

Technical Document LA25035

Part 2 — Technical Requirements



Application under the *Agricultural Operation Practices Act* for a confined feeding operation, manure collection area, and/or manure storage facility(ies)

NRCB USE ONLY	Application number	Legal land description
<input type="checkbox"/> Approval <input type="checkbox"/> Registration <input checked="" type="checkbox"/> Authorization	LA25035	SE 9-12-21 W4M
<input type="checkbox"/> Amendment		

APPLICATION DISCLOSURE

This information is collected under the authority of the *Agricultural Operation Practices Act* (AOPA), and is subject to the provisions of the *Freedom of Information and Protection of Privacy Act*. This information is public unless the NRCB grants a written request that certain sections remain private.

Any construction prior to obtaining an NRCB permit is an offence and is subject to enforcement action, including prosecution.

I, the applicant, or applicant's agent, have read and understand the statements above, and I acknowledge that the information provided in this application is true to the best of my knowledge.

May 1, 2025

Date of signing

AVE Farms Ltd.

Corporate name (if applicable)

Signature

Stan Vanessen

Print name

GENERAL INFORMATION REQUIREMENTS

Proposed facilities: list all proposed confined feeding operation facilities and their dimensions. Indicate whether any of the proposed facilities are additions to existing facilities. (attach additional pages if needed)	
Proposed facilities	Dimensions (m) (length, width, and depth)
Nursery Barn	76.5x17.8x1.8 deep

Existing facilities: list ALL existing confined feeding operation facilities and their dimensions		
Existing facilities	Dimensions (m) (length, width, and depth)	NRCB USE ONLY
Hog Barn 1	64x14	To be decommissioned
Hog Barn 2 (L Shape)	62x14 and 57x12	Confirmed
Hog Barn 3 (gestation barn LA05033)	58.3x19.5	To be decommissioned
NRCB USE ONLY		

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Last updated September 11, 2023

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If a new facility is replacing an old facility, please explain what will happen to the old facility and when. ☐ N/A

Hog barn 3 (LA05033) will be demolished prior to construction
Hog Barn 1 will be demolished post construction

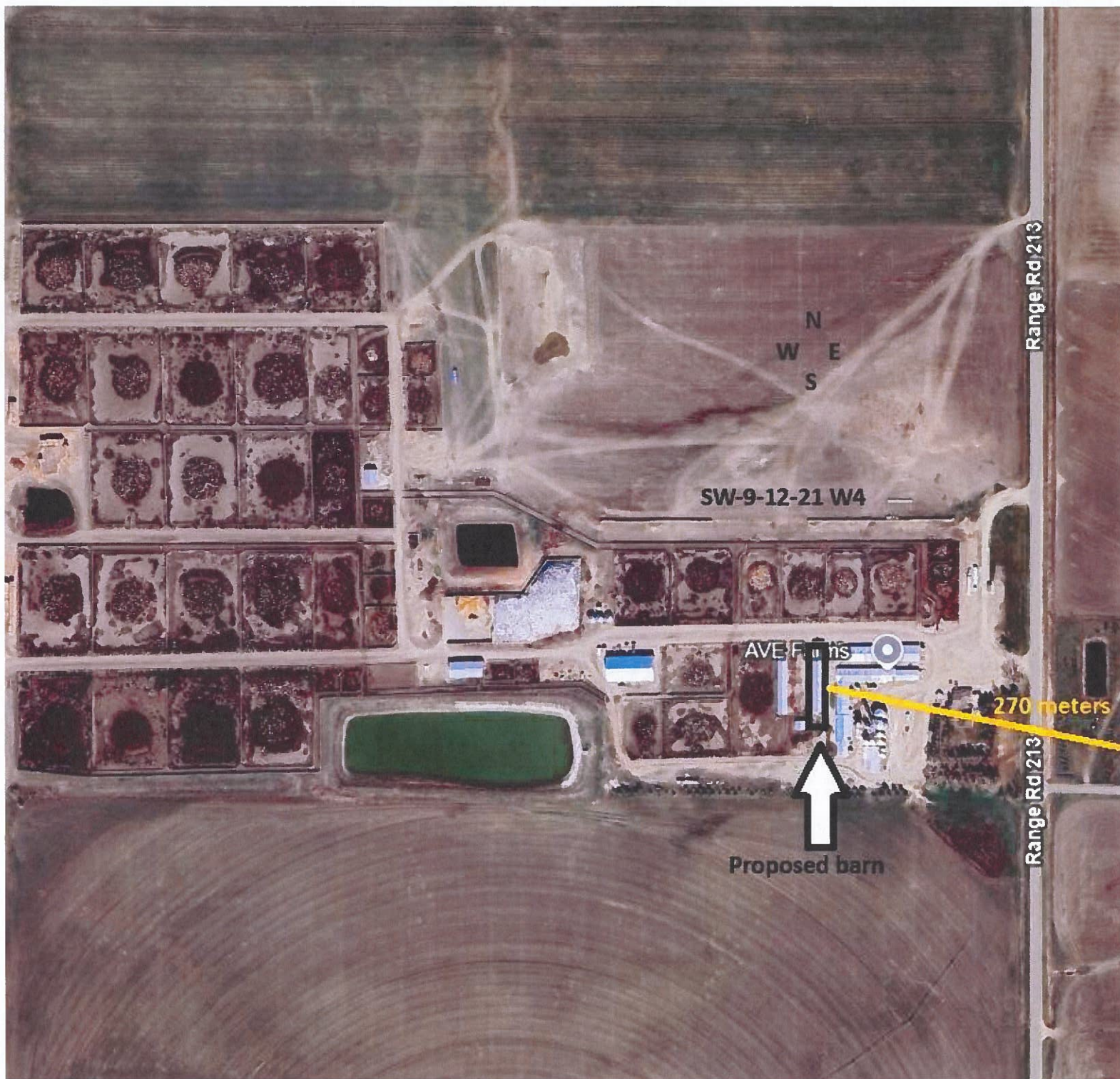
Construction completion date for proposed facilities May 1, 2026

Additional information

Livestock numbers: Complete only if livestock numbers are different from what was identified in the Part 1 application. Note: if livestock numbers increase in your Part 2 application, a new Part 1 application must be submitted which may result in a loss of priority for minimum distance separation (MDS).

Livestock category and type (Available in the Schedule 2 of the Part 2 Matters Regulation)	Permitted number	Proposed increase or decrease in number (if applicable)	Total
No proposed change in livestock			
Beef finishers	8000		8000
Swine farrow to wean	500		500





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DECLARATION AND ACKNOWLEDGMENT OF APPLICANT CONCERNING WATER ACT LICENCE

issued by Alberta Environment and Protected Areas (EPA) for a confined feeding operation (CFO)

Date and sign one of the following four options

OPTION 1: Applying through the NRCB for both the AOPA permit and the Water Act licence

I **DO** want my water licence application coupled to my AOPA permit application.

Signed this ____ day of _____, 20____.

Signature of Applicant or Agent

OPTION 2: Processing the AOPA permit and Water Act licence separately

1. I (we) acknowledge that the CFO will need a new water licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. I (we) request that the NRCB process the AOPA application **independently of** EPA's processing of the CFO's application for a water licence.
3. In making this request, I (we) recognize that, if this AOPA application is granted by the NRCB, the NRCB's decision will not be considered by EPA as improving or enhancing the CFO's eligibility for a water licence under the *Water Act*.
4. I (we) acknowledge that any construction or actions to populate the CFO with livestock pursuant to an AOPA permit in the absence of a *Water Act* licence will **not** be relevant to EPA's consideration of whether to grant the *Water Act* licence application.
5. I (we) acknowledge that any such construction or livestock populating will be at the CFO's sole risk if the *Water Act* licence application is denied or if the operation of the CFO is otherwise deemed to be in violation of the *Water Act*. This risk includes being required to depopulate the CFO and/or to cease further construction, or to remove "works" or "undertakings" (as defined in the *Water Act*).
6. **AS RELEVANT:** I (we) acknowledge that the CFO is located in the South Saskatchewan River Basin and that, pursuant to the *Bow, Oldman and South Saskatchewan River Basin Water Allocation Order* [Alta. Reg. 171/2007], this basin is currently closed to new surface water allocations.
7. **Provide:** Water licence application number(s) _____

Signed this ____ day of _____, 20____.

Signature of Applicant or Agent

OPTION 3: Additional water licence not required

1. I (we) declare that the CFO will not need a new licence from EPA under the *Water Act* for the development or activity proposed in this AOPA application.
2. **Provide:** Water license number(s) or water conveyance agreement details 001423770000

Signed this 1 day of May, 2025.

Signature of Applicant or Agent

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GENERAL ENVIRONMENTAL INFORMATION

(complete this section for the worst case of the existing facility which is the closest to water bodies or water wells and for each of the proposed facilities)
Facility description / name (as indicated on site plan)

Existing: Catch Basin

Proposed 1: Nursery Barn

Proposed 2: _____

Proposed 3: _____

Facility and environmental risk information		Facilities				NRCB USE ONLY	
		Existing	Proposed 1	Proposed 2	Proposed 3	Meets requirements	Comments
Information	Flood plain	<input type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input type="checkbox"/> > 1 m <input type="checkbox"/> ≤ 1 m	<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	Confirmed not in a flood plain
	Surface water	0	0			<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	None observed during site visit
	Groundwater	290 meters	290 meters			<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	No water wells registered to LLD
Information	What is the elevation of the floor of the lowest manure storage or collection facility above the 1:25 year flood plain or the highest known flood level?	290 meters	290 meters			<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	Ephemeral drain 290 m to the SE
	What is the depth to the water table?	7.9 meters	7.9 meters			<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	> 10 m from drilling reports provided with Approval LA15016
Information	What is the shortest distance from the manure collection or storage facility to a surface water body? (e.g., lake, creek, slough, seasonal)					<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	No wells. Not encountered within 10 mbgs during drilling
	What is the depth to the groundwater resource/aquifer you draw water from?	n/a	n/a			<input checked="" type="checkbox"/> YES <input type="checkbox"/> YES with exemption <input type="checkbox"/> NO	

Additional information (attach supporting information, e.g. borehole logs, records, etc. you consider relevant to your application)

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NRCB USE ONLY

ENVIRONMENTAL RISK SCREENING INFORMATION

ERST for proposed facilities

Facility	Groundwater score	Surface water score	File number
Nursery barn	Low	Low	LA25035
CFO facilities that meet or exceed AOPA requirements are presumed to be a low risk to surface water and groundwater			

ERST for existing facilities

Facility	Groundwater score	Surface water score	File number
Farrowing barn	Low	Low	LA24008
Gestation barn			LA24008
EMS			LA24008
Hog barn 1 (to be decommissioned)			LA20037
Hog barn 2			LA20037
Hog barn 3 (to be decommissioned)			LA20037
Catch basin			LA20037
Feedlot pens (SE row)			LA20037

Existing facilities continued

~~ERST related comments~~

Feedlot pens (NE row)
Feedlot pens (SW row)
Feedlot pens (NW row)
Feedlot pens (LA15016)
Feedlot pens (LA20037)

All feedlot pens assessed
in Approval LA20037

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WATER WELL AND SURFACE WATER INFORMATION

Well IDs: No water wells within 1 mile radius

Surface water related concerns from directly affected parties or referral agencies: ☐ YES ☒ NO

Groundwater related concerns from directly affected parties or referral agencies: ☐ YES ☒ NO

Water wells ☒ N/A

If applicable, exemption for 100 m distance requirements applied: ☐ YES ☐ NO Condition required: ☐ YES ☐ NO

Surface water ☒ N/A

If applicable, exemption for 30 m distance requirements applied: ☐ YES ☐ NO Condition required: ☐ YES ☐ NO

Water Well Exemption Screening Tool ☒ N/A

Water Well ID	Preliminary Screening Score	Secondary Screening Score	Facility

Groundwater or surface water related comments:

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DISTANCE OF ANY MANURE STORAGE FACILITY (EXISTING OR PROPOSED) TO NEIGHBOURING RESIDENCES

Neighbour name(s)	Legal land description	Distance (m)	NRCB USE ONLY			
			Zoning (LUB) category	MDS category (1-4)	Distance (m)	Waiver attached (if required)
Paul Jakober	SW-10-12-21-W4	190	Rural Ag	1	200	NA
Tim Hummel	NW-9-12-21-W4	1268	Rural Ag	1	1268	↓
Stan Brecka	SE-8-12-21-W4	1214	Rural Ag	1	1182	↓
Residences at NW 4-12-21 W4M and SW 9-12-21 are owned by AVE Farms						

The nursery barn will be built on the permitted footprint. MDS already met in Approval LA24008.

LAND BASE FOR MANURE AND COMPOST APPLICATION (complete only if an increase in livestock or manure production will occur)

Name of land owner(s)*	Legal land description	Usable area** (ha)	Soil zone ***	NRCB USE ONLY	
				Usable area (ha)	Agreement attached (if required)
	NA for authorizations				
Total					

* If you are **not** the registered landowner, you must attach copies of land use agreements signed by all landowners.

** Available manure spreading area (excluding setback areas from residences, common bodies of water, water wells, etc. as identified in Agdex 096-5 [Manure Spreading Regulations](#))

*** Brown, dark brown, black, grey wooded, or irrigated

Additional information (attach any additional information as required)

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NRCB USE ONLY

MINIMUM DISTANCE SEPARATION

Methods used to determine distance (if applicable): Aerial imagery

Margin of error (if applicable): +/- 3 m

Requirements (m): Category 1: 870 Category 2: 1160 Category 3: 1450 Category 4: 2320

Technology factor: ☐ YES ☒ NO

Expansion factor: ☐ YES ☒ NO

MDS related concerns from directly affected parties or referral agencies: ☐ YES ☒ NO

The proposed nursery barn is within the permitted footprint, therefore MDS does not apply to this authorization application (Standards and Administration Regulation 3(5)(c)(i))

LAND BASE FOR MANURE AND COMPOST APPLICATION

Land base required: _____

Land base listed: _____ NA for authorizations

Area not suitable: _____

Available area: _____

Requirement met: ☐ YES ☐ NO

Land spreading agreements required: ☐ YES ☐ NO

Manure management plan: ☐ YES ☐ NO

If yes, plan is attached: ☐

PLANS

Submitted and attached construction plans: ☐ YES ☒ NO

Submitted aerial photos: ☒ YES ☐ NO

Submitted photos: ☐ YES ☒ NO

GRANDFATHERING

Already completed: ☒ YES ☐ NO ☐ N/A

If already completed, see Approval LA15016

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LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner

(complete a copy of this section for **EACH** proposed in-barn liquid manure storage facility with a concrete liner)

Facility description / name (as indicated on site plan)

1. Nursery Barn
- 2.
- 3.

Manure storage capacity (use one row in the table for **EACH** in-barn storage. Attach additional pages if you require more rows)

	Length (m)	Width (m)	Total depth (m)	Depth below ground level (m)	NRCB USE ONLY Calculated storage capacity (m ³)
1.	76.5	17.8	1.8	1.8	2,451
2.					
3.					
TOTAL CAPACITY					2,451

Concrete liner details

Scrape alleys or unslatted portions of barn floors (if applicable)	Concrete thickness 20 cm		Method of sulphate protection type 50	
	Concrete strength 32 mpa		Concrete reinforcement size and spacing 15 mm rebar @ 30 cm spacing	
In-barn manure pit floors	Concrete thickness 20 cm		Method of sulphate protection type 30 Confirmed with applicant that this should be type 50	
	Concrete strength 32 mpa		Concrete reinforcement size and spacing 15 mm rebar @ 30 cm spacing	
In-barn manure pit walls	Concrete thickness 20 cm		Method of sulphate protection type 50	
	Concrete strength 32 mpa	Horizontal reinforcement size and spacing 10 mm @ 30 spacing	Vertical reinforcement size and spacing 10 mm @ 30 cm spacing	

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LIQUID MANURE COLLECTION AND/OR STORAGE: In-barn - Concrete liner (cont.)

Describe how the joints at the junction of the pit walls, pit floors and any other joints will be sealed
Volclay RX 101 waterstop applied at joints and junctions

Describe sealing practices for piping, etc. that penetrates the liner
Volclay RX 101 waterstop applied for all piping penetrating liner

Concrete requirements can be found in Technical Guideline Agdex 096-93

Guideline minimums:

Solid manure: 25MPa (D)

Solid manure (wet): 30MPa (C)

Liquid manure: 32MPa (B)

Category A is required to be engineered

Method of sulphate protection:

Type 50 or Type 10 with fly ash or equivalent

NRCB USE ONLY

Requirements met: ☒ YES ☐ NO

Condition required: ☒ YES ☐ NO

Additional information

NRCB USE ONLY

Liquid manure storage volume calculator attached: ☒ YES ☐ NO

Depth to water table: > 10 m

Requirements met: ☒ YES ☐ NO

Depth to uppermost groundwater resource: > 10 m

Requirements met: ☒ YES ☐ NO

ERST completed: ☒ see ERST page for details

Condition requiring that the concrete used to construct the nursery barn liner and pits meet the requirements for Category B (liquid manure - shallow pits), which includes using type 50 cement

Concrete liner requirements

Leakage detection system required: ☐ YES ☒ NO If yes, please explain why

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NRCB | Natural Resources
Conservation Board

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NRCB USE ONLY	
LIQUID MANURE STORAGE VOLUME CALCULATOR (if applicable)	
Facility 1	
Name / description EMS	Capacity 4914 m3
Facility 2	
Name / description Nursery barn	Capacity 2451 m3
Facility 3	
Name / description Farrowing barn	Capacity 498 m3
Facility 4	
Name / description Gestation barn	Capacity 2216 m3
TOTAL CAPACITY	10,079 m3
REQUIRED 9 MONTH STORAGE CAPACITY	2,775
MEETS THE REQUIREMENTS FOR A MINIMUM OF 9 MONTHS STORAGE	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

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NRCB USE ONLY

ALL SIGNATURES IN FILE

☒ YES ☐ NO

DATES OF APPROVAL OFFICER SITE VISITS

May 13, 2025	

CORRESPONDENCE WITH MUNICIPALITIES AND REFERRAL AGENCIES

Date deeming letters sent: May 5, 2025

Municipality: Lethbridge County

☒ letter sent ☒ response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Health Services: ☒ N/A

☐ letter sent ☐ response received ☐ written/email ☐ verbal ☐ no comments received

Alberta Environment and Parks: ☐ N/A

☒ letter sent ☒ response received ☒ written/email ☐ verbal ☐ no comments received

Alberta Transportation: ☒ N/A

☐ letter sent ☐ response received ☐ written/email ☐ verbal ☐ no comments received

Alberta Regulatory Services: ☒ N/A

☐ letter sent ☐ response received ☐ written/email ☐ verbal ☐ no comments received

Other: LNID, ATCO, Lethbridge North County Potable Water users ☐ N/A

☒ letter sent ☐ response received ☐ written/email ☐ verbal ☒ no comments received

Other: _____ ☐ N/A

☐ letter sent ☐ response received ☐ written/email ☐ verbal ☐ no comments received