THE YORK POTASH HARBOUR FACILITIES ORDER 201X

Applicant's Responses to Other Parties' Submissions for Deadline 6

Document 8.12

York Potash Limited

30 December 2015

YORKPOTASH
A Sirius Minerals Project

THE YORK POTASH HARBOUR FACILITIES ORDER 201X

APPLICANT'S RESPONSES TO OTHER PARTIES' SUBMISSIONS FOR DEADLINE 6

Issue/DCO Reference	Other Party's Submission Reference	Applicant's Response
Tata Steel UK Limited and Redcar Bulk Terminal		
Position of SSI	-	It is noted that these submissions depart from the previous approach and do not include SSI. As advised previously, the Applicant made contact with the Official Receiver following the announcement of receivership. Efforts in recent weeks to contact the solicitors for the liquidators for SSI have been met with no response.
Article 5	Paragraph 2a	The Applicant has no objection to this amendment.
Article 12(3)	Paragraph 2b	The Applicant agrees with this amendment.
Article 30(12)	Paragraph 2c	The Applicant has no objection to this amendment.
Article 38	Paragraph 2d	This reference was amended in the Applicant's draft DCO submitted for Deadline 6 (Document 4.1D). DLA Piper LLP have confirmed that the plan is now agreed (see e mail exchange in **Appendix 1**).
Schedule 3 (Part 3, 5 (3))	Paragraph 3a	The Applicant has no objection to this amendment.
Schedule 9	Paragraph 3b	The Applicant explained its position in Document 8.10 (see page 4).
Schedule 10	Paragraph 3c	Amendments to Schedule 10 have been agreed since Deadline 6. See **Appendix 1** to this document.
Constructability Notes	Paragraph 3d	Please see paragraph 20 of agreed Schedule 10 (Draft DCO Document 4.1D) which reflects the status of the constructability notes as requested by DLA Piper.
RBT	Paragraph 4	This issue was raised too late to be addressed for Deadline 6. Since the Deadline 6 submissions the Applicant has been in discussions with DLA Piper acting on behalf of RBT and agreement has been reached on a revised wording to Part 2 of Schedule 10. The position is set out in the e mail exchanges included in **Appendix 1** to this document which includes the text of the revised Part 2 of Schedule 10.

INEOS UK SNS Limited (DEA)/SABIC UK Petrochemicals Limited/Huntsman Polyurethanes (UK) Limited		
Schedule 9		
Statement of Issues	*Section 3*	*See Appendix 1 of Document 8.10 where the Applicant deals with the issues. The points are not repeated in this response. Only additional points are set out below.*
The need to cover planned pipelines which are known about at the time of the pipeline survey but which are constructed after the pipeline survey.	Paragraph 3.1	Any plans that Sabic and Huntsman have for additional pipelines are subject to the controls which already exist in respect of the pipeline corridor. Those pipelines, if they are implemented, will have the benefit of the protection of those controls as has been the case in the past.
The definition of "affected asset"	Paragraph 3.2	In paragraph 3.2.4 it is stated "*The routing of the proposed conveyor through the pipeline corridor, with all of its technical difficulties and congested uses is not a situation of the objectors' making, and they should not be expected to accept a lesser degree of protection simply because the Applicant has chosen to route its conveyor through this land*." This paragraph demonstrates the failure of the objectors to understand their own position. They too have chosen to route their pipelines through the pipeline corridor. That corridor is controlled by the arrangements with Sembcorp which provides protection for the pipelines concerned. However, the protection offered by the protective provisions in Schedule 9 go way beyond the protection currently afforded to the pipeline operators/owners. The Applicant is not clear on the point being made in paragraph 3.2.6(a). The approval of works details is related to the easement width because that is the current area in respect of which those pipelines have protection. The ability to approve the works details (as defined) goes far beyond the normal protection afforded within that easement width. In relation to paragraph 3.2.6(b) there has been various wording discussed between the Applicant and the Objectors and the Applicant has not been able to suggest any wording which has been satisfactory to the Objectors without it leading to a requirement to obtain approval from asset owners who are clearly not affected by the relevant works. The rights of access to maintain are not going to be affected and are protected by the provisions of paragraphs 21 – 23 of Schedule 9. In addition, paragraphs 10 – 16 specifically protect pipelines and are not constrained by the definition of affected asset. These provisions regulate activities such as trench excavation, piling etc.

		In relation to paragraph 3.2.6(c) the protection afforded by the 25 metre distance is more than sufficient and will accommodate the concerns expressed by the Objectors. The issue principally relates to dredging and the Applicant is able to commit to not dredging within 25 metres of the existing crossings. The closest crossing to the dredging area is the Breagh pipeline at 26.7 metres. The 25 metres incorporates a significant margin over the dredging that has already been permitted for the Northern Gateway project which authorises dredging as close as 14.6 metres to Tunnel No. 2. i.e. much closer than the Applicant's proposals. Please also see Appendix 4 to Document 8.3 and Appendix 3 to Document 8.5. In relation to paragraph 3.2.6(e) the Objectors are now suggesting that paragraph (e) (which was not the Applicant's drafting) can be deleted and the Applicant agrees with this.
The extent of definition of "apparatus"	Paragraph 3.3	It is not accepted that the definition of apparatus should be widened to encompass assets other than the pipelines along the pipeline corridor for which the protective provisions in Schedule 9 are specifically designed. The inclusion of a wider definition of apparatus in the Dogger Bank Teesside A&B DCO may well be because the protective provisions for Dogger Bank related to the Wilton Complex generally and were specifically directed towards those varied and widespread interests, and not the specific interests of the pipeline corridor.
The extent of land shown on the pipeline corridor plan	Paragraph 3.4	The distinctions drawn in respect of the pipeline corridor are not arbitrary, as suggested in paragraph 3.4.6 of the Objectors' submission. The protective provisions do not include land outside the Order land because there is no necessity for protective provisions for land beyond the Order land; no physical works will be carried out on that land. The Wilton Complex is identified and protected in relation only to a particular concern relating to impact on access (see paragraphs 21 and 22). The protective provisions in Schedule 9 are otherwise solely concerned with the pipeline corridor within the Order land. The pipelines elsewhere within the Order land referred to by the Objectors are within the land to be utilised for temporary works and are adequately covered by article 30. Those pipelines will not be in close proximity to any potentially invasive works.
The definition of the "pipeline survey"	Paragraph 3.5	See Document 8.10 (page 10).

The scope and process of the pipeline survey and recovery of costs relating thereto	Paragraph 3.6	In respect of paragraph 3.6.2 there is in fact no difference between the Applicant and the Objectors. The Applicant previously used the term "relevant work" but then changed it to "authorised development" as being more appropriate in that context. The Applicant has never proposed to use the term "authorised works" in paragraph 3(1). As far as the Applicant understands it, both parties agree with the term "authorised development." Please see Document 8.10 (pages 10 and 11) for the response to the remainder of paragraph 3.6.
Whether the minimum clearance should relate to "pipelines" or just "affected assets"	Paragraph 3.7	Please see Document 8.10 (page 11).
The inclusion of paragraph 25(9) (replacement assets and rights)	Paragraph 3.8	Please see Document 8.10 (page 11).
Paragraph 26 – whether, if owners etc. dispute the quantum/terms of the insurance the development can commence prior to the expert determination being completed	Paragraph 3.9	Please see Document 8.10 (page 11).
The inclusion of parties whose material is carried through the pipelines in the indemnity provisions	Paragraph 3.10	Please see Document 8.10 (page 12). The Objectors refer to the principle of indemnifying a pipeline owner for its losses contained in in paragraph 28(2) of Schedule 9. By virtue of paragraph 28(2) the pipeline owner is indemnified for, inter alia, consequential losses. If those consequential losses extend to losses relating to the material running through the pipeline then they will be recovered under this provision from the Objectors. That provides no basis however for extending the parties who have the benefit of the indemnity to parties other than those for whom the protective provisions have been extended to and negotiated with i.e. the pipeline owners and operators. This would extend the principle of indemnity beyond its normal scope and would be inconsistent with the approach taken in respect of indemnities for other parties in this DCO and indemnities in other DCOs.
Other Submissions		
	Annex 3	In this Annex the Objectors repeat submissions made at the first CA and DCO hearings in September.

Compulsory Acquisition Private Loss –v– Public Benefit	Paragraph 2	In respect of item (c) of paragraph 2.1.1 reference should be made to paragraph 25(1) of Schedule 9 which, following discussions with the Objectors, was amended to prevent the utilisation of any compulsory acquisition powers contained in articles 24 and 25 in respect of the protected land, which includes the Objectors' interests. It effectively confines the power to unknown rights. It is not clear therefore why the Objectors, in paragraph 2.2.3, continue to refer to articles 24 and 25 in respect of its concerns. On this basis it is not clear what the context is for the submissions made by the Objectors in relation to compulsory acquisition. In respect of paragraph 2.2.3(e) the ExA will be aware that a change was made to the draft DCO for Deadline 3 (2 October 2015) (Document 4.1B) which made it clear that the 20 metres flexibility referred to in this paragraph does not apply to the conveyor (Works No. 4). It is therefore not correct to say that the conveyor may deviate laterally by 20 metres. In respect of paragraph 2.2.3(g) in relation article 30, please see amendment to the definition of "building" in article 2 of the draft DCO submitted for Deadline 6 (Document 4.1D) which clarifies that for the purposes of article 30, the term "building" shall exclude pipelines or related apparatus. In relation to paragraphs 2.2.4 - 2.2.6, Bond Dickinson here repeat submissions made at the first CA hearing. The Applicant would refer to paragraphs 2.10 – 2.16 of the Applicant's Note of Oral Submissions (Document 8.5) however, as referred to in response to paragraph 2 above, the continuing submissions of Bond Dickinson in relation to CA issues are now superfluous. Not only has the Applicant agreed to what it believes are comprehensive and extensive protective provisions but, crucially, the amendments agreed rule out the prospect of the Applicant compulsorily acquiring the Objectors' interests.
Comments on the ExA Draft DCO		
Article 6(1) of the Draft DCO	Page 3	As is eluded to in the Objectors' submission the inclusion of this article is generally accepted for harbour developments. The Applicant does not agree that the inclusion of ancillary works is linked to the ability to become a harbour authority and notes that the Tees Port Authority is content with the inclusion of the article. Since the first draft DCO, article 6 has been amended and in particular the Applicant has limited the scope of the article in relation to the pipeline corridor in a manner it

		considers appropriate (see more restricted 6(3)). The Applicant had previously understood from the Objectors that this was acceptable.
Conveyor Routing	Page 4	The Applicant has previously explained its position in relation to the conveyor route. Please see Appendix 2 of Document 8.5. It is to be noted that the Objectors have not themselves sought to avoid new construction within the pipeline corridor for their own purposes. For example, the Breagh pipeline (now owned by Ineos) was constructed within the pipeline corridor in 2012 which involved construction immediately adjacent to the GDF major accident hazard pipeline for a run of 2 kilometres, all governed by the Sembcorp "permit to work" system which does not have the same extensive governance as is afforded by the protective provisions set out in Schedule 9.
BP CATS		
Statement of Difference	Entire	Please see **Appendix 2** to this submission.
Historic England		
Amended Requirement 10	Entire	The Applicant has no objection to the revised wording suggested by Historic England except that the references in suggested paragraph B) and C) to "condition" should refer to "requirement".
MMO		
Submission dated 14th December 2015	Entire	The Applicant has no comment on these submissions.
Submission dated 16th December 2015	Entire	The letter of 16 December confirms that the MMO is content with the Applicant's change to the licence period for the Deemed Marine Licence. The rationale for this is contained in the Applicant's explanation of changes to the DCO (Document 8.10).
Environment Agency		
-	Entire	The Applicant has no comment on these submissions.

RCBC		
Letter dated 10th December 2015 Conveyor Bridge	Entire	The Applicant is pleased to note that the Council has, following positive and productive discussions and negotiations with the Applicant, felt able to withdraw its objection to the conveyor bridge.
Letter dated 15th December 2015	Entire	The Applicant has no comment.
Natural England		
-	Entire	The Applicant has no comment.
GTC Group of Companies		
-	Entire	The Applicant has no comment.
Trinity House		
-	Entire	The Applicant has no comment.
Oil and Gas Authority		
Submission of 24th December 2015	Entire	The Oil and Gas Authority has submitted a late representation following lobbying by the CATS Parties. The representation makes it clear that the authority is not familiar with the DCO process, nor indeed the Applicant's proposals. In so far as the authority are simply pointing out that the CATS Pipeline makes an important contribution to gas supply to the UK, then the contents of the representation are not disputed by the Applicant. The Applicant would point out however that the authority is not in a position to make any judgment as to the acceptability or otherwise of the Applicant's proposals and their impact on the CATS Pipeline. In order to assist in informing the authority of the process, a representative of the Applicant met with the authority at its offices on 30 December 2015. At that meeting it became apparent that the representation by the authority was prompted by contact from the CATS Parties with whom the authority were engaged in any event in relation to the transfer of ownership of the pipeline. The contact was in the form of a single telephone conference on 8th or 9th December 2015 and the authority was supplied with only partial information by the CATS Parties which included only the CATS Parties' risk assessment. In particular, the information supplied to the authority by the CATS Parties does not appear to have included the protective

		provisions nor the agreed constructability notes. The authority is clearly not in a position to engage in consideration of the merits of the respective parties' positions. Nor would one expect it to do so, given that it is a regulating and licensing authority and does not have a health and safety function.

APPENDIX 1

Rolfe, Victoria

From: Green, Ian <Ian.Green@dlapiper.com>
Sent: 22 December 2015 16:02
To: Thomson, Morag; York Potash Harbour; Robert Ranger
Cc: william. woods (william.woods@siriusminerals.com); James Barrie; Hutton, Laura-Beth; andy.pickford@tatasteel.com; garry.omalley@rbt-port.co.uk
Subject: RE: York Potash Harbour Order [DLAP-UKMATTERS.FID3800231]

Dear Robert,

I can confirm that these amendments to Part 2 of Schedule 10 are agreed by Tata and RBT. The plan (3.16) as referred to below is also agreed.

Kind regards,

Ian Green
Legal Director

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E ian.green@dlapiper.com

DLA Piper UK LLP
www.dlapiper.com

From: Thomson, Morag [mailto:MoragThomson@eversheds.com]
Sent: 22 December 2015 13:54
To: York Potash Harbour; Robert Ranger
Cc: Green, Ian; william. woods (william.woods@siriusminerals.com); James Barrie; Hutton, Laura-Beth
Subject: York Potash Harbour Order
Importance: High

Robert

I refer to the submissions for Deadline 6 made on behalf of Tata Steel UK Ltd and Redcar Bulk Terminal by DLA.

In paragraph 4 a. DLA made reference to an issue which they had raised with us too late for us to address in advance of Deadline 6, relating to security protocols for plots 9 and 10.

We have been in discussion with DLA and their clients and have agreed revised wording to Part 2 of Schedule 10 to cover the issue. That revised wording is set out at the end of this e mail and is agreed. The opportunity has been taken to pick up two typographical errors also (in the heading and in 23(2)).

In addition, we can also confirm that the revised plan relating to access arrangements for the RBT conveyor (PB1586-SK181 Rev D) which we submitted for Deadline 6 has also been agreed.

It is our understanding that there are now no unresolved issues between the Applicant and Tata Steel UK Limited/RBT. The Applicant will restate the position in the 30 December submission but thought it might be helpful for the Examining Authority to be aware in advance.

This e mail has been copied to DLA in order that the position may be separately confirmed.

Kind regards

Morag

PART 2

FOR THE PROTECTION OF REDULCAR BULK TERMINAL

22. The following provisions of this part of this Schedule shall have effect for the benefit of any owner of the Redcar Bulk Terminal.

23.—(1) The undertaker shall not commence the construction of any part of Works No.4 within the conveyor route (northern) or any part of Works No.5 which are to be situated within or above plots 9 and/or 10 identified on the land plans without first agreeing (and thereafter implementing) with the owners of the Redcar Bulk Terminal a protocols to:

(a) govern access for the undertaker and the owners of the Redcar Bulk Terminal to the area shown on Document 3.16 which protocol shall have due regard to proper security and operational requirements of the Redcar Bulk Terminal and the undertaker: and

(b) ensure that the construction and use of the authorised development within the said plots 9 and 10 incorporates the appropriate health, safety and security requirements of the owner or occupier of Redcar Bulk terminal and the undertaker; and

(c) locate, protect and (to the extent required to ensure continuation of supply) replace, relocate and reconnect any services/service media within the said plots 9 and 10.

(2) In the event that the undertaker considers that the owner of the Redcar Bulk Terminal owner has unreasonably withheld its agreement under sub-paragraph (1), the undertaker may refer the matter to arbitration for determination under article 40(1) and paragraph 21 of Part 1 of this Schedule.

Morag Thomson | Partner | Planning and Infrastructure Consenting

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APPENDIX 2

APPLICANT'S RESPONSE TO DEADLINE 6 SUBMISSION OF THE CATS PARTIES

This note responds to the submission made by BP CATS for Deadline 6 and does so by reference to the paragraph numbering and headings set out in that submission.

1 INTRODUCTION

1.1 -1.3 No comment.

2 OVERVIEW

2.2
The Applicant notes the clear statement by the CATS Parties that they support the granting of the DCO with the northern alignment of the conveyor and their only difficulty is with the southern route.

2.3 – 2.7
The Examining Authority will be aware that it is not correct to say that the same benefits to the project would be secure by the northern route as the southern route, if that is what the last sentence of paragraph 2.3 is suggesting.

The Applicant has explained in previous submissions that the southern route is far superior in operational terms. Indeed, that much is apparent from a superficial look at the project plans. The southern route is self-evidently better, involving a straighter conveyor, less infrastructure, fewer corners and transfer towers and less product degradation. It is disingenuous to suggest that there has been insufficient material produced to demonstrate the obvious. The southern route is planned along a corridor the main purpose of which is to accommodate linear infrastructure for which it is well designed and suited.

The operational benefits are of significance in relation to a scheme which will rely on external funding, primarily from private sources. The project needs to demonstrate appropriate returns to potential investors to lever in finance as soon as possible.

Whilst it is acknowledged that the southern alignment involves a higher level of risk simply due to greater overlap in infrastructure alignment, what is not agreed is that the difference in level of risk is of significance and outweighs the clear benefits of the southern route. It is clear to those advising the Applicant that BP Cats have significantly overstated the risk based on a theoretical model which factors in a much higher level of human error than is justified having regard to the comprehensive protective provisions proposed.

3. MATTERS NOT AGREED WITH THE APPLICANT

3.1 – 3.3
These paragraphs correctly set out the areas of agreement and disagreement. However, in paragraph 3.1, RHDHV are described as the Applicant's "contractor". As the CATS Parties are aware, the advisors within RHDHV who have been advising the Applicant in relation to this matter are specialist risk and safety advisors. Relevant capability statements of RHDHV and the lead advisor within RHDHV, Johan van Middelaar, are contained in Annex 1 to this submission. It can be noted that there is specific experience in relation to pipelines within the team advising and apparent from the CV of Johan van Middelaar.

4. ROUTE SELECTION

4.1 – 4.6
This section simply confirms the position of the Applicant. Whilst the southern route is clearly superior operationally, there is significant existing infrastructure along that route and the feasibility of that route cannot be completely established at this stage. The northern route is therefore an insurance, albeit sub optimal, to allow the delivery of the York Project scheme from mine to coast

to be achieved within a fundable timescale. To delay the harbour, by the need for a significant amendment to the DCO to change to a northern route if the southern route proved not to be feasible, would delay the whole project and severely impact upon project funding and hence deliverability.

5. SEVERITY OF IMPACTS

5.6
The calculation and assumptions referred to in paragraph 5.6 are not agreed. They have not been verified and are not capable of being confirmed.

5.7
The crux of the disagreement between the Applicant and the CATS Parties is in paragraph 5.7. In that paragraph reference is made to the study commissioned by the CATS Parties which is described as independent. It was a commissioned study on the same basis as RHDHV were commissioned to advise the Applicant in this matter. There is no difference in extent of independence between the two sets of advisors.

In paragraph 5.7 it is stated that the CATS Parties advisor's opinion was that the southern route would exceed the tolerability threshold in R2P2 and would be classed as "intolerable". This is in contrast to the advice of RHDHV which is that the risk would be below the relevant threshold and be classified as "tolerable" (see Document 8.11).

5.8
Again, the assertion in this paragraph is not capable of being verified.

6. OPERATIONAL IMPACT

6.1 – 6.12
Paragraph 6.1 is an example of the tendency of the CATS Parties to overstate the risk. There is an assumption in the second sentence of this paragraph that any contact with the pipeline would invoke the protective provisions relating to damage to the pipeline. That is not the case – there may be benign contact which would not give rise to the need to invoke that protective provision.

The status of the cats pipeline as a Major Accident Hazard Pipeline (MAHP) is not unusual and does not set it apart. There are other such pipelines within the pipeline corridor, such as the Breagh pipeline (now owned by Ineous) and the GDF pipeline. The owners and operators of the Breagh pipeline do not object to the southern corridor subject to the protective provisions they feel appropriate (see Bond Dickinson's submissions on behalf of DEA now Ineous).

It is notable that the HSE, whom the Applicant did consult in advance of its application has not objected to any aspect of the Applicant's proposals.

It is important that the actual operational realities of the situation are fully understood rather than reliance being placed solely on theoretical models. We are not dealing here with a pipeline running through an environment which is protected solely for the use of the cats pipeline. It is a linear infrastructure corridor which has been, and continues to be, used for a wide variety of pipelines both above and below ground, including MAHP. There is therefore considerable experience of construction activities taking place within the pipeline corridor. They are a regular feature of the corridor and are controlled through the authority of Sembcorp and its "Permit to Work" system. The regime has successfully allowed the construction of pipelines since the CATS Parties pipeline was installed. The protective provisions in Schedule 9 of the DCO provide even more protection for the pipelines.

In particular, whilst much is made by the CATS parties of the status of their pipeline as an MAHP, construction in close proximity to such pipelines is not unusual.

An example of this is seen within the pipeline corridor itself. The Breagh pipeline, itself an MAHP, was installed, in 2012, immediately adjacent to the GDF 24" gas pipeline which was also an MAHP. for a length of 2km.

The required trench for the Breagh pipeline was dug between the road and the GDF pipe using a 20 tonne excavator. The trench was typically 1.5 to 2 metres wide and 2.5 to 3 metres deep. Pipe

laying side boom machines were used to lift and lower the new pipes and 20 tonne excavators again used to backfill and compact. Some photographs of the construction activity at the time are included in Annex 2 to this Appendix.

This all serves to demonstrate that significant construction activity in proximity to pipelines, including the Cats pipeline and other MAHP, is normal within the corridor and yet the CATS parties have not been able to point to any incident on site which has adversely affected its pipeline or any other MAHP. In addition, owners and operators of other MAHP do not have an objection in principle to the southern route, subject to appropriate protective provisions.

It is important to remember that the Applicant is not seeking to lay a continuous pipeline along the pipeline corridor requiring long and extensive trenching. It is simply seeking to accommodate its conveyor footings which are spaced approximately 30 metres apart, the position of which can be longitudinally adjusted by up to 15 metres to avoid obstructions. None of the conveyor footings will be within the easement of the CATS pipeline. Whilst there will be machinery required to lift the conveyors into place this will be no more intrusive than the nature of the machinery used for the installation of the Breagh pipeline. Whilst the cranes involved may be larger the bearing pressure on the ground will be no greater due to the spread of the load over a greater footprint.

It is also of interest to note, having regard to the emphasis placed in section 7 of the BP CATS submission, that part of the pre-commencement construction requirements under the Sembcorp "Permit to Work" regime involve the identification of the precise alignment of existing assets which is normal procedure.

7. QUANTITATIVE RISK ASSESSMENT

For reasons set out above it is felt that reliance solely on a theoretical risk assessment does not provide a realistic view of the situation. Notwithstanding this, the Applicant has taken advice in relation to the QRA carried out on behalf of the CATS Parties and the response is contained in Document 8.11. The contents of that document are not repeated below.

The Level Of Risk Mitigation That Can Be Claimed For Administrative Controls (In The Form Of Protective Provisions)

7.4
In the final sentence of paragraph 7.4 reference is made to agreement with YPL. That is correct save that the word "simple" is missing and should be inserted between "to" and "routine".

7.5
It is not agreed that the approach of the CATS Parties in relation to frequencies in its QRA takes into account all the protective provisions. In the Applicant's view, it clearly does not.

7.6, 7.7 and 7.8
It is not accepted by the Applicant that the protective provisions are effectively a single layer of protection (see Document 8.11 paragraph 5.3).

Multiple, including independent, layers of protection exist in Schedule 9, such as:-

- pipeline survey by Applicant (Para 3)
- owners input into survey (Para 3(3))
- work detail consents (see definition of "works details" in paragraph 2 which is extensive) (Paras 4,5 and 6)
- pipeline settlement and stress analysis (Para 9)
- physical identification of pipeline by hand digging where appropriate, identification of crowns etc. (Para 9)
- engagement of independent QA Inspector (Para 9(3))
- controls throughout construction (Paras 10 – 17)
- protection by fencing (Para 11)
- monitoring for damage (Para 18)
- the authorised development must be carried out in accordance with the constructability notes the contents of which have been agreed with the CATS Parties (Para 32)

In addition to the above, there are the normal management and supervisory processes that are required to be implemented in order to comply with regulations relating to construction.

Much is made of the pipeline survey being a crucial phase and a single point which might be determinative. Whilst that, as a premise, is rejected, three points arise:

i The provisions in Schedule 9 relating to the pipeline survey have been agreed with the CATS Parties. The solicitors acting for Huntsman/Sabic/DEA have requested greater participation in the pipeline survey by their clients than CATS Parties have. If the Examining Authority feels it appropriate then paragraph 3 of Schedule 9 could be amended as requested by Bond Dickinson to provide greater participation. The amendments required are set out in Annex 1 to Appendix 1 of Document 8.10.

ii A failure to identify the alignment of the cats pipeline (as a single determinative event, as CATS parties would have it) surely could also be similarly determinative in respect of the northern route which has a significant length of interface with the cats pipeline, and yet, the northern route is considered by the CATS Parties not just to be more acceptable, but wholly acceptable, with no objection to it taken.

iii Crucially, it is important to note that the intrusive operations, being the excavation for the conveyor footings, will all, in any event take place outside of the CATS easement.

The impact of the CATS Parties' advisor's view of the identification of the pipeline alignment, as a single determinative event, can be seen on table 6-1 of Appendix 1 to Document 8.11. That table compares the QRA done by the CATS Parties' advisors and that done by RHDHV. As can be seen, the largest difference between the two analysis in relation to the southern route relates to piling (C1 on/off, 7.92E-4 (CATS) v 1.44E-7 (RHDHV)) the principle factor responsible for those figures is inappropriate piling due to error in location of pipeline. If the pipeline locating provisions are considered to be satisfactory (either as proposed by the Applicant or proposed to be amended by Bond Dickinson) then that factor alone would very significantly reduce the 7.92E-4 value for C1 on/off in the CATS Parties assessment and would be likely, on its own, to bring the risk to below the HSE threshold.

The Impact of over Familiarisation and Normalisation of Risk on Human Error Rate for repetitive Activities

Please see Document 8.11.

Base Input with Respect to the Risk Presented by Vehicle Movements

Please see Document 8.11.

8. INDEMNITY

The Examining Authority is referred to Appendix 2 to Document 8.10 in respect of the arguments in relation to the appropriate form of indemnity. The Applicant maintains its objection to a different form of indemnity to that provided for, and acceptable to, all the other parties (including those in a similar position to the CATS parties).

There is a broader point relating to the indemnity and insurance provisions. The Applicant is required by the Protective Provisions to provide insurance of an appropriate level to effectively secure the indemnities. In order to obtain such insurance it will be necessary to inform the insurer in relation to all details of the proposal including levels of risk. If, when the further feasibility work has been carried out, the level of risk associated with the southern route were to be more akin to the CATS Parties' opinion rather than the Applicant's advisor's then there would be implications for insurability.

The Applicant understands that classification of the risk as "intolerable" within the HSE guidelines could effectively render insurance for that route a commercially unviable proposition. Accordingly the assessment of risk which will be undertaken when seeking to obtain insurance is another aspect of establishing the feasibility of the southern route.

The Applicant is confident, based on the advice it has received that the southern route falls below the HSE threshold and will prove to be an acceptable ("tolerable"), and therefore insurable, risk. If it proves not to be then the southern route would not proceed.

9. CONCLUSION

a) The Examining Authority is referred to Document 8.11 and, specifically Appendix 1 in relation to the technical arguments relating to the risk modelling.

b) It is self-evident that the southern route is operationally superior.

c) The CATS Parties have overstated the risk of the southern route and their concerns are not shared by other owners/operators of MAHP similarly located who do not object to the southern route subject to appropriate Protective provisions.

d) Construction activity along the southern route is a usual occurrence which takes place in a controlled fashion with due regard to other corridor users by virtue of the Sembcorp "Permit to Work" system. The system includes the identification of the location of existing assets as a normal part of the pre-construction process. The Protective Provisions in Schedule 9 offer even greater protection.

e) There is no basis to offer a greater form of indemnity to the CATS Parties than that offered to, and agreed by, other pipeline operators which is in line with indemnities in other DCO.

f) The Applicant is confident, based on the advice it has received, that the southern route falls below the HSE threshold and will prove to be an acceptable ("tolerable"), and therefore insurable, risk. If it proves not to be then the southern route would not proceed.

Royal HaskoningDHV
Enhancing Society Together

Curriculum Vitae

Johan van Middelaar

Industry, Energy & Mining
Senior Safety Manager

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Johan van Middelaar is a highly experienced HSE Manager with an extensive, international track record in Health, Safety and Environment (HSE). In a career spanning the Royal Navy and the maritime sector initially, he has worked for some of the world's leading industry and consultancy firms since 1992. Johan has acquired extensive experience and knowledge across Industrial Safety, Marine Safety on the areas of Policy making, Master planning, Industrial and Marine development, Conceptual design and HSE Risk Assessment.

Johan's key qualification is to enhance HSE into conceptual design and to consult on strategic level beyond the management system. Johan is well known for combining his managerial capabilities with a hands-on approach. Johan advises and participates as HSE Manager at leading international industry firms, authorities and scientific institutions. His expertise is sought by the National Safety Board frequently. As a short term consultant he is operating for the United Nations, including participation in UN-missions internationally. His views on safety are highly sought-after and he is co-author of several papers and international guidelines on safety.

Nationality
Dutch

Years of experience
25 years

Years with Royal HaskoningDHV
14 years

Professional memberships
Member of National Dutch Safety Association (NVVK).
Chairman of NVVK working counsel "Loss Prevention".
Board member of "Expert group Safety" of NL Engineers.

Special skills
Oversees complex situations, analytical skills.
Able to translate complex situations into practicable solutions.
Profound knowledge and experience on Safety.
International experience.
High integrity.

Languages
English (excellent), German (good)

Professional experience

Industry

> 1992 to date (Netherlands, Belgium, Spain, Turkey, Latvia, Estonia, Middle East, Bangladesh, Pakistan, Canada, Mid America's).

– Policy making, Master planning, Industrial development, Conceptual design w.r.t. HSE
– HSE Management and High Reliability Organization
– Risk Assessment (Qualitative, Quantitative) and Risk Mitigation
– Scenario Analyses and Domino effects w.r.t. spills of hazardous materials (toxic, flammable, explosive)
– HSE (Self) Assessment, including HSE management, Technical Integrity, Safety Culture.
– Emergency Preparedness and Response w.r.t. hazardous materials, incl. firefighting capabilities and alarm systems
– HSE / Risk based Policy land use planning
– Safety Culture and Improvement programs
– Occupational Health & Safety
– Interim (Operational) HSE Manager
– Impact Assessment w.r.t. Health, Safety and Environment
– Due Diligence audits, Compliance reviews
– Second opinion
■ Role: Project HSE Manager, Senior Consultant

Marine operations

> 2001 to date (global).

– Master planning, (pre) FEED, (conceptual) design of ports, waterways, terminals, port area's
– Marine Risk Assessment, HSE study, Hazard and Effect Management, Emergency Response
– Emergency Preparedness and Response w.r.t. hazardous materials, incl. firefighting capabilities and alarm systems
– HSE / Risk based Policy land use planning
– Marine and Occupational Health & Safety documents
■ Role: Project Manager, Senior HSE Consultant

Incident Investigations

> 2000 to date (global).

– National Safety Board: fire at Chemie-Pack, explosion at Shell Chemicals
– Ship-ship collision (FPSO, oil tanker, barge, ferry)
– Pipeline integrity (gas leak, onshore)
– Gas leak, gas explosion (industry, onshore)
– Personal injury (public domain, industry, oil & gas, drilling)
– Process incidents (loss of containment, - technical integrity)
– Meta-analysis major accidents in process safety industry; author report "Trend or Incident" (public available)
– Airliner: reference on request
– Railways: collapse of civil construction (railway underpass)
– Municipality: series of incidents remotely operated bridges
– Trainer Incident Investigation, Learning from Incidents
■ Role: Project Manager, Senior Investigator, Coach

Emergency Preparedness and Response

> 2009 to date (Netherlands).

– Development of major accident scenario's for the National Crisis Policy Team in order to assess the potential impact of an accident and consult on the emergency response

> 2006 to date, United Nations (global).

– Short term consultant for United Nations (Joint Environmental Unit of Coordination of Humanitarian Affairs (OCHA) i.c.w. UNDP and UNEP. Expert Chemical Accidents and Environmental Impact. Development of Flash Environmental Assessment Tool (FEAT). Participation in UN missions internationally
■ Role: Expert/Consultant Prevention and Chemical Accidents

Safety Authorities

> 1992 to date (Netherlands, Israel).

– Ministry of Environment (Major Hazards). Policy making, Spatial – and Master planning, Hazardous substances
– Ministry of Social Affairs and Employment. Organisation of international "Mutual Joint Visit" on Enforcement Seveso II
– Ministry of Environment, Israel. Environmental issues in the industrial area in Ramat Hovav.
– Ministry of Economic Affairs (international investments). Study impact of environmental legislation on 'decision making' for allocation international enterprises in NL.
– Dutch Ministry of Social Affairs and Employability. International benchmark and feasibility study with regard to 'environmental and safety ranking'.
– Safety North Netherlands (alliance northern provinces). Business case opportunities and employability in the field of Safety and Security.
■ Role: Project Manager, Senior Consultant

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Qualifications

2015 Safety Manager (SKO certificate; registration number 36986, date of expiry 23-2-2020).

2015 Lecturer at Copla NL (Safety, Fire and Explosion).

2008 Basic Offshore Safety Introduction and Emergency Response Training (NOGEPA 0.5A), incl. OPITO and OLF accepted upgrade for the Norwegian shelf, Falck Nutec, the Netherlands

2007 People Management Training for Managers, Jansse & Koekoek, the Netherlands

2006 Professional Organisation and Facilitating, AM Training and Coaching, the Netherlands

2003 Strategy and Culture, Management and Leadership of professional organisations, Focus, the Netherlands

2002 Auditing Quality, Safety and Environmental Management Systems, Det Norske Veritas (DNV), the Netherlands

2001 University of Delft, the Netherlands, post graduate "Additional Risk Analyses", Master of Safety Health & Environment). Risk assessment on major hazards.

1999 Post Hoger Onderwijs Veiligheidskunde (Masters), NL, Management Occupational Health and Safety (HVK). Safety Manager (University-level). Master's thesis awarded for best quality project in the Netherlands.

1996 Basic Safety – level 1 in petrol chemical industry, PBNA, the Netherlands

1994 Hogeschool Amsterdam (Bachelor), the Netherlands, post graduate degree Environmental Management, specialisation on Air (legislation, health, pollution, emission reduction and control techniques).

1993 Hogeschool Amsterdam, the Netherlands, post graduate degree Environmental Management. Environmental – general (management, legislation, auditing, hygiene, pollution, best available techniques.

1984 High Technical Nautical College (HTS), the Netherlands, B.A. Degree Technical Engineering, specialisation Navigation.

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Sub-sector Pipelines

The production of gas is the first step in the oil and gas cycle which ends when it reaches its final destination in the home or industry. Between the source and user is the pipeline infrastructure and an increasing demand for a logistic service portfolio.

The challenge

Planning, designing and constructing oil and gas pipelines involves a great variety of complex social and environmental challenges. Royal HaskoningDHV's multidisciplinary experts in the oil and gas industry have experience in the whole life cycle and can help you resolve these challenges.

We understand the oil and gas value chain, from offshore platform and tanking facilities, pipelines to shore and pipelines onshore with booster stations. Pipelines have many potential impacts on land and people. In more densely populated areas public opinion is a critical factor. Land acquisition can be complex, with issues around ownership of land and buildings, multiple landowners per plot, undefined boundaries and difficulties with assessing the value of property. The project may require the displacement of a local population, or affect the livelihood of local households, communities and businesses. Then, during the construction phase, emissions of pollutants, noise and waste can be environmentally and socially sensitive.

Our approach

Royal HaskoningDHV supports clients in finding innovative solutions for delivering their projects, while respecting valuable environmental areas and neighbouring communities. We can help you communicate with landowners and manage key issues including temporary disruption of land use, population resettlements and related compensation mechanisms. We can also advise on project compliance with international standards and managing health and safety risks during construction and site operation.

The sustainability of our living environment is a key concern in today's world and environmental considerations play a significant part in pipeline development and routing. Sustainable safety is at the heart of Royal HaskoningDHV's approach to supporting our clients in all aspects of the project lifecycle.

Our solutions

Royal HaskoningDHV has extensive international experience in all aspects of the gas and oil industry and understands that technical requirements, information management and cultural and social attitudes vary according to the country.

Stakeholder engagement to promote awareness and understanding is key to successful land easement and acquisition, and requires good, open, two-way communication. Our dedicated teams include legal and

communications experts to help you with social impact assessments and livelihood restoration frameworks to improve stakeholder engagement, as well as contractual support.

Clients and scope of services

Royal HaskoningDHV is a leading independent, international project management and engineering consultancy service provider. Each year we contribute to the delivery of some 30,000 projects around the world on behalf of our public and private sector clients, providing a wide range of multidisciplinary services for aviation, buildings, industry, energy and mining, maritime, infrastructure, planning and transport, and water.

With our extensive experience in all aspects of the oil and gas industry, as well as soil, water, air, waste and noise, we support our oil and gas clients with a tailor made approach to developing and implementing linear projects. We deliver information management systems for technical, health, safety and environmental aspects and our consultants have in-depth knowledge of environmental technologies, legislation, regulations, environmental impacts, management systems and communication. We can also help you with policy planning, feasibility studies, conducting investigations and solutions implementation.

Expertise includes the following:

- Social impact assessment
- Land easement and acquisition management
- Pipeline information management
- Environmental impact assessment
- Technical safety
- Compliance and permitting/approval
- Health, safety and environment management.

For further information, please contact our experts:

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Service:
HSE Engineering

HSE Engineering

The challenge

Embedding Health, Safety and Environmental (HSE) aspects in the design of industrial installations requires an integrated approach. To ensure compliance with national and international laws and regulations, design rules and company guidelines, HSE requirements must be incorporated during different phases of the design.

Comprehensive knowledge of HSE is essential for full implementation of HSE aspects in any installation, including appropriate measures to control process safety hazards, such as chemical or physical reactions, high pressure or high temperature, and fire and explosion safety.

Our solution

Royal HaskoningDHV's HSE experts identify and assess risks in the early stages of project design, incorporating the HSE philosophy defined by regulations, design standards and guidelines. We not only aim to control the risks of the completed installation, but also the risks during construction, maintenance and decommissioning.

Identification of Hazards and Controls

Using tools such as HAZID, What-If, HAZOP, FMEA (Failure Mode Effect Analysis) and BOWTIE, we work in close partnership with you to identify risks and mitigate them to acceptable levels.

HAZOP studies and SIL (Safety Integrity Level) Assessments identify and evaluate risks and operability issues in process installation, with instrumented process safety functions crucial for increasingly automated processes. We use methods ranging from risk graphs or matrices to the more detailed LOPA (Layer of Protection Analysis) to classify Safety Instrumented Functions, and verify them with tools such as Fault Tree Analysis.

Risk Assessment

We use our extensive experience and knowledge of HSE to assess the probability and impact of identified risks against defined risk acceptance criteria, and evaluate mitigation measures. We draw up Safety Cases to demonstrate that risks meet the set tolerability criteria and comply with the ALARP (As Low As Reasonably Practicable) principle. Key risk mitigation measures, such as Safety Critical Elements, and their management are described. The Safety Case also includes supporting safety studies such as escape, evacuation and rescue analysis (EERA), fire and explosion risk assessments (FERA), emergency system survivability assessment (ESSA), Ship Collision Study (SCRA), Dropped Objects Study (DOS), helicopter and marine transport studies.

HSE Management during Design

We support project design and implementation with HSE plans, reviews, and design philosophies. We also define specific performance standards in terms of functionality, reliability and vulnerability in emergencies for safety critical systems, and use them to monitor performance throughout the life cycle. We assess health risks, including machine safety, ergonomics and human factors, accessibility and maintainability, noise and vibration, and address environmental and human health risks by regulatory requirements and design standards. We perform noise studies and BAT (Best Available Techniques) during the design of an installation emission inventory and dispersion studies.

The outcome

Royal HaskoningDHV uses a structured approach to HSE, with defined activities during each project phase.
We use state of the art standards and modelling software for our HSE engineering support activities including:

- Dedicated hazard identification software applications such as HAZOP manager, PHApro and BowTieXP
- Performing SIL assessments according to IEC 61508/61511 or specific company standards, using software tools for classification and verification such as TRAC or ExSILentia
- Preparing explosion safety documents in compliance with EU and local ATEX regulations and standards such as NPR-7910, IP-15, IEC 60079 and NFPA
- Performing effect modelling calculations for releases of toxic and flammable gasses, fires and explosions, using software tools such as DNV PHASTpro, TNO EFFECTS, FLACS (CFD) and AutoDesk (CFD)

Client and scope of services

Royal HaskoningDHV is a leading independent, international project management and engineering consultancy service provider. Each year we deliver a wide range of multidisciplinary services for aviation, buildings, industry, energy and mining, maritime, infrastructure, planning and transport, and water.

We have a broad international experience with HSE engineering in many industrial sectors and organisations. We are not dependent on any particular system or service, so can provide independent advice based on our extensive experience in applying the best approach for each client to meet their specific needs.

For more information please contact our experts:
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Service:
effect modelling

Effect modelling

The challenge

Incidents can and do happen in the chemical and petrochemical industries. If an incident happens it may result in damage to equipment and potentially fatal injuries to workers or people outside the plant.

Many governments require companies to study possible incidents as part of a licence to operate a plant. Comprehensive understanding of the effects of incidents is essential, and the calculation of adverse effects of incidents is of major importance when both obtaining and maintaining licences.

The effects of incidents will range from toxic clouds to fire radiation and explosions. Fires can include pool fires, tank rim fires, jet fires and BLEVEs (boiling liquid expanding vapour explosions).

Our solution

Royal HaskoningDHV uses a structured approach to effect modelling. Our experts identify possible incidents and assess their consequences at every stage of design and operation.

They calculate the effects and advise on preventive and mitigating measures. They also calculate the influence such mitigating measures will have on the consequences of incidents.

We use state-of-the-art standards and software such as DNV Phast, TNO Effects and computational fluid dynamics (CFD) software such as FLACS (Flame Acceleration Simulator) and Autodesk.

Our services include:

Performing effect calculations for releases of:

- toxic and flammable materials, fires and explosions, and the size of and concentrations in a toxic cloud released during an incident
- liquid, forming a pool and evaporating slowly over time
- flammable chemicals and their ignition (eg, a fireball, a jet fire or a pool fire).

Effect modelling

Calculations involving:

- the emission of materials resulting from a release inside a building
- chimneys, vents and flares.

CFD modelling of:

- explosions in confined areas (eg, an offshore platform)
- smoke (such as in a parking garage and offshore platforms)
- hot exhaust gases from vents, turbine compressors, coolers and so on, to review temperatures and/or temperature rise at critical locations (eg, crane cabins, helidecks)
- toxic dispersions such as CO, CO_2 NOx and H_2S from exhausts and vents
- wind chill to review working environment conditions on offshore installations.

Assistance in determining preventive and mitigating measures.

Clients and scope of services

Royal HaskoningDHV is a leading independent, international project management and engineering consultancy service provider. Each year we deliver a wide range of multidisciplinary services for aviation, buildings, industry, energy and mining, maritime, infrastructure, planning and transport and water.

We have broad international experience in effect modelling and work across many industrial sectors and organisations. We are not dependent on any particular system or service, so we can provide independent advice based on our extensive experience in applying the best approach for each client to meet their specific needs.

For more information please contact our experts:

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ANNEX 2

These photographs show the Breagh high pressure pipeline (MAHP 20 inch diameter) being installed in the Sembcorp corridor in 2012. In particular the second photograph shows construction in close proximity to the GDF MAHP.