



Protecting Alaska's Cook Inlet watershed and the life it sustains

March 17, 2004

Water Docket  
U.S. Environmental Protection Agency  
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Washington, DC 20460

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To Whom This Concerns:

Cook Inlet Keeper (“Keeper”) is a nonprofit, membership organization dedicated to protecting Alaska’s Cook Inlet watershed and the life it sustains. Please accept these comments on behalf of Keeper and its membership on the Preliminary Effluent Guidelines Program Plan for 2004/2005. Note that I bring 20 years of work experience in the private, governmental, and non-profit sectors to these comments, and that I have been a licensed professional engineer for fifteen years. Additionally, I was a public member of the Effluent Guidelines Task Force from 1995-2000.

These comments cover four areas:

1. Reasons why EPA needs to revise a critical portion of the Effluent Guidelines for the Coastal Subcategory of the Oil and Gas Extraction Category;
2. Support for additional analysis – and potential revision – of the 1982 Petroleum Refining (including Petroleum Bulk Stations & Terminals) Effluent Guidelines;
3. Support for inclusion of coalbed methane extraction as a candidate for effluent guidelines development; and,
4. A general comment about data sources used in Plan development.

### **The Need for Revision of the Effluent Guidelines for the Coastal Subcategory of the Oil and Gas Extraction Category**

In the applicable effluent guidelines, a “zero discharge” standard applies to nearly all the drilling discharges in all areas of the country, *except Cook Inlet*.<sup>1</sup> With respect to the two types of discharges of greatest concern – produced water and drilling wastes – the rationales for not applying the effluent guidelines standard to Cook Inlet were stated as:

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<sup>1</sup> *Development Document for Final Effluent Limitations Guidelines and Standards for the Coastal Subcategory of the Oil and Gas Extraction Point Source Category*, U.S. Environmental Protection Agency, EPA-821-R-96-023, October 1996, Section 1.2 – Summary of the Final Rule, p. II-1-3.

“EPA rejects zero discharge of produced water because zero discharge is not economically achievable in Cook Inlet”<sup>2</sup> and, “EPA rejected zero discharge [of drilling wastes] in large part because the technology of grinding and injection has not been demonstrated to be available throughout Cook Inlet, and because of operational interferences that would result if operators were required to haul all drilling wastes to shore for disposal.”<sup>3</sup> As discussed below, since neither of these statements is accurate, the Cook Inlet portion of the effluent guidelines warrants revision at this time.

Produced water in Cook Inlet: EPA used a 1994 industry zero discharge study<sup>4</sup> to develop its estimate of the cost to Cook Inlet operators to achieve zero discharge of produced water. The industry’s cost analysis included construction of four new pipelines from onshore to offshore platforms for produced water re-injection. The capital costs of constructing four new onshore to offshore pipelines to transport produced water for re-injection (three new pipelines from Trading Bay Production Facility and one new pipeline from the East Foreland Treatment Facility) are the single most expensive items in EPA’s zero discharge cost estimate – these four pipelines represent 50% of the predicted capital costs, or \$48.4 million for the pipelines (1995\$).<sup>5</sup>

A re-examination of this cost analysis based on current conditions – recognizing that two Cook Inlet platforms have shut-down and others may shut-down soon regardless of EPA’s actions – would result in substantially less cost to achieve zero discharge because of the lack of need for four new onshore to offshore pipelines. With the increasingly unproductive nature of the Granite Point, Trading Bay, McArthur River, and Middle Ground Shoal fields, most experts expect additional Cook Inlet offshore platform shut-downs in the near future in these fields. EPA’s conclusion that zero discharge is not economically achievable in Cook Inlet is based on a cost model that is not representative of current conditions.

Drilling wastes in Cook Inlet: EPA needs to reevaluate its previous assessment that shows injection of drilling wastes to be technically infeasible in the Cook Inlet region, given Forest Oil’s current practice with the Osprey Project as well as Unocal’s (Bruce Platform, 2002) and Marathon’s (Kenai Gas Field, 1999) recently opened grind and inject facilities.

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<sup>2</sup> Ibid., p. XIV-18.

<sup>3</sup> Ibid., p. XIV-9.

<sup>4</sup> *Zero Discharge Analysis: Trading Bay Production Facility, Cook Inlet, Alaska*, Marthon Oil Company, Unocal Corporation, March 1994.

<sup>5</sup> *Development Document for Final Effluent Limitations Guidelines and Standards for the Coastal Subcategory of the Oil and Gas Extraction Point Source Category*, U.S. Environmental Protection Agency, EPA-821-R-96-023, October 1996, Appendix XI-2. Total estimated cost is \$96.9 million (1995\$). Note that the industry’s *Zero Discharge* document (footnote 4) has a preliminary cost estimate of only \$53 million for this option.

Further, recent technological developments to prevent injection well plugging mean it is more feasible than ever for Cook Inlet operators to inject drilling wastes.<sup>6</sup> In the applicable effluent guidelines, EPA stated that it was “unable to estimate the degree to which injection would be available in Cook Inlet” at that time.<sup>7</sup> Given the technological changes since 1996, EPA clearly needs to re-examine this portion of its effluent guidelines analysis.

Additionally, the aging of Cook Inlet’s offshore oil fields means that fewer wells are being drilled and reconditioned than in the past, so operational problems are less likely due to lower quantities of drilling waste being generated. Based on the Discharge Monitoring Report data submitted to EPA for 2001 and 2002, less than 14,000 barrels of drilling wastes are generated annually. This amount is only approximately 15% of the 89,000 barrels of drilling wastes EPA expected to be generated annually from offshore Cook Inlet oil and gas operations<sup>8</sup> – in other words, EPA’s estimate of drilling waste generation is 6.5 times too high. Because the quantities of drilling waste generated are substantially less than EPA predicted, “operational interferences” involving waste transport also should be substantially less.

### **The Need for Revision of the Effluent Guidelines for Petroleum Refining (including Petroleum Bulk Stations & Terminals)**

Keeper supports revision of the 1982 Effluent Guidelines for petroleum refining, and including petroleum bulk stations and terminals in this revision. Technology has advanced significantly since that time, e.g., development of less-toxic catalysts, so numerous pollution prevention and control strategies should become standard throughout the industry. See <http://www.environmentaldefense.org/article.cfm?ContentID=1538> for a list of pollution prevention options for refining.<sup>9</sup>

Keeper also places into the docket a 1996 report by People for Puget Sound entitled *Toxic Soup: A Report on Industrial Pollution in Puget Sound*, available at <http://www.pugetsound.org/p2/reportfolder/default.html>, which discusses oil refineries in Chapter 3. The report documents the need for strengthened effluent guidelines and states:

Two major changes need to happen before oil refineries are fully protecting Puget Sound from the pollution they generate.

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<sup>6</sup> *Problem solver, Invention can handle rock disposal on Slope*, Sarana Schell, Anchorage Daily News, September 8, 2003.

<sup>7</sup> *Development Document*, op. cit., p. VII-52.

<sup>8</sup> See 61 Federal Register 66093 (December 16, 1996).

<sup>9</sup> See <http://www.environmentaldefense.org/article.cfm?ContentID=1537> for more information on petroleum refining processes, including links to lists of Toxic Release Inventory chemicals used by process.

1. The refineries must be required to employ true AKART<sup>10</sup> for the wastewater discharge parameters currently in their permits. This must include upstream pollution prevention measures as well as improved treatment technologies. All permit limits must be based on this updated AKART. The federal oil refinery limits on which Ecology bases AKART are over 10 years old. Ecology's own guidelines require that when federal [limits] are over 10 years old a facility's process, design and efficiencies need to be evaluated to determine whether the federal limits truly represent AKART. The Oil and Grease analysis conducted in this report for these five refineries and a recent EPA study (1996) suggest that the federal effluent limits do not represent AKART.
2. The refineries should be required to prove they have AKART in place -- including upstream pollution prevention and treatment opportunities -- for any chemical they discharge above state water quality standards or for other toxic chemicals known to persist in the environment. Currently, refineries are discharging dioxins, furans, cyanide and heavy metals for which they have no permit limits. Many of these toxic chemicals are being discharged above state water quality standards, or no standards exist yet for these compounds. Permit limits should also be established for these chemicals, and no dilution zones should be granted for these persistent chemicals.<sup>11</sup>

### **The Need for Development of an Effluent Guidelines for the Coalbed Methane Subcategory of the Oil and Gas Extraction Category**

EPA says it evaluated coalbed methane extraction (and eight other industrial point source categories) and “based on available data, did not identify hazard or risks that appear to warrant effluent guideline revision.”<sup>12</sup> Keeper believes that EPA needs to expand its examination of available data on the impacts of coalbed methane produced water discharges. There are significant numbers of recent articles in the media about the impacts of coalbed methane’s produced water discharges that should be reviewed for this analysis. Among the federal analyses of coalbed methane discharges of interest is a USGS factsheet entitled *Coalbed Methane--An Untapped Energy Resource and an Environmental Concern*.<sup>13</sup>

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<sup>10</sup> All dischargers are required by state law to apply AKART (all known, available and reasonable methods of prevention, control and treatment) to reduce the amount of pollution they discharge into surface water. Dischargers must apply AKART regardless of the quality of the water into which they discharge their effluent. Permit limits established based on the application of AKART are called technology-based limits.

<sup>11</sup> See <http://www.pugetsound.org/p2/reportfolder/ch3i.html>.

<sup>12</sup> 68 Federal Register 75528.

<sup>13</sup> Available at <http://energy.usgs.gov/factsheets/Coalbed/coalmeth.html>.

### **Data Sources Used by EPA**

Based on the information in the December 31, 2003 notice on development of the Preliminary Effluent Guidelines Program Plan for 2004/2005, Keeper believes that EPA is neglecting one important source of data that can be used for effluent guidelines prioritization, now and in the future: Canada's National Pollutant Release Inventory (NPRI). NPRI is modeled on the U.S.'s Toxics Release Inventory (TRI), but reporting facilities are not limited to particular Standard Industrial Codes (SIC). As a result, NPRI has a more complete set of release data than does TRI, so EPA does not have to reject certain industrial categories from effluent guidelines development based on lack of data.

While the regulatory status of reporting facilities in Canada likely is different than similar facilities in the U.S., NPRI nevertheless can provide an indication of high-priority dischargers that might otherwise be overlooked by EPA's water program.

Thank you very much for your attention to these comments.

Sincerely,

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