Government of Western Australia
Department of Water and Environmental Regulation

Works Approval

Works approval number	W6915/2024/1
Works approval holder	CSBP Limited
ACN	008 668 371
Registered business address	Level 14, Tower 2 Brookfield Place 123 St Georges Terrace PERTH WA 6000
DWER file number	DER2024/000131
Duration	30/09/2024 to 29/09/2028
Date of issue	30/09/2024
Premises details	CSBP Limited KWINANA BEACH, WA 6167 Legal description - Part of Lot 20 on Diagram 78086, Volume 1918 / Folio 244 and Part of Lot 18 on Plan 17311, Volume 2058 / Folio 310 As defined by the coordinates in Schedule 2: Premises boundary

Prescribed premises category description (Schedule 1, *Environmental Protection Regulations 1987*)	Assessed production capacity
Category 31: Chemical manufacturing	4,070,800 tonnes per annum
Category 75: Chemical blending or mixing not causing discharge	262,800 tonnes per annum

This works approval is granted to the works approval holder, subject to the attached conditions, on 30 September 2024, by:

Michael Greenslade Digitally signed by Michael Greenslade
Date: 2024.09.30 15:15:01 +08'00'

MANAGER, PROCESS INDUSTRIES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Works approval history

Date	Reference number	Summary of changes
30/09/2024	W6915/2024/1	Works approval granted.

Interpretation

In this works approval:

(a) the words 'including', 'includes' and 'include' in conditions mean "including but not limited to", and similar, as appropriate;

(b) where any word or phrase is given a defined meaning, any other part of speech or other grammatical form of that word or phrase has a corresponding meaning;

(c) where tables are used in a condition, each row in a table constitutes a separate condition;

(d) any reference to an Australian or other standard, guideline, or code of practice in this works approval:

(i) if dated, refers to that particular version; and

(ii) if not dated, refers to the latest version and therefore may be subject to change over time;

(e) unless specified otherwise, any reference to a section of an Act refers to that section of the EP Act; and

(f) unless specified otherwise, all definitions are in accordance with the EP Act.

NOTE: This works approval requires specific conditions to be met but does not provide any implied authorisation for other emissions, discharges, or activities not specified in this works approval.

Works approval conditions

The works approval holder must ensure that the following conditions are complied with:

Construction phase

Infrastructure and equipment

1. The works approval holder must:

(a) construct and/or install the infrastructure and/or equipment;

(b) in accordance with the corresponding design and construction / installation requirements; and

(c) at the corresponding infrastructure location

as set out in Table 1.

Table 1: Design and construction / installation requirements

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Schedule 1: Maps)
Nitric Acid Ammonium Nitrate Plants 1, 2 and 3 (NAAN1, NAAN2 and NAAN3)			
1.	Selective catalytic reactors: - Tertiary catalyst reactors	The existing selective catalytic reactors (SCR) on NAAN1 and NAAN2 must be replaced with new tertiary catalyst reactors containing an EnviNOx® Iron Zeolite type catalyst or a catalyst of similar performance.	Located at NAAN1 and NAAN2, as shown in Figure 2.
2.	Chiller units: - Twin water-cooling towers; - Vapour absorption machine (VAM)	a) Chiller units at each NAAN plant must be plinth-mounted; b) Chillers at each NAAN plant must be installed with VAM technology; c) Thermal insulation must be installed on the chilled water supply and return line of the chiller units; and d) Twin cooling towers must be installed with variable speed drive fans	Labelled as 'new chiller unit infrastructure' as shown in Figure 2.
3.	General upgrades for noise attenuation at each NAAN plant: - Tail gas silencers; - Steam injectors; - Compressor/ expander unit; and - Precooler and air filtration unit	a) Tail gas silencers must be upgraded for each tail gas stack; b) Steam injectors in the ammonia vaporiser chloride free cooling water circuit (CFCW) must be replaced; c) Acoustic insulation must be upgraded at the compressor/expander units; and d) Air precooler and air filtration unit to be installed at the inlet of the air compressor for each NAAN plant which must be designed to achieve no greater than L_{Aeq} 88 dB at 1 m from the inlet.	Located in NAAN1, NAAN2 and NAAN3, as shown in Figure 2.
4.	Weak acid cooler at each NAAN plant	No specified requirements.	
5.	New pipe reactor, reactor separator and cyclonic column at each NAAN plant	No specified requirements.	

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Schedule 1: Maps)
Ammonium Nitrate Emulsion (ANE) Plant			
6.	1 x 3 kL Run tank	a) Must be stainless steel; and b) Must be contained within the existing ANE Plant bunded area.	Labelled as 'T0363' in Figure 3.
7.	3 x 110 kL Ammonium nitrate emulsion tanks	a) Must be painted mild steel tanks which meet the Australasian Explosives Industry Safety Group *Code of Practice (CoP): Storage and handling of UN3375* (AEISG, 2018); and b) Must be constructed on raised pads in accordance with the AEISG, 2018 Code of Practice.	Labelled as 'T0365, T0366 and T0367' in Figure 3.
8.	ANE tanker load out station	Load out station must be constructed with: a) an impermeable concrete hardstand of at least 60 m^2; and b) a product dispatch control system where predetermined volumes are set and monitored.	Labelled as 'new loading station' in Figure 3.
9.	Fuel phase storage: - 1 x 13 kL Fuel phase run tank; and - Secondary containment	a) Fuel phase run tank must be a vertical mild steel tank with an agitator and heating unit; and b) Fuel phase run tank must be contained in the existing fuel phase area bunded hardstand which: (i) must be extended by minimum 72 m^2 constructed with reinforced concrete; and (ii) has the capacity to contain 110% of the largest tank within it.	Labelled as 'T0364' in Figure 3.
Additional loading infrastructure to support production flexibility			
10.	Nitric acid (NA) containment: - 1 x 1000 t capacity NA storage tank; and - Secondary containment	NA storage tank must be: a) stainless steel; b) fitted with level indicator and alarm linked to automatic shut-down and monitored via programmable logic controller (PLC); and c) installed on a new concrete-reinforced hardstand with secondary containment bunding (minimum 2.4 m high and 300 mm thick walls) which: (i) is designed to meet the Australian Standard (AS) 3780; (ii) has the capacity to contain 110% of the largest tank within it; and (iii) is installed with spillage recovery sumps and pumps.	Labelled as 'new NA storage' as shown in Figure 2.

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Schedule 1: Maps)
11.	Ammonium Nitrate solution (ANSol) containment: - 1 x 700 t capacity ANSol tank; - 1 x 1,000 t capacity ANSol receival tank; - 1 x 50 t capacity ANSol blending tank; and - Secondary containment	Each tank must be: a) stainless steel; b) fitted with a level indicator and alarm linked to automatic shut-down and monitored via programmable logic controller (PLC); and c) installed on a new concrete-reinforced hardstand with secondary containment bunding (minimum 1.7 m high and 300 mm thick walls) which: (i) is designed to meet the Australian Standard (AS) 3780; (ii) has the capacity to contain 110% of the largest tank within it; and (iii) is installed with spillage recovery sumps and pumps.	Labelled as 'new AN storage' as shown in Figure 2.
12.	NA and ANSol loading station	The loading station must: a) include a concrete hardstand that is at least 60 m^2 b) be graded to a stainless steel lined sump which: (i) is 0.6 by 0.6 by 0.6 m; (ii) is resistant to corrosion; and (iii) has a pump with an automated flow switch for transfer of collected liquid to the NAAN neutralisation pit; c) be fitted with sensors to detect proper connection of loading lines to the tanker; d) be fitted with a flow integrator; e) have an adjustable loading arm which must be fitted with a high level switch that shuts off the system if the tanker becomes full; and f) be fitted with a manual emergency stop button on the gantry.	Labelled as 'ammonia nitrate and nitric acid load station' as shown in Figure 2.
13.	ANSol receiving station	The receiving station must: a) include a concrete hardstand that is at least 60 m^2; b) be graded to a stainless steel lined sump which: (i) is 0.6 by 0.6 by 0.6 m; (ii) is resistant to corrosion; and (iii) has a pump with an automated flow switch for transfer of collected liquid to the NAAN neutralisation pit; c) be serviced by two 75 m^3/ hour capacity pumps which are located within the existing ANSol tank bund; d) include an ANSol isolation valve that automatically closes on completion of transfer.	Labelled as 'new AN receiving station' as shown in Figure 2.

	Infrastructure	Design and construction / installation requirements	Infrastructure location (Schedule 1: Maps)
Ammonia Storage Flare (ASF) and Ammonia Plant Flare (APF) connection			
14.	ASF and APF connection	Connection piping must be: a) designed to American Society for Testing and Materials (ASTM) A333 (Standard Specification for Seamless and Welded Steel Pipe for Low-Temperature Service and Other Applications with Required Notch Toughness) Grade 6; b) installed within an existing overhead pipe rack with a new isolation valve; and c) Nitrogen purged and leak tested after installation.	As shown in Figure 4 (proposed connection piping).

Compliance reporting

2. The works approval holder must within 30 calendar days of an item of infrastructure or equipment required by condition 1 being constructed and/or installed:

(a) undertake an audit of their compliance with the requirements of condition 1; and

(b) prepare and submit to the CEO an Environmental Compliance Report on that compliance.

3. The Environmental Compliance Report required by condition 2, must include as a minimum the following:

(a) certification by a suitably qualified engineer that the items of infrastructure or component(s) thereof, as specified in condition 1, have been constructed in accordance with the relevant requirements specified in condition 1;

(b) as constructed plans and a detailed site plan for each item of infrastructure or component of infrastructure specified in condition 1; and

(c) be signed by a person authorised to represent the works approval holder and contains the printed name and position of that person.

Contaminated site – specified actions

4. When undertaking any ground excavation works, unless laboratory analysis has been undertaken and results prove excavated soils are uncontaminated, the works approval holder must treat any excavated soils as though they are contaminated and apply controls in accordance with the Contaminated Sites auditor-endorsed Contaminated Site Management Plan (CSMP) developed for the site.

Time limited operations phase

Commencement and duration

5. The works approval holder may only commence time limited operations for an item of infrastructure identified in condition 1:

(a) where the Environmental Compliance Report as required by condition 2 has been submitted by the works approval holder for that item of infrastructure.

6. The works approval holder may conduct time limited operations for an item of infrastructure specified in condition 7 (as applicable):

(a) for a period not exceeding 90 calendar days from the day the works approval holder meets the requirements of condition 5 for that item of infrastructure; or

(b) until such time as a licence for that item of infrastructure is granted in accordance with Part V of the *Environmental Protection Act 1986*, if one is granted before the end of the period specified in condition 6(a).

Time limited operations requirements

7. During time limited operations, the works approval holder must ensure that the premises infrastructure and equipment listed in Table 2 and located at the corresponding infrastructure location is maintained and operated in accordance with the corresponding operational requirement set out in Table 2.

Table 2: Infrastructure and equipment requirements during time limited operations

	Site infrastructure and equipment	Operational requirement	Infrastructure location (Schedule 1: Maps)
1.	Chiller units: - Twin water-cooling towers; - Vapour absorption machine (VAM)	Twin cooling tower fans must be turned down to reduce noise when full cooling capacity of the towers is not required.	Labelled as 'new chiller unit infrastructure' as shown in Figure 2.
2.	NA and ANSol loading station	a) The tanker filling process must be initiated by the truck driver (on the gantry) supervising the loading process; and b) Selection of chemical being loaded, tank capacity and volumes must be input in the control system via PLC prior to activation of loading.	Labelled as 'ammonia nitrate and nitric acid load station' as shown in Figure 2.
3.	ASF and APF connection	a) The isolation valve must remain closed except during maintenance of the ASF; and b) When fugitive ammonia gas is diverted from the ASF to the APF: (i) No ammonia importing to the ammonia storage tanks is to occur; (ii) No additional activities requiring purging of the Ammonia Plant (AP2) are to occur; (iii) Ammonia plant (AP2) start-up must be delayed until the ASF is available; and (iv) All refrigeration units must be available for service.	As shown in Figure 4 (proposed connection piping).

Time limited operations report

8. The works approval holder must submit to the CEO a report on the time limited operations within 30 calendar days of the completion date of time limited operations or 30 calendar days before the expiration date of the works approval, whichever is the sooner.

9. The works approval holder must ensure the report required by condition 8 includes the following:

(a) a summary of the time limited operations, including timeframes and amount of:

(i) nitric acid and ammonium nitrate produced; and

(ii) ammonium nitrate solution produced;

(b) a summary of the environmental performance of all infrastructure as constructed or installed (as applicable);

(c) a review of performance and compliance against the conditions of the works approval; and

(d) where the manufacturer's design specifications and the conditions of this works approval have not been met, what measures will the works approval holder take to meet them, and what timeframes will be required to implement those measures.

Records and reporting (general)

10. The works approval holder must record the following information in relation to complaints received by the works approval holder (whether received directly from a complainant or forwarded to them by the Department or another party) about any alleged emissions from the premises:

(a) the name and contact details of the complainant, (if provided);

(b) the time and date of the complaint;

(c) the complete details of the complaint and any other concerns or other issues raised; and

(d) the complete details and dates of any action taken by the works approval holder to investigate or respond to any complaint.

11. The works approval holder must maintain accurate and auditable books including the following records, information, reports, and data required by this works approval:

(a) the works conducted in accordance with condition 1;

(b) any maintenance of infrastructure that is performed in the course of complying with condition 7; and

(c) complaints received under condition 10.

12. The books specified under condition 11 must:

(a) be legible;

(b) if amended, be amended in such a way that the original version(s) and any subsequent amendments remain legible and are capable of retrieval;

(c) be retained by the works approval holder for the duration of the works approval; and

(d) be available to be produced to an inspector or the CEO as required.

Definitions

In this works approval, the terms in Table 3 have the meanings defined.

Table 3: Definitions

Term	Definition
AEISG 2018	means the Australasian Explosives Industry Safety Group (2018) *Code of Practice (CoP): Storage and handling of UN3375*
AN	means ammonium nitrate.
ANE	means ammonium nitrate emulsion.
ANSol	means ammonium nitrate solution.
APF	means ammonia plant flare.
ASF	means ammonia storage flare.
AS 3780	means the Australian Standard AS 3780-2008 *The storage and handling of corrosive substances*, as amended from time to time.
ASTM A333	means the ASTM international standard A333/A333M-18 *Standard Specification for Seamless and Welded Steel Pipe for Low-Temperature Service and Other Applications with Required Notch Toughness, a*s amended from time to time.
books	has the same meaning given to that term under the EP Act.
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department administering the *Environmental Protection Act 1986* Locked Bag 10 Joondalup DC WA 6919 info@dwer.wa.gov.au
CSMP	means Contaminated Site Management Plan - CSBP Limited (CSBP) 2023, *Contaminated Site Management Plan*, Perth, Western Australia.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V Division 3 of the EP Act.
discharge	has the same meaning given to that term under the EP Act.
Environmental Compliance Report	means a report to satisfy the CEO that the conditioned infrastructure and/or equipment has been constructed and/or installed in accordance with the works approval.
EP Act	*Environmental Protection Act 1986* (WA).

Term	Definition
AEISG 2018	means the Australasian Explosives Industry Safety Group (2018) *Code of Practice (CoP): Storage and handling of UN3375*
AN	means ammonium nitrate.
ANE	means ammonium nitrate emulsion.
ANSol	means ammonium nitrate solution.
APF	means ammonia plant flare.
ASF	means ammonia storage flare.
EP Regulations	*Environmental Protection Regulations 1987* (WA).
NA	means nitric acid.
NAAN	refers to nitric acid ammonium nitrate plants 1, 2 and/or 3.
PLC	means programmable logic controller
premises	the premises to which this licence applies, as specified at the front of this licence and as shown on the premises map Figure 1 in Schedule 1 to this works approval.
prescribed premises	has the same meaning given to that term under the EP Act.
SCR	means selective catalytic reactor
suitably qualified engineer	means a person who holds a tertiary academic qualification in mechanical engineering and has a minimum of five years of experience working in the field of mechanical engineering.
VAM	means vapour absorption machine.
works approval	refers to this document, which evidences the grant of the works approval by the CEO under section 54 of the EP Act, subject to the conditions.
works approval holder	refers to the occupier of the premises being the person to whom this works approval has been granted, as specified at the front of this works approval.

END OF CONDITIONS

Schedule 1: Maps

Premises map

The boundary of the prescribed premises is shown in the map below (Figure 1).

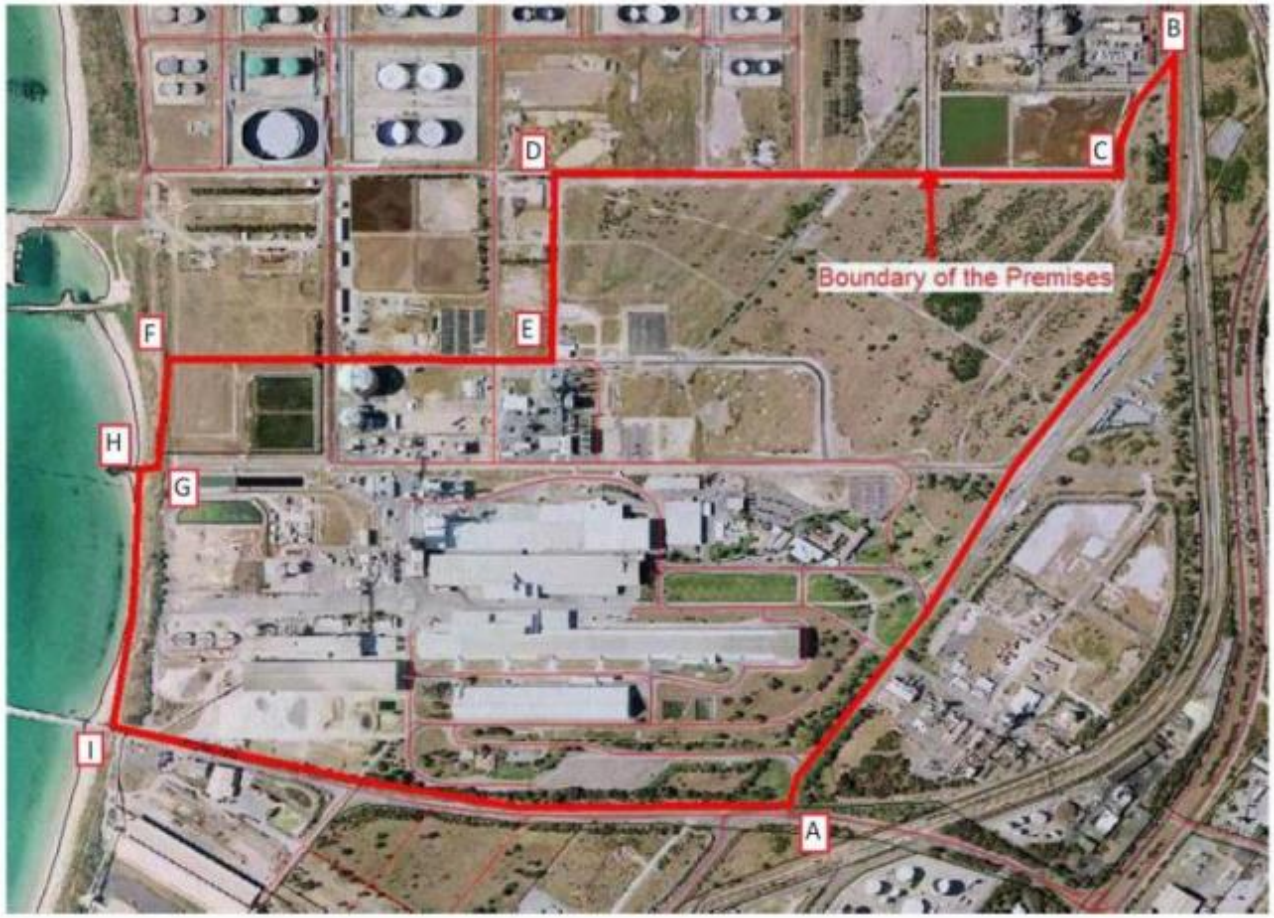

Figure 1: Map of the boundary of the prescribed premises

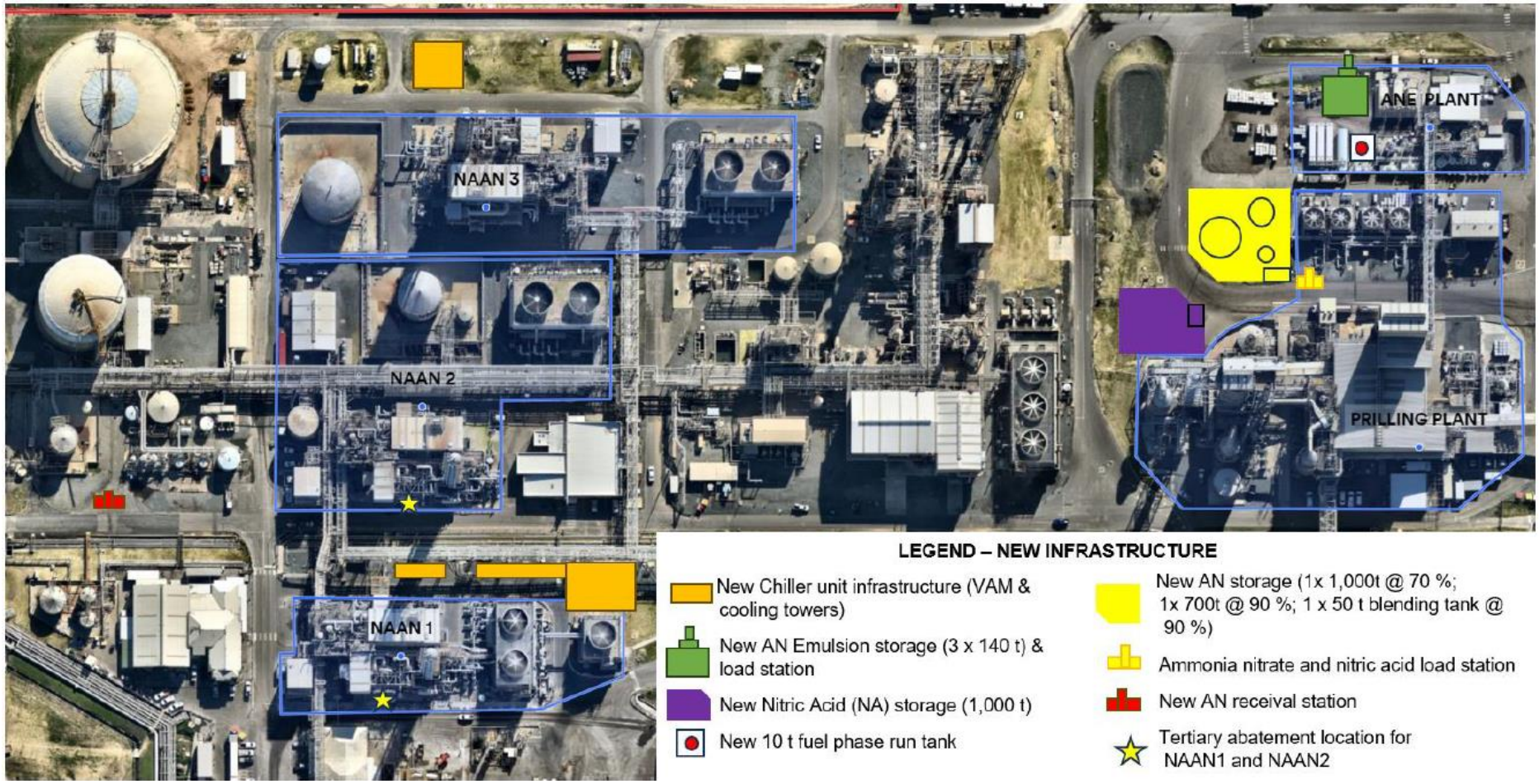

Figure 2: Indicative location of existing and proposed nitric acid and ammonium nitrate infrastructure

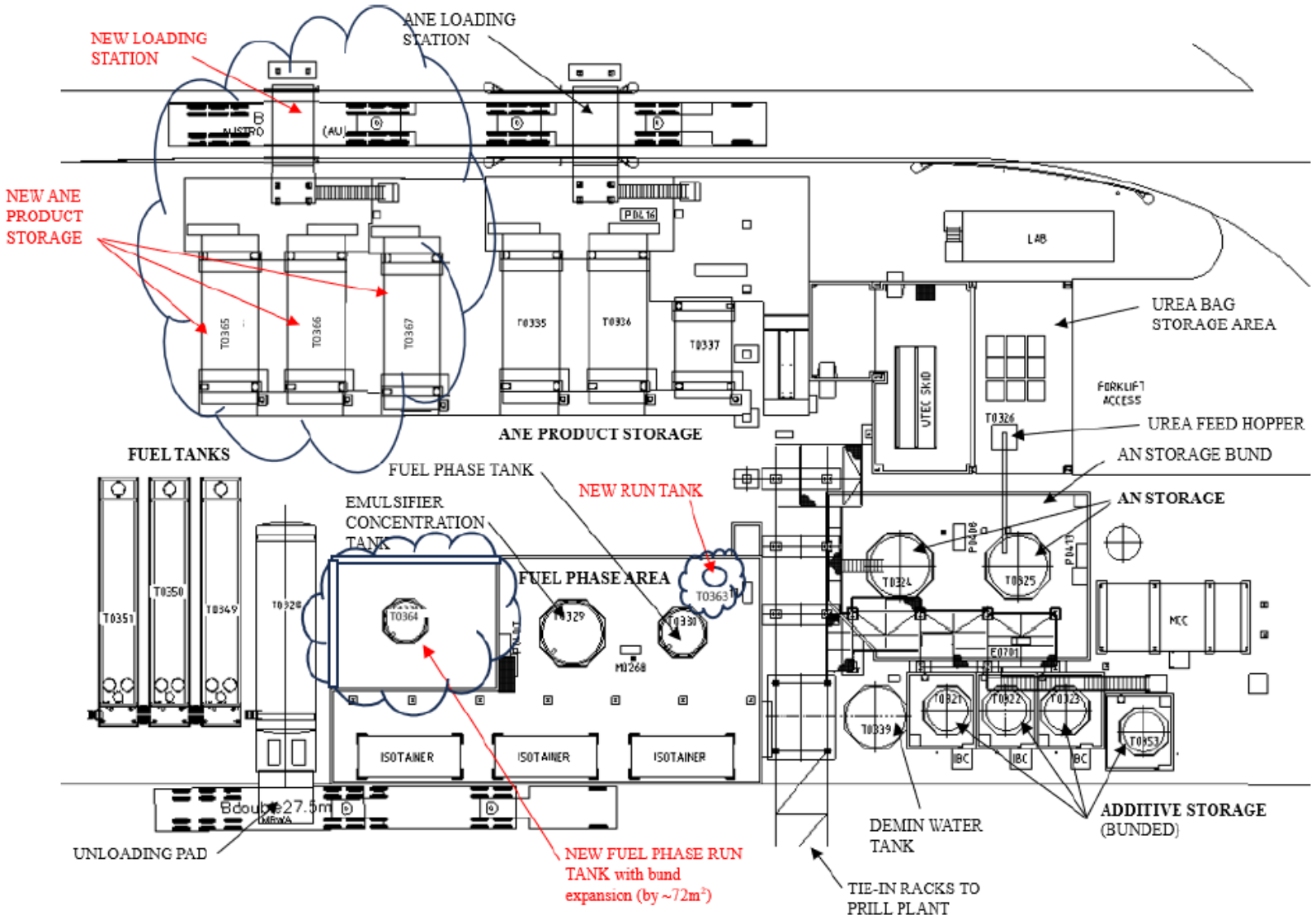

Figure 3: New infrastructure to support ANE expanded operations

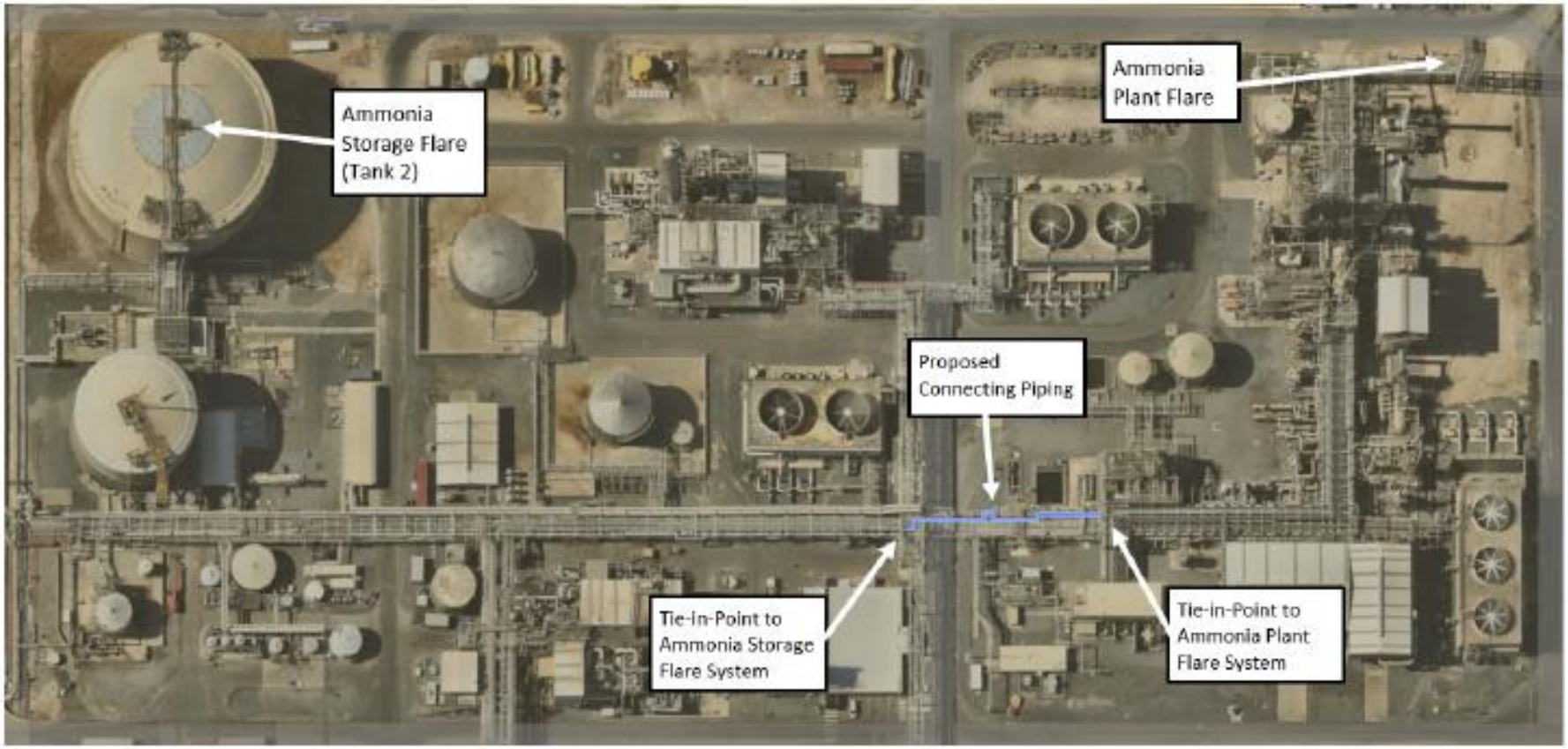

Figure 4: Proposed tie-in for Ammonia Storage and Ammonia Plant flare system

Schedule 2: Premises boundary

The corners of the premises boundary are the coordinates listed in Table 4.

Table 4: Premises boundary coordinates (GDA2020)

	Easting	Northing
1.	384141	6431978
2.	384679	6433260
3.	384601	6433066
4.	383785	6433041
5.	383782	6432738
6.	383231	6432731
7.	383206	6432562
8.	383181	6432531
9.	383137	6432090