As-Built Documentation

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection



Williams Engineering Services, LLC E14910 Bears Grass Rd, Augusta, WI 54722

Emerald Sky Dairy, LLC Feedpad & Runoff Collection Completion Certification Statement, Emerald, WI

September 14, 2019

To Whom it May Concern,

This letter is intended to certify completion of the new concrete feedpad with leachate collection system, located west of the Waste Storage Facility (WSF), at the Emerald Sky Dairy, LLC farm of Emerald, WI. The constructed practice meets Wisconsin NRCS Conservation Practice and Wisconsin Department of Natural Resources Standards listed below.

NRCS 382 – Fence (1/14)

NRCS 533 – Pumping Plant (7/11)

NRCS 561 – Heavy Use Area Protection (8/15)

NRCS 634 – Waste Transfer (1/14)

WDNR - NR 243

Items yet to be completed include limited topsoiling, seeding, and mulching.

I testify that to the best of my professional knowledge, judgment, and belief, that this practice was installed in accordance with the original construction plans, specifications, and/or the As-Built drawings, and that this practice meets the Practice Standards listed above.

Respectfully submitted,

Ronnie Williams, PE

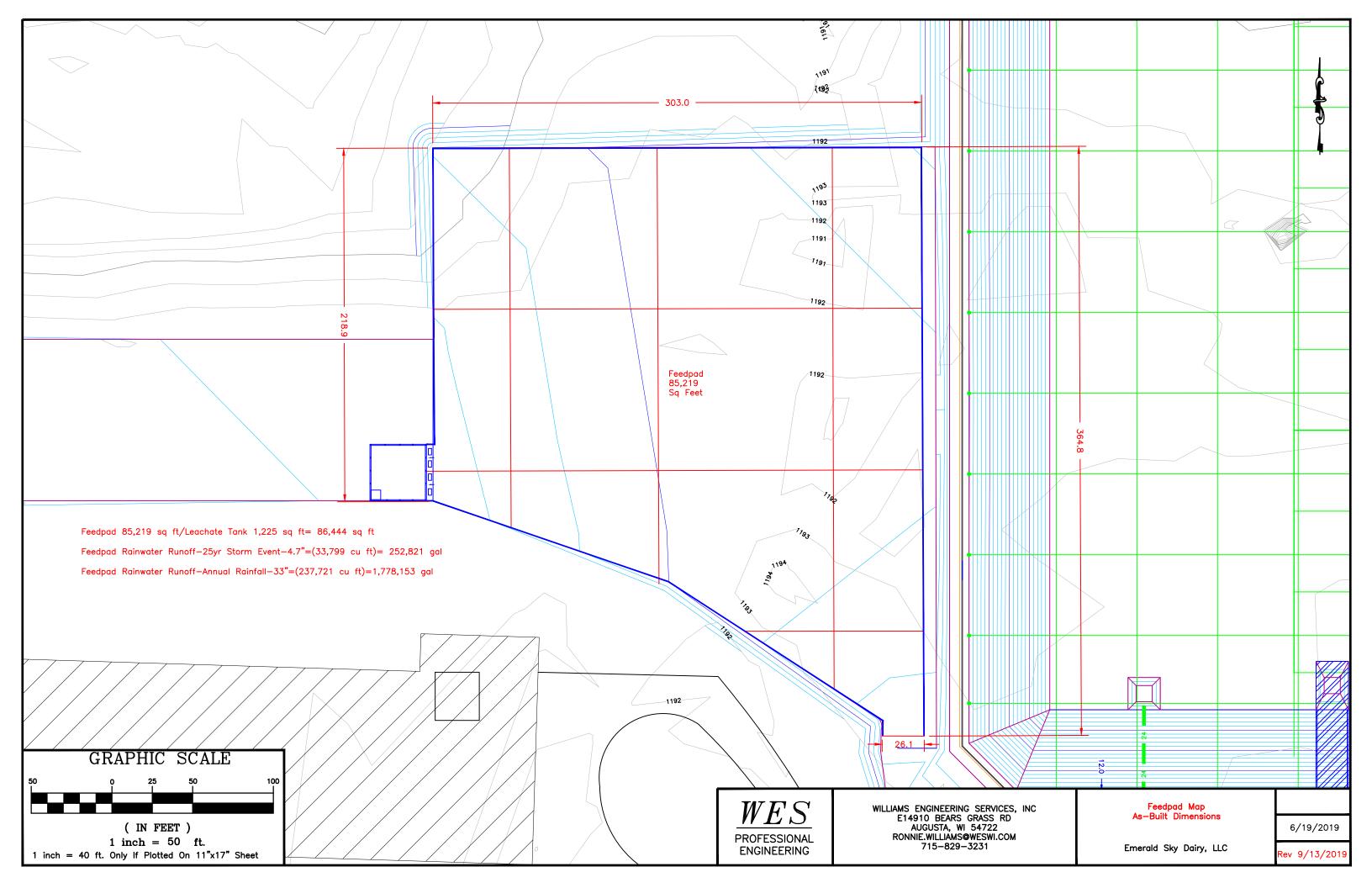


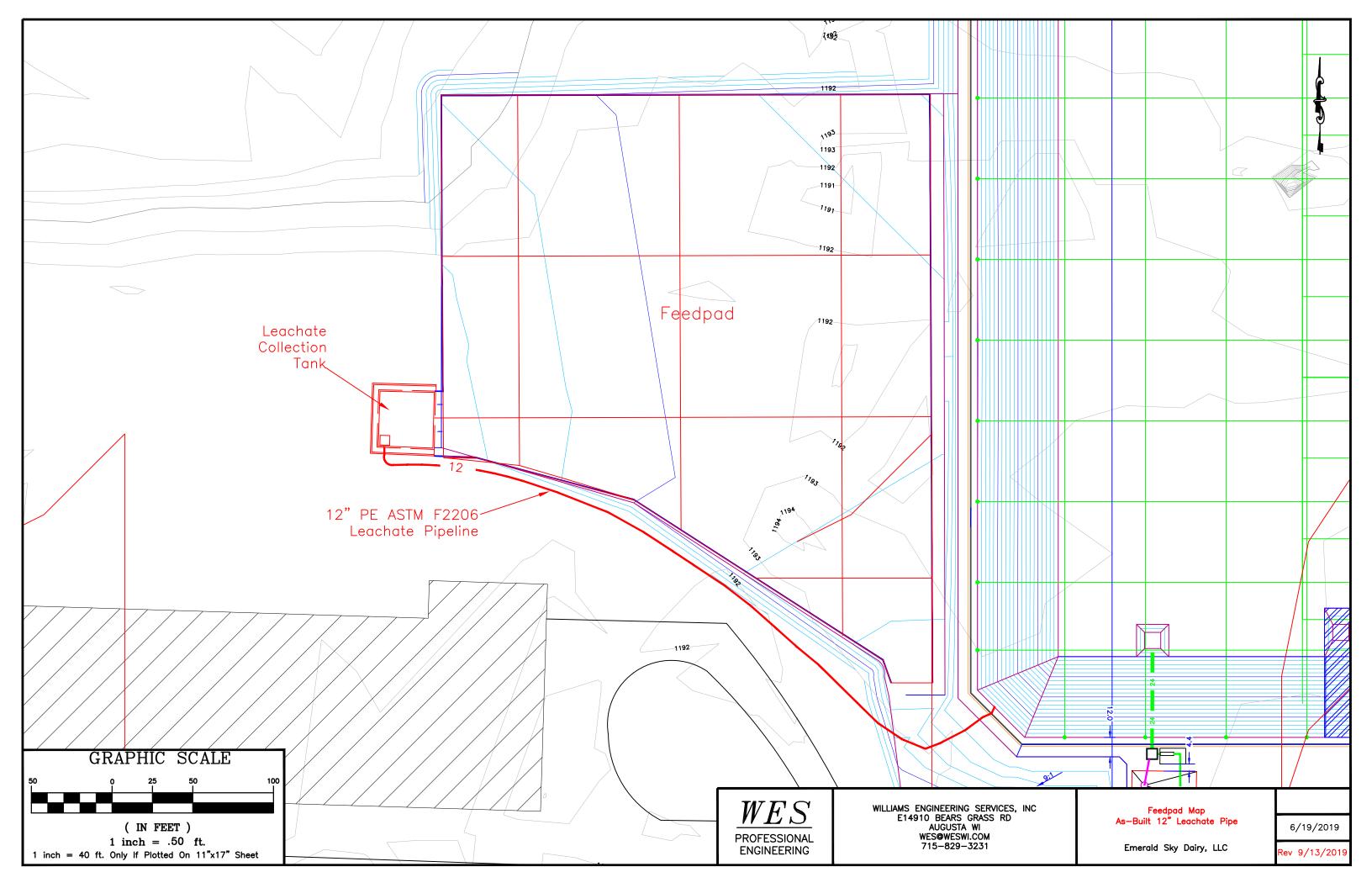
As-Built Drawings & As-Built Information

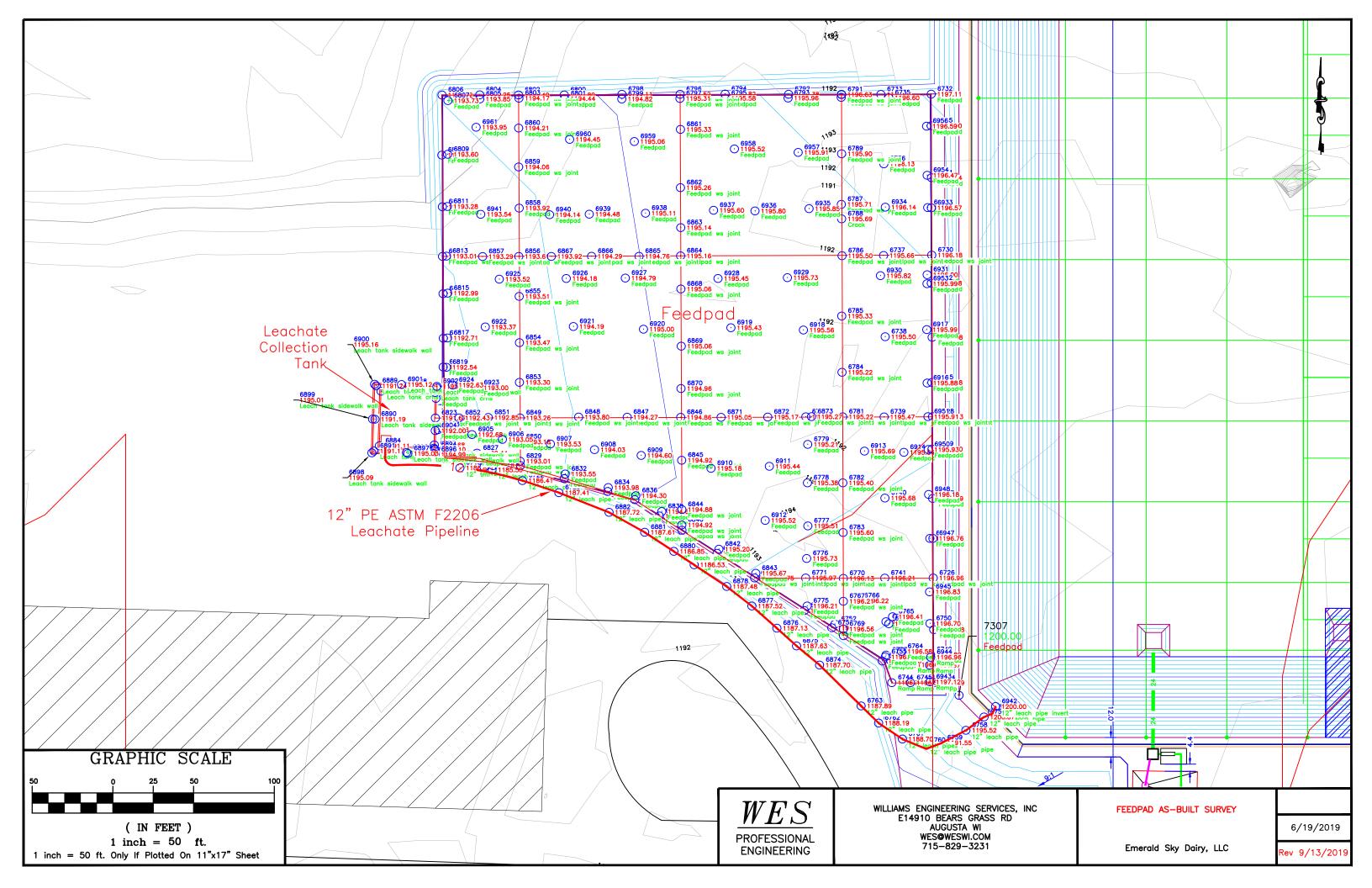
Emerald Sky Dairy, LLC

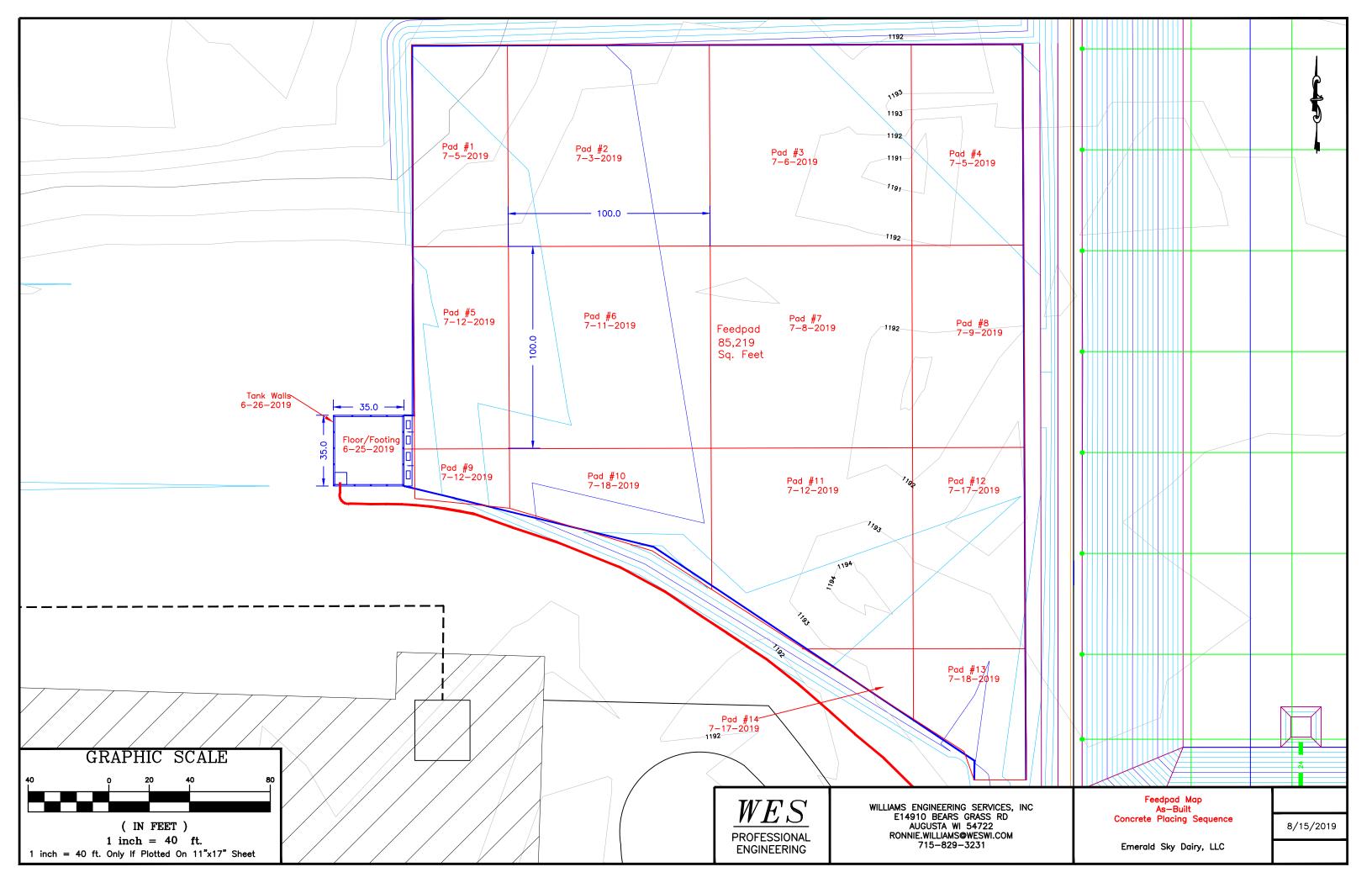
2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

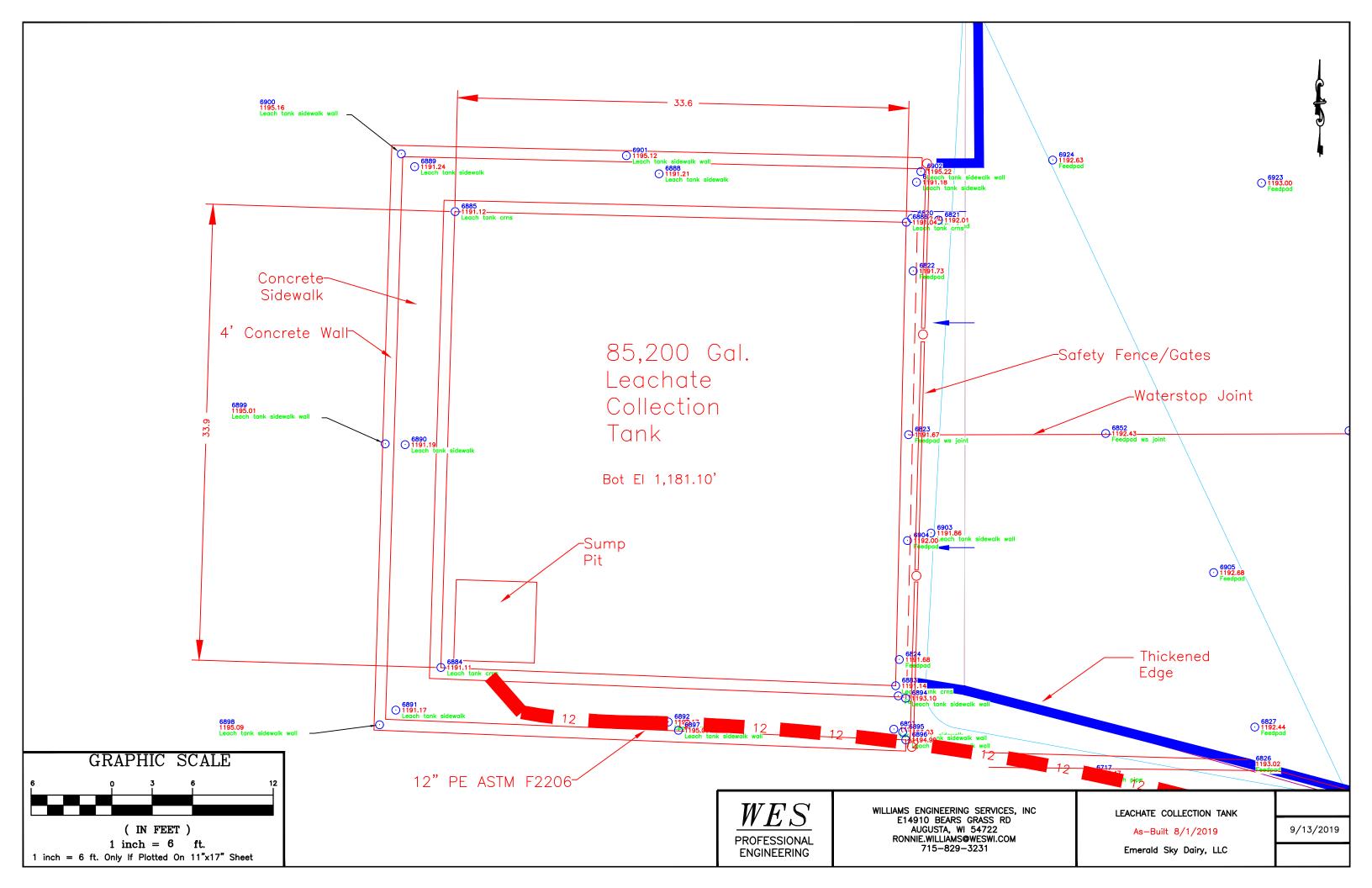
2019 Feedpad & Runoff Collection

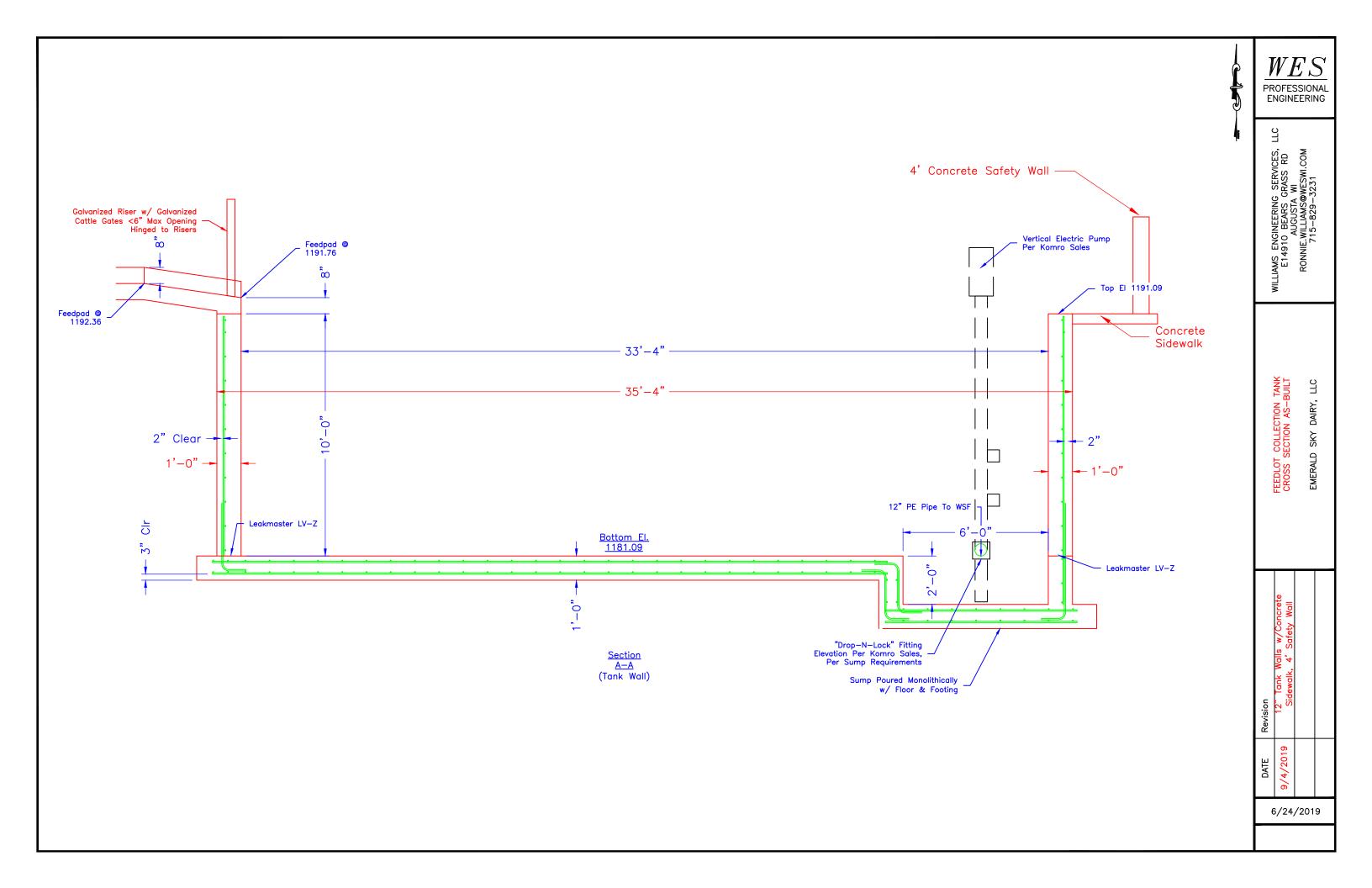


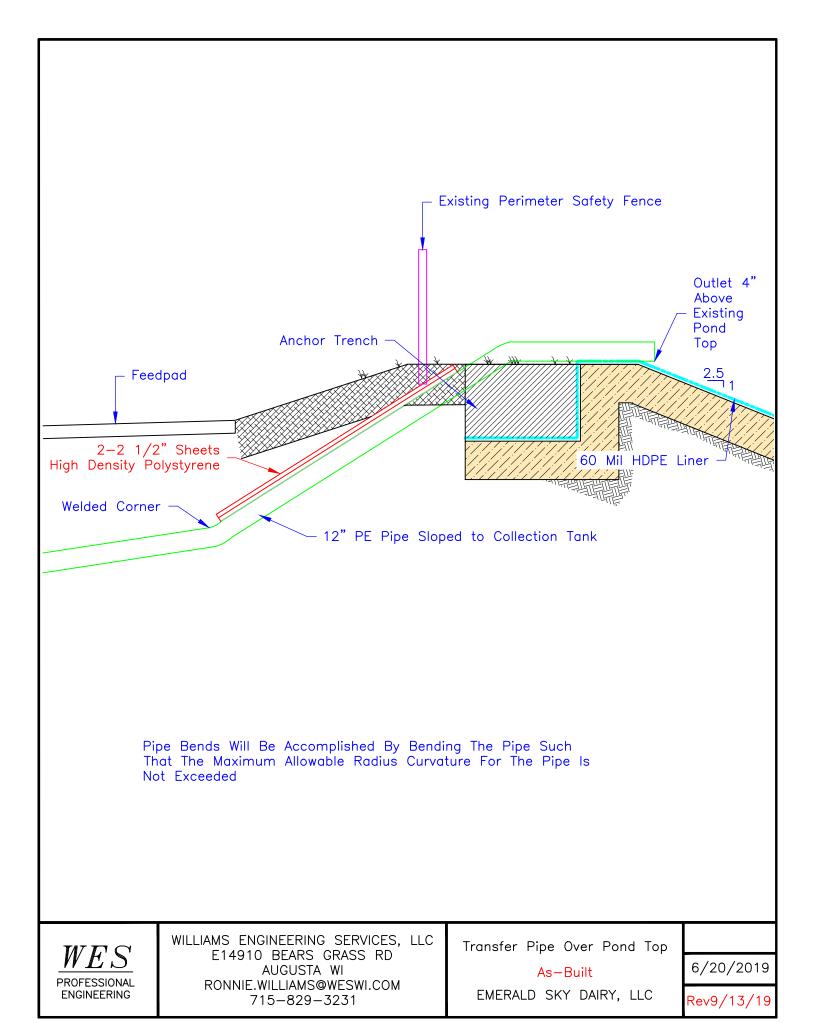












Concrete Testing

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

The enclosed pages are included to serve as a representation of files retained for the project.

Additional documentation is available upon request.

CORPORATE OFFICE 2025 CENTRE POINTE BLVD., #300 MENDOTA HEIGHTS, MN 55120-1221

CEMSTONE

PHONE: (651) 688-9292 • 1-800-CEMSTONE

cemstone.com

LOAD	LEAVE PLANT	ARRIVE JOB SITE	START UNLOADIN	G FINISH UNLOADING	LEAVE JOB SITE	ARRIVE PLANT
1. Warranties, Remedies a a) Cemstone does not adequately cuafter delivery/dischance b) Cemstone does not architectural specifications: Ready-Society for Testing paragraph 6.4.2) unless All testing MUST be pASTM standard. When accordance with ASTM be tested for compressive repairing or replacing the shall terminate two mocomputed from arrival or USTOMER NAME COMPRESSIDED CARPORESS / DELIVERY ADDRESS / D	and Limitations: ot, under any circumstances, red, is improperly handled ai large to customers or for which warrant, under any circumstance ided ready-mixed concrete finis mixed concrete shipped sha Materials (ASTM) Standar otherwise specified in writing erformed in accordance with compressive strength testing C172, specimens MUST be covered the strength in accordance with liability of Cemstone for any e goods as Cemstone shall elemants after the delivery. Free in job. Demurrage at \$2.20 per SERVICE INC.	warrant the performance of ond/or finished, or is not fit for the mix design was provided ances, the final color shade or a h. Ill generally conform to the d Specification C94-17 Op by Customer and agreed to by the most recent version of the isperformed, the concrete MU ast and cured according to AST ASTM C39. defect in the accepted goods seet. The obligation to repair or unloading time up to 7 minute minute must be paid by the pur CUST. NO.	concrete which is the intended use d by a party other appearance of any current American otion A (except Cemstone. he corresponding ST be sampled in M C31 and MUST shall be limited to replace the goods as per yard to be chaser thereafter.	concrete contained in this locater/cement ratio. Adding rete, including strength, ship should not add water if: *the maximum water/ceme* *the maximum slump has become a summer of the ship should not add water if: *the maximum slump has become a summer of the ship ship ship ship ship ship ship ship	and has been manufactured additional water will charinkage, color and bleed rather tratio has been reached een obtained 1/3 LD ED 1/3 LD DATE / TICKET NO.	or CUSTOMER REQUESTED chemical admixture increased slump INCHES ADDED 1" 2" 3" 4" Please circle inches added ORDER NO. 154
O. NO.	WAY	CUSTOMER JOB NO.	-	* 0	4 7 1 8 4	6 7 *
LANT TRUCK DI	David Redden	use AGRCULT	MAP PAGE SLUMP REG	UESTED SLUMP METER REA	DING @ PLANT SLUMP	METER READING ON ARRIVAL
LOAD QTY.	UM. QTY. ORD'I	O QTY. PRODUCT	CODE PF	ODUCT DESCRIPTION	UNIT PRICE	AMOUNT
9.50	9.50	0.00 NRCS2 1.00 BW 5.00 AE	Air E	3/4 FXA BATCH WEIGHTS ntrainment Admi)	et:	
		CHECK BOX IF TAKEN				
COD ORDER		CK, CASH OR CREDIT	RECEIVED BY			

RELEASE, WAIVER AND ASSUMPTION OF RISK BY OWNER/CONTRACTOR/SUBCONTRACTOR READ VERY CAREFULLY BEFORE SIGNING BELOW!









Customer acknowledges receiving from Cemstone Products Company/Cemstone Ready Mix, Inc/Cemstone Concrete Materials, LLC (Cemstone) the Safety Data Sheet (SDS) for ready-mix concrete represented by this document being purchased & delivered. Customer understands the WARNINGS contained in the SDS and acknowledges releasing, defending, and Indemnifying Cemstone, it affiliates, employees and representatives from any and all liability from claims or damages from any activities including the delivery and installation of the ready-mix concrete, that are under, or a result of, customers direction and/or control.

Customer further acknowledges that Cemstone is not liable for damage of any kind incurred by customers request that Cemstone move its concrete delivery truck or placing equipment past the curb line, right of way limits or onto private property. Customer understands that this request may involve hazardous activities or create hazardous conditions which exposes equipment, real property, third parties and customer to hazards which can result in property damage, bodily injury, illness, or death for which customer agrees to be responsible and pay, including any wrecker or tow truck fees. SIGNATURE OF RECEIPT – CONCRETE & WATER ADDED, CHEMICAL ADMIXTURES ADDED & ACKNOWLEDGEMENT OF WARNINGS

CERTIFICATE OF COMPLIANCE

Cemstone CRM 1190 County Road New Richmond, V		17			j	Plant: 023			TOMER RO SALI	ES & SERVICE	INC	
Order# 164 Job# ANDY 7 Batch Record:		-30 55 3/2019		Ticke S.P.#		471846	7	PO# Bridg	je# <i>I</i>	ANDY 715-495		
Begin Time: 1 Volume: 9.50	1:35 AN C`	Л YDS		Mix I	D:	NRCS2	Mix	Desc: 40	000 3/4 F	×Α		
Truck #: 701 QTY Order: 210)				ver: Y Del:	Da 9.5	vid Redden		Loads:	1		
Ingredient Source	MCFac	AbsFac	OD	ABS	SSD	Free Mst	CYDS TARG	Target		Actual	Free Wat	Trim
SANDCAS 94025	0.040	0.008	1404 II)	1404	44.93	1449	13765		13840	429 lb	
67CAS 94025	0.031	0.013	1786 II		1786	32.15	1818	17272	lb	17140	303 lb	
CDCEMENT CONDAIA			480 II)	480		430	4560	lb	4 545		
FLYASH PRAIRIE STATE			85 II)	85		85	808	lb	795		
CWWATER COLD WELL			253 II)	253		176	1668	lb	1616 -	1616 lb	
MRWRA AMPOL1020			3.0 /	2	.0		17.0	161.0	oz	162.0	2.6 lb	

1.50

11.3

Total Water: 2,352 lb

Design W/C: 0.448

Slump: 6.00 in

MRWRA AMPOL1020

RETARDER BMSTDELVO

HWWATER HOT WELL

MAIR90

AEA

Num Batches:

3.0 /C

1.50 oz

2.0 /C

.0 %

.0

1.50

.0

Design Water: 2403.5

lb

Water/Cement: 0.440

Water in Truck: 0.0 lb

Adjust Water: 0.0 lb / Load Trim Water: 0.0

/ CYDS

13.00

105.0

.0

.06 lb

.9 lb

100.0 %

Plant Weather: Mostly Cloudy 76°F, 7 MPH Winds out of S, RH: 83%

Observation Time 11:18 AM

To Add: 6.178 gl

14.25 oz

107.4 oz

.0 lb

CERTIFICATE OF COMPLIANCE

AIR CONTENT	_AIR TEMP.	_WATER ADDED @ PLANT	g_
CONCRETE TEMP.	SLUMP	_WATER ADDED @ JOBSITE	_g
CYLINDER NO.	_TIME DISCHARGED	TOTAL ACTUAL WATER	11
LOCATION / PART of STRUCTURE			
INSPECTOR SIGNATURE			
PRODUCER SIGNATURE			

2025 CENTRE POINTE BLVD., #300 MENDOTA HEIGHTS, MN 55120-1221

CEMSTONE

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ARRIVE PLANT FINISH UNLOADING LEAVE JOB SITE START UNLOADING LOAD LEAVE PLANT ARRIVE JOB SITE WARNING: CONCRETE MAY CAUSE BURNS TO EYES AND SKIN! SEE OTHER SIDE FOR SAFETY DATA SHEET 1. Warranties, Remedies and Limitations: The concrete contained in this load has been manufactured to the industry tolerance for water/cement ratio. Adding additional water will change the properties of the concrete, including strength, shrinkage, color and bleed rate. a) Cemstone does not; under any circumstances, warrant the performance of concrete which is not adequately cured, is improperly handled and/or finished, or is not fit for the intended use after delivery/discharge to customers or for which the mix design was provided by a party other than Cemstone. You should not add water if:

*the maximum water/cement ratio has been reached or

*the maximum slump has been obtained b) Cemstone does not warrant, under any circumstances, the final color shade or appearance of any b) Cemstone does not warrant, under any circumstances, the final color shade or appearance of any architectural specified ready-mixed concrete finish.

Specifications: Ready-mixed concrete shipped shall generally conform to the current American Society for Testing Materials (ASTM) Standard Specification C94-17 Option A (except paragraph 6.4.2) unless otherwise specified in writing by Customer and agreed to by Cemstone. All testing MUST be performed in accordance with the most recent version of the corresponding ASTM standard. When compressive strength testing is performed, the concrete MUST be sampled in accordance with ASTM C172, specimens MUST be cast and cured according to ASTM C31 and MUST be tested for compressive strength in accordance with ASTM C39.

The sole and exclusive liability of Cemstone for any defect in the accepted goods shall be limited to repairing or replacing the goods as Cemstone shall elect. The obligation to repair or replace the goods shall terminate two months after the delivery. Free unloading time up to 7 minutes per yard to be computed from arrival on job. Demurrage at \$2.20 per minute must be paid by the purchaser thereafter. chemical admixture increased slump WATER ADDED **INCHES ADDED** Full LD __ _ 2/3 LD _ 1/3 LD 1" 2" 3" 4" * CHEMICAL ADMIXTURES ADDED 1/3 LD . _ 2/3 LD _ Full LD ___ Please circle inches added ORDER NO. CUST. NO. **PROJECT NAME** CUSTOMER NAME DATE / TICKET NO. DELIVERY ADDRESS / DELIVERY/DRIVER INSTRUCTIONS CUSTOMER JOB NO. P.O. NO SLUMP METER READING ON ARRIVAL SLUMP METER READING @ PLANT MAP PAGE SLUMP REQUESTED PLANT TRUCK **UNIT PRICE** PRODUCT CODE PRODUCT DESCRIPTION **AMOUNT** CUM. QTY. ORD'D QTY. LOAD QTY. CD 4000 3/4 FXA TAKE BATCH WEIGHTS Air Entrainment Admixt COLOR SAMPLE (CHECK BOX IF TAKEN) COD ORDERS: COLLECT CHECK, CASH OR CREDIT CARD (circle one) RECEIVED BY AMOUNT RECEIVED **CHECK NUMBER** RELEASE, WAIVER AND ASSUMPTION OF RISK BY OWNER/CONTRACTOR/SUBCONTRACTOR DISCOVER READ VERY CAREFULLY BEFORE SIGNING BELOW! Customer acknowledges receiving from Cemstone Products Company/Cemstone Ready Mix, Inc/Cemstone Concrete Materials, LLC (Cemstone) the Safety Data Sheet (SDS) for ready-mix concrete represented by this document being purchased & delivered. Customer understands the WARNINGS contained in the SDS and acknowledges releasing, defending, and Indemnifying Cemstone, it affiliates, employees and representatives from any and all liability from claims or damages from any activities including the delivery and installation of the ready-mix concrete, that are under, or a result of, customers direction and/or control.

Customer further acknowledges that Cemstone is not liable for damage of any kind incurred by customers request that Cemstone move its concrete delivery truck or placing equipment past the curb line, right of way limits or onto private property. Customer understands that this request may involve hazardous activities or create hazardous conditions which exposes equipment, real property, third parties and customer to hazards which can result in property damage, bodily injury, illness, or death for which customer agrees to be responsible and pay, including any wrecker or tow truck fees. SIGNATURE OF RECEIPT – CONCRETE & WATER ADDED, CHEMICAL ADMIXTURES ADDED & ACKNOWLEDGEMENT OF WARNINGS

CERTIFICATE OF COMPLIANCE

	89	, in the second						dir	
Cemstone CRM 1190 County Road New Richmond, V			Р	lant: 023		CUSTOMEF KOMRO SA	R LLES & SERVICE	INC	
Order# 164 Job# ANDY 7 ⁻ Batch Record:	15-495-3055 07/18/2019	Tick S.P.		4718494		PO# Bridge #	ANDY 715-495-		
Begin Time: 11 Volume: 9.50	:39 AM CYDS	Mix	ID:	NRCS2	Mix	Desc: 4000 3/4	FXA		
Truck #: 943 QTY Order: 180			iver: Y Del:	DO 1 9	UG CHILSO	Loads	s: 2		
Ingredient Source SANDCAS 94025 67CAS 94025 CDCEMENT CONDAIA FLYASH PRAIRIE STATE CWWATER COLD WELL MRWRA AMPOL1020 AEA MAIR90 RETARDER BMSTDELVO HWWATER HOT WELL	MCFac AbsFac 0.040 0.008 0.031 0.013	OD ABS 1404 lb 1786 lb 480 lb 85 lb 253 lb 3.0 /C 1.50 oz 2.0 /C 0 %	SSD 1404 1786 480 85 253 .0 1.50 .0	Free Mst 44.93 32.15	CYDS TARG 1449 1818 480 85 176 17.0 1.50	Target 13765 lb 17272 lb 4560 lb 808 lb 1668 lb 161.0 oz 14.25 oz 107.4 oz .0 lb	Actual 13800 17220 4555 840 + 1624 - 159.0 14.00 105.0	Free Wat 428 lb 304 lb 1624 lb 2.6 lb 0.6 lb .9 lb	Trim
Actual Total Water: 2,360 lb Design W/C: 0.448 Slump: 6.00 in Plant Weather: Mostly	Num Batche Design Wate Water/Ceme Water in Tru Cloudy 77°F, 7	ent: 2403.5 ent: 0.437 lick: 0.0 lb	1 Ib A Adjust W		lb / Load Ot	To Add: 5.204 Trim Water: 0.0 oservation Time 11:3	gl lb / CYDS 3 AM		
		C	ERTIFI	CATE OF	COMPLIANC	Ξ			
AIR CONTENT		AI	R TEMP	•		WATER ADI	DED @ PLANT		g
CONCRETE TEMP		SI	JUMP	, , , , , , , , , , , , , , , , , , , ,	AA44	WATER ADI	DED @ JOBSITE		g
CYLINDER NO.		TI	ME DIS	CHARGED		TOTAL ACT	TUAL WATER		1}

LOCATION / PART of STRUCTURE

INSPECTOR SIGNATURE

PRODUCER SIGNATURE

Bound Diary Notes

(The Attached Notes Are A Sample Of The Notes Taken. Additional information available upon request)

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

6-24-19/8-1-19

IF FOUND PLEASE RETURN TO:

NAME Doug Row

COMPANY Williams Engineering

STREET

CITY _____ STATE __ ZIP ___

PHONE _____

JOB BOOK

PROJECT NAME Emerald Sky

PROJECT NUMBER Feed Pad

CREW ______

DATE _____ BOOK # ___ OF ____

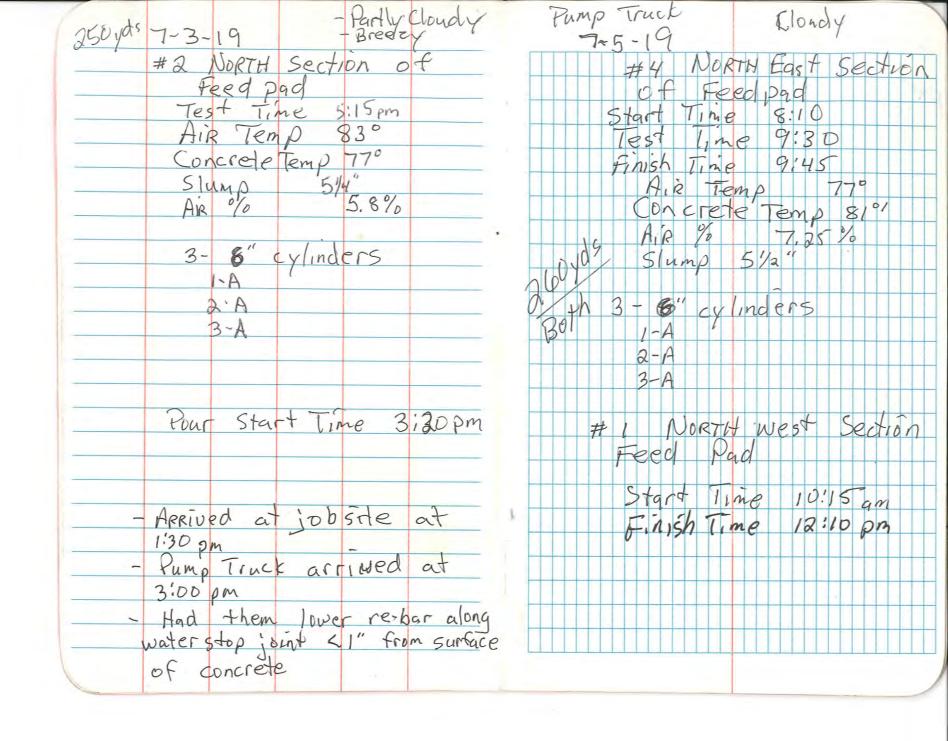
WEATHER

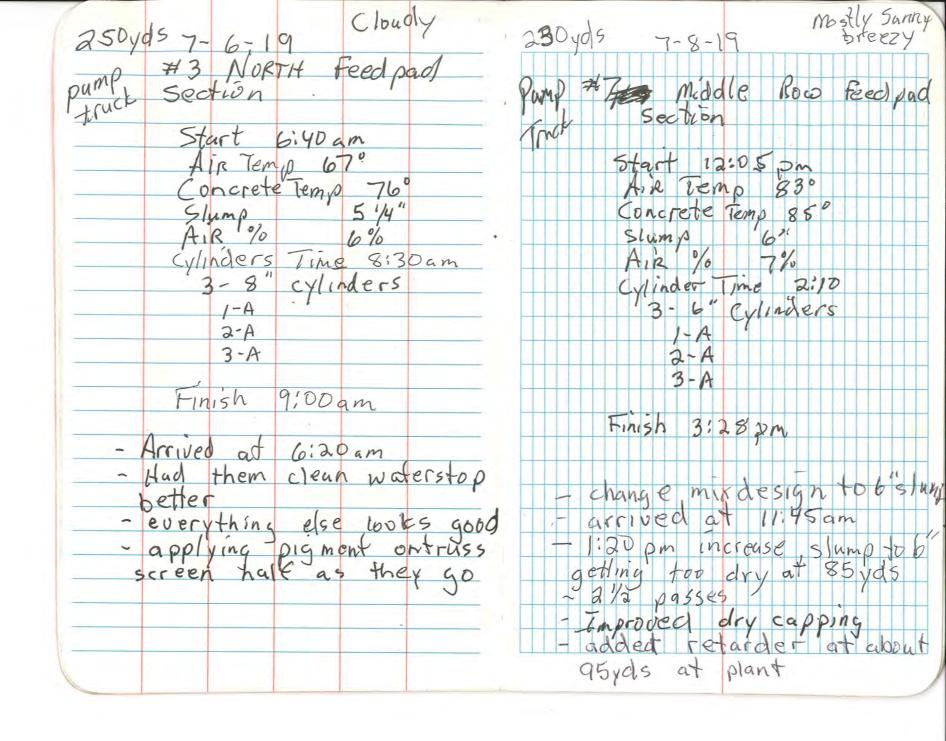


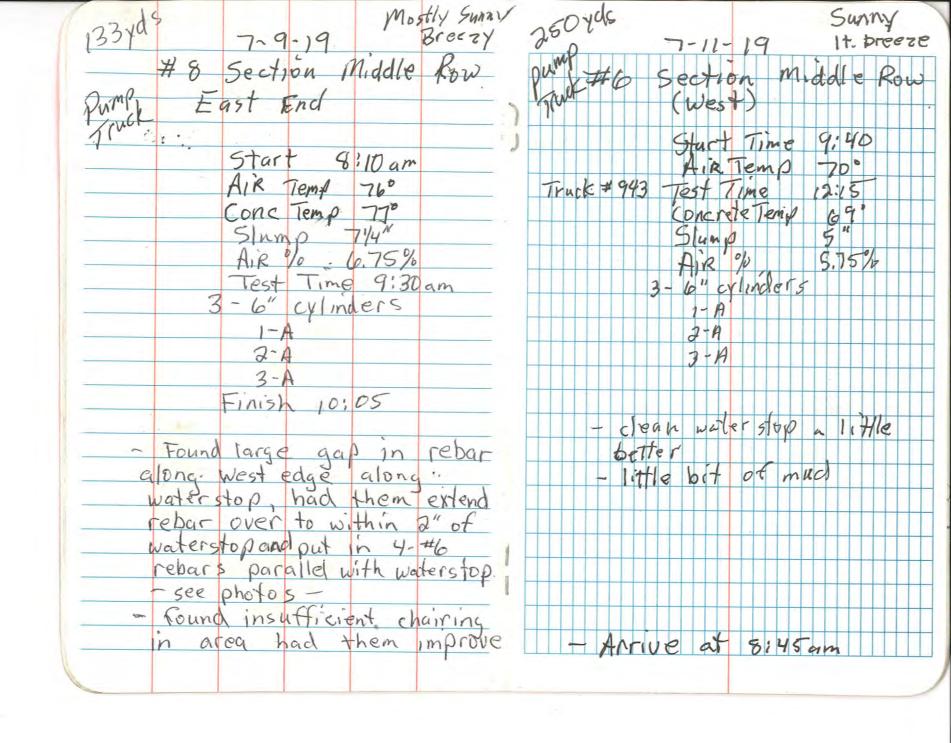
P.O. Box 8397 • Jackson, MS 39284-8397 Sales 1.800.647.5368 Fax 1.800.543.4203 www.forestry-suppliers.com

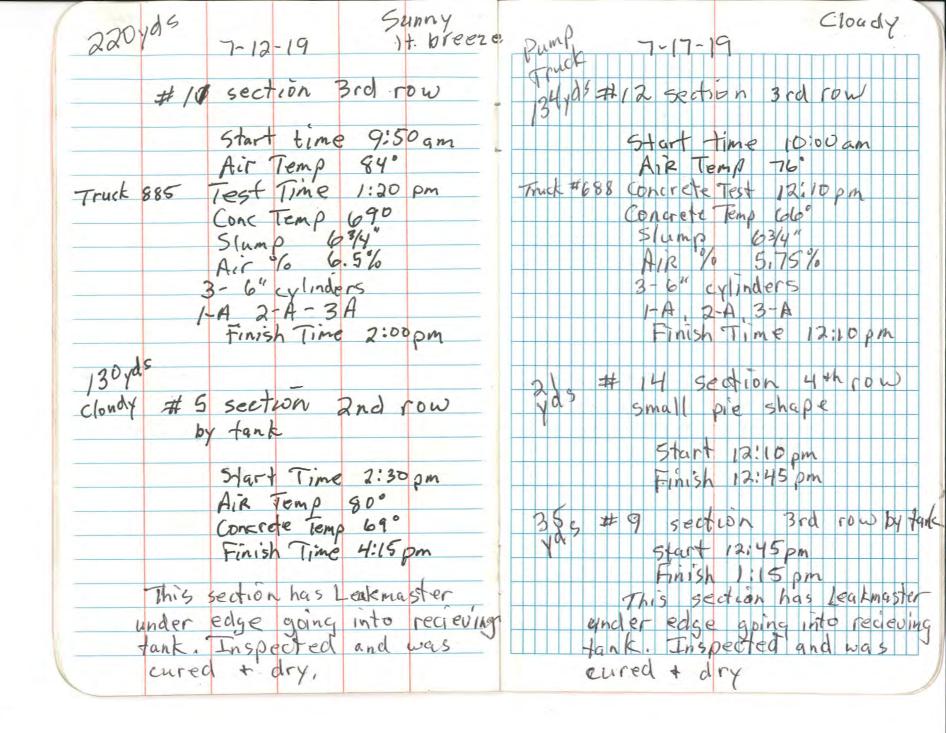
Stock No. 49365

4	5 vds	Pamp	Tank .	6.25 Footing	-19						4	p -	26.	-19		
	Hart	9:2	Dam					P	dn: 0	10	inle	h	jall	S		
- 7	Finish	10:4	bam			Say	ds.									
	A:o	To. A	1.90					Sta	rt	316	DOP	m		++		+
	Conc	Tomp	68°			-								++		+
																+
	3-6	ylind	ers	4"												
	I-A	4														
-	2-A 3-A														Н	+
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-				X-					+++			Н	+			+
-									+++		+++	Н	+			+
																1
																1









	Cloudy 76°	Josh- Foreman 8-1-	in Installed by
Pamp 718-19	76°	Josh 8-1	M Komro , HOPE welded
#13 Entrance	Rams Area	Installing	12 Leachate
2 26	/	Line From	Leachale Tank
MIN Start	Time 12:05 pm	+ to LMSA +	*2
Finish	mp: 76° Time 12:45 pm		
		- Had to in	stall 12" Repair
#10 Feed Sla	b 3rd Row		w corner of
		Leachate (Collection Tank
Start lim	e 1:10 pm ne 3:30 pm		e of the connect-
Truck		ion and	not enough room
Truck Rest Time Air Tem		to fuse	weld
Concrole T	emo tos	- Surveyed	depth and
Slum 0 Air 10 3-6" Cy	(03/4"	10 cation o	of pipelike
3-6" CX	Linders	- Last 24'	before pipe
1-A, 2-	A 3-A	comes out	of the ground
		af LMSA ** Styro Foam 6	
		JI / I O WIN O	

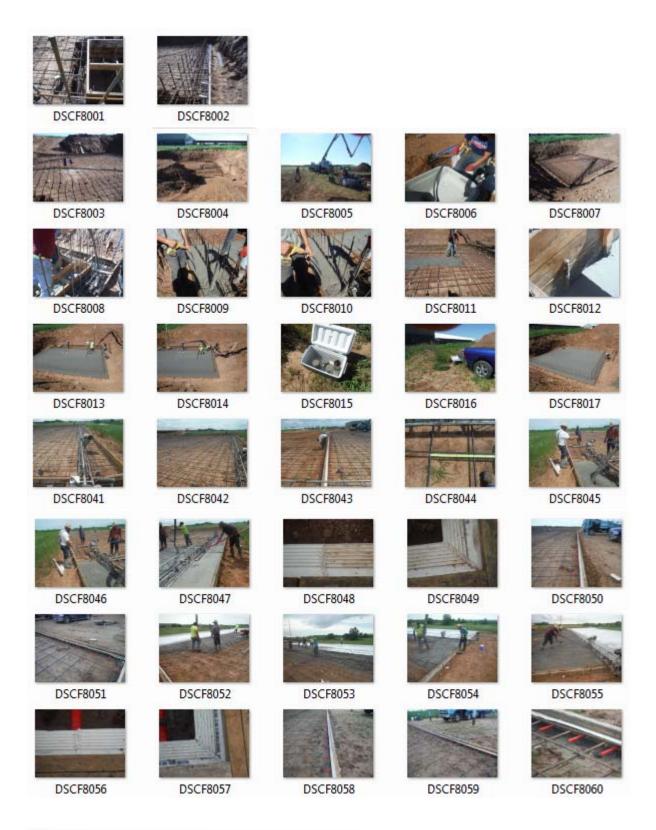
Photos

Emerald Sky Dairy, LLC

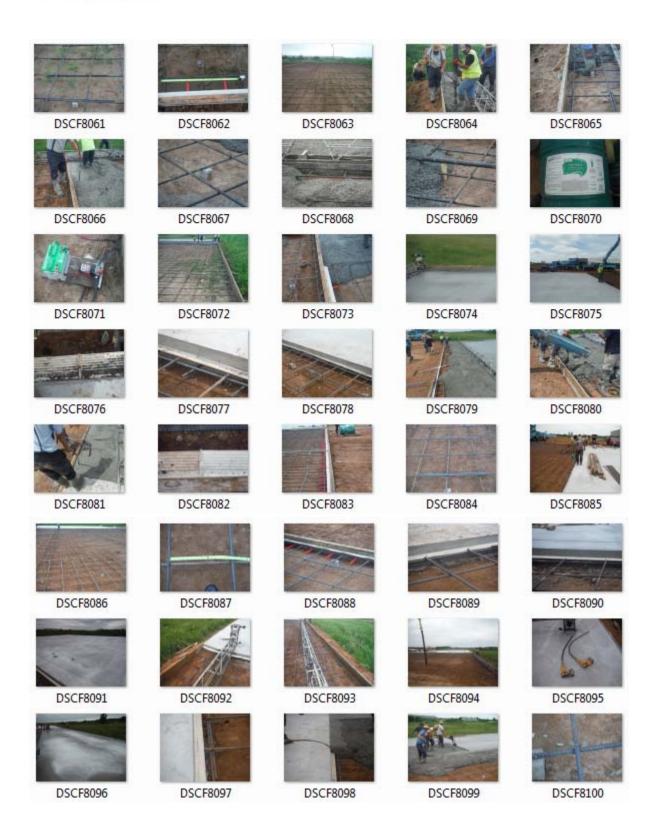
2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

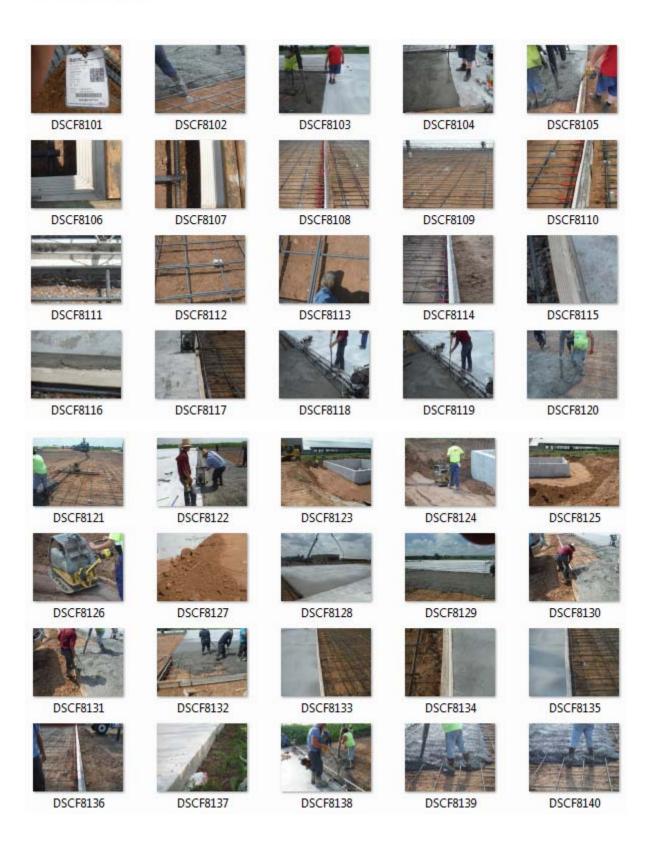




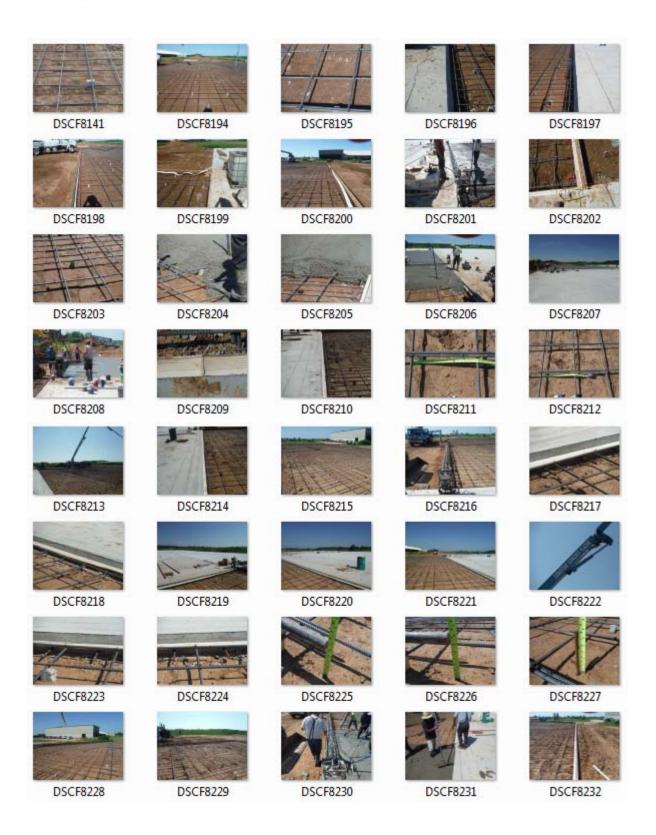




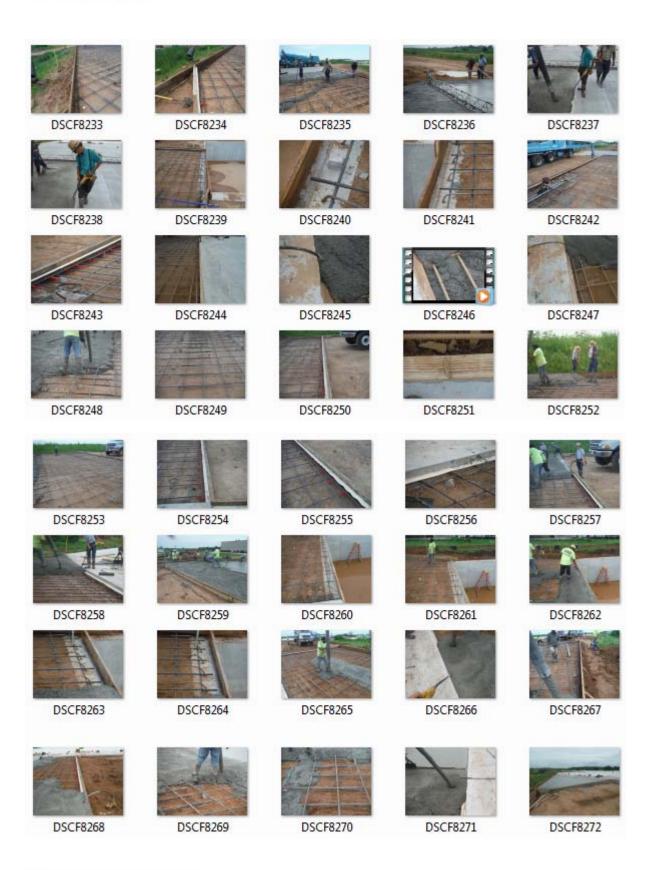




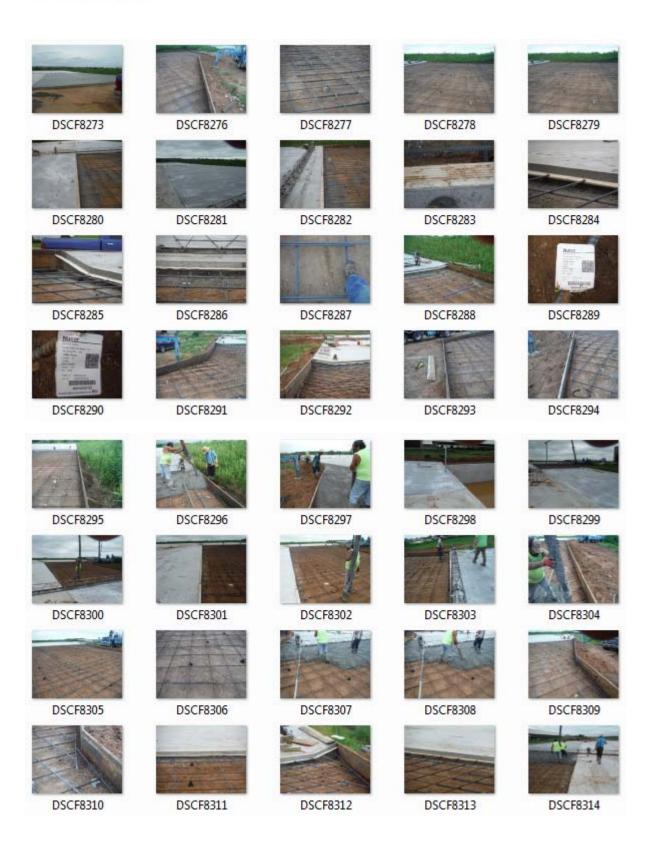




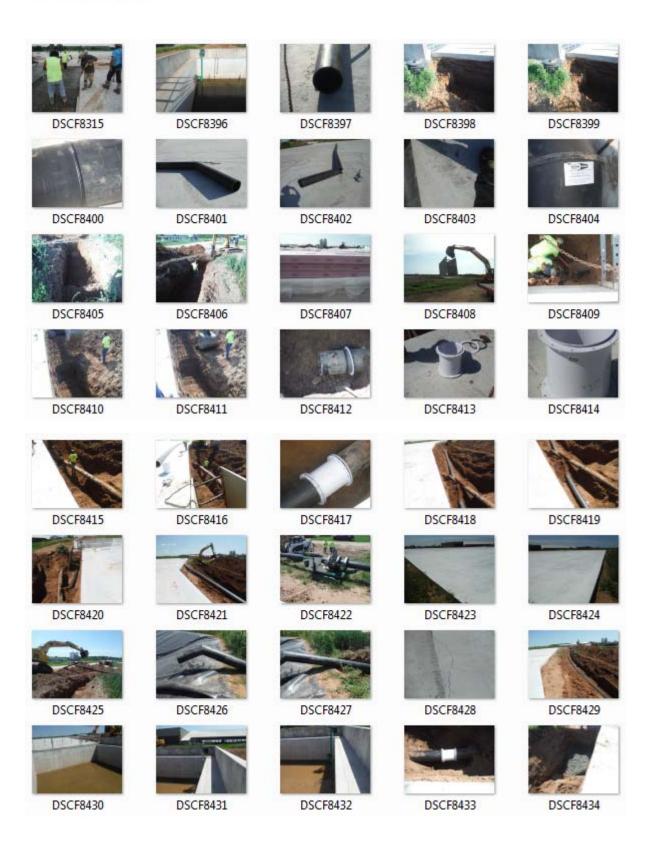
















DSCF8435



DSCF8436



DSCF8437



DSCF8438



20190816_163344



20190816_163402



20190816_163411



20190816_163435

Correspondence

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

Kelly Jacobs

From: Wheat, Gretchen S - DNR <Gretchen.Wheat@wisconsin.gov>

Sent: Tuesday, July 09, 2019 12:45 PM

To: Kelly Jacobs

Cc: Jackson, Jeffrey L - DNR; Michaud, Bernard J - DNR; Woodrow, Matthew C - DATCP;

steve.olson@co.saint-croix.wi.us

Subject: RE: Feed Pad Construction at Emerald Sky Dairy, LLC

Kelly – This follows up on my phone call to you today. As I explained, I have reviewed the submitted information titled Addendum #1 to the Original Construction Plan, prepared under certification by Ronnie Williams, which describes certain proposed modifications to the approved plans for WDNR Project # R-2017-0154. Based on my review, the proposed modifications are not significant enough to warrant submittal via the WDNR's e-Permitting System, and formal approval.

This email from me serves as documentation of my decision in this matter. I'll add this email string and the submitted information to the project file. Thank you.

We are committed to service excellence.

Visit our survey at http://dnr.wi.gov/customersurvey to evaluate how I did.

Gretchen Wheat, P.E.

Water Resources Engineer – CAFO / WPDES Permitted Farm Program Runoff Management Section, External Services Division Wisconsin Department of Natural Resources (608) 264-6273; green-wheat@wisconsin.gov



From: Kelly Jacobs < kelly.jacobs@weswi.com >

Sent: Tuesday, June 25, 2019 12:10 PM

To: Jackson, Jeffrey L - DNR < Jeffrey.Jackson@wisconsin.gov>

Cc: Steve.Olson@sccwi.gov; 'Todd Tuls' <todd@tulsdairies.com>; Ronnie Williams <ronnie.williams@weswi.com>

Subject: Feed Pad Construction at Emerald Sky Dairy, LLC

Good afternoon,

As outlined on the as-built completion certification statement dated December 21, 2018 for Emerald Sky Dairy, LLC, the proposed concrete feedpad, concrete calf lot, and heifer lot runoff collection systems were not yet constructed at that time. Today I am writing to inform you that construction is now resuming for the Emerald Sky feed pad construction as outlined in the WPDES Permit # WI-0059315 issued November 10, 2017 (DNR File Reference R-2017-0154B). Emerald Sky Dairy, LLC is not planning to construct the calf hutch area (concrete calf lot and heifer lot runoff collection systems) that were originally proposed (North of the TMF building) as the calves will instead be raised off site. Because of that change in management, the feed pad runoff is being re-routed directly to the HDPE waste storage facility. Attached is Addendum #1 to the Original Construction Plan which outlines the details of this modification. Please contact Ronnie Williams directly at 715-829-3231 with any questions you may have on this construction activity.

Thank you,

Kelly Jacobs Senior Environmental Scientist Williams Engineering Services, LLC E14910 Bears Grass Rd, Augusta, WI 54722 O: 715-286-5726 C: 715-429-0563

Kelly.Jacobs@weswi.com

Original Construction Plan

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

Ronnie Williams, PE
Williams Engineering Services, LLC
E14910 Bears Grass Road
Augusta, WI 54722
(715) 829-3231

Addendum to Construction Plans Emerald Sky Dairy, LLC

6/24/2019

Williams Engineering Services, LLC

This Addendum Includes The Following Changes To The Construction Plan Dated 8-10-2017.

Original Construction Plan Revisions

Site Drawings: "Waste Storage Facility, Waste Transfer System, Feed Pad Collection System & Site Expansion"

- New Collection Tank Location Map added as page
 - o Show accurate 12" pipe location
- New Collection Tank Cross Section added as page
 - o Callout sump pump for Komro sales
- New Collection Tank Top View added as page
 - Annotate wall and feedpad elevations
 - o Includes fencing typical detail
- New 10' Wall Details added as page
 - Annotate rebar sizing and spacing
 - o Annotate LV-Z sealant
- New Pipe Over Pond Top Detail added as page
 - Locate thrust block for securing 12" PE pipe



CONSTRUCTION PLAN:

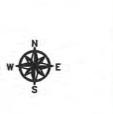
Emerald Sky Dairy, LLC

Construction Drawings for Proposed Runoff Collection and Waste Storage Facility Improvements

> 2487 County Road G Emerald, WI 54013 Todd Tuls: (402) 366-0363

DIGGER'S HOTLINE http:www.diggershotline.com

Call 3 Work Days Before You Dig! Toll Free 1-800-242-8511 811



NOT TO SCALE



LOCATION MAP

I hereby certify that this plan was prepared by me and that I am a duly licensed Professional Engineer under the laws of the State of Wisconsin.



To the best of my professional knowledge judgement, and belief this design and these construction plans meet the NRCS and WDNR standards listed on this sheet.

NOTICE TO LANDOWNERS AND CONTRACTORS REGARDING UTILITES:

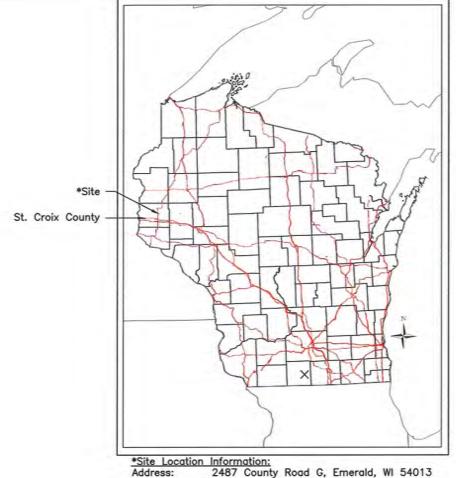
No representation is made as to the existence or nonexistence of underground hazards. Prior to the start of construction the owners of utilities must be notified of the pending construction. You will be liable for damages resulting from construction activities. (Call Diagers Hotline)

CONSTRUCTION DRAWINGS AND SPECIFICATIONS ACCEPTANCE

I/We have reviewed and do accept the attached plans. I/We agree to have this project constructed in accordance with these construction plans, operation and maintenance and specifications and to notify all affected utility companies.

Signed:	D 1
	Date:

WILLIAMS ENGINEERING SERVICES, LLC E14910 BEARS GRASS RD AUGUSTA WI 54722 Ronnie Williams, PE WI #35284 Cell # (715) 829-3231



Construction Specifications:

County: St. Croix

Township: Town of Emerald 30N

Township: 16W 22 Range: Section:

NRCS	Conservation Practice Standards:	
313	Waste Storage Facility (1/14)	
342	Critical Area Planting (1/13)	
360	Waste Facility Closure (3/13)	
382	Fence (1/14)	
412	Grassed Waterway (8/15)	
533	Pumping Plant (7/11)	
560	Access Road (10/14)	
561	Heavy Use Area (8/15)	
606	Subsurface Drain (3/14)	
634	Waste Transfer (1/14)	

(See Specifications Section For These Documents) USDA-NRCS Wisconsin - 1. Clearing (5/12) USDA-NRCS Wisconsin - 2. Excavation (5/12) USDA-NRCS Wisconsin - 3. Earthfill (5/12) USDA-NRCS Wisconsin - 4. Concrete (3/15) USDA-NRCS Wisconsin - 5. Construction Site Pollution Control (5/12) USDA-NRCS Wisconsin - 7. Mobilization and Demobilization (5/12) USDA-NRCS Wisconsin - 8. Drainfill (5/12) USDA-NRCS Wisconsin - 9. Rock RipRap (11/11) USDA-NRCS Wisconsin - 10. Fences (3/15)

USDA-NRCS Wisconsin - 13. GeoTextiles (5/10) USDA-NRCS Wisconsin - 14. Timber Fabrication and Installation (9/10)

USDA-NRCS Wisconsin - 15. Plastic Pipe Conduits (4/9) USDA-NRCS Wisconsin - 24. Construction Surveys (5/12)

USDA-NRCS Wisconsin - 26. Topsoiling (5/12)

USDA-NRCS Wisconsin - 44. Corrugated Polyethylene Tubing (5/12) USDA-NRCS Wisconsin - 202. Polyethylene Geomembrane Lining (9/12) USDA-NRCS Wisconsin - 204. Earthfill for Waste Storage Facilities (10/12)

USDA-NRCS Wisconsin - 300. Clay Liner (3/15)

Relevant WDNR Conservation Practice Standards:
NR-213 Wisconsin DNR - Lining of Industrial Lagoons and Design of Storage Structures (7/15) NR-243 Wisconsin DNR - Animal Feeding Operations (7/15) Wet Pond (10/7) 1001 Non-Channel Erosion Mat (8/03) 1052 Channel Erosion Mat (12/04) 1053 Silt Fence (3/06) 1056 1057 Stone Tracking Pad and Tire Washing (8/03) Seeding for Construction Site Erosion Control (11/03) 1059 1060 Storm Drain Inlet Protection for Construction Sites (7/14) Dewatering (4/07) 1061 Ditch Check (3/06) 1062

Sediment Basin (3/06) 1064 1067 Temporary Grading Practices for Erosion Control (3/04)

Dust Control on Construction Sites (3/04) 1068

Sediment Trap (9/05)

1063

1 of 258

Permits

Emerald Sky Dairy, LLC

2487 County Highway G Emerald, WI 54013 Section 22, Town 30N, Range 16W

2019 Feedpad & Runoff Collection

Ronnie Williams, PE
Williams Engineering Services, LLC
E14910 Bears Grass Road
Augusta, WI 54722
(715) 829-3231

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor Daniel L. Meyer, Secretary Telephone 608-266-2621 FAX 608-267-3579 TTY Access via relay - 711



November 10, 2017

File Ref: R-2017-0154B WDPES Permit # WI-0059315

Todd Tuls Emerald Sky Dairy 2670 D Road Rising City, NE 68658

Subject: Conditional Approval of Plans & Specifications for a Feed Storage Facility, Feed Leachate & Runoff Collection Systems, & Animal Lot Runoff Collection Systems, & Abandonments of an Animal Lot (Calf Hutch Lot) & a Tank (Heifer Barn Tank) at Emerald Sky Dairy, 2487 County Rd. G, Emerald, Sec. 22, NE¼ of NE¼, T30N, R16W, Town of Emerald, St. Croix County

Dear Mr. Tuls:

The Division of External Services of the Wisconsin Department of Natural Resources (DNR) hereby issues a partial conditional approval of the above-referenced plans and specifications, submitted by Ronnie Williams, P.E., Williams Engineering Services, LLC (WES) received August 14, 2017. The plans and specifications were deemed to be substantially complete as of the received date. DNR also reviewed additional information requested by St. Croix County, received by DNR October 5, 2017.

Other portions of the project were approved October 11, 2017 (DNR Project# R-2017-0154A) including abandonment of an existing Waste Storage Facility (WSF), two new WSFs, abandonment of certain existing Transfer Systems, and a new Solids Stacking Pad, all to have been completed in fall 2017.

Construction is approved to commence for a period of two years from the approval date. If work will commence later, or will occur over a longer period without continuous work (other than due to weather) a new written approval must be obtained. Questions may be directed to DNR animal waste specialist Leah Nicol, or DNR review engineer Gretchen Wheat. (Contact information is at the end of this letter.)

COMPLIANCE & PROJECT SUMMARY: DNR review was performed in accordance with s. 281.41 Wis. Stats., and s. NR 243.15, Wis. Adm. Code. NRCS Standards and Construction Specifications are referenced in the plans and specifications are therefore part of this approval, although only primary NRCS Standards may be referenced herein. Clean stormwater will be routed around waste handling areas.

<u>Proposed West Feed Storage Area (FSA)</u>: The proposed West FSA consists of water-tight concrete slabs and walls, with embedded water-stop in all joints, designed in accordance with NRCS 629 (1/17). This will comply with s. NR 243.15(9), Wis. Adm. Code (Feed Storage) if adequate storage is provided for all process wastewater and collected runoff, and the following criteria regarding feed leachate and runoff control are met.

Feed leachate and contaminated runoff must be managed to prevent pollutants from reaching navigable surface waters (up to the 25-yr, 24-hr storm) and prevent exceedances of groundwater quality standards, as required by ss. NR 243.13(1) and (2)(a), Wis. Adm. Code. (The method by which this requirement is complied with is described in Proposed Runoff Collection Systems, below.)

The proposed West FSA will be constructed in the southwest area of the site, immediately west of the new HDPE lined WSF. The site also has an existing FSA (East FSA, located in the northeast corner of the site).

<u>Proposed Runoff Collection Systems</u>: Three runoff collection systems are proposed (described in #1-3, below). The proposed runoff collection systems are comprised of waste transfer components which are designed in accordance with NRCS 634 (1/14). This complies with s. NR 243.15(4), Wis. Adm. Code (Transfer Systems).



From the animal lots (calf hutch lot and heifer lot) all manure and runoff (up to the 25-yr, 24-hr storm) will be collected; from the proposed and existing FSAs, all feed leachate and runoff (up to the 25-yr, 24-hr storm) will be collected; and collected waste will be stored in the new WSFs, and will be land applied in accordance with an approved Nutrient Management Plan. This complies with ss. NR 243.15(2) and 243.15(9), Wis. Adm. Code (Runoff Control, and Feed Storage).

#1 – Proposed West Runoff Collection System (for proposed West FSA & new Calf Hutch Lot): A proposed pipe and pump will be used in conjunction with the existing Transitional Management Facility Tank (TMF Tank). From the proposed West FSA and new Calf Hutch Lot, runoff will gravity flow to the TMF Tank (north of the TMF barn) and be pumped through a new 12 inch ASTM F714 polyethylene pipe to the new concrete lined WSF. The new Calf Hutch Lot will consist of a water-tight concrete slab. The Calf Hutch Lot size is presented as an east area (32,424 ft²) and a west area (23,740 ft²) sloped toward each other, to drain out the middle. The existing Calf Hutch Lot is located southeast of the TMF barn, and will be abandoned. (See Abandonment, below.)

#2 – Proposed East Runoff Collection System (for Existing East FSA): The system will consist of a proposed pipe and tank (East FSA Tank). From the existing East FSA, runoff will gravity flow to the East FSA Tank, and then will gravity flow through a new 24 inch ASTM F714 polyethylene pipe to the new concrete lined WSF.

#3 – Proposed Heifer Lot Runoff Collection System (for Existing Heifer Lot): The system consists of a proposed pipe, pump and tank (Heifer Lot Tank). From the existing Heifer Lot (6,600 ft²) runoff will gravity flow to the Heifer Lot Tank and be pumped through a new 8 inch diameter ASTM F714 polyethylene pipe to the new concrete lined WSF1. The existing Heifer Lot will remain in its current location, adjacent to the existing Heifer Barn, and the proposed Heifer Lot Tank will be located west of the Heifer Barn. The Heifer Lot Tank will serve both the Heifer Lot and Heifer Barn, and will be constructed in a wedge-shape of cast in-place reinforced concrete. The existing Heifer Barn Tank will be abandoned. (See Abandonment, below.)

<u>Abandonment of Existing Facilities</u>: The existing Calf Hutch Lot and existing Heifer Lot Tank will be abandoned. The submittal references NRCS 360 (3/13) for abandonment. This complies with s. NR 243.17(7)(a), Wis. Adm. Code.

<u>Days of Storage for Manure & Co-Mingled Wastewater</u>: After completion of the entire project (approved herein, and on October 11, 2017) the farm will have increased waste collection, and increased waste storage capacity. The new waste collection areas consist of the following:

- #1 Proposed West FSA (88,993 ft²) and new Calf Hutch Lot (56,164 ft²).
- #2 Existing East FSA (176,159 ft²).
- $#3 Existing Heifer Lot (6,600 ft^2).$
- Previously approved new Solids Stacking Area (8,790 ft²).

The total waste generation is estimated at 30.0 million gallons per year. The two new WSFs will have a combined total of 33.1 million gallons capacity to the top, and 30.0 million gallons to the maximum operating levels (MOLs), which will provide approximately 1 year of storage. DNR did not confirm the specific reported days of storage, but did confirm the farm will have far greater than 180 days of storage. This complies with s. NR 243.15(3)(i) to (k), Wis. Adm. Code.

BACKGROUND: This is an existing livestock operation that houses greater than 1,000 Animal Units, and has a Concentrated Animal Feed Operation (CAFO) WPDES Permit which was re-issued July 1, 2015. The farm recently came under new ownership. Currently the site has 1,500 milking cows, 200 dry cows, 250 heifers and 350 calves. A minor expansion is under consideration, but the previously proposed significant expansion is no longer being planned at this time. The plans and specifications for the portions of the project approved herein are intended to address compliance concerns identified by the owner, and improve overall operation, and were not submitted in response to permit schedule requirements or enforcement.

<u>SITE DESCRIPTION</u>: The production area is on an approximately 310 acre site. Site surface water drains primarily south and southwest. Much of the stormwater runoff from the site flows to an existing stormwater runoff pond located near the southern part of the facility via swales and constructed embankments. The stormwater pond currently receives contaminated runoff from the feed pad and calf hutch area.

The submittal reports no karst or sinkhole features were located during field observation, or upon review of available geological maps and GIS maps produced by WES utilizing current DNR and St. Croix County ArcGIS layers. There are two on-site groundwater supply wells, both of which are greater than 250 feet from the proposed facilities and systems.

A wetland delineation of the site was completed by a DNR Assured Wetland Delineator (Timothy D. King). Mapped wetlands exist immediately west and southwest of production area, and influenced the choice to locate proposed facilities in the east portion of the site. The submittal reports one mapped wetland in the production area was filled. The proposed facilities are not within the existing or filled wetland areas.

SOIL INVESTIGATIONS: In July 2017, WES performed test pits at the site. The site topsoil is primarily silt loam. Subsoils are varied from fine to coarse grained. Bedrock was not observed in any of the test pits. No saturation was observed in the test pits in the area of the proposed facilities approved herein. Sufficient separation from saturation and bedrock is demonstrated for the proposed facilities approved herein.

<u>CONDITIONS OF APPROVAL</u>: The plans and specifications for DNR Project# R-2017-0154B are hereby approved, subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below.

- 1. <u>Notification</u>: Prior to construction and when construction is complete, notify the DNR regional contact and county contact. (Contact information is in the cc list at the end of this letter.)
- 2. <u>Inspection</u>: During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees). NRCS Standards and Wisconsin Construction Specifications contain certain third party inspection requirements.
- 3. <u>Post-Construction Documentation</u>: Within 60 days of completing construction, submit to the DNR e-Permit website (http://dnr.wi.gov/permits/water) the post-construction report, and send one paper copy to the DNR regional contact. The report shall comply with s. NR 243.15(10), Wis. Adm. Code. The post-construction report shall include scaled drawings of the constructed facility, and documentation that construction has complied with the approve plans and specifications, and applicable design standards.

Note: Design change without prior approval is a violation of ch. NR 243 and the WPDES Permit. If the owner is contemplating design changes, please contact the DNR review engineer.

LIMITATION OF APPROVAL: The DNR reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a DNR determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with their requirements.

TAX TREATMENT: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain forms and information, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website http://www.revenue.wi.gov/.

APPEAL NOTICE: If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and Administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent. To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with s. NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with s. NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES
FOR THE SECRETARY

Mary Anne Lowndes

Chief, Runoff Management Section Bureau of Watershed Management

Email cc: Ronnie Williams, P.E. - WES

wes@chipvalley.com; (715) 286-3231

Steve Olson - St. Croix County LCD

steve.olson@co.saint-croix.wi.us; (715) 531-1909

Matthew Woodrow, P.E. – DATCP matthew.woodrow@wisconsin.gov

Gretchen Wheat, P.E.

Engineer, Runoff Management Section Bureau of Watershed Management

Leah Nicol – DNR Eau Claire

leah.nicol@wisconsin.gov; (715) 839-3730

Gretchen Wheat, P.E. - DNR Madison

gretchen.wheat@wisconsin.gov; (608) 264-6273

Joe Baeten - DNR Green Bay

joseph.baeten@wisconsin.gov; (920) 662-5191



Community Development Department

October 13, 2017

File#: LUP-2017-043

Todd Tuls 2670 D Road Rising City, NE 68658

Re: Land Use Permit for an Animal Waste Storage Facility located in the NE/SE/SW 1/4 of the N1/4 of Section 22, T30N, R16W, Town of Emerald.

Site Address: 2487 County Highway G

Dear Mr. Tuls,

This letter confirms zoning approval for a *Construction Permit* according to the plans you have submitted for an animal waste storage facility at the location referenced above. Staff finds that the proposed project meets the requirements of the St. Croix County Animal Waste Storage Facility Ordinance and the St. Croix County Zoning Ordinance with the following findings:

- 1. An animal waste storage facility is subject to the Animal Waste Storage Facility Ordinance and Zoning requirements.
- 2. An animal waste storage facility is allowed with a land use permit pursuant to Section 11.3 A. of the St. Croix County Animal Waste Storage Facility Ordinance.
- 3. The proposed storage facility meets the required setbacks pursuant to Section 17.12 (14) of the St. Croix County Zoning Ordinance.
- 4. The applicant submitted a manure storage facility plan that includes; engineered plans, operation and maintenance plan, soil logs, construction inspection plans, construction specifications, grading plans and erosion control plans.
- 5. The proposed manure storage facility is not located in a floodplain, Shoreland or Shoreland-wetland area.
- 6. The proposed animal waste storage structure complies with the standards in Section 11.2 A. of the St. Croix County Animal Waste Storage Facility Ordinance.

Based on these findings, approval of the land use permit is subject to the following conditions:

- 1. The applicant shall provide an as-built drawing of the constructed animal waste storage facility signed by a professional engineer.
- 2. The applicant shall obtain an operation permit from the county prior to use of the structure.
- 3. The applicant shall submit annually a certified 590 nutrient management plan for the operation.
- 4. The applicant shall remain in full compliance with Wisconsin Administrative Code ATCP 50 and NR 151.

- 5. Any modifications require approval from the St. Croix County Code Administrator.
- 6. Upon transfer of ownership, a written notice shall be submitted to the Code Administrator.
- 7. This permit is valid for one year. Prior to the expiration of the permit, a request can be made for one additional year.
- 8. If this operation ceases operations for a period of 24 months, this pit shall be closed according to Section 11.3 E of the Animal Waste Storage Facility Ordinance.
- 9. The applicant shall give five working days' notice to the Community Development Department prior to starting construction.

This approval does not allow for any additional construction, structures or structural changes, grading, filling, or clearing of vegetation beyond the limits of this request. Your information will remain on file in the St. Croix County Community Development Department. It is your responsibility to ensure compliance with any other local, state, or federal rules or regulations, including obtaining a building permit from the Town of Emerald.

Please feel free to contact me with any questions or concerns.

Sincerely,

Stove Olson 80 10/13/201

Conservation and Land Use Specialist

Sarah Droher

Land Use Technician II

Enc: Land Use Permit placard

cc: Town of Emerald; 2432 County Road G, Emerald, WI 54013

Todd Tuls; 2670 D Road, Rising City, NE 68658

ec: Ronnie Williams; wes@chipvalley.com

It Is Unlawful To Commence Work Before This Permit Is Placed In A Conspicuous Place On The Premises This Certifies That A

LAND USE PERMIT

Has Been Issued To

In compliance with requirements of the St. Croix Ordinance for a Animal Waste Storage Facility | located at 2487 County Road G | Sec. | 22 | T. | 30 | N.;R | 16 | W | 316 | ; or Lot | Block | ; Subdivision | Town of Emerald | Dated | 10/13/2017 | Application No. | LUP-2017-043 | Auditable | Au

(Valid one year from date of issuance) Technician II

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
101 S. Webster Street
Box 7921
Madison WI 53707-7921

Scott Walker, Governor Daniel L. Meyer, Secretary Telephone 608-266-2621 FAX 608-267-3579 TTY Access via relay - 711



October 11, 2017

File Ref: R-2017-0154A WDPES Permit # WI-0059315

Todd Tuls Emerald Sky Dairy 2670 D Road Rising City, NE 68658

Subject: Conditional Approval of Plans & Specifications for Two Waste Storage Facilities, a Manure Stacking Area & Waste Transfer Pipes, Abandonment of a Waste Storage Facility & Abandonment of a Waste Transfer System, at Emerald Sky Dairy, 2487 County Rd. G, Emerald, Sec. 22, NE¼ of NE¼, T30N, R16W, Town of Emerald, St. Croix County

Dear Mr. Tuls:

The Division of External Services of the Wisconsin Department of Natural Resources (DNR) hereby issues a partial conditional approval of the above-referenced plans and specifications, submitted by Ronnie Williams, P.E., Williams Engineering Services, LLC (WES) received August 14, 2017. The plans and specifications were deemed to be substantially complete as of the received date. DNR also reviewed additional information requested by St. Croix County, received by DNR October 5, 2017.

Construction is approved to commence for a period of two years from the approval date. If work will commence later, or will occur over a longer period without continuous work (other than due to weather) a new written approval must be obtained. Questions may be directed to DNR animal waste specialist Leah Nicol, or DNR review engineer Gretchen Wheat. (Contact information is at the end of this letter.)

The reason for a partial approval is to allow the following (approved) facilities and systems to be constructed yet this fall.

- Two waste storage facilities (WSF 1 & WSF 2) that are considered emergency replacements for an existing WSF that must be abandoned (listed below).
- A manure stacking area.
- A reception manhole for the new WSF1, and waste transfer pipes to route waste to the new manhole or directly into WSF1.
- Abandonment of an existing WSF that has a heavily damaged geomembrane liner (not repairable).
- Abandonment of existing waste transfer pipes (heifer barn collection tank to solids separation building; and solids separator collection tank to the existing WSF).

The following facilities and systems were also proposed, to be constructed in 2018, that are not yet approved, and will be addressed in separate correspondence as DNR project R-2017-0154B.

- Relocation and improvement of a calf hutch area, to add an impervious surface and runoff collection.
- Feed storage area expansion.
- Runoff controls for the proposed feed storage expansion area and for an existing feed storage area.
- Runoff controls for an existing heifer lot.
- Associated remaining portions of waste transfer systems, including tanks for collection or pumping.

Compliance & Project Summary: DNR review was in accordance with s. 281.41 Wis. Stats., ch. NR 243, Wis. Adm. Code, and applicable NRCS Standards. NRCS Standards and Construction Specifications, are referenced in the plans and specifications, and are therefore part of this approval, although only primary NRCS Standards may be referenced herein. Runoff calculations are based on the 25-yr, 24-hr rainfall of 5.1 inches, and an MSE3 storm type, for St. Croix County, as listed in Atlas 14. Clean stormwater will be routed around waste handling areas.



Proposed Waste Storage Facilities (WSF 1 & WSF 2) & Manure Stacking Area: Two impoundment style waste storage facilities (WSF1 & WSF2) are proposed. WSF1 and WSF2 will be connected together by an overflow pipe and concrete channel crossover to allow for the liquid fraction of the manure to flow from the concrete pond to the HDPE lined pond. Around the floor of each WSF1 and WSF2, a perimeter drain tile and observation manhole will also be installed, providing a method to monitor for and collect leakage, if it would occur. However, the drain tiles will gravity flow to a surface outlet. A concrete load out spill containment area is also proposed adjacent to each of the WSFs. These added features, along with the added clay sub-liner for WSF 1, and added clay liner thickness for WSF2, provide improved groundwater protection, as compared to the minimum design criteria, and is warranted due to permeable soil and shallow bedrock that exists at the site (also see Site Assessment, below).

- WSF 2 will be 3.3 million gallons (to top of berm) and 2.9 million gallons to the maximum operating level (MOL). The liner will be water-tight reinforced concrete (with embedded waterstop in all joints) and an additional 12 inch thick clay sub-liner in intimate contact with the concrete. The clay sub-liner will have a minimum 20% fines and a plasticity index of at least 7.
- WSF 2 will be 29.8 million gallons (to the top of berm) and 27.1 million gallons to the MOL. The liner will be 60 mil HDPE with the normally specified 2 feet thick clay sub-liner and vent tile network, plus an additional 1 foot thickness of clay sub-liner.

A manure stacking area for storage of manure solids and contaminated bedding will be constructed immediately north of WSF1, and gravity drain directly into WSF1. The area will have a water-tight reinforced concrete liner (with embedded waterstop in all joints)

WSF 1, WSF2 and the manure stacking area are each designed in accordance with NRCS 313 (1/14), and comply with s. NR 243.15(3), Wis. Adm. Code. The additional proposed liner provisions of WSF1 and WSF2, and perimeter drain tiles, also comply with s. NR 243.15(3)(c), Wis. Adm. Code, which calls for an assessment of the need for leak collection, monitoring or secondary containment, based on potential impacts to surface water or groundwater quality.

Abandonment of an Existing Waste Storage Facility: The existing HDPE pond will be abandoned. (Existing transfer pipes that discharge into the WSF will also be abandoned, as described below.) The submittal includes a closure plan for abandonment of the WSF, which references NRCS 360 (3/13). This complies with s. NR 243.15(7)(a) and (b), Wis. Adm. Code.

Proposed Reception Manhole for WSF1, & Waste Transfer Pipes: With the exception of the reception manhole for WSF1, proposed tanks are not approved, and will be reviewed in the subsequent part of the proposed project. (Runoff for the calf hutch area and feed storage area will flow into an existing modified tank in the solids separation area, such that a dedicated transfer pipe is not needed.) Transfer pipes are approved herein. If a new tank is to be installed later, the pipe will be installed and capped for later connection to a new tank. The transfer pipes will be PE ASTM F 714 (DR 21) which meet NRCS 634 (1/14) and therefore also comply with s. NR 243.15(4), Wis. Adm. Code.

- Reception Manhole for WSF1: Adjacent to the new WSF1 will be a new reception manhole to receive most wastes prior to discharge into WSF1. The manhole will also prevent backflow from WSF1.
- Transitional Management Facility (TMF) Barn Collection Tank to WSF1: The existing piping from
 the TMF barn collection tank to the solids separation area will be removed, and a replacement transfer
 pipe will be installed to route manure from the TMF barn collection tank directly to the proposed
 WSF1. (This original system was the source of the December 2016 manure spill.)
- Solid Separator Collection Tank to WSF1: The existing piping from solid separator collection tank to the existing WSF will be removed, and a replacement transfer pipe will be installed to route manure from the solid separator collection tank to the proposed WSF1.
- Heifer Lot Collection Tank to WSF1: There is currently no collection from the heifer lot. A new transfer pipe will be installed into the proposed reception manhole for WSF1, and stubbed for connection when the heifer lot collection system is constructed in 2018.

<u>Abandonment of Existing Transfer Systems</u>: Existing transfer pipes (two) that discharge into the existing WSF will be abandoned. Where existing transfer pipes extend through areas where the new WSFs will be constructed, the transfer pipes will be removed. Otherwise the pipe outlet will be encased in concrete.

The existing TMF barn transfer system (from the TMF barn collection tank to the solids separation area) will be abandoned. The submittal includes a closure plan for abandonment of these existing transfer systems, which references NRCS 360 (3/13). This complies with s. NR 243.15(7)(a), Wis. Adm. Code.

Days of Storage for Manure & Co-Mingled Wastewater: After completion of the part of the project approved herein, the farm will have a minor increase in waste collection (runoff collection from the new solids stacking area) and will have two WSFs totaling 33.1 million gallons to the top, and 30.0 million gallons to the maximum operating level (MOL). The subsequent part of the project (not yet approved) includes increased manure and wastewater collection (described immediately below) which is expected to result in a total waste generation of 30.0 million gallons per year. Based on this total waste generation, it is reported that the farm will have 378 days storage.

The increased manure and wastewater collection in the subsequent part of this project is due to the increased runoff collection from certain existing areas (existing and expanded feed storage area; the heifer lot; and the calf hutch area which will also be relocated).

DNR did not confirm the specific reported days of storage, but did confirm the farm will have far greater than 180 days of storage. This complies with s. NR 243.15(3)(i) to (k), Wis. Adm. Code.

Background: This is an existing livestock operation that houses greater than 1,000 Animal Units, and has a Concentrated Animal Feed Operation (CAFO) WPDES Permit which was re-issued July 1, 2015. The farm recently came under new ownership. Currently the site has 1,500 milking cows, 200 dry cows, 250 heifers and 350 calves. A minor expansion is under consideration, but the previously proposed significant expansion is no longer being planned at this time. The plans and specifications are primarily intended to address compliance concerns at the site, and improve overall operation. The production area is an approximately 310 acre site that currently consists of the following.

- Three freestall barns bedded with recycled manure solids.
- Milking parlor.
- Feed pad which has only a first flush leachate collection system.
- WSF that has a geombrane liner (HDPE) that has reached its anticipated service life, and has been greatly damaged, and temporarily repaired. The WSF cover has also been partially removed.
- Virginia style open front heifer shed with failed and poorly performing runoff collection. This houses all 250 heifers at the site.
- Calf hutch area on dirt, that lacks runoff collection. This houses all 350 calves at the site.
- Stormwater runoff pond, that receives contaminated runoff.
- Portions of a digester system, a methane collection and bottling system (ECO Fuel project) and a sand recovery system. Most of the components of these systems have been abandoned, or no longer in use.
 Tanks from the sand recovery system and parts of the digester system are still in use.

The submittal states, "Existing DNR permits for the Bio digester and ECO Fuels project shall be maintained, although they are not intended to be used at this time." DNR provides this clarification.

CAFO digesters and other facilities are normally addressed in a CAFO WPDES Permit, and plans and specifications must be approved prior to construction of new or modified reviewable facilities or systems. The DNR CAFO Program is unsure if another DNR Permit applied to the ECO Fuel equipment, but it is likely that engineering plans would need to be approved prior to construction of similar new or modified equipment. Permits may also have specific requirements for notification if the permitted equipment is taken out of service. The CAFO WPDES Permit contact is Leah Nicole. Questions about other permits may be directed to the DNR Program that issued the permit.

Stormwater runoff from the site flows to an existing stormwater runoff pond located in the most southern part of the facility via swales and constructed embankments. The stormwater pond currently receives contaminated runoff from the feed pad and calf hutch area, which does not comply with ch. NR 243, Wis. Adm. Code.

<u>Site Assessment</u>: Site surface water drains primarily to the southwest. The submittal reports no karst or sinkhole features were located during field observation, or upon review of available geological maps and GIS maps produced by WES utilizing current DNR and St. Croix County ArcGIS layers.

There are two on-site groundwater supply wells, both of which are greater than 250 feet from the proposed facilities and systems.

A wetland delineation of the site was completed by a DNR Assured Wetland Delineator (Timothy D. King). There are mapped wetlands immediately west and southwest of production area, and this influenced the choice to locate the proposed facilities within the eastern portion of the site. The submittal reports one mapped wetland within the production area was filled somewhat recently (by the previous owner) without a permit to do so. The proposed facilities are not within the filled wetland area, and this approval letter does not resolve or further address the wetland filling issue.

Soil Investigations: In July 2017, WES performed approximately 35 test pits in the area of proposed WSF1 and WSF2, and the proposed transfer systems. (Additional test pits were also performed in the central and western portion of the site, and borrow materials were identified, but the proposed facilities are not in those areas.) Bedrock was not observed in any of the test pits, with the deepest test pit being 24.5 feet below existing ground surface (b.g.s.). After 24 hours, perched groundwater from sand pockets was observed in 1 test pit at a depth of 7.5 feet b.g.s., and drain tile has been included in the design due to this observation.

With the perched water to be drained, the soils investigation demonstrates sufficient separation from saturation and bedrock for WSF1 (minimum 2 feet) and WSF2 (minimum 4 feet), and from bedrock for the proposed waste transfer pipes (minimum 6 inches). Transfer tanks are also proposed in the subsequent part of this project, not approved herein.

Although the site topsoil is quite consistently silt loam, subsoils are varied and occur at inconsistent depths. To approximately 5-6 feet immediately below the proposed floors of the WSFs, the soils are primarily coarse grained (SC and GP). At other depths and in other areas, suitable soils were found for construction of the proposed clay sub-liners for WSF1 and WSF2.

<u>Conditions of Approval</u>: The plans and specifications for project number R-2017-0154A are hereby approved and subject to chs. NR 151 and NR 243, Wis. Adm. Code, and the conditions listed below.

- 1. <u>Notification</u>: Prior to construction and when construction is complete, notify the DNR regional contact and county contact. (Contact information is in the cc list at the end of this letter.)
- 2. <u>Inspection</u>: During the construction of critical components, inspection shall be performed by a Wisconsin registered professional engineer or other qualified third party (excludes the owner and construction contractor and their employees). NRCS Standards and Wisconsin Construction Specifications contain certain third party inspection requirements.
- 3. <u>Post-Construction Documentation</u>: Within 60 days of completing construction, submit to the DNR e-Permit website (http://dnr.wi.gov/permits/water) the post-construction report, and send one paper copy to the DNR regional contact. The report shall comply with s. NR 243.15(10), Wis. Adm. Code, and document compliance with 1.-2. (above) and a.-d. (below).
 - a. A statement certifying that construction conforms with s. NR 243.15, Wis. Adm. Code, NRCS 313 (1/14), NRCS 634 (1/14), NRCS 360 (3/13) and applicable Wisconsin Construction Specifications.
 - b. The inspector's certification that inspection conformed with the approved inspection plan, NRCS Standards and Wisconsin Construction Specifications in a. (above), along with a copy of the Inspection Log showing each inspection date and corresponding items inspected.
 - c. A complete final as-built drawing package that identifies any changes from the approved design.
 - d. Documentation required in either i. or ii. (below).
 - i. <u>If no changes from approved plans</u>, certification for a above shall be accompanied by the following statement: Construction <u>fully</u> conforms with the approved plans and specifications.

- ii. If changes from approved plans, certification for a. (above) shall be accompanied by the
 - Summary of changes and description of how design conditions were met, if any.
 - A statement that construction substantially conforms with the approved plans and specifications.
 - Documentation of DNR approved design changes. (Design change without prior approval is a violation of ch. NR 243 and the WPDES Permit. Direct questions to the review engineer.)

Limitation of Approval: The DNR reserves the right to order changes or additions should conditions arise making this necessary. This approval is not to be construed as a DNR determination on the issuance of a Wisconsin Pollutant Discharge Elimination System Permit or opinion as to the ability of the proposed system to comply with effluent limitations in such a permit, approval of an Environmental Impact Statement that may be prepared, or approval for any activities requiring a permit under chs. 30 or 31, Wis. Stats. Where necessary, plans and specifications should be submitted to the Department of Safety and Professional Services or other state or local agencies to ensure conformance with their requirements.

Tax Treatment: Tangible personal property, that becomes part of a waste treatment of pollution abatement plant or equipment, may be exempt from sales tax under s. 77.45(26), Wis. Stats. Similarly, property purchased or constructed as a waste treatment facility and used for industrial waste treatment may be exempt from general property taxes under s. 70.11(21), Wis. Stats. A prerequisite to exemption is filing a statement on prescribed forms. To obtain forms and information, please contact the Department of Revenue, P.O. Box 8933, Madison, WI 53708, or check their website http://www.revenue.wi.gov/.

Appeal Notice: If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and Administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent. To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources, All requests for contested case hearings must be made in accordance with s. NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with s. NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

STATE OF WISCONSIN

DEPARTMENT OF NATURAL RESOURCES

FOR THE SECRETARY

Mary anne Lowndes

Mary Anne Lowndes

Chief, Runoff Management Section

Bureau of Watershed Management

Email cc: Ronnie Williams, P.E. - WES

wes@chipvalley.com; (715) 286-3231

Steve Olson - St. Croix County LCD

steve.olson@co.saint-croix.wi.us; (715) 531-1909

Matthew Woodrow, P.E. - DATCP matthew.woodrow@wisconsin.gov Gretchen Wheat, P.E.

Engineer, Runoff Management Section Bureau of Watershed Management

Theple When

Leah Nicol - DNR Eau Claire

leah.nicol@wisconsin.gov; (715) 839-3730

Gretchen Wheat, P.E. - DNR Madison

gretchen.wheat@wisconsin.gov; (608) 264-6273

Joe Baeten - DNR Green Bay

joseph.baeten@wisconsin.gov; (920) 662-5191

State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
Baldwin Service Center
890 Spruce Street
Baldwin, WI 54002

Scott Walker, Governor Kurt A. Thiede, Interim Secretary Telephone (715) 684-2914 FAX (715) 684-5940 TDD () -



September 12, 2017

Todd Tuls Emerald Sky Dairy, LLC 2670 D Road Rising City NE 68658

SUBJECT:

Coverage Under WPDES General Permit No. WI-S067831-05: Construction Site Storm Water Runoff

Permittee Name: Emerald Sky Dairy, LLC

Site Name:

Emerald Sky Dairy, LLC Proposed Waste Storage Improvements

FIN:

60607

Dear Permittee:

The Wisconsin Department of Natural Resources received your Water Resources Application for Project Permits or Notice of Intent, on September 05, 2017, for the Emerald Sky Dairy, LLC Proposed Waste Storage Improvements site and has evaluated the information provided regarding storm water discharges from your construction site. We have determined that your construction site activities will be regulated under ch. 283, Wis. Stats., ch. NR 216, Wis. Adm. Code, and in accordance with Wisconsin Pollutant Discharge Elimination System (WPDES) General Permit No. WI-S067831-05, Construction Site Storm Water Runoff. All erosion control and storm water management activities undertaken at the site must be done in accordance with the terms and conditions of the general permit.

The **Start Date** of permit coverage for this site is September 12, 2017. The maximum period of permit coverage for this site is limited to 3 years from the **Start Date**. Therefore, permit coverage automatically expires and terminates 3 years from the Start Date and storm water discharges are no longer authorized unless another Notice of Intent and application fee to retain coverage under this permit or a reissued version of this permit is submitted to the Department 14 working days prior to expiration.

A copy of the general permit along with extensive storm water information including technical standards, forms, guidance and other documents is accessible on the Department's storm water program Internet site. To obtain a copy of the general permit, please download it and the associated documents listed below from the following Department Internet site:

http://dnr.wi.gov/topic/stormwater/construction/forms.html

- Construction Site Storm Water Runoff WPDES general permit No. WI-S067831-05
- Construction site inspection report form
- Notice of Termination form

If, for any reason, you are unable to access these documents over the Internet, please contact me and I will send them to you.

To ensure compliance with the general permit, please read it carefully and be sure you understand its contents. Please take special note of the following requirements (This is not a complete list of the terms and conditions of the general permit.):

1. The Construction Site Erosion Control Plan and Storm Water Management Plan that you completed prior to submitting your permit application must be implemented and maintained throughout construction. Failure to do so may result in enforcement action by the Department.



- 2. The general permit requires that erosion and sediment controls be routinely inspected at least every 7 days, and within 24 hours after a rainfall event of 0.5 inches or greater. Weekly written reports of all inspections must be maintained. The reports must contain the following information:
 - a. Date, time, and exact place of inspection;
 - b. Name(s) of individual(s) performing inspection;
 - c. An assessment of the condition of erosion and sediment controls;
 - d. A description of any erosion and sediment control implementation and maintenance performed;
 - e. A description of the site's present phase of construction.
- 3. A Certificate of Permit Coverage must be posted in a conspicuous place on the construction site. The Certificate of Permit Coverage (WDNR Publication # WT-813) is enclosed for your use.
- 4. When construction activities have ceased and the site has undergone final stabilization, a Notice of Termination (NOT) of coverage under the general permit must be submitted to the Department.

It is important that you read and understand the terms and conditions of the general permit because they have the force of law and apply to you. Your project may lose its permit coverage if you do not comply with its terms and conditions. The Department may also withdraw your project from coverage under the general permit and require that you obtain an individual WPDES permit instead, based on the Department's own motion, upon the filing of a written petition by any person, or upon your request.

If you believe that you have a right to challenge this decision to grant permit coverage, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to s. 227.42, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with s. NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with s. NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing is not a prerequisite for judicial review and does not extend the 30-day period for filing a petition for judicial review.

Thank you for your cooperation with the Construction Site Storm Water Discharge Permit Program. If you have any questions concerning the contents of this letter or the general permit, please contact Michelle Asher at (715) 684-2914.

Sincerely,

Michelle Asher
West Central Region

Storm Water Specialist

ENCLOSURE: Certificate of Permit Coverage



CERTIFICATE OF PERMIT COVERAGE

WPDES CONSTRUCTION SITE STORM WATER RUNOFF PERMIT **UNDER THE**

Permit No. WI-S067831-05

has been granted WDNR storm water permit coverage. The landowner must implement and maintain erosion control practices to limit sediment-contaminated runoff to waters of the state in accordance with the permit. required to post this certificate in a conspicuous place at the construction site. This certifies that the site Under s. NR 216.455(2), Wis. Adm. Code, landowners of construction sites with storm water discharges regulated by the Wisconsin Department of Natural Resources (WDNR) Storm Water Permit Program are

EROSION CONTROL COMPLAINTS

should be reported to the WDNR Tip Line at 1-800-TIP-WDNR (1-800-847-9367)

Please provide the following information to the Tip Line:

WDNR Site No. (FIN): 60607

Site Name: Emerald Sky Dairy, LLC Proposed Waste Storage Improvements

Address/Location: 2487 County Highway G, Emerald, Wisconsin 54013 Town of EMERALD

Additional Information:

Landowner: Emerald Sky Dairy, LLC

Landowner's Contact Person: Todd Tuls

Contact Telephone Number: (402) 526-2385

Permit Start Date: September 12, 2017

By: MUNULINE

WDNR Publication # WT-813 (10/11)