

EAO WORKING GROUP MEETING – DAY #1

Aurora LNG Digby Island Project

Date/Time: February 6, 2017 / 1:30 PM to 5pm

Place: Convention Centre, Prince Rupert

Attendees: Aurora LNG: Darcy Janko, Kristen Couzens, Russell Morrison, Tracy Young, Jason Gouw, Cal Finley.

Stantec: Sandra Webster, Archie Riddell, Gillian Mathews

EAO: Edwin Hubert, Mark Van Doorn, Sean Moore, Alli Morrison

Working Group Member (on the phone): Melissa Aalhus (Northern Health), Vivian Au (CEAA), Kira Kristensen (Heritage Branch), Barbara Oke (Northern Health), Bob Payette (District of Port Edward), Paulina Csicsai (Ministry of Forests Lands and Natural Resource Operations), Susan Green (Ministry of Forests Lands and Natural Resource Operations), Todd Thomson (Ministry of Environment), Amy Hammerstedt (Ministry of Transportation and Infrastructure)

Working Group Member (in attendance): Carolann Brewer (Lax Kw'alaams Band), Marc Chawrun (BC Oil and Gas Commission), Paula Doucette (Transport Canada), Lindsay Galbraith (The Firelight Group; Lax Kw'alaams First Nation), Rina Gemeinhardt (Kitsumkalum First Nation), Jennifer Grant (Kitselas First Nation), Ronald Hall (Transport Canada), Cindy Hansen (Kitselas First Nation), Ken Howes (Lax Kw'alaams First Nation), Kyle Clifton (Gitga'at First Nation), Tanya Martin (Transport Canada), Debbie Moore (Kitselas First Nation), Laura Moore (Dodge Cove), Des Nobels (North Coast Regional District), Colin Parkinson (Transport Canada), Luanne Roth (supporting Dodge Cove), Nick Russo (Environment and Climate Change Canada), Andrea Scarth (Consultant for Kitselas First Nation), Hans Seidemann (City of Prince Rupert), Jack Smith (Prince Rupert Port Authority), Patricia Squires (Kitselas First Nation), David Taft (Kitselas First Nation), Paul Vendettelli (CoPR), Nicole Wallace (Silverwood Consulting; Kitsumkalum First Nation), Morganne Williams (North Coast Regional District), Anna Usborne (Metlakatla First Nation), William Nelson, (Metlakatla First Nation), Adam Kantakis (Lax Kw'alaams Band)

EAO INTRODUCTION – OPENING SLIDE

Lax Kw'alaams Band (Lax Kw'alaams) requested EAO evaluate the pace of the Project, as in their opinion, there is no justification for the urgency at which this Project is moving forward considering it's a substituted EA. Lax Kw'alaams questioned whether CEAA and EAO can fulfil their roles and responsibilities sufficiently at this pace and asked EAO not to rush this process until all gaps are filled and questions addressed. Further details on these gaps have been requested by Lax Kw'alaams which include: project schedule specifically construction and operations, pre-FEED engineering details, design plans on pipeline plans, topics including jetty location, alternative power, dredging material amounts and disposal at sea options, worker accommodation, and effluent pipe location and effluent pipe properties. Lax Kw'alaams submitted their AIUS and Socio-economic reports on February 2, 2017 to support the Lax Kw'alaams supplemental filing and request a chance to further discuss these topics once their reports are reviewed and information on the aforementioned gaps are provided. Lax Kw'alaams will not accept the "go elsewhere" approach to mitigation and want to engage with Aurora LNG to resolve these issues before the Project proceeds further.

Kitsumkalum First Nation (Kitsumkalum) agreed and supported Lax Kw'alaams in their above comments which Kitsumkalum noted match their own concerns.

EAO reviewed the Project timeline including reference to the information request (IR) schedule: all IRs to be submitted to EAO by Feb 21; proponent responses to IRs required by March 15; Working Group review of IRs March 15-29.

ARCHAEOLOGY

Anna Usborne (Metlakatla First Nation [Metlakatla]) questioned why the spatial boundaries for the PDA, LAA and RAA are the same size and asked for justification.

Response: As the potential effects are limited to and beyond these areas there weren't any anticipated effects to the VC because they would have been mitigated in a similar manor as to that being proposed by Aurora LNG.

Anna Usborne (Metlakatla) flagged this as a potential issue for Metlakatla given that the uniqueness of the sites can't be assessed when it's not compared to a larger regional area.

Rina Gemeinhardt (Kitsumkalum) commented that the list of Archaeology mitigations adhering to the law should not be considered mitigations and should therefore be removed from this presentation and the Application.

Action Item for Aurora LNG: Aurora LNG will categorize the items presented in the mitigation measures summary table as mitigations, legal requirements, best management practices or management plans.

Carolann Brewer (Lax Kw'alaams) requested that helipads be included in the assessment. Response : It was confirmed that they are within the PDA and therefore included.

INFRASTRUCTURE AND SERVICES

Andrea Scarth (Kitselas First Nation [Kitselas]) asked why baseline demand data on Prince Rupert hospital was included but not Mills hospital (Terrace) baseline data.

Response: The assessment focused on the Prince Rupert hospital as it was the primary focus for residual effects. Information on Mills hospital was incorporated into the cumulative effects assessment.

Debbie Moore (Kitselas) asked if there are plans to have a medic onsite, what plans have been arranged with the city regarding RCMP in terms of preventing the camp workers from leaving the camp and entering the town, and what additional measures are in place to support the RCMP to tackle this.

Response: It was confirmed that there will be a medic onsite. With respect to the RCMP, because it will be a closed camp with a fly in fly out policy, the ability of workers to spread out to the community would be limited.

Patricia Squires (Kitselas) asked if local people would stay at camp during their shift.

Response: It was confirmed that this would be the case.

Barb Oke (Northern Health) asked whether revised assumptions will be explicitly stated in the certified project description.

Follow up for EAO – EAO to further discuss and will be addressed at a later date. These details may be more appropriately included in the Social Management Plan (SMP) which will be developed in consultation with Northern Health.

Barb Oke (Northern Health) further asked if the transport for critical care patients was vetted through BC Ambulance Services (BCAS). Need to ensure that there isn't any negative impact to the local medical services (take away from existing medivac services).

Response: transport of patients has not been vetted through BCAS at this time. The Project intends to use the medivac provider through BCAS; it would not pull from local care. Mitigation measure 6.3.16 involves coordination with local health providers and this can be extended to include BCAS.

Debbie Moore (Kitselas) commented in response to the BCAS helicopter that the proponents at Gladstone were required to acquire a helicopter to support the project and urged Aurora LNG to consider this given the peak workforce number and injury statistics. Barb Oke (Northern Health) confirmed that Northern Health is in consultation with BCAS and this is an important issue.

Sean Moore (EAO) asked how the floating camp was included into the VCs? Aurora LNG explained it's a third party camp and therefore wasn't included into the Application. EAO commented that as it's a project component it should be assessed as a project activity across all VCs. Aurora LNG stated that the pioneer construction workers will stay in the floating camp and it will be docked to the facility.

Barb Oke (Northern Health) questioned whether a floating camp is regulated differently if its on sea.

Colin Parkinson (Transport Canada [TC]) explained if the floating camp is secured to an existing dock then there are no permitting requirements but if it is secured by an anchor then permits are required. Aurora LNG stated it will be secured to a dock.

Jack Smith (PRPA) further noted that if the floating camp is secured within PRPA boundaries then approval from the Port will be required.

Response: the camp will be owned by a third party and as a result all permits will be the responsibility of the said third party. The Aurora LNG floating camp should be similar to the RTA floating camp and how this camp is managed.

Lindsay Galbraith (Lax Kw'alaams) requested more information on the floating camp in terms of how it affects their rights and how these will be considered? Concerned about fly-in fly-out camps, how the options for camps were assessed in respect to the social effects?

Response: it was always the intention to use Digby Island as the camp location. Aurora LNG was aware of the request from Lax Kw'alaams to consider options on Kaien Island but due to logistical implications the Digby Island option was carried forward.

Laura Moore (Dodge Cove) is concerned with a 400 man floating camp and the impact of this camp in such close proximity to the community of Dodge Cove.

Response: the camp will be short term and will be a closed camp.

Action Item for Aurora LNG – EAO requested a technical memo on the floating camp that indicates if there would be any potential changes to the VC assessment including potential CEAA 5(1)(c) effects. Dodge Cove further requested that the memo note the responsibilities that are allocated to Aurora LNG versus the third party for the management of the floating camp.

Hans Seidemann (City of Prince Rupert) noted no references on drugs or alcohol stats are included in this VC which are needed to fully understand the characterizations so you can adequately determine the mitigations. He suspected these numbers are high locally yet the application states that there will be zero tolerance on site and camp will be dry.

Action Item for Aurora LNG – comment noted and will follow up.

Hans Seidemann (City of Prince Rupert) questioned whether there are 73 specialists in each category as stated in the Infrastructure and Services VC. This may be an error.

Action Item for Aurora LNG –Confirm if the 73 specialists is correct.

Hans Seidemann (City of Prince Rupert) noted that the Infrastructure and Services VC mentioned capital costs for a new fire dept but no cost for building a new building for the RCMP; this cost should be included.

Action Item for Aurora LNG – Confirm if the baseline costs for the RCMP building was included in the Application and if included indicate where it is located.

Hans Seidemann (City of Prince Rupert) also noted that if all these projects in Prince Rupert are approved then the population of Prince Rupert will exceed 15000 and will increase policing costs which is a burden on the city. This information and potential effects isn't reflected in the VC. The City of Prince Rupert also encouraged Aurora LNG to complete more baseline information gathering on rent and to update baseline rental data for 2015 and 2016.

Ken Howes (Lax Kw'alaams) noted the Project inclusion list does not include the AltaGas project which was publically announced on Jan 3 2017.

Response: the project inclusion list was approved in accordance with the AIR back in November 2015 and we moved forward with the information we had at that time. It should be noted that the Canpotex Potash Terminal Project, which is a similar size and in a similar location as the AltaGas Project, was included in the cumulative effects assessment even though it has been shelved.

Barb Oke (Northern Health) stated that requiring local people to stay in the camp could restrict people who would be able to work there (e.g. those with family responsibilities). Metlakatla also expressed the same concern.

Response: Aurora LNG agreed to take this into consideration and stated it's a matter of balancing the social impacts and economic effects.

Metlakatla would like to see the assessment that would be done on this and urges transparency on the assumptions and factors considered on this topic moving forward.

Action Item for EAO – Consider if a topic specific workshop/meeting on the SMP is required.

Paula Doucette (TC) noted that TC has regulations on construction of helipads. It should be noted that once there is a minimum number of passengers flying in/out of an airport then 24 hour fire service is required. This information was not included in the Application.

Action Item for TC- Provide Stantec/ Aurora LNG with a copy of these helipad regulations.

Paula Doucette (TC) questioned when the plume rise study will be ready so TC can complete their review.

Action Item for Aurora LNG - check on status of the study, expecting it by mid-February.

Tanya Martin (TC) asked how the federal regulators can get updated on results of the FN workshops? What were the issues and how are they related to our federal approvals and how are these getting tracked and addressed to ensure all information is captured.

Action Item for Aurora LNG- Aurora LNG will circulate to the First Nations the summary notes of the First Nation workshops before the end of this week

Tanya Martin (TC) asked if comments received during FN workshops will be included in the Aboriginal Consultation Report#3? Aurora LNG confirmed that they will be.

Rina Gemeinhardt (Kitsumkalum) invited CEAA to attend the working group in person and is concerned that CEAA will not be able to meet their federal requirements in the substituted process and urged them to attend more of these Working Group Meetings.

EAO reassured the working group that they are capturing all engagement consultation in the EAO report which will be submitted to CEAA for their review and consideration in the federal determination. This is consistent with the memorandum of understanding between the EAO and CEAA on substituted projects.

Hans Seidemann (City of Prince Rupert) noted that a infrastructure and services mitigation measure revolved around financing new city facilities and services through property tax. Property taxes from Aurora LNG would not flow to the city of Prince Rupert so cannot be considered a mitigation.

Action Item for Aurora LNG - Various forms of taxes were included in the Application but we will look at how the property tax is outlined in the Application.

LAND AND RESOURCE USE

No action items are recorded from this VC.

Des Nobles (Regional District – Dodge Cove) noted that there is regular use of trails on Digby Island but they have a light footprint and the veg grows very quickly so they appear overgrown. The enjoyment factor of recreational areas will be significantly affected by construction of an industrial facility even if the area is still available for recreational use.

COMMUNITY HEALTH

Andrea Scarth (Kitselas) noted that she found the approach to assessing community health to be very confusing. It appeared the approach was a population / health approach essentially to a social assessment. Its appreciated this is an evolving field and assessing community health is always changing but the social determinants of health should be assessed together and not separated into the different pillars. The assessment is missing the qualitative view because no community survey was done to document peoples current ratings on living in the community. This should have been sent to individual First Nation communities and Dodge Cove as they should have the right to determine the values that appeal to them.

Response: Assessing social effects is complex. The approach drew upon conclusions from Sections 4, 5 and 6 and overall used a similar approach to that of a 'health impact assessment'. Literature reviews were also used to inform the approach. Social determinants of health used in the assessment were based on those recognized by the Public Health Agency of Canada and were considered adequate in terms of capturing issues and concerns identified during consultation however these not necessarily align with those identified by Northern Health. The overall approach mimics a population-health based approach with interrelated effects between social determinants of health identified.

In addition, Part D assesses issues and concerns not assessed in Part B of the Application including quality of life. In Part D the conclusions from Part B are brought forward and through the use of case-study analysis are further explored. The status of issue (either resolved or unresolved) is then given. In the example of quality of life, as was seen through case study analysis, effects could be beneficial or adverse. In the case of quality of life the status is unresolved.

Barb (Northern Health) echoed Andrea (Kitselas)'s comments and felt that the assessment missed speaking to a number of health pathways. Barb didn't get a good sense of which communities engaged in the surveys, what portion of the communities were reached and the process of how the information was gathered. Barb doesn't agree with the way

significance is assessed in the social VCs. EAO responded that the AIR indicated that many of these issues would be addressed in a qualitative manner in Part D and urged working group members to provide additional help to understand the depth of their concerns regarding quality of life, etc.

Laura Moore (Dodge Cove) stated there is an imbalance regarding development within Prince Rupert. The Prince Rupert area is considered one of the best salmon fishing places yet there are also several mega industrial proposed projects, which need to be counter balanced. Digby Island could have provided the counterbalance. It's a shame that for the health and well being of Prince Rupert this isn't been considered.

Des Nobles (North Coast Regional District) noted the health assessment was strictly physiological and did not address the psychological. Dodge Cove is in a grey area as its more similar to First Nation communities than a typical white settlement. Quality of life is different for people in Dodge Cove than for others. Please be aware of this.

Response: Aurora LNG pointed out that the Community Health VC focused on quantity of food whereas Part D focused on quality of life and pulled this info as best we could from the info we received from the Working Group and Dodge Cove.

As a follow up action, EAO asked the working group to consider in the WG comment tracking table or through further topic-specific discussions how we can incorporate these views and the mitigation measures in the social VCs as they need to hear everyone's comments in order to capture and consider them in EAO's assessment report.

Barb Oke (Northern Health) commented that the physical aspect of human health shouldn't be eliminated from the community health assessment.

Response: Aurora LNG explained how the social determinants of health were concluded however given the complexity and array of determinants we couldn't include them all.

Action Item for EAO: EAO to consider if a special topic workshop should be set up to discuss social determinants of health and how we characterize these effects and considered in Social Management Plan requirements.

ECONOMIC CONDITIONS

Colin Parkinson (TC) stated that on pg 132 there is reference to dedicated ferry service.

Response: This service is for transporting workers at the beginning/end of their shift i.e. every two weeks not daily.

Colin urged Aurora LNG that before FID, they will need to understand the labour force requirements and when to start training for specific technical jobs such as marine jobs. For example, it takes 10 yrs to create a tug boat captain so please consider how to get people trained when you get closer to FID.

Response: Aurora LNG confirmed that providing training opportunities and communicating what training will be made available, along with what the training requirements are, needs to happen before FID.

Hans (City of Prince Rupert) questioned why characterization of resource industries excluded halibut and crab in the Economics VC.

Response: Aurora LNG explained that fisheries that are more likely to overlap with shipping were included. Fisheries using methods such as trapping are less likely to interact therefore they were not carried through the assessment. Other reasons for exclusion included using the DFO data on where these fisheries were located related to the shipping route.

Action Item for Aurora LNG: Make sure the rationale for why these fisheries were not included is in the Marine Transportation and Use VC.

Hans (City of Prince Rupert) noted that the Application stated that 20% of operations workforce expected to be fly in/out, why is this so high and what positions would this include? If not 20%, then could be underestimating the impact to local infrastructure and services.

Response: this is an estimate and accounts for turnover, managerial positions, and specialized technical positions that would be difficult to hire locally and retain in the area. It was assumed that a portion of the workforce would be from outside the area but the intent for the Project would be to train and keep as many people hired locally as possible.

Hans (City of Prince Rupert) suggested amending mitigation (specifically 5.2.1) on training to say programs will be developed with FID.

Action Item for Aurora LNG: Update mitigation measures related to training to include timeframe.

Hans (City of Prince Rupert) was concerned local employment market is not adequately captured. Currently a number one concern is availability of labour; without including the proposed LNG projects. The 10% unemployment figure is likely not a matter of job availability so don't expect that unemployment level will change with increased number of jobs. City of Prince Rupert asks Aurora LNG to please review the characterization of the labour market, in particular resiliency, which should be low, not moderate. EAO stated that the proponent can only function on info that they have available so if other info available please provide.

Lindsay Galbraith (Lax Kw'alaams) stated that Lax Kw'alaams rejects the "go elsewhere" theory as there is nowhere else for community members to use.

Response: Aurora LNG acknowledged that they received the Lax Kw'alaams reports in early February and are now reviewing the socio-ec assessment of significance with this material in mind.

VISUAL QUALITY

Des Nobels (North Coast Regional District) noted that the community met with Aurora LNG and stated their strong concerns that changes to Visual Quality will significantly impact them, but unfortunately this wasn't captured in the Application. It should be noted that Visual Quality will have a significant impact on the community especially the beach in Casey Cove which is the only public beach open to the community.

Tanya Martin (TC) asked if lighting from the Project has been identified as a concern for First Nation communities especially regarding the lighting effects on harvesting. ?

Action Item for Aurora LNG – Inform TC (Tanya Marin) which First Nation concerns have been raised regarding lighting and the status of this concern (addressed, resolved, etc).

Anna Usborne (Metlakatla) wanted to note that the visual quality assessment is not meeting the concerns of the Metlakatla community and asked if there is more work planned on this VC?

Response: Aurora LNG explained that analysis was done in accordance with guidelines developed by the BC Ministry of Forestry as no other guidelines exist in the province. Viewpoints were determined on the basis of use, proximity to the project and ability to see the Project site. It was determined that the Project would not be visible from Metlakatla village which is why it wasn't selected as a site for the photo simulation.

Metlakatla further commented that the Visual Quality sites are missing that "human element". An IR on this topic will be submitted requesting additional sites be assessed including night time assessment. EAO suggested that more engagement might be needed to clarify the viewpoint selection and why viewpoints for Metlakatla and Casey Cove weren't selected.

Laura Moore (Dodge Cove) stated flaring at night sky is missing and should also be examined.

Des Nobels (North Coast Regional District) expressed concern that if the Project goes ahead then the southern sky will be lost.

Action Item for Aurora LNG: Aurora LNG to consider additional viewpoints of concern including Casey Cove, shoreline sites, sites of interest identified by Aboriginal Groups and Dodge Cove, etc. through further consultation and engagement.

Hans (City of Prince Rupert) suggested it would be helpful to have a quantitative characterization of the sky glow effects that are anticipated.

Laura Moore (Dodge Cove) also added this should include when its foggy too.

MARINE USE AND NAV WATERS

Colin Parkinson (TC) asked if Aurora LNG anticipates requiring a no wake zone at the MOF when transporting modules? Small crafts may not be affected, but human powered (paddling) vessels will not be able to make it around the south end of the jetty. Suggest that a comment be included regarding human paddled crafts. Aurora LNG could include a mitigation that allows human powered crafts to pass under the trestle near the shore. It should be noted that Transport

Canada doesn't like the practice of using reefs as fish habitat offset because it can affect transportation. If this is proposed TC would require marking those reefs for a very long time.

Tanya Martin (TC) noted that an assessment of wake was not seen in the Application. Is limiting speed to 16 knots sufficient for First Nations so they can still exercise their rights and harvesting?

Response: wake is addressed in many sections of the Application. There was no significant effect linked to wake. Wake was studied in detail on the LNG Canada Project where effects of wake on Douglas Channel were assessed and concluded as not significant. Chatham Sound is wider than Douglas Channel and exposed to heavy weather wave action. As a result, potential vessel wake effects in Chatham Sounds are expected to be less than those described for Douglas Channel in the LNG Canada assessment.

Action Item for Aurora LNG - Provide TC with a table of all the mitigation measures relevant to First Nations and navigation and flag the status of these concerns.

Colin Parkinson (TC) asked if wake from large non-project vessels could impact the construction of the marine trestle? Will the current (PRPA) speed limit be sufficient to not impact the project?

Paula Doucette (TC) asked if the Marine Use and Navigation section will be updated with the Lax Kw'alaams supplemental filing?

Response: Aurora LNG confirmed this information will be reviewed and appropriate supplemental filing will be developed.

Paula Doucette (TC) asked if locally available data can be used in terms of the small craft traffic?

Response: local information was used but not much was available in terms of small craft as they are not required to report their locations. If other information is available, then it would be appreciated if regulators could provide this to Aurora LNG.

Colin Parkinson (TC) suggested there was a camera placed in the Porpoise Channel area that might be considered for data on smaller craft traffic. It is believed this data was reported in the PNW Project application.

Action Item for Aurora LNG: Aurora LNG will look review information included in the PNW Assessment to see if it includes relevance data on small craft activity

Laura Moore (Dodge Cove) stated that SIGTTO states that locations with high numbers of pleasure craft are not suitable for LNG terminals due to the exclusion zones.

Action Item for Aurora LNG: Aurora LNG will follow up with Dodge Cove on the SIGTTO numbers.

ACTION ITEMS/FOLLOW-UP

DAY 1 (February 6)

ARCHAEOLOGY

1. **Action Item for Aurora LNG:** Aurora LNG will categorize the items presented in the mitigation measures summary table as mitigations, legal requirements, best management practices or management plans.

INFRASTRUCTURE AND SERVICES

2. **Action item for Aurora LNG:** Integrate the floating camp into a tech memo and provide a summary on changes to VC assessment, effects related to CEAA 5(1)(c) and note what responsibilities are allocated to Aurora LNG versus the third party owner of the floating camp.
3. **Action Item for Aurora LNG:** References drugs or alcohol stats in this social VC
4. **Action Item for Aurora LNG:** Confirm if the 73 specialists is correct as stated in the infrastructure and services VC
5. **Action Item for Aurora LNG:** Confirm if the baseline costs for the RCMP building was included in the Application and if included indicate where it was located.
6. **Action Item for EAO –** Consider if a topic specific workshop/meeting on the SMP is required.
7. **Action Item for Transport Canada:** Provide Aurora LNG with a copy of the helipad regulations.
8. **Action Item for Aurora LNG:** Aurora LNG to provide an update on the status of the plume rise study, expecting it by mid-February.
9. **Action Item for Aurora LNG:** Aurora LNG will circulate notes from the First Nation workshops to First Nations by the end of this week

- 10. Action Item for Aurora LNG:** Review of how property tax is outlined in the Economic and social VCs.
- 11. Action Item for EAO:** EAO to consider if a special topic workshop should be set up to discuss social determinants of health and how we characterize these effects and considered in Social Management Plan requirements.

ECONOMIC

- 12. Action Item for Aurora LNG:** Make sure the rationale for why these trap fisheries were not included is in the Marine Transportation and Use VC.
- 13. Action Item for Aurora LNG:** Update mitigation measures related to training to include timeframes associated with these mitigation.

VISUAL QUALITY

- 14. Action Item for Aurora LNG** – Inform TC (Tanya Marin) which First Nation concerns have been raised regarding lighting and the status of this concern (addressed, resolved, etc).
- 15. Action Item for Aurora LNG:** Aurora LNG to consider additional viewpoints of concern including Casey Cove, shoreline sites, sites of interest identified by Aboriginal Groups and Dodge Cove, etc. through further consultation and engagement.

MARINE USE AND NAVIGABLE WATERS

- 16. Action Item for Aurora LNG** - Provide TC with a table of all the mitigation measures relevant to First Nations and navigation and flag the status
- 17. Action Item for Aurora LNG:** Aurora LNG will look review information included in the PNW Assessment to see if it includes relevance data on small craft activity
- 18. Action Item for Aurora LNG:** Aurora LNG will follow up with Dodge Cove on the SIGTTO numbers.

EAO WORKING GROUP MEETING – DAY #2

Aurora LNG Digby Island Project

Date/Time: February 7, 2017 / 8:30 AM – 5:00PM

Place: Convention Centre, Prince Rupert

Attendees: Aurora LNG: Darcy Janko, Kristen Couzens, Tracy Young, Russell Morrison, Jason Gouw, Cal Finley.

Stantec: Sandra Webster, Archie Riddell, Gillian Mathews

EAO: Edwin Hubert, Mark Van Doorn, Sean Moore, Alli Morrison

Working Group Member (on the phone) - Jessica Coulson (Natural Resources Canada), Andrew Huang (Environment and Climate Change Canada), Paula Smith (Health Canada), Ann Godon (Ministry of Environment), Warren McCormick (Ministry of Environment), Emily Quinn (Ministry of Health), Mary Cameron (Ministry of Health), Barbara Oke (Northern Health), Vivian Au (CEAA), Kym Keogh (Ministry of Environment), Scott Lewis (Environment and Climate Change Canada), Melissa Aalhus (Northern Health), Mary Cameron (Ministry of Health), Snehal Lakhani (Kitsumkalum First Nation), Garth Mullins (Environment and Climate Change Canada), Todd Thomson (Ministry of Environment), Amy Van Reeuyk (Climate Action Secretariat), Andrew Huang (Environment and Climate Change Canada), Scott Lewis (Environment and Climate Change Canada).

Working Group Member (in attendance)- Darren Chow (Fisheries and Oceans Canada), Carolann Brewer (Lax Kw'alaams Band), Marc Chawrun (BC Oil and Gas Commission), Paula Doucette (Transport Canada), Lindsay Galbraith (The Firelight Group; Lax Kwa'alams Band), Rina Gemeinhardt (Kitsumkalum First Nation), Jennifer Grant (Kitselas First Nation), Ronald Hall (Transport Canada), Cindy Hansen (Kitselas First Nation), Ken Howes (Lax Kw'alaams Band), Adam Kantakis (Lax Kw'alaams Band), Kyle Clifton (Gitga'at First Nation), Tanya Martin (Transport Canada), Debbie Moore (Kitselas First Nation), Laura Moore (Dodge Cove), Des Nobels (North Coast Regional District), Colin Parkinson (Transport Canada), Luanne Roth (T. Buck Suzuki; Dodge Cove), Nick Russo (Environment and Climate Change Canada), Andrea Scarth (Consultant for Kitselas First Nation), Hans Seidemann (City of Prince

Rupert), Jack Smith (Prince Rupert Port Authority), Patricia Squires (Kitselas First Nation), David Taft (Kitselas First Nation), Paul Vendettelli (City of Prince Rupert), Nicole Wallace (Silverwood Consulting; Kitsumkalum), Morganne Williams (North Coast Regional District), William Nelson (Metlakatla First Nation), Anna Osborne (Metlakatla First Nation), Quinton Ball (Kitsumkalum First Nation), Chris Schell (Ministry of Forests, Lands, Natural Resource Operations), Patrick Williston (Ministry of Environment), Ed Hoffmann (Ministry of Environment), Mark Van Doorn (EAO), Taylor Zeeg (Metlakatla First Nation).

EAO PROCESS SLIDES – OPENING SLIDES

Des Nobels (North Coast Regional District) asked EAO if the 180 day was a static period of time or are there gaps and how does this function? Sean Moore (EAO) confirmed the 180 day clock is in accordance with calendar days. The federal clock can stop based on information gaps whereas the EAO clock can only stop due to suspensions and extensions which can be driven by the proponent or the EAO executive director.

Paula Doucette (Transport Canada [TC]) requested EAO circulate a copy of the certified project description to the Working Group before it's finalized. EAO noted that the certified project description will be included in the final draft assessment report package that will be circulated to the working group for comment.

ENVIRONMENTAL VCS – AIR QUALITY

Mary Cameron (Ministry of Health [MOH]) asked to clarify if there are no receptors or just no sensitive receptors present in the area of NO₂ exceedance in the cumulative effects scenario.

Response: Aurora LNG confirmed that there are receptors in the CALPUFF model but that the area below Fairview Terminal is an industrial area only accessible through Fairview Terminal and isn't typically an area where residents are. For this reason, there are no receptors of concern. Aurora LNG later confirmed that there are no permanent receptors in the area (1.5 km radius). The area of predicted exceedance of the BC air quality standards are limited to a small area immediately adjacent to the Fairview Terminal. Dispersion modelling has indicated that the elevated NO₂ concentration predictions are dominated by emissions from the Fairview terminal itself. Other emissions sources in the study area are not substantive contributors to the predicted exceedance. The maximum predicted 1-hour (98th percentile and maximum) is predicted to occur 20 m southeast of the Fairview Terminal (Phase 2) boundary. The maximum annual average NO₂ concentration is predicted to occur 50 m southeast of the Fairview Terminal (Phase 2) boundary. Concentrations greater than the 1-hour objective are predicted to occur infrequently (approximately 0.3% of the time). Aurora LNG confirmed that there area

where the CALPUFF model has predicted exceedances of the BC air quality standards is limited to an industrial area only accessible through Fairview Terminal and isn't typically an area where residents would be located. For this reason, there are no sensitive receptor located in the area of predicted exceedance. Aurora LNG confirms that there are no permanent residents in the area (1.5 km radius).

Des Nobels (North Coast Regional District) asked what would account for the higher number at this site and would this include ships?

Response: The value is associated with the activities taking place at Fairview Terminal which includes ships. In the future case, the high NO₂ values are associated with the southern expansion with the Fairview Terminal and emissions at the terminal itself.

Warren McCormick (Ministry of Environment [MOE]) asked for clarity on how the baseline background modelling was incorporated into the project alone and cumulative cases.

Response: baseline was used to describe the air quality concentrations that represent the study area. The base case used both model predictions and Ambient Air Quality measurements, which are complementary tools; when combined they produce a conservative base case prediction. The ambient measurements were selected based on discussions with MOE. The selection of stations, timeframes, and contaminants was consistent with the Prince Rupert Airshed Study (PRAS). Measured baseline concentrations were then determined. It was not possible to account for all emission sources when the CALPUFF model was run. For this reason, the ambient background was added to the CALPUFF model so we could account for these emission sources not in the model. The base case, application case and CEA case included the measured baseline value added to the model predictions. CALPUFF accounts for all major industrial, marine shipping sources and proposed sources. The project alone case only accounts for emissions by the Project itself with no baseline or other sources added.

Warren McCormick (MOE) asked if the base case includes monitoring data added to the modelling data for the base case.

Response: Stantec confirmed this is correct and percentiles were selected based on MOE guidelines.

Patrick Williston (MOE) noted that he compared total NO₂ emissions with another project and noted that the other project showed predicted exceedances of 30 mg/m³ (vegetation impacts) and yet the Aurora project does not.

Response: the other project (referred to by MOE) was a mine that had older NO_x engines so it had much higher NO_x emissions and less plume rise compared to a gas turbine. Despite the similar magnitude emissions there is better dispersion of emissions from the Aurora LNG project. The exhaust gases have higher temperature and velocity with gas turbines.

Warren McCormick (MOE) inquired about the status of his request to receive the mass balance calculations including the natural gas balance and sulphur balance.

Action Item for Aurora LNG - Aurora LNG received this IR request for a mass balance and will follow up after this meeting with the status of that request.

Warren McCormick (MOE) asked about the possible use of ground flares?

Response: Aurora LNG confirmed that ground flares were considered and modelling was completed and presented in the TDR.

Warren McCormick (MOE) flagged that BC dispersion modelling guidelines can't be used for ground flare, only elevated flares.

Action Item for Aurora LNG – Aurora LNG will follow up with MOE on the modelling of a ground flare. EAO requested that Aurora LNG connect with MOE and likely BC Oil and Gas Commission (OGC) to discuss this further. Aurora LNG will schedule a meeting.

Luanne Roth (Dodge Cove) stated NO₂ emissions are not representative of the current conditions. The base case using the ships emissions was compared against the modelled data and it looked like the modelled data was a magnitude lower. Noticed that MEIT was used for the shipping source data and believe that it is inaccurate. Will the ships have NO_x reduction equipment? If so, then the stack conversion needs to be increased. PRAS used a 30% conversion value however this project used 10% conversion.

Response: Aurora LNG was advised by MOE to use the MEIT dataset. The measured baseline was included in the base case, application case, and CEA case. The model predictions were compared to the predictions which reflected model performance. The MEIT emissions for the year 2015 were selected for this Application which included the most recent regulatory changes. The emission inventory includes a mix of new and old ships but the emission level is based on the year of manufacture. Not all of the ships will meet the low NO_x emission requirement. The MEIT data was taken and put into the model and incorporated traffic into the model predictions. The 10% NO₂ to NO_x conversion was consistent with the dispersion modelling guidance on applying the ozone method.

Ed Hoffman (MOE) confirmed that MOE used the US EPA guidelines for stack conversion rate in the PRAS, which is 30% for turbines, whereas the BC guidelines recommend that 10% be used across the board for all sources.

Action Item for Aurora LNG – Aurora LNG to determine if it's possible to ascertain the difference between using 10% vs. 30% for the air quality assessment without re-doing any modelling.

Ken Howes (Lax Kw'alaams) questioned how VOCs were characterized as not significant given the lack of provincial or national objectives relating to VOCs. This is a concern for Lax Kw'alaams given the high numbers (600+tonnes/yr) and asked if there is any international guidance that can be used to determine thresholds for the environment and human health.

Response: It should be noted that the criteria for the compounds used in the dispersion modelling included fugitive VOCs which are light hydrocarbon and relatively non-toxic, and combustion VOCs which are small in magnitude. The dispersion model focused on the criteria air contaminants as those were the elements that are most likely to result in potential effects.

Mary Cameron (MOH) noted that there is insufficient information on the VOCs to identify the risk to human health and it should be brought forward into the Human Health VC. Why wasn't existing guidance such as the VOC guidelines from Alberta or the Health Canada toxicology reference values for VOCs used in the Application?

Response: Aurora LNG did reference toxicology but the decision was made to not include VOCs in the Human Health VC because of their volume and dispersion and because VOCs weren't a potential health issue on similar projects. Sean Moore (EAO) commented that this topic needs to be properly assessed as we have MOH on the record suggesting this could be a potential health risk.

Barb Oke (Northern Health) questioned why VOCs aren't mentioned in the Accidents and Malfunctions sections and is there a possibility this could impact human health?

Action Item for Aurora LNG - EAO suggested follow-up call between the proponent, MOE and MOH to discuss VOCs, and how to adequately assess its impact to human health including how they relate to the Accidents and Malfunctions.

NOISE

Sean Moore (EAO) asked if Health Canada is concerned with potential sleep disturbance effects based on the predicted noise levels relative to the 2016 Health Canada noise guidelines.

Paula Smith (Health Canada) confirmed that this information is being reviewed by their acoustic expert but it should be noted that any nighttime outdoor sound above 40dB will have adverse impacts to sleep. In areas where people need to sleep during day time hours (such as hospitals) an outdoor daytime sound level greater than 45dB will disturb sleep. The BC OGC maintains the need to keep indoor noise to levels that will not disturb sleep. There is a potential concern especially in Dodge Cove and they are interested in discussing this further.

Barb Oke (Northern Health) asked if the work camp was recognized as a receptor and if the ships were considered as a noise emitter that could disturb sleep for the workers?

Action Item for Aurora LNG – Aurora LNG confirmed that the work camp was not considered as a receptor. Aurora LNG will follow up on the importance of health for the workers during all hours and if this needs to be incorporated into the assessment and potential effects of the 2016 Health Canada Noise guidelines.

Aurora LNG notes Kitsumkalum First Nation (Kitsumkalum) and Dodge Cove's request to limit the definition of daytime hours to more reasonable limits e.g. end at 7pm rather than 10pm. Aurora LNG notes that blasting is expected to be done in the daylight hours for safety and pile driving would be primarily during daylight hours but land based pile-driving could extend to nighttime hours depending on schedules.

Action Item for Aurora LNG – Aurora LNG will take this information back, as it was flagged in the First Nation Workshops as well, and discuss it with their engineers.

EAO suggests this should likely be addressed in a technical memo especially the interaction with human health.

WATER QUALITY

Quinton Ball (Kitsumkalum) asked what happens if there is a change detected during the follow up program for acidification and eutrophication.

Response: if exceedances are reached we will implement remediation measures which would be lake specific.

Laura Moore (Dodge Cove) asked which lake had the nutrient exceedance.

Response: the exceedance was in the Dodge Cove water reservoir.

Dodge Cove further asked what is the mitigation measure that would be applied to this drinking water source.

Response: seeing as it is a drinking water source you could apply copper sulphate, and also look at the biota or else look to filtering if eutrophication is involved. It should be noted these are conservative models and we may not even see effects in these areas.

Sean (EAO) asked if any agencies present can speak to the monitoring requirements to the drinking water as this is a topic of concern.

Response: Aurora LNG noted again that both the air quality and water quality models are conservative. In this case, we are looking at a predicted increase of nitrogen but not in phosphorus. The phosphorus is very low and the systems are not productive right now. It is important that this drinking reservoir be included in the follow up monitoring but can't say at this time if any treatment would be required but we don't think the predicted nutrient changes would make the water undrinkable.

Barb Oke (Northern Health) questioned if surface water run off was looked at for the drinking water and if algae development was considered?

Response: Aurora LNG explained that as these lakes have no productivity and have no toxic algae growth there is no potential for algae development which is typically found in more productive lakes. Long term monitoring would look at what type of algae is present but this isn't part of the EA assessment. Please share if aware of any algal blooms in lakes in the general area.

Barb Oke (Northern Health) asked if turbidity was considered.

Response: Aurora confirmed turbidity was not considered in the Water Quality VC because there is no interaction. However, it was considered under the Freshwater Fish and Fish Habitat VC.

Mary Cameron (MOH) noted she would have liked to have seen discussion on algae blooms in the Application. Without any discussion on toxins generated by algal blooms it is difficult to know if the project could have any effect on the drinking water quality.

Response: Aurora LNG requested that an IR be submitted on this topic.

Laura Moore (Dodge Cove) questioned why the baseline data only did 2 tests but understood there is a requirement for a 1 year data set for drinking water.

Response: One year of baseline data is not required because there is no effluent stream from the Project to the lake.

Mark Van Doorn (EAO) asked for clarity on how surface water quantity was accounted for in the Freshwater Quality VC?

Response: Aurora LNG indicated that this is covered under the Freshwater Fish and Fish Habitat VC but based on where the watershed falls they are separate and not affected by the Project. There will be water management systems in place which will collect water as appropriate. Surface water will not be diverted into different watersheds or creeks.

Kym Keogh (MOE) stated the Application mentions that all stormwater will be directed to vegetative and natural drainages. Please confirm what this is classified as?

Response: Aurora LNG confirmed that during construction, stormwater will be directed to existing streams located on site which will be managed according to the Fisheries Act.

Kym Keogh (MOE) flagged stormwater will also be managed under the EMA as a discharge and must meet Water Quality guidelines. TSS background is missing from the Application. Background TSS is required so that the discharge can be compared to something.

Response: Aurora LNG commented on how difficult it is to determine background TSS and turbidity at this stage as they can change in response to rain events. This will be addressed through a long term monitoring plan during construction.

Kitsumkalum questioned how Aurora LNG will meet BC Water Quality guidelines given the high rainfall especially during construction and asked what technology they will use for this?

Action Item Aurora LNG – Aurora LNG will circulate back on how they will meet the BC water quality standards during construction and what technology will be used.

Mark Van Doorn (EAO) asked which lake was already acidic.

Response: confirmed there are two acidic lakes (one lake on Smith Island and the other is Tsook Lake which is the Metlakatla First Nation (Metlakatla) reservoir.

Patrick Williston (MOE) asked if it is possible to model the nutrient loading to the specific area (drinking water reservoir) to determine if the water quality nitrogen guidelines will be exceeded. It would be nice to know well in advance if it is likely that the guidelines will be exceeded. It is noted that the “J” stream coming out of a lake on Digby is predicted to exceed

the lower level of nitrogen so this stream may experience some stress due to the nitrogen loading and further information on how this will impact the aquatic biota / ecology is requested. This will likely be submitted as an IR.

Action Item Aurora LNG- Aurora LNG will follow up with MOE in terms of water quality and ensure their requirements are captured.

MARINE WATER QUALITY

Darren Chow (DFO) asked if actual current modelling was used to confirm if silt curtains will be feasible in Casey Cove. Skeptical that silt curtains would work in that area due to strong currents.

Response: Aurora LNG Indicated that if silt curtains aren't used, this wouldn't change our modelling conclusions but we will consider this information moving forward.

Scott Lewis (Environment Canada [ECCC]) noted cumulative effects associated with multiple vessels disposing at the same time in one location is not part of the Disposal at Sea (DAS) process and should be addressed in EA (not left to permitting). As part of the DAS process, ECCC looks at alternatives to DAS, and what other uses are available to reduce material volume. If DAS is the best choice then there should be an effects assessment conducted on the site selected. What information is available in terms of alternatives?

Response: Aurora LNG considered on land and DAS options and is in on-going discussions with project engineers regarding reducing disposal volumes and types of site materials. The DAS site proposed by Canpotex was reviewed as a possible option but when ECCC indicated that the Canpotex site was not recommended, Aurora LNG focused only on Brown Passage.

Action Item for Aurora LNG - Aurora LNG will continue to follow the ECCC guidance on DAS selection criteria and will discuss this DAS site selection further with ECCC (including Adam Leuw at ECCC).

Darren Chow (DFO) reminded Aurora LNG that DFO also needs to know the site selection to inform EAO of potential effects.

Mark Van Doorn (EAO) asked if dredging, disposal and piling are limited to daytime hours.

Response: Aurora LNG assumed that the dredging will be 20 hours per day for the MoF and 10 hours per day on the marine jetty. Aurora LNG also confirmed blasting will be required at the marine jetty and additional geotech studies will be required to confirm the final material volumes.

Nick Russo (ECCC) questioned the water intake line for the facility and if it there will be dredging at that location?

Response: Aurora LNG confirmed that there will be no dredging for the intake line, the intake line will not be buried, and the outfall line will be trenched.

EAO wants confirmation on DAS and the requirement to provide this information to ECCC.

Des Nobels (North Coast Regional District) asked if the top 0.5m is still intended to be disposed on land.

Response: Aurora LNG confirmed it will be disposed of within the PDA but the specific location is not yet determined.

Des Nobels (North Coast Regional District) was concerned that the Casey Cove dredge footprint will have a significant impact on the beach area on the north side of Casey Cove and affect visual quality (at low tide) and cause erosion.

Action Item for Aurora LNG: Aurora LNG indicated that they didn't anticipate dredging above the high tide line but would look into this.

Lax Kw'alaams and Metlakatla both raised concerns on the DAS information gaps and requested to see alternatives to the Brown Passage DAS site.

Action Item for Aurora LNG – Aurora LNG will review the ECCC DAS guidelines and set up a meeting for next steps. EAO wants this meeting to include FNs (Lax Kw'alaams and Metlakatla) so please put forward a path and timing.

Mary Cameron (MOH) suggested a landfill permit may be required for the contaminated dredge material.

Response: Aurora LNG confirmed that the material does not exceed the IL + levels so no permit is required.

Nicole Wallace (Kitsumkalum) asked if trenching for the outfall was modelled in the sediment plume study?

Response: Aurora LNG confirmed that trenching for the outfall was not modelled.

Nick Russo (ECCC) asked why water cooling was used instead of air cooling for the power plant.

Response: Aurora LNG explained that both air and water cooling processes were reviewed but the water cooling was selected as the more conservative approach for the EA and the most efficient design for the power plant.

Nick Russo (ECCC) asked if a desalination plant would still be required.

Response: Aurora LNG confirmed yes as no freshwater sources are available so need the desalination plant for the camp as well as for facility operations.

Action Item for Aurora LNG - EAO suggested follow up discussion with ECCC, DFO, Lax Kw'alaams and Metlakatla on the topic of DAS alternatives. A written plan of engagement should support this to ensure it is properly managed.

FRESHWATER FISH AND FISH HABITAT, MARINE FISH AND FISH HABITAT AND MARINE MAMMALS

Darren Chow (DFO) noted that there aren't enough offsetting options in the provided draft offsetting plan to offset the potential 11,000 m² freshwater fish habitat loss as a result of Project activities and asked how Aurora LNG will offset the habitat that will be destroyed. This question also applies to the marine habitat. It is strongly suggested to engage with DFO as early as possible to identify offset options.

Response: Aurora LNG noted that the provided Fish Habitat Offsetting Plan is conceptual at this stage of the Project and further work is needed to refine the options. There is the potential to try and offset for both freshwater and marine impacts in one offset application.

Darren Chow (DFO) explained that additional criteria aside from just habitat availability are needed to determine serious harm to fish. Habitat abundance, and habitat use should also be considered.

Response: Aurora LNG confirmed these additional criteria were considered.

Darren Chow (DFO) further noted there is no mention of fish salvage in the marine habitat. This will be required especially when considering northern abalone. The offsetting plan does not speak to death of fish (freshwater or marine) as per the Fisheries Act.

Response: Aurora LNG explained that offsetting fish mortality would be based on estimating the fish mortality and then putting forward an offset ratio. With respect to northern abalone, Aurora LNG will first need to determine if there is suitable habitat and then estimate the number of abalone expected to be impacted.

Sean Moore (EAO) asked if the conceptual offsetting plan was developed in consultation with DFO prior to Application submission.

Response: Aurora LNG confirmed that consultation with DFO had not occurred but that it was a conceptual plan and that feedback is expected during the Application Review phase with expectation the plan will continue to be revised with DFO input.

Colin Parkinson (TC) reminded Aurora LNG to consult with TC early on in the EA process. TC is interested in seeing details such as depth and size of fish habitat locations.

Response: Aurora LNG noted that habitat reefs are an ideal habitat offset for this project given the species impacted and it is recognized that construction of reefs requires consultation with TC to determine acceptable locations for reef creation.

Action Item for Aurora LNG – Aurora LNG to consult with DFO on the Offsetting Plan including discussing what habitat types require offsetting and if additional areas will be needed? Aurora LNG will follow up with TC once specific locations are known.

Des Nobels (North Coast Regional District) flagged that there was no mention of freshwater insect populations and the contribution of those populations toward fish numbers. Also didn't see any discussion on the effects of underwater noise on fish in the Application. No confidence in the majority of offset projects constructed to date.

Response: Aurora LNG responded that insect populations in the water courses that are being retained won't be affected. Offsetting requirements have become more stringent and constructed offsets require a longer term of monitoring. If offsets fail or don't meet expectations, proponents are required to fix or build additional habitat.

Des Nobels (North Coast Regional District) commented on recent literature suggesting that juvenile salmon consume insects washed into the marine environment.

Action Item for Aurora LNG – EAO notes that fish habitat offsetting will have to be another topic for further discussion soon.

GREENHOUSE GAS EMISSIONS

Nick Russo (ECCC) noted the upstream GHG emission reporting requirement and asked for a status of this report.

Response: Aurora LNG confirmed this report is being written and will be provided to EAO on Feb 22nd.

VEGETATION / WETLAND RESOURCES

Andrew Huang (ECCC) noted that no net loss is applicable to the Project and includes red & blue listed wetlands as well as eel grass and intertidal wetlands. However, the Application only proposed compensating for 2 ha of red and blue listed wetlands.

Response: Aurora LNG confirmed that a conceptual wetland compensation plan is included in the appendices to the application. Compensation of marine riparian, including eelgrass, will be offset as part of the Fish and Fish Habitat Offsetting Plan.

Andrew Huang (ECCC) is concerned that the fisheries conservation measures won't cover all the wetland function compensation measures.

Jack Smith (Prince Rupert Port Authority [PRPA]) responded that any wetted area is managed by PRPA and subject to the Federal Wetland policy. Any implementation of this policy and compensation measures need to be presented to PRPA as they are responsible for ensuring the Wetland Policy.

Patrick Williston (MOE) asked what is expected to happen to the terrestrial ecology that is within that 911 ha that is potentially impacted by nutrient loading (nitrogen loading). Please include this information and predicted outcomes as there is literature (e.g. how biodiversity reduces with N loading) on the terrestrial environment.

Response: Aurora LNG responded that potential effects are unknown but it is expected that there will be increased growth rates to some plant species, and see some shift in species distribution and maybe diversity. A follow up program would be needed to further determine this.

Patrick Williston (MOE) asked if the shift of plant communities within the defined area is significant or not. That is what the reviewers need to be able to answer. Discussion beyond just the area of exceedance is required.

Sean Moore (EAO) stated that the takeaway for EAO on this issue is that the follow up program needs to be clearly defined as to what is being assessed and how it is to be measured.

MARINE MAMMALS

Carolann Brewer (Lax Kw'alaams) expressed concern regarding the marine baseline surveys suggesting they didn't provide reliable estimates for potential effects. It is noted that in comparison the surveys for PNW identified more individual animals over a similar area which could indicate that there was a fault with the baseline data collection.

Response: Aurora LNG responded that the surveys for PNW were already on record when the surveys were completed for this project and that all of that data was pooled with the data collected by Aurora LNG and the DFO siting data.

Lindsay Galbraith (Lax Kw'alaams) flagged high levels of concern on the reliance on effective mitigations in the EA. Need to understand what is acceptable or not and can't define that without proper baseline data collection.

Response: Aurora LNG acknowledged the concern and suggested this be taken offline so that more discussion can happen through consultation.

Tanya Martin (TC) expressed concern that the issue of noise and related cumulative effects is underdeveloped and the impact to marine mammals is a valid concern which wasn't properly addressed in this Application.

Response: Aurora LNG explained that for cumulative effects a qualitative assessment was complete, which is standard practice. The sounds which interact or contribute to underwater noise don't exceed threshold for behaviour change and contribute to sound levels from other projects. It should be noted that a conservative approach was taken for the cumulative effects assessment in the marine mammals VC.

Lindsay Galbraith (Lax Kw'alaams) was concerned with effects to marine mammals e.g. ship strikes and cumulative effects of underwater acoustics on marine mammals.

Response: Aurora LNG assured Lax Kw'alaams that a qualitative assessment was completed, as was done on other local projects, as quantitative assessment would not result in useable data due to potential for large errors.

Darren Chow (DFO) asked to review the exclusion zone and that Aurora LNG consult further with DFO.
Action Item for Aurora LNG: Aurora LNG will meet with DFO to discuss the marine mammal exclusion zone.

WILDLIFE

Chris Schell (Ministry of Forests, Lands, Natural Resource Operations [FLNRO]) asked if the area has been assessed for wind firmness.

Response: Aurora LNG confirmed this was considered through the use of edge effects.

Chris Schell (FLNRO) asked if the PDA was all to be cleared.

Response: Aurora LNG confirmed yes, everything apart from the min. 30 m buffer. FLNRO notes they would like to see larger than 30m buffer if possible.

Andrew Huang (ECCC) commented on the biannual raptor surveys. He asked why the northern goshawk (blue listed species) wasn't specifically surveyed including sufficient call backs which is a key factor for ECCC.

Response: Aurora LNG indicated that the Application focused on habitats that would be a concern for goshawk or other species at risk, however we were unable to complete a nighttime survey which was a limiting fact and no modelling was completed given the low data for this species on a regional basis.

Andrew Huang (ECCC) asked why owl surveys weren't completed (especially western screech owls).

Response: Aurora LNG explained that due to access and logistical issues no surveys were completed. Surveys focused on targeted multi species programs. Detailed habitat surveys were also used (based on ground truthing data) to compensate for not specifically surveying the western screech owl so we could develop proper mitigation measures.

Andrew Huang (ECCC) recommended considering ARU to supplement the baseline data collection specifically for western screech owls.

Response: Aurora LNG confirmed that baseline data collected was detailed but could consider ARU methods.

Chris Schell (FLNRO) noted that the Application lacked information on actual toad breeding sites including where the juveniles and ponds are found.

Response: Aurora LNG commented that it is difficult to identify the breeding sites but a standard mitigation would be to survey and identify the breeding sites prior to construction.

Andrew Huang (ECCC) remarked that other life stages of western toad weren't properly assessed as the timing didn't cover the migration timeframe.

Response: Aurora LNG responded that the Project would need to avoid or move the western toadlets if work needed to be done during the sensitive timeframes and this would be a pre-construction requirement. ECCC noted they will be requesting more guidance be provided regarding western toads.

MARINE BIRDS

Andrew Huang (ECCC) noted both flaring options are near Delusion Bay which is prime area for marine birds. Has there been consideration of conducting surveys using radars? It would capture the direction of flight and height.

Response: Aurora LNG responded that the distribution of the breeding locations of species most likely to be affected by light was considered.

Andrew Huang (ECCC) asked that a more methodological approach be used to determine potential effects of a flare on marine birds rather than an incidental approach (ops staff identifying dead birds).

Response: Aurora LNG replied that based on the assessment it looks like the likelihood of bird impacts is low.

Des Nobels (North Coast Regional District) commented that the baseline data is flawed. Local knowledge shows that there are sandhill cranes and rhinoceros auklets present. Pygmy and elf owls are relatively common on the island. The Application does not mention flying squirrels despite this species being present on Digby Island. Western toads are well distributed across the island.

HUMAN HEALTH

Luanne Roth (Dodge Cove) noted there would likely be an increase in the concentration of contaminants in marine foods due to the redistribution of sediments during dredging. Think that there will be a considerable increase in NO₂ if the conversion rate is changed from 10% to 30% to align with PRAS. Also O₃ was not provided on an hourly basis as it should have been. Secondary ozone production by catalyzing VOCs wasn't taken into account in the Application.

Response: Aurora LNG requested that this be submitted as an IR so it can be properly addressed. Dioxins and furans have very low water solubility so they don't dissolve into the water column when disturbed. Therefore once the sediments that contain the dioxins and furans are removed then the marine foods will actually improve. Marine foods can uptake from the water column however the amount able to be uptaken is much lower than from the sediments directly.

Mary Cameron (Health Canada) requested to see research and discussion on dredging in the Application as Health Canada believe there is research that concentrations of contaminants will actually increase due to dredging. Also note that dioxin & furans levels are about twice as high in crabs identified in PNW report.

Action Item for Aurora LNG: Aurora LNG will follow up on this issue and provide clarity to the numbers used for consumption in the human health assessment.

Mary Cameron (Health Canada) raised concerns that the consumption rates underestimate the risk to human health and the referenced study was misinterpreted for this Application. Further discussion between Aurora LNG and Health Canada on the interpretation of consumption rates is required.

Mary Cameron (Health Canada) questioned why only 29 grid points were assessed in the human health assessment rather than the complete set of 1900 grid points.

Response: Aurora LNG explained that the 29 presented were sensitive locations representing daycares, nursing homes, etc.

Mary Cameron (Health Canada) notes that the area of Prince Rupert was not covered by all the 29 grid points in the assessment and all the grid points included should be spatially presented.

Response: Aurora LNG requested Health Canada present this as an IR and provide the area in question (not covered by grid points) so that further discussion can occur.

Warren McCormick (MOE) asked how the grid points were selected for human health.

Response: Receptor points were selected for hospitals, schools, etc. in the general populated areas and where sensitive people were likely to be. MOE stated they will require further discussion on this issue and will follow up.

Nicole Wallace (Kitsumkalum) asked how the offline discussions would be tracked so that the information could be shared. EAO explained it is yet to be determined how the topic section will run and if potentially topics will be open to the broader group.

Aurora LNG: Once it is determined what the agencies want to discuss we can begin the path forward on this and will follow up on what the topic specific sessions will be like.

ACCIDENTS AND MALFUNCTIONS

Paula Doucette (TC) noted “credible” versus “worst case” scenarios and asked why the worst case scenario (4 trains shut down) wasn’t used in the Application?

Response: Aurora LNG responded that this was a very unlikely scenario so it didn’t merit discussion. The probability and likelihood was very low for all trains to shut down at the same time.

Barb Oke (Northern Health) asked if Aurora LNG can provide more information on the likely Accident & Malfunctions for LNG and the safety record of the industry as Northern Health found various incident reports with LNG e.g. explosion in Algiers.

Response: Aurora LNG noted that the scenarios that were assessed comply with the AIR and assessments of similar LNG projects.

Paula Doucette (TC) requested confirmation on the timeframes for short term emergency flaring.

Response: Aurora LNG confirmed this is expected to be 1 hour for short term whereas long term is expected to be 24hrs in duration.

Paula asked if there was qualitative risk assessment data collected regarding vessel grounding and collision and the probability of this happening.

Action Item for Aurora LNG: Aurora LNG will follow up regarding vessel grounding, collisions and the probability of this happening and confirm if this information is available.

Colin Parkinson (TC) asked what the steps are if there is a grounding and how is a leak detected? It was noted that there would have to be confirmation that the cargo is intact before first responders would mobilize.

Laura Moore (Dodge Cove) requested more detail on rapid phase transition, thermal radiation and vapour plumes and how this would impact Prince Rupert, Dodge Cove and local areas.

Response: Aurora LNG stated that this information is found in Section 9.10 of the application.

Colin Parkinson (TC) requested that gas cloud modelling be completed for the TERMPOL and to do this along the marine shipping route.

EAO noted that further engagement is needed between agencies (federal & provincial) to address community concerns on emergency response.

It is noted that the OGC should be included in all of these emergency response discussions as they will play a role in the permitting phase.

Action Item for EAO: Metlakatla requested that EAO send links to the LNG information session documents on EAO's website.

CLOSING COMMENTS

EAO requests that structured comments be provided by agencies. Also please provide Aurora LNG with any recommended references that you want them to review to determine if the additional information might change any of their EA conclusions.

Lax Kw'alaams is concerned with DAS options and this requires further consultation. Lax Kw'alaams want to engage with Working Group members and to advise their community on the potential Project impacts and be involved in any mitigation strategies that have been proposed. Lots of these have been linked to Aboriginal interests and rights. We look forward to working with you.

ACTION ITEMS/FOLLOW-UP

DAY 2 (February 7)

AIR QUALITY

- 19. Action Item for Aurora LNG** -Aurora LNG received the MOE IR request regarding mass balance calculations and we will follow up after this meeting and confirm the status.
- 20. Action Item for Aurora LNG** -Aurora LNG will follow up with MOE on the modelling of a ground flare. EAO requested that Aurora LNG connect with MOE and likely OGC to discuss this further. Aurora LNG will schedule a meeting.
- 21. Action Item for Aurora LNG** -Aurora LNG to determine if it's possible to ascertain the difference between using 10% vs. 30% without re-doing any air quality modelling.
- 22. Action Item for Aurora LNG** -EAO suggested follow-up call between the proponent, MOE and MOH to discuss VOCs, and how to adequately assess its impact to human health including how they relate to the Accidents and Malfunctions.

NOISE

- 23. Action Item for Aurora LNG** – Aurora LNG confirmed that the work camp was not considered as a receptor. Aurora LNG will follow up on the importance of health for the workers during all hours and if this needs to be incorporated into the assessment and potential effects of the 2016 Health Canada Noise guidelines.

- 24. Action Item for Aurora LNG** – Aurora LNG will take this information back, as it was flagged in the First Nation Workshops as well, and discuss it with their engineers.

WATER QUALITY

- 25. Action Item for Aurora LNG** – Aurora LNG will circulate back on how they will meet the BC water quality standards during construction and what technology will be used.
- 26. Action Item for Aurora LNG** Aurora LNG will follow up with MOE in terms of water quality and ensure we capture their requirements.

MARINE FISH

- 27. Action Item for Aurora LNG** - Aurora LNG to consult with DFO on the Offsetting Plan including discussing what habitat types require offsetting and if additional areas will be needed? Aurora LNG will follow up with TC once specific locations are known in terms of proposed reef construction.
- 28. Action Item for Aurora LNG** -Aurora LNG will continue to follow the ECCC guidance on DAS selection criteria and will discuss this DAS site selection further with ECCC (including Adam Leuw at ECCC).
- 29. Action Item for Aurora LNG** -Aurora LNG indicated that they didn't anticipate dredging above the high tide line in Casey Cove but would confirm this is correct.
- 30. Action Item for Aurora LNG** -Aurora LNG will review the ECCC DAS guidelines and set up a meeting for next steps. EAO wants this meeting to include FNs (Lax Kw'alaams and Metlakatla) so please put forward a path and timing.
- 31. Action Item for Aurora LNG** -EAO suggested follow up discussion with ECCC, DFO, Lax Kw'alaams and Metlakatla on the topic of DAS alternatives. A written plan of engagement should support this to ensure it is properly managed.

MARINE MAMMALS

- 32. Action Item for Aurora LNG** - Aurora LNG will meet with DFO to discuss the marine mammal exclusion zone

HUMAN HEALTH

- 33. Action Item for Aurora LNG** - Aurora LNG will follow up on this issue and provide clarity to the numbers used for consumption in the human health assessment.

ACCIDENTS AND MALFUNCTIONS

- 34. Action Item for Aurora LNG** - Aurora LNG will follow up regarding vessel grounding, collisions and the probability of this happening and confirm if this information is available.
- 35. Action Item for EAO** - Metlakatla requested that EAO send links to the LNG information session documents on EAO's website.