

568

February 11, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
THE CLEVELAND ELECTRIC)	Docket Nos. 50-440 OL
ILLUMINATING CO. ET AL.)	50-441 OL
)	
(Perry Nuclear Power Plant,)	
Units 1 and 2))	

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MOTION FOR THE APPOINTMENT OF BOARD WITNESS

I. INTRODUCTION

Intervenor Ohio Citizens for Responsible Energy ("OCRE") hereby moves the Licensing Board to appoint as its own consultant and witness on Issue #16 Mr. George Dennis Eley of Ocean Fleets Services. OCRE would call Mr. Eley as its own expert witness but for the paucity of OCRE's funds. It is thus necessary for the Board to call Mr. Eley as its own witness to fulfill its mandate to decide issues based on a full and complete record and to provide OCRE with due process.

II. DISCUSSION

A. OCRE's Need for Expert Witnesses

The Board is obviously aware of the complex and technical nature of the Transamerica Delaval diesel generator issue. No doubt the Board is also aware of the substantial resources Applicants and Staff have expended in studying the TDI engines and components thereof.

8502140118 850211
PDR ADOCK 05000440
PDR

For example, Applicants in their Motion for Summary Disposition of Issue #16 have submitted no less than 4

DS03

affidavits attesting to the purported reliability of the TDI engines based on analyses, tests, or inspections performed by the affiants. Applicants rely not only on the TDI DG Owners Group, which, by Applicants' assessment, has mounted an effort 'spanning over a year's time and drawing upon the input from a variety of high quality technical consultants and involving more than a hundred engineers and technicians' (Motion at 7), but also on an independent engineering consultant, Southwest Research Institute.

Similarly, the NRC Staff has utilized the Pacific Northwest Laboratory to perform technical evaluations of the Owners Group program and analyses.

OCRE, on the other hand, does not have the financial resources to commission its own technical evaluation of the TDI DGs. OCRE barely has enough money to cover the costs of documents and postage needed for participation in this proceeding. So, without the relief requested herein, OCRE will not be able to present affirmative evidence to buttress its claim that the Perry DGs are unreliable.

Applicants of course will have no trouble presenting witnesses defending the reliability of the Perry DGs. Nor will the Staff, which has supported the applicants on this issue in other licensing proceedings. The resultant record will be filled with evidence supporting the claims of Applicants, with

none supporting OCRE's claims.

Since the Licensing Board's decision must be based upon the record (10 CFR 2.760(c), Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Unit 2), ALAB-254, 8 AEC 1184, 1187 (1974)), the Board will have no choice but to rule in Applicants's favor. Appellate review of the Board's decision will be to no avail, as the "substantial evidence" test of 5 USC 706 (2)(E) will have been met. See Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 414, 416 (1971) ("the ultimate standard of review is a narrow one. The court is not empowered to substitute its judgement for that of the agency.").

Thus, due to the impecunious circumstances of the only party which could present a different opinion on the reliability of the Perry diesel generators, this proceeding will become a meaningless charade with a foregone conclusion. Our nation expects more from its legal system.

B. The Witness Sought

OCRE requests that the Board call Mr. George Dennis Eley (and any associates who may also be needed) of Ocean Fleets Services. OCRE has attached its January 18, 1985 letter to Mr. Eley requesting his services as Exhibit 1. Mr. Eley's response is attached as Exhibit 2. Ocean Fleets served as expert consultant and witnesses on TDI DG reliability to intervenor Suffolk County in the Shoreham OL proceeding. The professional

qualifications of Mr. Eley and Mr. Aneesh Bakshi, also of Ocean Fleets, have been attached as Exhibits 3 and 4, respectively.

Ocean Fleets has gained substantial experience with TDI DGs as a result of the Shoreham proceeding, wherein Messrs. Eley and Bakshi testified on diesel engine design, manufacture, and operation, and crankshafts and cylinder blocks. Ocean Fleets will be available to work on this proceeding after the third week of February, according to Mr. Eley's letter. Because of their extensive experience with this issue, Ocean Fleets can probably complete its evaluation of the Perry DGs in accordance with the Board's proposed hearing schedule.

The testimony presented in the Shoreham proceeding by Ocean Fleets consultants revealed serious deficiencies in the analyses of the Owners Group and the NRC Staff. See "Joint Direct Testimony of Dr. Robert N. Anderson, Professor Stanley G. Christensen, G. Dennis Eley, Aneesh Bakshi, Dale G. Bridenbaugh and Richard B. Hubbard Regarding Suffolk County's Emergency Diesel Generator Contentions", dated July 31, 1984. Thus, their participation in this proceeding will provide the full spectrum of expert opinion necessary for a reasoned and fair decision by this Board.

C. OCRE's Inability to Pay for the Witness

As indicated in Mr. Eley's letter, Ocean Fleets charges from \$65 to \$85 per hour for consultancy work, and \$100 per hour for

hearing appearances. This is in addition to any expenses incurred. Exhibit 5 consists of information provided by Mr. Eley concerning time spent and expenses incurred in the Shoreham case. Note that these typify the busiest period of that proceeding. Consultancy time ranged from 201 to 587 hours. Expenses exceeded \$1000 per month.

To get an idea of the minimum costs involved if OCRE were to utilize Ocean Fleets' services, consider using one consultant, at \$65 per hour, for 200 consultancy hours and 16 hearing hours (2 days). Consultancy fees would equal \$13,000; hearing fees, \$1600. Assume expenses are equal to \$750. The total is \$15,350, again at a minimum. This sum far exceeds the value of OCRE's coffers. This sum far exceeds the total amount of funds which OCRE has been able to raise in the last 4 years. In fact, OCRE is unable to pay for even one month's expenses, let alone fees.

Despite OCRE's desire to present the best case possible on Issue #16, OCRE finds it financially impossible to do so. Hence the instant request.

Indeed, OCRE finds itself in the same position as the appellees in United States Marshalls Service v. Means, 724 F2d 762 (8th Cir., 1983), *aff'd* on rehearing 741 F2d 1053 (1984):

The defendants [Means et al.] have no money to bring any witnesses to the trial; the Government has brought and is bringing a number of witnesses to testify; the defendants have no money to pay even the expenses of friendly expert witnesses;

without money, there will be no witnesses; without witnesses, there will be no defense; without a defense, the Government must prevail. 724 F2d at 647.

The court ruled that the government must, in all fairness, pay for Means' witnesses, citing statutory authority. Legal avenues likewise exist in this proceeding to assure that justice will be advanced.

III. WHAT THE LAW REQUIRES

A. Due Process

The Fifth Amendment to the Constitution states that no person shall "be deprived of life, liberty, or property, without due process of law." The licensing of the Perry Nuclear Power Plant is an action threatening to deprive OCRE members of their lives (through catastrophic accidents or by the toxic and carcinogenic nature of routine emissions of ionizing radiation), liberty (the freedom to live in a healthy environment), and property (through contamination and/or confiscation following a catastrophic accident or by the devaluation of property so imperiled and polluted by routine radioactive emissions). This proceeding, held pursuant to Section 189 of the Atomic Energy Act, the Administrative Procedure Act, and the Commission's rules of practice, is the due process mechanism by which OCRE's rights are protected.

The Supreme Court has interpreted due process as being the

opportunity to be heard, at a meaningful time and in a meaningful manner. Armstrong v. Manzo, 380 U.S. 545 (1965). The opportunity to be heard must also be tailored to the capacities and circumstances of those who are to be heard. Goldberg v. Kelly, 397 U.S. 254 (1970).

Compare Union of Concerned Scientists v. NRC, Case No. 82-053, DC Cir, May 25, 1984, (cert. denied ___U.S.___) slip op. at 19:

the Commission is entitled to great freedom in its efforts to structure its proceedings so as to maintain their integrity while assuring meaningful public participation, but one of its goals must to be to assure that there is meaningful public participation. (Emphasis in original.)

It is obviously not meaningful when 2 parties to a proceeding have the resources to present a case but the party with the most to lose is destined to lose because of its financial inability to present evidence. A meaningful opportunity to be heard requires that this proceeding be tailored to the financial capacities and circumstances of OCRE by calling OCRE's prospective witnesses as Board witnesses and paying the costs.

Denial of a party's right to present its evidence and summon the witnesses of its choice is a denial of due process. Union Bag-Camp Paper Corporation v. FTC, 233 F.Supp 660, 666 (S.D.N.Y. 1964). It clearly makes little difference whether this denial stems from the improper action of an adjudicatory tribunal or

from its inaction which preserves an unfair situation such as that herein. The end result is the same.

B. The NRC's Statutory Mandate to Protect the Public

The Nuclear Regulatory Commission's unique function is that of protecting the public health and safety from those hazards associated with the use of nuclear power to generate electricity. Pacific Gas and Electric Co. v. State Energy Resources Conservation & Development Commission, 51 LW 4449, 4453 (April 19, 1983). This Licensing Board also has this responsibility. Compare, e.g., the criteria for issuance of an operating license by the Commission in 10 CFR 50.57(a) with those enumerated in 10 CFR 2.104(c) for consideration by the presiding officer.

It has long been held that administrative agencies are entrusted with the protection of the public, and in so doing must not limit their vision to the horizons of the private parties in the proceeding. Michigan Consolidated Gas Co. v. FPC, 283 F2d 204, 226 (DC Cir. 1960). Rather, the agency's decision must be based on a complete record if the agency is properly to discharge its duty in serving the public interest. Scenic Hudson Preservation Conference v. FPC, 354 F2d 608, 612 (2nd Cir. 1965).

This principle has been best expressed in Isbrandtsen Co. v. United States, 96 F.Supp. 883, 892 (S.D.N.Y. 1951):

[Administrative agencies] are not expected merely to call balls and strikes, or to weigh the evidence submitted by the parties and let the scales tip as they will. The agency does not do its duty when it merely decides upon a poor or nonrepresentative record. As the sole representative of the public, which is a third party in these proceedings, the agency owes the duty to investigate all the pertinent facts, and to see that they are adduced when the parties have not put them in . . . The agency must always act upon the record made, and if that is not sufficient, it should see that the record is supplemented before it acts.

These principles have received wide acceptance in our legal system. See, e.g., the Manual for Administrative Law Judges, Revised Ed. 1982, prepared for the Administrative Conference of the United States by Merritt Ruhlen at 3:

an Administrative Law Judge has a strong affirmative duty not only to try a case fairly and to write a sound decision but to insure that an accurate and complete record is developed (citing Scenic Hudson, supra).

Especially see pp.21-22, which specifically refers to NRC proceedings and the necessity of having a complete record, which may be accomplished either by the Board calling its own witnesses or instructing the parties to adduce additional evidence.

Indeed, the Federal Rules of Evidence have embodied this concept. Rules 614 and 706 specifically empower the courts to call witnesses either *sua sponte* or on the motion of any party. The purpose of these rules is to ensure that "the judge is not imprisoned within the case as made by the parties", and this power has been called "crucial to prevent impairment of the fact-finding process." Means, supra, 741 F2d at 1058.

Thus, it is neither in the public interest nor in accordance with the law for the Board to decide this case on the basis of evidence presented by Staff and Applicants while ignoring contradictory evidence which OCRE would proffer but for its lack of money. Such action "is not fair play for [the Board] to create an injustice, instead of remedying one, by omitting to inform itself and by acting ignorantly when intelligent action is possible." Isbrandtsen, supra (96 F.Supp at 892).

Without the relief requested by OCRE, the scales of justice in this proceeding will tip to the side having the weight of dollars, and not necessarily the weight of truth. Such lack of fairness cannot be tolerated in an administrative agency subject to the provisions of the Administrative Procedure Act. It is also contrary to the NRC's statutory mandate to protect the public interest. For OCRE's participation in this case to be meaningful in aiding the NRC in protecting the public, appointment of the Board witness sought is essential. Compare UCS, supra, "we believe Congress vested in the public, as well as the NRC Staff, a role in assuring safe operation of nuclear power plants." Siip op. at 22.

C. NRC Case Law

It is the law of this agency that, when an intervenor would call an expert witness but for financial lack, the Board should call the witness as its own and pay the appropriate costs.

Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-382, 5 NRC 603, 607 (1977). This is the only remedy consistent with the NRC's "paramount consideration", the search for truth. Ibid. at 608.

This approach has been freely employed. See, e.g., Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-604, 12 NRC 149 (1980) (ACRS consultant testified as Board witnesses at intervenors' request); Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-667, 15 NRC 421 (1981) (ACRS consultant called as Board witness at intervenor's request); Southern California Edison (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-3, 15 NRC 61 (1982) (ACRS consultant appeared as Board witness).

The Board should not construe South Carolina Electric and Gas (Virgil C. Summer Nuclear Station, Unit 1), ALAB-663, 14 NRC 1140 (1981) as a prohibition on calling Board witnesses. What was prohibited in Summer was a Board calling independent witnesses sua sponte without first affording the parties to the proceeding an opportunity to supplement their testimony. In fact, the Appeal ^{Board} expressly distinguished between such sua sponte action and calling a witness which intervenors wanted to have heard.

In ALAB-710, 17 NRC 25 (1983), the Appeal Board affirmed the Summer ALSB's decision, with these comments on the Board witness

question:

licensing boards of course have the authority to call witnesses of their own. This is necessary for the fulfillment of our shared goal of a fully developed record on matters of safety and environmental significance.

The Appeal Board did qualify a Licensing Board's power to call independent witnesses sua sponte, in that the Board first must give the parties to the proceeding every opportunity to clarify or supplement previous testimony and show why it cannot reach an informed decision without independent witnesses. Thus, the Summer decisions are not applicable to this situation in that the witnesses are sought by OCRE.

IV. CONCLUSION

The discussion above clearly demonstrates that the Licensing Board must call Mr. George Dennis Eley of Ocean Fleets Services to serve as a Board witness on diesel generator reliability. Without Mr. Eley's testimony, the Board will have to decide this issue on an incomplete record and in ignorance of the serious flaws in Applicant and Staff evaluations of the Perry DGs. Such an action would be contrary to the due process clause of the Constitution, the NRC's statutory mandate to protect the public interest, and NRC case law.

OCRE is confident that this Board would not take such an improper course.

Respectfully submitted,



Susan L. Hiatt
OCRE Representative
8275 Munson Rd.

January 18, 1985

EXHIBIT 1

Mr. George Dennis Eley
Ocean Fleets Consultancy Service
1501 Grandview Avenue
Midatlantic Corporate Center
Thorofare, NJ 08086

Dear Mr. Eley:

The undersigned represents Ohio Citizens for Responsible Energy ("OCRE"), a public interest intervenor in the operating license proceeding currently before the Nuclear Regulatory Commission's Atomic Safety and Licensing Board for the Perry Nuclear Power Plant near Cleveland, Ohio. The Perry facility is using two emergency diesel generators manufactured by Transamerica Delaval, Inc (DSRV-16 machines rated at 7000 kw) per unit to meet the NRC's requirements for onsite electric power.

OCRE has a contention admitted in the Perry proceeding alleging that the TDI DGs are unreliable. We are interested in your services as a consultant and expert witness to perform analyses of the Perry TDI diesels and to offer testimony in any NRC hearing held on this subject, as well as to assist in prehearing functions such as providing affidavits or assisting in the preparation of cross-examination of utility and NRC Staff witnesses.

Specifically, your analysis would encompass the following areas:

1. review of reports of the TDI Owners Group and their consultant, Failure Analysis Associates, and of the NRC Staff and its consultants, Battelle Pacific Northwest Laboratories, on the design adequacy of various components of the TDI V-16 engine, particularly the piston skirts, cylinder heads, crankshafts, cylinder blocks, push rods, connecting rods, engine base and bearing caps, and turbocharger.
2. review of the manufacturing and installation history of the Perry TDI engines, especially for those components listed above, including other components or practices which could affect the reliability of those components.
3. performance of independent analyses, inspections, or calculations when needed to determine the reliability of the engines or any component thereof.
4. review of the Owners Group "Phase II" or Design Review/Quality Revalidation report for the Perry engines.
5. review of the results of tests (including operational tests) and inspections performed on the Perry engines.

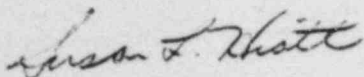
We would like an estimate of the costs of your services as outlined above, including your estimate of the expenses you would incur in performing these services. We would also like an estimate of when you could begin work on this case and when your work would be completed. We of course realize that your first commitment is to the Shoreham proceeding. However, while no

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hearing date has been set for Perry, we suspect that hearings might be held this spring; in addition, we might need your services for prehearing matters, such as providing an affidavit in response to utility or NRC motions for summary disposition.

We look forward to your reply.

Sincerely,



Susan L. Hiatt
OCRE Representative
8275 Munson Rd.
Mentor, OH 44060
(216) 255-3158

Ocean Fleets Services

A Division of Ocean Cory Inc.

P.O. Box 247
1301 Metropolitan Avenue
Thorofare, New Jersey 08086
Telephone: (609) 848-2913
Telex: 6971078(W.U.)

January 29, 1985

Ms. Susan L. Hiatt
OCRE Representative
8275 Munson Road
Mentor, Ohio 44060

EXHIBIT 2

Dear Ms. Hiatt:

We confirm receipt of your letter dated 18th January, 1985, concerning the operating license proceedings currently before the Nuclear Regulatory Commission Atomic Safety and Licensing Board and note that O. C. R. E. has a contention admitted in the Perry proceedings alleging that the Emergency Power T. D. I. D. G.'s are unreliable.

As you are already aware that the area of the work enumerated in your letter is similar in nature to that already performed by our company, I shall restrict this response to estimates of costs incurred in so doing. We would however, request that you submit a copy of the contention together with the grounds on which it was admitted, irrespective of whether our services are retained.

For services as enumerated below, we have a standard daily fee which varies from \$85.00 per hour to \$65.00 per hour dependent upon the Consultant involved.

- Provision of Affidavits
- Assisting with preparation of cross examination
- Review of reports from Owners Group, Failure Analysis Associates, N.R.C. staff and B. P. N. L. on the design adequacy of T. D. I. V16 components
- Review of the manufacturing and installation history of the Perry T. D. I. Diesel engines and possibly the effect on reliability of components other than those listed above
- Performance of independent analysis, calculations and inspections as required
- Review of Owners Group DRQR for Perry
- Review of Operational Tests and Inspections on Perry Engines

Ms. Susan L. Hiatt
OCRE Representative

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With regard to the total costs incurred on a project of this nature, for your information we have submitted a five monthly break down of our work performed for Suffolk County which typifies the busiest period and the extent of coverage needed. In addition, we have submitted typical monthly expense sheets that are billed at cost to our Clients. Please note however that the Shoreham case has so far extended over a ten month period and has involved three of our Consultants each working on a particular assignment.

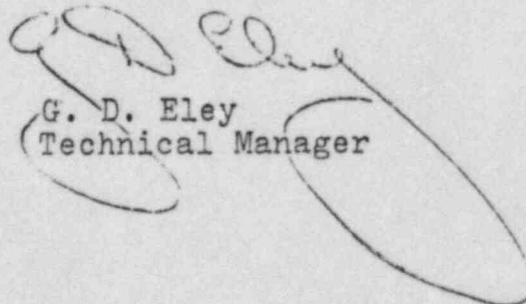
In addition to the above our fees for court appearances, giving testimony and deposition would be \$100 per hour.

Availability for this work would be after the third week in February thereafter the extent of which we would allocate and agree to dependent upon the requirements of the case.

Our general opinion, based on your preliminary letter and our existing knowledge that some of the components are generic, is that the involvement needed to complete the tasks in hand would be proportionately less than that provided on the Shoreham Case.

We trust the enclosed will suffice. Should you require any further information, please do not hesitate to contact us.

Yours sincerely,



G. D. Eley
Technical Manager

CONFIDENTIAL

EXHIBIT 3

RESUME

Name: George Dennis Eley
Address: 117 Bortons Road
Marlton, New Jersey 08053
Home Phone: (609) 768-6699
Business Phone: (609) 848-2913

Licenses and
Certificates: Combined First Class Certificate of Competency
Steamship & Motorship. Higher National
Certificate in Mechanical Engineering.

Society
Memberships: Associate Member of The Institute of Marine
Engineers. Member of the Institute of Port
Engineers. Member of the ASTM Task Group on
Pollution Abatement Equipment (F25.11).

Employment History

1981 - 1983 Marine Consultant with:-
Head Office:- Ocean Transport and Trading PLC.
India Buildings
Water Street
Liverpool, England L20RB
Telephone No. 011-44-51-236-9292
Address of U.S.A. Office:-
Ocean Fleets Consultancy Service
1501 Grandview Avenue
Midatlantic Corporate Center
Thorofare, New Jersey 08086
Telephone Nos. (609) 435-6457 & (609) 848-2913

1969 - 1981: - Third Assistant, 2nd And Chief
Marine Engineer with above Company.

1966 - 1969: - Estimator and Contracts Engineer for British
Shipbuilders at:-

Austin & Pickersgill Limited
Shipbuilders and Installation
Engineers
P.O. Box 38
Southwick
Sunderland
Tyne & Wear, England

Telephone Nos. 011-44-783-57684

1959 - 1966: - Apprentice Fitter & Turner, then Contracts
Engineer with:-

George Clark & N.E.M., LTD.
P.O. Box 8
Northumberland Engine Works
Wallsend, Northumberland, England

Telephone No. 011-44-966-623141

Summary of Work Experience & Accomplishments

As a Marine Consultant with Ocean Transport & Trading, my duties
have included:-

Negotiation and formation of a joint venture with the American
Bureau of Shipping to provide fuel services to the marine
industry.

My responsibilities have been to negotiate with Senior Officers of
ABS and to formulate operational policy. My duties also include
coordination of the various departments and efficient operation of
the business. I have implemented the Data Bank System for the
above business and control the staff so doing. I also act as an
independent consultant on machinery damage investigations and run
seminars for the following establishments on fuel technology.

1.) "Kings Point Merchant Marine Academy" on Professor
Christenson's "Continuing Education on Diesel Technology" given to
chief engineers studying for advanced certification.

2.) Maritime Safety International lecturing to chief and port
engineers on poor quality fuel oil.

3.) Marine Engineers Benefit Association to chief and port
engineers on poor quality fuel oils.

In addition I advise on system design for ships enginerooms and upgrade existing vessel so that they have full operational capability on lower quality fuel. I have worked in this capacity with major American shipping companies and normally negotiate the contracts for so doing with the vice presidents of those respective companies.

Prior to my employment as a Consultant, I was employed by the same company for 12 years as a Marine Engineer in all capacities up to the rank of Chief Engineer. In this capacity my responsibilities were for the efficient operation and maintenance of various diesel engines, boilers, air compressors, refrigeration systems which encompassed a high degree of automation. Coordination with different marine and hull classification societies was also a requirement as was the effective implementation of planned maintenance scheduling.

Before continuing my career at sea, I was employed by British Shipbuilders as a Contracts Engineer. During this period, my responsibilities were to produce ships specifications for newbuildings to a potential owners requirements, and also to handle all ships contract correspondence. It was also my responsibility to estimate the costs of various building projects and submit these costs for negotiation with the owners representatives.

Prior to my employment with British Shipbuilders, I served an Engineering Apprenticeship with George Clark & N.E.M. LTD., a Marine Enginebuilder. On completion of my apprenticeship I continued as a Draughtsman with this same company in the Engine Design Department until I was promoted to Contracts Engineer with duties similar to those held at British Shipbuilders.

RESUME

EXHIBIT 4

ANILKESH BAKSHI
4104 Fox Run Drive,
Plainsboro, N.J. 08536.

Phone (B) 201-343-3335
(H) 609-799-3635

PERSONAL

Age - 30 Yrs., Height - 5'11", Weight - 164 Lbs.

EMPLOYMENT

- 1982 - 1983 MARINE SURVEYOR AND TECHNICAL CONSULTANT
T.J.D. Enterprises, N.Jersey.
National Marine Consultants, N.Jersey.
- 1978 - 1981 CHIEF ENGINEER/PORT ENGINEER.
Arya National Shipping Lines, LONDON, U.K.
- 1977 - 1978 SECOND ENGINEER/ASSISTANT PROJECT ENGINEER.
Kapal Management Pvt.Ltd., SINGAPORE (KEPPEL SHIPYARD)
- 1974 - 1977 THIRD ENGINEER.
Scindia Steam and Navigation Co.Ltd., BOMBAY.
- 1969 - 1973 ENGINEER APPRENTICE
Scindia Shipyard, BOMBAY.

SUMMARY OF WORK EXPERIENCE & ACCOMPLISHMENTS

As marine surveyor and technical consultant, duties include coordinating various machinery repairs and carrying out hull and cargo surveys. As chief engineer/port engineer worked on various diesel engines, boiler, air compression and refrigeration systems encompassing a high degree of automation. Responsible for the operation, maintenance and subsequent reports of all machinery. Monitored all paper work relating to the engine and personnel. Introduced a cost-effective planned maintenance and inventory control system. In view of my strong analytical and professional abilities, promoted as the youngest chief engineer in the company. Shipyard experience includes, incharge of dry-dock repairs and supervision of new construction with an emphasis in the piping design and non-destructive testing departments. Also coordinated with different marine and hull classification societies during plan approval and surveys.

EDUCATION

- 1982 STATE UNIVERSITY OF NEW YORK, MARITIME COLLEGE, N.Y.
M.S. in Marine Transportation Management.
- 1978 SOUTH SHIELDS MARINE & TECHNICAL COLLEGE, U.K.
B.S. in Marine Engineering (Chief Engineer's License)
- 1969 - 1972 MARINE ENGINEERING TECHNICAL COLLEGE, BOMBAY.
- 1968 HIGH SCHOOL, 'C' LEVELS, UNIVERSITY OF CAMBRIDGE, U.K.

WORK EXPERIENCE

1982 - 1983

T.J.D. Enterprises, N.Jersey.
National Marine Consultants, N.Jersey.

Presently working as marine surveyor and technical consultant. Work includes inspection and survey of hull, cargo and machinery. Also interface machinery repairs between ship and shore. Responsibilities also encompass carrying out various feasibility studies for machinery performance monitoring systems.

1977 - 1981

Arya National Shipping Lines, LONDON.
Kapal Management Pte.Ltd., SINGAPORE (KEPPEL SHIPYARD SHIPYARD AND ADMINISTRATIVE EXPERIENCE

Employed as chief engineer and certified for motor vessels of any horse power. Steam generation experience includes operation, maintenance and survey of different low and high pressure boilers and related machinery - some of them being Babcock & Wilcox, Scotch and Cochran type boilers.

The ships worked on were semi to fully automated. I was responsible for the supervision of eleven people in the engine room. All repairs were effected on board, a result of tact and effective dealing with the various union crew.

Repairs normally could be underlined as overhaul of main and auxiliary engine units, air compressors, auxiliary pumps and pumping systems. Also was responsible for the efficient running and maintenance of the air conditioning and freon and ammonia refrigeration plants.

In the shipyard was incharge of complete dry-dock repairs including propeller and tail end shaft removal and inspection. Also supervised construction of mini-bulk carriers. Worked in the piping design and plan approval departments. Coordinated with different classification societies for annual and five yearly surveys. Was authorized to certify machinery for fulfilling insurance requirements for various classification societies.

As port/chief engineer monitored all paper work relating to the operation of the boilers and engines such as oil consumption, indenting spare parts, performance reports, sea voyage and final analysis reports.

REFERENCES

Available on request.

RECEIVED
6/14/83

County of Suffolk, New York - Standard Voucher

SERIAL NUMBER

640761

71 (2-76)

County	Pt	Fpt	Fund No.					
Vendor No.	Trans	Fund	Appropriation	Sub-object	Enc. No.	Enc. Liquidated	Amount Payable	1099
Check and Order No.	<u>EXHIBIT 5</u>							
Item Voucher No.								

Pay to: Name <u>OCEAN FLEETS SERVICES</u>	2 Payee Identification or Social Security No. <u>13-3138464</u>	DO NOT WRITE IN ANY AREA ENCLOSED BY RED LINES.
Address <u>1301 METROPOLITAN AVENUE</u>	3 Payee Reference <u>DOCKET NO. 50-322 0L</u>	
City and State <u>THOROFARE, NEW JERSEY</u> Zip Code <u>08086</u>		

Cash discount % Days. Delivery Terms: Vendor Contact Phone No.

Contract No. Purchase Order No. and Date	Item No.	DESCRIPTION OF MATERIAL/SERVICE If items are too numerous to be incorporated in the block below use form A.C. 71A and carry Total Forward	Quantity
C- S (Contract #)		<u>MARCH 1984</u> CONSULTANCY HOURS	201
PC- (P.O. #)		<u>APRIL 1984</u> CONSULTANCY HOURS	420
DP- (Date)		<u>MAY 1984</u> CONSULTANCY HOURS DEPOSITION HOURS	538 24
(Buyer #)		<u>JUNE 1984</u> CONSULTANCY HOURS DEPOSITION HOURS	518.5 4
(Comm. Code)		<u>JULY 1984</u> CONSULTANCY HOURS	587
Buyer Initial		(SEE ATTACHED TIME LOGS)	

PAYEE CERTIFICATION: I certify that the above bill is just, true and correct; that no part thereof has been paid except that the balance is actually due and owing; that taxes from which the County is exempt are excluded and that I have read familiar with the provisions of Local Law 32-1980 as detailed in the payee instruction section of this voucher.

J. Moore
PAYEE'S SIGNATURE IN INK

GENERAL MANAGER
Title

OCTOBER 10, 1984
Date

OCEAN FLEETS SERVICES
Name of Company

DEPARTMENT CERTIFICATION

HEREBY CERTIFY THAT THE MATERIALS ABOVE SPECIFIED HAVE BEEN RECEIVED BY ME IN GOOD CONDITION WITHOUT SUBSTITUTION, THE SERVICE PROPERLY PERFORMED AND THAT THE QUANTITIES THEREOF HAVE BEEN VERIFIED WITH THE EXCEPTIONS OF DISCREPANCIES NOTED, AND PAYMENT IS APPROVED.

SIGNED _____ DATE _____

COUNTY COMPTROLLER'S PRE-AUDIT

Certificate for Payment of Net Amount	Verified
	Audited

EXHIBIT B

COUNTY OF SUFFOLK

Department of Audit and Control

CONSULTANT'S EXPENSE SUMMARY

G. D. ELEY

NAME OCEAN FLEETS SERVICES		Period Beginning 8/1/84					Period Ending 8/31/84					Authorized Signature <i>J. Malone</i>				
Expenditure Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	24	25	26	27	28	29	7/30	7/31	
Rail or Bus Transportation																
Rental or Auto Allowance																
Fees and Parking Fees					5.45			2.00							2.00	
Car or Limousine																
Meals/Tips	42.00	41.00	94.50		25.00	29.25	4.27							12.18	18.82	
Travel/Tips	93.31	93.31			93.31	43.31									69.71	69.71
Telephone and Telegraph		6.72												185.43	12.29	8.43
Materials or Supplies						94.03								54.12		
Travel																
Supporting Expenses																

Expenditures should be covered by receipted bills or invoices wherever available. Necessary purchases of materials, supplies, equipment or services should be supported by summaries showing vendor, description, unit cost and purpose.

TOTAL REIMBURSABLE EXPENSES:

81,150.14

COUNTY OF SUFFOLK

Department of Audit and Control

CONSULTANT'S EXPENSE SUMMARY

G. D. Eley

NAME OCEAN FLEETS SERVICES

Period Beginning July 1

Period Ending July 31, 84

Authorized Signature

J. Moore

Expenditure Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Rail or Bus Transportation								79.00								
Rental or Mileage Allowance																
Tolls and Parking Fees	18.28															
Taxi or Limousine	14.00							13.00				32.00				
Tips	83.32	35.92						40.85	39.11	12.26	80.00	7.94				
Gratuities/Tips	94.01							105.50	105.50	105.50	105.50					
Phone and Telegraph	14.20							4.32	4.32		4.98					
Materials or Supplies																
Equipment									5.67							
Supporting Expenses								6.10								

Expenditures should be covered by receipted bills or invoices wherever available. Necessary purchases of materials, supplies, equipment or services should be supported by summaries showing vendor, description, unit cost and purpose.

TOTAL REIMBURSABLE EXPENSES:

\$1,011.28

EXHIBIT B

COUNTY OF SUFFOLK

Department of Audit and Control

CONSULTANT'S EXPENSE SUMMARY

G. D. ELEY

Item Name CREAM FLEETS SERVICES Period Beginning 3/1/84 Period Ending 3/31/84 Authorized Signature JANICE

Expenditure Items	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Air, Rail or Bus Transportation					553.52											
Auto Rental or Mileage Allowance																
Tolls and Parking Fees																
Taxi or Limousine					13.00			28.00								
Meals/Tips					33.00	14.00	12.50	17.00								
Lodging/Tips					131.70	131.70	131.70									
Telephone and Telegraph					3.83	5.32										
Materials or Supplies																
Equipment																
Other Supporting Services						8.00										

All expenditures should be covered by receipted bills or invoices wherever possible. Necessary purchases of materials, supplies, equipment or services should be supported by summaries showing vendor, description, unit cost and purpose.

TOTAL REIMBURSABLE EXPENSES:

B 108337

CERTIFICATE OF SERVICE

This is to certify that copies of the foregoing were served by deposit in the U.S. Mail, first class, postage prepaid, this 11th day of February, 1985 to those on the service list below.


Susan L. Hiatt

SERVICE LIST

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Atomic Safety & Licensing Appeal Board Panel
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