UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

BEFORE THE ADMINISTRATOR

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| In the Matter of | ) | |
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| Shee Atika, Inc., | ) | NPDES Docket No. 1085-07-22-402 |
| | ) | |
| Permittee | ) | |

Clean Water Act - Permits - Point Sources - Pollutants - Where Permittee proposed to construct a log transfer facility whereby logs would be transferred to waters undisputably navigable, transfer facility was a point source and logs, bark, etc., discharged to water were pollutants within meaning of the Act, thus, log transfer facility was subject to regulation under the Act and a NPDES permit for such discharges was required.

Clean Water Act - Rulemaking - Silvicultural Activities - Where regulation as published (presently, 40 CFR 122.27) was applicable only to wet-deck log storage facilities, regulation under the Act could not be extended to dry-deck log storage and sortyard facilities in the absence of further rulemaking in accordance with Administrative Procedure Act and permit conditions relating to such facilities would be deleted.

Clean Water Act - NPDES Permits - Ancillary Conditions - In the absence of promulgated effluent limitations, EPA has authority to impose

permit conditions which are rationally related to a reduction in the discharge of pollutants to waters of the United States and permit conditions requiring disposal of bark and wood debris at upland areas and prohibiting the deposit of solid waste at or adjacent to the LTF are authorized by the Act. EPA, however, does not have approval authority over such areas and may not require that bark disposal areas be diked.

Clean Water Act - NPDES Permits - Effluent Limitations - Permit condition requiring that bark accumulations be removed with a suction dredge is not an "effluent limitation" and thus is beyond EPA's authority to impose under § 402 of the Act. General Counsel Decision No. 40, April 2, 1976, followed.

Clean Water Act - Reasonableness of Permit Conditions - Evidence - Where permit conditions concerning log entry speed, bark deposition monitoring, discharge of debris and settleable solids limitations were not supported by the evidence, these conditions would be deleted.

Clean Water Act - Permits - Section 401 Certifications - Evidence - Where permit condition requiring restoration of shoreline and removal of structures upon cessation of operations included language not fairly encompassed within § 401 certification from the State and no evidence was introduced to support such provision, permit condition would be modified to the extent condition exceeded scope of certification.

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| Appearance for Permittee: | Pierre J. LaForce, Esq.<br>Wilkinson, Barker, Knauer and Quinn<br>Washington, D.C. |
| Appearance for EPA: | James Moore, Esq.<br>Lisa Stone, Esq.<br>Office of Regional Counsel<br>U.S. EPA, Region X<br>Seattle, Washington |
| Appearance for Intervenor Sierra Club Legal Defense Fund, Inc.: | Durwood J. Zaelke, Esq.<br>Washington, D.C. |
| Appearance for Intervenor City of Angoon: | Frederick P. Furth, Esq.<br>Jeffrey A. Glick, Esq.<br>Furth, Fahrner, Bluemle and Mason<br>San Francisco, California |

## Initial Decision

This is a proceeding under § 402 of the Clean Water Act, as amended (33 U.S.C. 1342). On June 3, 1985, Shee Atika was issued Permit No. AK-004048-7 authorizing the discharge of logs and bark associated with a log transfer facility (LTF) to Chatham Strait (Cube Cove, Discharge 001), and treated runoff from a log sorting and storage yard (Discharge 002) to Chatham Strait.1/ On July 3, 1985, Shee Atika filed a request

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1/ The proposed LTF is to be located on Admiralty Island, which is approximately 32 miles from Juneau, Alaska. Although Shee Atika contends that the proposed facility is not subject to the CWA, it applied for an NPDES permit on September 12, 1983, because of litigation instituted by the Sierra Club and the City of Angoon. It appears that Shee Atika submitted the application, because it was ordered to do so by the District Court. The only order in the file, however, is dated subsequent to the applications (April 10, 1984) and requires Shee Atika to process its application for an NPDES permit in a timely fashion. See City of Angoon, et al. v. Marsh (D. Alaska, 1984, Exh. A to Intervenors' Memorandum in Support of Motion For Summary Determination). The proposal referred to in the Court's order was for the transfer of logs to Cube Cove by helicopter.

for an evidentiary hearing pursuant to 40 CFR 124.74 to contest certain terms of the permit.

The Regional Administrator granted Shee Atika's request in part and denied it in part on August 7, 1985. Issues upon which an evidentiary hearing was granted are:

a. whether an NPDES permit is required as to the LTF in view of Shee Atika's contention that no pollutant will be introduced into the water and no point source discharge is involved,

b. whether EPA has jurisdiction over the log sortyard and other upland facilities,

c. whether rainfall runoff from the log sortyard area and other upland areas is subject to NPDES regulation,

d. whether EPA has jurisdiction over upland areas, specifically bark disposal sites, and facilities located thereon,

e. whether log bundle entry speed limitation of three feet-per-second is reasonable and supported by the evidence,

f. whether the requirement of no water splashing when log bundles are placed in water is reasonable,

g. whether the requirement of Part I A.2.c. that a bark removal program be undertaken when bark deposition encompasses 100% coverage over an area one acre or larger in size in which the depth of bark exceeds 10 centimeters at any point is reasonable,

h. whether the requirement that bark be removed with a suction dredge is reasonable,

i. whether the requirement Shee Atika conduct scuba dives at the beginning of each logging season is reasonable,

j. whether the prohibition on discharge of debris from log sorting and storage yard is reasonable,

k. whether the 0.1 ml/l settleable solids limitation in treated discharges from the log sorting and storage yard is reasonable,

l. whether monitoring of the mentioned discharges on a monthly basis is reasonable,2/

m. whether the prohibition on solid waste at or adjacent to the LTF site is within the regulatory authority of EPA and

n. EPA should be required to justify and support permit conditions on the basis of its own findings rather than relying on the fact certain conditions or requirements may be imposed by other agencies.

The Regional Administrator granted in part Shee Atika's request for an evidentiary hearing as to the requirement for restoration of shoreline and removal of structures, recognizing that the language of this condition contained a sentence which was not contained in the § 401 certification from the State of Alaska. To the extent that the condition was required by the Alaska certification, an evidentiary hearing was denied. The Regional Administrator also denied an evidentiary hearing with respect to Shee Atika's selective enforcement argument, i.e., that it is the only LTF

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2/ Shee Atika has withdrawn its challenge to this requirement (Tr. 152).

required to obtain an NPDES permit,[3/] and denied an evidentiary hearing with respect to other requirements included within the State of Alaska's certification, e.g., removal of stray logs within 24 hours and prohibition on bark accumulation. Shee Atika did not appeal these denials to the Administrator in accordance with 40 CFR 124.91 (see § 124.75(b)) and they are now final.

Under date of August 30, 1985, the Sierra Club Legal Defense Fund and the City of Angoon, Alaska, hereinafter Sierra Club-Angoon, moved to intervene, pursuant to 40 CFR 124.79, desiring to limit their participation to the submission of briefs and memoranda on legal issues.[4/] These requests were granted and Sierra Club-Angoon were admitted as parties on September 24, 1985. Pursuant to motion of Shee Atika, the ALJ, on October 23, 1985, entered an order, in accordance with 40 CFR 124.60(a)(2), authorizing Shee Atika to commence discharges in accordance with all terms and conditions of the permit, pending final agency action thereon.[5/] On October 30, 1985,

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3/ Although recognizing that he did not have jurisdiction to fashion a remedy, the ALJ denied EPA's motion to strike testimony relating to selective enforcement, because it involved fundamental fairness in administration of the law (Tr. 8). It should be noted, however, that EPA is now requiring other LTFs to submit NPDES permit applications and that Shee Atika has withdrawn its challenge in this respect (Brief at 1, 2).

4/ This appears to be another chapter in a protracted controversy between Shee Atika, an Alaska Native Corporation established pursuant to the Alaska Native Claims Settlement Act (16 U.S.C. § 1601 et seq.), which desires to develop its lands, and Sierra Club-Angoon, et al. which are dedicated to the maintenance of Admiralty Island as a wilderness area. See City of Angoon v. Marsh, 749 F.2d 1413 (9th Cir., 1984).

5/ Notwithstanding this authorization, Shee Atika is not likely to begin operations and commence discharges anytime soon, because the Court, voided the § 404 permit for dredge and fill material, necessary for construction of the LTF, issued by the Corps of Engineers, and enjoined Shee Atika from all use of the Cube Cove LTF until a valid § 404 permit is obtained, upon the ground the EIS was inadequate. See City of Angoon, et al. v. Hodel, et al. (D. Alaska, 1985, Exh B to Memorandum of Points and Authorities In Support of Motion For Summary Determination). This decision deprives Shee Atika of the use of its property and unsurprisingly, has been appealed.

Sierra Club-Angoon, in accordance with the ALJ's direction, submitted a statement of position on five legal issues. This statement was considered as a motion for summary determination pursuant to 40 CFR 124.84. These issues, although fully briefed, were not decided prior to the hearing, but are necessarily decided herein. See discussion, infra at 38-50.

A hearing on this matter was held in Seattle, Washington on March 27, 1986.

Based on the entire record,[6/] including the proposed findings and briefs of the parties, I find that the following facts are established:

1. On September 12, 1983, Shee Atika submitted separate applications for an NPDES permit for the LTF and an accompanying six-acre log sortyard (AR 1-8). The applications were supported by two studies prepared in March 1983, by the engineering consulting firm, $CH_2M$ Hill, Inc.: "Cube Cove and Vicinity-Baseline Ecological Field Studies" (AR 1103) and "Cube Cove Oceanographic Study" (AR 1210), previously submitted to EPA.

2. Under date of September 22, 1983, Shee Atika forwarded a copy of the Certificate of Reasonable Assurance issued by the Alaska Department of Environmental Conservation (DEC), dated March 10, 1982, pursuant to § 401 of the Act for the proposed LTF (AR 539-42). This document stated that there is reasonable assurance that the proposed activity, and any discharge which may result, is in compliance with § 401 of the CWA, which includes Alaska Water Quality Standards and Standards of

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6/ The administrative record (40 CFR 124.85(d)(2)) is in evidence as U.S. Exhibit 1. References to the administrative record will be AR followed by the page number.

the Alaska Coastal Management Program, subject to certain conditions among which were that logs be placed in the water by a "nonviolent transfer system." The final certificate issued by the State is dated February 21, 1985 (AR 1525-27).

3. In accordance with DEC regulations, Sierra Club-Angoon requested and were granted an adjudicatory hearing to contest the Certificate of Reasonable Assurance. An adjudicatory hearing was held during the period March 23 - 29, 1983 and in a recommended decision, dated July 7, 1983, the hearing officer found, inter alia, that the terms and conditions of the Certificate of Reasonable Assurance, with certain additional terms and conditions, were adequate to protect water quality and that DEC's decision the Certificate was consistent with the Alaska coastal Management Program was correct and properly made (AR 412-60). This decision was adopted by the Commissioner of the DEC on August 8, 1983 (AR 529-32). The Commissioner did, however, amend the Certificate with respect to bark monitoring and blasting. The Commissioner's decision was affirmed by the Superior Court of the State of Alaska, City of Angoon v. Neve, No. 1 JU-83-1545 Civil (1985) and is now final.

4. Cube Cove is approximately 100 acres in size, opens to the northwest and has no natural physical features protecting it from storm waves emanating from the north, northwest (Appendix to Recommended Decision, AR 463). The proposed LTF consists of a 400-foot rubble mound breakwater, a 300-foot floating breakwater, stifflegs,[7] a continuous-chain transfer system, an A-frame log transfer system, a barge loading ramp, a fuel storage area, and a small boat dock (Id. at 464). Fill required

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7/ Stifflegs consist of logs attached end-to-end, placed horizontally in the water and anchored for the purpose of containing log bundles until they are assembled into rafts. The stifflegs will not be treated.

for the rubble mound breakwater will be obtained from an area adjacent to the LTF, designated to be the log sortyard.

5. The proposed LTF and its operation were further described by Mr. Roger D. Snippen, President of Shee Atika. He described the double A-frame transfer mechanism as consisting of two large logs or steel members, which pivot at the ground and are attached at the top, similar to a large crane (Shee Atika Exh. 2 at 5). By means of a cable, the A-frame enables a bundle of logs to be picked off of a truck or the ground and placed in the water. Properly operated, the A-frame deposits logs gently in the water. This system is to be utilized only until the continuous chain system described below is operational or while the chain system is being repaired.

6. The continuous-chain transfer system consists of two parallel steel beams supported by steel pilings (Shee Atika Exh. 2 at 4). The steel beams descend into the water at approximately a 25% grade and have sprockets for the conveyor chain at the upper and lower ends. Operationally, a bundle of logs is placed on the beams and chain and the weight of the logs causes the bundle to move slowly downward into the water. Speed of the downward movement is controlled by a friction clutch. When a bundle enters the water, the loss of weight stops the movement of the chain. This system is approximately 120 feet in length (Tr. 138) and, according to Mr. Snippen, can deposit a bundle of logs in the water gently, with hardly a ripple. The A-frame and the continuous-chain transfer systems are considered "nonviolent."

7. Mr. Snippen described the log sortyard as an area, adjacent to and upland from the continuous-chain transfer system, where logs are brought, sorted, and made into bundles after harvesting (Shee Atika

Exh. 2 at 6; Tr. 125-27). He stated that the sortyard would occupy five to six acres and that Shee Atika did not anticipate long-term storage of logs, explaining that the ideal situation, from their point of view, would be to have the log inventory completely depleted at the time of the cessation of operations in mid-October. The floor of the sortyard will be covered with crushed stone and will slope away from Cube Cove at an approximate 4% grade (Appendix to Recommended Decision, AR 469). A drainage ditch will be constructed across the back northwest of the sortyard, sloping toward Chatham Strait. Runoff in the ditch will pass through a one-inch screen and settling basin or pond prior to entry into the strait. Approximately 90% of the runoff will enter Chatham Strait, the balance will enter Cube Cove.

8. Mr. Snippen testified that Shee Atika anticipated operating the LTF intermittently between mid-March and mid-October and harvesting between 30 million and 40 million board feet per year (Shee Atika Exh. 2 at 5). He explained that the logs were for the export market, that it was important that the logs be undamaged with as little bark loss and as little time in the water as possible. He indicated that for the most part they anticipated moving logs out of Cube Cove within 24 hours.

9. Waste from LTF operations of the type proposed by Shee Atika generally consist of wood, bark, particulate matter and related material which enters the water as a result of the logs being placed therein (testimony of Richard B. Parkin, Chief of the Ocean Programs Section, Water Division, EPA Region X, U.S. Exh. 2 at 3). The waste can include oil and grease and other petroleum products used for the log handling machinery, as well as water soluble components of logs, wood debris and bark deposits. Potential effects of these discharges on water

quality during operation of an LTF include increases in suspended solids and turbidity, settleable solids, floating solids and debris, as well as other materials used in the logging process such as metal banding. A majority of the wood waste initially floats and then sinks after becoming waterlogged (Id. at 3). Over time, soluble organic compounds and lignin-like substances leach out of the logs and bark, affecting both the color and toxicity of the water.

10. Runoff from the log storage and sortyard generally consists of rainwater containing wood debris, bark, leachate and associated debris that are lost during sorting and storage; oil, grease and other petroleum products used for log handling machinery, and entrained soil and other particulate matter (Parkin, U.S. Exh. 2 at 3). Potential effects of those discharges on water quality include increases in suspended solids, turbidity, settleable and floating solids and oil and grease in the receiving water.

11. Accumulations of bark are a principal concern, because bark leachates in highly concentrated forms have been shown to be acutely toxic (AR at 489). Concentrated bark extracts utilized in these experiments are not, however, found in the natural environment (testimony of Dr. Victor W. Kaczynski, Shee Atika Exh. 1 at 12).8/

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8/ Dr. Kaczynski, who also appeared as an expert witness for Shee Atika at the DEC hearing, was qualified as an expert witness in fisheries biology, biological oceanography, toxicology testing with specific emphasis on bioassays, and on the biological effects of bark and log leachates (Id. at 5; Tr. 106). Counsel for EPA waived cross-examination of Dr. Kaczynski and his written and rebuttal testimony (Shee Atika Exh. 3), and a cross-section of Cube Cove (Shee Atika Exh. 5) are in evidence. His testimony is essentially uncontradicted.

That most studies attempting to measure water quality degradation from the effects of bark accumulation have been conducted in the laboratory and those that have attempted to correlate waste chemistry data, physical oceanographic data and biological impacts data in the field have serious omissions, i.e., circulation patterns were not measured, is confirmed by the Preliminary Ocean Discharge Criteria Evaluation for Log Transfer Facilities in Alaska.9/ The cited document states (AR 602): "In general, it appears that under static conditions, wood leachates could build up to toxic levels in bottom substrates and overlying water. It is unknown whether this can occur in waters that are regularly flushed by tides and other oceanographic phenomena. Oxygen demand exerted by the bark could be a potentially serious problem in basins which do not have high flushing rates. Without site specific information at existing transfer facilities, the magnitude of this problem cannot be evaluated."

12. Another concern from accumulations of bark is a smothering action on plants and animals (Parkin at 3). These accumulations have resulted in severe reductions in benthic infauna at existing LTF sites. For these assertions, Mr. Parkin relies on studies referred to in the Preliminary Ocean Discharge Evaluation For Log Transfer Facilities in

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9/ AR 566-609 at 602. Facilities discharging inside the baseline of the territorial seas, such as Shee Atika, are not subject to § 403(c) Ocean Discharge Criteria (Fact Sheet, AR 1447).

Alaska mentioned in the preceding finding[10/] and an interim report "Effects of Bark Disposition on Benthic Infauna at a Log Transfer Facility" (Attachment 4 to his testimony). The former document (AR 603) refers to a 1979 study showing loss of supension-feeding bivalves at a one cm accumulation of bark and major changes in community. Average bark accumulation at measured dump sites was determined to be approximately 11 cm and the average aerial extent 3.3 acres.[11/] The interim report compared macro-infauna (numbers and biomass) at an area of bark accumulation with those of an adjacent unaffected area. It was determined that bivalves and polychaetes dominated the fauna of both areas, but were significantly diminished under bark deposits and that a complete covering of bark debris can have drastic effects on the structure of benthic communities, with deposit feeders replacing suspension feeders. These studies do not purport to determine whether the effects of bark are due to chemical, i.e., leaching, or smothering action, or a combination of the two. Dr. Kaczynski criticized this study upon the ground, among others, that the control and experimental sites were not truly comparable in that the control site was located in a sheltered, bay-like area, while the experimental site was located on a point (Rebuttal Testimony at 11).

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10/ The criteria evaluation document (AR 602) states that in most studies reviewed, areas with a bark covering had few epibenthic organisms present and that reduction in available food, and lack of suitable substrate for burrowing or other protection could account for these observations.

11/ AR at 603. The criteria document at 595 and Table 4 refer to means, however, and it appears that these figures are means rather than averages. See Forest Service comments on the draft permit (letter, dated April 10, 1985, AR 1505-08 at 1506).

13. The Oceanographic Study of Cube Cove prepared by $CH_2M$ Hill, Inc. referred to in finding 1 concluded, inter alia, that there were no dead spots (zones that lack current motion for extended periods of time) in the cove and that the proposed structures, properly designed, should not create any; because of the current flow, the majority of debris should be carried outward into Chatham Strait; the proposed breakwater should increase the circulation and current movement through the log transfer area; the significant volume of water exchanged during each tidal cycle, coupled with the current pattern will continue to mix and flush the water in the cove; and the flushing rate will not change with the addition of the breakwater (AR 1241). This study also concluded that complete flushing of the cove would occur every three tidal cycles or 36 hours (AR 1226).

14. The "Baseline Ecological Field Studies", referred to in finding 1, included in addition to Cube Cove, four nearby coves for comparison purposes (AR 1106). Diving studies were conducted to estimate king and Dungeness crab abundance, the number of species present and to examine physical and biological features. From in situ water quality analysis, it was determined that there were rapid rates of mixing and flushing in Cube Cove and regular rates of exchange with ambient water in Chatham Strait. No temperature stratification was detected in the cove and water quality measurements were similar to those in Chatham Strait. These findings were confirmed by the Oceanographic Study referred to in the preceding finding. The absence of areas of low salinity in Cube Cove and the presence of salinity values similar to those in Chatham Strait were indications that there was not an estuarine environment in the cove. Water quality was good in Cube

Cove, meeting state criteria for marine waters, except for high levels of lipids (oils) from a natural source.

15. The study referred to in the preceding finding stated that analysis of bulk sediment samples from Cube Cove indicated that sediments were uncontaminated inorganic materials composed primarily of sand and gravel (AR 1106-07). Sample analysis and diver observations confirmed the absence of mud and silt from the sediments and terrestrial plant materials on the bottom, which provided further evidence of rapid rates of mixing and flushing. The study indicated that Cube Cove contained no unique features or organisms, had no commercial fisheries, no rare, endangered or threatened species and no important or critical habitats. Water quality, i.e., salinity, temperature, dissolved oxygen, pH, and the physical and chemical composition of bottom sediments in Cube Cove were similar to those of other areas studied. Species diversity and richness of Cube Cove's intertidal and subtidal communities appeared similar to those of the other study areas (AR 1108). The study concluded that construction and operation of the facility will have no significant long-term impacts to water quality, sediments, flora, fauna (including juvenile salmonids, Dungeness and king crabs, bald eagles, and marine mammals) and subsistence and recreational use in Cube Cove.

16. A September 29, 1983 site visit by representatives of the National Marine Fisheries Service (NMFS) resulted in estimates of crab abundance in Cube Cove which were within the range of estimates at other undisturbed sites in Southeastern Alaska (AR 1010-17). A more comprehensive investigation of marine infauna in Cube Cove conducted by the Fish and Wildlife Service on September 8 and 9, 1983, resulted in the

following conclusions: "The study results indicated that the density and abundance of infauna in Cube Cove are comparable or greater than other undisturbed nearshore areas in Alaska used for comparison. The abundant polychaete and bivalve assemblages provide a food base for commercially valuable species such as Dungeness crab, king crab and halibut. If significant accumulations of bark debris and other contaminants result from the proposed logging activities, we anticipate that infauna in Cube Cove would be adversely affected. The magnitude of the effects would relate to the amounts of contaminants that would be introduced into Cube Cove and to any alteration of circulation patterns or flushing rates that may result from construction of the proposed breakwater * * *." (FWS letter dated January 3, 1984, to Colonel Neil E. Saling, COE, AR 1019).

18. No effluent limitations or guidelines for discharges from LTFs have been published.12/ In the absence of such limitations or guidelines, EPA included in the permit as "best professional judgment", four General Discharge Limitations and 13 Best Management Practices (BMPs). Among the BMPs (Part I A.2.b.) are the following: "All log bundles shall be placed into receiving waters using a nonviolent log let-down device to minimize adverse environmental effects. The log let-down device shall be operated with a log bundle entry speed not exceeding 3 feet per second, and under control so that water splashing does not occur when the log bundles are transferred into the water. Equipment used in conjunction with the log let-down device shall be

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12/ Effluent limitations applicable to the storage of logs where water is intentionally sprayed on the logs have, however, been promulgated (40 CFR 429.100).

operated to prevent loss of petroleum and lubricating products into the receiving waters."

19. Shee Atika has attacked as arbitrary and unreasonable the three feet-per-second log bundle entry speed requirement. Defending this requirement, Mr. Parkin testified that three feet-per-second is EPA's best professional judgment of an entry speed that will ensure nonviolent entry of logs into the water and is achievable by technology available to the permittee (U.S. Exh. 2 at 7). Mr. Parkin points out that Shee Atika recognized the necessity of achieving nonviolent entry of log bundles into the water and that Alaska's certificate of Reasonable Assurance requires nonviolent entry. He also points out that in comments on the draft permit, Shee Atika did not argue that the entry speed requirement should be deleted altogether, but only that the entry speed in its permit was lower than the five feet-per-second routinely placed on its competitors.13/ Mr. Parkin further states that the three feet-per-second requirement was EPA's best professional judgment based on precedent in the industry,14/ field data on speeds achievable with current technology and EPA's understanding that such technology was available, economical and reasonable for use by Shee Atika. He also maintains that the mentioned requirement is supported by data published since the permit was issued (findings 20 and 21).

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13/ U.S. Exh. 2 at 8,9. The precedents referred to were apparently imposed in permits issued by the Corps of Engineers under §§ 403 and 404, and are not NPDES § 402 permits.

14/ Mr. Snippen asserts that Shee Atika's Cube Cove operation is the precedent and that the Corps of Engineers permits referred to by Mr. Parkin (Sealaska and Forest Service) were issued after the Corps imposed the three feet-per-second requirement on Shee Atika (Rebuttal Testimony, Shee Atika Exh. 4 at 3). He states that Shee Atika is the first LTF operation upon which this requirement was imposed.

20. In the summer and fall of 1983, a team of Forest Service representatives collected data on existing LTFs in southeastern Alaska in an effort to further define the term "nonviolent" (memorandum, dated January 13, 1984, U.S. Exh. 2, Attachment 1). The team visited seven LTFs, collecting data from six on the distance log bundles traveled once beginning their descent and the time elapsed until the bundle entered the water. Velocities were calculated by dividing distance traveled by elapsed time. The only system visited having a chain conveyor was at Thorne Bay, which had the lowest average velocity of 2.5 feet-per-second. The team recognized that its velocity determinations were essentially estimates and recommended that a nonviolent facility be of any design that places logs in the water at an average velocity of four feet-per-second or less and dissipates an amount of kinetic enegery less than 18,000 foot-pounds.

21. Log Transfer Facility Siting, Construction, Operation and Monitoring Guidelines (1985)[15/] do not set a single uniform log entry speed for LTFs, but provide that "(t)he speed of log bundles entering the receiving waters should be the slowest practicable speed achievable." (Id. at 12). The guideline was asserted to be necessary, because the amount of bark lost during transfer of log bundles into receiving waters is directly correlated with the speed of bundle entry. This conclusion was stated to be confirmed by an in-progress USFWS study, which is not in the record. The guideline states that while there is insufficient information to agree upon a guideline defining a practicable speed for various types and sizes of LTFs, three feet-per-second was an achievable entry speed and would serve as a reference

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15/ U.S. Exh. 2, Attachment 4 at 12. The guidelines were developed by a Technical Subcommittee consisting of industry, governmental and public representatives.

point for discussion. The subcommittee's (note 15, supra) Statement of Unresolved Issues, dated September 18, 1985 (U.S. Exh. 2, Attachment 3), includes maximum allowable log bundle entry speed as such an issue. Although recognizing that three feet-per-second was achievable (at least by crane and continuous-chain transfer systems), the practicability of such a speed was questioned. It was pointed out that the continuous-chain and crane transfer systems were not economically or technically practicable at many sites, that the three feet-per-second speed was derived from a single field report and that the mentioned speed limit will constrain BPJ options available for specific sites.

22. Dr. Kaczynski testified that he knew of no scientific study which has been performed to validate the entry speed limitation of three feet-per-second (Shee Atika Exh 1 at 32). He stated that it was his understanding that gentle log let-down could be achieved at a log entry speed in excess of three feet-per-second[16/] and that the limitation was therefore unreasonable. In rebuttal testimony, he asserted that the relevant inquiry, which has not been answered, is whether a three feet-per-second requirement is necessary to assure gentle entry, or whether an acceptable result could be achieved at a greater entry speed (Shee Atika Exh 3 at 7). In comments on the draft permit, the Forest Service stated the belief that the three feet-per-second requirement is not supported by existing information and that the best judgment of journeymen professionals is that six-to-seven feet-per-second would be acceptable as an interim measure (Forest Service letter, dated

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16/ In comments on the draft permit, $CH_2M$ Hill (Dr. Kaczynski) stated that operators of LTFs have been able to achieve easy let-down without splashing at entry speeds up to about ten feet-per-second (letter, dated April 10, 1985, AR-1513).

April 10, 1985, AR 1505-08 at 1506). Dr. Kaczynski advocated continuation of the "no splash" requirement as a common sense solution to the problem and deletion of the three feet-per-second limitation.17/ Asserting that the configuration of a log bundle changes when it goes from a dead weight to a buoyant condition, which causes bark loss on interior of logs and water turbulence, the Forst Service says that the no splash condition cannot be met (AR 1506). Mr. Snippen indicated that, although he initially had reservations concerning whether the "no splash" requirement would be reasonably interpreted, he agreed that the limitation was rationally and logically related to the goal of minimization of bark loss upon entry into the water, and that accordingly, he (Shee Atika) would support the "no-splash" standard and deletion of the fixed log-entry speed (Rebuttal Testimony, Shee Atika Exh 4 at 4, 5).

23. In further rebuttal testimony, Mr. Snippen stated that, contrary to EPA's perception, the length of time required to move bundles from land to water is of economic importance (Id. at 4). He pointed out that in order to achieve a three feet-per-second entry speed with a continuous-chain mechanism the entire chain must be operated at that speed. In contrast, an A-frame or other form of cable operation could be operated at a much high rate as long as it was slowed to the required speed at the point of entry. He opined that the difference in operating

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17/ Mr. Parkin testified that there were no studies of which he was aware concerning the speed of entry necessary to comply with the "no-splash" requirement (Tr. 46, 47). The Forest Service study previously mentioned (finding 20) states "(i)t is intuitively appealing, although not proven, that large splashes resulting from fast moving bundles with high kinetic energies cause more dislodged bark, than bundles gently placed into the water." (Id. at 4).

speeds might be as much as 40% and stated that, although the continuous-chain mechanism was regarded by some as state-of-the-art technology, operators were not likely to adopt a system which cannot be operated at an economically competitive rate. Under cross-examination, however, it appeared that after logs were bundled, in the sortyard, they would be loaded on a truck by a forklift and hauled to the chain conveyor, loaded on the conveyor also by forklift and that after the bundles were in the water, they would be assembled into rafts of like logs to the extent feasible and pushed toward the holding pens (stifflegs) (Tr. 133-37). The activities would occupy, as a minimum, several minutes, so it does not appear that the maximum 30 to 40 seconds a bundle spends on the 120-foot conveyor at a speed of three feet-per-second[18/] is necessarily crucial. Mr. Snippen expressed a willingness to assume that as a technical matter, Shee Atika could comply with the three feet-per-second requirement (Tr. 131-32).

24. Mr. Parkin defended the no splash requirement as a means of monitoring compliance with nonviolent entry (Testimony at 13, 14; Tr. 47, 48). He stated that in EPA's judgment, elimination of splashdown would ensure nonviolent entry and provide an easy, unambiguous measure of compliance with the mentioned requirement. In further testimony, he described the absence of a splash as an indicator gentle letdown was being achieved.[19/]

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18/ Because of the approximate four-to-one slope and depending on the tidal cycle (the highest tide at Cube Cove is 18.7 feet and the mean high tide is 13.8 feet, Table 2, Cube Cove Oceanographic Study, AR 1220) as much as 60 feet of the conveyor may be under water (Tr. 139-41).

19/ Tr. 93. Because there does not appear to be any correlation between "no splash" and the three feet-per-second limitations, it seems obvious that one or the other of those requirements is redundant.

Concerning the three feet-per-second entry speed limitation, Mr. Parkin expressed the Agency's belief that bark loss was dependent on the velocity with which a log bundle enters the water, because the kinetic energy or force of such entry increased exponentially with the velocity (Tr. 93-95). Additionally, he testified that three feet-per-second quantifies gentle and was measureable and enforceable (Rebuttal Testimony at 4). For this assertion, he relies on the Forest Service study (finding 20), containing speeds which, as we have seen, are essentially estimates. According to Mr. Snippen, there is a controversy within the engineering community and the designers of the chain conveyor as to whether three feet-per-second was an actual verifiable number.20/

25. Part I A.2.c. of the permit requires that, if at any time, the results of bark monitoring or sampling indicate that bark deposition in Cube Cove encompasses 100% coverage over an area of one acre or more in which the bark depth exceeds ten centimeters at any point, the permittee shall remove the bark with a suction dredge, and dispose of it at an approved upland, diked disposal site. Shee Atika asserted that there was no substantial evidence to support this requirement and that removal by a suction dredge would have adverse environmental consequences. Defending the cited requirement, Mr. Parkin says that the bark removal requirement is based on data in the record that bark accumulations can cause mortality of certain organisms and alterations of the benthic community (Testimony at 16). He points out that the 1982 Environmental

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20/ Tr. 131. The Forest Service team's report (finding 20) assumed that average velocity equalled final velocity at the only chain-conveyor system measured.

Review by Shee Atika's consultant, $CH_2M$ Hill (AR 1529), alluded to a study showing the near absence of animal life at log dump sites (AR 1605). A 1973 survey of four log dumps in Southeast Alaska found large, localized accumulations of bark at three of the sites, which had eliminated plant life from the area (AR 1597). Mr. Parkin also pointed out that although the Environmental Review stated that impacts [of bark accumulation] at Cube Cove should not be significant, this conclusion was based on the expectation that bark would not accumulate rather than evidence bark accumulation would not effect the biota. He stated that if bark accumulates, it must be removed in order to adequately protect the environment. Dr. Kaczynski disputed EPA's attempt to rely on the 1982 $CH_2M$ Hill study referred to by Mr. Parkin to support the bark removal requirement, asserting that the study was a preliminary "first look" without the benefit of baseline or other scientific site studies and that accordingly, the conclusions therein were very conservative (Rebuttal at 9, 10).

26. Dr. Kaczynski testified that the amount of bark accumulation was not solely determinative on the question of whether bark deposits would have an adverse impact on marine biota (Testimony at 30). He explained that the key was the amount of oxygen in the water body over and within the bark accumulation and that if there was good circulation, and the oxygen level remains high, there likely would be no adverse effects. He asserted that it was the oxygen level in the bark accumulation, which should be measured, rather than the accumulation and that he knew of no documented scientific study, which recommends or supports the ten centimeter limitation (Id. at 31). The Log Transfer Facility

Guidelines (finding 21) specify an interim threshold bark accumulation level identical to the one at issue here. The guideline states that when the threshold is exceeded, cleanup, if any, will occur at the discretion of the permitting agencies. An interim guideline is assertedly necessary because of the lack of technical information on practicable bark accumulation levels and the effects on water quality and biota of bark removal.21/ Unresolved issues as stated by the Technical Subcommittee, which developed the guidelines, include submarine bark accumulation threshold level and bark removal when it exceeds that level. Items of concern included lack of information on the extent and depth of bark accumulation at existing LTF sites, basis for establishing the threshold level and whether performance against the threshold level was practicably achievable. As to bark removal, it was noted that mechanical removal of bark had not yet occurred in Southeast Alaska, and that questions such as whether bark can be effectively removed and the physical and environmental effects of such removal had not been answered.

27. Commenting on the draft permit, the Forest Service stated that it did not agree with the ten cm., one acre criteria (AR 1506). It was pointed out that ongoing studies indicate that bark deposits at existing sites range from zero acres to nine acres with a mean of 1.9 acres. The Forest Service stated that the ten cm. value is based on O'Clair's work with clams, which indicates an $LD_{50}$ mortality at this depth of cover. Because of paralytic shellfish poisoning, clams are allegedly not a current

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21/ Studies by the Forest Service and the Fish and Wildlife Service to assess the practicability of bark removal are assertedly underway. The interim guideline will remain in effect pending completion of these studies, which expectedly will allow development of a final guideline by the fall of 1987.

economic resource in Southeast Alaska. It was further alleged that economically valuable crab resources would live, but not thrive on bark deposits. The Forest Service contended that the zone of initial mixing for this site as defined in regulations is 9.6 acres based on the entire site, or 3.8 acres, if only a half circle around the specific entry point was considered.22/ According to the Forest Service, EPA has selected "values of opportunity" which are not supported by existing and ongoing research and this approach adds considerable operational burden without attendant environmental benefits. The advisability of suction dredging with its attendant damage to bottom dwellers was questioned.

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22/ For these assertions, reliance is placed on regulations involving Ocean Dumping (40 CFR Part 227) and the definition of a "release zone" as the "* * area swept out by the locus of points constantly 100 meters from the perimeter of the conveyance engaged in dumping activities, beginning at the first moment in which dumping is scheduled to occur and ending at the last moment in which dumping is scheduled to occur." (§ 227.28) It is obvious this definition contemplates that dumping is occurring from a moving vessel. Reliance is also placed on the definition of "Initial Mixing" when no other means of estimation are feasible (§ 227.29(b)) providing:

> (b) When no other means of estimation are feasible.
>
> (1) The liquid and suspended particulate phases of the dumped waste may be assumed to be evenly distributed after four hours over a column of water bounded on the surface by the release zone and extending to the ocean floor, thermocline, or halocline if one exists, or to a depth of 20 meters, whichever is shallower, and
>
> (2) The solid phase of a dumped waste may be assumed to settle rapidly to the ocean bottom and to be distributed evenly over the ocean bottom in an area equal to that of the release zone as defined in § 227.28.

28. In rebuttal testimony, Dr. Kaczynski pointed out that EPA had not made an independent study of possible bark accumulation, but was relying on a worst-case analysis prepared by Ott Water Engineers for the Corps of Engineers.[23/] Aside from his reservations as to the reasonableness of using a worst-case approach for preparing permit conditions, Dr. Kaczynski emphasized that the worst-case condition[24/] was assumed to be present every day the LTF was being operated and that this did not represent a reasonable forecast of bark deposit or accumulation at Cube Cove.[25/] He expressed the belief that ample scientific data had been developed with respect to Shee Atika's proposed operation at Cube Cove and that it was this data, rather than generalized information, which should be utilized in developing permit conditions. Regarding the possible effects of bark accumulation, he testified that relevant scientific studies showed that where there is good water circulation and movement, there would be no impacts upon the benthic environment (Rebuttal Testimony at 3-5). He stated that studies showing environmental damage with relatively shallow deposits of bark involved situations having

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23/ Id. at 2. Mr. Parkin confirmed that EPA's estimates of anticipated bark loss were based on the Ott Water Engineers' report (Tr. 23).

24/ As hypothesized by Ott the worst-case condition would be a long-term condition of calm winds which would allow floating bark to remain in the cove, possibly hindered from flushing by the log booms (stifflegs) accompanied by long-term usage of the facility (letter report of Ott Water Engineers, dated July 9, 1984, AR 1074).

25/ Ott Water Engineers, while agreeing that the site should have minimal bark deposition, especially as compared with other sites in Southeast Alaska, concluded, however, that some long-term accumulation of bark was likely to occur nearshore behind the breakwater at the loading facility, that the stifflegs would tend to entrap floating bark and allow some settling of bark smaller than two-inches in diameter and that there was a possibility of some bark accumulation in the kelp beds at the north and south edges of Cube Cove (AR 1069-70).

inadequate water movement and that damage was probably attributable to poor water circulation, rather than bark depth.

29. In making its worst-case analysis, Ott Water Engineers assumed, inter alia, that 325,000 board-feet would be processed per day, that one-to-three percent of bark available would be dislodged upon transfer to the water,[26/] that one-third of Cube Cove would be flushed per tidal cycle (eight percent plus or minus of the original water would remain after three days), that 37 percent of bark dislodged would be of less than two-inch dimension, that 80 percent of bark smaller than 0.5 inches would settle within three days and that 45 percent and eight percent of bark smaller than one-inch and two-inches, respectively, would settle within three days (AR 1075-76). These assumptions resulted in an estimate ranging from 1200 to 3700 cubic feet of settled bark accumulation within Cube Cove per year. Mr. Snippen disputed this estimate of bark loss upon transfer to the water, saying that based on his several years experience in the forest products industry, three percent was far too high, in that three percent might be projected as bark loss from the entire operation, i.e., from felling of the tree to delivery at the processing facility (Rebuttal Testimony at 1, 2). He was of the opinion that bark loss upon transfer to the water should not exceed 20 percent of the entire bark loss and that he would consider such an LTF bark loss level to be very high. In his view, a worst-case scenario would result in LTF bark loss not exceeding six-tenths of one percent [of total bark loss]. To illustrate his contention that three

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26/ The Ott report states that literature values of bark loss for conventional dumping without mitigation measures range from 6 to 17 percent (AR 1075).

percent bark loss was unreasonable, he determined, based on industry scaling and grading rules and wood conversion tables, that a three percent bark loss on a hypothetical average log, would mean that a piece of bark five-feet long by one-foot wide would be dislodged. He contended that this was neither reasonable nor realistic.

30. Alluding to Dr. Kaczynski's opinion that bark removal requirements should be based on oxygen, rather than bark levels, Mr. Parkin pointed out that, although a number of studies have related alterations of benthic communities to the presence of bark, these effects are not completely understood (Rebuttal Testimony at 9). He asserted that the effects of ancillary conditions resulting from bark accumulation such as leachate toxicity, depressed oxygen levels or simply changes in the substrate have not been adequately studied. Referring to studies showing alteration of sand bed fauna at bark accumulations as little as 0.8 cm. and virtual elimination of molluscs and several species of polychaetes at bark accumulations greater than 2.5 cm.,27/ he contended that the bark removal permit provision was necessary in order to protect Cube Cove. He insisted that bark accumulations can alter the biological, physical and chemical integrity of the environment, leading to unpredictable changes in the benthic community (Tr. 50-55).

31. Part I B.1.c.1. of the permit requires the permittee to comply with the bark monitoring program submitted to ADEC by Shee Atika on May 24, 1984, as modified by the ADEC in a letter, dated June 7, 1984, and provides that copies of results of all "* * sample collection and

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27/ The study cited for this conclusion is Jackson (1986) which is apparently the final version of "Effects Of Bark Deposition On Benthic Infauna At A Log Transfer Facility" by Rodney G. Jackson, a draft of which is in the record (ante at 12).

measurement of bark deposition depths * * *, shall also be submitted to EPA and ADEC for each of the scuba dives made at the start and close of each logging season." Additionally, Paragraph I B.c.2. requires Shee Atika to submit for approval a bark monitoring program for areas outside the ADEC program and between MHW and 60 feet below MLLW, which "* * program shall include a general reconnaisance dive, prior to start of log transfer each season and at the close of each season * * *." The mentioned letter provides that "Shee Atika purposes (sic) to take samples at the close of each season and prior to start up in the spring * * *" and that a scuba diver would be employed for this purpose (AR 1781).

32. Shee Atika asserts that because scuba dives are to be conducted at the close of each logging season, it is unnecessary to conduct dives at the beginning of the next season, pointing out that no activity will have occurred in the interim. Mr. Snippen testified that the letter of May 24, 1984, referred to in the preceding finding, did not accurately reflect Shee Atika's intent, which was to conduct an initial baseline dive or dives prior to the first year of operations and thereafter to conduct dives at the close of each logging season (Shee Atika Exh 2 at 19). He stated that there was no need for this kind of monitoring and that Shee Atika did not intend to propose such a scheme. He indicated these dives were very expensive, costing a minimum of $14,000 (Tr. 154) and that Shee Atika intended to clear up any confusion in this regard with the Alaska DEC. On cross-examination, he readily acknowledged that Shee Atika's May 24 letter proposed two monitoring dives a year (Tr. 149-50). Based on concerns assertedly

expressed by Dr. Kaczynski as to currents moving any bark that accumulated,[28/] he also acknowledged the possibility that bark could become lodged in kelp beds or elsewhere during the winter and off-season months (Tr. 151). Being of the opinion that bark on the bottom would consist of larger and heavier pieces, he indicated, however, that he wouldn't expect much bark movement.

33. Part I B.1.c.2. requires the permittee to submit for approval a monitoring program to map the areas and depths of bark where the deposition has 100% coverage, for those areas outside the area of the ADEC program, and between MHW and 60 feet below the MLLW. As indicated previously, the program is to include a general reconnaisance dive, prior to start of log transfer each season and at the close of each season, to establish any accumulations larger than 1/2 acre in general areas shown in Figure 1. The need for this bark monitoring program will be re-evaluated annually. Additionally, Part I B.1.c.3. requires the permittee to submit for approval of EPA and ADEC, a proposed plan for monitoring the extent of entrainment and deposition of bark in kelp beds outside the mouth of Cube Cove in areas identified in Figure 2. Shee Atika contends that EPA has proposed for monitoring an additional 61 acres within Cube Cove (the area required for monitoring by ADEC is approximately 3.9

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28/ Dr. Kaczynski's actual testimony was that because of current conditions, circulation patterns and tidal flushing of Cube Cove, there would probably be little accumulation, as such, of bark (testimony at 15).

acres) and of kelp beds outside the cove without any evidentiary or scientific support therefor.29/

34. Dr. Kaczynski testified that there was no justification for the additional monitoring proposed by EPA (testimony at 33). He pointed out that the additional monitoring designated by EPA covered all areas of potential bark accumulation within the cove identified by Ott Water Engineers in its worst-case analysis and that accumulation of bark within kelp bed areas was described by Ott as hypothesis only. Ott Water Engineers stated that the primary area of bark accumulation would be limited to the area behind the rubble mound breakwater (approximately 170,000 sq. ft.) and that in other areas, accumulation would be sporadic and would not be expected to be measurable (AR 1076). The supposition that bark might accumulate in kelp beds at the mouth of the cove was based on the thought current conditions within the beds might be reduced (AR 1070). No current data from the kelp beds were available, however, and Ott indicated that kelp impacts cannot be quantified with existing data (AR 1079). Ott also stated that, based on recent studies performed in Chatham Strait, kelp is an annual and that winter storms would likely remove much of the kelp as well as any accumulation of bark within the kelp bed area.

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29/ In denying a motion to strike portions of Dr. Kaczynski's testimony disputing the reasonableness and necessity of additional bark monitoring within the cove and of kelp bed areas at the mouth of the cove, the ALJ ruled that this monitoring was within the scope of Shee Atika's hearing request and the Regional Administrator's decision (Tr. 8). It is clear that Shee Atika objected to this monitoring in comments on the draft permit (AR 1501-02, 1515) and that the Regional Administrator granted its request for an evidentiary hearing on the issue of EPA justifying permit conditions on the basis of its own findings and determinations rather than relying on conditions imposed by other agencies. EPA has sought to justify this additional monitoring, in part, on the basis of the EIS and of a similar provision (AR 1758) in the § 404 permit issued by the COE (EPA Response to Comments, AR 1709-10).

35. Part I A.1.b. of the permit provides that there shall be no discharge of debris from the log sorting and storage yard. Debris is defined as woody material such as bark, twigs, branches, heartwood or sapwood that will not pass through a 2.54 centimeter (1.0 inch) diameter round opening (Id. at 15). Shee Atika has attacked this requirement as arbitrary and unreasonable, asserting that the prohibition should be limited to "significant, intentional" discharges (Request for Evidentiary Hearing). In comments on the draft permit, $CH_2M$ Hill (Dr. Kaczynski) had stated that it was virtually impossible to prevent some spillage of bark or wood debris from any log deck or LTF operation (AR 1514). EPA's response consisted principally of the assertion the "no discharge" requirement was not applicable to the log transfer operation (AR 1712).

36. Defending the "no discharge" prohibition, Mr. Parkin testified that the ground and soil at LTFs is typically disturbed from heavy use of equipment associated with log handling and sorting (U.S. Exh 2 at 6). He pointed out that rainwater and surface runoff can transport soils, abraded wood wastes, petroleum products, and other pollutants into the receiving waters in the form of settleable and suspended solids. He stated that adverse impacts in the water column from suspended and settleable solids are well-documented in the context of runoff from LTFs. Benthic impacts from solids having settled to the bottom were described as physical smothering of flora and fauna, elimination of epifauna, interference with spawning and rearing and increased BOD loadings. On cross-examination, Mr. Parkin agreed that the foregoing testimony related to general impacts and was not addressed to this particular site (Tr. 40). In further testimony, he indicated that because bark and debris would periodically be removed from the log storage and sortyard and because of

the screening and settling basin proposed by Shee Atika (finding 7), Shee Atika should be able to comply with the "no discharge" requirement (Testimony at 22, 23). He further stated that "no discharge of debris" is the simplest and least ambiguous requirement that could be imposed.

37. Dr. Kaczynski described runoff from the sortyard as proposed by Shee Atika as consisting first and foremost of rainwater (Testimony at 20). He testified there would also be some ground bark, wood debris, small amounts of leachates from bark and wood, soil sediments and dissolved organics from soil brought in on logs and log trucks. He further testified that there might be minor deposits of oils and greases from the equipment, which could result in trace amounts of hydrocarbons in the runoff.30/ Based on average annual rainfall of 60 inches in the area and on the assumption that ten percent of the runoff would enter Cube Cove and upon Shee Atika's anticipated log harvest, Dr. Kaczynski performed some calculations as to BOD and COD demand the runoff would contribute to the cove. He calculated the BOD at 0.024 parts per billion per day and the COD at 0.08 parts per billion per day (Id. at 22-24). He described these amounts as undetectable and was of the opinion that there would not be any measurable water quality or biological impact of any kind from log deck runoff. This opinion also applied to Chatham Strait (Id. at 24-26).

38. Part I A.1.c. of the permit provides that the concentration of settleable solids in treated discharges from the log sorting and storage yard shall

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30/ The EIS states that approximately 13 gallons of hydrocarbons per day could be introduced into Cube Cove without violating Alaska Water Quality Standards (AR 911).

not exceed 0.1 ml/l as measured by the standard Imhoff cone test procedure outlined in Method 209F of Standard Methods, 15th Edition. In comments on the draft permit and in its request for an evidentiary hearing, Shee Atika has attacked this requirement as arbitrary and unsupported. Summarized, EPA's response is that runoff from log sorting and storage yards contains soil derived and other pollutants, that these discharges are subject to § 402 of the Act and that this discharge limitation has been imposed in NPDES permits issued by at least one other state (Response to Comments). Mr. Parkin testified that solids are pollutants that can adversely alter both water column and sediment characteristics of the environment (Testimony at 24). He asserted that the 0.1 ml/l settleable solids limitations was established to provide necessary protection by use of a rapid, simple testing procedure and that this requirement has been included in at least one NPDES permit in Region X.31/ On cross-examination, he defended the requirement on the basis of the need to comply with water quality standards (Tr. 65). He acknowledged that Chatham Strait would not be effected "one wit" by settleable solids at the level shown in Exhibit 6 32/ and probably not at twice that level and that 0.01 ml/l was very conservative (Tr. 66, 67).

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31/ Dr. Kaczynski testified that EPA's reliance on Washington State Standards was misplaced in that the Washington limitation was applicable to discharges from wet-deck facilities (Testimony at 28). Although Mr. Parkin asserted that the great majority of log operations in Washington State are dry-decks (Tr. 73), this testimony was refuted by Mr. Snippen, who was experienced with logging operations in Washington and Oregon and qualified as an expert in forest industries management, and who testified that there were few [log] decks in Washington and Oregon, which were not sprinkled (Tr. 153).

32/ Shee Atika Exhibit 6 is a jar containing one liter of water and 0.1 mg of settleable solids. Although the water is clear, the settleable solids are barely visible.

39. In comments on the draft permit, Dr. Kaczynski asserted that the 0.1 ml/l limitation was arbitrary and restrictive, pointing out that the Alaska DEC criterion was based on turbidity as measured in NTUs in the receiving water body, i.e., not to exceed 25 NTUs (AR 1514-15). He also pointed out that the American Fisheries Society has deliberated on this matter in depth and suggested that a receiving water body limit of 100 mg/l of nonfilterable residue (suspended and settleable solids) would adequately protect aquatic and marine life. In his testimony, Dr. Kaczynski reiterated his support for a receiving water body standard, including a mixing zone (Id. at 28, 29). He asserted that 0.1 ml/l settleable solids limitation was overly restrictive and not appropriate for dry-deck runoff and that a more appropriate limitation is 10 mg/l. Dr. Kaczynski also pointed out that the Imhoff procedure is an easy one, but that at such low levels it was not accurate or readily reproducible. Mr. Parkin acknowledged that at such low levels the precision of the Imhoff cone would vary with the effluent and size of the particles (Tr. 76).

40. Part II C.3. of the permit provides that: "The permittee or their assignees shall restore the shoreline to preconstruction features and remove all structures if they relinquish their interest in harvesting timber in the area. Cleanup and removal of all debris, floats, stifflegs, let-down devices, and other structures from the log transfer facility shall be conducted when use thereof is to be permanently terminated." Shee Atika has contended that EPA lacks jurisdiction to require restoration of shoreline and removal of structures. EPA has defended this requirement upon the basis that it is required by the Certificate of Reasonable Assurance issued by the State of Alaska. It is immediately apparent,

however, that the certificate issued by the State[33/] contains the second, but not the first of the quoted sentences from the permit. EPA has not offered or introduced any evidence in support of this additional requirement.[34/] Dr. Kaczynski testified that destruction of the breakwater and curvilinear fill along the Cube Cove shoreline would cause considerable environmental damage (testimony at 33, 34). He explained that such a requirement would, among other adverse impacts, result in destruction of established habitat and expressed the opinion there was no environmental justification therefor. Another basis for his objection, was the very high cost of removing the breakwater.

## C O N C L U S I O N S

1. The log transfer facility proposed by Shee Atika is a point source and logs, bark, etc., discharged to the water are pollutants within the meaning of CWA and the facility is properly subject to regulation under the Act. Accordingly, an NPDES permit is required for such discharges.

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33/ Paragraph (14) of the Certificate of Reasonable Assurance provides:

> (14) Cleanup and removal of all debris, floats, stifflegs, letdown devices, and other structures from the log transfer facility shall be conducted when use thereof is to be permanently terminated. Discontinuance of use by official notice or for the running of five years shall be prima facie evidence of the permanence of termination. This stipulation is intended to assist the reversion of the area to its natural state as expeditiously as possible following discontinuation of use.

34/ Paragraph II j. of the Special Conditions of the § 404 permit issued by the COE provides:

> (j) That the permittee or their assignees shall restore the shoreline to preconstruction configuration and remove all structures if they relinquish their ownership interest in harvesting timber in the area.

(AR at 1759).

2. The regulation as published (40 CFR 122.27) is applicable only to wet-deck log storage facilities and permit conditions purporting to regulate discharges from the log storage and sortyard, a dry-deck facility, are unauthorized and will be deleted.

3. Permit conditions requiring disposal of bark and wood debris at upland areas and prohibiting the deposit of solid waste at or adjacent to the LTF are rationally related to a reduction in the discharge of pollutants to waters of the United States and are authorized by the Act. EPA, however, does not have approval authority over such areas and may not require that bark disposal areas be diked.

4. The permit condition requiring that bark accumulations be removed with a suction dredge is not an "effluent limitation" and thus is beyond EPA's authority to impose under § 402 of the Act.

5. The three feet-per-second log entry speed limitation is not supported by the evidence and will be deleted. The "no splash" requirement is retained.

6. Evidence does not support the requirement for an additional 61 acres of bark monitoring within Cube Cove and for monitoring of kelp beds at the mouth of the cove. These requirements will be deleted.

7. The requirement for scuba dives prior to commencing operations in the spring of each year has not been justified and is retained only because it is included in the State of Alaska's § 401 certification.

8. Evidence does not support the no discharge of debris and 0.1 ml/l settleable solids limitations and these requirements will be deleted.

9. The requirement for restoration of shoreline to preconstruction features was not included in the § 401 certification and EPA has introduced no evidence to support this provision. Accordingly, it will be deleted.

## D I S C U S S I O N

It appears to be well settled that an LTF is a point source[35/] and that logs, bark, etc., discharged into the water as a consequence of operation of the LTF are pollutants[36/] as defined by the Act. See, e.g., United States v. Earth Sciences, Inc., 599 F.2d 368 (10th Cir. 1979) (point source includes any identifiable conveyance from which pollutants might enter waters of the United States and overflows from a reserve sump used in mining operations were point source discharges); Sierra Club v. Abston Construction Company, 620 F.2d 41 (5th Cir. 1980) (surface runoff from rainfall, when collected or channeled by miners in connection with mining activities, constitutes point source pollution); Barcelo v. Brown, 478 F.Supp 646 (D. P.R. 1979) affirmed sub nom Weinberger v. Romero-Barcelo, 456 U.S. 305 (1982) (aircraft from which ordinance was discharged were point sources and ordinance was a pollutant within meaning of Act and such discharges, absent a permit, violated the Act). See also United States v. Kennebec Log-Driving Company, 399 F.Supp 754 (D. Me. 1975), affirmed 530 F.2d 446 (1st Cir. 1976) (settling of water-soaked logs and bark from logs constituted refuse within meaning of Rivers and Harbors Act of 1899). It has been held that the term "pollutant" in the

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35/ Section 502 (14) of the Act defines point source as follows:

> (14) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

36/ "Pollutant" is defined in § 502 (6) thusly:

> (6) The term "pollutant" means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into water.
>
> * * * *.

Clean Water Act was meant to be at least as broad as refuse under the Rivers and Harbors Act (United States v. Hamel, 551 F.2d 107 (6th Cir. 1977) (gasoline held to be a pollutant).

Shee Atika does not seriously dispute the propositions that its proposed LTF is a point source and that logs, bark, etc., discharged to the water as a result of operation of the LTF are or can be pollutants. Instead, it argues that it has fully demonstrated that its operations will not result in degradation of either water quality or the aquatic environment generally and that even under a worst-case scenario, its operations will only be a de minimis source of pollution (Brief and Reply Brief at 3). Shee Atika asserts that the courts, United States v. Chevron Oil Co., 583 F.2d 1357 (5th Cir. 1978)[37/] and EPA (49 FR 38011, 1984) have recognized that Congress did not intend de minimis sources of pollution to be regulated under the NPDES program. The cited Federal Register explains that a conveyance or system of conveyances for collecting and conveying storm water runoff that did not constitute a "storm water discharge" would not be considered a point source upon the ground that the excluded discharges were de minimis sources of pollution which Congress did not intend to regulate under the NPDES program. See 40 CFR 122.26.[38/]

Shee Atika argues that it has demonstrated that discharges from the proposed LTF are either pollution free or, at most, will involve hypothetically a de minimis case of pollution and that NPDES regulation is warranted

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37/ Chevron Oil concerned discharges of oil in "harmful quantities" as determined by the President under § 311(b)(3) of the Act and is not relevant to the NPDES program.

38/ As indicated hereinafter, EPA contends that an additional source of its authority to regulate discharges from the log storage and sortyard is § 122.26(c), providing for case-by-case designations of storm water discharges.

neither as a matter of law or policy (Post-hearing Brief at 4; Reply Brief, dated August 29, 1986, at 3, 4). It is concluded that this is not a correct view of the law. The starting point is § 301(a) which essentially provides that, except in accordance with a permit issued under § 402, the discharge of any pollutant is unlawful. In Natural Resources Defense Council v. Train, 568 F.2d 1369 (D.C. Cir. 1977), it was held that a permit issued under § 402 is the only means by which a discharger may escape the total prohibition of § 301(a). Although the court suggested that the Administrator had the authority to define point and nonpoint sources, it held the Administrator did not have the authority to exempt point sources from the requirements of the Act.39/ See also United States v. Tom-Kat Development, Inc., 614 F.Supp. 613 (D. Alaska 1985) (discharge of a pollutant without a permit is without exception unlawful).40/

It is well settled that a fundamental purpose of the Act was to shift the focus of water pollution control from the quality of the receiving water to technological control of effluent. See Crown Simpson Pulp Company v. Costle, 642 F.2d 323 (9th Cir. 1981) (variances from effluent limitations could not be granted upon the basis of the effects of discharges on receiving water quality), and Weyerhaeuser v. Costle, 590 F.2d 1011 (D.C. Cir. 1978)

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39/ The cited case resulted from EPA's decision to exempt certain uncontrolled storm water discharges, discharges from agricultural and silvicultural operations and from confined animal facilities below a certain size from the requirements of the NPDES program. In the 1977 amendments to the Act, return flows from irrigated agriculture were exempted from the definition of a point source, § 502(14).

40/ This, of course, leaves open the extent of the de minimis sources of pollution, which, according to EPA, Congress did not intend to regulate.

(to consider receiving water quality in setting effluent limitations would be inconsistent with the Act).41/

In view of the foregoing, it is concluded that discharges from the LTF proposed by Shee Atika are subject to regulation under the Act and that a NPDES permit is required for such discharges, notwithstanding the minuscule or non-existent effects of such discharges on the receiving water.

A different conclusion is required with respect to the log storage and sortyard. This is because the regulation (presently 40 CFR 122.27)42/ as

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41/ The one exception in the Act as originally enacted is thermal pollution under § 316. Under the 1977 amendments, receiving water quality may also be considered for POTWs qualifying under § 301(h).

42/ "Silvicultural point sources" subject to the NPDES permit program are defined in § 122.27(b) as follows:

> (a) Permit requirement. Silvicultural point sources, as defined in this section, as point sources subject to the NPDES permit program.
>
> (b) Definitions. (1) "Silvicultural point source" means any discernible, confined and discrete conveyance related to rock crushing, gravel washing, log sorting, or log storage facilities which are operated in connection with silvicultural activities and from which pollutants are discharged into waters of the United States. The term does not include non-point source silvicultural activities such as nursery operations, site preparation, reforestation and subsequent cultural treatment, thinning, prescribed burning, pest and fire control, harvesting operations, surface drainage, or road construction and maintenance from which there is natural runoff.
>
> * * *

"Log sorting and log storage facilities are defined in § 122.27(b)(3) as follows:

> (3) "Log sorting and log storage facilities" means facilities whose discharges result from the holding of unprocessed wood, for example, logs or roundwood with bark or after removal of bark held in self-contained bodies of water (mill ponds or log ponds) or stored on land where water is applied intentionally on the logs (wet decking). (See 40 CFR Part 429, Subpart I, including the effluent limitations guidelines.)

published (41 FR 6281, February 12, 1976) made it clear that NPDES permits were required for silvicultural point sources where the application of water by any person resulted in a discharge of pollutants to navigable waters through a discernible, confined, discrete conveyance.43/ Because the facility proposed by Shee Atika will be "dry-deck," i.e., water will not be intentionally applied to logs in the storage and sortyard, the regulation as

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43/ This is evident from the following language in the preamble (41 FR at 6282):

> * * *
>
> Permits with effluent limitations would be required for discharges from specified silvicultural point sources--rock crushing, gravel washing, log sorting and log storage facilities--where the application or utilization of water by any person results in a discharge of pollutants through a discernible, confined and discrete conveyance into navigable waters.
>
> * * *
>
> Technically, a point source is defined as a "discernible, confined and discrete conveyance, including but not limited to any pipe, ditch [or] channel * * * (§ 502(14) of the FWPCA) and includes all such conveyances. However, a proper interpretation of the FWPCA as explained in the legislative history and supported by the court in NRDC v. Train is that not every "ditch, water bar or culvert" is "means (sic) to be a point source under the Act [FWPCA]" (7 ERC 1881 at 1887). It is evident, therefore, that ditches, pipes and drains that serve only to channel, direct, and convey nonpoint runoff from precipitation are not meant to be subject to the § 402 permit program.
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> * * *
>
> Only those silvicultural activities that, as a result of controlled water use by a person, discharge pollutants through a discernible, confined and discrete conveyance into navigable waters are required to obtain a § 402 pollution discharge permit.
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> * * * *.

While the quoted comments are from the preamble to the regulation as proposed, the preamble to the final regulation stated that "no new requirements are intended by this promulgation" (41 FR 24709-712 at 24711, June 18, 1976).

written does not require an NPDES permit for discharges therefrom. EPA contends that the ditch to be constructed by Shee Atika and the storage and sortyard itself are point sources, that the definition of nonpoint source silvicultural activities in § 122.27(b)(1) does not include the activities proposed by Shee Atika and points out that the language "for example" in § 122.27(b)(3) indicates that the definitional activities therein are not inclusive (Reply Brief at 2-5). EPA goes so far as to assert that the 1976 Federal Register notice is irrelevant. While no issue is or need be taken with the contention that the ditch to be constructed across the rear of the storage and sortyard and perhaps the storage and sortyard itself are point sources, the quotes from the preamble (note 43, supra) establish beyond peradventure that the § 122.27(b)(3) as initially written applied only to wet-deck facilities. As originally promulgated, the cited section contained the language "i.e." meaning "that is." See 40 CFR 125.54(b)(3) (1976). "For example" was substituted for "i.e." in 1980 (40 CFR 122.58 (b)(3)), a change characterized as "minor wording changes" (45 FR 33372, May 19, 1980). Any doubts that § 122.27(b)(3) applied only to wet-deck facilities would seem to be dispelled by the reference to the effluent limitations for the wet storage subcategory (40 CFR Part 429, Subpart I, formerly Subpart J). Moreover, it is significant that effluent limitations have not been promulgated for the dry-deck subcategory.

It is true that the definition of "silvicultural point source" in § 122.27(b)(1) as any discernible, confined and discrete conveyance related to "* * * log sorting or log storage facilities * * *" would, without more, cover the activities proposed by Shee Atika. It is also far from clear that Shee Atika's activities can be fitted within the definition of nonpoint source silvicultural activities in § 122.27(b)(1). EPA, however, while emphasizing "for example" in § 122.27(b)(3), chooses to ignore the words

"such as" in the definition of non-point silvicultural point sources (§ 122.27(b)(1)), which indicate that the examples therein nursery operations, site preparation, reforestation, harvesting operations, etc., from which there is natural runoff are not inclusive. It should be obvious that the definition of silvicultural point sources in § 122.27 (b)(1) insofar as applicable to log sorting or storage facilities must be read in the light of the definition in § 122.27(b)(3). Moreover, it is a well settled principle of statutory and regulatory construction that specific provisions control the general, so that if there is any conflict or ambiguity between §§ 122.27(b)(1) and (b)(3), § 122.27(b)(3), the provision specifically defining log sorting and storage facilities, which are subject to the rule, controls.

EPA has also attempted to justify regulation of the log storage and sortyard on the basis that regulations (40 CFR § 122.26) applicable to storm water runoff apply.44/ This contention is rejected. The Agency,

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44/ Cross-Motion for Summary Determination, dated January 24, 1986, at 13, 14). Section 122.26(b) provides in pertinent part:

> (b) Definitions. (1) "Storm water point source" means a conveyance or system of conveyances (including pipes, conduits, ditches, and channels) primarily used for collecting and conveying storm water runoff and which;
>
> (i) Is located at an urbanized area as designated by the Bureau of the Census according to the criteria in 39 FR 15202 (May 1, 1974); or
>
> (ii) Discharges from lands or facilities used for industrial or commercial activities; or
>
> (iii) Is designated under paragraph (c) of this section. Conveyances that discharge storm water runoff combined with municipal sewage are point sources that must obtain NPDES permits, but are not "storm water point sources."
>
> (2) "Group I storm water discharge" means any "storm water point source" which is:

as we have seen, made a conscious decision when it promulgated the regulation applicable to silvicultural activities (40 CFR § 122.27) to exclude "dry-deck" log sorting and storage facilities such as that proposed by Shee Atika from the scope of the regulation. This exclusion may not be narrowed or abrogated by the application of a subsequently promulgated regulation (49 FR 37988 et seq., September 26, 1984), which is silent as to § 122.27. Moreover, while there is no doubt that the ditch and settling basin to be constructed at the log storage and sortyard fits the first part of the definition of a "storm water point source" as a conveyance or system of conveyances primarily used for collecting and conveying storm water runoff (§ 122.26(b)(1), note 44, supra), it does not appear that the ditch and settling basin can properly be considered within the intent of the second part of the definition, which includes § 122.26(b)(1)(ii) "discharges from lands or facilities used for industrial or commercial activities." Shee Atika's proposed activities are not "industrial" in the usual sense of the term and although prima facie "commercial," the preamble indicates that not all such activities are intended to be included therein. See, e.g.,

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Footnote 44/ continued

> (i) Subject to effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards;
>
> (ii) Designated under paragraph (c) of this section; or
>
> (iii) Located at an industrial plant or in plant associated areas. "Plant associated areas" means industrial plant yards, immediate access roads, drainage ponds, refuse piles, storage piles or areas and material or products loading and unloading areas. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots.
>
> * * * *.

49 FR 38016. "Today the Agency is promulgating a clear definition of storm water point sources as those which are located in urbanized, industrial, commercial areas, or are designated by the Director. * * * In essence, the regulations will consider as point sources all storm water discharges located in urbanized commercial, or industrial areas regardless of the amount or type of pollutants they contain."

Under EPA's apparent view, Shee Atika's proposed discharges constitute a "Group I storm water discharge" within the definition in § 122.27(b)(2). This is not sustainable as the proposed discharges are not subject to "effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards" (§ 122.27(b)(2)(i)); and are not "located at an industrial plant or in plant associated areas" (§ 122.27(b)(2)(iii)). Indeed, EPA appears to have conceded this much for in its "Response to Comments" on the draft permit (AR 1696), it argued that runoff from the log storage and sortyard is subject to regulation on the basis of a "case-by-case designation" allegedly made by the Regional Administrator in accordance with § 122.26(c)(2).45/ The mentioned section requires a determination that the particular storm water discharge is a significant contribution of pollution to waters of the United States considering listed factors. There is, however,

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45/ The cited section provides in pertinent part:

> (c) Case-by-case designation of storm water discharges. The Director may designate a conveyance or system of conveyances primarily used for collecting and conveying storm water runoff as a storm water point source. This designation may be made to the extent allowed or required by EPA promulgated effluent limitations guidelines for point sources in the storm water discharge category or when:
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> * * *
>
> (2) The Director determines that a storm water discharge is a significant contributor of pollution to the waters of the United States. In making this determination the Director shall consider the following factors:

no documentation of such a determination in the record and no satisfactory explanation of the basis for such a determination has been offered.46/ The regulation requires a reasoned determination that a particular discharge is a significant contributor of pollution to waters of the United States based on consideration of specific factors. EPA has not shown that such a determination was made and this purported justification for regulating discharges from the log storage and sortyard must be and is rejected.

EPA appears to be of the belief that if it finds the regulation as published inconvenient, the regulation may be disregarded and the Agency may rely on its authority to issue permits on a case-by-case basis under § 402. The problem with this position is that it conflicts with the settled and long-standing rule that an agency is bound by its own regulations. See e.g., American Broadcasting Co. v. F.C.C., 179 F.2d 437 (D.C. Cir. 1949) (Commission as well as licensees are bound by Commission's standards applicable to the granting or amendment of licenses); and United States v. Nixon, 418 U.S. 683 (1974) (executive bound by regulation while it remains in

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Footnote 45/ continued

(i) The location of the discharge with respect to waters of the United States;

(ii) The size of the discharge;

(iii) The quantity and nature of the pollutants reaching waters of the United States; and

(iv) Other relevant factors.

46/ Responding to a specific question as to the basis of the alleged determination by the Regional Administrator, Mr. Parkin stated that the permit writer felt that if it [the storm water discharge] was unregulated, it could violate water quality standards and have an impact on the environment (Tr. 69). This obviously does not comply with § 122.26(c)(2).

effect). See also Dyniewicz v. United States, 742 F.2d 484 (9th Cir. 1984) and cases cited. Having announced to the world that NPDES permit requirements would only be extended to log sorting and log storage facilities where water is intentionally applied to the logs (wet-decking), such requirements may not be extended to dry-deck facilities such as those proposed by Shee Atika, absent further rulemaking.47/

Shee Atika maintains that EPA has no jurisdiction over upland areas and requests that Part I A.2.c., providing in pertinent part "* * the permittee shall remove the bark with a suction dredge, and dispose of it at an approved upland diked disposal site and I A.2.h. "(T)his material [bark and wood debris removed from the log let-down device] shall be disposed of at an acceptable upland site" be amended to reflect that EPA has no approval authority over these sites. Shee Atika also alleges that EPA has no authority to impose conditions I A.2.f., "(t)he log storage and sortyard and log let-down device shall be operated so that accumulations of bark, wood waste, and other logging debris are contained on the uplands" and I A.2.k., prohibiting the deposit of solid waste at or adjacent to the LTF site. EPA argues that the mentioned conditions are justified, because otherwise pollutants will be discharged to waters of the United States and upland areas are an integral part of the whole operation (Brief at 6-8). It asserts that these operations must be regulated in order to carry out the purposes of the Clean Water Act. Opposing EPA's contentions, Shee Atika cites Exxon v. Train, 554 F.2d 1310, (5th Cir. 1977) (Opposition To Motion For Summary Determination) and maintains that EPA's assertions constitute nothing more than post hoc

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47/ Cf. U.S. Nameplate Company, RCRA (3008) Appeal No. 85-3 (Final Decision, March 31, 1986). (Agency could not rely on background document, which was not published in Federal Register, to support contention wastewater treatment sludge from electroplating operations included sludge from chemical etching).

rationalizations of counsel as there is no evidence to support these requirements (Reply Brief at 9, 10).

Exxon v. Train, supra, involved EPA's authority to regulate disposal of wastes into deep wells, an authority legislative history indicated that Congress specifically withheld, and thus is not controlling here. More to the point is GC Decision No. 40, April 2, 1976, which states that the Administrator is not confined to language imposing only conditions which address the physical discharge and describes the rule thusly: "(s)o long as there is a rational connection between the condition and the assured attainment of effluent limitations, there is statutory authority to impose it." (Id. at 166).

Although it is concluded below that EPA does not have authority to require removal of bark with a suction dredge, there is a rational connection between requiring the log sorting and storage yard and log let-down device to be operated so that accumulations of bark, wood and other logging debris are contained on the uplands and that accumulations of bark and wood debris are disposed of at an acceptable upland site. The same is true for the prohibition on the deposit of solid waste at or adjacent to the LTF site. It is apparent that accumulations of bark and wood debris and the deposit of solid waste at or adjacent to the site could, through tides or heavy rainfall, result in the discharge of such materials to waters of the United States. "An acceptable upland site" in this context does not mean that EPA has approval authority over such sites or may require diking of bark disposal areas, as these matters are considered beyond the scope of conditions reasonably related to a reduction of the discharge of pollutants. It merely means that EPA may prohibit disposal of bark and wood debris in areas where there is a reasonable likelihood of such materials being discharged to waters of the United States.

In GC Decision No. 40, April 2, 1976, cited by Sierra Club-Angoon, the General Counsel ruled that the Administrator's authority under § 402(a)(1), in the absence of promulgated effluent limitations, to issue permits containing such conditions as he determines are necessary to carry out the provisions of this Act was limited to conditions necessary to assured compliance with one or more of the sections listed in § 402(a)(1), that the listed sections contemplated restrictions on quantities, rates and concentrations of chemical, physical, biological and other constituents which are discharged and did not include remedial measures such as the removal of in-place pollutants. Answering the argument that § 301(b)(1)(C) authorizes the imposition of "limitations" necessary to implement water quality standards, the decision holds that a requirement for the removal of in-place pollutants cannot reasonably be characterized as a limitation and that although the Administrator could regulate discharges or, if necessary to prevent violations of water quality standards, prohibit them altogether, he could not, through the vehicle of an NPDES permit, require dredged removal of in-place pollutants. This decision is considered to be sound and is obviously on all fours with the matter at issue here. It is concluded that, although EPA may impose conditions reasonably designed to limit the amount of bark discharged, it may not, in an NPDES permit, require the dredged removal of bark deposits.48/ The provision requiring such removal will be deleted.

Shee Atika says that it fully agrees with the necessity for "nonviolent" entry of log bundles into the water (Reply Brief at 10). While insisting that the three feet-per-second log entry speed limitation is arbitrary and unsupported, Shee Atika has withdrawn its objections to the "no splash" standard

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48/ While a similar provision is included in the § 404 permit issued by the Corps of Engineers, there is no evidence of any determination that the provision is required by a substantial impairment of navigation or anchorage pursuant to § 402(b)(6).

(finding 22). As we have seen, Dr. Kaczynski favored retention of the "no splash" standard as a common sense solution to the problem. Mr. Parkin testified that elimination of splashdown would ensure nonviolent entry and provide an easy, unambiguous measure of compliance (finding 24). Inasmuch as there is no evidence of any correlation between the three feet-per-second log entry speed limitation and the "no splash" requirement, it seems obvious that one or the other of these requirements is redundant (note 19, supra). Moreover, if Mr. Parkin's testimony to the effect that "no splash provides an easy, unambiguous measure of compliance [with nonviolent entry]" is accepted, there is simply no necessity for the three feet-per-second limitation. EPA relies on the Forest Service study to support the proposition that an entry speed of three feet-per-second is achievable by a chain conveyor (finding 20). The mentioned study did indicate that an average velocity of 2.5 feet-per-second was achieved by a chain conveyor at Thorne Bay. It should be noted, however, that average velocity was assumed to equal final velocity (note 20, supra) and that the Forest Service team recognized that its determinations were essentially estimates.49/ It is significant that neither the Forest Service study nor the Log Transfer Facility Siting, Construction, Operation and Monitoring Guidelines (finding 21) recommend or adopt the entry speed included in the permit and that the Statement of Unresolved Issues by the subcommittee which adopted the mentioned guidelines includes log bundle entry speed as such an issue. While it is true that Mr. Snippen was willing to assume that as a technical matter Shee Atika could comply with the three feet-per-second limitation, he also testified that there was a controversy within the engineering community as to whether the limitation was an actual,

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49/ The only meaningful velocity is the velocity as the bundle enters the water and it would seem that this could only accurately be determined by a photo-electric cell or similar instrument, which is not likely to be available at a typical LTF.

verifiable number (findings 23 & 24). On this record, the answer to that question is in the negative. There appears to be merit in Shee Atika's assertion that EPA has imposed the entry speed limitation and other challenged requirements upon the belief that if a requirement is achievable, it may be imposed. The Act, § 301(b)(2), requires application of the "best available technology economically achievable" (BAT) which determination is to be made considering the factors in § 304(b)(2)50/ including the cost of achieving such effluent reduction. While no balancing of benefits versus cost is required at this stage, the Administrator is nevertheless bound by a test of reasonableness. Legislative History Of The Water Pollution Control Act Amendments of 1972 at 170. See also EPA v. National Crushed Stone Association, 449 U.S. 64 (1980) (§ 301(c) variance provision

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50/ The cited section provides in pertinent part:

* * *

> (2)(A) identify, in terms of amounts of constituents and chemical, physical, and biological characteristics of pollutants, the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operation methods, and other alternatives for classes and categories of point sources (other than publicly owned treatment works); and
>
> (B) specify factors to be taken into account in determining the best measures and practices available to comply with subsection (b)(2) of section 301 of this Act to be applicable to any point source (other than publicly owned treatment works) within such categories of classes. Factors relating to the assessment of best available technology shall take into account the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, the cost of achieving such effluent reduction, non-water quality environmental impact (including energy requirements), and such other factors as the Administrator deems appropriate; [and]

* * * *.

applicable only to BAT standards). It is concluded that the evidence does not support the three feet-per-second log bundle entry speed limitation and it will be deleted.

Having concluded that EPA does not have authority to impose a requirement that bark accumulations be removed with a suction dredge, it is only necessary to address Shee Atika's objections to permit conditions requiring bark monitoring beyond those imposed by ADEC within Cube Cove, alleged to be 61 acres, and monitoring of kelp beds at the mouth of the cove. The overwhelming weight of the evidence is that there will be little or no accumulation of bark within the cove. As we have seen, EPA's justification for requiring this additional monitoring was a study, commissioned by the Corps of Engineers, conducted by Ott Water Engineers (finding 28). While agreeing that some long-term accumulation of bark was likely nearshore behind the breakwater, the study indicated the possibility of some bark accumulation beneath stifflegs within the cove and in kelp beds at the mouth of the cove. This study, however, was based on a worst-case analysis and whatever may be the justification for requiring such an analysis in the preparation of environmental impact statements,[51/] there is no justification for basing permit conditions in the absence of promulgated effluent limitations, which are required to consider costs and meet a test of reasonableness, upon such an analysis. Moreover, it should be emphasized that there is no evidence opposing Mr. Snippen's testimony that bark loss estimates by Ott Water Engineers were far too high (finding 29) and that in Chatham Strait kelp is an annual, which along with any accumulations of bark would likely be removed by winter storms (finding 34). Ott also indicated that the primary area of bark accumulation

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51/ The CEQ has proposed to eliminate the requirement for worst-case analyses in the preparation of environmental impact statements in instances where information as to adverse impacts is unavailable or uncertain (40 CFR 1502.22), upon the ground the requirement is contrary to the rule of reason (50 FR 32234, August 9, 1985).

would be behind the rubble mound breakwater and that in other areas, accumulation would be sporadic and was not expected to be measurable. It is concluded that EPA has not justified this additional monitoring. Accordingly, the provisions requiring bark monitoring in Cube Cove beyond that specified by ADEC and for monitoring kelp beds at the mouth of the cove will be deleted.

EPA has advanced three reasons to justify the requirement for scuba dives to monitor bark deposition prior to the commencement of operations each spring: (1) the supposition that currents may have altered bark deposition patterns since the scuba dives conducted after the close of logging operations in the fall, (2) these dives were proposed by Shee Atika and (3) the dives are required by the Certificate of Reasonable Assurance issued by the State of Alaska.

Regarding (1), EPA relies on Mr. Snippen's testimony to the effect currents may serve to alter the location of bark deposits during the winter months (Brief at 13). This testimony, however, was elicited on cross-examination and appears to be based on a misapprehension of Dr. Kaczynski's testimony, which merely listed current conditions as among factors supporting his opinion there would be little or no accumulation of bark in the cove (finding 32). EPA's theories as to bark accumulation are based primarily on the report by Ott Water Engineers and, as we have seen, Mr. Snippen's testimony that bark loss estimates by Ott are far too high has not been rebutted. The overwhelming weight of the evidence supports the conclusion there will be little or no accumulation of bark in the cove and under these circumstances, the necessity for scuba dives to monitor bark accumulation prior to the commencement of operations in the spring, costing an estimated $14,000 (finding 32), has

not been demonstrated. Regarding reason No. 2, even if, as EPA would have it, Mr. Snippen's testimony that Shee Atika intended to propose only a baseline dive prior to the commencement of initial operations is considered disingenuous, this is no reason to hold Shee Atika to a requirement for which no reasonable justification has been presented. Regarding reason No. 3, EPA is required by § 401(d) of the Act to include in permits conditions set forth in a state's certification and, as long as the requirement for scuba dives in the spring is contained in the § 401 certification issued by Alaska, it may not be removed. Shee Atika, however, asks only that, if it is able to convince the State of Alaska the requirement should be removed from the § 401 certification, EPA be willing to delete the requirement from the permit. On this record, this request is reasonable and will be granted.

Because the regulation as published (40 CFR 122.27) applies only to wet-deck facilities, it has been concluded that EPA may not regulate discharges from the log storage and sortyard. While this would seem to end the matter, a brief discussion of the evidence supporting the "no discharge of debris" and "0.1 ml/l settleable solids" limitations, which have been contested by Shee Atika, is in order in the event a different result on the question of EPA's authority is reached on appeal. Mr. Parkin's testimony in support of the "no discharge of debris" prohibition was not related to this site and amounts to this: Shee Atika can comply with this limitation and it is the simplest and least ambiguous measure of compliance that could be imposed (finding 36). As pointed out above, however, the mere fact that a particular limitation may be achievable is not in and of itself a sufficient ground for imposing it. EPA's justification for 0.1 ml/l limitation on settleable solids is that it is necessary to comply

with water quality standards (finding 38). This matter was thoroughly considered in the DEC evidentiary hearing, which resulted in the conclusion that the conditions in the Certificate of Reasonable Assurance, which did not include the mentioned limitation on settleable solids, were adequate to protect water quality (finding 3). EPA's contention the 0.1 ml/l settleable solids limitation is necessary to comply with water quality standards is conclusory as there is no evidence in support thereof. It is concluded that on this record neither the no discharge of debris nor the 0.1 ml/l settleable solids limitations have been justified.52/

As we have seen (finding 40), Part II C.3. of the permit contains a sentence requiring the permittee or its assignees to restore the shoreline to preconstruction features and remove all structures if it relinquishes its interest in harvesting timber in the area. This sentence was not included in the § 401 certification issued by Alaska which provides in part: "Cleanup and removal of all debris, floats, stifflegs, let-down devices and other structures from the log transfer facility shall be conducted when use thereof is to be permanently terminated. * * This stipulation is intended to assist the reversion of the area to its natural

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52/ It is recognized, of course, that § 301(b)(2) requires reasonable further progress toward the goal of eliminating the discharge of all pollutants and that with appropriate evidentiary support the mentioned requirements could be justified on that ground. EPA cites Trustees For Alaska v. EPA, 749 F.2d 549 (9th Cir. 1984) as requiring end-of-pipe effluent limitations. The cited case does hold that § 301(b)(1)(C) of the Act (33 U.S.C. 1311(b)(1)(C)) requires the Administrator to include in permits such effluent limitations as he determines are necessary to achieve state water quality standards. This does not mean, however, that, in the absence of readily translatable or transferable state water quality standard requirements, permit limitations based on the Administrator's judgment may be determined arbitrarily and upheld without regard to evidentiary support in the record. Otherwise, the right to a hearing conferred by § 402 of the Act and regulation, 40 CFR § 124.85, would not be meaningful.

state as expeditiously as possible following discontinuance of use." The first of the quoted sentences is also included in the permit. EPA has not introduced any evidence to support the requirements for restoration of shoreline to preconstruction features and removal of all structures, merely contending without elaboration, that these are required by the Certificate of Reasonable Assurance. At the outset, it should be noted that if EPA lacks authority to require the dredged removal of in-place pollutants, a fortiori would it lack authority to require restoration of shoreline and removal of all structures, except to the extent these are required by the § 401 certification. Although EPA has not specifically so argued, it is recognized that the reference to the removal of "other structures" together with the statement that the purpose of the requirement is to assist the reversion of the area to its natural state in the Certificate of Reasonable Assurance could be construed as requiring restoration of shoreline and removal of the rubble mound breakwater. There is, however, a latin term "noscitur a sociis," a word is known by its associates, and it is concluded that the requirement for cleanup and removal of "all debris, floats, stifflegs, let-down devices and other structures" cannot be stretched to include restoration of shoreline and removal of the rubble mound breakwater. Of course, if the § 401 certification has the meaning attributed to it by EPA, there is no need for the specific requirement for restoration of shoreline and removal of all structures and the sentence in Part II C.3. containing these requirements will be deleted.

## O R D E R [53/]

The permit is modified as follows:

1. The "no discharge of debris" and 0.1 ml/l settleable solids limitations concerning discharges from the log sorting and storage yard, Parts I A.1.b. & c., are deleted.
2. The provision of Part I A.2.b. that log entry speed not exceed three feet-per-second is deleted.
3. The provision of Part I A.2.c. requiring removal of bark deposits from Cube Cove with a suction dredge is deleted.
4. A sentence is added to Parts I A.2.f. & g. providing that "acceptable upland sites" means only that there is no reasonable likelihood of accumulations of bark and log debris being discharged to waters of the United States and that EPA does not have approval authority over such sites.
5. The requirements of Parts I B.1.c.2. & 3. for bark monitoring within Cube Cove beyond that specified by ADEC and in kelp beds at the mouth of the cove are deleted.
6. Part I B.1.c.1. is modified by the addition of a sentence providing: If the State of Alaska removes the requirement for general reconnaisance dives prior to the commence of log transfer operations in the spring, this requirement will be deleted from the permit.

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53/ Unless appealed in accordance with 40 CFR § 124.91 or unless the Administrator elects sua sponte to review the same as therein provided, this decision will become the final decision of the Administrator in accordance with § 124.89.

7. The first sentence of Part II C.3. requiring restoration of shoreline and removal of all structures is deleted.

Dated this 4th day of November 1986.

Spencer T. Nissen
Administrative Law Judge