MINUTES

HARBOR SAFETY COMMITTEE OF THE SAN FRANCISCO BAY REGION

10:00 a.m., Thursday, August 10, 1995 Port of San Francisco, World Trade Center, Room 3100, San Francisco, CA

- 1. The public meeting was called to order by Chair, Arthur Thomas, San Francisco Bar Pilots, at 10:05. The following committee members or alternates were in attendance: James Faber, Port of Richmond; Alexander Krygsman, Port of Stockton; Charles Mitchell, Port of San Francisco; Margot Brown, National Boating Federation; Geoff Landon (alternate for Maurice Croce), Chevron Shipping Co.; Mary McMillan, Westar Marine Services; Marci Glazer, Center for Marine Conservation; Joan Lundstrom, San Francisco Bay Conservation and Development Commission; Rich Smith, (alternate for Dwight Koops), SeaRiver Maritime; Lynn Korwatch (alternate for John Gosling), Matson Navigation Co.; Michael Nerney, Inchcape Shipping Services; Bob Clinton (alternate for Ron Duckhorn), Crowley Maritime; Roger Peters, Member at Large; U. S. Coast Guard representatives, CDR Theodore Mar (MSO) and CDR Dennis Sobeck; U. S. Navy representative Robert Mattson; and OSPR representatives Marian Ashe and Bud Leland. Also in attendance, more than sixty representatives of the interested public.
- 2. T. Hunter, Marine Exchange, confirmed that a quorum was present.
- 3. MINUTES OF PREVIOUS MEETING. MOTION by J. Lundstrom, seconded by J. Faber, "to approve the minutes of 7-5-95." As a correction, G. Landon noted that M. Croce attended the meeting and his name should be added to those present. M. Glazer referred to p. 2, three lines from the bottom of the page, language should read "when <u>astern</u> bollard pull is substituted for <u>ahead</u> bollard pull. Motion amended to include corrections and passed without objection.
- 4. In opening remarks, A. Thomas noted that the product being addressed today has been three years in the making. The work of all committee members, especially those on the Tug Escort Sub-Committee, and the input of countless maritime and community representatives, has resulted in the proposed tug escort guidelines being voted upon. In discussion of these issues, in order to stay on track and moving forward, the Chair will first recognize HSC members and then the public. Members of the public will be asked to hold their comments to three minutes unless they have a prepared statement. This format conforms with the spirit of openness and fairness that has been maintained throughout the work of this committee. It is noted that this meeting has drawn the interest of the Senate Select Committee for Maritime Affairs, chaired by Senator Milton Marks, whose aide Joy Skalbeck is in attendance.
- 5. **COAST GUARD REPORT.** T. Mar, reported for Captain D. Montoro who is on leave. In July, there were 39 reported and investigated pollution incidents. Of these 16 were not spills and one was out of the harbor area in EPA's zone. There were no major or medium spills during the month, nor were there any spills from deep draft commercial vessels. Under the Port State Control (vessel inspection) program 174 foreign flag vessels were targeted in July. 39 were boarded. This resulted in 3 vessels being subjected to control one SOLAS intervention, 1 COTP order and 1 "other". J. Lundstrom asked if the CG has any information on a reported sheen today near the Bay Bridge. T. Mar responded that he has not received a report on such an event.
- 6. CLEARINGHOUSE REPORT, A. Steinbrugge. There were no irregularities reported to OSPR during July. The written report for July and year-to-date is made a part of these minutes.
- 7. **OSPR REPORT,** B. Leland. (1) AB 1742 has passed both houses and gone to the Governor for signature. This legislation extends the immunity for liability protection provided for state workers to members of the HSC. The MX has copies of the bill available. The Chair asked what other provisions were part of the bill. J. Lundstrom noted that, as she reads the language, the Administrator no longer has to recognize comments from the SF HSC. The bill deletes language from SB 2040 which required the Administrator to hold a public hearing and issue findings of fact in the event the Administrator proposed regulations below those recommended by the HSC. (2) AB 1119, which addressed mandatory state pilotage on SF Bay, is now a two year bill.

- 8. PORTS SUB-COMMITTEE, Captain Tom Richards, NOAA. NOAA engineers and technicians are working at Coast Guard Island assembling the bottom meters and current meters to be deployed using USCG platforms during the next phase of the program. Carl Bowler, San Francisco Bar Pilots, noted that, from the Pilots' perspective, the stations in place are being routinely used. (2) Electronic Charts. Questionnaires are available for anyone who has comments or input for the program. C. Bowler added that the SFBP will be using electronic charts on portable units, with electronic charts and gps receivers, soon. J. Faber asked about funding for PORTS. T. Richards responded that Stanley Wilson, Director of NOS, has underwritten the initial two year project. This demo project will serve to demonstrate uses and benefits and then local and/or regional support will be sought.
- 9. D. Sobeck introduced the new VTS XO, Pete Marsh, and Captain Tom Meyers, Washington, D.C., who is in the area in connection with a short range aids to navigation project. The Chair welcomed both gentlemen and noted that T. Meyers has been instrumental in efforts to promote navigational safety, from the smallest recreational to the largest commercial vessel, on national and international waters. R. Peters introduced Port of San Francisco representative, Charlie Mitchell, Chief Wharfinger for the Port. R. Peters will remain on the committee as a member-at-large.
- 10. PLAN REVIEW SUB-COMMITTEE, J. Lundstrom. Almost all sections of the plan review are completed and the plan review will be ready for the September meeting. The plan review will include a number of new recommendations as well as updated information. The draft will be distributed one week before the 9-14-95 HSC meeting. An indication of how useful these updates can be is demonstrated by the USCG section on CALTRANS seismic retrofitting on all bridges. This will allow the coordination of construction schedules. M. Glazer noted that a group has been formed in Washington state, under the auspices of NOAA, known as the Smart Forum.
- 11. TUG ESCORT SUB-COMMITTEE REPORT, R. Peters. R. Peters provided background to review the process to date. In the spring of 1993, the HSC adopted a revised set of permanent guidelines to supersede the emergency regulations which the HSC adopted the prior year. During the State's administrative process, OSPR chose to reject the permanent guidelines on the basis of their lack of scientific basis and justification. To meet these concerns, the HSC instructed the sub-committee to rewrite the guidelines maintaining very visible public participation, a close working relationship with OSPR and developing a science-based standard for regulations. As a result of state funding concerns, industry volunteered to engage a consultant (Glosten) in conjunction with an industry-based Technical Advisory Group, with the TES acting as a policy board. In addition, the state contracted for the services of a peer reviewer. Both reports were completed in the spring of 1994. The first Glosten study addressed dual tanker failure (propulsion and steering). The study assessed the force required to stop a tanker (with dual failure) within a tactical area of performance, which was based upon a 95th percentile of success. After review, the TES determined that the likelihood of a dual failure and the resultant tanker demands, was unreasonable. The TES adopted a single failure standard and directed Glosten to look at a single failure scenario and established three sub-committees (failure probability, waterways characteristics and commercial and navigational implications of demand standards). Glosten recalculated their demands standards based upon a single failure to develop a matching criteria.
- 12. The TES reviewed and adopted a series of recommendations that are contained in the report "Summary of Issues and Recommendations for Amendments to the Tank Vessel Resort Regulations. The TES calendar provides for adoption of regulations by 8-96. Current regulations expire 12-96. The TES has made every effort to ensure compatibility with any federal regulations that may come into effect. The TES has distributed the following documents to the HSC and public mailing list: (1) "Summary of Issues", identifying issues recommended for adoption by the HSC, providing rationale. (2) Report from the Failure Probability Group regarding likelihood of

mechanical failures. (3) Report from Waterways Group reviewing characteristics of various zones in the Bay. (4) Report from Vessels-by-Tier Group showing number of tugs necessary to comply with existing regulations, dual failure and single failure scenarios.

- 13. The findings of the TES and its specific work groups are: (1) Based upon not finding any evidence of dual-failure incidents, a single failure standard has been chosen upon which to base the matching of tankers and tugs. (2) Tanker braking demand was determined to exceed tanker steering demand within a 10 knot speed limit. TES proposes that a default matching matrix table based upon braking demand be adopted. (3) Tanker and tug operators are expected to comply with the regulations and are also required to maintain a reasonable expectation of success and act accordingly. (4) Tanker braking demands measured in kips (1,000 lbs.) at slack water in Zones 1 and 2 are roughly equivalent to the bollard pull values in existing regulation, but expressed in astern bollard pull. With assisting currents and for Zones 4 and 6, higher demands are realized. (5) The existing geographic system of six zones for tug escorting, with attendant requirements was found to be the best way to identify waterway specific requirements. (6) Subject to OSPR approval, tanker operators should be authorized to model their respective fleets to meet commercial demands and individual vessel characteristics. (7) Use of braking force as measured in static bollard pull tends to denigrate the combined steering/stopping abilities of enhanced tug boats, therefore, subject to OSPR approval, tug boat operators should be authorized to model their respective fleets to take into account individual tug characteristics. (8) Additional clarifications and requirements were identified for crews, tankers, the CH, tugs, barges and zones.
- 14. The "Summary of Issues" covers the following: (1) Matching Tugs and Tankers. The matching matrix is designed for use by tankers that are not specifically modeled for repeated transits. The matrix has two demand requirements, one for the main portions of San Francisco Bay and one with higher demands for Carquinez Straits. Demands are shown for slack water as well as two and four knot assisting currents. Braking forces are defined as astern bollard pull for conventional tugs and ahead bollard pull for tractor tugs. No more than a maximum number of three tugs may be used. In the event of an emergency, tankers are exempted from escort rules. The selection of preferred or recommended maneuvers will remain the discretion of the pilot, tank vessel master and escort vessel operator; waterway-specific navigation tactics are not presented. Speed limits for untethered operations are 10 knots in the Bay and 8 knots on the Strait. Tethering is not required. However, tethered operations may be adopted by tanker operators or tug companies after specific evaluation as approved by OSPR. (2) Six Zones. The existing system of six zones is maintained with no escorting requirements for Zones 3 and 5. Tug standby at Zones 3 and 5 is now required. Expansion of Zone 1 to the pilot station was not adopted. (3) Tug Boats. Tug availability for service and on-station status is now required. Station-keeping distance has been reduced. Tug casualties have to be reported to the CH. Equipment standards have been increased. Use of inspection systems and schedules such as those of the American Waterways Organization have been allowed. Record keeping is now required. Bollard pull testing has been further refined and measuring free running speed has been dropped. Line-haul tug definition for barge transits has been clarified. Tug seaworthiness requirements for Zone 1 have been enhanced and are subject to a phasing program. Specific modeling of tugs has been allowed. Bollard pull may now be certified by any authorized classification society. Periodic tug certification schedules have been included. (4) Crew Certification. Crew certification standards have been clarified and company programs will be allowed. OSPR will approve training programs. The number of crewmen on a tug has been clarified at three. Training programs have been defined and emergency drills are not required. (5) Barges. Crew transfers are not required when certain mechanical devices are used. Source of crewmen for barges is from the line haul tug. Fully-redundant tugs in conjunction with double haul barges will not be exempted from regulation. Additional equipment requirements have been named. (6) Tankers. Tankers are required to check in with the CH prior to their movement. Unregulated tankers are required to check in even though they will not be subject to escorting. Pre-escort conferences are required. The adequacy of bits on

tankers for the uses for which they are intended will be required. Written plans will take the form of check lists. double-hull tankers with bow thrusters and fully redundant steering and propulsion machinery are exempt from escorting. Shifting within an anchorage will not require an escort. (7) Clearing House. Verification of matching will be a responsibility of the CH. The CH is expressly authorized to assess and collect charges for its services.

It will be useful for the HSC to understand the context of propulsion and steering failures amongst other risks, such as human failure, inadequate navigational aids, submerged rocks, vessel traffic patterns, sudden shoaling and inaccurate tide and current information. Tug escorting is but one of many tactics available to masters and pilots in bringing a mechanically disabled tanker to a safe status. The added capabilities of these escort regulations are meant to supplement the many options available. Time has not permitted the full-scale sea trial testing of all maneuvers. However, an adequate full-scale sea trial testing was conducted to verify and calibrate the computer model in the simulation of hundreds of maneuvers which are deemed to be adequate to provide enhanced safety on San Francisco Bay.

- 15. The TES requests that the HSC: (1) Accept and adopt the report of the TES and adopt the amendments identified in the Issues and Recommendations Summary and seek their promulgation by OSPR into regulation on an expeditious basis. (2) Assign to a technical piloting committee further review of waterway-specific navigational maneuvers and their possible adoption by the HSC and OSPR. (3) Support MIT's study "Formulation of a Model for Ship Transit Risk" and seek the use of San Francisco Bay as a beta-test site.
- 16. MOTION by R. Peters, seconded by J. Faber that "the HSC accept and adopt the report of the TES as submitted." M. Glazer objected to acceptance of the report as submitted and stated that the TES report and the TES recommendations were adopted by the TES on a split vote of 3-1. She indicated the opinion that the report should indicate that fact. M. Ashe, OSPR, noted that every vote on every issue, along with the supporting documents, are a part of the public record. M. Glazer responded that this fact should be a part of the report which is a summary to the public of the actions and work of the TES. The Chair, A. Thomas, stated that the TES must accept the report from the Chair of the TES; any additions to the report should have been taken up in sub-committee. He added that these minutes will reflect M. Glazer's objection. J. Lundstrom asked, for clarification if the Peters-Faber motion addressed the executive summary only. R. Peters responded that it encompasses all referenced documents. Question called. Motion passed unanimously.
- 17. MOTION by R. Peters, seconded by J. Faber to "adopt the amendments identified in the Issues and Recommendations Summary and seek their promulgation by OSPR into regulation on an expeditious basis." J. Lundstrom suggested the HSC go through the issues and amendments on a section-by-section basis. R. Peters responded that the "Summary of Issues and Recommendations to the Tank Vessel Escort Regulations" dated 8-10-95 identifies the only issues which have received public comment and may be controversial. That document is made a part of these minutes. He suggested that the HSC focus on those issues and turn to the actual makers of the proposed amendments to speak to these issues.
- 18. Alternative Compliance for Tugs. (from TES document 8-10-95, A1). G. Skarich reported that the GGTA reached no clear consensus on the issue at its most recent meeting and will reserve comment until OSPR has regulations out for public comment. She referred to an 8-10-95 letter from Scott Merritt, Foss Maritime, to the HSC. S. Merritt stated that the goal at the end of the rule making process is to ascertain that by submitting alternative braking force, the owner/operator is stating that their escort vessel has the capability to generate the forces necessary to provide a 95th percentile or better solution over the range of the default matrix, starting from the maximum speed

allowed in the zone to be transited. The owner/operator further states that the escort vessel will be operated with all the necessary equipment, personnel and in a condition to enable the vessel to generate those forces. It is important that regulations define the parameters for testing alternative force such that, for testing purposes, the escort tug does not exceed manufacturer's recommendations for safe operation of equipment and systems and safety of the crew. Language proposed in the 8-10-95 letter is the same language agreed to at the February meeting of the TES, with the change from "average braking capability" to "alternative braking force". These recommendations result from work by ARCO and Foss to develop practical parameters for testing. S. Merritt referred to a second letter addressed to the HSC on 8-7-95 which seeks to submit regulatory language to provide control for testing. G. Skarich noted that both letters went to members of the GGTA, however the association by-laws did not provide for time to meet and review the documents. She added that association members would not be able to reach consensus on some of the issues in the 8-7-95 letter. Both letters (Foss, 8-7-95; and Foss, 8-10-95) are made a part of these minutes.

- 19. R. Peters asked for HSC comments on the issue of alternative compliance. R. Clinton noted that the language submitted in the R. Peters' 8-10-95 document only addresses issues in the Foss letter of 8-7-95 and suggested that issues in the Foss 8-10-95 letter should be included. R. Smith agreed that how the ultimate calculations are made is important and added that this goes along with the comments in the letter of 8-9-95 from J. Lundstrom to the HSC, made here a part of these minutes. J. Lundstrom added that, as of now, there is no oversight provided for alternative compliance for tugs. M. Glazer stated that the 95th percentile for success is a burden placed upon tankers. The language being considered confuses tug and tanker responsibilities. S. Merritt responded that for the end product the tug is responsible for providing a number representing tug capability. Tanker operators will take a tug and model or test throughout the range of the default table to submit alternative braking force numbers to demonstrate that a tug is capable of producing forces on specific tankers to give 95% success. R. Peters stated that the TES has made a recommendation based upon the fact that the actual performance of some tugs is not adequately reflected by static bollard pull. He asked if there is any controversy over the language submitted by the TES, the language in either of the two Foss letters (8-7-95 and 8-10-95) or the Lundstrom letter (8-9-95).
- 20. G. Skarich stated that her only objection to language in the Foss 8-7-95 letter is the addition of the word "steering" in paragraph one, since it refers only to tractor tugs. S. Merritt answered that reverse tractors can steer and brake at the same time, stopping a tanker in a smaller performance box.
- 21. MOTION by J. Faber, seconded by J. Lundstrom, to "accept the language of the TES 8-10-95 document, with deletions as noted, and add the respective language from the BCDC letter of 8-9-95 and the Foss letter of 8-10-95." The Chair asked for comments and hearing none called the question. Motion passed unanimously.
- 22. **Table 1.** (from TES document 8-10-95, A1). G. Skarich questioned what matching tug a tanker uses if it falls between lines on the matrix, i.e., does a tanker at 45 go to 40 or 50 to find the appropriate matching tug. The GGTA is assuming the higher, but the language is not clear. R. Peters concurred that the intent was for a match to be for all tankers of the number given or less. This is a clerical matter and there is no controversy. S. Merritt stated that the table goes to 180, but there are vessels at 185, and this should be addressed in the future. R. Peters recommended this be put to the consultant for scientific resolution to construct the next line of the table, to 190. He added that this too is a clerical issue which can be dealt with. The record will reflect that the table of displacements provides an "up to" number.
- 23. Speed Limits. (from TES document 8-10-95, A3). There appears to be a conflict in the language for speed limits. While a speed limit is expressed in language "can't exceed 10 kts.", section A (Issues and Recommendations

Summary); section D specifies no speed limit. R. Peters stated the understanding that speed limits are established in association with the matching matrix, however, tanker operators are allowed to model their vessels and allow for higher speed limits, i.e., 8-10 knots is the highest speed allowed using the matrix. The speed can be greater if modeling gives 95% success. M. Glazer noted that an 8 kts. speed limit is not in the recommendations for Zone 6. R. Peters responded that this was an oversight, the intention was to limit speed to 8 kts. in certain waterways. This is a clerical matter and the 8 kt. limit will be inserted in the proper place for Zones 4 and 6. J. Lundstrom questioned the intent. She referred to TES minutes from 7-16-95, which she interprets to indicate the intention to have a 10 knot speed limit. Where did fleet models get exemption from speed limits? R. Peters responded that the commercial consideration for fleet modeling was speed issues. R. Smith added that any fleet modeling will require speed as a component. A. Thomas added that modeling as reported to OSPR will include all relative factors of a model, including speed, after approved by OSPR it will go to the CH. R. Clinton suggested that perhaps the language in D should not say "exempt from speed limits" but rather indicate that a tanker will not travel at a speed in excess of that at which it was modeled.

- 24. A. Thomas suggested that the record will show that modeled vessels may be exempt from the 8-10 kt. speed limit but modeling will impose an inherent speed limit. MOTION by J. Lundstrom, seconded by R. Peters, to adopt language submitted by A. Thomas for insertion into D, "Speed limits of 8 to 10 kts. refers to vessels conforming to the default matching matrix. Vessels that have been fleet modeled are exempt from the 8 to 10 kts. speed limit and are limited by the speed from fleet modeling as represented to OSPR and the CH." Motion passed.
- 25. Tugs to Standby by in Zones 3 and 5. (from TES document 8-10-95, B2). R. Peters explained that the question is, should tugs standby at both ends of Zones 3 and 5 while a tanker is transiting the zone. The GGTA suggests that one tug standing by at either end of the zone requiring an escort could provide for adequate safety. A. Thomas noted that the language addresses the situation where you move a regulated vessel through zones and expect a different company to provide an escort at the end of an unregulated area. MOTION by R. Peters that "or replace and in the language submitted in B2." G. Landon noted that, if a regulated tanker requires a tug in Zones 2 and 4, the operator would have the tug move along with the tanker and stay with it. Language that requires a tug standing by at the end of an zone that doesn't require escorting does not take this into account. R. Peters amended his MOTION to say that "The regulations should specify that the escort tugs should standby a regulated vessel in Zones 2 or 4 or attend the regulated vessel as it transits Zone 5; with parallel application to other zones." The intent is to have a tug standing by at one end of the zone not requiring an escort tug unless there is a tug attending the vessel. Motion seconded by J. Faber and passed unanimously.
- 26. Escort Vessels Reporting Casualties. (from TES document 8-10-95, C4). The GGTA would like to get away from the tug having to immediately notify the CH during an emergency when the entire crew may have other priorities. The requirement to report a casualty is already covered by the USCG, using form 2692. R. Peters asked how shifting the burden of reporting to the CH would affect the ship and/or pilot. R. Clinton asked why it is important to immediately notify the CH; it is the tanker and pilot who need to know immediately. G. Waugh concurred and T. Hunter confirmed that the CH does not have an immediate need to know. MOTION by R. Peters to "amend section C4 so as to remove the CH from the immediate notification list and additionally continue to require that the towboat operator notify the CH within 72 hours. Motion seconded by M. Brown and passed without objection.
- 27. Bollard Pull Testing Standardization. (from TES document 8-10-95, C10). R. Peters noted that the issue regards testing in other ports being acceptable in San Francisco Bay. The intent is yes, but the language refers to

standards and the GGTA advises that there are no such standards. G. Skarich stated that the ABS monitors tests with rules provided by the CH. A. Thomas added that the CH, OSPR, ABS and other ports could coordinate. M. Glazer stated that it is up to OSPR to develop a single set of testing guidelines. B. Leland responded that OSPR is working on it. It was agreed that the language will stand as written.

- 28. Line-Haul Tugs. (from TES document 8-10-95, C13). The GGTA requests additional language to allow the line-haul tug to become the escort vessel for a barge "if it has been properly relieved of its duties as the primary towing vessel." M. Brown stated that the existing language was proposed by the GGTA and if a barge has already entered the bay, it already has an escort. S. Merritt described a situation where the escort tug might be used to push in the notch of the barge and would then switch with the line-haul tug, relieving it to become the escort tug. MOTION by R. Peters that "the language suggested by the GGTA be adopted with the addition of the words and physically added after properly." Motion seconded by M. Nerney. B. Leland stated that OSPR may require a definition of being properly relieved. Motion passed without objection.
- 29. Training Requirements. (from TES document 8-10-95, D1). GGTA withdrew their request that knowledge of communications systems be added to section D1(e). It was noted that there is no 851.8(c)5 in section D1(e)(2) and the reference will be deleted.
- 30. R. Peters reported that all requests for amendments have been dealt with. The HSC Chair returned to the main motion to "adopt the amendments identified in the Issues and Recommendations Summary and seek their promulgation by OSPR into regulation on an expeditious basis." R. Peters, the maker, amended his motion to say "adopt the amendments identified in the Issues and Recommendations Summary as amended by action today and seek their promulgation by OSPR into regulation on an expeditious basis." R. Smith noted that testing going on in Prince William Sound will provide valuable information to this committee. Providing the ability in the proposed guidelines to model tankers and tugs allows the industry and operators to keep up with technology. J. Lundstrom addressed the consistency with federal regulations issue and asked USCG representatives if the amendments as adopted today are in conformance with anticipated federal regulations. T. Mar responded that he sees no conflict with federal regulations that may be promulgated.
- 31. In speaking to the motion, J. Lundstrom stated that the heart of the regulations is the matching formula and she is troubled in reading Glosten 2. Concern for an unbiased study led to the contracting of a consultant peer reviewer. There was no independent review of Glosten 2. When the guidelines go to OSPR, the Administrator should see if the assumptions in Glosten 2 are such that the study is unbiased. The report was contracted for by a tanker company directly impacted by the regulations. A. Thomas stated his belief that the independent contractor used as peer reviewer was barely satisfactory and that the funds expended were wasted. The direction for Glosten 2 was from the full HSC, not a single tug or tanker company. Biases, if any, are those of the full committee. He agreed that OSPR should review the mechanics of the study, but is concerned that this review not interfere with timely process. B. Leland added that Glosten 2 employs much the same practices as Glosten 1, which was the purpose for peer review.
- 32. The Chair called the question.
- 33. M. Glazer stated that she would speak and vote against the motion and against the heart of the package, which is the matching matrix. The speed limits are good, involvement has been good but she cannot vote for the matrix because it doesn't come close to "best achievable protection". The HSC has bent over backwards to take into account all factors at hand for tankers. The standard only effects braking and not heading.

- 34. The Chair called for a roll call vote. D. Adams (absent); J. Faber (yes); A. Krygsman (yes); R. Peters (yes); J. Gaidsick (absent); M. Brown (yes); G. Landon for M. Croce (yes); M. McMillan (yes); M. Glazer (no); A. Thomas (pass as Chair); J. Lundstrom (yes with reservations as expressed); R. Smith (yes); L. Korwatch for J. Gosling (yes); M. Nerney (yes); G. Lundeberg (absent); R. Clinton (yes); and C. Mitchell (yes). Motion passed.
- 35. MOTION by R. Peters that "the HSC assign to a technical piloting committee further review of waterway-specific navigational maneuvers and their possible adoption by the HSC and OSPR." Motion seconded by J. Lundstrom. R. Smith concurred that the idea is a good one, but noted that it is difficult to put language into regulation specifying maneuvers. Motion passed without objection.
- 36. MOTION by R. Peters that, in order to have a broad understanding of the risks and how to spend money, "the HSC support MIT's study "Formulation of a Model for Ship Transit Risk" and seek the use of San Francisco Bay as a beta-test site." Motion seconded by R. Clinton. R. Smith noted a similar study being conducted in Prince William Sound, funded by the oil companies that move oil there. Motion passes without objection.
- 37. UNFINISHED BUSINESS: None.
- 38. **NEW BUSINESS:** None.
- 39. The Chair thanked the members of the committee for their significant efforts to try to enhance the safety of tanker movement on San Francisco Bay; the state and federal government representatives who attended all HSC meetings for their input; the individuals from the interested public, maritime community and industry for their expertise and input; and the Secretariat for its continued support activities.
- 40. **NEXT MEETING.** The next meeting is scheduled to be held on Thursday, 9-14-95, at 10:0 a.m. in the Port of Richmond to address the Annual Review of the Harbor Safety Plan and amendments to it.
- 41. MOTION to adjourn by M. Brown, seconded by M. Glazer. Meeting adjourned at 12:30 without objection.

Respectfully submitted,

Terry Hunter
Executive Secretary