxx™. Filling the seam between the soil surface and the device, improving filtration and sediment retention.
8. If the SiltSoxx™ are to be left as a permanent fixture or part of the natural landscape, a visual but smaller mesh of installation for the intended permanent application. The Engineer will specify seed requirements.
9. Filtrexx® SiltSoxx™ are not to be used in perennial, ephemeral, or intermittent streams.

See design drawings schematic for correct Filtrexx® SiltSoxx™ installation (Figure 1.1).

INSPECTION AND MAINTENANCE
Routine inspection should be conducted within 24 hrs of a runoff event or as designated by the

regulating authority. SiltSoxx™ should be regularly inspected to make sure they maintain their shape and are producing adequate hydraulic flow-through. If ponding becomes excessive, additional SiltSoxx™ may be required to reduce effective slope length, or sediment removal may be necessary. SiltSoxx™ shall be inspected until area above has been permanently stabilized and construction activity has ceased.
1. The Contractor shall maintain the SiltSoxx™ in a functional condition at all times and it shall be routinely inspected.
2. If SiltSoxx™ have been damaged, it shall be repaired, or replaced if beyond repair.
3. The Contractor shall remove sediment at the base of the upslope side of the SiltSoxx™ when accumulation has reached 1/2 of the effective height of the SiltSoxx™, or as directed by the Engineer. Alternatively, a new SiltSoxx™ can be placed on top of and slightly behind the original one (coming more sediment storage capacity without soil disturbance.
4. SiltSoxx™ shall be maintained until disturbed area above the device has been permanently stabilized and construction activity has ceased.
5. The FiberMedia™ will be disposed on site once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.
6. For long-term sediment and pollution control applications, SiltSoxx™ can be seeded at the time of installation to create a vegetative filtering system for prolonged and increased filtration of sediment and soluble pollutants (contained vegetative filter strips). The appropriate seed mix shall be determined by the Engineer.

Slope Percent	Maximum Slope Length Above SiltSoxx™ in Feet (meters)*			
	8 in (200 mm) SiltSoxx™	12 in (300 mm) SiltSoxx™	18 in (450mm) SiltSoxx™	24 in (600mm) SiltSoxx™
	8.5 in (200 mm) **	14 in (300 mm) **	19 in (450 mm) **	25 in (600 mm) **
2 (or less)	250 (76)	700 (213)	1000 (305)	1000 (305)
5	100 (30)	300 (100)	1000 (305)	1000 (305)
10	50 (15)	150 (45)	400 (120)	1000 (305)
15	40 (12)	100 (30)	250 (100)	400 (120)
20	30 (9)	70 (20)	150 (45)	300 (90)
25	30 (9)	50 (15)	100 (30)	200 (61)
30	30 (9)	40 (12)	70 (21)	150 (45)
35	30 (9)	30 (9)	60 (18)	100 (30)
40	30 (9)	30 (9)	50 (15)	80 (24)
45	30 (9)	30 (9)	40 (12)	60 (18)
50	30 (9)	30 (9)	30 (9)	50 (15)

* Based on a failure point of 10 in (0.3 m) super silt fences (wire reinforced) at 1000 lb (453 m) of slope, unmarked width equivalent to receiving length of sediment control devices, 1 to 2 in (25 mm) to 150 mm).
** Effective height of SiltSoxx™ after installation was with standard wood from runoff as data tested by Utah State University.

NOTES:
1. ALL MATERIAL TO MEET SPECIFICATIONS.
2. FILTER MEDIA TO MEET APPLICATION REQUIREMENTS.
3. FILTER MEDIA TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

SiltSoxxTM for Sediment Control

HALFF
HALFF ASSOCIATES, INC. - 1900 SPRINGDALE ROAD, SUITE 240 - CARROLLTON, TEXAS 75006
2601 NE COLLEGE/HWY 63, STE 1 - BENTONVILLE, AR 72712 - 479.273.2288 - FAX 479.273.2284

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHERELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 731-4746 FAX: (603) 731-4745
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

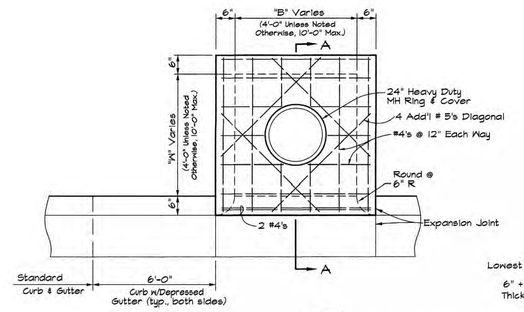
NO.	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

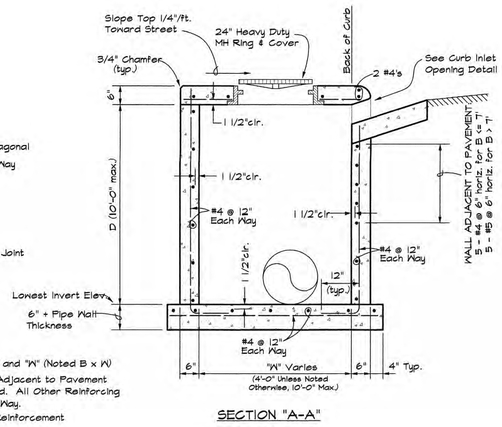
CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: EROSION CONTROL DETAILS

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C3.23

DATE PLOTTED: 3/9/2022 5:09:24 PM PLOTTED BY: Love, Tiffany



PLAN



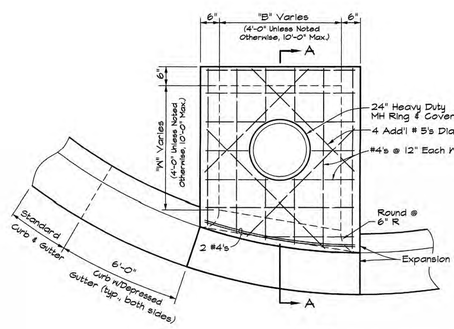
SECTION "A-A"

NOTES:

1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. Wall Reinforcement for Wall Adjacent to Pavement and Top Shall Be as Indicated. All Other Reinforcing Shall be #4 bars at 12" Each Way.
3. See Detail for Wall Corner Reinforcement

DR-10: CURB INLET

Not to Scale



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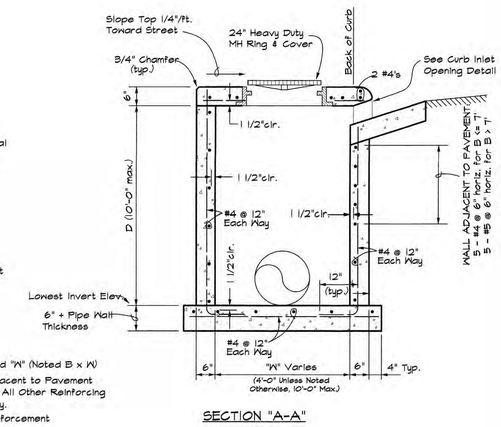


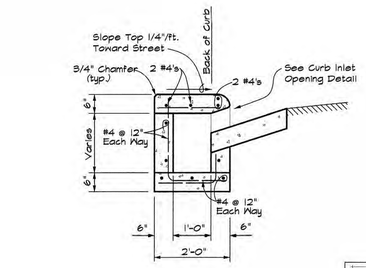
SECTION "A-A"

NOTES:

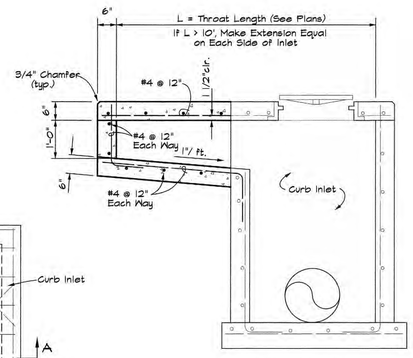
1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. Wall Reinforcement for Wall Adjacent to Pavement and Top Shall Be as Indicated. All Other Reinforcing Shall be #4 bars at 12" Each Way.
3. See Detail for Wall Corner Reinforcement

DR-20: CORNER CURB INLET

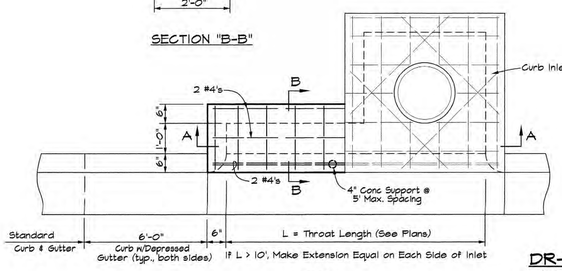
Not to Scale



SECTION "B-B"



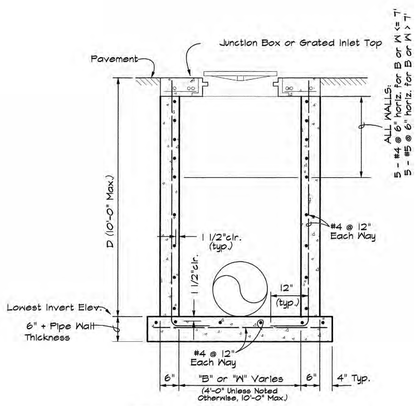
SECTION "A-A"



PLAN

DR-30: CURB INLET EXTENSION

Not to Scale 2-25-10

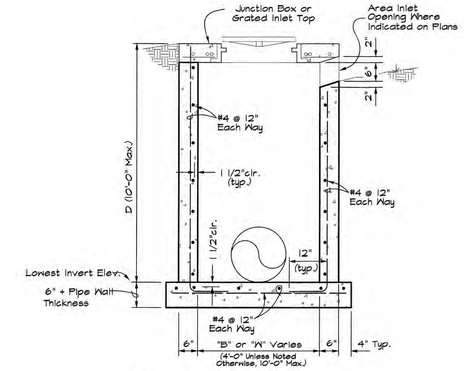


NOTES:

1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. Wall Reinforcement for Wall Adjacent to Pavement and Top Shall Be as Indicated. All Other Reinforcing Shall be #4 bars at 12" Each Way.
3. See Detail for Wall Corner Reinforcement

DR-50: JUNCTION BOX or GRATED INLET IN PAVEMENT

Not to Scale

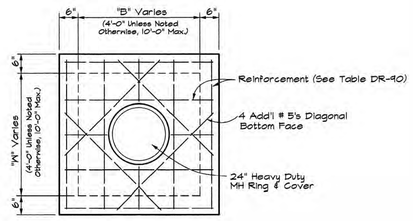


NOTE:

1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. See Detail for Wall Corner Reinforcement

DR-60: JUNCTION BOX or GRATED INLET NOT IN PAVEMENT

Not to Scale

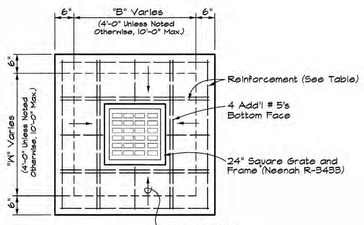


NOTES:

1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. See Table for Top Thickness and Reinforcing
3. Exposed Edges Shall Have 3/4" Chamfer

DR-70: JUNCTION BOX TOP

Not to Scale



NOTES:

1. See Plans for Dimensions "B" and "W" (Noted B x W)
2. See Table for Top Thickness and Reinforcing
3. Exposed Edges Shall Have 3/4" Chamfer

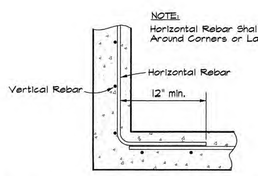
DR-80: GRATED INLET TOP

Not to Scale

TOP REINFORCING FOR INLETS & JUNCTION BOXES For Locations Subject to Traffic Loading (HS-20)			
B or W	Thickness	Short Span Reinforcing	Long Span Reinforcing
Up to 4'0"	10"	#6 @ 5"	#4 @ 12"
4'1" to 5'0"	10"	#7 @ 5"	#4 @ 12"
5'1" to 7'0"	12"	#7 @ 5"	#4 @ 12"
7'1" to 9'0"	12"	#8 @ 5"	#4 @ 12"
9'1" to 10'0"	13"	#9 @ 5"	#4 @ 12"

TOP REINFORCING FOR INLETS & JUNCTION BOXES For Locations NOT Subject to Traffic Loading			
Max. Span (B or W)	Thickness	Short Span Reinforcing	Long Span Reinforcing
Up to 7'0"	6"	#4 @ 12"	#4 @ 12"
7'1" to 8'0"	6"	#4 @ 10"	#4 @ 12"
8'1" to 9'0"	6"	#4 @ 8"	#4 @ 12"
9'1" to 10'0"	6"	#4 @ 6"	#4 @ 12"

DR-90: JUNCTION BOX or GRATED INLET TOP REINFORCING



DR-100: PLAN - JUNCTION BOX, GRATED INLET or CURB INLET WALL CORNER REINFORCING

Not to Scale

HALFF
HALFF ASSOCIATES, INC. • ENG #000465/BRS #1-2-2022 • LS #001444/BRS #1-2-2021
2401 W. COTTONWOOD ST., STE. 1 • BENTONVILLE, AR 72712 • 479.273.2058 • HALFF.COM

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHERRY HILL DRIVE, SUITE 1, DANVERS, MASSACHUSETTS 01301
PHONE: (800) 225-0801 • FAX: (978) 762-5101
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005021109

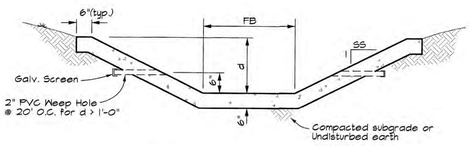
#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA.
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: STORMWATER DRAINAGE DETAILS

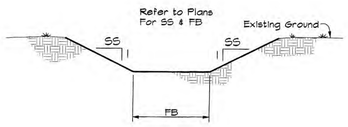
STATE OF MISSOURI
TIMOTHY B. LOVE
NUMBER E-28010121101
3/10/22
NOT FOR CONSTRUCTION
PURPOSES
PROFESSIONAL ENGINEER
Digitally signed by Timothy B. Love, P.E.
MO# PE-2001012101
The Original Signed and Sealed Document is on File at the Office of Record

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.03



NOTES:
1. See Plans for "FB", "SS" and "d"
2. This Detail is For "d" <= 8'-0" or "FB" <= 8'-0" Ditches with Dimensions that Exceed These Limits Shall be Constructed as Directed by the Engineer.
3. Transverse Contraction Joints Shall be Placed at 10'-0" O.C.

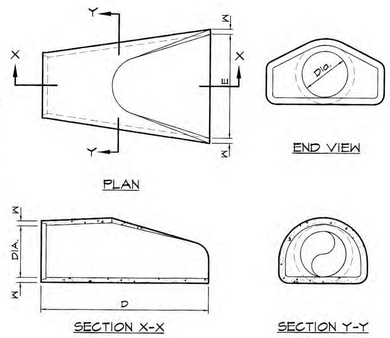
DR-110: CONCRETE LINED DITCH
Not to Scale 2-25-10



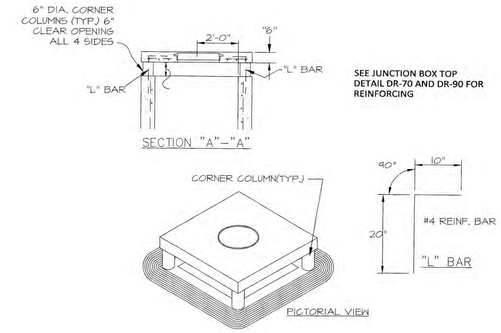
DR-120: EARTHEN DITCH
Not to Scale

W= Wall Thickness Of Pipe

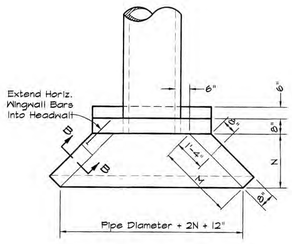
DIA.	D	E
18"	6'-1"	3'-0"
24"	6'-1.5"	4'-0"
30"	6'-1.75"	5'-0"
36"	8'-1.75"	6'-0"
42"	8'-2"	6'-6"
48"	8'-2"	7'-0"
54"	8'-4"	7'-6"
60"	8'-4"	8'-0"
72"	8'-4"	9'-0"



DR-130: FLARED END SECTION
Not To Scale



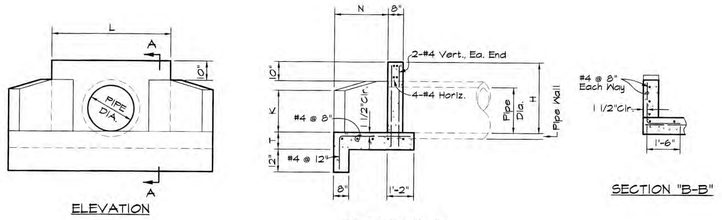
AREA INLET TOP DETAIL
N.T.S



PLAN VIEW

DIMENSIONS						
I.D.	T	H	K	L	M	N
18"	9"	2'-8"	1'-7"	4'-0"	2'-1 1/4"	1'-6"
24"	9"	3'-2"	1'-10"	4'-6"	2'-10"	2'-0"
30"	10"	3'-8"	2'-1"	5'-1"	3'-6 1/2"	2'-6"
36"	10"	4'-2"	2'-4"	5'-8"	4'-3"	3'-0"
42"	10"	4'-8"	2'-8"	6'-3"	4'-11 1/2"	3'-6"
48"	12"	5'-5"	3'-2"	6'-10"	5'-8"	4'-0"

Notes:
1. All Concrete Shall Be Class "AA".
2. All Exposed Concrete Shall Have A Grout Cleaned Finish
4. All Exposed Corners To Be Chamfered 3/4".
5. 2" Diameter Weep Holes Shall Be Installed 4'-0" O.C. At Bottom Of Headwalls.
6. High Point Of Headwall Shall Not Project More Than 3" Above Slope.

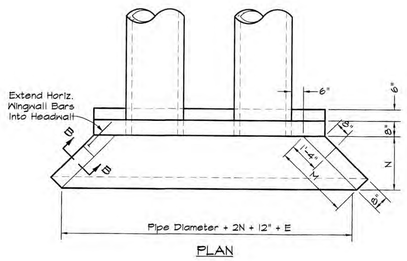


ELEVATION

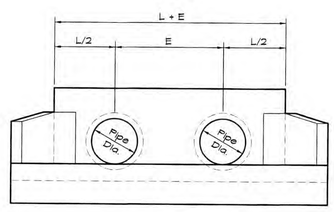
SECTION "A-A"

SECTION "B-B"

DR-140: SINGLE PIPE HEADWALL WITH 45° WINGWALLS
Not To Scale



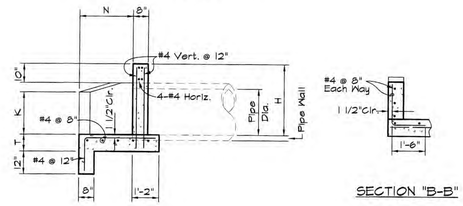
PLAN



ELEVATION

DIMENSIONS								
I.D.	E	L + E	T	H	K	L	M	N
18"	2'-6"	6'-6"	9"	2'-8"	1'-7"	4'-0"	2'-1 1/4"	1'-6"
24"	3'-0"	7'-6"	9"	3'-2"	1'-10"	4'-6"	2'-10"	2'-0"
30"	3'-9"	8'-10"	10"	3'-8"	2'-1"	5'-1"	3'-6 1/2"	2'-6"
36"	4'-6"	10'-4"	10"	4'-2"	2'-4"	5'-8"	4'-3"	3'-0"
42"	5'-3"	11'-6"	10"	4'-8"	2'-8"	6'-3"	4'-11 1/2"	3'-6"
48"	6'-0"	12'-10"	12"	5'-5"	3'-2"	6'-10"	5'-8"	4'-0"

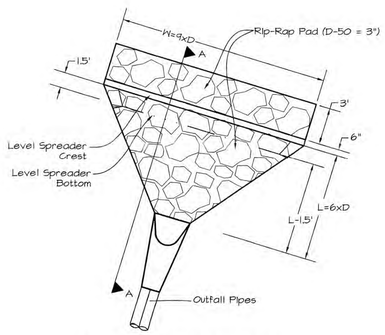
Notes:
1. All Concrete Shall Be Class "AA".
2. All Exposed Concrete Shall Have a Grout Cleaned Finish
4. All Exposed Corners To Be Chamfered 3/4".
5. 2" Diameter Weep Holes Shall Be Installed 4'-0" O.C. at Bottom Of Headwalls.
6. High Point of Headwall Shall Not Project More Than 3" Above Slope.



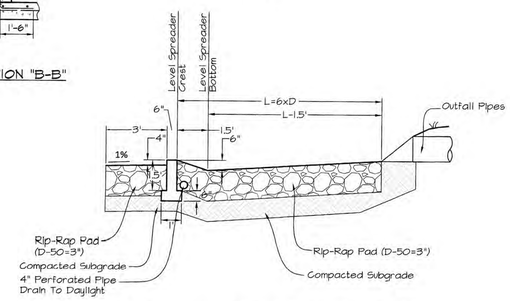
SECTION "A-A"

SECTION "B-B"

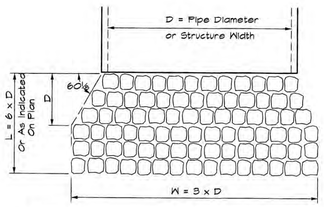
DR-150: DOUBLE PIPE HEADWALL WITH 45° WINGWALLS
Not To Scale



LEVEL SPREADER DETAIL
Not To Scale

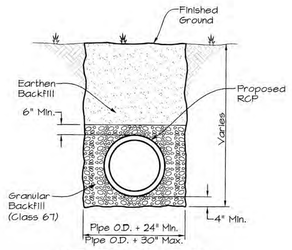


LEVEL SPREADER SECTION "A-A"
Not To Scale

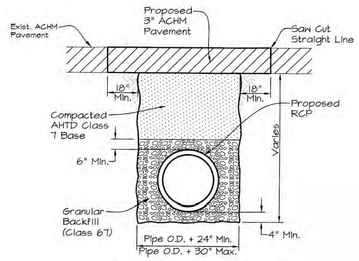


NOTES:
1. Rip-Rap Pad to be Centered on Structure.
2. Place Filter Fabric Over the Rip-Rap Footprint Prior to Placement of Stones.
3. Stone Shall Consist of Field Stone or Rough, Unhewn Quarry Stone as Nearly Uniform in Section as Practical. The Stones Shall be Dense, Resistant to the Action of Air and Water and Suitable in All Aspects for the Purpose Intended.
4. Unless Otherwise Specified, All Stones Used as Rip-Rap Weigh Between 50 and 150 Pounds Each, and at Least 60% of the Stones Shall Weigh More Tan 100 Pounds Each.
5. Stone Shall be Grouted in Place With a Concrete Slurry.

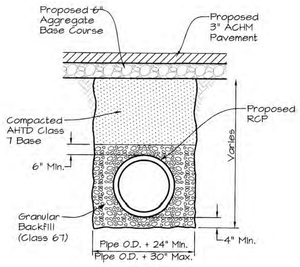
DR-160: RIP-RAP PAD
Not to Scale



STORM DRAIN IN GREENSPACE
No Scale



STORM DRAIN BENEATH EXISTING PAVEMENT
No Scale



STORM DRAIN BENEATH PROPOSED PAVEMENT
Not to Scale

HALFF
HALFF ASSOCIATES, INC. - TBPE #312 | TBPLS #10022400 | TBAE #14378 | TBGE #50 | 3 2 3 1 2022 - LB #10022400 | 3 2 3 1 2021
AUS | 4030 W. BOY SCOUT BLVD., SUITE 1000 | TAMPA, FL 33607 | 813.396.1700
AUS | 9500 RESEARCH BLVD., BUILDING 1, SUITE 1-100 | AUSTIN, TX 78759 | 512.777.4600
AUS | 1 CITYCENTRE DR., SUITE 1 | MISSISSAUGA, ON L5B 1M2 | 905.273.3300

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-9010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

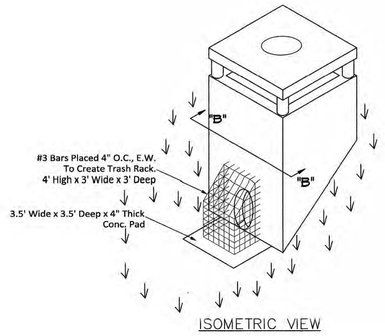
NO	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

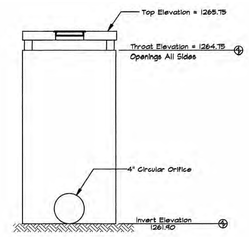
CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: STORMWATER DRAINAGE DETAILS

Drawing C. Melton, Jr., P.E.
MO # PE-2010012121
The Original Signed and Sealed Document is on File in the Office of Halff

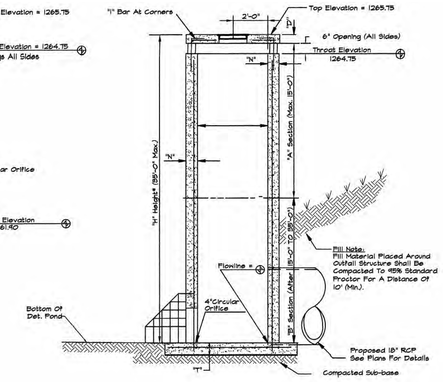
PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.04



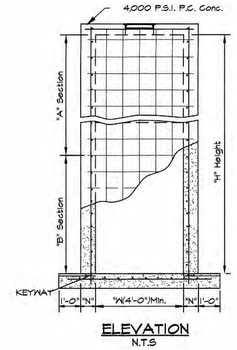
ISOMETRIC VIEW



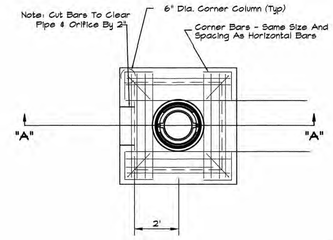
SECTION "B-B"
N.T.S



SECTION "A-A"
N.T.S



ELEVATION
N.T.S



PLAN

N.T.S

General Notes:

1. All Exposed Corners To Have 3/4" Chamfer.
2. All #4 & #5 Reinforcing Bars To Have 1-1/2" Cover, Larger Sizes To Have 2" Cover.
3. See Grading And Drainage Plan For Pipe Sizes, Locations, And Flow Lines.
4. Pipes Shall Connect To The Ends Or Sides Of The Inlet. Connection Shall Not Be Made At Corners Of Inlet.
5. All Reinforcing Bars To Be Grade 60.

Reinforcement Schedule, Base	
Section	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

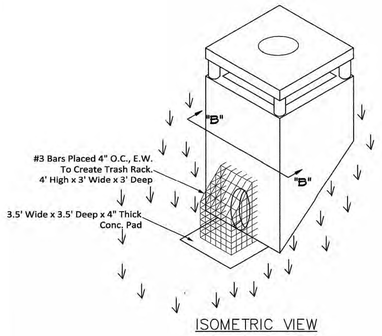
Table Of "W" Dimensions			
Pipe Size	Skew Of Cross Drain		
Single	Straight	30½	45½
24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
Double	For "A" Section Only		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

Reinforcement Schedule, Walls				
Section	Width ("W")		Hor.	Vert.
"A"	4'		#4's @ 9"	#4's @ 10"
	Between 4' & 7'		#6's @ 9"	#4's @ 10"
	Greater Than 7'		#5's @ 4 1/2"	#4's @ 10"
"B"	4'		#4's @ 6"	#4's @ 10"
	Between 4' & 7'		#6's @ 6"	#4's @ 10"

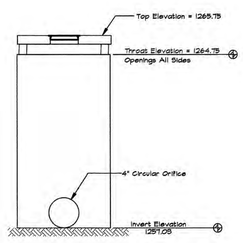
Table Of "T" & "N" Dimensions				
Section	Width ("W")	"T"	"N"	"D"
"A"	Between 4' & 7'	6" + Pipe Thickness	8"	6"
	Greater Than 7'	6" + Pipe Thickness	8"	8"
"B"	4'	6" + Pipe Thickness	8"	8"
	Between 4' & 7'	6" + Pipe Thickness	10"	8"

Reinforcement Schedule, Top		
Dimensions	Steel	Special Pattern
W1 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W1 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4'S @ 6" E.W.	Diagonal @ Cover
W1 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover

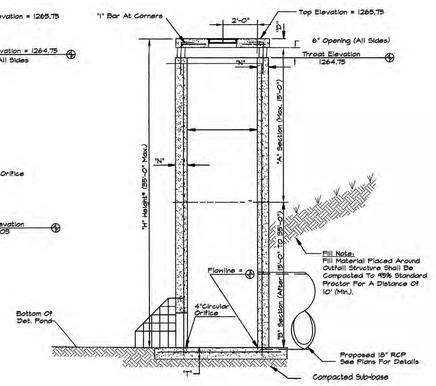
NORTH DETENTION POND OUTLET STRUCTURE
Not to Scale



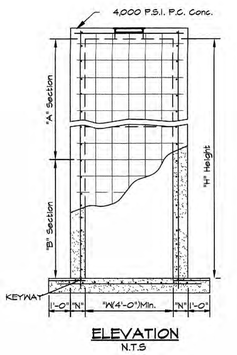
ISOMETRIC VIEW



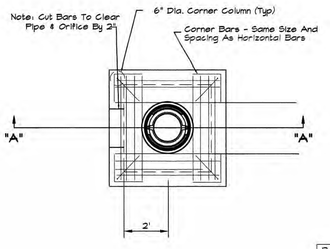
SECTION "B-B"
N.T.S



SECTION "A-A"
N.T.S



ELEVATION
N.T.S



PLAN

N.T.S

General Notes:

1. All Exposed Corners To Have 3/4" Chamfer.
2. All #4 & #5 Reinforcing Bars To Have 1-1/2" Cover, Larger Sizes To Have 2" Cover.
3. See Grading And Drainage Plan For Pipe Sizes, Locations, And Flow Lines.
4. Pipes Shall Connect To The Ends Or Sides Of The Inlet. Connection Shall Not Be Made At Corners Of Inlet.
5. All Reinforcing Bars To Be Grade 60.

Reinforcement Schedule, Base	
Section	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

Table Of "W" Dimensions			
Pipe Size	Skew Of Cross Drain		
Single	Straight	30½	45½
24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
Double	For "A" Section Only		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-6"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

Reinforcement Schedule, Walls				
Section	Width ("W")		Hor.	Vert.
"A"	4'		#4's @ 9"	#4's @ 10"
	Between 4' & 7'		#6's @ 9"	#4's @ 10"
	Greater Than 7'		#5's @ 4 1/2"	#4's @ 10"
"B"	4'		#4's @ 6"	#4's @ 10"
	Between 4' & 7'		#6's @ 6"	#4's @ 10"

Table Of "T" & "N" Dimensions				
Section	Width ("W")	"T"	"N"	"D"
"A"	Between 4' & 7'	6" + Pipe Thickness	8"	6"
	Greater Than 7'	6" + Pipe Thickness	8"	8"
"B"	4'	6" + Pipe Thickness	8"	8"
	Between 4' & 7'	6" + Pipe Thickness	10"	8"

Reinforcement Schedule, Top		
Dimensions	Steel	Special Pattern
W1 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W1 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4'S @ 6" E.W.	Diagonal @ Cover
W1 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover

SOUTH DETENTION POND OUTLET STRUCTURE
Not to Scale

HALFF
HALFF ASSOCIATES, INC. | TBPE-FIRM #312 | TBPELS-FIRM #10033-01 | EXP 12.31.2021
2601 NE COTTONWOOD ST., STE 1 • BENTONVILLE, AR 72712 • 479.273.2898 • HALFF.COM

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHERRY DRIVE, HAMILTON, MASSACHUSETTS 01301
PHONE: (603) 235-0013 FAX: (603) 225-0076
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005038109

⚠	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

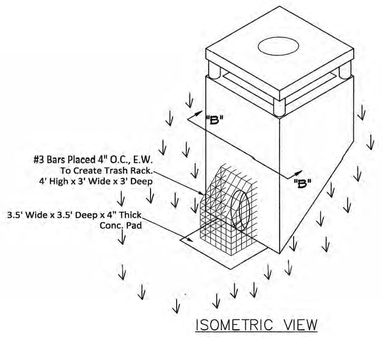
KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: OUTLET STRUCTURE DETAIL - NORTH AND SOUTH

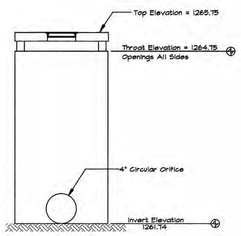
STATE OF MISSOURI
TIFFANY BLAKE LOVE
PE-2001012101
3-10-22
PROFESSIONAL ENGINEER
Tiffany B. Love, P.E.
MO Pe-2001012101
The Original Signed and Sealed Document is on File at the Office of Halff

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.05

DATE PLOTTED: 3/9/2022 5:10:27 PM PLOTTED BY: Love, Tiffany



ISOMETRIC VIEW



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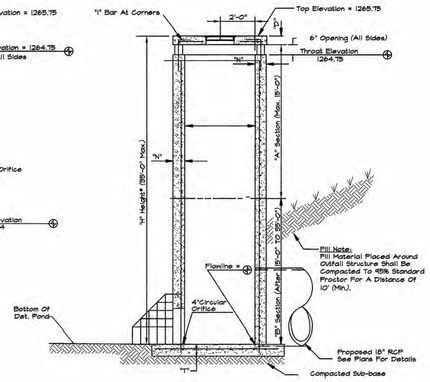
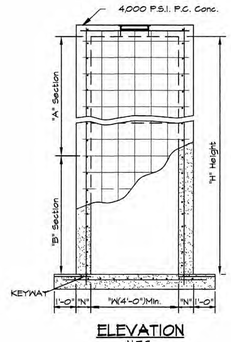
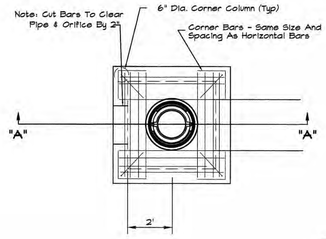


SECTION "A-A"
N.T.S



ELEVATION
N.T.S



PLAN
N.T.S

General Notes:

1. All Exposed Corners To Have 3/4" Chamfer.
2. All #4 & #5 Reinforcing Bars To Have 1-1/2" Cover, Larger Sizes To Have 2" Cover.
3. See Grading And Drainage Plan For Pipe Sizes, Locations, And Flow Lines.
4. Pipes Shall Connect To The Ends Or Sides Of The Inlet. Connection Shall Not Be Made At Corners Of Inlet.
5. All Reinforcing Bars To Be Grade 60.

Reinforcement Schedule, Base	
Section	
"A"	#4's @ 6" E.W.
"B"	#6's @ 6" E.W.

Table Of 'W' Dimensions			
Pipe Size	Skew Of Cross Drain		
Single	Straight	30's	45's
24"	4'-0"	4'-0"	4'-10"
30"	4'-0"	4'-7"	5'-8"
36"	4'-0"	5'-3"	6'-5"
42"	5'-3"	5'-11"	7'-3"
48"	5'-10"	6'-7"	8'-0"
60"	7'-0"	7'-10"	9'-8"
Double	For "A" Section Only		
24"	7'-0"	7'-10"	9'-5"
30"	8'-2"	9'-2"	11'-0"
36"	9'-4"	10'-6"	12'-8"
42"	10'-6"	11'-10"	14'-2"
48"	11'-8"	13'-2"	15'-10"

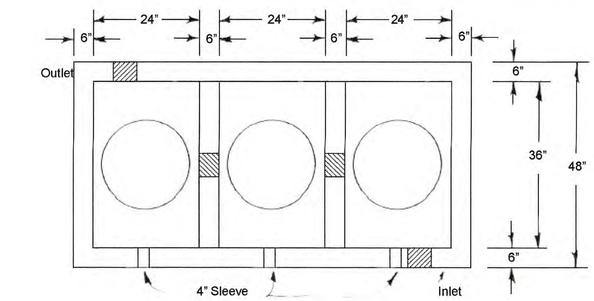
Reinforcement Schedule, Walls			
Section	Width ("W")	Hor.	Vert.
"A"	4'	#4's @ 9"	#4's @ 10"
	Between 4' & 7'	#6's @ 9"	#4's @ 10"
	Greater Than 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
	Between 4' & 7'	#6's @ 6"	#4's @ 10"

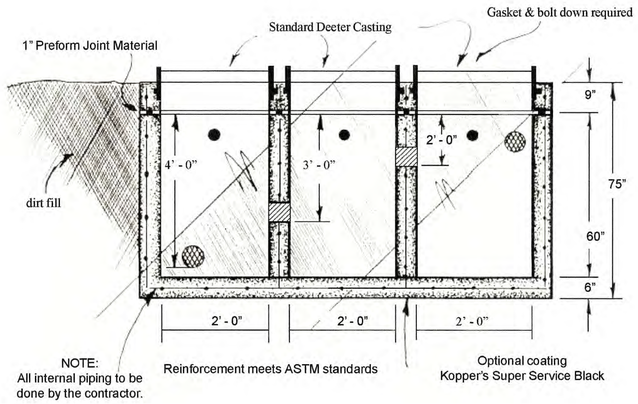
Table Of "T" & "N" Dimensions				
Section	Width ("W")	"T"	"N"	"D"
"A"	Between 4' & 7'	6" + Pipe Thickness	8"	6"
	Greater Than 7'	6" + Pipe Thickness	8"	8"
"B"	4'	6" + Pipe Thickness	8"	8"
	Between 4' & 7'	6" + Pipe Thickness	10"	8"

Reinforcement Schedule, Top		
Dimensions	Steel	Special Pattern
W1 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Less	#4's @ 8" E.W.	Diagonal @ Cover
W1 = 7' Or Greater	#4's @ 8" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover
W1 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover
W2 = 7' Or Greater	#4's @ 6" E.W.	Diagonal @ Cover

EAST DETENTION POND OUTLET STRUCTURE
Not to Scale

Precast Oil Interceptor





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Design Group
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MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

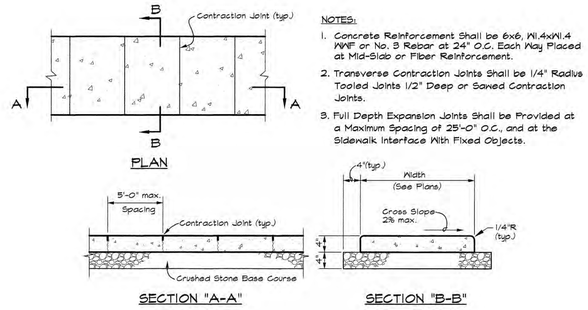
NO.	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: OUTLET STRUCTURE DETAIL - EAST

STATE OF MISSOURI
DOUGLAS C. MELTON, JR.
PE-2001012101
PROFESSIONAL ENGINEER
Drawing is Digitally Signed and Sealed
The Original Signed and Sealed Document is on file at the Office of Record

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.06

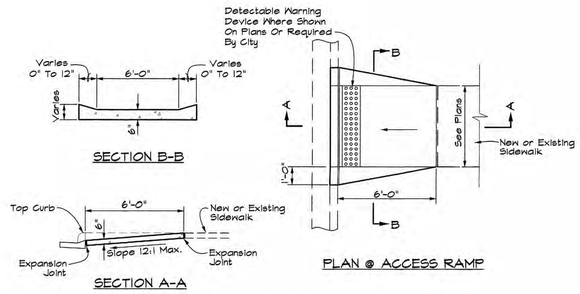


NOTES:

1. Concrete Reinforcement Shall be 6x6, W1.4xW1.4 WWF or No. 3 Rebar at 24" O.C. Each Way Placed at Mid-Slab or Fiber Reinforcement.
2. Transverse Contraction Joints Shall be 1/4" Radius Tooled Joints 1/2" Deep or Sawed Contraction Joints.
3. Full Depth Expansion Joints Shall be Provided at a Maximum Spacing of 25'-0" O.C., and at the Sidewalk Interface With Fixed Objects.

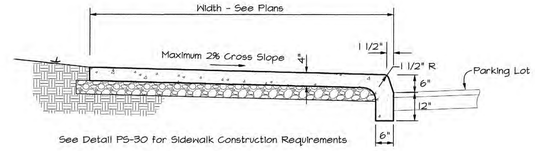
PS 30: CONCRETE SIDEWALK

Not to Scale



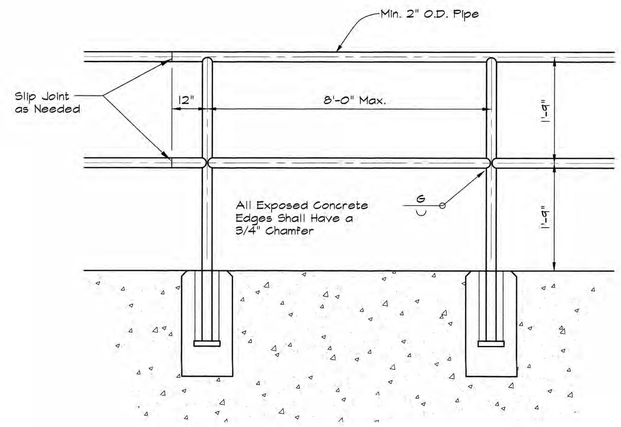
PS-40: ACCESSIBLE SIDEWALK RAMP

Not to Scale



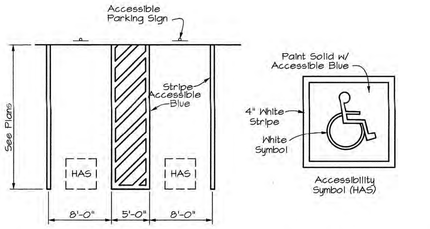
PS-70: CONCRETE SIDEWALK ADJACENT TO PARKING LOT

Not to Scale



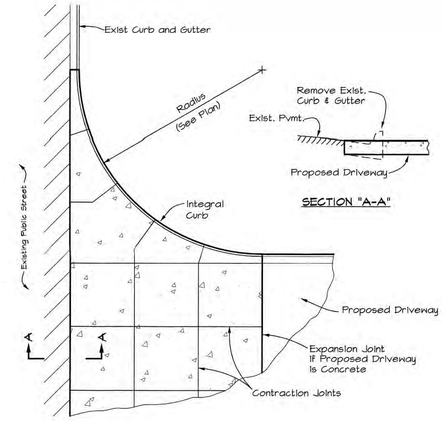
HANDRAIL

No Scale



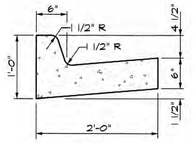
PS-80: ACCESSIBLE PARKING SPACE LAYOUT

Not to Scale



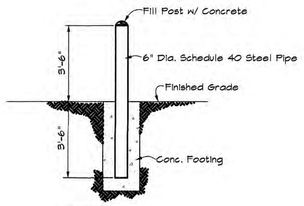
PS-120: CONCRETE DRIVEWAY APRON

Not to Scale



ST-10: TYPE "A" CURB & GUTTER

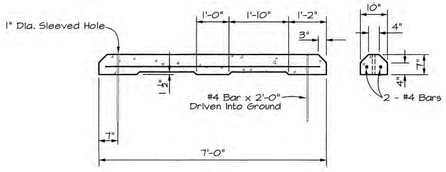
Not to Scale



NOTE:
All Pipe Bollards Shall be Painted Red Unless Noted Otherwise. Not For Electric.

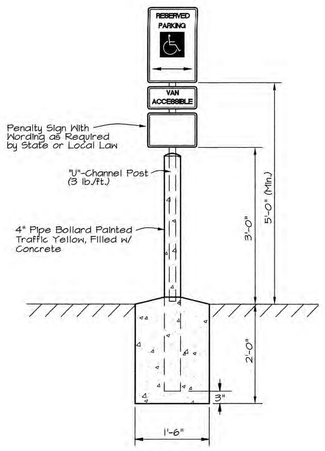
PS-150: PIPE BOLLARD

Not to Scale



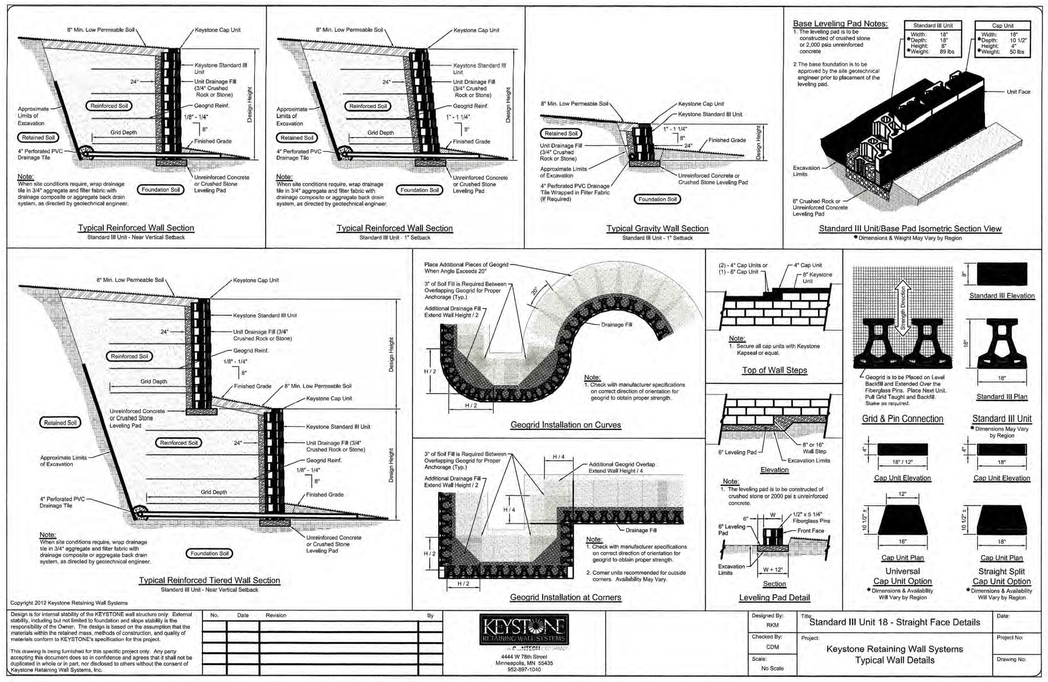
PS-130: PRECAST CONC. WHEELSTOP

Not to Scale



ACCESSIBLE ACCESSIBLE PARKING SIGN

Not to Scale



Typical Reinforced Tiered Wall Section
Standard III Unit - Near Vertical Setback

Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability, is the responsibility of the Owner. The design is based on the assumption that the materials within the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.

This drawing is being furnished for this specific project only. Any party accepting this document does so in confidence and agrees that it shall not be duplicated in whole or in part, nor disclosed to others without the consent of Keystone Retaining Wall Systems, Inc.

No.	Date	Revision	By

KEYSTONE RETAINING WALL SYSTEMS
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040

Designed By:	RKM
Checked By:	CDM
Scale:	No Scale
Title:	Standard III Unit 18 - Straight Face Details
Project:	Keystone Retaining Wall Systems Typical Wall Details
Date:	
Project No:	
Drawing No:	

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PHONE: (603) 224-2661 FAX: (603) 224-2661
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

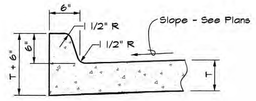
KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: PAVEMENT, SIDEWALK, AND DRIVEWAY DETAILS

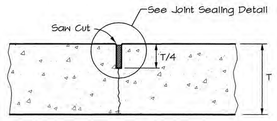
Douglas C. Melton, Jr., P.E.
The Original Signed and Sealed Document is on File at the Office of Record

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.07

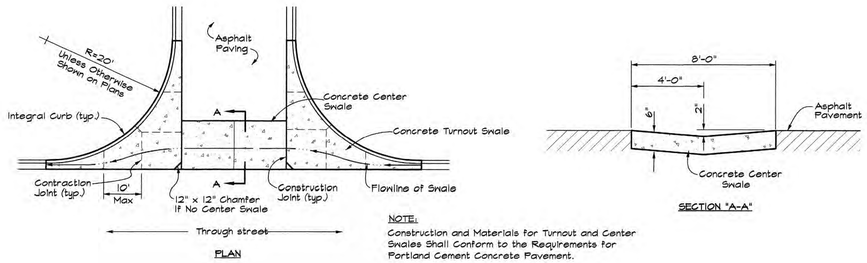
DATE PLOTTED: 3/9/2022 5:10:57 PM PLOTTED BY: Lowe, Tiffany



ST-40: INTEGRAL CURB FOR CONC. PAVING
Not to Scale



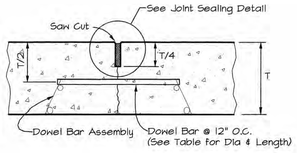
ST-60: CONTRACTION JOINT
Not to Scale



NOTE:
Construction and Materials for Turnout and Center Swales Shall Conform to the Requirements for Portland Cement Concrete Pavement.

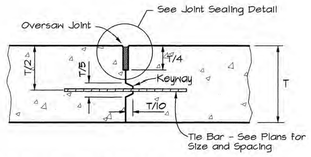
ST-50: TURNOUT & CENTER SWALE DETAIL
Not to Scale

T	Dowel Dia.	Dowel Length
5"	5/8"	12"
6"	3/4"	14"
7"	7/8"	14"
8"	1"	14"
9"	1 1/8"	16"

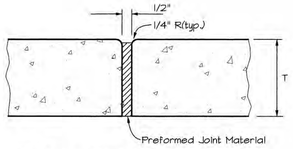


NOTE:
Immediately Prior to Placement of Concrete, Each Bar Shall be Field Coated for a Minimum Distance of 2" Greater than Half the Length of the Bar With an Approved Lubricant. Lubricated Ends of Adjacent Bars Shall be on Alternating Sides of the Slab Joint.

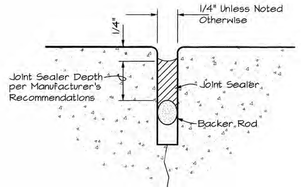
ST-70: DOWELED CONTRACTION JOINT
Not to Scale



ST-80: TIED CONSTRUCTION JOINT
Not to Scale



ST-110: EXPANSION JOINT
Not to Scale



ST-120: CONCRETE JOINT SEALING
Not to Scale

30"x30"

R1-1

18"x24"

R6-2

30"x30"

R5-1

30"x30"

R5-2a

36"x24"

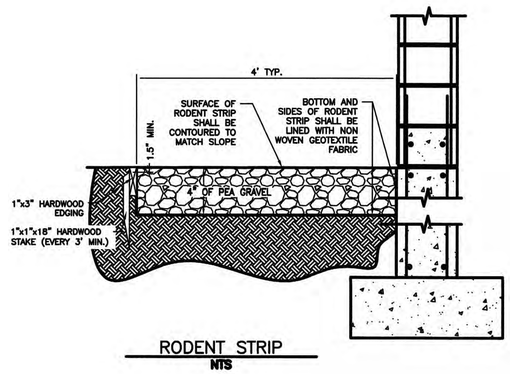
R5-9

12"x18"

R7-1

36"x30"

R3-5L



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1	03/10/22	TBL	BULLETIN #7

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: STREET DETAILS

KYLE M. MADISON
COLORADO
MELTON, JR.
PE-2001012701
PROFESSIONAL ENGINEER
Kyle M. Melton, P.E.
Date: 12/22/2021
The Original Signed and Sealed Document is on File at the Office of Record

PROJECT NO. 2102123
ISSUED 12/22/2021
SCALE AS NOTED
DRAWN BY TBL
DRAWING NO. C6.08

DATE PLOTTED: 3/9/2022 5:11:09 PM PLOTTED BY: Lowe, Tiffany

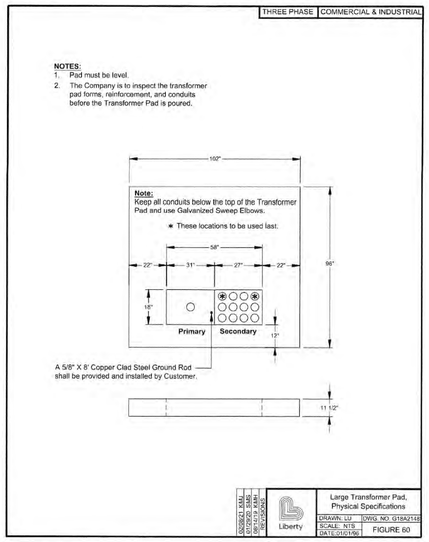


Figure 60: Large Transformer Pad, Physical Specifications

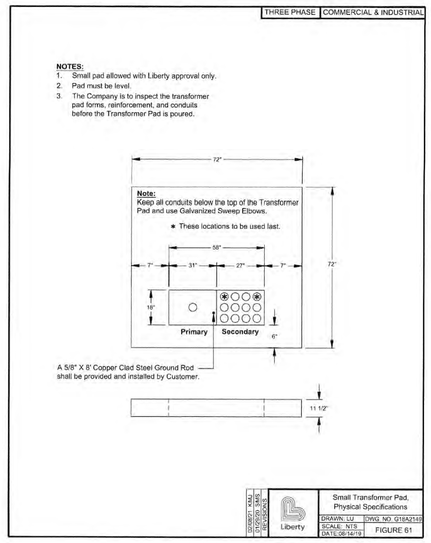


Figure 61: Small Transformer Pad, Physical Specifications

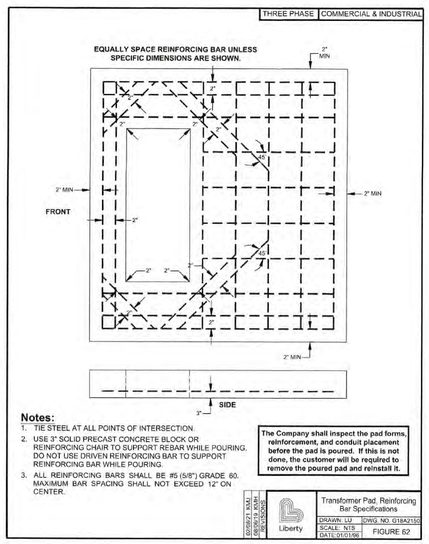


Figure 62: Transformer Pad, Reinforcing Bar Specifications

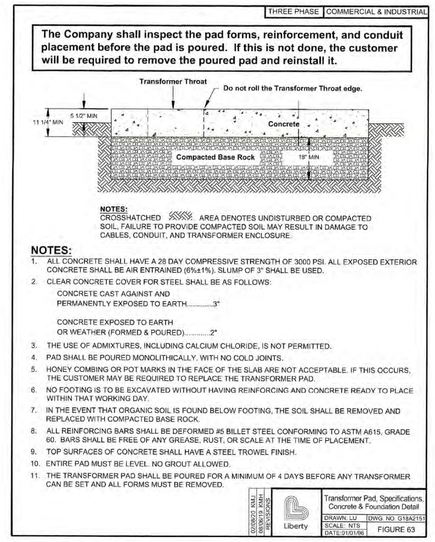


Figure 63: Transformer Pad, Specifications, Concrete & Foundation Detail

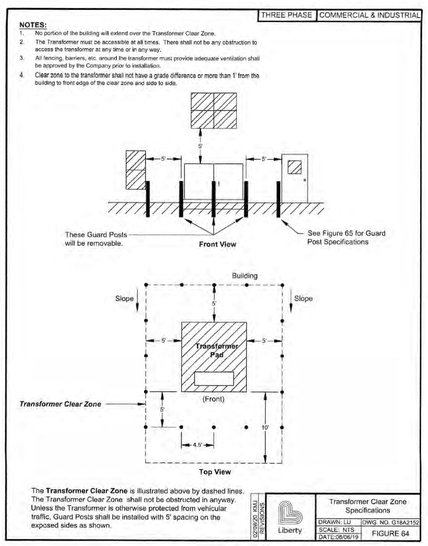


Figure 64: Transformer Clear Zone Specifications

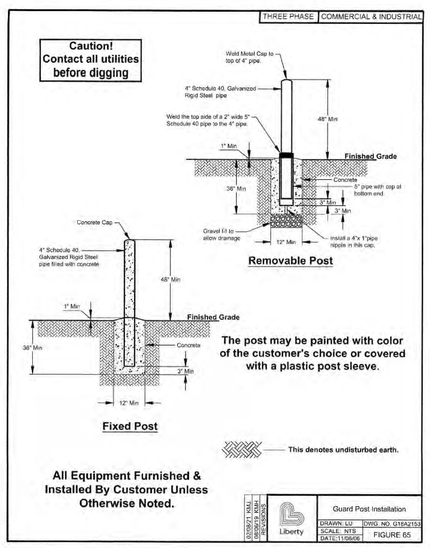
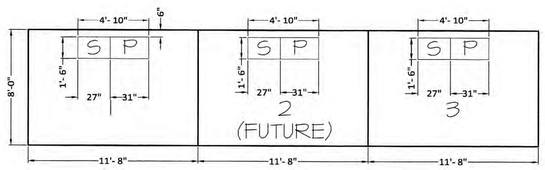


Figure 65: Guard Post Installation



TRANSFORMER PAD DIMENSIONS

Not to Scale

Notes:
1) Install Galvanize Sweep Elbows All Transformer Positions And Condult To 5' Beyond Front Of Pad. Stop Elbows Below Base Of Pad.
2) Position 2 Will Be Temporary Plugged With 4"-Thick PCC Slab (No Reinforcement). Separate Temporary Plug From Throat Sides And Underlying Compacted Base Rock With 10 Mil Visqueen.
3) Slab Reinforcement Detail Above (Figure 62)

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2407 SE COTTONWOOD ST. STE. 110 BENTONVILLE, AR 72712 • 479.216.4200 HALFF.COM

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MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

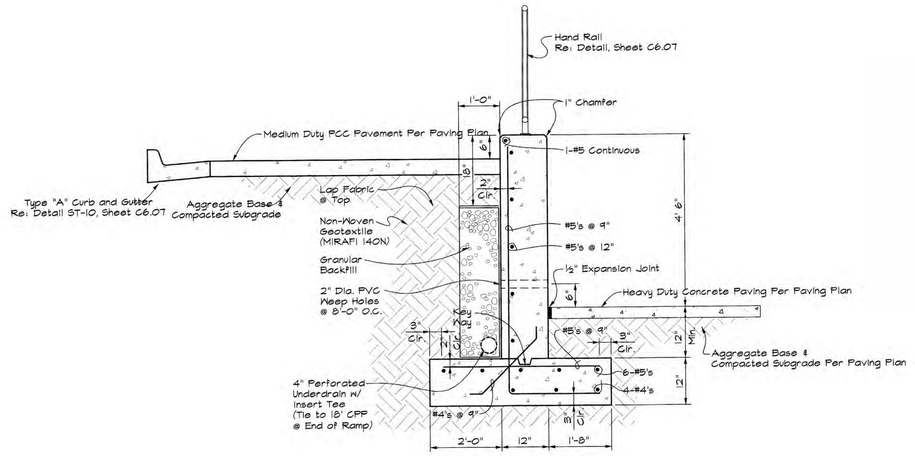
	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: ELECTRICAL DETAILS

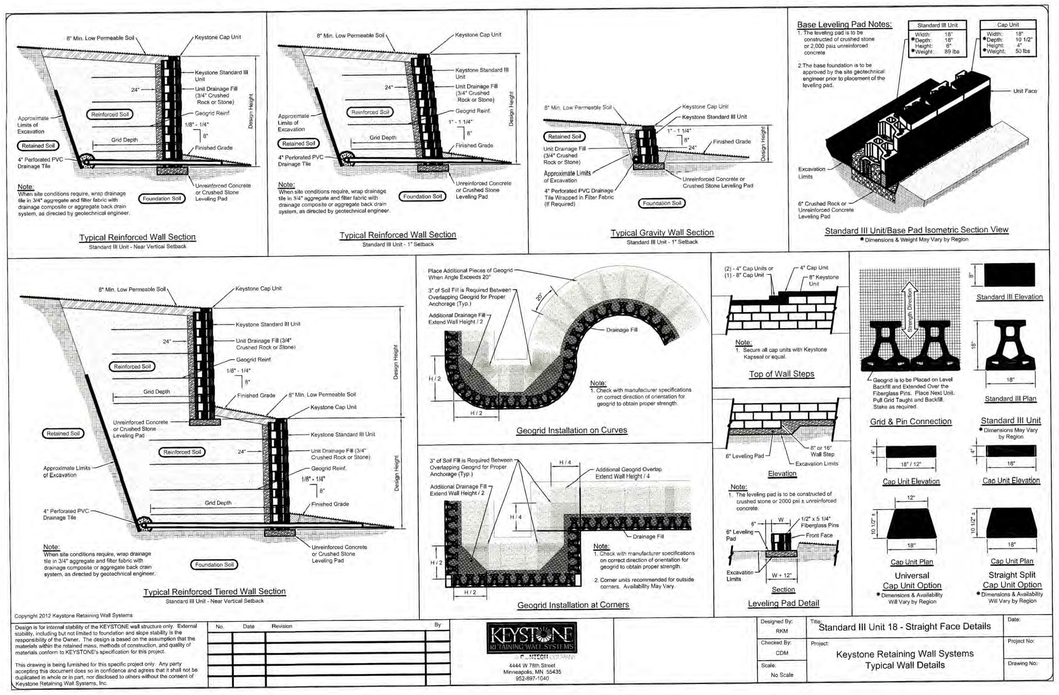
Douglas Bletsch, P.E. MO# PE-2001015710
The Original Signed and Sealed Document is on file at the Office of Record

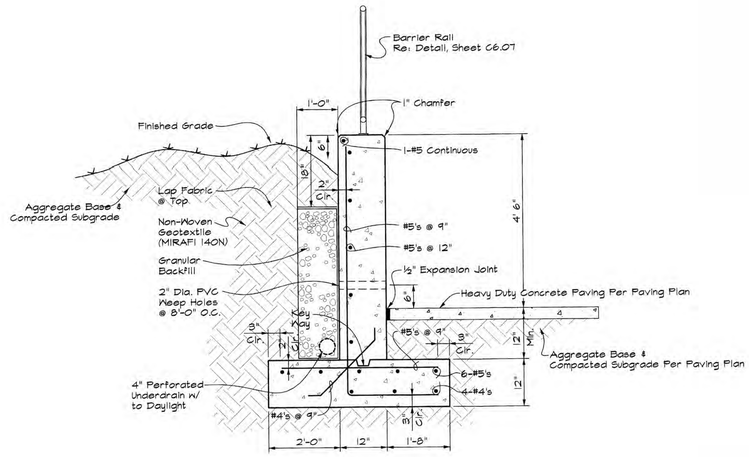
PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.09



RETAINING WALL AT RAMP - TYPICAL SECTION

Not To Scale


8" Min. Low Permeable Soil
Keystone Cap Unit
Keystone Standard III Unit
Unit Drainage Fill (3/4" Crushed Rock or Stone)
Geogrid Reinf.
24"
Reinforced Soil
1/8" - 1/4"
8"
Approximate Limits of Excavation
Grid Depth
Finished Grade
Retained Soil
4" Perforated PVC Drainage Tile
Design Height
Unreinforced Concrete or Crushed Stone Leveling Pad
Foundation Soil
Note:
When site conditions require, wrap drainage tile in 3/4" aggregate and filter fabric with drainage composite or aggregate back drain system, as directed by geotechnical engineer.
Typical Reinforced Wall Section
Standard III Unit - Near Vertical Setback
Typical Reinforced Wall Section
Standard III Unit - 1" Setback
Typical Gravity Wall Section
Standard III Unit - 1" Setback
Base Leveling Pad Notes:
1. The leveling pad is to be constructed of crushed stone or 2,000 psi unreinforced concrete
2. The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.
Standard III Unit
Width: 18"
Depth: 10"
Height: 8"
Weight: 89 lbs
Cap Unit
Width: 18"
Depth: 10 1/2"
Height: 8"
Weight: 50 lbs
Unit Face
Excavation Limits
8" Crushed Rock or Unreinforced Concrete Leveling Pad
Standard III Unit/Base Pad Isometric Section View
Dimensions & Weight May Vary by Region
Typical Reinforced Tiered Wall Section
Standard III Unit - Near Vertical Setback
Place Additional Pieces of Geogrid Where Angle Exceeds 20°
3" of Soil Fill is Required Between Overlapping Geogrid for Proper Anchorage (Typ.)
Additional Drainage Fill = Extend Wall Height / 2
Drainage Fill
H / 2
Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.
Geogrid Installation on Curves
Additional Geogrid Overlap = Extend Wall Height / 4
H / 4
Note:
1. Check with manufacturer specifications on correct direction of orientation for geogrid to obtain proper strength.
2. Corner units recommended for outside corners. Availability May Vary.
Geogrid Installation at Corners
(2) - 4" Cap Units or (1) - 8" Cap Unit
4" Cap Unit
8" Keystone Unit
Note:
1. Secure all cap units with Keystone Kapseal or equal.
Top of Wall Steps
8" or 16" Wall Step
6" Leveling Pad
Excavation Limits
Elevation
Note:
1. The leveling pad is to be constructed of crushed stone or 2000 psi unreinforced concrete.
6"
W
8" Leveling Pad
1/2" x 5 1/4" Fiberglass Pins
Front Face
Excavation Limits
W + 12"
Section
Leveling Pad Detail
Geogrid Overlap
4. Geogrid is to be Placed on Level Backfill and Extended Over the Fiberglass Pins. Place Next Unit, Pull Grid Taught and Backfill. Stake as required.
Grid & Pin Connection
18" / 12"
Cap Unit Elevation
12"
10 1/2"
Cap Unit Plan
Universal Cap Unit Option
Dimensions & Availability Will Vary by Region
8"
Standard III Elevation
16"
18"
Standard III Plan
Standard III Unit
Dimensions May Vary by Region
Cap Unit Elevation
Straight Split Cap Unit Option
Dimensions & Availability Will Vary by Region
Copyright 2012 Keystone Retaining Wall Systems
Design is for internal stability of the KEYSTONE wall structure only. External stability, including but not limited to foundation and slope stability, is the responsibility of the user. The design is based on the assumption that the materials used for the retained mass, methods of construction, and quality of materials conform to KEYSTONE's specification for this project.
This drawing is being furnished for this specific project only. Any party accepting this document does so in confidence and agrees that it shall not be duplicated in whole or in part, nor disclosed to others without the consent of Keystone Retaining Wall Systems, Inc.
No. Date Revision By
KEYSTONE RETAINING WALL SYSTEMS
4444 W 78th Street
Minneapolis, MN 55435
952-897-1040
Designed By: RKM
Checked By: CDM
Scale: No Scale
Title: Standard III Unit 18 - Straight Face Details
Project: Keystone Retaining Wall Systems Typical Wall Details
Date:
Project No:
Drawing No:



RETAINING WALL - TYPICAL SECTION

Not To Scale

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Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

△	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

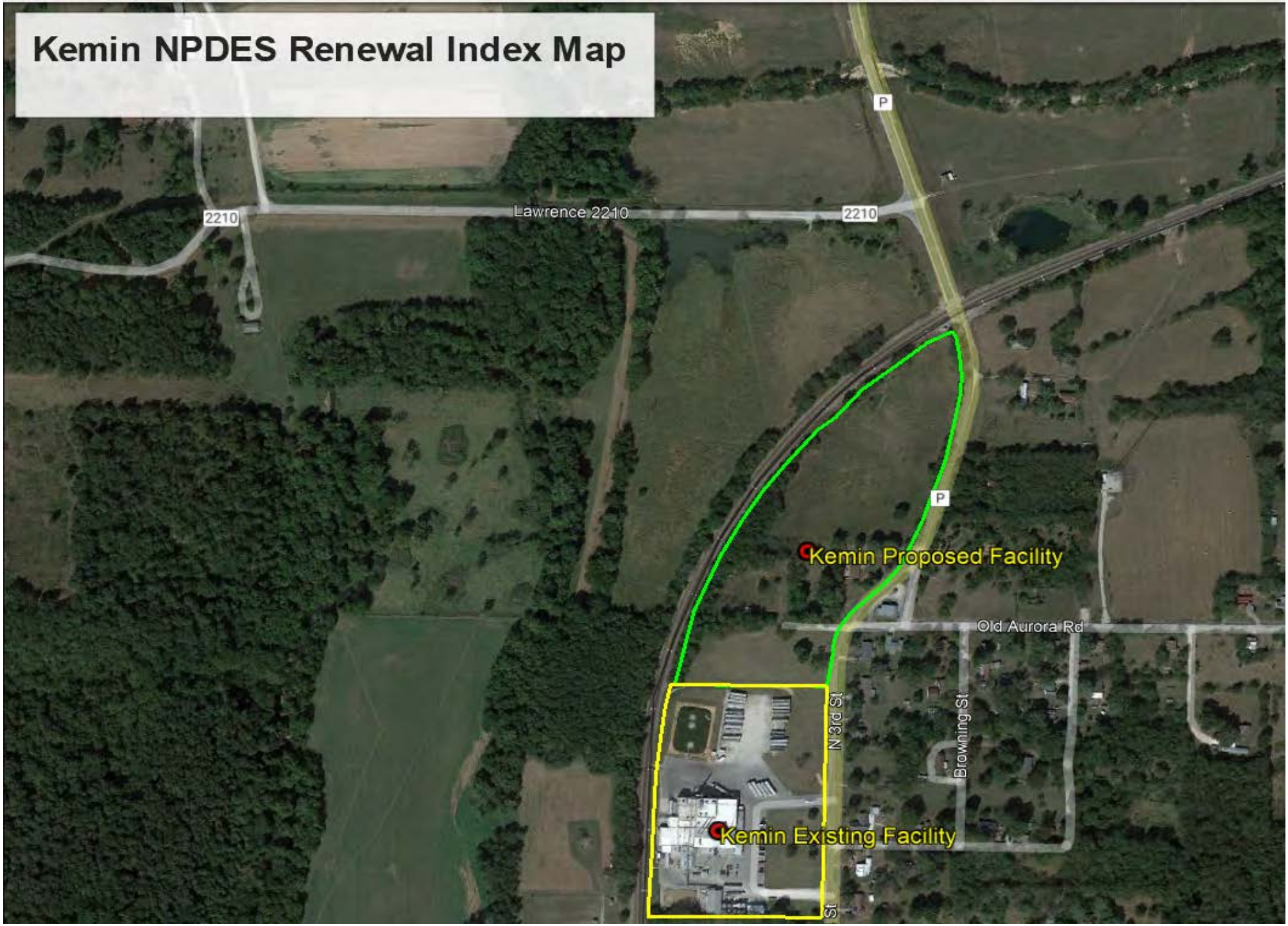
KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: RETAINING WALL DETAILS

STATE OF MISSOURI
JOSHUA C. NELSON
PE-2010121201
PROFESSIONAL ENGINEER
Joseph E. Nelson, P.E.
2019.11.20 01:12:55
The Original Signed and Sealed Document is Kept at the Offices of the Preparer

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C6.10

DATE PLOTTED: 3/9/2022 5:11:39 PM PLOTTED BY: Lowe, Tiffany


Kemin NPDES Renewal Index Map
2210
Lawrence 2210
2210
P
P
Kemin Proposed Facility
Old Aurora Rd
N 3rd St
Browning St
Kemin Existing Facility
St

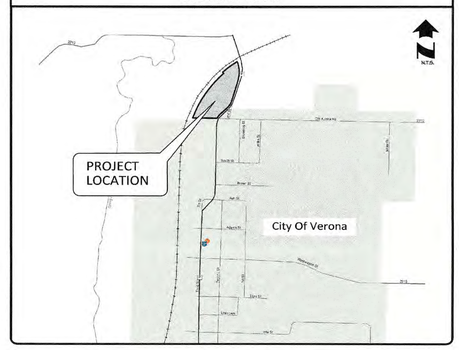

Douger Branch
Old Aurora Rd


N 3rd
W Brown St
W Ash St
W Ash St
Google Earth


N
1000 ft

Index of Sheets

VICINITY MAP



August 2022

Large Scale Development Plans

for

KEMIN INDUSTRIES NEW PROTEIN FACILITY

Missouri State Highway P

Verona, Lawrence County, Missouri 65769

REV#2 08/22/22 TJL BULLETIN #14

Issued for Construction - 03.10.2022

STATE OF MISSOURI
DOUGLAS C. MCNOTT, JR.
NUMBER PE-2001012101
PROFESSIONAL ENGINEER
8.22.22
Douglas C. McNott, Jr., P.E.
MO# PE-2001012101
This Original Signed and Sealed Document is on file at the Office of Record

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2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM

FLOOD CERTIFICATION:

Based Upon Review Of FEMA Firm: Lawrence County, Missouri And Incorporated Areas, And By Graphic Plotting Only, The Subject Property Is Determined To Be In Zone X, Or Areas Determined To Be Outside The 0.2% Annual Chance Floodplain.

Map Number: 5007C0260J

Effective Date: September 28, 2007

SITE UTILITY CONTACTS

WATER & ELECTRIC
LIBERTY UTILITIES
CONTACT: MARY KRUEGER
602 S. JOPLIN AVE.
JOPLIN, MO
PHONE: (417) 625-5100
EMAIL: mary.krueger@libertyutilities.com

NATURAL GAS
SPIRE ENERGY
CONTACT: DUSTIN BORELAND
3025 SE CLOVER DRIVE
LEE SUMMIT, MO 64082
PHONE: (417) 626-4837
EMAIL: dustin.boreland@spireenergy.com

GOVERNING AGENCIES

CITY OF VERONA
144 N. 3RD STREET
VERONA, MO 65769
PHONE: (417) 498-6725

CITY CLERK
LAURA HAZELWOOD
PHONE: (417) 498-6725
EMAIL: verona@suddenlinkmail.com

BUILDING INSPECTOR
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PHONE (417) 229-0421
EMAIL: verona@suddenlinkmail.com

FIRE CHIEF
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PHONE: (417) 440-0479
EMAIL: verona@suddenlinkmail.com

POLICE CHIEF
JEREIMY ALLEN
PHONE: (417) 498-6270
EMAIL: verona@suddenlinkmail.com

MAYOR
JOSEPH HECK
PHONE: (417) 498-6725

WASTEWATER SUPERINTENDENT
ORVIL MAPLES
PHONE: (417) 498-6725

KEMIN INDUSTRIES
NEW PROTEIN FACILITY

Demolition Notes

1. The Contractor Is Responsible For The Demolition, Removal, And Disposal At A Location Approved By All Governing Authorities, Of All Structures, Pads, Walls, Flumes, Foundations, Parking, Drives, Drainage, Structures, Utilities, Etc., Such That The Improvements Shown On The Remaining Plans Can Be Constructed. All Facilities To Be Removed Shall Be Undercut To Suitable Material And Brought To Grade With Suitable Compacted Fill Material Per The Specifications.
2. The Contractor Is Responsible For Removing All Debris From The Site And Disposing Of The Debris In A Lawful Manner. The Contractor Is Responsible For Obtaining All Permits Required For Demolition And Disposal.
3. The Contractor Shall Maintain All Utility Services To The Owner And Surrounding Property Owners At All Times. Utility Services Shall Not Be Interrupted Without Approval From The Respective Utility Companies And Affected Property Owners.
4. The Contractor Shall Coordinate With Respective Utility Companies Prior To The Removal And/or Relocation Of Utilities. The Contractor Shall Coordinate With The Utility Company Concerning Portions Of Work Which May Be Performed By The Utility Company's Forces And Any Fees Which Are To Be Paid To The Utility Company For Their Services. The Contractor Is Responsible For Paying All Fees And Charges.
5. The Locations Of All Existing Utilities Shown On This Plan Have Been Determined From The Best Information Available And Are Given For The Convenience Of The Contractor. The Engineer Assumes No Responsibility For Their Accuracy. Prior To The Start Of Any Demolition Activity, The Contractor Shall Notify The Utility Companies For Onsite Locations Of Existing Utilities.
6. All Existing Sewers, Piping And Utilities Shown Are Not To Be Interpreted As The Exact Location, Or As The Only Obstacles That May Occur On The Site. Verify Existing Conditions And Proceed With Caution Around Any Anticipated Features.
7. Prior To Demolition Occurring, All Relevant Erosion Control Devices Are To Be Installed.
8. Should Removal And/or Relocation Activities Damage Fencing, Lighting, Utilities, Storm Inlet Structures, Etc, That Are Designated To Remain, Then The Contractor Shall Provide New Materials/ Structures in Accordance With The Contract Documents. Except For Materials Designed To Be Relocated On This Plan, All Other Construction Materials Shall Be New.
9. Contractor May Limit Saw-cut & Pavement Removal To Only Those Areas Where It Is Required As Shown On These Construction Plans But If Any Damage Is Incurred On Any Of The Surrounding Pavement, Etc. The Contractor Shall Be Responsible For Its Removal And Repair.
10. The Contractor Shall Coordinate Water Main Work With The Fire Dept. And Liberty Utilities To Plan Proposed Improvements And To Ensure Adequate Fire Protection Is Constantly Available To The Surrounding Property Owners And Site Throughout This Specific Work And Through All Phases Of Construction. Contractor Will Be Responsible For Arranging/Providing Any Required Water Main Shut Offs With Liberty Utilities During Construction. Any Costs Associated With Water Main Shut Offs Will Be The Responsibility Of The Contractor And No Extra Compensation Will Be Provided.
11. Damage To All Existing Conditions To Remain Will Be Replaced At Contractor's Expense.

Site Erosion Control General Notes

1. Stabilization Measures Shall Be Initiated As Soon As Practicable In Portions Of The Site Where Construction Activities Have Temporarily Or Permanently Ceased, But In No Case More Than Fourteen (14) Days After Work Has Ceased, Unless Activity In That Portion Of The Site Will Resume Within Twenty-one (21) Days. Following Initial Soil Disturbance Or Redisturbance, Permanent Or Temporary Stabilization Shall Be Completed Within Seven Calendar Days For The Surface Of All Perimeter Slopes
2. All Sediment And Erosion Control Devices Shall Be Inspected Every Seven (7) Days Or Every 14 Days And After Each Rainfall Occurrence That Exceeds One-Quarter (0.25) Inch. Damaged Or Ineffective Devices Shall Be Repaired Or Replaced, As Necessary.
3. Provide Temporary Construction Entrance, Silt Fence, Inlet Protection, And/Or Other Erosion Control Devices, As May Be Required, To Control Soil Erosion During All Phases Of Construction. All Disturbed Areas Shall Be Cleaned Of Debris, Finish Graded, And Stabilized With Permanent Vegetation Immediately After Completion Of Construction.
4. All Erosion Control Devices Shall Be Properly Maintained Until The Completion Of All Phases Of Construction And All Disturbed Areas Have Been Stabilized. Additional Control Devices May Be Required During Construction In Order To Control Erosion And/Or Off-Site Sedimentation. All Temporary Control Devices Shall Be Removed Once Permanent Vegetation Is Established.
5. All Disturbed Areas Not To Be Paved, Landscaped, Or Sodded Shall Receive Site Seeding.
6. The Contractor Shall Inspect, Repair, And Add Stone To The Stabilized Construction Entrance When It Becomes Saturated With Mud To Ensure It Works As Intended.
7. The Topsoil Stockpile Shall Be Graded To Drain And Seeded With A Temporary Seed Mix, See Landscape Plan For Notes.
8. Dust Control On-site Shall Be Minimized By Spraying Water On Dry Areas Of The Site. The Use Of Oils And Other Petroleum Based Or Toxic Liquids For Dust Suppression Is Prohibited.
9. If The Majority Of Mud Or Dirt Is Not Removed From Traffic Exits, Contractor Shall Establish Additional Vehicle Wash Areas At Construction Traffic Exit Points. Rinse-Off Will Not Be Allowed Outside The Project Construction Limits. Any Dirt Or Mud Tracked Onto Adjacent Roadway Shall Be Picked/Swept Up Immediately.
10. All Erosion And Sedimentation Controls Shown On The Plans Shall Be Constructed In Accordance With Governing Authorities And Maintained As Part Of This Project. Contractor To Install Erosion Control In Accordance With The Erosion Sedimentation Control Plan As A Minimum. Other Measures May Be Required To Assure That Silt Is Controlled On-Site.

Site Grading and Drainage General Notes

1. No Land Clearing Shall Begin Until All Erosion Control Measures And Tree Protection Fencing Have Been Installed. The Contractor Shall Take All Precautions To Prevent Soil Sediment From Leaving The Site. All Erosion Control Measures And Tree Protection Fencing Shall Be Maintained Until All Contributing Areas Are Graded And Stabilized.
2. All Disturbed Areas To Be Seeded Shall Be Topsoiled To A Minimum Depth Of 4", Fertilized At A Rate Of 250 Pounds Per Acre, And Seeded With Annual Rye Grass At A Rate Of 3-4 Pounds Per 1000 S.F. And Turf-Type Fescue At A Rate Of 8 Pounds Per 1000 S.F. The Area Must Also Be Mulched. If The Seeded Areas Are 20% Grass Until A Healthy Permanent Stand Is Established. All Detention Pond Bottoms And Side Slopes Shall Receive 4" Of Topsoil And Solid Sod. Other Areas May Receive Solid Sod Adjacent To Parking Lots And Sidewalks.
3. All Storm Sewer Distances Are From Center Of Inlet To Center Of Inlet Or From Center Of Inlet To End Of Flared-End-Section.
4. All Existing Utility Vaults, Valves, Meters, And Boxes To Be Adjusted To Finished Grades In Accordance With City Of Verona Regulations And To The Corresponding Utility Companies Requirements.
5. No Finished Grade Slopes Shall Exceed 3:1.
6. All Soils Under The Building And Pavement Shall Be Structural Fill Approved By The Geotechnical Engineer. Contractor Will Be Required To Provide Proctor Tests To Be Reviewed/Approved By The Geotechnical Engineer.
7. Contractor Must Obtain A Permit Prior To Performing A Street Cut Within City Right-Of-Way. All Construction In Said Right-of-Way Shall Be In Accordance With City of Verona Details And Specifications.
8. All Proposed Sidewalks And Accessible Ramps Shall Have A Maximum Cross Slope Of 2%.
9. There Are No Known Existing Erosion Control Problems Existing On Site.
10. There Are No Existing Wetlands On Site.

Site General Notes

1. The Contractor Shall Be Solely And Completely Responsible For Conditions Of The Job Site, Including Safety Of All Persons And Property During All Phases Of Construction Of This Site. This Requirement Shall Apply Continuously And Shall Not Be Limited To Construction Working Hours.
2. It Is The Contractor's Responsibility To Take All Precautions Necessary To Avoid Property Damage To Adjacent Properties During The Construction Phases Of This Project.
3. All Dimensions, Unless Otherwise Noted, Are To The Back Of Curb, Face Of Building, Edge Of Pavement, Or Centerline Of Stripe. All Radii are 5' Unless Otherwise Noted.
4. Contractor Shall Coordinate And Comply With All Utility Companies Involved In Project And Pay All Required Fees And Costs.
5. Unless Otherwise Noted, All Curb Shall Be 6" Type "A" Concrete Curb And Gutter. Refer To Detail Sheets.
6. See Architectural Plans for Exact Building Dimensions and Layout.
7. Proposed Sidewalks Shall Be A Minimum Of 5' Wide Unless Otherwise Noted.
8. All Signage, Pavement Markings, And Striping Shall Conform To The Manual Of Uniform Traffic Control Devices (MUTCD) Standards And Regulations.
9. Contractor Must Obtain A Permit Prior To Performing A Street Cut Within City Of Verona Right-Of-Way Or The Missouri Department Of Transportation (MODOT). All Construction In Said Right-of-Way Shall Be In Accordance With City of Verona And MODOT Details And Specifications.

Sequence Of Construction

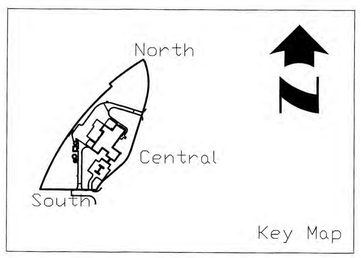
1. Install Silt Fence And Temporary Construction Entrance For Construction Traffic At Location Shown In The Plans.
2. Install Inlet Protection And Other Erosion Control Measures.
3. All Erosion Control Measures Shall Be Inspected And Approved By The City Of Verona Prior To Contractor Proceeding With Construction.
4. Begin Demolition. Rough-grade The Driveways, Parking Lot. Perform Mass Grading Of The Site.
5. Install Storm Sewer And Other Utility Lines. When Underground Utility Installation Is Complete, Fine-grade The Paved Areas To Subgrade And Install The Stone Base Course. Construct The Curb And Gutter And Backfill The Curbs. Install The Concrete Pavement For The Project.
6. As These Phases Progress, Intermittent Storm Water Controls Should Be Installed To Prevent Silt From Washing Off The Construction Site And Entering The Streets, Storm Sewer System, Or Adjacent Properties.
7. Finish Grade The Site And Perform Final Cleanup. Spread Topsoil And Sod All Areas Disturbed By Construction That Will Not Be Paved Or Landscape Beds. Refer To The Sod/Seeding Notes, This Sheet.
8. Remove Temporary Erosion Control Measures After Permanent Stand Of Vegetation Is Established.

Note To Contractor:
All Erosion Control Shown Functions As A Guide. It Is The Contractor's Responsibility To Ensure That The Requirements Of The Missouri Department Of Natural Resources General Permit Are Maintained. Actual Erosion Control Devices May Vary Due To The Contractor's Sequence Of Demolition And Construction. Additional Measures May Become Necessary During Construction.

LEGEND

- Ex. Boundary Line
- Ex. Adjacent Boundary Line
- R/W — Ex. Right of Way Line
- Ex. Road Centerline
- Ex. Easement Line
- 25'BSL — Ex. Building Setback Line
- Ex. Concrete
- Ex. Gravel
- 24"RCP — Ex. Storm Drain Pipe
- TV — Ex. Television Line
- W — Ex. Water Line
- 8"SSS — Ex. Sanitary Sewer Line
- T — Ex. Telephone Line
- OHT — Ex. Overhead Telephone Line
- FO — Ex. Fiber Optic Line
- Ex. Overhead Electric Line
- Ex. Tree Edge Line
- X — Ex. Fence Line
- Ex. Rebar
- Ex. Nail
- Ex. Monument
- Ex. Water Meter
- Ex. Power Pole
- Ex. Power Pole w/ Guy Wire
- Ex. Sign
- Ex. Tree
- Ex. Building
- B-1 — Boring Location (Geotech Report By GTS, Inc. GTS Project No. 21-01-05-043 Date: 04/01/2021)

- 30' BSL – Proposed Building Setback Line
- Proposed Type "A" Curb & Gutter
- Proposed 1' Ribbon Curb
- Proposed Concrete Sidewalk
- Proposed Accessible Ramp, Type "B"
- Light Duty Hot Mix Asphalt Concrete (HMAC)
- Proposed Concrete
- Light Duty Portland Cement Concrete (PCC)
- Proposed Heavy Duty Hot Mix Asphalt Concrete (HMAC)
- Proposed Heavy Duty Portland Cement Concrete (PCC)
- Proposed Medium Duty Portland Cement Concrete (PCC)
- Proposed Pea Gravel
- 8"W — Proposed Water Line W/Size
- 4"SSSL — Proposed Sanitary Sewer Service Line W/Size
- 10"SCSW — Proposed Spill Containment Storm Water Line W/Size
- G — Proposed Gas Line
- T — Proposed Telephone Line
- UGE — Proposed Underground Electric Line
- Proposed Overhead Electric Line
- 24" RCP — Proposed Storm Drain Pipe
- X — Proposed Fence Line
- 1265 — Proposed Major Contour
- 1264 — Proposed Minor Contour
- Proposed Water Meter
- Proposed Water Valve
- Proposed Fire Department Connection
- Proposed RPZ Backflow Preventer
- Proposed Waterline "T" Fitting
- Proposed Waterline 90° Fitting
- Proposed Sewer Manhole
- CO — Proposed Clean-Out
- Proposed Gas Meter
- Proposed Power Pole
- Proposed Light Pole
- Proposed Flared End Section
- Proposed Junction Box / Curb Inlet
- Proposed Grate Inlet
- Proposed Sign
- Proposed Accessible Parking
- Proposed Building
- TC=1366.25 — Proposed Top of Curb Elevation
- FG=1366.25 — Proposed Finished Surface Elevation
- SX — Proposed Silt Soxx
- SF — Proposed Silt Fence
- Limits of Disturbance
- Rock Check Dam
- Temporary Construction Entrance
- Inlet Protection
- SWPPP — SWPPP Mailbox
- Flow Arrow
- Concrete Washout



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2400 BEE CAVE WOODS DR. STE. 1 • BENTONVILLE, AR 72712 • 479.273.2288 • HALFF.COM

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: GENERAL NOTES AND LEGEND

Timothy Lee Milton, P.E.
MO# PE-2009010101
The Original Signed and Sealed Document is on file at the Office of Record

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C0.02

ALTA/NSPS SURVEY FOR
KEMIN INDUSTRIES, INC.
A PART OF THE S½ OF THE SE¼
SECTION 8, TOWNSHIP 26 NORTH, RANGE 26 WEST
LAWRENCE COUNTY, MISSOURI

FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO: NCS-1060387-KCTY
SCHEDULE A TITLE COMMITMENT DESCRIPTION

PART OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P" AND THE SOUTH LINE OF SECTION 8, THENCE 38 FEET WEST, THENCE NORTH 266 FEET, THENCE EAST 260 FEET TO THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P", THENCE SOUTHWESTERLY ALONG SAID WEST RIGHT-OF-WAY LINE TO THE POINT OF BEGINNING.

SCHEDULE B-II EXCEPTIONS

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met. (Not a survey item)
2. Rights or claims of parties in possession not shown by the Public Records. (Not a survey item)
3. Easements, or claims of easements, not shown by the Public Records. (None found nor provided)
4. Any encroachment, encumbrance, violation, variation or adverse circumstances affecting Title that would be disclosed by an accurate and complete survey of the Land or that could be ascertained by an inspection of the Land. (Gravel driveway being used as access to the property which encroaches on the adjacent tract. No legal access found nor provided, plotted)
5. Any lien or right to a lien for services, labor, material or equipment, unless such lien is shown by the Public Records at Date of Policy and not otherwise excepted from coverage herein. (Not a survey item)
6. Taxes, or special assessments, if any, not shown as existing liens by the Public Records. (Not a survey item)
7. The lien of the general taxes for the year 2021, and thereafter. General, state, county and city taxes and assessments for the year 2020 in the amount of $862.74 are PAID. Parcel No. 19-3.1-8-000-000-017.000; General, state, county and city taxes and assessments for the year 2020 in the amount of $110.75 are PAID. Parcel No. 19-3.1-8-000-000-016.000 (Not a survey item)
8. Conveyance for State Highway Purposes as made on October 27, 1933 in Book 164, Page 441. (Does not apply, plotted as the West R/W of Hwy P for informational purposes)
9. Electric Line Easement/Right-of-way granted to The Empire District Electric Company, as shown in Book 206 Page 310. (Does not apply to subject property)
10. Pipe Line Right-of-Way in favor of Western Missouri Gas Co., dated October 29, 1958, and filed for record November 6, 1958 in Book 234, Page 530. Assigned to Southern Union Company in Book 350, Page 885. Assignment of Easements and Rights-of-Way to Laclede Gas Company in Book 449, Page 4364. (Does not apply to subject property)
11. Tenancy rights, either as month to month, or by virtue of written leases of persons in possession of any part of the subject property. (Not a survey item)

FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO: NCS-1060398-KCTY
SCHEDULE A TITLE COMMITMENT DESCRIPTION

ALL OF THE SOUTH ONE-HALF OF THE SOUTHEAST QUARTER LYING WEST OF LAWRENCE COUNTY "P" SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, EXCEPT RAILROAD RIGHT-OF-WAY; ALSO EXCEPT THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, EXCEPT ALL THAT PART LYING EAST OF THE FORMER MILL RACE, ALL BEING LOCATED IN SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI. ALSO EXCEPT PART OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P" AND THE SOUTH LINE OF SECTION 8, THENCE 38 FEET WEST, THENCE NORTH 266 FEET, THENCE EAST 260 FEET TO THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P", THENCE SOUTHWESTERLY ALONG SAID WEST RIGHT-OF-WAY LINE TO THE POINT OF BEGINNING. ALSO EXCEPT PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, THENCE NORTH 12 RODS AND 7 FEET, THENCE WEST 19 RODS TO THE RAILROAD RIGHT OF WAY, THENCE SOUTHWESTERLY ALONG RIGHT OF WAY TO SOUTH LINE OF SECTION 8, THENCE EAST 25 RODS TO BEGINNING.

SCHEDULE B-II EXCEPTIONS

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met. (Not a survey item)
2. Rights or claims of parties in possession not shown by the Public Records. (Not a survey item)
3. Easements, or claims of easements, not shown by the Public Records. (None found nor provided)
4. Any encroachment, encumbrance, violation, variation or adverse circumstances affecting Title that would be disclosed by an accurate and complete survey of the Land or that could be ascertained by an inspection of the Land. (Apparent encroachment of underground utilities, plotted)
5. Any lien or right to a lien for services, labor, material or equipment, unless such lien is shown by the Public Records at Date of Policy and not otherwise excepted from coverage herein. (Not a survey item)
6. Taxes, or special assessments, if any, not shown as existing liens by the Public Records. (Not a survey item)
7. The lien of the general taxes for the year 2021, and thereafter. General, state, county and city taxes and assessments for the year 2020 in the amount of $40.20 are PAID. Parcel No. 19-3.1-08-000-000-009.003 (Not a survey item)
8. Electric Line Easement/Right-of-way granted to The Empire District Electric Company, as shown in Book 206, Page 310. (Applies, plotted)
9. Right-of Way and easements in favor of State of Missouri, dated March 28, 1994, and filed for record April 12, 1994 in Book 351, Page 902. (Applies to overall title description, but does not apply to surveyed subject property)
10. Conveyance For State Highway Purposes in favor of State of Missouri, dated October 27, 1933, and filed for record December 30, 1933 in Book 164, Page 441. (Applies, plotted)
11. Electric Line Easement/Right-of-way granted to The Empire District Electric Company, as shown in Book 206, Page 310. (Applies, plotted)
12. Electric Line Easement/Right-of-way granted to The Empire District Electric Company, as shown in Book 396, Page 706. (Applies, not plottable, blanket in nature)
13. NOTE: Warranty Deed Book 395, Page 85 listed as an exception on the vesting deed is incorrect (appears to be 359/85) and Warranty Deed Book 407, Page 729 duplicates already excepted property. (Applies, not plottable)
14. Rights of Public and others entitled thereto in and to that portion of subject property embraced within the right of way of Lawrence 2210 on the North side of subject property. (Applies to overall title description, but does not apply to surveyed subject property)
15. Railroad rights-of-way, switch tracks, spur tracks, and all easements, licenses or servitudes within, appurtenant to or serving such rights-of-way or easements, including but not limited to, electric and telephone transmission lines, broadband transmission lines, video and multi-channel video, pipelines and any facilities in support of telephony, communication or transportation. (Does not apply to subject property, plotted as the Southeast Right-of-Way of the railroad for informational purposes)
16. Tenancy rights, either as month to month, or by virtue of written leases of persons in possession of any part of the subject property. (Not a survey item)

FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO: NCS-1060406-KCTY
SCHEDULE A TITLE COMMITMENT DESCRIPTION

TRACT 1:

PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, THENCE NORTH 12 RODS AND 7 FEET, THENCE WEST 19 RODS TO THE RAILROAD RIGHT OF WAY, THENCE SOUTHWESTERLY ALONG RIGHT OF WAY TO SOUTH LINE OF SECTION 8, THENCE EAST 25 RODS TO BEGINNING.

EXCEPT PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 135.5 FEET WEST OF THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, THENCE NORTH 205 FEET, THENCE WEST 178 FEET TO THE ST. LOUS-SAN FRANCISCO RAILROAD RIGHT OF WAY, THENCE SOUTHWESTERLY ALONG SAID RIGHT OF WAY TO THE SOUTH LINE OF SECTION 8, THENCE EAST 277 FEET TO THE POINT OF BEGINNING.

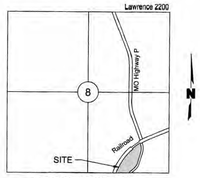
TRACT 2:
PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT 135.5 FEET WEST OF THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, THENCE NORTH 205 FEET, THENCE WEST 178 FEET TO THE ST. LOUS-SAN FRANCISCO RAILROAD RIGHT OF WAY, THENCE SOUTHWESTERLY ALONG SAID RIGHT OF WAY TO THE SOUTH LINE OF SECTION 8, THENCE EAST 277 FEET TO THE POINT OF BEGINNING.

SCHEDULE B-II EXCEPTIONS

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met. (Not a survey item)
2. Rights or claims of parties in possession not shown by the Public Records. (Not a survey item)
3. Easements, or claims of easements, not shown by the Public Records. (None found nor provided)
4. Any encroachment, encumbrance, violation, variation or adverse circumstances affecting Title that would be disclosed by an accurate and complete survey of the Land or that could be ascertained by an inspection of the Land. (Gravel driveway being used as access to the property which encroaches on the adjacent tract. No legal access found nor provided, plotted)
5. Any lien or right to a lien for services, labor, material or equipment, unless such lien is shown by the Public Records at Date of Policy and not otherwise excepted from coverage herein. (Not a survey item)
6. Taxes, or special assessments, if any, not shown as existing liens by the Public Records. (Not a survey item)
7. The lien of the general taxes for the year 2021, and thereafter. General, state, county and city taxes and assessments for the year 2020 in the amount of $49.91 are PAID. Parcel No. 19-3.1-08-000-000-019.000 (Tract 1); General, state, county and city taxes and assessments for the year 2020 in the amount of $66.93 are PAID. Parcel No. 19-3.1-08-000-000-019.001 (Tract 2) (Not a survey item)
8. Electric Line Easement/Right-of-way granted to the Empire District Electric Company, as shown in Book 221, Page 20. (Applies, not plottable)
9. An easement for ingress and egress as shown on a Warranty Deed Book 369, Page 143. (Applies, plotted)
10. From the information presently available to The Company, we are unable to determine the means of access to and from the premises in question; therefore, unless we are furnished with acceptable proof of access, our policy will contain the following exception: "Liability, if any, for loss or damage occasioned by the lack of access to and from the premises in question." (No legal access found nor provided)
11. Railroad rights-of-way, switch tracks, spur tracks, and all easements, licenses or servitudes within, appurtenant to or serving such rights-of-way or easements, including but not limited to, electric and telephone transmission lines, broadband transmission lines, video and multi-channel video, pipelines and any facilities in support of telephony, communication or transportation. (Does not apply to subject property, plotted as the Southeast Right-of-Way of the railroad for informational purposes)
12. Tenancy rights, either as month to month, or by virtue of written leases of persons in possession of any part of the subject property. (Not a survey item)

SURVEYOR'S RECOMMENDED DESCRIPTION FOR (FILE NO: NCS-1060398-KCTY)

ALL OF THE SOUTH ONE-HALF OF THE SOUTHEAST QUARTER LYING WEST OF LAWRENCE COUNTY "P" SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, EXCEPT RAILROAD RIGHT-OF-WAY; ALSO EXCEPT THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, EXCEPT ALL THAT PART LYING EAST OF THE FORMER MILL RACE, ALL BEING LOCATED IN SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI. ALSO EXCEPT PART OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, DESCRIBED AS BEGINNING AT THE INTERSECTION OF THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P" AND THE SOUTH LINE OF SECTION 8, THENCE 38 FEET WEST, THENCE NORTH 266 FEET, THENCE EAST 260 FEET TO THE WEST RIGHT-OF-WAY LINE OF LAWRENCE COUNTY HIGHWAY "P", THENCE SOUTHWESTERLY ALONG SAID WEST RIGHT-OF-WAY LINE TO THE POINT OF BEGINNING. ALSO EXCEPT PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 26, RANGE 26, LAWRENCE COUNTY, MISSOURI, DESCRIBED AS BEGINNING AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER, THENCE NORTH 12 RODS AND 7 FEET, THENCE WEST 19 RODS TO THE RAILROAD RIGHT OF WAY, THENCE SOUTHWESTERLY ALONG RIGHT OF WAY TO SOUTH LINE OF SECTION 8, THENCE EAST 25 RODS TO BEGINNING, ALSO EXCEPT ALL THAT PART LYING WEST OF THE RAILROAD RIGHT-OF-WAY.



LOCATION MAP
Sec. 8, T-26-N, R-26-W
Scale: 1"=2000'

INFORMATION OF FACT

1. This survey and plan is based upon the following data and/or exceptions:

	Yes	No	Item
a) Deed of Record	X		Book 426, Page 688; Book 429, Page 865 & Book 457, Page 1107
b) Filed Maps		X	
c) Title Search/Binder	X		First American Title Insurance Company, File No. NCS-1060387-KCTY, Effective Date: March 30, 2021 at 8:00 AM; File No. NCS-1060398-KCTY, Effective Date: April 8, 2021 at 8:00 AM; File No. NCS-1060406-KCTY, Effective Date: April 2, 2021 at 8:00 AM

2. Certified To: Kemin Industries, Inc; First American Title Insurance Company
This is to certify that, to the best of my knowledge and belief, this map or plan is the result of a field survey performed on April 27, 2021, by me or under my direct supervision, in accordance with the rules and regulations promulgated by the "State Board of Professional Engineers and Land Surveyors". The information depicted hereon, to the best of my knowledge and belief, represents the conditions found at, and as of the date of the field survey, except such improvements or easements, if any below the surface and not visible. Accordingly the undersigned professional is not responsible for the presence of underground utilities or structures, if same are not visible or otherwise disclosed by any aforementioned data listed above.
3. This survey or plan is made for and certified to the parties named hereon for the purpose(s) stated. No other purpose is intended nor implied. The undersigned professional is neither responsible nor liable for the use of this plan beyond its intended purpose.
4. The use of the word "certify" or "certification" constitutes an expression of professional opinion regarding those facts or findings which are the undersigned professional's knowledge, information and belief, and in accordance with the commonly accepted procedure consistent with the applicable standards of practice, and does not constitute a warranty or guarantee either expressed or implied.
5. Current Zoning: For the parcels within the City Limits of Verona, MO, R1-One Family Residential. For the parcel within Lawrence County, Lawrence County, MO, has no zoning restrictions nor does the county have any building codes or regulations.
The above setbacks are from information contained in the City of Verona, Lawrence County GIS website. The above information can be verified once a zoning report or letter has been provided to the Surveyor. See Table A, Item 6(a) and 6(b) of the "2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys".
6. The Flood Insurance Rate Map (FIRM) from the Federal Emergency Management Agency (FEMA) Community Panel No. 29109C0423D, Effective Date August 2, 2012, shows this property is located in Zone "X" (Areas determined to be outside the 0.2% annual chance floodplain.)
7. Map References:
   7.a. A survey by Austin Land Surveying, LLC, for Robby & Becky Davis, dated 2-5-2010 and revised through 8-5-2011, signed by D. Aaron Austin, PLS 2000147872
   7.b. An ALTA/ACSM survey by Hood-Rich, Inc, for Darrco, LLC, dated 06-17-2011, signed by David D. Drumm, PLS 2007017958
   7.c. A survey entitled, "Station Map Verona, Lawrence County, Missouri, St. Louis-San Francisco Railway Company", dated 6-30-1918.
   7.d. MODoT Highway Plans for Lawrence County, MO, District 7, Route P (No Job # listed)
   7.e. MODoT Highway Plans for Lawrence County, MO, District 7, Route P, Job #J7S0438
8. Olsson and the surveyor of record make no guarantees that the underground utilities shown hereon comprise all such utilities in the area, either in service or abandoned. Olsson and the surveyor of record further does not warrant that the underground utilities shown are in the exact location indicated. Olsson and the surveyor of record have not physically located the underground utilities. If any underground utility locations are required, they will have to be verified by field potholing the utilities as utility depths will not be indicated on the topographic survey. Olsson and the surveyor of record shall not be liable for the location of or the failure to note the location of non-visible utilities. Utilities were ordered to be located per one-call ticket number 211080040, 211080043, 211080044 & 211080045. The companies listed on the ticket are Empire District Electric, Empire District Electric Water, Spire MO West, Windstream Communications, Spire MO West, City of Verona, Windstream Communications.

SURVEYOR'S NOTES

1. Property Addresses are 605, 615 and 633 N. 3rd Street. The property to the North does not have an address on file.
2. There is no evidence of earth moving work, building construction or building additions on the site.
3. There is no evidence of recent street or sidewalk construction or repairs.
4. There are no parking spaces on subject property.

STATE OF MISSOURI
LS-2671
RODDY G. NEFF
REGISTERED LAND SURVEYOR
8-18-21
Digitally signed by Roddy G. Neff
Date: 2021.08.18 11:07:19 -05'00'

CERTIFICATE OF SURVEY AND ACCURACY

To: Kemin Industries, Inc; First American Title Insurance Company
This is to certify that this map or plat, dated May 4, 2021, and revised through August 18, 2021, and the survey on which it is based were made in accordance with the 2021 "Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys", jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6b, 7a, 8, 9, 11(b) (811 locate), 13, 16, 17 and19 (1,000,000) of Table A thereof. The field work completed on April 28, 2021.

Roddy G. Neff, MO LS 2671
Olsson Associates, MO LC 366
rgneff@olsson.com

8-18-21
Date

ALTA/NSPS Survey for Kemin Industris, Inc.

	DATE	REVISION	BY
drawn by: DRC			
surveyed by: DDD/CO			
checked by: RGN			
approved by: RGN			
project no.: 021-03628			
file name: V_ALT_021-03628	08.18.21	Revised City Limits	DRC
	05.04.21	Original Preparation	DRC

olsson

Olsson Associates, Inc. Survey MO Certificate of Authority #LC366
550 St. Louis St. TEL 417.890.8602
Springfield, MO 65806 FAX 417.890.8805 www.olsson.com

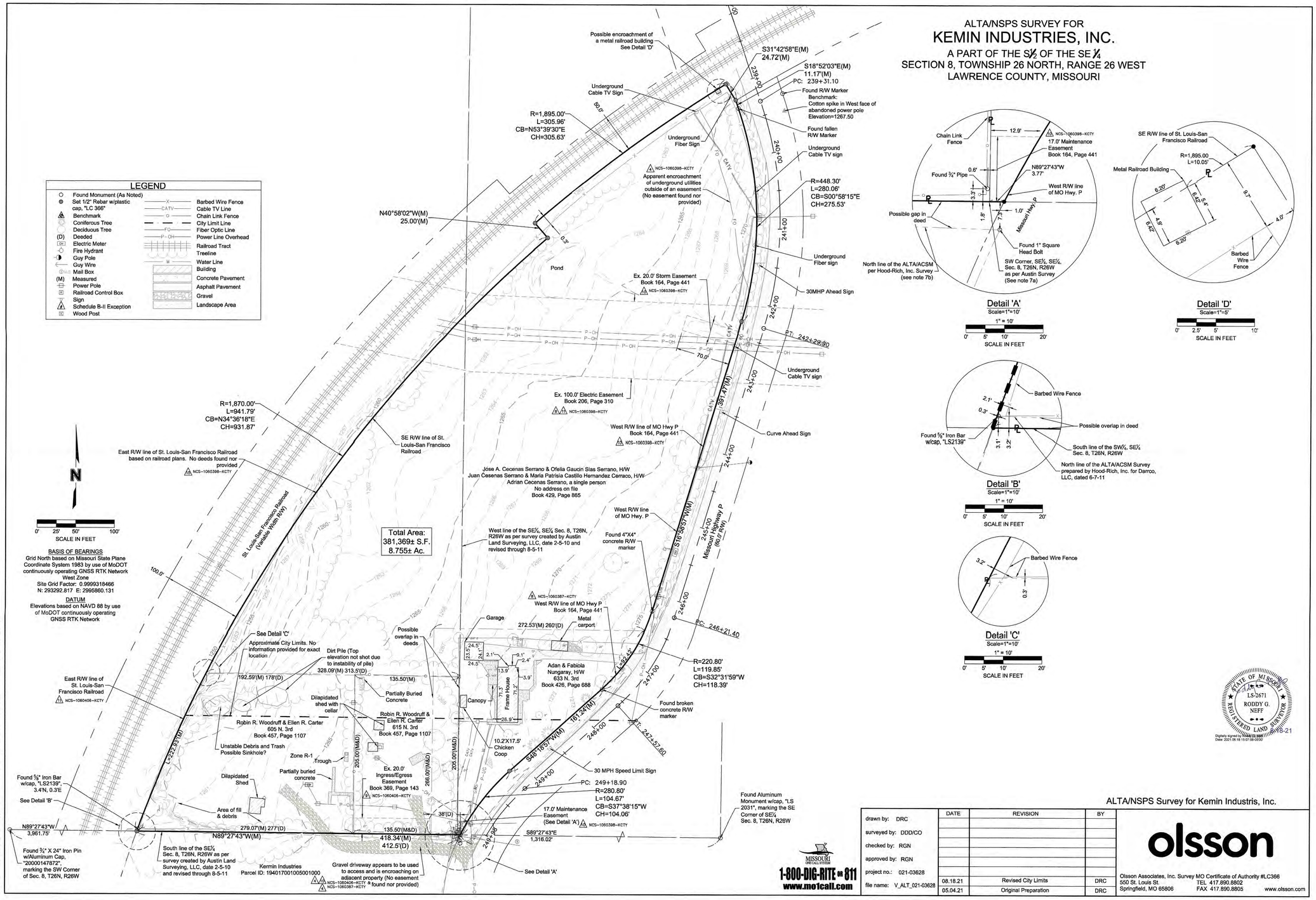
PREPARED FOR
Kemin Industries, Inc.
1900 Scott Avenue
Des Moines, IA 50317

PREPARED BY
Olsson, Inc.
550 St. Louis Street
Springfield, MO 65806

MISSOURI ONE CALL SYSTEM
1-800-DIG-RITE or 811
www.mo1call.com

DWG: F:\2021\03501-04000\021-03628\40-Design\Survey\SRVY\Sheets\V_ALT_021-03628.dwg USER: dchance
DATE: Aug 18, 2021 9:53am XREFS: V_XBND(Y_021-03628 V_XTOPO_021-03628

ALTA/NSPS SURVEY FOR
KEMIN INDUSTRIES, INC.
A PART OF THE S½ OF THE SE¼
SECTION 8, TOWNSHIP 26 NORTH, RANGE 26 WEST
LAWRENCE COUNTY, MISSOURI



STATE OF MISSOURI
LS-2671
RODDY G. NEFF
REGISTERED LAND SURVEYOR
8-21
Digitally signed by Roddy G. Neff
Date: 2021.06.18 13:07:58-05'00'

1-800-DIG-RITE OR 811
www.mo1call.com

ALTA/NSPS Survey for Kemin Industris, Inc.

	DATE	REVISION	BY
drawn by: DRC			
surveyed by: DDD/CO			
checked by: RGN			
approved by: RGN			
project no.: 021-03628			
file name: V_ALT_021-03628	08.18.21	Revised City Limits	DRC
	05.04.21	Original Preparation	DRC

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550 St. Louis St. TEL 417.890.8802
Springfield, MO 65806 FAX 417.890.8805 www.olsson.com

DWG: F:\2021\03501-04000\021-03628\40-Design\Survey\SRVY\Sheets\V_ALT_021-03628.dwg
DATE: Aug 18, 2021 9:53am
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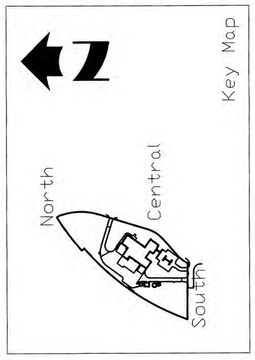
USER: dchance



MISSOURI ONE-CALL SYSTEM
1-800-344-7483
STOP - CALL BEFORE YOU DIG!

LEGEND

▨	Ex. Asphalt
▭	Ex. Concrete
▭	Ex. Gravel
— — — R/W —	Ex. Right of Way Line
—— W ——	Ex. Water Line
—— G ——	Ex. Gas Line
—— TV ——	Ex. Television Line
—— FO ——	Ex. Fiber Optic Line
—— UGE ——	Ex. Underground Electric Line
—— ⫽ —— ⫽ ——	Ex. Overhead Electric Line
◡◡◡◡◡◡	Ex. Tree Edge Line
—— X ——	Ex. Fence Line
═ ═ ═ ═	Ex. Storm Drain Pipe
●	Ex. Rebar
Ⓦ	Ex. Water Meter
⊕	Ex. Fire Hydrant
○	Ex. Tree
▨	Ex. Building
— — — —	Proposed Saw-Cut Line
· /· /· /· /· /·	Remove & Dispose Of Existing Utilities
⊗	Demolish Existing Tree
▩	Contractor Shall Demolish And Dispose Of Buildings, Foundations, Concrete Walks, Utility Service Lines, Landscaping And All Appurtenances Associated With These Items, Within The Limits Of Construction In Accordance With Local And State Requirements For Disposal.

HALFF

HALFF ASSOCIATES, INC. • ENG #2018039265 EXP:12.31.2022 • LS #2021048378 EXP:12.31.2021
2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM

Design Group

DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 033301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7

KEMIN®

CLIENT KEMIN INDUSTRIES
DES MOINES, IA

PROJECT NEW PROTEIN FACILITY
VERONA, MO

DRAWING TITLE OVERALL DEMOLITION AND BMP PLAN

DOUGLAS C. MELTON, JR.
PE-2001012101
3-10-22

Douglas C. Melton, Jr., P.E.
MO# PE-2001012101
The Original Signed and Sealed Document
is on file at the Office of Record

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL

DRAWING NO.
CD1.00

DATE PLOTTED: 3/10/2022 8:56:57 AM PLOTTED BY: Lowe, Tiffany

HALFF
TEXAS REGISTERED ENGINEERING FIRM F-312
1201 NORTH BOWSER ROAD, SUITE 300
RICHARDSON, TEXAS 75081
PHONE: 972.235.3031
WWW.HALFF.COM

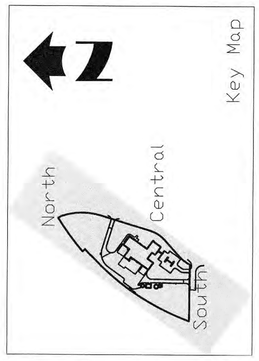
Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

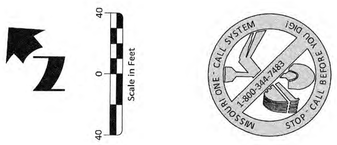
3	08/22/22	TJL	BULLETIN #14
2	05/06/22	CVL	BULLETIN #11
1	03/10/22	TJL	BULLETIN #7
0	12/22/21	TJL	ISSUED FOR CONSTRUCTION
Δ	DATE	BY	REVISION

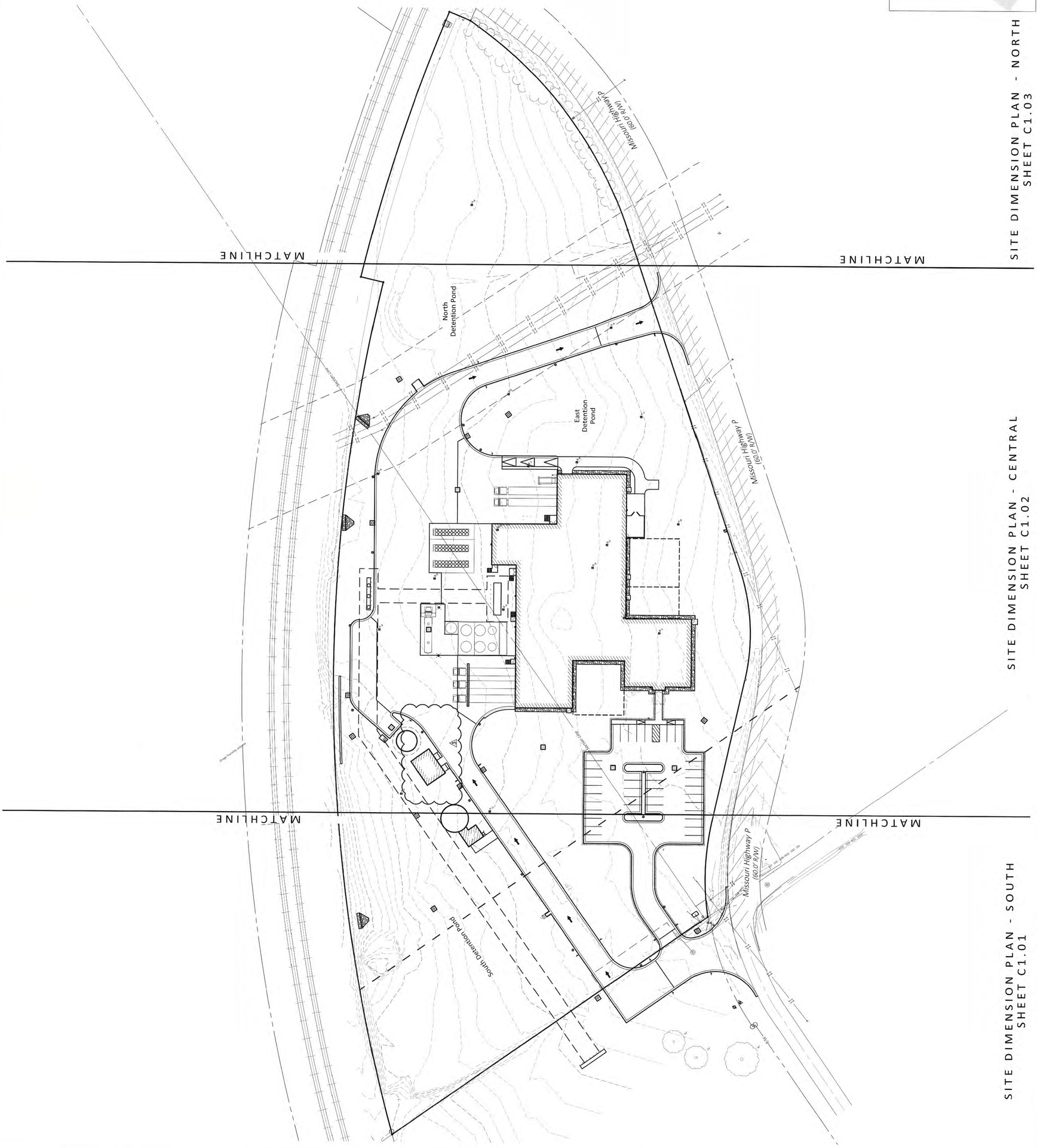
KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: OVERALL SITE DIMENSION PLAN AND SHEET INDEX

PROJECT NO.	21021123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C1.00







SITE DIMENSION PLAN - NORTH
SHEET C1.03

SITE DIMENSION PLAN - CENTRAL
SHEET C1.02

SITE DIMENSION PLAN - SOUTH
SHEET C1.01

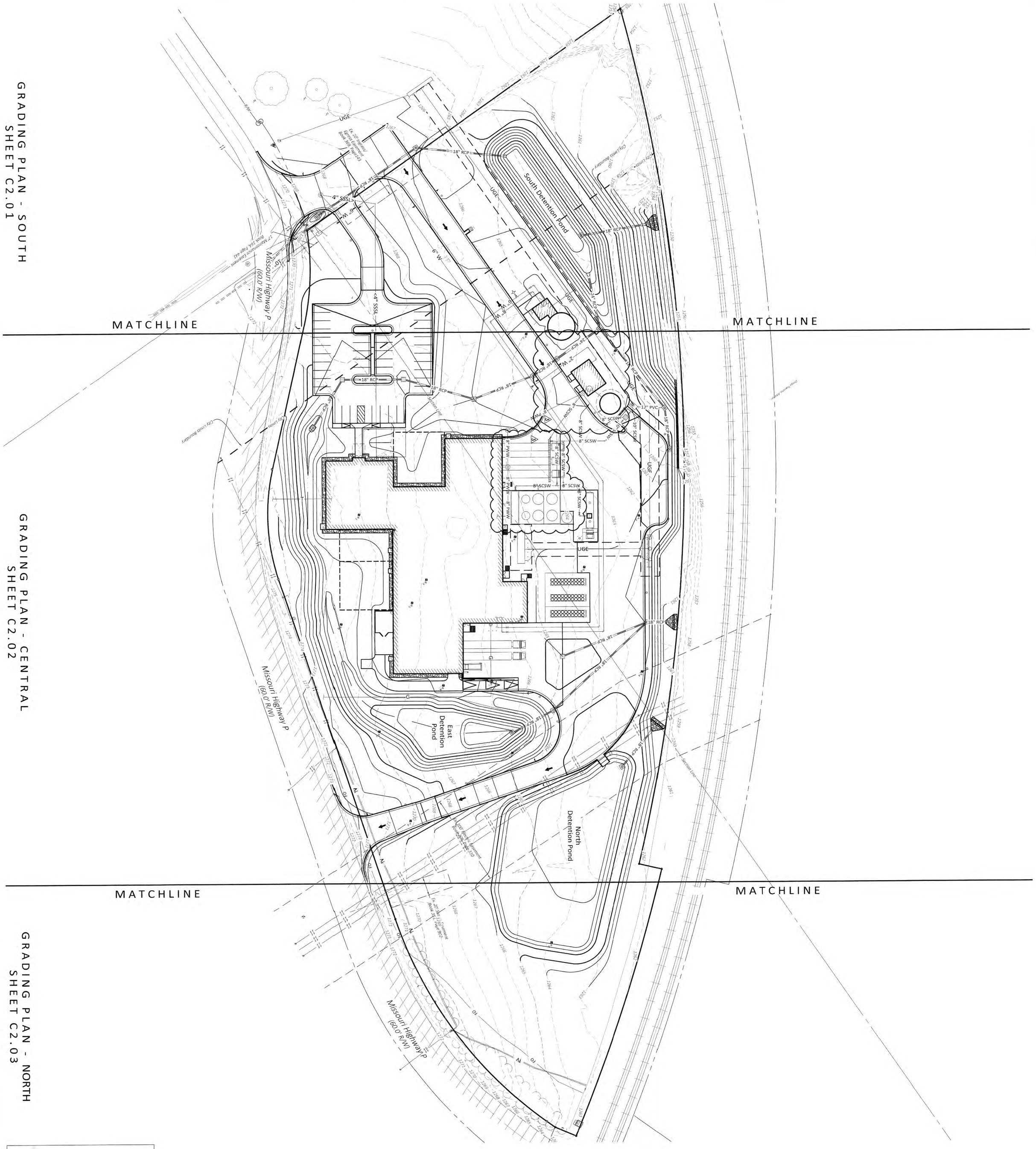
DATE PLOTTED: 8/22/2022 10:21:59 AM PLOTTED BY: Lunsford, Tommie

DATE PLOTTED: 8/22/2022 11:04:12 AM PLOTTED BY: Lunsford, Tammie

GRADING PLAN - SOUTH
SHEET C2.01

GRADING PLAN - CENTRAL
SHEET C2.02

GRADING PLAN - NORTH
SHEET C2.03



CLIENT	KEMIN INDUSTRIES DES MOINES, IA
PROJECT	NEW PROTEIN FACILITY VERONA, MO
DRAWING TITLE	OVERALL GRADING PLAN AND SHEET INDEX

DRAWING NO.	C2.00
DRAWN BY	TBL
SCALE	AS NOTED
ISSUED	12/22/2021
PROJECT NO.	2102123

#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7
2	05/06/22	CVL	BULLETIN #11
3	08/22/22	TJL	BULLETIN #14

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

HALFF
HALFF ASSOCIATES, INC. • ENG #2018039265 EXP:12.31.2022 • LS #2021048378 EXP:12.31.2021
2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM

Scale in Feet: 40 0 40

DATE PLOTTED: 8/22/2022 10:28:34 AM PLOTTED BY: Lunsford, Tommie

STORMWATER DRAINAGE PLAN
- SOUTH
SHEET C3.01

STORMWATER DRAINAGE PLAN
- CENTRAL
SHEET C3.02

STORMWATER DRAINAGE PLAN
- NORTH
SHEET C3.03

CLIENT	KEMIN INDUSTRIES DES MOINES, IA
PROJECT	NEW PROTEIN FACILITY VERONA, MO
DRAWING TITLE	OVERALL STORMWATER DRAINAGE PLAN AND SHEET INDEX

#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7
2	05/06/22	CVL	BULLETIN #11
3	08/22/22	TJL	BULLETIN #14

PROJECT NO. 2102123
ISSUED 12/22/2021
SCALE AS NOTED
DRAWN BY TBL
DRAWING NO. C3.00

STATE OF MISSOURI
TYLER JAMES LUNSFORD
NUMBER PE-2009018210
PROFESSIONAL ENGINEER
8/22/22

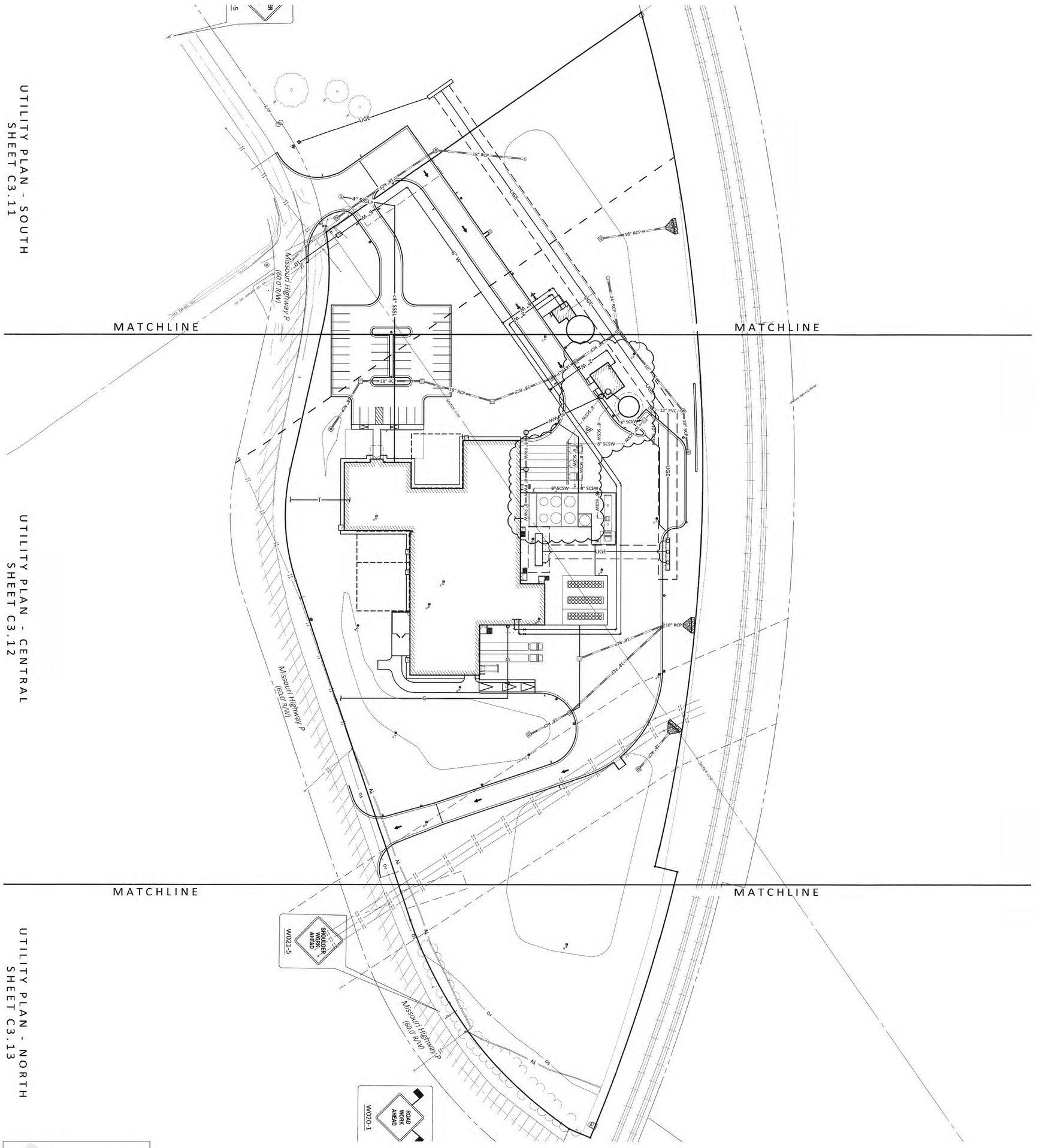
Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

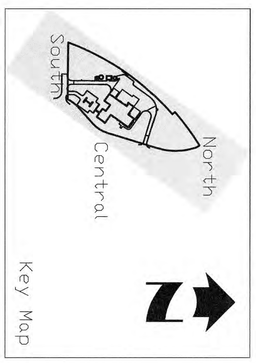
HALFF
HALFF ASSOCIATES, INC. • ENG #2018039265 EXP:12.31.2022 • LS #2021048378 EXP:12.31.2021
2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM

UTILITY PLAN - SOUTH
SHEET C3.11

UTILITY PLAN - CENTRAL
SHEET C3.12

UTILITY PLAN - NORTH
SHEET C3.13





MISSOURI ONE CALL SYSTEM
1-800-344-7483
STOP! CALL BEFORE YOU DIG!

Scale in Feet
40
0
40

DATE PLOTTED: 8/25/2022 - 12:42:10 PM PLOTTED BY: Lunsford, Tammie

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C3.10

CLIENT	KEMIN INDUSTRIES DES MOINES, IA
PROJECT	NEW PROTEIN FACILITY VERONA, MO
DRAWING TITLE	OVERALL UTILITY PLAN AND SHEET INDEX

KEMIN

#	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	03/10/22	TBL	BULLETIN #7
2	05/06/22	CVL	BULLETIN #11
3	08/22/22	TJL	BULLETIN #14

Design Group
DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

HALFF
HALFF ASSOCIATES, INC. • ENG #2018039265 EXP:12.31.2022 • LS #2021048378 EXP:12.31.2021
2407 SE COTTONWOOD ST. STE 1 • BENTONVILLE, AR 72712 • 479.273.2209 • HALFF.COM

20 0 20

Scale in Feet

MISSOURI ONE CALL SYSTEM 1-800-344-7483 STOP CALL BEFORE YOU DIG!

Note: The Location And Number Of Concrete Washout Stations Are A Minimum. Other Sites May Be Used Using The Detail On Sheet C2.24.

Total Site Area: 8.76 Acres
Limits Of Disturbance: ±7.99 Acres

HALFF

HALFF ASSOCIATES, INC. • 8303 #501900856 EXP 7.31.2022 • 18 #2501040338 EXP 12.31.2021
AUST BE CONTINUING EXP. 3/31/ • 8303 NORTH MOPAC EXPRESSWAY, SUITE A • AUSTIN, TEXAS 78759 • TEL 512.777.4600 • FAX 512.252.8141

Design Group

DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE: (603) 225-0010 FAX: (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

NO	DATE	BY	REVISION
A	12/22/21	TBL	ISSUED FOR CONSTRUCTION

KEMIN

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA
PROJECT: NEW PROTEIN FACILITY, VERONA, MO
DRAWING TITLE: EROSION CONTROL PLAN - SOUTH

STATE OF MISSOURI — DOUGLAS C. NELSON JR. — NUMBER PE-2007012110 — PROFESSIONAL ENGINEER
Douglas C. Nelson, Jr., P.E.
Date: 12/22/2021
The Original Signed and Sealed Document is on file at the Office of Halff

PROJECT NO.	2102123
ISSUED	12/22/2021
SCALE	AS NOTED
DRAWN BY	TBL
DRAWING NO.	C3.20

CLIENT: KEMIN INDUSTRIES, DES MOINES, IA

PROJECT: NEW PROTEIN FACILITY, VERONA, MO

DRAWING TITLE: EROSION CONTROL PLAN - CENTRAL

NO.	DATE	BY	REVISION
0	12/22/21	TBL	ISSUED FOR CONSTRUCTION
1	04/10/22	TBL	BULLETIN #7
2	06/06/22	CVL	BULLETIN #11

PROJECT NO. 2102123
ISSUED 12/22/2021
SCALE AS NOTED
DRAWN BY TBL
DRAWING NO. C3.21

DESIGN GROUP FACILITY SOLUTIONS, INC.
5 CHENELL DRIVE, BOX 3, CONCORD, NEW HAMPSHIRE 03301
PHONE (603) 225-0010 FAX (603) 225-0761
MISSOURI CERTIFICATE OF AUTHORITY NO. 2005028109

HALFF

Note: The Location And Number Of Concrete Washout Stations Are A Minimum. Other Sites May Be Used During The Detail On Sheet C2.24.

Total Site Area: 8.76 Acres
Limits Of Disturbance: ±7.99 Acres

Key Map

North Central South

Scale in Feet: 20 0 20

MISSOURI ONE CALL SYSTEM 1-800-344-7483 STOP - CALL BEFORE YOU DIG!

MATCHLINE SEE SHEET C2.23

MATCHLINE SEE SHEET C2.21

Missouri Highway P (60.0' R/W)

Proposed Building 134,603 Sq. Ft. FFE = 1270.00

Waste Water Treatment Plant FFE = 1257.00

Approximate Limits Of Disturbance

Silt Fence Re: Detail

Silt Sock Re: Detail

Silt Sock Re: Detail

Silt Fence Re: Detail

Temporary Rock Check Dam (Typ.) Re: Detail

Temporary Construction Entrance Re: Detail

Concrete Washout Re: Detail

Concrete Washout Re: Detail

Temporary Inlet Protection (Typ.) Re: Detail

Future Expansion

Future Expansion

Concrete Washout Re: Detail

Water Line Crossing

15' Utility Easement UGE

20' Utility Easement UGE

100 Yr. W.S.E. = 1264.44

100 Yr. W.S.E. = 1264.76

Sanitary Line

Storm Line

8" SDSW

8" PWW

8" MDSW

18" RCP

15" RCP

12" PVC

10" MDSW

2" W

Existing Contours

Proposed Contours

SF

SS

SW

W

G

OHP

UGE

X

P-1 P-2 P-3 P-4 P-5 P-6 P-7 P-8 P-9

C1 C2 C3 C4 C5 C6 C7 C8 C9

DATE PLOTTED: 6/6/2022 10:08:08 AM PLOTTED BY: Lanowski, Tammie

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

FORM C – APPLICATION FOR DISCHARGE PERMIT – MANUFACTURING, COMMERCIAL, MINING, SILVICULTURE OPERATIONS, AND STORMWATER

GENERAL INFORMATION (PLEASE SEE INSTRUCTIONS)

1.0 NAME OF FACILITY

Kemin Industries, Inc.

1.1 THIS FACILITY IS OPERATING UNDER MISSOURI STATE OPERATING PERMIT (MSOP) NUMBER:

MO-0136760

1.2 IS THIS A NEW FACILITY? PROVIDE CONSTRUCTION PERMIT (CP) NUMBER IF APPLICABLE

A new facility has been constructed on the site of the existing facility. MORA20126

1.3 Describe the nature of the business, in detail. Identify the goods and services provided by the business. Include descriptions of all raw, intermediate, final products, byproducts, or waste products used in the production or manufacturing process, stored outdoors, loaded or transferred and any other pertinent information for potential sources of wastewater or stormwater discharges.

The existing Kemin facility receives raw meat (chicken, pork and beef) and processes the raw products into dried protein powder used for animal feed supplements. The new facility will receive an identical stream of meat products, but process the final product into FDA approved protein powder for human consumption. All existing and new food ingredients are stored inside the facilities, or outside in sealed tank storage. The exterior product storage tanks are surrounded by concrete spill barriers where appropriate. Process wastewater in the existing facility is managed by a pump and haul system. Wastewater is land applied except in inclement weather where it is stored on site and then hauled to the City of Springfield Southwest Treatment Plant for disposal. Process wastewater for the new facility will receive primary treatment on site and the wastewater stored in a 50,000 gallon steel tank before disposal in the existing pump and haul system. The new facility will include a spill capture system to direct spills of food fluids into the storage tank. Normal stormwater flows from potential pavement contamination will be directed through an oil and grease separator before discharge into one of three new sgrass-lined tormwater detention ponds.

FLOWS, TYPE, AND FREQUENCY

2.0 Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in item B. Construct a water balance on the line drawing by showing average and maximum flows between intakes, operations, treatment units, evaporation, public sewers, and outfalls. If a water balance cannot by determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

2.1 For each outfall (1) below, provide: (2) a description of all operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, stormwater runoff, and any other process or non-process wastewater, (3) the average flow and maximum flow (put max in parentheses) contributed by each operation and the sum of those operations, (4) the treatment received by the wastewater, and (5) the treatment type code. Continue on additional sheets if necessary.

1. OUTFALL NO.	2. OPERATION(S) CONTRIBUTING FLOW; INCLUDE ALL PROCESSES AND SUB PROCESSES AT EACH OUTFALL	3. AVERAGE FLOW AND (MAXIMUM FLOW), INCLUDE UNITS	4. TREATMENT DESCRIPTION	5. TREATMENT CODES FROM TABLE A
1	Existing Stormwater Flume	111.94 mgd (Q10)	None	4A
2	Existing Tank & Lagoon Storage		Pre Treat, Aerate	1H,1T,3B,3F
3	Existing Stormwater Flume	1.08 mgd (Q10)	None	4A
**	Existing Land Application Sites		Existing-None, New-Pre Treat	1H,1T,3B,3F
31	New Detention Pond (South)	0.43 mgd (Q10)	Sediment removal. Separator.	1M,1U,4A
32	New Detention Pond (East)	0.32 mgd (Q10)	Sediment removal	1M,4A
33	New Detention Pond (North)	0.27 mgd (Q10)	Sediment removal	1M,4A
34	New Wastewater Storage Tank		Pre Treat	1H,1T,3B,3F
35-77	New Land Application SItes		Pre Treat	1H,1T,3B,3F
**	Outfalls 7-9, 13-24, 26			

Attach additional pages if necessary.

2.2 INTERMITTENT DISCHARGES

Except for stormwater runoff, leaks, or spills, are any of the discharges described in items 2.0 or 2.1 intermittent or seasonal?

☐ Yes *(complete the following table)* ☑ No *(go to section 2.3)*

1. OUTFALL NUMBER	2. OPERATION(S) CONTRIBUTING FLOW	3. FREQUENCY		4. FLOW				C. DURATION *(in days)*
				A. FLOW RATE *(in mgd)*		B. TOTAL VOLUME (specify with units)		
		A. DAYS PER WEEK *(specify average)*	B. MONTHS PER YEAR *(specify average)*	1. MAXIMUM DAILY	2. LONG TERM AVERAGE	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.3 PRODUCTION

A. Does an effluent limitation guideline (ELG) promulgated by EPA under section 304 of the Clean Water Act apply to your facility? Indicate the part and subparts applicable.

☐ Yes 40 CFR_____ Subpart(s) _____ ☑ No *(go to section 2.5)*

B. Are the limitations in the effluent guideline(s) expressed in terms of production (or other measure of operation)? Describe in C below.

☐ Yes *(complete C.)* ☐ No *(go to section 2.5)*

C. If you answered "yes" to B, list the quantity representing an actual measurement of your maximum level of production, expressed in the terms and units used in the applicable effluent guideline and indicate the affected outfalls.

A. OUTFALL(S)	B. QUANTITY PER DAY	C. UNITS OF MEASURE	D. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*

2.4 IMPROVEMENTS

A. Are you required by any federal, state, or local authority to meet any implementation schedule for the construction, upgrading, or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ Yes *(complete the following table)* ☑ No *(go to 2.6)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
			A. REQUIRED	B. PROJECTED

B. Optional: provide below or attach additional sheets describing water pollution control programs or other environmental projects which may affect discharges. Indicate whether each program is underway or planned, and indicate actual or planned schedules for construction. This may include proposed bmp projects for stormwater.

2.5 SLUDGE MANAGEMENT

Describe the removal of any industrial or domestic biosolids or sludges generated at your facility. Include names and contact information for any haulers used. Note the frequency, volume, and methods (incineration, landfilling, composting, etc) used. See Form A for additional forms which may need to be completed.

There are not sludge products generated with this facility. The scraps of meat that will be collected on the rotary screen will be disposed in a licensed landfill.

DATA COLLECTION AND REPORTING REQUIREMENTS FOR APPLICANTS

3.0 EFFLUENT (AND INTAKE) CHARACTERISTICS (SEE INSTRUCTIONS)

A. & B. See instructions before continuing – complete one Table 1 for **each outfall** (and intake) – annotate the outfall (intake) number or designation in the space provided. The facility is not required to complete intake data unless required by the department or rule.

C. Use the space below to list any pollutants listed in the instructions section 3.0 C. Table B which you know or have reason to believe is discharged or may be discharged from any outfall not listed in parts 3.0 A or B on Table 1. For every pollutant listed, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	3. OUTFALL(S)	4. ANALYTICAL RESULTS (INCLUDE UNITS)

3.1 Whole Effluent Toxicity Testing

A. To your knowledge, have any Whole Effluent Toxicity (WET) tests been performed on the facility discharges (or on receiving waters in relation to your discharge) within the last three years?

☐ Yes (go to 3.1 B) ☑ No (go to 3.2)

3.1 B

Disclose wet testing conditions, including test duration (chronic or acute), the organisms tested, and the testing results. Provide any results of toxicity identification evaluations (TIE) or toxicity reduction evaluations (TRE) if applicable. Please indicate the conclusions of the test(s) including any pollutants identified as causing toxicity and steps the facility is taking to remedy the toxicity.

Not applicable.

3.2 CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported herein, above, or on Table 1 performed by a contract laboratory or consulting firm?

☑ Yes (list the name, address, telephone number, and pollutants analyzed by each laboratory or firm.) ☐ No *(go to 4.0)*

A. LAB NAME	B. ADDRESS	C. TELEPHONE *(area code and number)*	D. POLLUTANTS ANALYZED *(list or group)*
MMET, Inc.	316 North Airport Road Strafford, MO 65757	417-736-6016	As per Attachment M

4.0 STORMWATER

4.1
Do you have industrial stormwater discharges from the site? If so, attach a site map outlining drainage areas served by each outfall. Indicate the following attributes within each drainage area: pavement or other impervious surfaces; buildings; outdoor storage areas; material loading and unloading areas; outdoor industrial activities; structural stormwater control measures; hazardous waste treatment, storage, and disposal units; and wells or springs in the area.

OUTFALL NUMBER	TOTAL AREA DRAINED (PROVIDE UNITS)	TYPES OF SURFACES (VEGETATED, STONE , PAVED, ETC)	BEST MANAGEMENT PRACTICES EMPLOYED; INCLUDE STRUCTURAL BMPS AND TREATMENT DESIGN FLOW FOR BMPS DESCRIBE HOW FLOW IS MEASURED
1	234 acres	Vegetated, Paved, Buildings	Usual and customary pavement sweeping and trash removal.
3	0.4 acres	Vegetated, Paved, Buildings	Usual and customary pavement sweeping and trash removal.
31	5.8 acres	Vegetated, Paved, Buildings	Usual and customary housekeeping; runoff diversion through separator.
32	1.6 acres	Vegetated, Paved, Buildings	Usual and customary pavement sweeping and trash removal.
33	14.3 acres	Vegetated, Paved, Buildings	Usual and customary pavement sweeping and trash removal.

4.2 STORMWATER FLOWS
Provide the date of sampling with the flows, and how the flows were estimated.
Flows are for the 10-year event and are from hydrologic modeling last updated on September 12, 2022.

SIGNATORY REQUIREMENTS

5.0 CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)	TELEPHONE NUMBER WITH AREA CODE
Elizabeth A. Nelson-Vice President and General Counsel	515-559-5100
SIGNATURE (SEE INSTRUCTIONS) Elizabeth A. Nelson	DATE SIGNED Feb. 15, 2023

SEE INSTRUCTIONS; PLEASE PRINT OR TYPE.
You may report some or all of this information on separate sheet *(use similar format)* instead of completing these pages.

FORM C TABLE 1 FOR 3.0 - ITEMS A AND B

EFFLUENT (AND INTAKE) CHARACTERISTICS	THIS OUTFALL IS:	OUTFALL NO.

3.0 PART A – You must provide the results of at least one analysis for every pollutant in Part A. Complete one table for each outfall or proposed outfall. See instructions.

1. POLLUTANT	2. VALUES							3. UNITS *(specify if blank)*	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			
A. Biochemical Oxygen Demand, 5-day (BOD_5)									
B. Chemical Oxygen Demand (COD)									
C. Total Organic Carbon (TOC)									
D. Total Suspended Solids (TSS)									
E. Ammonia as N									
F. Flow	VALUE		VALUE		VALUE			MILLIONS OF GALLONS PER DAY (MGD)	
G. Temperature *(winter)*	VALUE		VALUE		VALUE			°F	
H. Temperature *(summer)*	VALUE		VALUE		VALUE			°F	
I. pH	MINIMUM		MAXIMUM		AVERAGE			STANDARD UNITS (SU)	

3.0 PART B – Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark Column 2A for any pollutant, you must provide the results for at least one analysis for the pollutant. Complete one table for each outfall (intake). Provide results for additional parameters not listed here in Part 3.0 C.

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUES		C. LONG TERM AVERAGE VALUES		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants											
A. Alkalinity ($CaCO_3$)			MINIMUM		MINIMUM		MINIMUM				
B. Bromide (24959-67-9)											
C. Chloride (16887-00-6)											
D. Chlorine, Total Residual											
E. Color											
F. Conductivity											
F. Cyanide, Amenable to Chlorination											

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 1 – Conventional and Non-Conventional Pollutants (Continued)											
G. *E. coli*											
H. Fluoride (16984-48-8)											
I. Nitrate plus Nitrate *(as N)*											
J. Kjeldahl, Total (as N)											
K. Nitrogen, Total Organic *(as N)*											
L. Oil and Grease											
M. Phenols, Total											
N. Phosphorus *(as P)*, Total (7723-14-0)											
O. Sulfate *(as SO^4)* (14808-79-8)											
P. Sulfide *(as S)*											
Q. Sulfite (as SO^3) (14265-45-3)											
R. Surfactants											
S. Trihalomethanes, Total											
Subpart 2 – Metals											
1M. Aluminum, Total Recoverable (7429-90-5)											
2M. Antimony, Total Recoverable (7440-36-9)											
3M. Arsenic, Total Recoverable (7440-38-2)											
4M. Barium, Total Recoverable (7440-39-3)											
5M. Beryllium, Total Recoverable (7440-41-7)											
6M. Boron, Total Recoverable (7440-42-8)											
7M. Cadmium, Total Recoverable (7440-43-9)											
8M. Chromium III Total Recoverable (16065-83-1)											
9M. Chromium VI, Dissolved (18540-29-9)											
10M. Cobalt, Total Recoverable (7440-48-4)											

1. POLLUTANT AND CAS NUMBER *(if available)*	2. MARK "X"		3. VALUES							4. UNITS	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVERAGE VALUE		D. NO. OF ANALYSES	A. CONCEN-TRATION	B. MASS
			CONCENTRATION	MASS	CONCENTRATION	MASS	CONCENTRATION	MASS			
Subpart 2 – Metals (Continued)											
11M. Copper, Total Recoverable (7440-50-8)											
12M. Iron, Total Recoverable (7439-89-6)											
13M. Lead, Total Recoverable (7439-92-1)											
14M. Magnesium, Total Recoverable (7439-95-4)											
15M. Manganese, Total Recoverable (7439-96-5)											
16M. Mercury, Total Recoverable (7439-97-6)											
17M. Methylmercury (22967926)											
18M. Molybdenum, Total Recoverable (7439-98-7)											
19M. Nickel, Total Recoverable (7440-02-0)											
20M. Selenium, Total Recoverable (7782-49-2)											
21M. Silver, Total Recoverable (7440-22-4)											
22M. Thallium, Total Recoverable (7440-28-0)											
23M. Tin, Total Recoverable (7440-31-5)											
24M. Titanium, Total Recoverable (7440-32-6)											
25M. Zinc, Total Recoverable (7440-66-6)											
Subpart 3 – Radioactivity											
1R. Alpha Total											
2R. Beta Total											
3R. Radium Total											
4R. Radium 226 plus 228 Total											

INSTRUCTIONS FOR FILLING OUT APPLICATION FOR NPDES DISCHARGE PERMIT – FORM C – MANUFACTURING, COMMERCIAL, MINING, SILVICULTURE OPERATIONS, PROCESS WASTEWATER, NON-PROCESS WASTEWATER, AND INDUSTRIAL STORMWATER DISCHARGES.

All applicable sections must be filled in when the application is submitted. The form must be signed as indicated. This application is to be completed only for facilities with a discharge. Non-discharging (land application facilities) should fill out the appropriate forms for the activity. Include any area with potential discharge, even if there is normally no discharge. If this form is not adequate for you to describe your existing operations, then sufficient information should be attached so an evaluation of the discharges can be made. Attach additional sheets as necessary for any additional information. If an applicant believes previous outfalls are no longer applicable to the facility, please indicate so. Certain parts of the application may be submitted electronically, such as extensive analytical data, or project plans relating to improvements. This may be included using a thumb drive or CD. If extensive data is submitted without an electronic copy, the department may request the submission at a later time so the permit writer can mathematically evaluate the data. If you have any questions regarding this form please contact the Water Protection Program Operating Permits Administrative Assistant at 800-361-4827 or 573-571-6825 and you will be directed to a permit writer.

GENERAL INFORMATION

1.0 Name of Facility – By what title or name is this facility known? Has the official name changed? Please indicate both the previous and current name you wish to be listed on the permit.

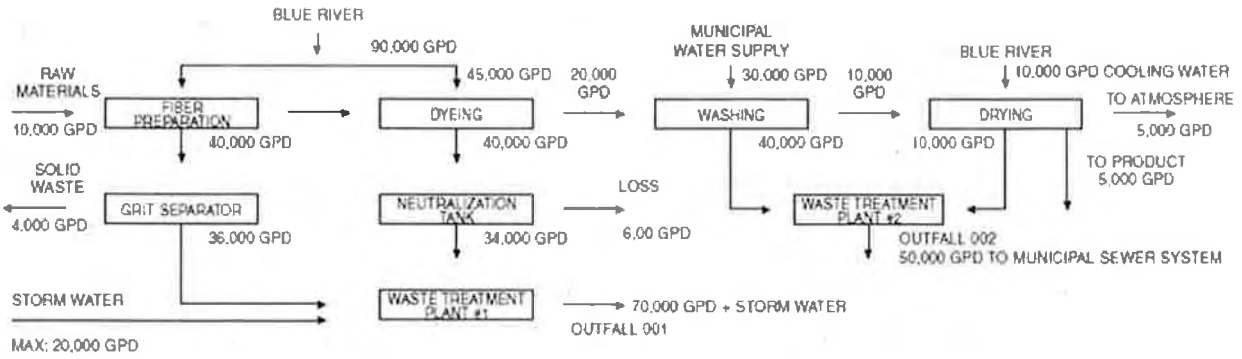
1.1 Operating permit number as assigned (MO-#######)

1.2 Indicate if this is a new facility or if there are any new discharges. Has the facility completed an antidegradation review? Is this facility being moved from a general permit to a site specific permit? If so, indicate general permit number.

1.3 Self-explanatory.

FLOWS, TYPE, AND FREQUENCY

2.0 The line drawing should show the route taken by water in your facility from intake to discharge. Show all operations contributing wastewater, including process and production areas, sanitary flows, cooling water, and stormwater runoff. Indicate any alternate treatment trains available. You may group similar operations into a single unit labeled to correspond to the more detailed listing. More than one drawing may be required depending on the complexity of the system. The water balance should show average and maximum flows. Show all significant losses of water to: products, atmosphere, public sewer systems; both storm sewer and sewer. You should use actual measurements whenever available; otherwise, use your best estimate. An example of an acceptable line drawing appears below.



2.1 List all sources of wastewater to each outfall. Operations may be described in general terms (for example, "dye-making reactor" or a "distillation tower"). You may estimate the flow contributed by each source if no data is available, and for stormwater, you may use any reasonable measure of duration, volume, or frequency. For each treatment unit, indicate its size, flow rate, and retention time, and describe the ultimate disposal of any solid or liquid wastes not discharged. Treatment units should be listed in order and you should select the proper code from Table A to fill in column 3B for each treatment unit. Insert "XX" into column 3B if no code corresponds to a treatment unit you list.

TABLE A – CODES FOR TREATMENT UNITS			
PHYSICAL TREATMENT PROCESSES			
1-A	Ammonia Stripping	1-M	Grit Removal
1-B	Dialysis	1-N	Microstraining
1-C	Diatomaceous Earth Filtration	1-O	Mixing
1-D	Distillation	1-P	Moving Bed Filters
1-E	Electrodialysis	1-Q	Multimedia Filtration
1-F	Evaporation	1-R	Rapid Sand Filtration
1-G	Flocculation	1-S	Reverse Osmosis (Hyper Filtration)
1-H	Flotation	1-T	Screening
1-I	Foam Fractionation	1-U	Sedimentation (Settling)
1-J	Freezing	1-V	Slow Sand Filtration
1-K	Gas-Phase Separation	1-W	Solvent Extraction
1-L	Grinding (Comminutors)	1-X	Sorption
CHEMICAL TREATMENT PROCESSES			
2-A	Carbon Absorption	2-G	Disinfection (Ozone)
2-B	Chemical Oxidation	2-H	Disinfection (Other)
2-C	Chemical Precipitation	2-I	Electrochemical Treatment
2-D	Coagulation	2-J	Ion Exchange
2-E	Dechlorination	2-K	Neutralization
2-F	Disinfection (Chlorine)	2-L	Reduction
BIOLOGICAL TREATMENT PROCESSES			
3-A	Activated Sludge	3-E	Pre-Aeration
3-B	Aerated Lagoons	3-F	Spray Irrigation/Land Application
3-C	Anaerobic Treatment	3-G	Stabilization Ponds
3-D	Nitrification-Denitrification	3-H	Trickling Filtration
OTHER PROCESSES			
4-A	Discharge to Surface Water	4-C	Reuse/Recycle of Treated Effluent
4-B	Ocean Discharge Through Outfall	4-D	Underground Injection
SLUDGE TREATMENT AND DISPOSAL PROCESSES			
5-A	Aerobic Digestion	5-M	Heat Drying
5-B	Anaerobic Digestion	5-N	Heat Treatment
5-C	Belt Filtration	5-O	Incineration
5-D	Centrifugation	5-P	Land Application
5-E	Chemical Conditioning	5-Q	Landfill
5-F	Chlorine Treatment	5-R	Pressure Filtration
5-G	Composting	5-S	Pyrolysis
5-H	Drying Beds	5-T	Sludge Lagoons
5-I	Elutriation	5-U	Vacuum Filtration
5-J	Flotation Thickening	5-V	Vibration
5-K	Freezing	5-W	Web Oxidation
5-L	Gravity Thickening		

2.2 A discharge is intermittent unless it occurs without interruption during the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities. A discharge is seasonal if it occurs only during certain parts of the year. Fill in every applicable column in this item for each source of intermittent or seasonal discharges. Base your answers on actual data whenever available; otherwise, provide your best estimate. Report the highest daily value for flow rate and total volume in the "Maximum Daily" columns. Report the average of all daily values measures during days when discharge occurred within the last year in the "Long Term Average" columns.

PRODUCTION

2.3 A. All effluent limitation guidelines (ELGs) promulgated by EPA appear in the Federal Register and are published annually in 40 CPR Subchapter N (400-499). A guideline applies to you based on the applicability sections within each subpart. If you are unsure you are covered by an ELG, check with your Missouri Department of Natural Resources' Regional Office. You must check yes if an applicable effluent guideline has been promulgated, even if the guideline limitations are being contested in court. If you believe a promulgated effluent guideline has been remanded for reconsideration by a court and does not apply to your operations, you may check no. The ELG number and subpart(s) must be included.

2.3 B. An ELG is expressed in terms of production (or other measure of operation) if the limitations are expressed as mass of pollutant per operational parameter; for example, "pounds of BOD per cubic foot of logs from which bark is removed," or "pounds of TSS per megawatt hour of electrical energy consumed by smelting furnace." An example of a guideline not expressed in terms of a measure of operation is one which limits the concentration of pollutants, or requires no discharge of the wastewater.

2.3 C. This item must be completed if you checked "yes" to item B. The production information requested here is necessary to apply effluent guidelines to your facility and you may not claim it as confidential. However, you do not have to indicate how the reported information was calculated. Report quantities and the units of measurement used in the applicable effluent guideline. The data provided must be a measure of actual operation over a one month period, such as the production for the highest month during the last twelve months, or the monthly average production for the highest year of the last five years, or other reasonable measure of actual operation, but may not be based on design capacity or on predictions of future increases in operation. This data must be concurrent of facility operations.

2.4 IMPROVEMENTS If you check yes to this question, complete all parts of the table, or attach a copy of any previous submission you have made containing the same information. You are not required to submit a description of future pollution control projects if you do not wish to, or if none are planned.

2.5 SLUDGE MANAGEMENT If the facility generates any sludge or biosolids, please indicate where the sludge accumulates (lagoon, tank, etc.) and the methods of disposal. Please include the volume and frequency of sludge removal/disposal and any haulers used. Please indicate if the facility composts, incinerates, landfills, stores, sells, or other methods of eliminating the sludge from lagoons or holding tanks. Consider submitting a sludge or biosolids management plan electronically if additional description is needed.

DATA COLLECTION AND REPORTING REQUIREMENTS FOR APPLICANTS

3.0 This section requires collection and reporting of data on pollutants discharged from each outfall, including stormwater outfalls, non-process wastewater, and any intake data you wish to provide. Parts A, B, and C address different sets of pollutants and must be completed in accordance with the specific instructions for the part. All data must be reported as a concentration **and** as total mass. You may report some or all of the required data by attaching separate sheets of paper.

3.0 A. and B. These sections are found on Table 1. Complete a separate table for each outfall and intake.

3.0 A. Requires reporting at least one analysis for each pollutant. Part A must be completed by all applicants for all outfalls, including outfalls containing only noncontact cooling water, stormwater runoff, or other discharges; intake values are not required in this Part. Upon written request, (email is suitable) prior to submitting the application, the department may waive the requirements to test for one or more of these pollutants upon determining testing for the pollutant(s) is not applicable for your effluent.

3.0 B. Mark "X" in either "Believed Present", Column 2A, or "Believed Absent", Column 2B, for each pollutant, based on your best estimate, and test those you believe present. Base your determination a pollutant is present in, or absent from, your discharge on your knowledge of your raw materials, source water, maintenance chemicals, intermediate, byproduct, and final products, and any previous analyses known to you of the facility's effluent, or of any similar effluent. If either chloride or sulfate is believed present, the department asks you to test for both chloride and sulfate. If you expect a pollutant is present as a result your intake water, you should mark "Believed Present" and analyze for the pollutant. Provide analysis of the intake or source water as well; this includes water withdrawn from wells or obtained from a potable water source. Presence of a pollutant in the discharge from sourced water does not eliminate disclosure requirements. If a

pollutant is reported as not present, the pollutant will be considered "believed absent" for the purposes of application shield.

3.0 A and B Continued

Use the following abbreviations (or other as applicable) in Column 4, "Units". Mass must be specified as per day, month, or year.

CONCENTRATION		MASS	
ppm	parts per million	lbs	pounds
mg/L	milligrams per liter	ton	tons (English tons)
ppb	parts per billion	mg	Milligrams
ug/L	micrograms per liter	g	grams
pCi/L	picocuries per liter	kg	kilograms
		T	tonnes (metric tons)

MAXIMUM DAILY VALUE. If you measure a pollutant only once, complete only the "Maximum Daily Value" columns and insert "1" into the "number of analyses" in Column D. The Missouri Department of Natural Resources may require you to conduct additional analyses to further characterize your discharge. If the pollutant is sampled but not detected, a less than "<" symbol should be used next to the detection limit (or laboratory reporting limit). Simply stating "below detection limits" without quantifying the limit of detection may not be appropriate and additional information may be required.

MAXIMUM 30 DAY VALUES. "Maximum 30 Day Values" are not compulsory but should be filled out if data is available. The department suggests at least 4 samples (one per week) be collected over a one month period for averaging purposes, but is not required. Determine the average of all daily values taken during one calendar month, and report the highest average of all daily values taken during all calendar months, and report the highest average in Column B. Column D must show the number of samples used in the calculation.

LONG TERM AVERAGES. "Long Term Average Values" are not compulsory but should be filled out if data is available. Determine the long term average of all the data and report in Column C. Column D must show the number of samples used in the calculations. The facility should include a statement describing the timeframe of the data used in the calculations. Consider including an electronic copy of the data with the application.

SAMPLING. The collection of samples for analyses should be supervised by a person experienced in performing sampling of industrial wastewater and/or stormwater. You may contact your Missouri Department of Natural Resources' Regional Office for detailed guidance on sampling techniques and for answers to specific questions. Any specific requirements contained in the applicable analytical methods should be followed for sample containers, sample preservation, holding times, the collection of duplicate or blank samples, etc. The time when you sample should be representative of your normal operation, with all processes contributing wastewater in normal operation, and with your treatment system operating properly with no system upsets. Samples should be collected from the center of the flow channel, at a site specified in your present permit, or for new discharges, at any site adequate for the collection of a representative sample.

GRAB SAMPLE. An individual sample of sufficient volume for analysis, collected at a randomly selected time, over a period not exceeding 15 minutes, which is representative of the discharge. Grab samples must be used for temperature, pH, total residual chlorine, oil and grease, *E. coli,* and any pollutant considered to be volatile. Grab samples are typically appropriate for stormwater.

COMPOSITE SAMPLE. Use composite sampling (if available) for all pollutants (except above). A combination of at least eight sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24 hour period. For volatile pollutants, aliquots must be combined in the laboratory immediately before analysis. The composite must be proportional; either time interval proportional, or flow proportional. Aliquots may be collected manually or automatically.

ANALYSIS. You must use test methods promulgated in 40 CFR Part 136 for all analyses. The facility must use a sufficiently sensitive method to determine compliance with Missouri Water Quality Standards in accordance with Standard Conditions Part I. If no method has been promulgated for a particular pollutant, you may use any suitable method for measuring the level of the pollutant in your discharge. If there is no promulgated method, your attached description should include the preservation techniques, sample holding times, the quality control measures which you used, and any other

pertinent information, such as filtering or what fraction the method detects. For obscure methods or new contaminants, consider including an electronic copy of the method with the application and the laboratory analysis sheets.

IDENTICAL OUTFALL CONSIDERATION. If you have two or more substantially identical outfalls, you may submit the results of the analysis for one substantially identical outfall in its place. Identify which outfall you did test and describe why the outfalls which you did not test are substantially identical to the outfall you did test.

REPORTING OF INTAKE DATA. You are not required to report intake data unless you wish apply for "net" effluent limitations for one or more pollutants. Net limitations are technology limits adjusted by subtracting the level of the pollutant present in the intake water from the discharge. National Pollutant Discharge Elimination System (NPDES) regulations allow net limitations only in certain circumstances. To demonstrate eligibility, report the maximum and average of the results of analyses on the intake water, attach a statement the intake water is drawn from the same body of water into which the discharge is made, and a statement how the pollutant level is reduced by the wastewater treatment. When applicable, a demonstration to the extent the pollutants in the intake vary physically, chemically, or biologically from the pollutants contained in the discharge; for example, when the pollutant represents a class of compounds.

3.0. C. requires listing any pollutants from "TABLE B – TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT" you believe to be present and explain why you believe them to be present. If you have analytical data, you must report it. You may include other pollutants not listed below but present in your discharge in 3.0 C. Please provide Chemical Abstract Service (CAS) numbers for any additional pollutants described. If the facility is required to complete Form D, duplication of the parameters here is not required.

TABLE B – TOXIC POLLUTANTS AND HAZARDOUS SUBSTANCES REQUIRED TO BE IDENTIFIED BY APPLICANTS IF EXPECTED TO BE PRESENT		
TOXIC POLLUTANT	HAZARDOUS SUBSTANCES	HAZARDOUS SUBSTANCES
Asbestos	Dimethylamine	Napthenic acid
HAZARDOUS SUBSTANCES	Dintrobenzene	Nitrotoluene
Acetaldehyde	Diquat	Parathion
Allyl alcohol	Disulfoton	Phenolsulfonate
Allyl chloride	Diuron	Phosgene
Amyl acetate	Epichlorohydrin	Propargite
Aniline	Ethion	Propylene oxide
Benzonitrile	Ethylene diamine	Pyrethrins
Benzyl chloride	Ethylene dibromide	Quinoline
Butyl acetate	Formaldehyde	Resorcinol
Butylamine	Furfural	Strontium
Captan	Guthion	Strychnine
Carbaryl	Isoprene	Sytrene
Carbofuran	Isopropanolamine	2,4,5-T (2,4,5-Trichloro-phenoxyacetic acid)
Carbon disulfide	Kelthane	TDE (Tetrachlorodiphenyl ethane)
Chlorpyrifos	Kepone	2, 4, 5-TP (2-(2,4,5-Trichloro-phenoxy) propanoic acid)
Coumaphos	Malathion	Trichlorofon
Cresol	Mercaptodimethur	Triethanolamine
Crotonaldehyde	Methoxychlor	Triethaylamine
2,4-D (2,4-Dichloro-Phenoxyacetic acid)	Methyl mercaptan	Uranium
Diazinon	Methyl parathion	Vanadium
Dicamba	Mevinphos	Vinyl acetate
Dichlobenil	Mexacarbate	Xylene
2,2-Dichloropropionic acid	Monethyl amine	Xylenol
Dichlorvos	Monomethyl amine	Zirconium
Diethylamine	Nalad	

3.1 Self-explanatory.

3.2 Self-explanatory.

4.0 STORMWATER [10 CSR 20-6.200(2)(C)1.]

In accordance with 10 CSR 20-6.200(2)(C)1.E(I) and (II), the facility must sample the stormwater for any pollutant listed in the permit for process wastewater discharges and/or the applicable Effluent Limitation Guideline. All industrial stormwater must be sampled for parameters listed in 10 CSR 20-6.200(2)(C)1.E.(III); these are: oil and grease, pH, biochemical oxygen demands (BOD_5), chemical oxygen demands (COD), total suspended solids (TSS), conductivity, total phosphorus, total Kjeldahl nitrogen, and nitrate plus nitrite nitrogen.

4.1 Indicate the outfall numbers for industrial stormwater discharges. Provide the area drained by each outfall. Indicate the type and percentages of surface(s), for example: 60% grass or vegetated areas, 10% non-vegetated soils, 30% pavement, etc., the outfall drains. The facility must indicate any structural best management practices, such as settling/retention, rain garden/infiltration, filter socks, etc, employed at each outfall.

4.2 Describe the method used to determine the flow rate in accordance with 10 CSR 20-6.200(2)(C)1., and the flow rate; submit the date and duration of the storm event from which the samples were taken.

5.0 SIGNATORY REQUIREMENTS The Clean Water Act provides for severe penalties for submitting false information on this application form. Section 309(c)(2) of the Clean Water Act provides "Any person who knowingly makes any false statement, representation, or certification in any application . . . shall upon conviction, be punished by a fine of no more $10,000 or by imprisonment for not more than six months, or both.

All applications must be signed as follows and the signature must be original. For a corporation: by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters. For a partnership or sole proprietorship: by a general partner or the proprietor. For a municipal, state, federal or other public facility: by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

FORM I – PERMIT APPLICATION FOR OPERATION OF WASTEWATER IRRIGATION SYSTEMS

FOR AGENCY USE ONLY
PERMIT NUMBER MO -
DATE RECEIVED

INSTRUCTIONS: The following forms must be submitted with Form I: FORM B or B2 for domestic wastewater.
FORM A for industrial wastewater.

1. FACILITY INFORMATION

1.1 Facility Name
Kemin Industries, Inc.

1.2 Permit Number
MO- 0136760

1.3 Type of wastewater to be irrigated: ☐ Domestic ☐ Municipal ☐ State/National Park ☐ Seasonal business
☐ Municipal with Pretreatment Program or Significant Industrial Users ☑ Other (explain) Food Process

SIC Codes (list all that apply, in order of importance) 2048

1.4 Months when the business or enterprise will operate or generate wastewater:
☑ 12 months per year ☐ Part of year (list Months): ___

1.5 This system is designed for:
☑ No-discharge ☑ Partial irrigation when feasible and discharge rest of time.
☐ Irrigation during recreation season (April – October) and discharge during November – March.
☑ Other (explain) Process waste water will disposed under a pump and haul system.

1.6 List the Facility outfalls which will be applicable to the irrigation system.
Outfall Numbers: Exhibit

2. STORAGE BASINS

2.1 Number of storage basins: 1S,5C,2E
Type of basin: ■ Steel ☑ Concrete ☐ Fiberglass ☑ Earthen
☐ Earthen with membrane liner

3. LAND APPLICATION SYSTEM

3.1 Number of irrigation sites * _____ Total Acres * _____
Location: ___ ¼, ___ ¼, ___ ¼, Sec ___ T ___ R ___ _____ County _____ Acres
Location: ___ ¼, ___ ¼, ___ ¼, Sec ___ T ___ R ___ _____ County _____ Acres
Attach pages as needed. ***See Attachment F-Form A Section 8.1**

3.2 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings, and other pertinent features. **See Attachment A and Attachment K.**

3.3 Type of vegetation: ☑ Grass hay ☑ Pasture ☐ Timber ☐ Row crops ☐ Other (describe) _____

3.4 Wastewater flow (dry weather) gallons/day:
Average annual: 45,560 Seasonal _____ Off-season _____
Months of seasonal flow: _____

3. LAND APPLICATION SYSTEM (continued)

3.5 Land Application rate per acre (design flow including 1 in 10 year stormwater flows):

Design: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

Total Irrigation per year (gallons): _____ Design _____ Actual

Actual months used for Irrigation (check all that apply):

☑ Jan ☑ Feb ☑ Mar ☑ Apr ☑ May ☑ Jun ☑ Jul ☑ Aug ☑ Sep ☑ Oct ☑ Nov ☑ Dec

3.6 Land Application Rate is based on:

☑ Nutrient Management Plan (N&P)

☐ Hydraulic Loading

☐ Other (describe) _____

3.7 Equipment type: ☐ Sprinklers ☐ Gated pipe ☐ Center pivot ☐ Traveling gun ☑ Other (describe) Truck

Equipment Flow Capacity: _____ Gallons per hour _____ Total hours of operation per year

3.8 **Public Use Areas**. Public access shall not be allowed to public use area irrigation sites when application is occurring. Method of Public Access Restriction:

☑ Site is Fenced ☐ Wastewater disinfection prior to irrigation ☑ Site is not for public use

☐ Other (describe): _____

3.9 Separation distance (in feet) from the outside edge of the wetted irrigation area to nearby down gradient features:

100 Permanent flowing stream 300 Losing Stream 100 Intermittent (wet weather) stream 10 Lake or pond

50 Property boundary 150 Dwellings 300 Water supply well ____ Other (describe) _____

3.10 The facility must develop and retain an Operation and Maintenance (O&M) Plan for the irrigation system.

Date of O&M Plan: _____ **No O&M Plan since fluid is applied by contract haulers.**

4. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.

OWNER OR AUTHORIZED REPRESENTATIVE	OFFICIAL TITLE
Elizabeth A. Nelson	Vice President and General Counsel
EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE
libby.nelson@kemin.com	(515) 559-5100
SIGNATURE	DATE SIGNED
Elizabeth A. Nelson	Feb. 15, 2023

780-1686 (08-14)