



ITOPF comments on the draft Damage Assessment and Restoration Plan (DARP) for the November 26 2004, M/T Athos I oil spill on the Delaware River, New Jersey.

Due to the circumstances surrounding the liability of the owners of ATHOS I, ITOPF has not been involved in the NRDA after the initial setting up of expert teams. Nevertheless, the UK P&I Club (part of the International Group of P&I Clubs) has, in the spirit of the MoU between the IGP&I and NOAA, asked ITOPF to comment on the draft DARP for the ATHOS I incident.

General comments

- We note that the document gives the liability limit for Athos 1 (Page 4, in foot notes): “Under OPA, the limits of liability are based on the vessel’s gross tonnage (GT). The gross tonnage of the Athos is 37,895 GT. Accordingly, the limit of liability is \$47,474,000 (\$1,200 per GT).” Our calculations give a different figure of \$45,474,000 (37,895 GT * 1,200 \$/GT).
- The draft DARP gives an account of the authorities’ request for a cooperative assessment and the RP’s refusal to pay for costs, thereby ending the formalisation of the cooperative effort, however there is no mention of the RP’s funding of any of the work. We understand that at the start of the NRDA process the ship owner/ Club agreed to pay for \$100,000 of NRDA work, however mention of this voluntary contribution is not included in the DARP. It is also surprising to see that there is no mention in the document of the RP’s involvement in the organisation, execution and financing of the response.
- The DARP (page 1) states that “The incident also forced USCG to close the River to commercial traffic for over a week, and submerged oil resulted in contamination of water intakes and the closure of the Salem Nuclear Power Plant.” While it is true that there were large slicks of oil on the river surface in the first week and that there were good grounds for vessel traffic to be restricted in this period, the description of the submerged oil problem could be misleading. Were any intakes actually contaminated, or was there a fear of contamination? The nuclear power station is a case in point where their decision to close was made without reference to information available to the spill management team or USCG.
- Page 27 of the DARP states that “Federal and State scientists and consultants with damage assessment experience conducted the injury assessments. Each assessment was conducted in full cooperation with the RP, with the goal of reaching consensus among all parties.” It seems as though there may be some question about the actual degree of consensus. Reading the comments and Trustee replies to RP comments on various documents on the administrative record indicates that there was considerable dispute on the details, with the RP often indicating that the Trustee approach led to exaggeration of the claims.

- On the subject of toxicity, the DARP states (page 19) that: “Thus, 99.5 percent of the source oil, on a mass basis, was something other than specific target PAHs, presumably, asphaltenes and other high molecular weight refractory organics. These compounds, which have limited aqueous solubility, and therefore toxicity, were present as a non-aqueous phase liquid that became dynamically attached to the bottom (see following section describing subsurface oil observations). This inhibits oxygen transfer to the bottom, and benthic aquatic life can smother and die.” This statement could be misunderstood in that it implies that 99.5% of the oil sank to the sea bed and that it killed everything there. In contrast, we understand that a large part did float and was subsequently recovered from shores or the water surface itself.

Subtidal benthic habitat

- It appears that subtidal benthic injury as a result of the incident has not been quantified through actual measurements in the field. Results of chemical analysis are largely within chronic thresholds, and would therefore be expected to be within higher acute thresholds which would perhaps be more relevant to a short lived oil spill on a fast flowing river. Even so, there does not appear to have been any differentiation between PAH contribution by ATHOS I oil and background levels. Given the urban/industrial nature of the area, we are surprised that oil fingerprinting hasn't been carried out. The DARP therefore appears to rely on other observations: “oil observed on the water” and “detection of sunken oil”, none of which confirm any injury to aquatic organisms, only the presence of oil. In fact, the DARP notes that “Subsurface oil suspended off the bottom (and mobile) was detected around Little Tinicum Island and, intermittently, in the middle spill zone area below the island. No, or less than 1 percent, oil was observed on any of the snare samplers in the upper Delaware Bay “. This could be read as saying subsurface oil was not a problem in any location other than the grounding site.
- The DARP also notes the presence of dead fish in the area, however it is not clear whether fish counts were compared with background levels (i.e. pre-spill counts of dead fish), or indeed whether the cause of their deaths was established or whether they were tested for the presence of ATHOS I oil. Without this information it is not possible to confirm whether the spill caused the deaths, or whether it was natural or other causes, and therefore these observations do not help in determining whether there was any injury to aquatic resources.
- A toxicity test of oiled sediment adjacent to the spill site (collected at 1 and 3 months post incident) was carried out, and suggests impacts to amphipods. However the source of the contamination has not been determined. It is not clear from the DARP and associated documents how the available data has been extrapolated to equate to 412 acres.
- On the matter of subsurface oil, the DARP (page 19) states that: “Pooled stranded oil was found at the collision site in two trenches, with a total volume estimated between 3,390 and 3,610 gallons (NOAA 2006).” This equates to 12.8 to 13.6 m³ and refers to oil that is presumed to have been released at pressure out of the bottom of the tanker, come into contact with the sediments there and stayed near the bottom. We wonder whether this was

a rough estimate made by divers in low visibility for operational reasons, or if it was verified by more quantitative methods later?

- The Trustees used a “multi-step process to apply the HEA methodology to aquatic resource injury quantification for this spill. First, the spatial extent of injury was estimated, based on the simplifying assumption that subtidal impacts were most likely to occur in areas adjacent to heavy shoreline oiling”. This appears to be a very questionable and wide-reaching assumption, which implies that all such areas were 100% injured and therefore seems conservative. We wonder what observations and measurements were carried out to support this assumption. We note the reference to V-SORS tests, however these offered only a very limited view of what was happening in subtidal areas. Further, the DARP states that: “Next, based on background contamination and toxicity data from prior studies, the Trustees identified a baseline service loss of 10 percent.” Again, we wonder what observations or measurements in the field were used to support this figure.

Birds

- The DARP claims bird loss as “11,869 estimated dead (includes direct and indirect losses, a majority of which were swans and geese)”. This is a significantly large number when compared with the report that only “206 birds were collected dead or died at the rehabilitation center, and 337 birds were rehabilitated and released alive”. The average dead bird multiplier is therefore $(11869/206)$ 57.6, which seems to be an extraordinarily high factor for an incident that occurred on a river, rather than in open ocean. We question how the multipliers have been determined. The “direct loss” calculation is based on extrapolation of the field observations of oiled (but presumably not captured) birds, using data from studies/past cases. We question how likely it is that these studies/cases would have been under the same conditions and involved the same species as those observed/measured following the ATHOS I incident, and therefore wonder how the Trustees used and extrapolated figures from past cases/studies to give a dead bird count.
- We note that “Indirect injury in terms of production forgone due to the loss of future generations was included in the estimation of total injury.” We wonder how many generations into the future were included in the estimation, and how the number of generations was decided upon.
- There appears to be some overlap between the assessment of injury to oiled wildlife (mostly ducks and geese) and that to recreational users, notably hunters who, for two weeks, were kept from hunting the very same species. We would expect that the bird population, while undoubtedly affected to some degree by the oil spill, would have benefited from a hunting ban and from any lost use as a result of the incident. We ask whether a comparison has been made between the number of dead birds collected/estimated and the number of birds that didn’t die due to the hunting ban/lost use. Is it possible that the reduction in hunting led to a reduction in the number of birds lost overall? We feel that this issue should be addressed in order to prevent any potential double counting of injury.

Shoreline

- The DARP states that “A total of approximately 280 miles of shoreline were exposed to oil during the Athos spill”. The document also includes a coloured chart aimed at showing the relative impact areas. There is no doubt that shoreline was oiled in this case, and some of it severely. However, generic statements and charts with little detail (such as where the industrial areas might be) and unfortunate use of colour tend to overstate the impact. A chart, for example, that had 4 distinctive colours for “very light”, “Light”, “moderate” and “heavy” with some indication as to natural vs. man-made shorelines would have been much more clear. As it stands, neither the statement nor the chart conveys the information as found in Table 2 where one can see that the degree of oiling in the 280 miles is either light or very light (>73%); moderate (21%) or heavy (6%).
- The DARP assesses injury to sea walls as damage to ecological habitat (page 30). Sea walls can provide important erosion protection functions and these may have ecological impacts if impaired. However, there was no known loss to the erosion protection functions in this case. The habitat losses claimed for rip rap as habitat, however we question how much ecological service rip rap actually provides.
- Further, the DARP states that “...the majority of the oil was removed by natural weathering processes within the first year.” A similar statement was made for the more heavily-oiled sea walls: “One year following the spill, the loss of services was estimated to be at 15 percent, reflecting the rapid recruitment of short-lived species.” Table 7 also assumes a 100% service loss of moderately/heavily oiled seawalls after 6 months. Are these figures based on field studies, where service loss was observed and measured, or are they drawn from assumptions? If it is the latter, how do the figures meet the OPA '90 requirement that the losses be observable and measureable? How do we know that service loss after a year is not 5% or 25%? We understand that these figures are based on past cases and studies, but we wonder how the Trustees have ensured that they have extrapolated like for like, that the past cases took place in similar situations to this one, and that the figures from past cases were derived from field measurements? These comments are valid for all of the habitat-type HEA assessments, e.g. sea walls, sand/mud flats, coarse substrate, marsh, and tributary habitat. In all of these, the same technique appears to have been used with the same application of subjective, non-observable estimates of percent service losses.

Recreation

- The DARP estimates that “41,709 trips on the river were affected by the spill with an estimated lost value of \$1,313,239.” That would appear to be an exceptionally large number of trips for a winter event. The spill happened at the very end of the boating season. The large number does not seem realistic, especially given the ease with which many of the trips presumably could have been shifted to other locations. We do note that per-trip lost value used was only \$31.48, indicating a relatively low-value experience, on average.
- The number of recreational trips “lost” is surprising: “The number of recreational fishing/crabbing trips affected by the spill was estimated to be 20,652 leading to a loss in

value of \$688,067. The number of waterfowl hunting trips affected was 15,559 leading to a loss of \$406,325. The number of pleasure boating trips affected was 5,498 causing a loss of \$95,530. The estimate of the total number of affected trips was 41,709, and the estimate of total recreational use losses was \$1,313,239."It is not stated over which period these losses were projected. This could be the source of the unexpectedly high number, especially if it is many years into the future.

- The DARP states that: "Interviews with marina owners were conducted to determine the potential impacts to recreational boating. In general, the level of recreational boating at the time of the incident appeared low, although some boat-based fishing typically continues throughout the year. Sporadic problems with oil were also reported at marinas in the area." Indeed, the marinas were oiled and had to be cleaned, as did numerous boats. However, we wonder whether it was necessary to include this in the NRDA because the vessels and facilities were cleaned during the incident response, and any damage claims are a private, third party matter.

Restoration projects

- The second main section of the DARP, the restoration planning section, does not appear to have (yet) undergone the same level of public comment and response as the rest.
- There appear to be two cases of duplication of restoration projects between the different sub-groups:
 - The Mad Horse Creek project includes marsh restoration, and the Trustees have calculated that 38.1 acres will contribute to compensatory restoration as a proxy for various shoreline habitats (sea-walls, sand/mud substrate, marsh and coarse substrate). The Trustees have also assigned an additional 25.4 acres of marsh restoration at Mad Horse Creek to compensate for injury to dabbling ducks. It would be reasonable to expect that each acre would provide for BOTH resources and therefore that the 38 acres assigned to shoreline injury would also provide sufficient habitat for compensation to dabbling ducks. It would be helpful to understand the extent to which the Trustees have considered the combined benefits to both resource groups. In addition, we would also query why the marsh restoration at Mad Horse Creek estimated at compensating for injury to dabbling ducks and shorebirds would not also benefit swans and geese.
 - Likewise, the Trustees have agreed that the Oyster Reef Enhancement and Restoration project will compensate for losses to birds (gulls, diving ducks, diving birds, wading bird and kingfishers), and also to subtidal benthic habitat. However, the benefits have been segregated: 73.5 acres assigned to bird injury, and 4.5 acres to benthic habitat, even though the acreage assigned to bird injury would more than cover that assigned to benthic habitat and would be expected to have the same benefit per acre.
- The DARP states that: "Among the proposed restoration proposals are a variety of habitat restoration projects intended to compensate for bird losses caused by the spill. The majority

of bird losses were to migratory species. For that reason, bird scaling calculations are based on the incremental forage expected to be provided by these near spill-area projects and their corresponding ability to support the numbers and types of birds needed to compensate for quantified bird losses (accounting for trophic transfer efficiencies). It would be inappropriate to also credit these projects against spill related habitat losses since such an approach would double count project benefits (e.g. incremental productivity).” As explained above, we disagree with this argument. If a project benefits more than one species, the credit should be given for each resource benefitted. We therefore wonder why the DARP does not consider the mutual benefits of a specific project to more than one resource.

- It is difficult to understand how a contingency of 25% of the total project cost can be claimed. The DARP states that this is to “account for the uncertainties inherent in these preliminary estimates and to cover the risk that the costs of the projects would turn out to be higher than expected, and/or the projects would not result in the expected magnitude of benefits and need augmentation”. Could it also be possible that those uncertainties might also lead to the costs of projects being lower than expected, or that the results might turn out to be better than anticipated? 25% seems excessive, given the expertise and experience that the Trustees have with these types of projects.
- Table 48 (Trustee Council Oversight Costs) would be more user-friendly if it included row and column totals or if the text included some reference to the overall costs. The table with totals is calculated as follows:

Trustee	hours	year 1	year 2	year 3	year 4	year 5	year 6	year 7	total
NJDEP	408	9,642	9,932	10,230	10,537	10,853	11,178	11,514	73,886
DNREC	200	9,272	9,550	9,837	10,132	10,436	10,749	11,071	71,047
USFWS	344	15,671	16,141	16,625	17,124	17,638	18,167	18,712	120,078
PADEP	352	11,242	11,579	11,927	12,285	12,653	13,033	13,424	86,143
NOAA	1818	229,670	236,560	243,657	250,967	258,496	266,251	308,537	1,794,138
Annual Total		275,497	283,762	292,276	301,045	310,076	319,378	363,258	2,145,292
change from previous year			8,265	8,514	8,769	9,031	9,302	43,880	

We note that the total oversight costs (\$2,145,292) equal approximately 8.8% of the restoration cost itself. This seems excessive.

Final comment

We hope that our comments are seen to be constructive and are helpful in producing the final DARP. Should the Trustees have any queries relating to any of the points made in this document, we would be happy to discuss them.

ITOPF

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