

**Deep Basin
Core Contractor Meeting**

October 6, 2010

Road Transport Safety



Objectives and Expectations

- Safety Moment – Load Securement
- Deep Basin North (BC) Resource Radio Channel Update
- Rules of The Road Update
- Obtain feedback/input

EDC Rig Fatality August 9, 2010

Summary

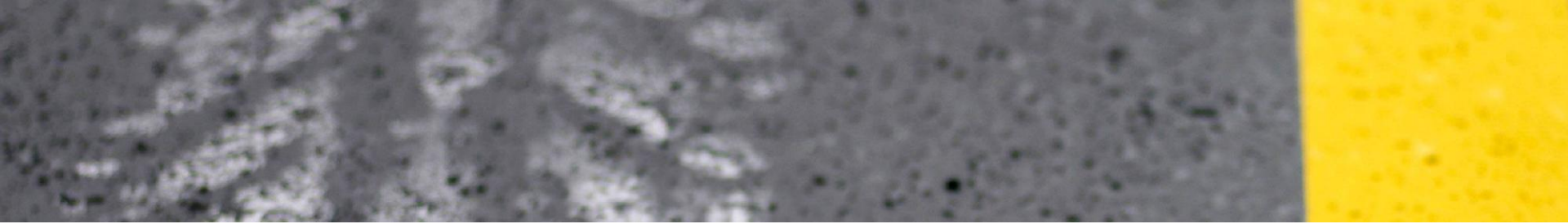
- Rig 52 relocation was taking place on Aug 8th between locations BED 4-4 and BED 1-AB a distance of 13 km on graded infield roads. At approx 7am a convoy of trucks moving rig components under the supervision of the truck pusher were escorted to the new location. Upon arrival of the convoy the truck pusher returned to BED 4-4. The truck drivers were instructed to stand-by until a forklift arrived.
- Pico (EDC subcontractor) driver took it upon himself to remove the load securing chains. After releasing the front chain, and removing a side-stopper, he started to release the aft chain, with great difficulty. Once he managed to release the chain a 7m x 0.9m rig-floor beam section slid fell from the trailer and landed on him causing fatal injuries.



Findings from the Investigation

- Loads not safely and suitably secured for transit between drilling rig locations.
 - *The 7m*09.m beam which forms part of the rig floor and fell from the trailer had several protruding parts and did not have a simple center of gravity. It had been loaded in such a fashion that any movement during transit would cause it to slide outboard onto the securing chains, subsequently when the chains were removed the incident occurred. A loading reconstruction exercise was conducted to verify this.*

- Unapproved removal of load securing devices.
 - *Driver of the vehicle removed the chain securing devices and the trailer stopper without instruction from authorized EDC staff. Clear instructions were given to all drivers with forklift loads to standby at new location and wait for offloading.*
- No intervention when procedures are knowingly being breached
 - *The eye witness of incident was a truck driver employed by a second contractor company (not Pico)*
 - *He was parked behind the vehicle involved in the incident and watched as the driver unsecured his load by removing chains and stopper. He did not stop or intervene*

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- Truck-pusher crew changed during rig move operations.
 - *Outgoing Truck-pusher crew changed at 6am on the morning of the incident. The trailer was loaded by one truck-pusher on the 6th of Aug. it was then moved between rig sites by the new truck pusher on the morning of the 8th of Aug. None of the truck pushers had attended the pre rig move meeting.*
 - Several Rig moves carried out concurrently.
 - *At the time of the incident there were 5 ongoing EDC rig moves.*
 - *The availability of key personnel and equipment for these activities was sub-optimal to enable safe and efficient execution.*

Driver Fatigue

This accident occurred north of Deer Lodge on I-90. The driver was ~ 22 year old guy heading east to College. He had left central Washington early in the morning. He fell asleep at the wheel and drifted off the shoulder hitting the end of the section of guard rail. The guard rail came through the right headlight, engine compartment, firewall, glove box, passenger seat, rear seat and exited out the driver's side rear window. That is 120 Feet of guard rail that threaded through the suburban.

No passengers and the driver was not injured. I am sharing this as a reminder to all about NOT driving when you shouldn't be behind the wheel (drinking, texting, distracted or just plain tired).







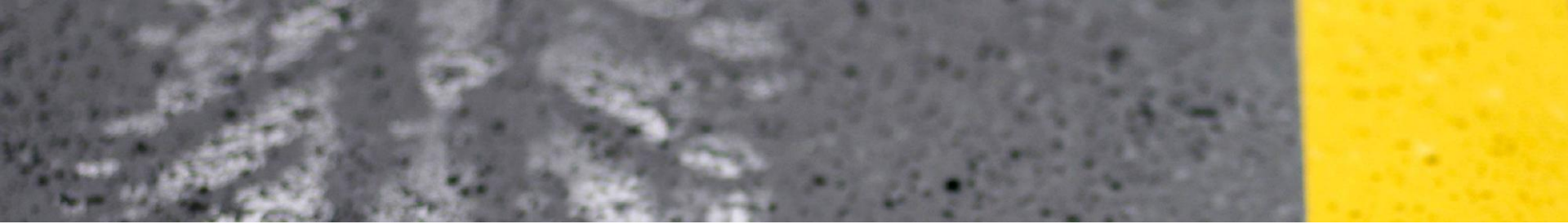


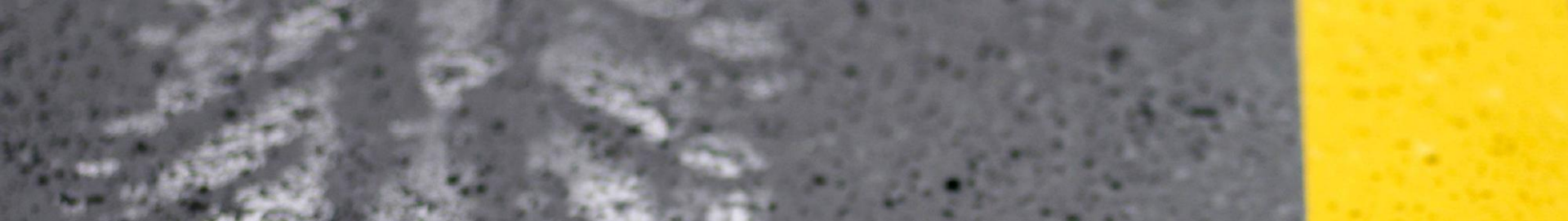
Resource Roads Update - Radio's

- Key facts you **need** to know about the proper use of the RR channels and narrow band capable 2-way radios:
 - The 2-way radios that are used for these narrow band channels **MUST BE** legally capable of being properly programmed with narrow band frequencies.
 - Equipment that is older than 1997 will likely need to be replaced and updated.
 - RR frequencies **MUST ONLY** be programmed by qualified and authorized Technicians.
 - Self programming of 2-way radios **IS NOT LEGAL**
 - It is recommended that the Radio operator maintain and provide a copy of the documentation with the radio that shows that your 2-way radio has been programmed by a qualified Radio Technician.
 - All 2-way radios **MUST** have a radio license issued by Industry Canada. For more information or to apply for a radio license, call Industry Canada at 1 (800) 667-3780.

Radio Calling Protocol

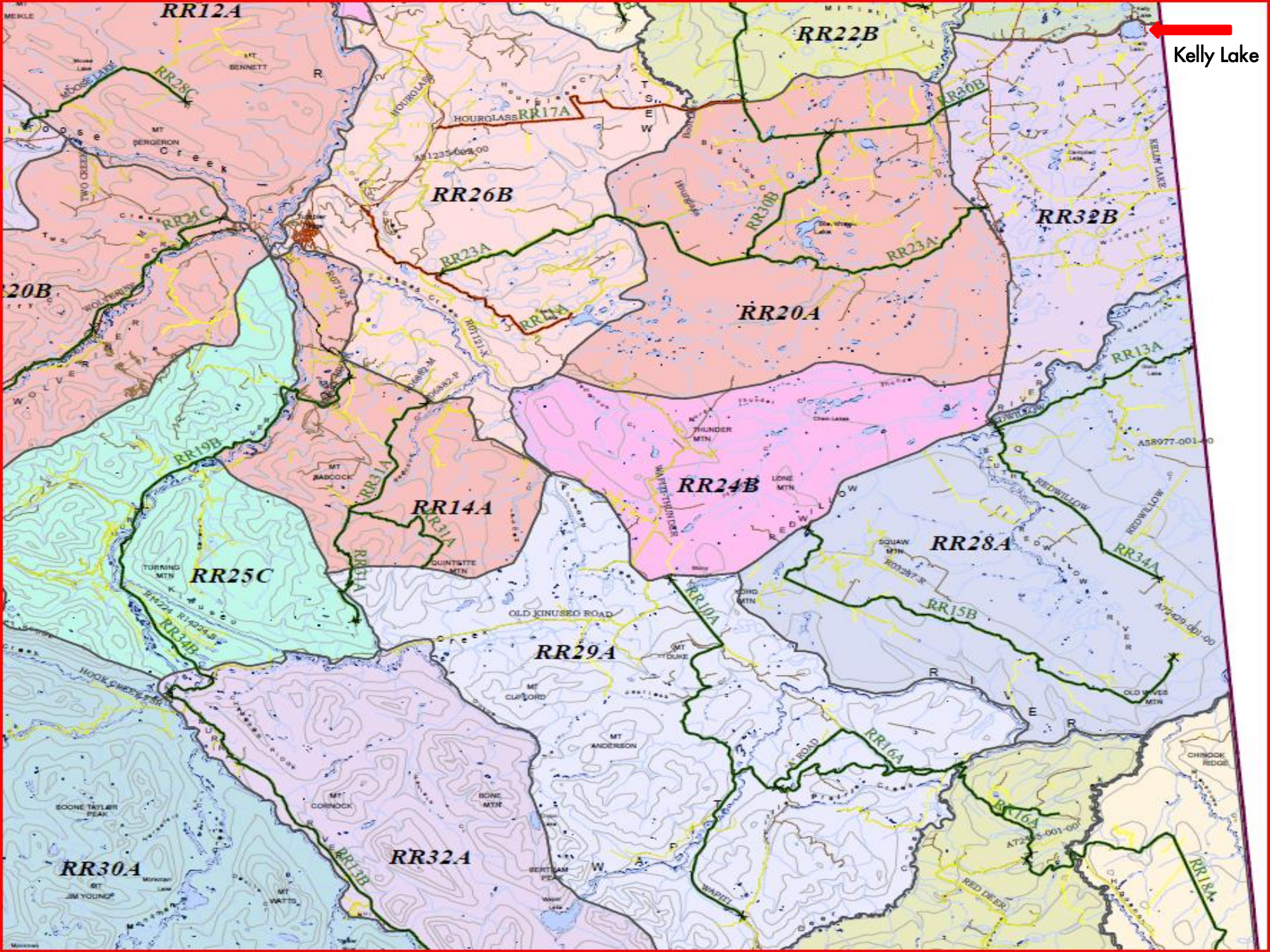
- “UP” and “DOWN” will be the terms used to identify travel direction. “UP” will be assigned in the direction of increasing kilometre signs; “DOWN” will be assigned in the direction of decreasing kilometre signs.
- All users call the kilometre, travel direction, and road name (i.e. “12 km UP on Ojay Main”).
- Vehicles travelling in the “UP” direction call every **EVEN** km and vehicles travelling in the “DOWN” direction call every **ODD** km.
- Must call situations for both up and down travelling vehicles are:
 - When entering a new road system;
 - At posted “Must Call” signs;
 - Whenever there is a road frequency/channel change, or when leaving a road;
 - Whenever you are stopping and parking on the road, and again when you resume;
 - Whenever you encounter a vehicle travelling without a radio.

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- Convoy calling is allowed:
 - The lead vehicle is responsible for calling for all vehicles in the convoy;
 - It is the responsibility of the vehicle joining or leaving the convoy to inform and to receive confirmation from the lead vehicle;
 - Convoys that exceed 3 HGVs must travel with a min. of front & rear pilot vehicles;
 - A vehicle more than 1 km behind the lead vehicle is no longer part of that convoy and must call their own position;
 - A vehicle must be in sight of the vehicle in front of them or evidence that they are very close (dust, lights or turbulence) to be considered as part of a convoy.

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- Never overtake any vehicle without notifying them on the radio and receiving the "OK" or seeing them pull clear.
 - Avoid distractions while monitoring the road channel:
 - No unnecessary radio chatter;
 - Avoid noise distractions i.e. AM/FM radios, phones, music players, passengers;
 - Stay on designated road channel at all times while travelling.
 - Prior to entering a road system, ask for a radio check.
 - When responding to a radio check, respond by indicating the signal strength and clarity (i.e. 5 by 5 indicates loud and clear).
 - RR channels are for traffic management purposes only. Conduct all other communication on a non-RR channel when not travelling on a RR. When switching channels between road systems, request oncoming traffic to indicate if "anyone is close".

Radio Channels Needed - Deep Basin North

- RR15b Rat Lake
- RR10a, 16a & 18a Ojay
- RR 34a, 13a Red Willow
- RR32b, 29a, 22a, 28a Surrounding Areas



Kelly Lake

Rules of The Road

- Travel must occur in compliance with the Statutes of the Province of BC governing vehicular traffic use. All aspects of the Traffic Safety Act & NSC apply to all roads everywhere, including in the Deep Basin North area.
- The maximum allowable speed on all roadways is 80 km/hr, unless otherwise posted.
- All vehicles will slow down when meeting other vehicles or when passing maintenance equipment.
- Minimize noise where possible
- All vehicles will be operated according to road and weather conditions, at speeds that permit stopping within the line of sight.
- All vehicles must be equipped with a VHF (2-way) radio for communication purposes as all roads are "radio assisted." Drivers must call kilometers as required.

Cont...

- All drilling rig, service rig, Frac moves and convoys of 3 HGVs or more and any oversized loads greater than 3.85 m (12'6) or 80T, **MUST** be equipped with or have as a minimum a lead & rear pilot vehicle which is equipped with a VHF (2-way) radio for communication purposes and convoy management.
- Proper radio use protocols will be observed. Absolutely no visiting, chatting or foul language will be tolerated on haul channels.
- Headlights and/or running lights are mandatory at all times. (Driving lights and fog lights must be turned off when meeting oncoming traffic.)
- All vehicles shall maintain a safe following distance that road conditions allow.
- No vehicle shall park on any bridge or in the centre of any roadway or on any curve

Closing

Q & A / Feedback



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