



VIA EMAIL ONLY

([mike.evans@alaska.gov](mailto:mike.evans@alaska.gov))

October 4, 2013

Michael Evans  
Environmental Program Specialist  
Alaska Department of Environmental Conservation  
SPAR-IPP/EPR  
555 Cordova Street  
Anchorage, AK 99501

RE: CIPL OIL DISCHARGE PREVENTION & CONTINGENCY PLAN NO. 12-CP-2081

Dear Mr. Evans:

Please accept these comments on the above-referenced matter from Cook Inletkeeper and the Kachemak Bay Conservation Society (hereinafter "Inletkeeper").

After reviewing CIPL's submissions, its clear CIPL simply edited the paperwork it used to bring Tank 3 back into operation after the 2009 eruption of Mt. Redoubt and subsequent evacuation of the Drift River Oil Terminal. As a result, Inletkeeper is submitting comments for tank 4 it previously submitted for Tank 3 on June 4, 2012, because the issues and concerns remain largely identical.

Of course, a primary distinction between the 2012 C-Plan review and the current one is the volume of oil at risk at the base of an active volcano; under the current proposal, CIPL would now be permitted to store over 22 million gallons of oil in the floodplain below Mt. Redoubt. While Inletkeeper applauds the removal of oil from the DROT when the AVO shifts the volcano threat level from green to yellow, we know from experience that volcanic eruptions can and do occur with little or no warning. For example, Mt. Redoubt erupted in 1989 with less than 24 hours notice (See attached timeline). As a result, it makes no sense to threaten sensitive fisheries by storing oil at the base of an active volcano when other viable options – such as a trans-Inlet pipeline or tankering – exist.

When reviewing CIPL's spill scenarios from ruptured oil tanks, two central fictions persist. First, it claims oil will not reach open water. But the facility rests on a flood plain, adjacent to

anadromous streams that flow to Cook Inlet, and lahars sweeping around DROT in 2009 clearly reached Cook Inlet's waters. Importantly, CIPL has never substantiated this assumption with data or research, and equally important, ADEC has never compelled them to. Second, CIPL pretends it can implement a response plan during volcanic activity. Yet operators evacuated the DROT after the 2009 eruption, and later confessed they could not meet the State of Alaska's spill response laws and rules when the facility was unmanned (see attached timeline).

In its decision to permit Tank 3 back into service in 2012, ADEC wrote:

The department understands there are times that response operations will be limited, and that includes any type of response during a lahar. That limitation is in part why the department is in agreement with CIPL that the best way to deal with a lahar caused oil spill is to avoid it through operational and engineering methods. (p.26)

This rationale – that we can somehow engineer our way around massive forces of nature such as volcanoes – lies at the root of the hubris that will see Tank 4 brought online.

Taking a step back, Inletkeeper is more broadly concerned with the State of Alaska's willingness to put the corporate interest above the important fisheries in Lower Cook Inlet and the countless families they support. In the immediate aftermath of the 2009 eruption, industry undertook steps to resume oil storage at the base of Mt. Redoubt, and not only did the State not dissuade them, it actively encouraged them. For example, ADFG readily granted permits to Hilcorp to conduct mining operations and to fill a salmon stream in the Redoubt Critical Habitat Area, despite the fact ADFG's own laws and rules flatly prohibited such activities (see attached appeal).

When the Alaska Oil Spill Commission issued its report on the Exxon Valdez Oil Spill in 1990, it pointed to complacency as a primary cause of the devastation that struck local communities and continues to this day. Allowing CIPL and Hilcorp to continue storing oil at the base of an active volcano is the height of complacency, and in this day and age, Alaskans and their magnificent resources in Cook Inlet deserve better.

Yours for Cook Inlet,



Bob Shavelson  
Inletkeeper

Enc. Cook Inletkeeper 2012 DROT C-Plan Comments  
Cook Inletkeeper Redoubt Bay CHA Appeal  
DROT 2009 Eruption Timeline



VIA EMAIL ONLY

([shannon.dewandel@alaska.gov](mailto:shannon.dewandel@alaska.gov))

June 4, 2012

Shannon DeWandel  
Alaska Department of Environmental Conservation  
Division of Spill Prevention & Response  
555 Cordova Street  
Anchorage, AK 99501

RE: SPILL CONTINGENCY PLAN COMMENTS & REQUESTS FOR ADDITIONAL INFORMATION  
ON CIPL 12-CP-2081; DRIFT RIVER OIL TERMINAL

Dear Ms. DeWandel:

## I. Introduction

Cook Inletkeeper is a public interest group comprised of Alaskans concerned about clean water, healthy salmon and strong local economies. Please accept these comments and requests for additional information on behalf of Inletkeeper and its more than 2500 members and supporters throughout the Cook Inlet watershed on the proposed C-plan for the Drift River Oil Terminal (DROT).

Inletkeeper played a central role in the 2009 Drift River Oil Terminal Incident, and from Inletkeeper's perspective, that incident reflected the worst break-down in spill prevention and response in Alaska since the *Exxon Valdez* in 1989. Yet Hilcorp/Cook Inlet Pipeline recently characterized the 2009 Mt. Redoubt eruption and subsequent emergency response around DROT as a "non-incident,"<sup>1</sup> and the Cook Inlet Regional Citizens Advisory Council (CIRCAC) similarly downplayed the incident with an industry-scrubbed post-incident report.<sup>2</sup> For a factual accounting of what transpired at DROT in 2009, including a review of the significant spill response break-downs that occurred, attached please find Inletkeeper's timeline of events for

---

<sup>1</sup> Wesley Loy, Anchorage Daily News, *Hilcorp Looks to Resume Oil Storage in Shadow of Volcano* at <http://www.adn.com/2012/05/19/2471782/hilcorp-looks-to-resume-oil-storage.html>

<sup>2</sup> See CIRCAC, *Evaluation of the 2009 Drift River Oil Terminal Coordination & Response with a Review of the Cook Inlet RCAC's Role in Spill Response* (June 2010) (available at: <http://www.circac.org/documents/pdf/Reports/100510%20Final%20Drift%20River.pdf>). Cook Inletkeeper wrote a brief but compelling response to the report, highlighting major gaps, conflicts of interest and inconsistencies that render CIRCAC's report virtually meaningless. See Letter from Bob Shavelson, Cook Inletkeeper, to Grace Merkes, President, CIRCAC, June 18, 2010 (enclosed and available at: <http://inletkeeper.org/resources/contents/circacdrotresponse>).

the incident, which are incorporated herein as comments.<sup>3</sup> While the 2009 Mt. Redoubt eruption provided many lessons learned, the most important is this: it's physically and technologically impossible to successfully respond to a major oil spill in lahar-induced conditions in an active volcano zone. Because Cook Inlet fisheries drive roughly \$1 billion into local economies each year,<sup>4</sup> and because there is no way for this C-Plan to legally or technically meet state and federal law, ADEC must disapprove this C-Plan and require Hilcorp to pursue reasonable alternatives other than tank storage at the facility, including but not limited to a safer and more efficient pipeline across Cook Inlet.

## **II. Oil Storage at DROT Poses Exceptional Risks to Cook Inlet Fisheries & Violates State & Federal Law**

### **A. Background**

The original selection of the Drift River Oil Terminal (DROT) as an oil storage facility at the base of an active volcano was a monumental mistake, and while industry has made facility modifications to reduce spill risks over the years, the fact remains that sheer luck is the only thing that's stood between past volcanic eruptions and a major oil spill in Cook Inlet. As a result, the continued use of DROT flies in the face of common sense, and for the reasons cited below, the facility cannot meet relevant state and federal spill prevention and response requirements. Hilcorp/CIPL conceded this point recently during an interview on the Alaska Public Radio Network, when Hilcorp's Lori Nelson said the success of Hilcorp's spill contingency plan rests on the "hope that mother nature cooperates in the long run."<sup>5</sup> Unfortunately, "hope" is not an acceptable criterion under 18 AAC 75.

Mt. Redoubt is believed to have generated 7 or more eruptions in the last 250 years, and geological indicators suggest this activity will continue. If Mt. Redoubt's eruptive behavior continues, there is a strong chance the Drift River storage facility will be inundated by lahars larger than the 2009 events.<sup>6</sup> Lahars of equivalent size, with slightly different behavior than

---

<sup>3</sup> Cook Inletkeeper, *Drift River Oil Terminal Timelines, Issues & Questions 2009* (also available at: <http://inletkeeper.org/resources/contents/driftriver2009timeline.1>)

<sup>4</sup> See ECONorthwest, *Economic Analysis of the Chuitna Watershed & Cook Inlet* (2010) (available at: <http://inletkeeper.org/resources/contents/economic-analysis-of-the-chuitna-watershed-cook-inlet/view>).

<sup>5</sup> APRN, *Hilcorp Plans to Increase Cook Inlet Energy Production* (June 1, 2012) (available at: <http://www.alaskapublic.org/2012/06/01/hilcorp-plans-to-increase-cook-inlet-energy-production/>)

<sup>6</sup> Support for the statements in Section II herein can be found at: *The 2009 Eruption of Redoubt Volcano*, Alaska by Janet R Schaefer, 2011. [http://www.dggs.alaska.gov/webpubs/dggs/ri/text/ri2011\\_005.PDF](http://www.dggs.alaska.gov/webpubs/dggs/ri/text/ri2011_005.PDF); *Magnitude and Frequency of Lahars and Lahar-Runout Flows in the Toutle-Cowlitz River System*, Kevin M. Scott, 1989. <http://pubs.usgs.gov/pp/1447b/report.pdf>; *Preliminary Observations of Voluminous Ice-Rich and Water-Rich Lahars Generated during the 2009 Eruption of Redoubt Volcano, Alaska*, Waythomas, Pierson, Major, and Scott, 2012. <http://pubs.usgs.gov/of/2012/1078/pdf/ofr20121078.pdf>; *EFFECTS OF THE 1966-68 ERUPTIONS OF MOUNT REDOUBT ON THE FLOW OF DRIFT GLACIER, ALASKA, U.S.A.*, Sturm, Benson, and MacKeith, 1986. [http://www.igsoc.org/journal.old/32/112/igs\\_journal\\_vol32\\_issue112\\_pg355-362.pdf](http://www.igsoc.org/journal.old/32/112/igs_journal_vol32_issue112_pg355-362.pdf); *Flood generation and destruction of "Drift" Glacier by the 1989-90 eruption of Redoubt Volcano, Alaska*, 1992, Trabant and Meyer. [http://www.igsoc.org/annals.old/16/igs\\_annals\\_vol16\\_year1992\\_pg33-38.pdf](http://www.igsoc.org/annals.old/16/igs_annals_vol16_year1992_pg33-38.pdf)

observed in 2009, could also create local breaches in the protective berms. Even if the lahars are not larger than 2009, but continue to occur periodically on the historic scale, and hazard mitigation measures are effective, the facility still faces an increasingly untenable situation. Raising of the valley floor by lahar deposition will progressively increase the facility's vulnerability to both lahars and flooding. In fact, the lahars and flooding in 2009 already reduced the external freeboard at DROT to an extent that increases risks to the facility.

**B. Lahar hazard mitigation in the past has been barely sufficient.**

Existing mitigation structures at the Drift River facility successfully diverted the 2009 lahars, but only barely (Schaffer 2011). Had the lahars developed an erosive flow along one of the berms, or channelized the Drift River against it, this could have created a local breach in the structure, inundating the facility without overtopping the berms. A larger debris flow than occurred in 2009 could easily overtop and breach berms of comparable specification.

**C. Accumulation of sediment outside the facility makes it more vulnerable to future flooding.**

The 2009 lahars deposited large volumes of sediment around the facility (Schaefer, 2011). Future lahars can be expected to continue this process. Cumulatively, this will raise the ground level surrounding the facility, making it more vulnerable to conventional flooding and groundwater inundation. Future lahars breaching of the protective berms would be more destructive.

**D. A volcanic landslide could create a debris-dammed lake and a destructive outburst flood that might threaten the Drift River facility.**

The broad, relatively flat upper Drift River valley enters a tightly constricted gorge where it passes Redoubt. If this constriction were dammed by a landslide from Mt. Redoubt, this could create debris-dammed lake. Such a lake could accumulate on the order of a cubic kilometer of water. Landslide dammed lakes often fail abruptly, producing a violent flood. Similar events occurred prehistorically at St. Helens (Scott, 1989) and elsewhere. Such a flood could threaten the oil storage facility, either by simply overtopping dikes during extreme flooding, or through rapid erosion. Because an outburst flood like this would start with less sediment than a lahar, it would tend to be more erosive than a lahar.

**III. Specific Comments on the Proposed C-Plan**

Below please find a review of the proposed C-Plan against the approval criteria listed in 18 AAC 75.445 of the Alaska Department of Environmental Conservation regulations, with requests for additional information (RAI) provided where appropriate. The bullets start in C-plan section 1.5 and follow consecutively thereafter.

Section 1.5 DEPLOYMENT STRATEGIES [18 AAC 75.425(e)(1)(E)]:

- Table 1-4 describing CISPRI vessel response times materially omits winter vessel response times required to assess the efficacy of response efforts. Winter response

times could be several times those listed in the table and could easily exceed 8 hours for the major response vessels and 16 hours for barges anchored elsewhere in Cook Inlet to avoid the winter ice at Nikiski Bay. Subsequent winter spill scenarios, (see pp. 1-43, 1-52), contradict the response times listed in this table, but none show the extra transit times required for tug transit to winter barge mooring sites in lower Cook Inlet and tug and barge transit from these winter mooring sites.

- RFAI: Please revise Table 1-4 to show the longest expected response time of personnel and vessels during winter months with both favorable and severe environmental conditions as mandated by 18 AAC 75.445(f)

#### Section 1.6.3 Discharge Tracking [18 AAC 75.425(e)(1)(F)]:

- Visual tracking of spills may be limited during winter months to less than 5 hours per day;
- Tracking buoys have not been demonstrated to work in ice flows where buoys would be destroyed or submerged;
- CISPRI's Infrared spill tracking has encountered numerous problems to date.
- RFAI: Please produce a revised section showing a real time tracking system capable of tracking oil 24/7 as required by 18 AAC 75.425(e)(1)(F)(iv) and as available from aircraft that employ SLAR, UV/IR sensors, laser fluorescence sensors, microwave radiometers and other integrated airborne oil pollution sensor systems employed by Canada and virtually every Western European nation.

#### Section 1.6.8 Scenarios SCENARIO 1 OIL STORAGE TANKS RUPTURE:

- snow and ice cover displace storage volume in secondary containment;
- snow, ice and mud from lahars may block passage of oil between shared secondary storage, drastically reducing the amount of oil that could be retained in secondary containment;
- Hilcorp/CIPL cannot claim oil will not reach open water for several reasons:
  - 1) It has not established that there is any impermeable "containment outside of secondary containment" as required by 18 AAC 75.432(d)(6); even if legitimate containment could be proven outside of secondary containment, the allowable credit is only 10%, not the 40% claimed;
  - 2) the hazard of lahar that mandated invocation of Section 18 AAC 75.432(c) would necessarily displace any secondary or tertiary storage volume by filling it with mud and by otherwise presenting a continuous flood condition equivalent to the Mississippi River flow volume through the DRT area that would exceed any claimed storage capacity inside or outside of secondary containment;
- The low wind speed of 5 kt. creates the high potential for accumulation of explosive vapors and vapor suppression would require a large quantity of AFFF, fire monitors, pumps and associated hydraulic power packs but are not listed. Similarly vapor dispersion capability, (e.g. airboats) is not shown either.

- Table 1-8 misrepresents the oil recovery rates possible given impact of both storage tanks by a volcanic lahar and the scenario conditions:
  - 1) The presumption of absorption of oil on land before it reaches water preclude these recovery rates because the oil would not freely flow.
  - 2) Low wind speed promotes accumulation of explosive and toxic vapors precluding use of the majority of listed equipment due to ignition sources on engines.
  - 3) No transport of large or heavy equipment on snow is available and cleared road for tank inspections is also an avenue of oil leakage to open water.
  - 4) No ice penetration is available
  - 5) There are insufficient vessels/vehicles able to deploy equipment on thin ice over river or in ice flows in Inlet.
  - 6) None of the equipment except front end loaders are designed to recover oil mixed with lahar mud, the mandated cause of the dual tank failure, and loaders won't work in the river or Inlet where a dredge would be required to suction oily mud from the river(s) and Inlet bottoms
  - 7) None of the equipment is designed for stationary recovery in swift river currents >2 kt. and downstream drifting is not possible in winter
  - 8) Manta Ray skimmers are not appropriate for use in fast currents of River or Inlet
  - 9) Weir and disk skimmers are not appropriate in ice and rope mops and brushes have insufficient encounter rates, (see ASTM F-1780), due to disabled boom in ice.
  - 10) As with the 2009 DROT incident, once the facility is evacuated during a volcanic event, on-site response capacity by facility personnel and equipment is rendered useless.
- Table 1-10 misrepresents the personnel necessary to mobilize and deploy the cited Task Forces where the number of personnel are insufficient to both operate the vehicles and the equipment listed.
- RFAI: Please provide a realistic RPS response scenario in conformance with 18 AAC 75.432(c) and .445(f) showing:
  - 1) the entire 540,000 bbl oil release into "open water" due to flooding of secondary containment by the volcanic lahar that mandated invocation of 18 AAC 75.432(c) and creation of the instant RPS scenario involving all active storage tanks that might be affected
  - 2) the loss of oil buoyancy of the majority of oil released due to thorough mixing with lahar mud and the resultant need for dredging of oiled mud from rivers and the Inlet. Lahars also tend to leave mud deposits on land necessitating recovery of oiled mud using dozers and loaders with long term impermeable land storage and approved barge transport for the collected oily mud to an approved disposal site.
  - 3) realistic recovery rates for the oil that floats free of lahar mud in the heavy ice flows that would be expected during winter response in the Inlet. Skimmer efficiencies must be consistent with an encounter rate analysis as per ASTM F-1780 and otherwise mandated by 18 AAC 75.445(g)(3). This regulation requires quantification of the effect of boom on recovery rates but when boom is totally disabled by the ice flows, only the encounter width of the rope and brush mop skimmers themselves remain in

consideration for establishing recovery rates. Rope and brush mops should be further de-rated consistent with 18 AAC 75.445(f) where ropes are often lifted above the oil by ice and all mops have reduced oil adhesion due to freezing. Any claims that ice concentrates oil or that the CI-OW-2 tactic blocks ice flow but not oil flow must be supported with scientific data collection and analysis consistent with regulations and industry standards established in ASTM F-1780. Any claims that tidal rips will concentrate oil for skimmers also necessitates that the skimmers be tested using ASTM F-631 procedures for determining reliability and oil recovery effectiveness in the heavy debris concentrations that are coincidentally present in tidal rips. Ice should be added to the ASTM debris testing procedure for establishing the mandated realistic recovery rates that must be substantially lower than summertime response in calm conditions due to the severe winter and volcanic eruption conditions particular to this RPS scenario.

4) a listing of personnel that reflects the full range of mobilization, deployment, operation and maintenance duties associated with oil recovery and sensitive area protection. The personnel at the DRT must be presumed to be unavailable for response due to their isolation in safe harbor or facility evacuation during the volcanic hazard that precipitated the failure of both active crude oil storage tanks.

#### SCENARIO 2 PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – SUMMER:

- TABLE 1-11 trajectory statement establishes the unwillingness of Hilcorp/CIPL to comply with 18 AAC 75.445(d)(4) in its requirement to exclude oil from sensitive areas. The Middle River is an anadromous stream within the Trading Bay Game Refuge, requiring the protections mandated in section .445(d)(4), but Hilcorp/CIPL insists it is permitted to contaminate the Game Refuge and anadromous stream so it can more easily collect oil in Cook Inlet.
- TABLE 1-12 wildlife protection plan suggests that only birds will be affected:
  - 1) by omission of aquatic species, CIPL erroneously suggests that oil does not adversely affect the habitat of salmonids in the Middle River, or Cook Inlet beluga whale Type 1 critical habitat under the Endangered Species Act.
  - 2) Hilcorp/CIPL's failure to report the "instantaneous erosion event" that causes the catastrophic pipeline failure would not be confined to the river channel but would spread oiled mud and debris across significant flood plain land areas adversely impacting all of the land species within the Refuge as well. CIPL is therefore planning to transform a state game refuge and anadromous stream into an uncontained, oiled mud storage pit with no intent of protecting any aquatic or land species from exposure to toxic oil deposits.
- TABLE 1-13 shows oil recovery rates that are inconsistent with the oil thickness and encounter rates that would be expected given the spreading of oil first in the swift river waters and then in Cook Inlet currents that could exceed 6 knots. The recovery rates and tactics do not change over time when oil would be spread in increasingly thin layers thus violating 18 AAC 75.445(f) requiring realistic recovery efficiencies given severe environmental conditions. Moreover, the recovery rates are taken directly from Tesoro tanker response scenarios that envision much more timely oil collection immediately down



current of the stricken tanker where oil would be concentrated in much thicker layers and not broadly mixed and dispersed in a turbulent, debris and particulate laden flood event.

- Figure 1-5 shows an enormous area of spill coverage that belies the oil recovery rate professed in this scenario. It is simply impossible for the tactics shown in the referenced CISPRI TM to recover oil at the rates shown in Table 1-13 given the very thin average oil thickness this area represents.
- RFAI: Please provide a realistic RPS response scenario in conformance with 18 AAC 75.445(f) showing:
  - 1) a response strategy to divert the oil release caused by an "instantaneous erosion event" and lahar streambed scouring away from every anadromous stream channel along the pipeline route. Oil must be diverted away from every sensitive area and into an impermeable secondary containment. Where it is clearly impossible to exclude oil from sensitive areas in conformance with 18 AAC 75.445(d)(4) given the physical forces and oil submersion effects involved with lahar erosion events, please provide an alternative pipeline route outside of, or substantially below the deepest stream scouring events within the volcanic flood plain as evidenced in the geologic record. For those pipeline areas North of the Redoubt flood plain subject to an "instantaneous erosion event" please supply a means of capturing or diverting the oil in flood waters from the anadromous stream and Game Refuge. Again, if this oil capture or diversion in floods is not possible consistent with the requirement of oil exclusion from sensitive areas, please supply an alternative pipeline route that does not threaten Alaskan fisheries and game.
  - 2) realistic and decreasing recovery rates of skimmers over time in conformance with the requirements of 18 AAC 75.445(f). Recovery rates in the instant scenario would necessarily be less than those using identical tactics in tanker spill scenarios given the delayed response and the resultant dispersion and submersion of oil through the violent mixing of oil with flood waters, debris and particulates. CIPL must employ the industry standard ASTM F-1780 analysis to recovery rates given the broad and ever increasing area of spill coverage shown in Figure 1-5.

#### SCENARIO 3 PIPELINE RUPTURE AT MIDDLE RIVER CROSSING – WINTER:

- TABLE 1-17 fails to show equipment or tactics that can maintain real-time tracking of the oil spill in compliance with regulations as set forth in comments on Section 1.6.3 above.
- The claim that boom could be utilized in ice thicknesses up to 6" is simply absurd where even very thin layers of slush would accumulate at the boom apex causing displacement of oil at the surface, increased oil entrainment and oil escapement when the ice eventually sinks the boom.
- Any effort used to date to deflect or release ice from skimming operations has also deflected and released oil, necessarily causing oil recovery rates to precipitously decline. The 0° F temperatures assumed in this scenario would most certainly cause thick ice flows that would destroy or severely damage boom, disk skimmers and weir skimmers directly exposed to ice flows.
- Foxtail skimmer effectiveness would also greatly suffer due to freezing of the rope mops and the ice continually lifting the mops above the oil.

- There is no evidence to support the effectiveness of the CI-OW-2 tactic that would necessarily deflect the vast majority of oil away from the Foxtail or disk skimmer positioned on the down-current side in the center of the skimming vessel. The same principle that applies to buoy tracking of oil applies to deflection of ice, the oil will travel in the same direction as the floating buoy or ice so deflection of the ice away from the skimmer with the vessel hull will also deflect the vast majority of the oil away from the skimmer as well. The mandate to utilize realistic skimmer efficiencies in severe conditions requires CIPL to provide comprehensive tank testing data on this otherwise unproven and patently illogical response technique. Given that CIPL claims the same oil recovery rate without boom in CI-OW-2 as with boom in CI-OW-1, there would be no reason to use boom at all, a patently absurd proposition in direct conflict with all physical characteristics and behavior of oil established in industry standards applied to oil recovery.
- Table 1-18 claims that there would be no reduction in oil recovery rates of its skimmers between the summer response scenario shown in Table 1-13 and the instant 0° F temperature and 25 knot wind scenario suggesting that CIPL is deliberately defrauding the State of Alaska or a level of extreme incompetence that should preclude approval of the C-plan. This claim of no reduction in response times or skimmer effectiveness is in direct conflict with the normal operating practice of moving response vessels to more distal Kachemak Bay anchorages in the winter and totally discounts its own published acknowledgements in Section 3.4, REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS, that ice, low temperatures, short days and high winds would decrease response effectiveness. Either CIPL cannot read and understand its own C-plan or it hopes ADEC and the public cannot.
- TABLE 1-20 professes to show personnel requirements but is so limited as to be meaningless in the context of the much larger effort required as it fails to show sufficient personnel: required to mobilize equipment at equipment loading sites; for onshore and on-water communications, command and control; for safety; for sensitive area protection deployment and maintenance; for wildlife rescue and hazing; for shoreline cleanup; for waste management and disposal; and the multiple shifts for several of these functions that must be carried out for more than 12 hours per day. Winter operations should necessarily show increased personnel requirements over identical summer operations and/or reduced operational effectiveness. This woefully inadequate listing of personnel needs demonstrates that CIPL is incapable of effectively managing a widespread and multifaceted spill response, particularly in adverse winter conditions. The limited accounting of personnel also brings into question whether CIPL intends to conduct spill response on Middle River, sensitive area protection or wildlife protection at all.
- RFAI: Please provide a realistic winter RPS response scenario in conformance with 18 AAC 75.445(f) showing the degradation of response effectiveness due to ice, low temperatures, short days and high winds as reported in Section 3.4 and otherwise showing:
  - 1) the reduction in response time and oil recovery caused by the dislocation and delayed mobilization of response assets when ice is prevalent in Cook Inlet.
  - 2) a response strategy to divert the oil release caused by an "instantaneous erosion event" and lahar streambed scouring away from every anadromous stream channel along the

pipeline route. Oil must be diverted away from every sensitive area and into an impermeable secondary containment. Where it is clearly impossible to exclude oil from sensitive areas in conformance with 18 AAC 75.445(d)(4) given the physical forces and oil submersion effects involved with lahar erosion events, please provide an alternative pipeline route outside of, or substantially below the deepest stream scouring events within the volcanic flood plain as evidenced in the geologic record. For those pipeline areas North of the Redoubt flood plain subject to an "instantaneous erosion event" please supply a means of capturing or diverting the oil in flood waters from the anadromous stream and Game Refuge. Again, if this oil capture or diversion in floods is not possible consistent with the requirement of oil exclusion from sensitive areas, please supply an alternative pipeline route that does not threaten Alaskan fisheries and game.

2) realistic and decreasing recovery rates of skimmers over time in conformance with the requirements of 18 AAC 75.445(f). Recovery rates in the instant scenario would necessarily be less than those using identical tactics in tanker spill scenarios given the delayed response and the resultant dispersion and submersion of oil through the violent mixing of oil with flood waters, debris and particulates. CIPL must employ the industry standard ASTM F-1780 analysis to recovery rates given the broad and ever increasing area of spill coverage shown in Figure 1-5.

#### RESPONSE STRATEGY FUEL TRANSFER CHRISTY LEE PLATFORM:

- Most of the scenario defects in the prior section are repeated here due to winter conditions, albeit slightly less demanding than the prior scenario in short:
  - 1) CISPRI was unable to track spilled crude from loading arms into ice under near identical conditions while loading the Seabulk Pride.
  - 2) The ability to timely respond is grossly overstated due to adverse conditions and distal anchoring locations of the required vessels. Spill recovery rates must reflect the decreasing concentration of oil over time and delayed winter vessel deployments must be reflected in lower initial recovery rates.
  - 3) The recovery rates of skimmers could not be identical to summertime calm water response conditions where ice, freezing temperatures, higher winds and shorter days would substantially reduce skimmer effectiveness and operational times.
  - 4) The ice on shorelines and in the water would only impede and disable sensitive area protection and would not substitute for active area protection efforts established in any GRS. The presence of ice on shorelines could not satisfy the regulatory requirement to exclude oil from sensitive areas where tidal action repeatedly cracks, lifts and moves ice along with oil contaminated sediments incorporated into the ice.
- RFAI: please provide a realistic winter RPS response scenario in conformance with 18 AAC 75.445(f) showing the degradation of response effectiveness due to ice, low temperatures, short days and high winds as reported in Section 3.4 and as otherwise delayed due to winter dislocation of response assets

#### 1.7.1 In Situ Burning

- Cook Inlet currents are so swift and unpredictable that the potential for shoreline fires or disruption of navigation may occur from drifting fire booms with burning oil without active vessel control of the boom. Hilcorp/CIPL has not described any ability to deploy vessels that could actively control the fire boom and extinguish oil fires before they can cause fires onshore or disrupt navigation.
- RFAI: Because CISPRI listed dispersants as a plausible response tool in 2009, please provide detailed information on the types and amounts of dispersants to be used, under what scenarios and conditions, and what ecological effects such dispersants would have on receiving environment.

#### 2.1.5 TRANSFER PROCEDURES [18 AAC 75.025]:

- Transfers at the Christy Lee Platform are not boomed because " currents... far exceed the holding capacity of containment boom. Oil will entrain under the boom at about 1 knot, and the currents in this area almost always exceed that." Hilcorp/CIPL omits the fact that high current booming configurations are available to collect and contain oil in fast currents: "The Current Buster can be deployed as a stationary recovery device in fast water situations or as part of a vessel-based sweep system, with towing speeds up to 3.5 knots.", ADEC BEST AVAILABLE TECHNOLOGY Conference Report, June 2006 at p. 46.
- RFAI: please provide a full explanation of why this material misrepresentation occurred and why the pertinent information in the ADEC BAT Report was not cited. Please amend the transfer procedures to explain why CIPL will or will not use high speed booming configurations that provide the maximum retention of spilled oil possible during transfers using NOFI Ocean Buster booms at each end of the vessel and appropriately sized ocean boom connecting the two Ocean Busters. Please show the proper positioning of oil spill response vessels as needed to block ice flows and prevent damage to the Ocean Busters and ocean boom necessary to contain spills during fuel and crude oil transfers.

#### 2.1.6 LEAK DETECTION, MONITORING, AND OPERATING REQUIREMENTS FOR CRUDE OIL TRANSMISSION PIPELINES [18 AAC 75.055]:

- This description of leak detection and the BAT analysis at TABLE 4-7 fails to comport with the recommendations and conclusions in the 11/30/11 ADEC BAT Conference Report and is therefore not in compliance with the applicable BAT regulation 18 AAC 75.445(k)(3). Hilcorp/CIPL fails to utilize any of the primary RTTM systems recognized to be superior to the installed EFA system and also fails to utilize any of the secondary external hydrocarbon detection systems that could provide even more sensitive spill detection at locations more susceptible to leakage.
- RFAI please provide a comparative analysis of internal and external pipeline leak detection systems commensurate with the BAT Conference Report and select an upgrade to the existing system from among those systems described as BAT in the Report unless there are additional systems not analyzed that demonstrate a superior sensitivity, accuracy and/or more timely alarm for pipeline leaks than those determined

to be BAT in the conclusions and recommendation section 5. It is suggested, consistent with the Report, that one of the recommended RTTM systems be acquired with one of the recommended secondary external leak detection systems placed at every pipe penetration, (e.g. pipe junctions and valves), and water crossing.

#### 2.1.8 SECONDARY CONTAINMENT REQUIREMENTS FOR OIL STORAGE TANKS [18 AAC 75.075]:

- This section claims that the storage tanks can contain 100% of the tank volume plus precipitation but then states "Tanks 3 and 4 are contained within another combined geosynthetic clay lined earthen dike secondary containment area. These two containment areas are adjacent to each other and connected by two 30-inch-diameter pipes, allowing the entire combined secondary containment system to be available to each of the four tanks". Neither this statement nor facility diagrams are sufficiently descriptive to definitively show whether the required storage volume would be available to any individual or multiple tanks given the presence of deep snow, ice or lahar mud inside the containment that could block the 30" pipes and limit the available storage. The pipes allowing communication between storage areas may not be capable of sufficient flow rates, even when unobstructed, to prevent escape of oil over the containment walls during a catastrophic seam failure.
- It is similarly vague as to whether there is sufficient secondary containment volume to store the entire contents of the two active tanks plus precipitation as required by ADEC's invocation of 18 AAC 75.432(c).
- RFAI please submit a comprehensive set of narrative and readable, dimensioned diagrams to establish sufficient secondary containment volume to store the entire contents of the two active tanks plus precipitation during a catastrophic tank failure without impairment by accumulations of snow, ice, lahar mud or other potential obstructions to piping intended to allow sharing of adjacent storage areas.

#### 2.1.9 FACILITY OIL PIPING REQUIREMENTS [18 AAC 75.080]:

- This section contends that drainage ditches at the DRT designed to accelerate water flow to Drift River would prevent oil from reaching the River. Neither the narrative nor facility diagrams show any pond volume associated with the ditches to create storage capacity nor automated gate system that would automatically detect oil and secure the implied ditch storage capacity against oil flow. Where it is understood that pipe leaks may not be discovered or stopped for one hour, it is a material misrepresentation to assert that these drainage ditches would provide "drainage control" such that "spills from other onshore piping would not reach open water."
- RFAI please provide detailed narrative and readable, dimensioned diagrams to establish the existence and volume of tertiary containment at the DRT capable of holding >166,000 bbl of oil and the maximum possible precipitation. Please describe how this tertiary storage would be automatically activated during the early stages of an unobserved and uncontrolled spill or during low wind conditions that would allow accumulation of explosive vapors precluding the use of dozers or loaders to block drainage ditches.

### 2.3.1 POTENTIAL DISCHARGE SPILL VOLUMES:

- This section, at page 2-4 states that the maximum spill volume is "... a tank and is equivalent to the total contents of the tank.", but the invocation of 18 AAC 75.432(c) requires that the RPS must be adjusted upward to include all storage tanks. The fact that the increased risk justifying application of section .432(c) is a volcanic lahar with the flow rate greater than the Mississippi River necessarily threatens all facility piping in addition to all of the active crude oil and fuel storage tanks. ADEC should require and CIPL should plan for a total release of all Terminal tanks and piping as well as the entire section of main pipeline North of the DRT.
- RFAI please provide a comprehensive analysis and recognition that all facility piping and the adjacent main pipeline section in addition to all of the active DRT crude oil and fuel storage tanks would represent the worst case discharge due to the extraordinary threat from unpredictable volcanic lahars.

### 2.4 CONDITIONS INCREASING RISK OF DISCHARGE [18 AAC 75.425(e)(2)(D)]:

- This section recognizes the risk of volcanic lahars impinging upon the DRT but fails to adequately quantify the lahar flow rates, the lahar velocity, the size, momentum and destructive effect of debris entrained in the lahar or the depth of scouring possible from lahar events. The narrative briefly mentions three recent lahar events but fails to produce any geologic investigations across the flood plain to evaluate the potential for more severe events and the revetments necessary to protect all tanks and piping from the effects of the worst case lahar, especially if past lahars have increased surrounding topography elevation relative to the DROT facility .
- RFAI: please produce a comprehensive geologic evaluation of the entire volcanic flood plain to accurately describe the worst case lahar incident over geologic time and the engineered revetments necessary to insure that the pipeline and facility will not be adversely impacted by the worst case lahar event occurring at any location across the flood plain.

### 2.5 DISCHARGE DETECTION [18 AAC 75.425(e)(2)(E)]

- As mentioned in the leak detection section above, the instrumentation for discharge detection fails to meet the BAT requirement and must necessarily be improved. The history of discharges at this facility and others suggest that additional external leak detection identified in the 11/30/11 BAT Conference Report would be appropriate for deployment in the tank farm and at valve and pipe junctions along the main pipeline and facility piping. Discharges during vessel transfer operation have often occurred at night and are larger than daytime spills due to the lag time in observing the leak or overflow. Prudent loading procedures should include additional electronic discharge detection capability such as an IR/UV sensor down current of the Platform during night time transfer operations.
- RFAI: Please explain specifically how discharge detection will occur during facility evacuation, as occurred during the 2009 incident, including equipment, length of time it

can operate unattended, remote access, and other relevant information to show that an unmanned facility can still meet applicable response requirements.

### 3.2.2 ROUTES OF DISCHARGE:

- The narrative addressing pipeline spills fails to report evidence in the historic and geologic record establishing the potential of lahars to scour new stream channels virtually anywhere along the Mt. Redoubt flood plain. This information is particularly relevant given the very thin 1/4" pipe wall and shallow 4' burial depth along the majority of the main pipe length in the volcanic flood plain.
- This section appears to repeat the false claims cited above regarding the maximum possible discharge, the protection offered by the flood levee and the volume of secondary containment available to retain that maximum tank farm spill. The listed volume of 413,000 bbl simultaneously available to all active storage tanks is far below the 540,000 bbl RPS spill and unless the levee is extended to enclose the entire tank farm area, no oil migration protection may be credited to this structure. The fact that a lahar is presumed to cause both active tanks to catastrophically fail in the RPS scenario necessarily renders all secondary storage and levee "protection" moot with all oil being released directly into the open water of the lahar that has effectively changed the size/course of the main Drift River channel to run directly through the tank farm.
- RFAI as requested above, please provide a comprehensive analysis of lahar flows over geologic time as necessary to insure exclusion of oil from all the sensitive areas both inside and adjacent to the Redoubt Bay Critical Habitat Area and Trading Bay Game Refuge.

### 3.4 REALISTIC MAXIMUM RESPONSE OPERATING LIMITATIONS [18 AAC 75.425(e)(3)(D)]:

- Although this section generally addresses various potential impediments to effective oil recovery operations, it fails to specify: how much each limiting factor degrades each type of response equipment as required by 18 AAC 75.425(e)(3)(F)(iii), or; the overall effect of individual and combined limitations on spill response reliability and effectiveness as a whole in order to evaluate compliance with 18 AAC 75.445(k)(1).
- This section claims that tidal convergence zones assist in collection of oil but omits the fact that the concurrent collection of ice and debris in those tidal rips would substantially impair, if not stop, oil recovery by all skimming systems in the regional inventory.
- RFAI please provide:
  - 1) a complete listing of each type of oil spill response equipment in the CIPL and CISPRI inventory, including individual vessels, and list the operational characteristics and limitations associated with each piece of equipment.
  - 2) Please supply the data from skimmer tests on all CIPL and CISPRI skimming systems utilizing the ASTM F-631 debris tests and additional augmented debris tests that add

significant quantities of various sizes of ice blocks to the specified debris types and quantities.

3) Please provide a comprehensive analysis of the individual and combined impacts to the reliability and effectiveness of spill response operations caused by the limiting environmental factors listed in this section and described above.

4) Please provide a comprehensive analysis of the appropriateness of using low speed boom and tactics in the high current areas surrounding this facility where the impact to fisheries and sensitive areas would be much greater when using the low speed boom and tactics as opposed to the use of high speed boom and skimmers such as Ocean Busters, inclined plane skimmers, Lamor Oil and Ice Separators and other high speed and ice/debris tolerant skimming systems recently developed.

5) This section states that "DRT will request the vessel to harbor in Homer, until the weather or ice condition improves". Please provide a comprehensive analysis and quantification of ice and weather conditions that would justify suspension and resumption of loading operations at the Platform.

6) Please fully describe the physical and operational characteristics that would allow CISPRI and CIPL skimmers and other pumping systems to "penetrate the ice and debris". Please specify the size and concentration of ice and/or debris that each of these skimming systems and pumps can penetrate or otherwise ingest without damage or degradation of effectiveness.

7) Please produce all studies that would tend to support the contention that "Shoreline impact during the winter would be much less intrusive because fuel has a greater viscosity in colder temperatures."

8) Please fully describe which equipment would require "additional heat during spill response", when it would be applied and the additional personnel needed to operate heating equipment.

9) Please fully describe what equipment would be used to herd ice, where would it be used, how much ice would need to be herded and at what rate the specified equipment could herd ice.

10) Please specify the tracking buoys and strobes designed to resist ice damage and otherwise effectively track oil in frozen rivers or in heavy Cook Inlet ice flows. Please specify and fully describe any other oil tracking systems that are designed to track oil under shore-fast river ice or in heavy concentrations of ice in fast currents.

11) Please fully describe the effect on oil buoyancy and oil recovery when crude oil is subject to violent mixing with mud and debris in a volcanic lahar or contaminated with airborne ash fallout.

12) Please revise the spill scenarios to show the realistic loss of control or reduction in oil removal rates under those severe weather or other environmental limitations as



discussed above or that might otherwise reasonably be expected to occur as required by 18 AAC 75.445(f).

### 3.6 RESPONSE EQUIPMENT [18 AAC 75.425(e)(3)(F)]:

- The response times and locations of major response assets is not reported consistently across all sections of the C-plan and the failure to fully disclose the seasonal dislocation of assets would substantially affect the reported response times in scenarios in violation of multiple regulations including: 18 AAC 75.425(e)(1)(E)(i); .425(e)(1)(F); .425(e)(3)(E); .425(e)(3)(F)(i); .425(e)(3)(F)(ii); .425(e)(3)(F)(i); .425(e)(3)(G)(ii); .425(e)(3)(F)(i); .425(e)(3)(K). The withholding of this information could likewise be construed as material omissions designed to circumvent an accurate application of the approval criteria in 18 AAC 75.445(b); .445(c); .445(d)(4); .445(d)(5); .445(d)(7); .445(g)(1) thru (6); .445(i)(1)(C); .445(i)(1)(F); and .445(k)(1).
- RFAI please provide accurate locations of all response equipment and vessels throughout the year and appropriately revise the response times and recovery rates in the affected spill scenarios.

### 3.10 PROTECTION OF ENVIRONMENTALLY SENSITIVE AREAS [18 AAC 75.425(e)(3)(J)]:

- Although this section briefly discusses the need to protect sensitive areas it fails to identify the maximum number of GRS plans that might need deployment given a worst case spill trajectory and the associated equipment and personnel that would be required to exclude oil from those sites in potentially severe weather/conditions. This comprehensive analysis of sensitive area impacts under worst case trajectories is clearly required to determine the ability of CIPL to comply with 18 AAC 75.445(d)(4). Compliance with .445(d)(4) is particularly suspect where the 540,000 bbl RPS spill to open water at the DRT tank farm greatly exceeds the largest RPS spill to water presently served by CISPRI.
- RFAI please provide a comprehensive analysis of the equipment and personnel needs for satisfaction of 18 AAC 75.445(d)(4) given a worst case spill trajectory that would potentially impact the greatest number of sensitive areas.

#### 3.11.1 MT. REDOUBT PREVENTION RESPONSE STRATEGIES:

- This section alleges that Hilcopr/CIPL has appropriately adjusted flood/lahar protection revetments and pipeline placement but fails to specify what flood levels may have occurred in the applicable geologic time frame nor have the potential maximum lahar scouring effects been documented.
- RFAI please provide:
  - 1) a geologic survey evaluation of the entire volcanic flood plain and analysis to identify the maximum possible flood levels and destructive lahar effects at the DRT

2) a geologic survey evaluation of the entire volcanic flood plain and analysis to identify the maximum possible souring effect and their potential locations across the pipeline right of way.

#### **PREPARATIONS FOR VOLCANIC ACTIVITY:**

- This section proposes various actions at successively more acute levels of eruptive alert but does not specify what the triggers are for each alert stage which may be independently altered by the Alaska Volcano Observatory.
- Volcanic eruptions are not very predictable and may not offer the necessary time for scheduling and loading a tank vessel planned at the Yellow Alert stage. The availability of a tank vessel within 24 hours has not been established with any records of tank vessel scheduling by any willing and capable shippers and it is certainly not the practice for the Tesoro tankers that normally serve this trade to be available every 24 hours.
- The fact that up to 540,000 bbl of storage tank capacity and up to another 121,161 bbl of pipeline fill may have to be removed from the facility to prevent sensitive area contamination, the tanker loading could take several days and multiple tankers to complete.
- The fact that several tank barges with a combined holding capacity >600,000 bbl would be immediately needed if the two tank RPS were properly deemed released to open water suggests that offloading of the storage tanks to these barges would be immediately required when a Yellow Alert is issued in order to show a good faith attempt to prevent oil from entering the adjacent sensitive areas. If oil recovery barges were intended to be used for oil transport in this manner, they would be required to have double hulls for OPA '90 compliance.
- RFAI please demonstrate with the appropriate firm contracts and records of tank vessel scheduling that CIPL can immediately obtain sufficient tank vessel capacity to timely offload all crude oil and products at the DRT and in the CIPL piping before lahars could cause contamination of sensitive areas.

#### **PART 4. BEST AVAILABLE TECHNOLOGY REVIEW [18 AAC 75.425 (e)]:**

- This section alleges to provide the information mandated by BAT regulations but fails to provide any meaningful comparative analyses of the pertinent specifications relevant to a selection of the best commercially available technology in each subject category. Indeed, multiple tables alleging a technology review only superficially describes the one technology already in use at the facility. It is necessary to prepare a document comparing several alternative options with the detail and expertise evidenced in the latest BAT Conference Report dated 3/12 to provide any meaningful BAT review and subsequent scientific selection of the best technology.

- The source control analysis for provides no comparative analyses of the ability of different commercial products to effectively or timely patch or clamp tanks and/or pipes. No mention of pipe clamps and equipment to apply them over pressurized leaks is provided as is available on TAPS.
- The section addressing source control for the Platform diesel tank fails to address the alternative of installing fixed piping and a high volume pump(s) that could quickly empty the diesel tank into all of the 30" loading lines to tank storage.
- The referenced CISPRI TM only provides a description of various tactics and does not provide a comparative analysis of the commercially available spill trajectory programs that would establish the CIPL trajectory program as the best of those available.
- Although the analysis of tank liquid level sensors fails to provide pertinent specifications regarding the sensitivity and reaction times of any of the commercially available systems, it is clear that the Ultrasound option is deemed "more effective" without any significant cause for withholding its immediate installation. The suggestion that there is "no compelling reason to use this system" shows a fundamental misunderstanding and disregard of the BAT regulations and statute.
- The review of corrosion detection alternatives rejects the use of smart pigs on the mainline for three reasons that are actually just one reason, cost. Hilcorp/CIPL provides no definitive retrofit cost, cost level that is prohibitive and no comparative analysis of the cost of the retrofits verses the irreparable harm that could be caused to sensitive areas and protected species by CIPLs failure to timely detect corrosion.
- The section allegedly reviewing leak detection systems is wholly worthless where it only describes the system already installed and arbitrarily declares it best without qualification or comparison to any of the systems recently analyzed in the BAT Conference Report dated 3/12.
- RFAI please provide:
  - 1) a comprehensive comparative cost benefit analysis of all available commercial alternatives for tank and pipeline leak detection systems including all of those presented in the 3/12 BAT Conference Report with conclusion as to which alternative could rationally be deemed the best among the alternatives.
  - 2) a comprehensive comparative cost benefit analysis of all available commercial alternatives for pipeline corrosion detection and provide a detailed explanation of why retrofit of the mainline is cost prohibitive.
  - 3) a comprehensive comparative cost benefit analysis of all available commercial alternatives for tank liquid level sensors and provide a detailed explanation of why the superior ultrasonic sensor was rejected.
  - 4) a comprehensive comparative cost benefit analysis of all available commercial alternatives for spill trajectory modeling and a scientifically supported rational for selecting the best among the alternatives
  - 5) a comprehensive comparative cost benefit analysis of all available commercial alternatives for source control for tanks and pipes and fully explain why various alternative tank patches and pipe clamps are or are not the best technology for source

control.

### III. Conclusion

For the reasons cited above, the State of Alaska should not approve a C-Plan that resumes oil storage at the base of an active volcano, and we look forward to responses to the RFAI's presented herein.

As Hilcorp's Lori Nelson conceded on statewide news, Hilcorp "does recognize [a pipeline across Cook Inlet] is definitely the best way to go," but the "quickest" option is to simply continue storing oil at the base of Mt. Redoubt.<sup>7</sup> Unfortunately, the quickest and cheapest means for Hilcorp is not in the best interest of Alaskans or the magnificent Cook Inlet fisheries that support them. As a result, we hope the Parnell Administration agrees "doing it right" in Alaska's oil fields does not mean putting Cook Inlet fisheries needlessly at risk.

Thank you for your attention to these comments, and please do not hesitate to contact me if you have any questions.

Very truly yours,



Bob Shavelson  
Cook Inletkeeper

Cc: (VIA EMAIL ONLY)  
Vicki Clark, Trustees for Alaska ([vclark@trustees.org](mailto:vclark@trustees.org))  
Roland Maw, United Cook Inlet Drift Association ([info@ucida.org](mailto:info@ucida.org))  
Buck Luakitis, North Pacific Fisherman's Association ([npfahomer@gmail.com](mailto:npfahomer@gmail.com))  
Mark Vinsel, United Fishermen of Alaska ([ufa1@ufa-fish.org](mailto:ufa1@ufa-fish.org))  
Mary Ann Mills, Cook Inlet Treaty Tribes ([mmills@kenaitze.org](mailto:mmills@kenaitze.org))  
Larry Dietrick, ADEC ([larry.dietrick@alaska.gov](mailto:larry.dietrick@alaska.gov))  
Dan Sullivan, DNR ([daniel.sullivan@alaska.gov](mailto:daniel.sullivan@alaska.gov))

---

<sup>7</sup> APRN, <http://www.alaskapublic.org/2012/06/01/hilcorp-plans-to-increase-cook-inlet-energy-production/>  
Cook Inletkeeper



# COOK INLETKEEPER®

---

PROTECTING ALASKA'S COOK INLET WATERSHED AND THE LIFE IT SUSTAINS

---

## Drift River Oil Terminal Timeline, Issues & Questions 2009

**Background:** Cook Inlet Pipeline Company (CIPL) owns the Drift River Oil Terminal (DROT) and associated pipelines on the West Side of Cook Inlet, Alaska. CIPL is partly owned by Chevron Pipeline Company, which operates the DROT. The DROT was constructed in the late 1960's, and at that time, construction of an oil storage facility at the base of an active volcano raised numerous concerns. In 1989-90, the eruption of Mount Redoubt threatened the DROT, which then held over 37 million gallons of crude, though the *Exxon Valdez* Oil Spill in 1989 largely obscured media attention and public concern regarding DROT. In response to the threats posed by the facility's proximity to the volcano and the resulting mud, ice and debris flows (i.e. "lahars"), DROT owners buttressed the facility's protective dike system, installed a safe haven for workers and implemented other measures after the 1989-90 incident. On March 22, 2009, Mount Redoubt erupted again, exposing similar risks and threats experienced in 1989-90. The following is a timeline developed by Cook Inletkeeper using media accounts, state and federal agency documents, and personal knowledge.

### Drift River Oil terminal Timeline & Commentary:

January 1965: Mount Redoubt first shows signs of its modern activity phase and despite these early warnings, plans for the Drift River Oil Terminal proceed.<sup>1</sup>

January 1966: Mount Redoubt starts a two year long series of eruptions that cause severe flooding in the Drift River flood plain, sending large boulders and blocks of ice "the size of a D-7 cat" downstream. The initial eruption on January 25<sup>th</sup> "flooded the site of the oil-tanker terminal on Cook Inlet at the mouth of Drift River, forcing the evacuation of a seismic crew" consisting of 22 men. Despite this clear threat and ongoing eruptions, Mobil, Unocal, Marathon and Atlantic Richfield started facility construction later that summer, which continued to facility completion in 1967. The design life of the facility and associated pipelines was not expected to exceed 30 years.<sup>2</sup>

---

<sup>1</sup> See [www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&page=citations&eruptionid=439](http://www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&page=citations&eruptionid=439)

<sup>2</sup> See [www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&eruptionid=441&page=basics](http://www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&eruptionid=441&page=basics);  
[www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&page=impact&eruptionid=441](http://www.avo.alaska.edu/volcanoes/volcact.php?volname=Redoubt&page=impact&eruptionid=441);  
[www.adn.com/money/industries/oil/story/773178.html](http://www.adn.com/money/industries/oil/story/773178.html)

December 1989: On December 14<sup>th</sup>, Mt. Redoubt, with less than 24 hours of precursory seismic activity, starts a series of 23 violent eruptions lasting 16 months. Lahars and floods with blocks of ice larger than 33 feet across inundate the oil terminal with mud and ash. DROT storage tanks contain over 37 million gallons of oil. Repeated eruptions - some without any warning - and associated floods cause repeated evacuations and extended shutdown of the DROT. Pyroclastic flows in the Upper Drift River Valley run up the slopes more than 700 m, and associated floods erode stream banks, exposing the buried oil pipeline at Montana Bill Creek. The largest flood on January 2<sup>nd</sup> produces more water than the average flow of the Mississippi River, left more than 3 feet of mud in the terminal and carried huge blocks of volcanic rock – some measuring more than 25 feet across – into Cook Inlet. Employee evacuations and a lengthy process to reduce oil volumes at the DROT ensue. Media and public attention to DROT are diverted in March 1989, when the Exxon Valdez runs aground in Prince William Sound. Fortunately, no oil storage tanks or pipelines are compromised. In response, permittees construct an improved dike system to protect the storage tanks, bury the pipeline deeper at two locations and reduce the amount of oil stored at the terminal. However, despite these enhancements, the terminal and pipelines remain susceptible to the unpredictable and violent risks posed by volcanic activity and resulting lahars and flooding.<sup>3</sup>

November 5, 2008: Seismic activity at Mt. Redoubt increases. The Alaska Volcano Observatory raises the Volcano Alert Level to “Yellow/Advisory.” A period of increasing seismic unrest ensues.

January 2009: Public concern mounts over impending volcanic eruption. Chevron refuses to reveal the volume of oil in tanks at the base of Mt. Redoubt, and also refuses to make public its Volcano Readiness Plan, citing Homeland Security Act exclusions. “That’s not public information,” said Chevron’s spokesperson. “We can’t release any numbers.” The U.S. Coast Guard (USCG), the Alaska Department of Environment Conservation (ADEC) and other entities acquiesce, despite the fact oil tank volumes are routinely made public at the Valdez Marine Oil Terminal in Prince William Sound, Alaska.<sup>4</sup> As a result, the public has no information to gauge whether spill prevention and response plans and capacities in Cook Inlet are sufficient to address a catastrophic oil spill in Cook Inlet fisheries.

February 18, 2009: CIPL amends its Oil Discharge Prevention and Contingency Plan for DROT, and rewrites sections on spill scenarios and response strategies. Despite Mt. Redoubt’s seismic activity, and the substantial nature of the plan revisions, the plan undergoes no public review and contains no reference to volcano-induced oil spills. Furthermore, the plan does not address a worst case spill scenario (i.e. loss of all tanks and pipelines due to volcanic flows) resulting from “specific natural ...conditions [i.e. volcanic eruptions] outside the facility which could place the facility at an increased risk of an oil discharge affecting one or more storage tanks,” as required by state law<sup>5</sup>. Instead, the plan does not account for tank spills to open water, and accounts for

---

<sup>3</sup> See [www.avo.alaska.edu/volcanoes/volcact.php?volcane=Redoubt&eruptionid=442&page=basics](http://www.avo.alaska.edu/volcanoes/volcact.php?volcane=Redoubt&eruptionid=442&page=basics); [www.avo.alaska.edu/volcanoes/volcact.php?volcane=Redoubt&page=impact&eruptionid=442](http://www.avo.alaska.edu/volcanoes/volcact.php?volcane=Redoubt&page=impact&eruptionid=442); [www.groundtruthtrekking.org/blog/?p=855](http://www.groundtruthtrekking.org/blog/?p=855)

<sup>4</sup> See [www.adn.com/news/alaska/story/673773.html](http://www.adn.com/news/alaska/story/673773.html)

<sup>5</sup> 18 AAC 75.432(b). “For an increased risk described in (b) of this section, *the response planning standard volume is equal to the capacity of all of the potentially affected oil storage tanks at the facility.* Id. at (c) (emphasis added).

open water spill response for only 9311 barrels (bbl) (391,052 gallons) from associated pipelines. As a result, the DROT's spill response plan does not mandate spill response preparedness for a catastrophic release to Cook Inlet fisheries. ADEC approves the amendments.

March 22, 2009: Mt. Redoubt erupts. Massive floods of water, ice, mud and debris ("lahars") sweep in and around the DROT; Chevron evacuates the facility, leaving it without any spill monitoring or on-site spill response capacity, and finally reveals it has left 6.3 million gallons of oil at the DROT, just above Cook Inlet's valuable salmon, halibut, clam and other fisheries. Sensitive areas at risk from a DROT oil spill include Redoubt Bay Critical Habitat Area, Kalgin Island Critical Habitat Area, Trading Bay State Game Refuge, Clam Gulch Critical Habitat Area, Kachemak bay Critical Habitat Area, the mouths of numerous salmon streams on the East and West sides of Cook Inlet (including the Kenai River) and the Kachemak Bay National Estuarine Research Reserve. Inletkeeper, commercial fishermen and others immediately called for a draw-down of the oil tanks as soon as safely possible to protect valuable commercial, sport and subsistence fisheries.

March 23, 2009: Over flights of the facility by KTUU, the AVO, the USCG and others present alarming images of lahars flooding the facility and lapping up – and occasionally, over – the tops of containment berms protecting the oil tank farm. The debris flows significantly reduce the outside freeboard of the containment berms, and deposit approximately 6 feet of mud in some areas of the terminal, inundating pump houses, power facilities and spill response equipment. Shortly after these images were made public, the U.S. Coast Guard closes the airspace for 2 miles around the facility; subsequent images made public from the Unified Command are from high altitude and/or fail to show details of lahar and flooding impacts.

March 24, 2009: Inletkeeper and others send letters to Department of Homeland Security (DHS) and Governor Sarah Palin, requesting emergency declarations, human health protections and oil tanks draw downs to protect fisheries from a catastrophic spill.<sup>6</sup> Neither Palin or DHS responds. ADEC claims the facility and pipeline are "shut in" and "secured" but in reality, the facility was simply abandoned, with oil still in the tanks and piping without spill monitoring, active valve and pump control or site security. With no personnel at the facility, and with spill monitoring systems compromised, it thus becomes apparent the facility cannot meet state law regarding spill prevention and response.

March 26, 2009: Alaska Department of Environmental Conservation (ADEC) issues first Incident Action Plan (IAP), four days after the March 22 eruption. The IAP listed the following "Overall & Strategic Objectives:" 1. Ensure the Safety of Citizens and Response Personnel; 2. Monitor damage assessment; participate in over flights; 3. Conduct bottom soundings at tanker loading facility; 4. Coordinate with AVO for notice of eruptions and floods; 5. Identify regulatory requirements for facility re-start of operations; 6. Identify oil storage capacity and inventory management of facilities; 7. Monitoring plans and timeframe for repairs necessary for resumption of operations; 8. Identify and maintain stakeholder communications and engagement.

---

<sup>6</sup> Available from Cook Inletkeeper.

ADEC makes no reference to Cook Inlet fisheries protection in its priority list; instead the primary focus is on facility re-start.<sup>7</sup>

March 27, 2009: Trustees for Alaska, on behalf of Cook Inletkeeper, submits a petition to Governor Sarah Palin, requesting a state disaster declaration. Palin refuses to act on the petition. ADEC is joined by the U.S. Coast Guard on the second IAP. In addition to the objectives identified above, two additional objectives added: 1) conduct a risk-based decision process prior to movement of any crude oil product from the facility; 2) identify spill response resources available (CISPRI, CIPL, Chevron) – status, deployment times and location. Thus, 5 days after the eruption, identification of spill response equipment becomes a response objective, although fisheries protection has yet to be considered a priority.<sup>8</sup> Furthermore, it becomes clear spill response assets in Cook Inlet are not at-the-ready to address a catastrophic release of oil to Cook Inlet fisheries.

March 28, 2009: ADEC and USCG now working as Joint Incident Management team. Two additional objectives added to the IAP list: 1) Prevent the release of oil, hazardous materials, and refuse/terminal debris to the environment. 2) Develop plans for increased monitoring of lahars thru placement of additional instrumentation by AVO. Thus, 6 days after the March 22 eruption, preventing the release of oil to the environment becomes an objective of the IAP, although there remain no plans to address oil spilled in a debris-laden lahar, nor has the spill response capacity needed to respond to a catastrophic release been identified in Cook Inlet or elsewhere.<sup>9</sup>

March 31, 2009: Unified Command – consisting of Chevron, U.S. Coast Guard and Alaska Department of Environmental Conservation finally activates – more than a week after the initial eruption and evacuation of the facility. Unified Command occupies Sheraton Hotel in Anchorage, despite the fact the incident command center at Cook Inlet Spill Prevention and Response Inc (CISPRI) in Nikiski is situated precisely for this type of incident response and lies within view of Mt. Redoubt.

April 1, 2009: In response to calls to draw-down the tanks, the Unified Command insists water cannot be used to ballast the tanks, to keep them from dislodging in the event of a flood. Unified Command issues “Water Use Options Fact Sheet,” which outlines reasons why water cannot be used to ballast the DROT tanks. Among other reasons, the Fact Sheet states: “We know of no tankers that will take on water into their tanks.”<sup>10</sup> The Unified Command insists oil must remain in the DROT tanks. Because ballasting the tanks with water will make facility start-up more difficult – but will also lead to the removal of oil threatening Cook Inlet fisheries - Inletkeeper raises questions about the Water Use Options Fact Sheet. Furthermore, the Spill Response Workgroup determines, for the first time, that oil could indeed spill beyond the secondary containment dikes surrounding the 6.2 million gallons of oil in storage tanks, but makes no effort to revise or amend the existing C-plan - which contends that all oil would be contained inside the dikes – through public notice and comment. Finally, in response to concerns regarding

---

<sup>7</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/iap/090324201\\_iap\\_01.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/iap/090324201_iap_01.pdf)

<sup>8</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/iap/090324201\\_iap\\_02.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/iap/090324201_iap_02.pdf)

<sup>9</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/iap/090324201\\_iap\\_03.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/iap/090324201_iap_03.pdf)

<sup>10</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/090324201\\_fact\\_01.htm](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/090324201_fact_01.htm)



inadequate spill response capacity in Cook Inlet, USCG tells public radio audience that spill response equipment can be brought in from California.<sup>11</sup>

April 2, 2009: Unified Command issues Incident Action plan, though necessary spill response assets in Cook Inlet still not identified, and need for out-of-area spill response assets remains unclear. “Continue conversations with other out of area resources for possible equipment use.” The Unified Command also identifies the use of dispersants as an oil spill response tactic, despite the fact such tools are not designed for on-shore or near-shore use.<sup>12</sup>

April 3, 2009: Inletkeeper obtains an independent engineering assessment that effectively rebuts the assertions made in the Unified Command’s Water Use Options Fact Sheet. The engineering assessment states: “The water usage option obstacles cited by the UC appear as excuses or half-truths to avoid taking more prudent, though more costly, measures that would prevent a large oil spill at the Drift River Terminal into a very sensitive area.”<sup>13</sup> The Unified Command later revises its Water Use Options Fact Sheet when a tanker does in fact transfer water to DROT tanks for additional ballast.

April 4, 2009: Mt Redoubt erupts again, sending additional lahars in and around the Drift River terminal, just as a tanker approaches to start drawing down oil so upstream production facilities could continue to operate. Dangerous conditions force the tanker to turn back. The Unified Command issues “Drift River Fact Sheet # 3: Spill Response Resources,” which states “[s]hould a major lahar or flooding event cause a wash out of tank containment berms, spill response equipment exists within the Cook Inlet region to address such an event.” But the fact sheet ignores the fact that response vessels and aircraft cannot approach the area during ash hazards, eruptions or electric static events, nor does the document discuss specific spill response assets at the ready in or around Cook Inlet. Instead, the fact sheet makes a blanket assertion that spill response capacity exists in Cook Inlet to address a catastrophic release, despite the fact the assets for such a response have not been adequately identified.

April 5, 2009: Chevron “suspends” operations at the facility, and a tanker calls on DROT to draw-down the tanks to approximately 2.5 million gallons of oil. Contrary to the assertions made in the Water Use Options Fact Sheet, Chevron uses water to ballast the tanks to keep them more stable. When asked what had changed to allow water to now ballast the tanks, ADEC responded: “Now that *Cook Inlet Pipe Line* made the decision to shut down the facility, then that opens up some other options.”<sup>14</sup> In other words, as long as Chevron decided that facility operations remained a priority, fisheries protection received a lower priority. Only after Chevron decided to suspend operations due to the obvious risks posed by an erupting volcano did the ADEC, USCG and other state and federal agencies allow the priorities to change. Additionally, Chevron lays off oil field contractors due to the suspension of operations at the facility.<sup>15</sup>

---

<sup>11</sup> KBBI, Coffee Table Show, Apr. 1, 2009.

<sup>12</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/iap/090324201\\_iap\\_07\\_abbr.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/iap/090324201_iap_07_abbr.pdf)

<sup>13</sup> See Richard B. Kuprewicz, President, Accufacts Inc., “*Observations on Unified Command Drift River Fact Sheet No 1: Water Usage Options for the current Mt. Redoubt Volcano threat to the Drift River Oil Terminal* (Apr. 3, 2009) (available from Inletkeeper).

<sup>14</sup> See [www.adn.com/volcano/story/749408.html](http://www.adn.com/volcano/story/749408.html) (emphasis added)

<sup>15</sup> See [www.petroleumnews.com/pnads/122740141.shtml](http://www.petroleumnews.com/pnads/122740141.shtml)

April 7, 2009: In response to the discrepancy over the use of water to ballast the DROT tanks, the Unified Command issues “Water Use Options Fact Sheet, Updated,” which explains why water was in fact used to ballast the tanks.<sup>16</sup> The revised fact sheet contradicts the previous fact sheet on water use, and supports the assertion that continued facility operations – and not Cook Inlet fisheries protection – was a higher priority since March 22.

April 17, 2009: Nearly four weeks after Chevron first abandons the terminal and pipeline monitoring, it notifies ADEC that “CIPL’s ability to respond to an oil spill and to meet the response planning standards set out at 18 AAC 75.430 – 18 AAC 75.442 has been diminished due to the evacuation of its employees for life safety reasons in response to Mt. Redoubt’s increased volcanic activity and subsequent lahars.”<sup>17</sup> The applicable regulation requires CIPL to notify DEC ten days *before* any planned outage could impair its ability to meet Response Planning Standards through a so-called “notice of non-readiness.” Despite the fact Chevron acknowledges its inability to meet state law requirements regarding spill prevention and response on April 17, it is clear it could not meet such requirements since March 22.

April 28, 2009: Crude oil and ballast seawater offloaded to the tank vessel *Mississippi Voyager* hired by the upstream oil producers through Chevron Shipping Company. Contrary to original Water Use Options Fact Sheet, the tanker pumps roughly 5 million gallons of fresh water from its ballast tanks into DROT storage tanks still containing significant oil. Although the decision to allow this transfer by the Unified Command came approximately a week earlier, the day the tanker called on DROT was the first public notice of the situation.

April 29, 2009: Chevron responds to a DEC request for additional information regarding the Notice of Non-readiness issued on April 17<sup>th</sup>. The content of that request, and CIPL’s response are: “1) Is the SCADA operational around the clock, or only when personnel are at Drift River running the generators? *Chevron Response: SCADA is operational around the clock.* 2) Can the generators run with no one there? For how long? *Chevron Response: Yes. Indefinitely.*”<sup>18</sup> “SCADA” stands for “Supervisory Control And Data Acquisition,” and includes the systems needed to monitor tank volumes and pipeline oil pressures, among other things, to identify oil spills. This exchange strongly suggests ADEC did not know if the terminal and pipelines were monitored since first abandonment on March 23<sup>rd</sup>. Furthermore, it’s virtually impossible for any generator to run “indefinitely.” Despite these concerns, ADEC accepts Chevron/CIPL’s abbreviated and cryptic response.

April 30, 2009: The Unified Command issues a press release stating that after the most recent draw-down, approximately 434,000 gallons (10,333 bbl) remains at DROT. Later accounts significantly increase this number.

---

<sup>16</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/090324201\\_fact\\_04.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/090324201_fact_04.pdf)

<sup>17</sup> See Letter from Barry Staskywicz, Cook Inlet Pipeline Company, to Betty Schorr, ADEC (Apr. 17, 2009).

<sup>18</sup> See Letter from Barry Staskywicz, Cook Inlet Pipeline Company, to Betty Schorr, ADEC (Apr. 29, 2009).

May 1, 2009: The Alaska Journal of Commerce quotes the Federal On-Scene Coordinator: "[W]e have no record of any spill at the Drift River terminal in its 40 years of operation."<sup>19</sup> Yet the Drift River C-Plan and state and federal records list numerous spills at the facility.

May 6, 2009: Unified Command issues press release correcting volume of oil removed from DROT. After a third party assessment, the volume of oil remaining at the DROT is reported to be 841,860 gallons (20,040 bbl) – almost double the original estimate from April 30.

July 10, 2009: ADEC issues a Situation Report that reveals that weeks earlier the Unified Command had approved a plan to remove the oil from tanks 1 & 2 with submersible pumps and consolidate the oil in tank 3, (previously reported as offline and unavailable), to reduce the potential damage from freezing until the tanks can be cleaned next summer when conditions are assumed to be safer for extended stay of personnel. The oil in tank 3 would be pumped into a tanker but tank 3 will “remain in service in order to provide necessary emergency overpressure protection for future operations”. No information was provided regarding “future operations” or any public amendment of the C-plan that may apply despite the fact that DEC stated: “ADEC’s Industry Preparedness Program is working with Cook Inlet Pipeline Company to review the CIPL Oil Discharge Prevention and Contingency Plan to verify where changes must be made to achieve compliance with state contingency plan regulatory requirements prior to resumption of pipeline operations.”

July 13, 2009: Chevron and Cook Inlet Pipeline announce plans to transport oil stored at facilities at Granite Point and Trading Bay and ship it through a 42-mile pipeline for direct delivery to tankers which will be berthed at its Christy Lee platform located near its Drift River Terminal. As a result of the DROT by-pass, oil tanker transits in Cook Inlet are expected to increase to twice a month, according to Chevron.<sup>20</sup>

August 3, 2009: ADEC approves revisions to the DROT spill response plan without public notice or comment. Despite the fact the plan revisions included such things as discharge detection and visual inspections, deployment of personnel and spill response elements, volcano information, marine transfer operations, abnormal operations and emergency operations, ADEC considers the plan amendments to be “minor amendments” not requiring public notice and comment.<sup>21</sup> Yet state law requires openness and transparency in reviewing spill plans, except in circumstances where plan changes are routine or do not result in significant changes to spill response capacity.<sup>22</sup> These changes in state law came about to eliminate the secrecy and complacency that proceeded the *Exxon Valdez* Oil Spill. Yet at no time immediately prior to or after Redoubt erupted on March 22 did ADEC make available to the public proposed changes in the DROT’s spill response plan.

---

<sup>19</sup> See [www.alaskajournal.com/stories/050109/loc\\_news1001.shtml](http://www.alaskajournal.com/stories/050109/loc_news1001.shtml)

<sup>20</sup> See [www.alaskajournal.com/stories/072309/oil\\_3\\_012.shtml](http://www.alaskajournal.com/stories/072309/oil_3_012.shtml)

<sup>21</sup> See [www.dec.state.ak.us/SPAR/perp/response/sum\\_fy09/090324201/sitrep/090324201\\_sr\\_20.pdf](http://www.dec.state.ak.us/SPAR/perp/response/sum_fy09/090324201/sitrep/090324201_sr_20.pdf)

<sup>22</sup> See 18 AAC 75.415(b). According to ADEC rules, “routine plan updates include (1) a deletion to the list of vessels operating under the approved plan; (2) a revision to the list of names, addresses, or telephone numbers of spill command and response personnel; and (3) a revision to a training procedure or course work requirement that does not reduce the amount or quality of training required by this chapter.” *Id.* While regulatory interpretations may differ, it appears from the plain language of the rule that routine plan amendments are meant to be routine.

August 7, 2009: A Tesoro-contracted tanker removes oil and water from DROT tanks 1, 2, and 3. ADEC reports that removal of all oil and water was not feasible due to “current operating conditions.” Tanks 1 and 2 are apparently taken out of service and flanged off. Currently, tanks 1 and 2 each contain 1,396 bbls of oil (117,264 gallons total) and 4,636 bbls of oily water (194,712 gallons). Tank 3 was pumped down to 999 bbls (41,958 gallons) of oil. Chevron now plans to bypass the tank systems at Drift River, and to pump upstream oil directly to tankers at the DROT’s Christy Lee loading platform, with roughly two tanker-visits per week.

August 18, 2009: The USCG withdraws a proposed rule to consider tug escorts for single hull tankers in Cook Inlet and elsewhere.<sup>23</sup> The rulemaking had been ongoing since 1993. The Oil Pollution Act of 1990 mandated tug escorts in Prince William Sound and Puget Sound, and left it to the USCG to determine appropriate safeguards in “other waters.” While most tankers serving Cook Inlet are double hull or double bottom, single hull tankers service the area under contract at times. OPA 90 mandated the phase out of all single hull tankers by 2015.<sup>24</sup> The re-routing of oil around the DROT storage facility will increase tanker transits to twice monthly, according to Chevron, thereby increasing the risk of spills from shipping.

### **Issues & Unresolved Questions:**

Note: Many of these issues and questions were presented in writing and as oral testimony to the Unified Command (Chevron, United States Coast Guard and Alaska Department of Environmental Conservation) at a public meeting sponsored by the Cook Inlet Regional Citizens Advisory Council to discuss the DROT incident on April 7, 2009.<sup>25</sup> To date, none of the members of the Unified Command has answered the questions posed at the April 7, 2009, public meeting. Accordingly, the issues and questions presented previously have been amended to reflect additional information.

1. Economic Dislocations: Cook Inletkeeper recognizes the significant economic dislocations caused by suspending or shutting down operations in the Cook Inlet oil fields. Inletkeeper feels strongly that no worker should suffer the economic consequences of a layoff, and the state of Alaska should not suffer from reduced royalties and other payments, because Chevron made a business decision to assume the risk of continuing operations at a facility sited at the base of an active volcano. Chevron produced net profits of \$24 billion dollars last year, and in 2007, Chevron CEO David O’Reilly took home more than \$45 million in total compensation. Chevron is perfectly free to make the business decision to continue high risk operations at the Drift River Terminal, but when those risks materialize, it should not be Alaskans who suffer the consequences. The State of Alaska recently filed suit against BP for economic damages stemming from BP’s risk-taking on the North Slope, and Chevron needs to be held accountable to the workers and everyday Alaskans impacted by the suspension of operations at the Drift River Terminal. Questions: How much money did local, state and federal governments lose as a

---

<sup>23</sup> Federal Register Volume 74, Number 158 (Tuesday, August 18, 2009).

<sup>24</sup> See <http://shipbuildinghistory.com/today/shippingstatistics/OPA90.htm>

<sup>25</sup> See Bob Shavelson, Cook Inlet, “Statement & Questions to the Unified Command Regarding the Drift River Terminal Incident 2009 ( Apr. 7, 2009).

result of the suspension of operations at the DROT? Will the state or federal governments pursue fines or other compensation as a result of this highly foreseeable incident? How many workers were laid off or furloughed as the result of the DROT incident? Did Chevron and/or CIPL continue to pay workers laid off by this incident? What will state and federal agencies do in the future to ensure similar economic dislocations do not happen?

2. Pre-Incident Information: As Mt. Redoubt awoke in late 2008 and early 2009, Cook Inletkeeper asked Chevron and the U.S. Guard how much oil remained in the Drift River Terminal Tanks, and additionally asked to review a copy of the facility's "Volcano Readiness Plan." Both requests were denied, citing the Homeland Security Act. Yet Alyeska announces tank volumes at the Valdez Marine Terminal on a daily basis. In the lead-up to the March 22 eruption, there was no indication any actionable plans existed to address a major spill that could wreck havoc on Cook Inlet fisheries and the families they support; nor any indication Chevron and the relevant state and federal agencies had considered the economic dislocations that would ensue should operations at the Drift River Terminal cease. Questions: Doesn't the Valdez Marine Terminal – which holds considerably more oil than the Drift River Terminal, and which plays a much more important role in Alaskan economics – pose a greater risk of terrorist attack? What provisions of federal law specifically protected Chevron from disclosing vital information prior to the current incident, and why does the U.S. Coast Guard apply federal law differently in Cook Inlet compared to Prince William Sound? What alleged terrorist risk could be worse than an erupting volcano? Why is the confidentiality of oil data owned by Chevron more important than fish and wildlife resources owned by all Alaskans?

3. Pre-Incident & Immediate Post-Incident Planning: In the relative vacuum of information that preceded the March 22 incident, and without access to the facility's Volcano Readiness Plan, it remains unclear what plans were in place to address a catastrophic release from the facility. We do know that the facility's spill prevention and response contingency plan ("C-Plan") did not address a worst case scenario, as required by state law, and in light of the concerns raised after the 1989-90 eruption, presumably some plans were in place to address a catastrophic spill. Yet those plans have yet to be made public. Furthermore, it took the relevant agencies and Chevron almost a week after the March 22 eruption just to activate the Unified Command structure, and longer still to effectuate the action steps needed to address the threats of a major oil spill. Questions: Why did the U.S. Coast Guard designate a Federal On-Scene Coordinator it knew would be deployed to another theater shortly after the Unified Command was activated? In light of the fact the Alaska Volcano Observatory had reported elevated activity at Mt. Redoubt in Fall 2008, why did it take the Unified Command so long to activate? Why haven't spill response plans – including the facility's C-Plan – been made available to the public on the Unified Command web site? Why didn't ADEC make the changes to the DROT's spill response plan available for public comment? Does ADEC consider all the changes made to the DROT's spill plan to be "routine" under state law, and if so, when did the legal threshold for routine plan amendments change? In the future, what changes will the relevant agencies request in the C-plan to make sure that this doesn't happen again?

4. Incident Spill Prevention & Response Priorities: From the outset of this incident, state and federal agencies and industry representatives consistently maintained that a "safe" level of oil was needed to ballast the two active tanks at the Drift River Terminal, ostensibly to keep the

tanks intact should flooding occur. This volume of “safe” oil appeared to fluctuate as agency and industry changed positions on an almost daily basis. Questions soon arose about why water could not be used to ballast the tanks, because water ballast is common industry practice for tank farms threatened by flooding. On April 1, the Unified Command issued “Unified Command Drift River Fact Sheet: Water Usage Options,” which laid out a laundry list of reasons why water could not be used to ballast the tanks. On April 3, Inletkeeper obtained an opinion from an engineer experienced in oil and gas issues, stating that water ballast could in fact be used to secure the Drift River Terminal tanks, and any issues regarding water ballast revolved largely around cost concerns, not technology or infrastructure limitations.<sup>26</sup> On April 4, a major eruption occurred at Mt. Redoubt, sending a lahar down the Drift River Valley and causing additional damage to the Drift River Terminal. On April 5, Chevron and the Cook Inlet Pipeline Company announced the decision to suspend operations at the Drift River Terminal, and proceeded to use water to ballast the tanks while offloading approximately 60% of the more than 6 million gallons of oil at the facility. When asked what had changed to allow water to now ballast the tanks, ADEC responded: “Now that *Cook Inlet Pipe Line* made the decision to shut down the facility, then that opens up some other options (emphasis added)”<sup>27</sup>. On April 7, the Unified Command issued “Unified Command Drift River Fact Sheet No. 4: Water Usage Options, Updated” which refutes the previous Water Use Options Fact Sheet issued by the Unified Command, and which discusses how water can in fact be used to ballast the active Drift River Terminal tanks. This sequence of events clearly demonstrates that continued production was a priority over spill prevention and fisheries protection, and that the Unified Command shifted course only after Chevron decided - due to the ongoing threats from the volcanic eruption - to suspend operations. Questions: Why did the Unified Command Issue the second Water Use Options Fact Sheet on April 7? If spill prevention and fisheries protection were higher priorities than continued production, why didn’t the Unified Command use water to ballast the active Drift River Terminal tanks at the outset? Why has the Unified Command left over 2 million gallons of oil at the terminal when additional volcanic eruptions are expected?

5. Information Not Provided to the Public: Immediately after the March 22 eruption, pictures emerged showing significant flooding and mud and debris flows at the Drift River Terminal, including images showing over-topping of the tank farm’s protective dike system, loss of freeboard on the outside of the dike system, and mud and water accumulations and associated damage around various parts of the facility. Shortly after, the U.S. Coast Guard restricted the air space over the terminal, and since that time, detailed photos have been unavailable to the media and the public.<sup>28</sup> Instead, information has been carefully controlled by the Unified Command, and the public had few or no information sources to verify accurate on-the-ground conditions. For example, as discussed previously, the unified Command has not posted the Drift River Terminal’s C-Plan on its web site. Additionally, in light of significant questions regarding

---

<sup>26</sup> Letter from Richard B. Kuprewicz, President, Accufacts Inc., to Bob Shavelson, Cook Inletkeeper (Apr. 3, 2009) (available upon request).

<sup>27</sup> Marti Early, Alaska Department of Environmental Conservation (*quoted in* the Anchorage Daily News, Apr. 6, 2009)(available at: <http://www.adn.com/volcano/story/749408.html>)

<sup>28</sup> In response to concerns expressed by Inletkeeper regarding updated photos of the facility, the Unified Command posted several images from an April 4 flyover. But those images are from high altitude, making it impossible to understand any impacts from the April 4 eruption; similarly, the most recent photos do not show areas of the facility previously impacted by mud, water and debris flows.



mechanical spill response capacity in the conditions associated with a lahar-induced spill, the Unified Command has posted no information or plans regarding other response tools, such as the use of dispersants, or the use of in-situ burning (ISB). There have been legitimate questions raised regarding the effectiveness and relative toxicity of dispersants, and questions regarding air quality and air standards modeling have been raised for ISB. Accordingly, prior to, and now after, March 22, the public has been denied the basic information needed to help the Unified Command make open, transparent and informed decisions. Questions: On the issue of dispersants, what type of dispersants have been stockpiled, and what volumes of dispersants were on hand and proposed for possible usage? Is there a detailed plan to use dispersants and if so, why hasn't it been made public? How will dispersants be deployed? If a plane will be used, what if ash prevents it? What science has been relied upon to show dispersants would be effective in these types of situations? Would dispersants be deployed in ice conditions? In nearshore conditions? If there is not a detailed plan to use dispersants, how can dispersants remain part of any spill response scenario? On the issue of in-situ burning, why haven't regulators addressed the legitimate questions raised about air quality modeling and related issues?

6. Spill Prevention and Response Readiness: The various scenarios for a lahar-induced catastrophic release at the Drift River Terminal pose significant challenges to any realistic spill response plan, and we are aware of no technology that could effectively clean-up an oil spill in the chaotic aftermath of a significant flood consisting of oil, mud, debris, ice and water. While the facility's C-Plan states a response planning standard (RPS) of approximately 4 million gallons, once the March 22 eruption occurred, it should have become apparent even that RPS could not be met, because, among other reasons, the C-Plan does not contain a spill scenario involving a lahar and a catastrophic release. Under OPA 90, an onshore facility required to prepare a response plan may not handle, store, or transport oil unless the facility is operating in compliance with its C-Plan. As Chevron/CIPL's April 17 notice of non-readiness readily proves, the facility was out of compliance with its c-plan since March 22, when the facility was evacuated. Furthermore, statements made by Cook Inlet spill response personnel and the Unified Command as to the barge lightering capacity in Cook Inlet changed regularly; and at one point a U.S. Coast Guard representative even stated response tools could be deployed from California. In fact, during the 2006 grounding of the *Seabulk Pride* in Cook Inlet, spill response assets had to be diverted from Prince William Sound, because Cook Inlet lacked the barge capacity to contain 5 million gallons. Questions: Why didn't the relevant state and federal agencies suspend Drift River Terminal operations immediately after the March 22, when it became clear the facility could not meet its response planning standard, and even if it could, it could not address a worst case spill? Why didn't ADEC require CIPL to plan for a worst case spill as required by the state's own c-plan rules? Will state and/or federal agencies pursue fines or other penalties in light of Chevron's inability to meet the RPS at the facility after March 22? When was the last time a federal or state agency conducted drills of removal capability, without prior notice, under the facility's C-Plan? Why didn't the Unified Command publicly disclose concerns regarding oil in the pipelines connected to the DROT? Does the current response planning standard address a catastrophic release from tanks 1,2 & 3, along with associated pipelines? What assets are available in Cook Inlet to meet this standard? Why doesn't the now re-configured pipeline scheme at DROT require a public review of the facility's c-plan pursuant to state law?

7. Worker Safety Concerns: The Unified Command has been consistent in one respect; it has held worker safety to be the highest priority in this incident. We applaud the Unified Command in this regard and the workers who have stepped up to ensure no oil spills into Cook Inlet fisheries, and who are working to bring production back-online as soon as safely possible. Yet since the 1989-90 eruption and well before, we knew the inherent risks of operating an oil terminal at the base of an active volcano, and we knew those risks posed significant threats to workers at the facility. In fact, we are aware of no other oil facility in the world where workers are afforded a bunkered “safe haven” to protect them from the threats posed by volcanic eruptions. Furthermore, workers were routinely put in harms way at DROT during periods of heightened seismic activity. Questions: What plans were in place prior to the March 22 eruption to ensure worker safety during an eruption? What plans were in place to ensure worker safety during operations attempting to maintain the facility in an operational state immediately following the eruption? Chevron has forbidden workers at the facility from speaking to the media; have the Coast Guard and ADEC interviewed these employees and if not, why? If so, will transcripts be available to the public? What changes will be made to ensure worker safety in the future?

Cook Inletkeeper is a community-based nonprofit organization dedicated to protecting the Cook Inlet watershed and the life it sustained. [www.inletkeeper.org](http://www.inletkeeper.org). Cook Inletkeeper ©2009.





VIA CERTIFIED MAIL ONLY

September 25, 2012

Cora Campbell, Commissioner  
Alaska Department of Fish & Game  
P.O. Box 115526  
Juneau, AK 99811-5526

RE: APPEAL & HEARING REQUEST REGARDING SPECIAL AREA PERMIT 12-II-0196-SA

Dear Commissioner Campbell:

This is an appeal under 5 AAC 95.920 and a request for a hearing pursuant to AS 44.62.370 regarding Special Area Permit FH 12-II-0196-SA.

## I. Introduction

On August 29, 2012, the Alaska Department of Fish & Game issued the above-referenced permits to allow Hilcorp Alaska, LLC (Hilcorp) to extract materials and fill/cross an anadromous stream in the Redoubt Bay Critical Habitat Area (RBCHA). Hilcorp intends to use the materials extracted from the RBCHA to bolster the revetments surrounding its Drift River Oil Terminal (DROT) so it may resume storing oil at the base of an active volcano (Mt. Redoubt).

Cook Inletkeeper is a nonprofit, public interest organization formed in 1995 to protect the Cook Inlet watershed and the life it sustains. Inletkeeper works on behalf of its Board, staff and members to promote clean water and healthy salmon habitat. Inletkeeper has a long history pressing for responsible oil and gas development, and for ensuring industry and state and federal agencies comply with habitat protection rules.

## II. Statement of Issues

The above-referenced permits authorize Hilcorp to extract up to 125,000 cubic yards of boulders and riprap materials; conduct up to 135 round trips per day using rock trucks, excavators and a front end loader; land helicopters; and fill and cross a salmon stream.

The Alaska Legislature created the Redoubt Bay Critical Habitat Area in 1989. See AS §

16.20.625. The purpose of the RBCHA “is to protect and preserve habitat areas especially crucial to the perpetuation of fish and wildlife, and to restrict all other uses not compatible with that primary purpose. AS § 16.20.500 (emphasis added).

ADFG has an affirmative duty to apply and enforce the standards contained in the RBCHA Management Plan for activities in the RBCHA:

The Redoubt Bay Critical Habitat Area goals and policies stated in the Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area Management Plan dated July 1994 are adopted by reference. The plan presents management goals and policies for the critical habitat area and its resources that the department will use in determining whether proposed activities in the critical habitat area are compatible with the protection of fish and wildlife, their habitats, and public use of the critical habitat area. Under [5 AAC 95.420](#), a special area permit is required for certain activities occurring in a designated state critical habitat area. The department will review each special area permit application for consistency with the Redoubt Bay Critical Habitat Area goals and policies adopted by reference in this section. A special area permit for an activity in the Redoubt Bay Critical Habitat Area will be approved, conditioned, or denied based on the criteria set out in the Redoubt Bay Critical Habitat Area goals and policies stated in the Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area Management Plan and on the standards contained elsewhere in 5 AAC 95. 5 AAC 95.615

The RBCHA Management Plan states:

**Material Extraction** – Do not allow material extraction within the critical habitat area unless for the purposes of maintenance, enhancement, or restoration of the critical habitat area, except that gravel extraction may be allowed if extenuating circumstances create a transcending public need for which there is no feasible alternative.... RBCHA Management Plan, p. 17 (1994).

Thus, the RBCHA flatly prohibits materials extraction. Even if ADFG attempts to erroneously classify Hilcorp’s material extraction as gravel extraction, ADFG has failed to make the requisite findings required by the RBCHA Management Plan to extract gravel in the RBCHA. Specifically, ADFG has failed to show any 1) extenuating circumstances that 2) create a transcending public need 3) for which there is no feasible alternative.

There is no extenuating circumstance in this instance; Hilcorp has been successfully operating the Drift River Oil Terminal (DROT) in a “tight-lined” configuration since shortly after the 2009 eruption of Mt. Redoubt washed through and around the DROT. Similarly, there is no transcending public need; Hilcorp is a private corporation and its interests are not the public’s interest. Finally, and perhaps most importantly, there is a clear, feasible and prudent alternative to mining rock from a

critical habitat area: Hilcorp can use barges to transport the rock to the facility from a location not within a critical habitat area.

### III. Statute & Regulations Violated

ADFG violated AS §§ 16.20.500, 16.05.625, 5 AAC 95.615 and the Redoubt Bay Critical Habitat Management Plan when it issued the above-referenced permits.

### IV. Verification

The information contained within this request for a hearing is verified based on information contained in this request; review of the permit application and the permitting document, and on the information and belief of the Requestor.

### V. Relief Requested

Inletkeeper requests ADFG to revoke the authorizations granted in its permitting decision document dated August 29, 2012, and to issue an immediate stay on all activities authorized under that decision until this issue has been adjudicated. Inletkeeper requests a hearing in this matter if ADFG does not revoke the authorization.

### VI. Conclusion

Thank you for your prompt attention to this matter. You may contact me at the above address, by phone (907.235.4068 x21) or email (bob@inletkeeper.org).

Very truly yours,

Bob Shavelson, Inletkeeper  
Director of Advocacy