KOCH FERTILIZER CANADA ULC

March 18th, 2019

City of Brandon
Planning & Building Safety Department
421-9th Street
Brandon, Manitoba R7A 4A9
ATTN: Sonikile Tembo

Dear Ms. Tembo;
Re: Conditional Use Permit for 2-Storey Temporary Office Trailer

Please accept this letter in support of an application by Koch Fertilizer Canada, ULC (KFC) for a 5-year conditional use of a 2-storey office trailer. The purpose of the office trailer is to accommodate additional employees until permanent facilities are made available and to support ongoing business needs related to plant maintenance.

This request is supplementary. The trailer had been approved under a previous approved application that is to expire this spring.

The temporary office trailer is used to support ongoing plant operation and maintenance activities. The trailer is a 2-story unit constructed of heavy steel and is intended for year-round occupancy.

We attach a site plan, drawing number 8350A166 revision 0, showing the proposed trailer location, a code compliance review of the 2-storey unit and CSA specifications from the trailer supplier for the 2 storey unit to support this request. The trailer was inspected by Mr. Brian Ursel when it was located. It has not been moved since then.

This trailer is located at civic address of 1400-17th Street East, legal of Parcel B Plan 38228 BLTO in W ½ 18-10-18 WPM. The trailer is in proximity to similar use buildings and structures, will not adversely affect other properties or potential developments and is consistent with the MH zoning of the existing property. It is also located within the area designated "Industrial" shown on Map 1: Urban Land Use of the 2013 Brandon & Area Planning District Development Plan and is consistent with the development plan.

Yours truly,

Kelly Simonson, Managing Director

SNC·LAVALIN

SNC-LAVALIN INC.
148 Nature Park Way
Winnipeg, Manitoba
Canada R3P 0X7

Telephone: 204-786-8080
Fax: 204-786-7934

November 29, 2013

Koch Fertilizer Canada ULC 615970
1400 – 17th Street East
Brandon, Manitoba R7A 7C4

Attention : Mr. Steve Farmaner

National Building Code of Canada (NBCC) Compliance Review
Of Temporary Office Space Building at
Koch Chemical Facility, Brandon, Manitoba

Dear Mr. Farmaner,

In response to Koch's request for our review of the intended temporary office space for compliance with the National Building Code of Canada 2010 (NBCC) as revised by 'The Manitoba Buildings and Mobile Homes Act' (C.C.S.M c. B93) Regulation 31/2011 ('the Code'). SNC-Lavalin Inc. (SLI) has the following comments:

The Province of Manitoba does not have provisions to accommodate the construction of temporary or factory fabricated structures. For this reason, compliance with Part 3 or Part 9 of the Code is required. We have elected to review the proposed building under Part 3 of the Code, because of the nature of the existing facility.

SLI understands that the proposed building dimensions will be in the order of 24' wide by 40' long with a building height of approximately 20'. The proposed structure is intended to be constructed as a 2 storey building. The upper storey ceiling height will be approximately 19' above existing grade. The building is non-sprinklered. The proposed building conforms to a Group D Occupancy, and has a Building Area of 960 ft². General construction consists of corrugated 10 gauge cold formed steel sheet.

The Code requires that new construction conform to Section 3.8, Article 3.8.2.1. Barrier Free design has not been considered because the complex is an industrial site and is staffed only by able bodied personnel. This should be discussed with the Authority having Jurisdiction. It is reasonable that this requirement be waived.

A second issue that should be confirmed with the Authority having Jurisdiction is the absence of washroom facilities. There are washrooms within adjacent structures that will serve the purpose, and other than a possible minor inconvenience, this should have no impact.

None of the above items are hazardous or life threatening, in our opinion.

Based on the information supplied by Koch, the building conforms to Article 3.2.2.60 of the NBCC.

This classification requires the building to have a 45 minute fire resistance rating for both supporting walls and floors if of combustible construction. Our understanding from the literature provided by A Box 4 U, is that the roof insulation is fiberglass and is located below the metal deck cladding. There is, however, a layer of polyiso board beneath the fiberglass insulation. The proposed construction of the building has sufficient combustible elements for the building to be considered as combustible construction. This requires that floor assemblies be considered as fire separations with a fire resistance rating of 45 minutes, minimum. The two layers of 5/8" thick Type 'X' gypsum wallboard for the ceiling will provide an adequate separation between the two levels and exceeds the 45 minute rating requirement. In addition, the finishes and materials for non-combustible construction must have maximum ratings for heat flux (50 KW/m^2) and heat release ($3MJ/m^2$) and smoke extinction ($1m^2$). The proposed construction likely achieves this.

The anticipated occupant load per floor, based on the intended use is 8 people and based on building area is 10 people.

By code, a single exit from each floor is permitted if the area is less than 2150 ft^2 and the exit distance is less than 82'. The building size proposed does not permit an exit distance in excess of 82'.

We would, however, recommend that two exits be provided from each floor level, should egress from one of the exit ways become blocked. The second exit should be considered as an additional non-regulated means of egress only.

The door opening can be 32" wide and 6'-8" high, but we would recommend a 3' x 7' door with a wired glass window or a suitable small window area to prevent swinging the door into someone at the top of the exit stairs.

The upper exit stair platform should be approximately 3'- 6" wide and approximately 5'-0" long, and the edge of the landing should be located 1'-0" beyond the door swing. Stair rise and run and guardrails for same shall be as required by the NBCC. The stair to the upper floor is not adjacent to another structure and should not require a fire rated enclosure; this should be discussed with the Brandon Building Department. In the event that future construction occurs, it may be required to construct a fire rated enclosure.

SLI understands that the building will face one street, and be located 10' east of the CRR Building. Exiting will be on the opposite side of the building facing the CRR Building. SLI understand that the CRR Building has a non-combustible exterior and window openings are above the roof of the proposed building.

The wall area facing the CRR Building will be approximately $71m^2$ and has a limiting distance equal to 3m. It is understood that there will be no unprotected openings in the

exterior walls. Table 3.2.3.1.B of the NBCC permits an area of 12% of the building face to be unprotected and Table 3.2.3.7 requires that the wall facing the CRR Building have a one hour fire resistance rating. The wall construction can be combustible or non-combustible, but the cladding shall be non-combustible.

The closest fire hydrant is located 90' away from the proposed location for the new building. This should be acceptable.

Interior partitions, both shown and possible future locations should be arranged so that the shortest travel distance from any point on the floor is less than 82'. This should be easy to accomplish since the maximum distance from one building corner to the exit would be approximately 44'.

The door should have a ¾ hour fire resistance rating. It should be equipped with a self-closure and a properly illuminated EXIT light.

SLI recommends that all available information, provided by A Box 4 U, together with a copy of this letter be forwarded to the Brandon regional building authority for their consideration. Under a normal permitting scenario the Authority Having Jurisdiction (AHJ) undertakes their review and provides a building permit before commencing any construction activities. In our opinion, with the exception of the two items noted, the proposed building is in compliance with the intent of the Code. The items noted are not life threatening and are easily accommodated by the occupants of the proposed building.

Should you have further questions or require clarification, please advise.

Sincerely,

Richard Coates P. Eng
Winnipeg Operations

cc. Roger Bean

PROVINCE OF MANITOBA
R. A.
COATES
Member
3158
REGISTERED PROFESSIONAL ENGINEER

APEGM
Certificate of Authorization
SNC - Lavalin Inc.
No. 4489 Date: 13.11.29

Proposal Prepared For:

Canada

12’x40’x9.5’ Blast Resistant Module

A Box 4 U Canada Lease Fleet

Rev: 4

December, 2012

Proposal Prepared By:

A Box 4 U

4340 S. West Street

Wichita, KS 67217

Phone: (316) 554-9000

“Keeping Pace by Providing SAFE Space”

Canada Lease Fleet
12'x40' Blast Resistant Building

Blast Design Loads:

Building designed for 8PSI/200MS (Duration); ASCE Medium Response

Engineering and Design:

A Box 4 U will work with ABS Consulting in San Antonio, TX for complete Blast Design and Analysis.

Detail Blast Load Calculations will be on file at A Box 4 U

Customer approval drawings available prior to fabrication

Building will comply with all of the following Codes and Standards

1. API 752 and 753
2. CWB welding standards and certification
3. CSA electrical standards, components and inspections
4. CSA Certification and inspections

1. **<u>Exterior – CWB Welding Standards</u>**

    a. Walls

        i. Structural steel reinforced corrugated 12 gauge steel panels; wall thickness – 9"

        ii. Penetrations -

            1. Electric Panel Inlet: 2" Stainless Steel
            2. Communication inlet: 3" Stainless Steel
            3. HVAC Electrical Supply: 1 ½" Stainless Steel
            4. (4) Exterior Light: ¼"

        iii. Structural HVAC frame

        iv. Serial Number – 3" tall welded numbers on the HVAC end of the building

    b. Roof

        i. Structural steel reinforced flat 11 gauge steel panels; roof thickness – 11"

        ii. Roof Insulation – R25 with Spyder fiberglass insulation with R12 continuous polyiso board

        iii. ISO 1161 corner fittings at all four corners

    c. Floor

        i. Structural steel reinforced floor; floor thickness – 9"

        ii. Floor Insulation – R38 with polyiso board insulation or 5 ½" thick closed cell sprayed on urethane foam - both option to include a top layer with R8 continuous polyiso board

        iii. ISO 1161 corner fittings at all four corners

    d. Exterior Personnel Door

        i. Quantity – 2

        ii. Size – 3'0"x7'0" blast resistant door; designed to meet blast design loads

iii. Door swing per structural drawing

iv. Intercon 8" Weld Hinges w/grease fittings (part #INTWGFFES200)

2. Exterior Finish

a. Surface Preparation

i. Sandblast conforms to SSPC-SP-10 (Near White Metal)

ii. Exterior floor, walls, doors, door frames and roof

b. Coating

i. Spray-On Products, part number #SOP-3500

ii. Color: Red

1. Under side of Floor
2. Walls
3. Roof
4. Doors and Frames

3. <u>Interior Finish</u>

a. Insulation

i. Floor

1. R38 with polyiso board insulation or 5 ½" sprayed on closed cell urethane foam - both options to have a top layer of R8 continuous polyiso board

ii. Walls

1. R35 with Spyder or Owens Corning fiberglass insulation with R12 continuous polyiso board – Blown in insulation to have blow blanket

iii. Roof

1. R25 with Spyder or Owens Corning fiberglass insulation with R12 continuous polyiso board – Blown in insulation to have blow blanket

iv. Exterior Doors

1. R8 with Spyder or Owens Corning fiberglass insulation with blow blanket

b. Walls

i. 7/16" OSB

1. Securely fastened to the structural steel with countersunk Tek 5 fasteners (minimum of 15 screws per 4x8 board)
2. OSB to have 1/8" gap in between sheets with clear paintable caulk applied in the gaps.

ii. FRP Finish

1. Textured FRP, Nudo product # LP-F9

2. .090 thick
3. Color: White
4. Secured to OSB using Titebond, Fast Grip adhesive

c. Ceiling

i. 7/16" OSB

1. Securely fastened to the structural steel with countersunk Tek 5 fasteners (Minimum of 15 screws per 4x8 board)
2. OSB to have 1/8" gap in between sheets with clear paintable caulk applied in the gaps.

ii. FRP Finish

1. Textured FRP, Nudo product # LP-F9
2. .090 thick
3. Color: White
4. Secured to OSB using Titebond, Fast Grip adhesive and plastic rivets

d. Floor

i. 1 1/8" thick Advantech wood sub floor

ii. Securely fastened to the structural steel with Item # TCS-516 180200, Description – 5/16-18X2 FH Torx screws. Screws to be installed on 15" centers for the width and on each floor member for the length

iii. Vinyl floor

1. Flexi-Tile Product # FTC-540DG45.
2. Coin pattern

3. Color: Grey
4. Size: 20.5"x20.5"
5. 4.5mm thickness

iv. Vinyl cove base

1. Johnsonite Traditional Wall Base
2. 4" tall
3. Secured to wall with Parabond Fusion X
4. Color: 40 Black

e. Exterior Personnel Door

i. ¼" OSB

1. Securely fastened to the structural steel with Tek 5 fasteners

ii. FRP Finish

1. Textured FRP, Nudo product # LP-F9
2. .090 thick
3. Color: White
4. Secured to OSB using Titebond, Fast Grip adhesive

iii. All Door Assemblies Include

1. Kason door handle assembly, Model #2C00400
2. Kason interior push plunger
3. stainless steel strike plate
4. stainless steel kick plate
5. Black Rubber gasket on all 4 sides – Trim-Lok – Trim-Seal Product builder (6375B3X5/5/16C)
6. Aluminum threshold, Reese S483 AU or equivalent

7. Door sweep – Reese – Raindrip weather strip brush – 354A
8. Ingersoll Rand door closer, heavy duty , 4040 XP or equivalent with heavy duty solid arm
9. Door thickness – 2"

f. (1) 5 lb ABC fire extinguisher located near each exterior door

4. <u>Electrical/Communications – CSA electrical standards and components</u>

a. Electrical distribution

i. Electric distribution connection to be made via 2" male pipe thread inlets into back of electrical breaker panel - – to include gray plastic bushing (Topaz #836)

ii. Module prepared for 220 volt, 60Hz, single phase power

iii. 24 space 120/240V 1PH panel Square D – Part #CQO124M125C100 with 20A (QO120) and 60A (QO260) Square D breakers or GE TMC1210CCU – 100 amp with 12 circuits (1 @ 60 amp breaker and 4 @ 20 amp breakers)

iv. Solid copper wiring throughout, gauge per electrical engineered drawings

v. Surface mount on walls and ceiling with EMT conduit securely fastened to structural steel with Tek 5 fasteners

1. Set screw connections on all EMT conduit

b. Electrical outlets

i. 20A, 110V Duplex, Cooper or equivalent

ii. Outlet quantity and locations per floor plan

c. Communications outlets

i. CAT 5E communication outlets with (4) RJ45 outlets (2 wired & labeled for network communications and 2 wired and labeled for phone communications)

ii. Outlet quantity and locations per floor plan

d. Interior lights

i. (5) Kurtzon Tamperproof fluorescent light fixtures with dual, T8, shatter resistant bulbs, controlled by 20 amp toggle switches

e. Exterior lights

i. LED fixtures located by each exterior personnel door - LEDSM60 (Larson Electronics)

ii. Magna Light Part #LEDSM60

iii. Operates on 12 or 24 volts DC with transformer - PLN-60-12 or DCP-5-12V (Larson Electronics)

iv. Use black rubber grommets with silicone to run wires through exterior wall (Tiewraps.com Part #TG-18)

f. Emergency lights/exit sign

i. Combination 110V emergency light/exit sign with battery back-up located at each exterior personnel door – item code: EXL (Choose CSA approved option) from theexitstore.com

g. Smoke/CO detector

i. Kidde 110V detector with 9V battery back-up located per floor plan – PRY900-0113 or BRK model 9120B

ii. Locations: per floor plan

5. <u>Mechanical – HVAC – CSA certified installation and components</u>

a. HVAC

i. Climate Control Class 1 Div 2 wall mount HVAC units

ii. (1) Capacity: 36,000 BTU/HR capacity (3 ton)

iii. 10kw strip heat

iv. Power Supply: 208-230/1/60

v. Non-programmable thermostat

vi. Brushed aluminum air return and grill

vii. Hazardous Seal Off on outside of building at HVAC wall penetration with compound (Crouse-Hinds Chico A19PX)

6. Building Signage

a. Exterior

i. .040 aluminum panels mounted with Tek 5 fasteners (part #) & rubber washers

ii. (4)2'x1' white aluminum with A Box 4 U logo and contact info to go on each side of box

iii. (2) 1'x2' white aluminum occupancy sign to go by each personnel door

iv. (2) 9.5"x3.5" white aluminum plate with building barcode to go on each end of the building

v. (2) 8"x12" 8PSI/200MS BRB Sign to go under Occupancy signs

vi. (1) 4"x6" silver aluminum "This is a leased module"

vii. (2) 10"x2.5" white aluminum signs – 1 each for Communications and AC Power

b. Interior

i. (1) 7"x7" silver aluminum plate next to electrical breaker panel with component capacities

ii. (1) 9.5"x3.5" white aluminum plate with building barcode

iii. (1) 4"x6" silver aluminum "This is a leased module"

iv. (1) 18"x12" White aluminum "Use & Service Guide"