members were also an impressive group. It cannot have been easy for them or for any of you to have people watching the operations and inspecting the ship all the time. One of the easiest things to describe to people here is the people we met and dealt with as observers. The skill and dedication all of you bring to your jobs is very impressive. As someone commented after I showed my slides and spoke in Austin last week, my experiences aboard the Vulcanus II have "humanized" the ocean incineration issue.

Thanks again for giving me the opportunity to be an observer. I shall continue to follow the Vulcanus with interest.

Happy holidays!

Sincerely,

Diane B. Sheridan
League of Women Voters of Texas
[redacted]

cc: K. Haubourdin
J. Godefroy

League of Women Voters of Texas Education Fund
1212 Guadalupe, #109 • Austin, Texas 78701 • Tel.512/472-1100

December 7, 1983

To the crew of the Vulcanus II on its November 4, 1983 voyage:

Enclosed is the report I have written about my observations aboard Vulcanus II in early November. I have tried to make it fair and accurate, and I hope that I have done so.

Thank you again to those of you who helped me learn about the incineration process on your ship. It may have been as interesting to spend a week learning about landfills or injection wells, but it would not have been as enjoyable as being on the Vulcanus II. Thank you for your hospitality.

Happy holidays!

Sincerely,

Diane Sheridan

Diane B. Sheridan
Hazardous Waste Director

League of Women Voters of Texas Education Fund
1212 Guadalupe, #109 • Austin, Texas 78701 • Tel.512/472-1100
December 7, 1983

M. Jean-Louis Godefroy
Companie Francaise de Commerce International
[redacted]

Dear M. Godefroy,

The enclosed thank you to Mr. Heinemann for making my trip on the Vulcanus II both educational and enjoyable is not sufficient to let you and Alice and Madame know how very much I appreciated your hospitality.

When my trip was first being planned, I did not want to be met at the airport because I wanted to be able to see some of Paris. When it became clear that Chem Waste wanted me to be met, I rather shamelessly begged for at least a few hours to see the city. I could not miss at least a quick view of all the monuments and buildings that I learned about in history and art classes. Once I arrived, I realized that I could never have seen what I did without the arrangements you all were gracious enough to make. Thank you.

With best wishes for happy holidays!

Sincerely,

Diane Sheridan

Diane B. Sheridan

Wednesday, November 2, 1983

Mark drove me to IAH for my 1:10 flight to New York. On a 747, it was smooth and comfortable. Arrived almost on time and had an hour or so to wait for the flight to Paris. The Paris flight was crowded, with three of us in a side row, making for uncomfortable sleeping. Most people in my cabin were French and seemed to know each other. The flight attendants were adept at identifying the Americans apparently we stick out in a crowd.

I worked on my notebook of questions and feel as if I know well what issues are of concern after my 30-35 conversations this last week. The issues are many and not all can be addressed by a tour. However, I feel that verifying the use of many of the items described on paper will be of value.

After two naps totalling 3 hours sleep, I know fatigue will hit soon. But I want to see a little of Paris first.

We arrived in Paris about 8:30 am. The weather was sunny and 38°, a big difference from the 82° I left at home. I was met by Alice Mallie who works for Mr. Godfroy, CWA's French agent. She had a taxi-chauffeur and we took a tour of Paris till 11:45. It was hard just to pass so many places I'd learned about for years, but it was better to see them

from a car than not at all. Notre Dame was the only place we went inside of. It was beautiful with colors of glass just not made anymore. A mass was in progress with chants & organ music. We also passed most of the other French monuments: Arcs de Triomphe, Prefecture, Notre Dame, Les Invalides, Hotel de Ville, Tuileries, Louvre, Tour Eiffel, Place Vendome, ~~the~~ Bois de Boulogne, etc. Driving is hectic and the air incredibly dirty - a haze hangs over the city and it smells of exhaust. However, it's truly beautiful.

At noon, Alain took me to the train station (Gare St. Lazare) and got me onto the train for Le Havre. At the rest room, I was waiting for her when I suddenly discovered that I was watching men in the men's room, there being a gap in the wall, and the men declined to close their stall doors. Two women worked there, ~~to~~ cashiers for their pay toilets and ~~was~~ I wondered how strange it would be to have a job as an attendant in a men's room.

People are very stylishly dressed, even babies. Pants of strange lengths, tight at the bottom, worn with short boot with spiked short heels.

There was no time to buy anything, so I hope to shop in Le Havre.

I sat on the train in a first class car where you get served a meal (for an extra price). Out of the two choices, I took the tournedos and beginner because I knew what they were. When the tray came, the entree did not look like tournedos we all know and love, But I gamely ate what appeared to be prosciutto stuffed with a salty cheese, trying to get full. The bread + butter were wonderful, so that was okay. Having taken all I could of the strange dish on a stomach empty since dinner the night before, I then discovered that the real entree hadn't yet been served! European meals strike again. I was very tired on the train and dozed off + on the time hoping I wouldn't miss my stop. The scenery was beautiful, a bit like Eastern Pennsylvania with rolling hills, + leaves changing + tidy farms. Of course, many of the homes were ancient and the new ones styled like them.

At Le Havre, I was met by two men from Ocean Combustion Services: Mr. Godefroy, the French agent, and Mr. Verdegaal from Rotterdam. They assured me that Le Havre was an ugly town, having been quickly rebuilt after the war without concern for architectural merit. The theatre in town looks like a large incinerator, strangely enough. They immediately took me to my hotel to sleep till dinner. The Hotel Mercure is nice, fairly American-ish, even with a TV. (At

seems to have only one channel which is a blend of MTV and game shows. Sleep did wonders and now I feel better equipped to face a different world. On the train, there were no women traveling alone in my car and only one English-speaking person. My guide this morning who is half-American and half-Dane, explained that French people really don't like to speak English, whereas other nations do.

11-4-83

Boarded the ship at about 10 am. Its loading was completed earlier than expected. Ship had loaded at a nearby pier then had to move to allow another ship to enter.

The ship sailed about 2 pm. We passed South 44 at the Jogestrol pier where the waste was loaded. (Pictures)

Discussed flags w/ V. V/I under Singapore and V/II Monrovia (U.S. tax advantages). V/II certified by the Dutch + must meet their env. regs.

Took 2½ hrs of ship with V. Having seen part of it in the am, it was helpful to see it again.

Prior to sailing, on board were the crew + the guests for the trip + other pre-sail guests.

Mr. Heinemann – pres. of OCS

Mme. Duclos –

M. Godefroy – French agent

M. Verdegaal – OCS – Rotterdam

M. Auberdin sp. – Chemist for OCS – hired last week

pre-sail guests were 4 French generators who depos of their waste via OCS.

First impressions after touring the ship — advertised as state of the art, & suspect it is. It seems to have ~~be~~ plans for disposing of anything that might be contaminated w/ the possible exception of the incinerator deck which is constantly washed down w/ sea water during operations.

Construction seems sound w/ safety measures including a large list of items I'll list elsewhere. We hear often that the design was based on ten years of experience w/ V/I and has corrected deficiencies in the ship. For this reason, it is important to distinguish between the post Vulcanus design on V/II and the repeated V/I.

V/II is planned to operate in the US and V/I in Europe.

Riding is very smooth. At 10:30 pm we're probably in the Straits of Dover but calm prevails. I'm wearing the Transderm patch but suspect I could do without. It was so smoothly done that we were 10 yds. from the pier before I was realize we were moving.

One incident caused some problems today when Greenpeace brought 3 men and wanted me to share my cabin. I refused, which angered them, and their French rep. had to go home. The US Rep is Steve McAllister and the GB one is Tony Marriner who is to film the operation. Helpful. I am the only woman on a ship with 23 or 24 men. We are kept fairly separate from the crew

by captain's orders. He wishes the ship to sail smoothly and routinely, without accidents or outside descriptions.

We were given a life drill lesson daily within 30 minutes of sailing and warned that we may be having a drill.

For our tour, we wore protective jumpsuit and hard gloves. Due to the fact that the ship was cleaned in port and hasn't burned yet, we did not have to change shoes but were encouraged to do so.

At 10:30 pm, it's time to rest. We sat in the mess room after dinner and discussed pollution and America and other good topics and then watched a film of a German great ship who did testing Sept. 28 under + near the plume.

November 5.

Time passes slowly except during a tour or some other task. The highlight of today's trip was to climb the incinerator and peer over the edge to see it before and after firing. When it fires, it belches black smoke as it starts + at one point sent flame up. In a matter of minutes the upper wall temperature had reached 300°, too hot for us to peer over. So we went up + down several times. Climbing one this + high

Article for Texas VOTER on Vulcanus trip--Sondra, There's lots here, and you can decide where to cut if needed.

Vulcanus is indeed a fitting name for a ship that incinerates hazardous wastes at more than 1200°C, its furnaces lighting the sky and sending forth a trailing white plume. As the League's hazardous waste director, I accompanied the Vulcanus II on a routine voyage in the North Sea last November. During the six day trip, I received an extensive education in the ship's design and operations and was motivated to increase my understanding of ocean incineration in general.

Ocean incineration is a technology to destroy liquid organic waste. It has been used for twelve years in Europe and on several occasions since 1973 in the Gulf of Mexico. It is a type of incineration, or thermal treatment, and one of the three main technologies currently available to dispose of hazardous wastes. Incineration differs from the more commonly used methods of landfilling and deep well injection in that it destroys rather than stores waste. Incinerators can burn both liquids and solids, but those on ships burn only liquids. Several Texas industries have on-site incinerators, and a commercial facility operates in Deer Park. Both land-based and ocean incinerators usually destroy chlorinated hydrocarbon wastes like pesticides and PCB's, which persist in the environment and are therefore inappropriate for landfill disposal.

Ocean incineration presents some unique considerations, however, and it also falls prey to the fear that all disposal is bad. It has become especially controversial since Chemical Waste Management applied for permits to operate the Vulcanus I

that with the sea below was scary at first, but not so bad the other times. I took a few pictures + had Steve take some since he is tall and could lean over more safely than I. Sharing pictures would be nice and I hope to get Tony to make me a video tape of his film.

This trip is interesting as a cultural experience as well as a technological one. The 5 guests include 2 USA, 1 GB, 1 Holland, & 1 Belgian. The Greenpeace people remind me of the late 60's radicals and may be that age. Hearing tales of their sailing to Russia to stop whalehunting, taking a peace mission to Leningrad, being mocked by the Soviet police and chased by the Soviet is so different from the one I know! One of their newest causes is the elimination of flush toilets. We agreed that Greenpeace can start pushing the idea in 1983 and the UK will come out with pro/con papers in 2000. They are actually very pleasant.

Much free time is spent discussing waste technologies and how various govts manage waste. Most Eur. countries export to England or East Germany both of whom want the foreign trade. The Dutch attitude probably prevail: if you do it in our country, do it right. But once it goes over the border, we no longer have responsibility.

and Vulcanus II in the Gulf of Mexico incineration site, burning mixed chlorinated hydrocarbons, including some PCB's.

The reasons for the controversy and the concerns people voice are many and varied. Some object to the lack of scrubbers to cleanse the emissions, a requirement in land-based but not ocean incinerators. Ocean incinerators do not scrub their hydrogen chloride emissions on the theory that the ocean's basic environment can buffer the acidic emissions. Others feel that scrubbers produce sludge that must be landfilled, balancing the risks. Some are concerned that the .01% of the waste that is not destroyed will in time accumulate to an amount unacceptable if we want good water quality for the gulf. Others believe the small amount undestroyed must be balanced against the large amounts undestroyed by land disposal methods. Some believe that testing to determine the gulf's baseline water quality is inadequate. Others believe we know more about ocean incineration than any other disposal method. Some believe the test burns produced inadequate analyses of the effects on air and water quality. Others believe the experiences of the ship in Europe prove that the environmental effects are minimal. Some fear that no acceptable level of contamination has been set for the gulf. Others feel the gulf has endured ocean dumping in the past and shown its capacity to survive. Some believe that port facilities present an unacceptble risk to those who live [redacted] where wastes will be transported and stored on shore. Some fear transporting the wastes to the burn site, with the risk of collision or accident in bad weather. Others think we already have ships carrying equally damaging products on our shipping lanes. Some fear what a collision would do to our shrimping and fishing industries, since the wastes

handled often bioaccumulate. They are unsure how damages would be assessed, and liability established, and how successful claims would be made against the shipowner's insurance. Some fear that mere public perception of contamination in the gulf will injure the shrimping, fishing, and tourism industries. Some are concerned that monitoring and enforcement will be difficult at sea. Others feel the shipriders EPA will have on board and the independent testing they can require will supply adequate enforcement of regulations. Some are concerned that the state has so little role to play in a technology that could impact it. Some do not believe the EPA should determine to grant permits until it writes regulations specific to ocean incineration, as Congress said it should do some years ago. Others believe the ocean dumping regulations based on international practices provide adequate protection as well as authority to grant a permit. Some fear hazardous wastes and want us to stop producing them and save what we have till better technology emerges. Others believe we'll have waste to dispose, even if we reduce and recycle to the maximum. They believe storage presents risks also. In summary, some believe that ocean incineration produces unacceptable risks to human health and the environment. Others believe the technology is viable if not perfect.

The League's position on ocean incineration is that we don't have a position. Therefore, our role is educational. While we have supported incineration as a higher technology preferable to land disposal, we don't have any national agreement on the use of ocean incineration. The educator's role is a necessary one in any controversy, however, and sharing our research should help others make informed judgments about

permits and regulations. For that reason, the League accepted the invitation of Chemical Waste Management to send me to the North Sea for what was not only an educational experience but also a unique adventure.

I boarded the Vulcanus II at LeHavre after flying from Houston to New York to Paris and traveling by train to the port on France's northern coast. I had seen a photograph of the 300' long ship but had not been able to imagine what it would be like to go to sea on a working vessel. My knowledge of ships was limited to rowboats and a few trips on sailboats, hardly a preparation for a floating hazardous waste management facility. I was relieve to see the ship gleaming in the morning sun and had only slight qualms as to why I was going to the North Sea instead of the Safeway on a Friday morning.

Two other observers were also on board, both from Greenpeace, the international environmental organization known for its civil disobedience actions such as blockading whaling ships from leaving port. Their U.S. action organizer, from Boston, and their filmmaker, from London, and I had some humorous conversations contrasting our organizations' approaches to resolving environmental problems. (We agreed that all methods serve the cause!) Accompanying us as tour guide was the Dutch-born Chief of European Operations of Ocean Combustion Services, the Chem Waste subsidiary that operates the Vulcanus ships. With him was their newly-hired chemist, from Belgium.

The crew numbered eighteen or nineteen and were of many nationalities. All spoke some English, and I regretted daily that I did not speak German or Dutch, the major languages spoken. Our captain was German and the navigational crew Dutch. The incineration crew was primarily German, and the seamen

mostly Spanish-speaking. All were politely friendly, and getting the crew to feel comfortable around us was a challenge. Having someone watch you do your job, taking notes at times, could not have been enjoyable for them. As the only woman on the ship, probably ever, I was pleased to know I'd passed the acceptance test by the end of the trip, when I received an invitation to celebrate the return to port with the crew.

Accommodations were spartan but comfortable as the ship is only a year old. I slept in a passenger cabin in the bowels of the ship that will carry the EPA shipriders who will monitor the ship's compliance with regulations on each U.S. cruise. The ship is nicely decorated, if you like Chem Waste maroon and buff. I had a bunk, bench, table, and bookcase, and I shared a large bathroom with the Greenpeace men. Meals were communal, with the five guests eating at set hours that overlapped the crew's slightly. The accommodations are at the fore end of the ship and topped by the bridge, skirted by a walkway where I walked for exercise. There is also a conference room where we could work above deck, a laundry, and an exercise room and sauna. I wasn't liberated enough to share the sauna with presumably unrobed men, but I did my part to lose the American vs. British table tennis tournament one night.

The remainder of the ship is called the contaminated area. Protective clothing must be worn there, and unnecessary visits are prohibited except to observers who can go anywhere as long as they obey safety regulations. We were issued unattractive heavy dayglo orange coveralls and workgloves. I had been forewarned to bring disposable shoes to be kept in a change locker and used only in the contaminated area. I now presume my old jogging shoes are up in smoke somewhere in the Netherlands,

where drums of rags and coveralls are sent for land disposal.

A typical day on the ship began with 8:00 a.m. breakfast and conversation with the incinerator crew when they came off their twelve hour shift. The German cook fed us so well I couldn't handle three meals a day. Coffee breaks were at set hours, but fruit, cookies, and beverages were always available in the mess. Thanks to mostly calm seas and seasickness patches, I was never ill but instead grew fat from good food and little exercise.

Part of each morning was spent looking around the ship, then meeting with management to ask questions. I'd accumulated thirty-five looseleaf pages of questions before I left. Some were my own and many came from spending several days on the phone to thirty-five people seeking advice on being a good observer. To get accurate information, I asked and reasked questions of the same and different people, knowing my report would not be submitted for company review. The more than fifty written pages of answers were turned into a report sent to local League presidents in December and available for purchase from the state office.

There were many things to see on the ship. We received an extensive tour upon leaving port. It revealed everything from the radar systems to the innards of an incinerator, from the type of engines to where the cook stored his potatoes. The only experience of the trip that truly scared me was climbing an incinerator stack--up a narrow ladder next to the edge of the ship at 13 knots, through a trap door to balance on a pipe in order to see into the bottle-shaped incinerator. Had I not believed my cowardice would have been attributed to my gender, I might never have made the climb.

As observers, we had free rein of the ship and as much free time as we chose. After dinner came movie time with the other guests and the braver crew members who would associate with upper management and environmental extremists. I discreetly vanished before the second feature was chosen as it was usually a videocasette labeled "Pikante" or worse. Wandering the ship at night not only gave us time to see if operation standards relaxed afterhours (they didn't) but also provided needed exercise to help make one tired. Spare time was also spent reading volumes of ocean incineration materials I'd carted along in my suitcase. During the days when waste was being incinerated, most of my spare moments were spent staring at the glow and plume from the incinerator stacks, a mesmerizing experience. The weather was unusually warm (40°), so it was pleasant to be outside tracking the plume as it fell into the ocean. Technicolor flames lit the sky briefly when waste was first fed to the incinerator, and brief flames shot out when feed was adjusted and caloric values changed. Our voyage carried an unusual cargo at government request, so we saw more color in the plume and more adjustment problems than usual. While gazing at the plume in the wee hours of one morning, we saw a Russian fishing vessel ignore the ship's warning and sail through the [redacted] plume, an experience to be avoided as the HCl causes sore throats and eyes and breathing problems. As I stood and wondered how someone could be so foolish, the ship circled us and sailed under the plume again, [redacted] obviously intentionally.

The time I spent on the ship was busy but peaceful, not lonely but with time to be alone without benefit of telephone, mail, news, and chores. The quietude took some getting used

to, but in the end I found being a sailor an attractive career. My feelings were mixed when the unusual waste damaged the analysis equipment and caused us to return to port in Antwerp four or five days early. I regretted that my opportunities to see the ship in action were being curtailed despite the fact that it gave me time to see Belgium before I flew home.

Can you really learn anything useful by traveling on a ship? I've been asked that question a lot and emphatically answer "yes." Exploring, looking at architectural designs, and asking questions teaches a lot about the ship's design. The experiences of ten years of operating Vulcanus I determined the design of the German-built Vulcanus II as much as Dutch regulations did. Many features minimize the risk of collision and resulting cargo leaks including double bottom and hull, void spaces around storage tanks, firewalls, and a variety of navigational equipment. Dozens of features are designed to catch or curtail leaks or spills from the time waste is loaded till it is burned. They are as simple as shields over the loading valves and as complex as radar measurement of the quantity of waste in each tank. Not all such features are specified in regulations, and people may wish to decide if they should be since another company, At Sea Incineration, is building two incinerator ships with governement assistance, and a third set of ships has been proposed by a shipping company.

A great deal can also be learned about the ship's operations by watching the crew at work. I spent many hours in the control room watching the engineers regulate temperature, airflow, and waste feed to be sure the waste was burned xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx above the regulated tem-

perature limits. Though I cannot judge the adequacy of the Dutch government's combustion and destruction efficiency formulas, I could watch the analysis results reveal that the ship was incinerating according to formula.

Assessing the skill of the crew is perhaps the most nebulous experience to describe. The crew impressed me as well-trained, hardworking, and cognizant of waste issues. The engineers were especially interested in doing a good job, and their attitudes were good despite the difficulties caused by the problem waste. Should the permits be granted, the Vulcanus II with most of the crew we met would come to America, something they are anxious to do.

Traveling on an incinerator ship cannot resolve all of the dilemmas that surround ocean incineration, but it was in intensely educational experience. By my articles, report, slide show, and speeches, I'm trying to share what I learned. The adventure, however, is more difficult to describe--but an experience I'll never forget.

Vulcanus--when I watched the incandescent glow and white plume belch forth from the stacks of this hazardous waste incinerator ship, I realized how appropriate a name it is. As the Hazardous Waste Director of the League of Women Voters of Texas, I accompanied the Vulcanus II on a routine burn of mixed chlorinated hydrocarbons in the North Sea in early November. Two Greenpeace representatives, from Boston and London, also observed. While watching the incineration process in person does not address all the complexities of the ocean incineration issue, it does provide an education in the ship's design and operations. Since the League has no action position on this technology, but we are helping to provide information on this controversial subject.

The Vulcanus I and II are operated by Ocean Combustion Service BV, a Dutch firm founded in 1968 and purchased by Chemical Waste Management in 1980. OCS-CWM have applied for three-year permits to incinerate at the Gulf of Mexico incineration site. If granted, the Vulcanus II, built in Germany in 1982, will come to America with the crew we met.

The Vulcanus II includes many features to minimize the risk of damage to the ship and the environment. Its double hull, firewalls, and void spaces around cargo tanks make it possible to sustain collision without necessarily losing all the cargo. Potential leaks or spills can often be captured and routed to a cargo tank; leaks in the incinerator room go to an oil separator. Ocean incineration permits set controls on air emissions by limiting what waste is accepted. These vessels do not use scrubbers on the theory that the HCl and

trace contaminants emitted will fall into the sea shortly after leaving the stack to be buffered by the ocean. Formulas devised by the Dutch government determine combustion efficiency and destruction efficiency. Sampling on a routine trip is automatic and limited to measuring CO, CO_2, O_2, and temperature. Test results are fed to the ship's computer and, independently, to the Dutch government's sealed computer. Reading the computer printout revealed that the combustion efficiency exceeded regulatory requirements at the time waste was first fed.

Waste feed begins automatically when a certain temperature is reached by burning fuel initially. Engineers are skilled at determining which level of which tank to feed, feed rate, and compressed air delivery. However, part of the waste on our voyage was nontypical and being carried at government request. It apparently damaged the analyzer, making it impossible to verify combustion efficiency. The ship reported the breakdown to the Dutch regulatory authority and was sent back to port early.

The 18-19 crew members are German, Dutch, or Spanish primarily, and all speak at least some English. Various safety measures exist to minimize the risk of exposure to waste and emissions. Many were helpful in explaining the ship's work to us and aware of hazardous waste issues.

The North Sea site is within Dutch waters. The ship has many navigational aids. It sails into the wind to keep the plume behind it. Fishing vessels sometimes come nearby. Despite being warned to stay away, a Russian vessel entered the

plume, circled the ship, and sailed through the plume again on our trip.

For some, ocean incineration presents an unacceptable risk to human health and the environment. For others, it is a viable alternative to landfill or injection well disposal of wastes that are often persistent, mobile, and toxic. For all of us, it is a current issue worthy of investigation.

I hope my observations will be of value to those seeking to judge the effectiveness and usefulness of this technology and the safeguards provided by permits and regulations. A publication describing my experiences in more detail is available from the LWV-Texas, 1212 Guadalupe #109, Austin 78701 for $2.00, plus tax if applicable. I also have a speech and slide presentation. For more information, contact the League at 512/472-1100 or me at 713/334-5253.

Anlage 3 b

INCINERATION JOURNAL AT "SUN FAN" Page 0006
SKIP NO :.....FROM :.....TO :.....

TU 08.03.83 01:00	SAT POSITION:	ON GURATOR PP. 1	OFF CARGO TK. 1 P
	54:21.36 N	OFF GURATOR PP. 2	OFF CARGO TK. 1 S
	03:45.24 E	OFF GURATOR PP. 3	ON CARGO TK. 2 P
		OFF GURATOR PP. 4	OFF CARGO TK. 2 S
	WIND: 080 DEG	ON GURATOR PP. 5	OFF CARGO TK. 3 P
	14.8Kn, BFT 04	OFF GURATOR PP. 6	ON CARGO TK. 3 S
			OFF CARGO TK. 4 P
	ON INC.ROOM VENT	OFF WATER INJ.PP.	OFF CARGO TK. 4 S

TU 08.03.83 01:00 INCINERATOR 2 STP
ON COMAIR BLOWER FLOW1: 27750 m3/h FLOW2: 27937 m3/h FLOW3: 27300 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INC OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INC ON QUTY-CON PPP. FLOW: 10.36 ml/h

TEMP.UPP.1	1110 DEG C (ALM< 0900)	SHELLTEMP.1	133 DEG C (ALM> 200)
TEMP.MID.1	1316 DEG C (ALM< 1100)	SHELLTEMP.2	104 DEG C (ALM> 200)
TEMP.MID.2	1284 DEG C (ALM< 1100)	SHELLTEMP.3	117 DEG C (ALM> 200)
TEMP.MID.3	1318 DEG C (ALM< 1100)	CO	: 0.0001 % (ALM>0.005%)
TEMP.THR.1	1044 DEG C (ALM> 1350)	CO2	:10.12 % (ALM> 15%)
TEMP.THR.2	1057 DEG C (ALM> 1350)	O2	:09.37 % (ALM< 03%)
TEMP.THR.3	1022 DEG C (ALM> 1350)	COMB.EFF.:	99.9988 % (<99.900025)

TU 08.03.83 01:05 INCINERATOR 3 AFT
ON COMAIR BLOWER FLOW1: 25837 m3/h FLOW2: 25275 m3/h FLOW3: 25725 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INC OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INC ON QUTY-CON PPP. FLOW: 11.91 ml/h

TEMP.UPP.1	1058 DEG C (ALM< 0900)	SHELLTEMP.1	131 DEG C (ALM> 200)
TEMP.MID.1	1314 DEG C (ALM< 1100)	SHELLTEMP.2	103 DEG C (ALM> 200)
TEMP.MID.2	1282 DEG C (ALM< 1100)	SHELLTEMP.3	132 DEG C (ALM> 200)
TEMP.MID.3	1286 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0992 DEG C (ALM> 1350)	CO2	:07.82 % (ALM> 15%)
TEMP.THR.2	0967 DEG C (ALM> 1350)	O2	:11.81 % (ALM< 03%)
TEMP.THR.3	1132 DEG C (ALM> 1350)	COMB.EFF.:	00.0001 % (<99.900025)

TU 08.03.83 01:0A ON CARGO TK. 3 REMARKS:
TU 08.03.83 01:09 OFF CARGO TK. 7 REMARKS:
TU 08.03.83 01:10 INCINERATOR 1 PRI
ON COMAIR BLOWER FLOW1: 28050 m3/h FLOW2: 27750 m3/h FLOW3: 27412 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INC OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INC ON QUTY-CON PPP. FLOW: 09.46 ml/h

TEMP.UPP.1	1084 DEG C (ALM< 0900)	SHELLTEMP.1	117 DEG C (ALM> 200)
TEMP.MID.1	1212 DEG C (ALM< 1100)	SHELLTEMP.2	140 DEG C (ALM> 200)
TEMP.MID.2	1204 DEG C (ALM< 1100)	SHELLTEMP.3	108 DEG C (ALM> 200)
TEMP.MID.3	1176 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0965 DEG C (ALM> 1350)	CO2	:09.34 % (ALM> 15%)
TEMP.THR.2	1120 DEG C (ALM> 1350)	O2	:10.21 % (ALM< 03%)
TEMP.THR.3	1026 DEG C (ALM> 1350)	COMB.EFF.:	00.0001 % (<99.900025)

TU 08.03.83 01:12 ON BURNER 8 REMARKS:
TU 08.03.83 01:12 ON BURNER 7 REMARKS:
TU 08.03.83 01:13 ON CONTR. FEED PUMP 3 REMARKS:
TU 08.03.83 01:13 ON BURNER 9 REMARKS:
TU 08.03.83 01:13 ON CHEMICALS INC. 7 REMARKS:

PAGE 0007

TU 08.03.83 01:13 ON CHEMICALS INC. 8 REMARKS:
TU 08.03.83 01:13 ON CHEMICALS INC. 9 REMARKS:
TU 08.03.83 01:13 OFF BURNER 9 REMARKS:
TU 08.03.83 01:13 ON CU INC. 2 REMARKS:
TU 08.03.83 01:14 OFF BURNER 7 REMARKS:
TU 08.03.83 01:14 OFF CONTR. FEED PUMP 3 REMARKS:
TU 08.03.83 01:14 ON CONTR. FEED PUMP 3 REMARKS:
TU 08.03.83 01:14 ON TEMP.MID.7 REMARKS:
TU 08.03.83 01:14 ON BURNER 7 REMARKS:
TU 08.03.83 01:14 ON TEMP.MID.8 REMARKS:
TU 08.03.83 01:14 OFF TEMP.MID.8 REMARKS:
TU 08.03.83 01:14 ON TEMP.MID.8 REMARKS:
TU 08.03.83 01:14 OFF CONTR. FEED PUMP 3 REMARKS:
TU 08.03.83 01:14 OFF BURNER 7 REMARKS:
TU 08.03.83 01:14 OFF BURNER 8 REMARKS:
TU 08.03.83 01:14 OFF CHEMICALS INC. 7 REMARKS:
TU 08.03.83 01:14 OFF CHEMICALS INC. 8 REMARKS:
TU 08.03.83 01:14 OFF TEMP.MID.8 REMARKS:
TU 08.03.83 01:14 OFF TEMP.MID.7 REMARKS:
TU 08.03.83 01:14 OFF CHEMICALS INC. 9 REMARKS:
TU 08.03.83 01:16 OFF CU INC. 2 REMARKS:
TU 08.03.83 02:00 SAT POSITION: ON GURATOR PP. 1 OFF CARGO TK. 1 P
54:21.16 N OFF GURATOR PP. 2 OFF CARGO TK. 1 S
03:46.68 E OFF GURATOR PP. 3 OFF CARGO TK. 2 P
OFF GURATOR PP. 4 OFF CARGO TK. 2 S
WIND: 060 DEG ON GURATOR PP. 5 OFF CARGO TK. 3 P

OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 08.36 m3/h

TEMP.UPP.1	1056 DEG C (ALM< 0900)	SHELLTEMP.1	134 DEG C (ALM> 200)
TEMP.MID.1	1262 DEG C (ALM< 1100)	SHELLTEMP.2	104 DEG C (ALM> 200)
TEMP.MID.2	1236 DEG C (ALM< 1100)	SHELLTEMP.3	116 DEG C (ALM> 200)
TEMP.MID.3	1260 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	1008 DEG C (ALM> 1350)	CO2	:08.88 % (ALM> 15%)
TEMP.THR.2	1019 DEG C (ALM> 1350)	O2	:10.31 % (ALM< 03%)
TEMP.THR.3	0993 DEG C (ALM> 1350)	COMB.EFF.	:00.0001 % (<99.900025)

TU 08.03.83 02:05 INCINERATOR 3 AFT
ON COMAIR BLOWER FLOW1: 26550 m3/h FLOW2: 25462 m3/h FLOW3: 26100 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 10.18 m3/h

TEMP.UPP.1	1014 DEG C (ALM< 0900)	SHELLTEMP.1	131 DEG C (ALM> 200)
TEMP.MID.1	1232 DEG C (ALM< 1100)	SHELLTEMP.2	102 DEG C (ALM> 200)
TEMP.MID.2	1214 DEG C (ALM< 1100)	SHELLTEMP.3	132 DEG C (ALM> 200)
TEMP.MID.3	1222 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0964 DEG C (ALM> 1350)	CO2	:07.34 % (ALM> 15%)
TEMP.THR.2	0909 DEG C (ALM> 1350)	O2	:12.11 % (ALM< 03%)
TEMP.THR.3	1042 DEG C (ALM> 1350)	COMB.EFF.	:00.0001 % (<99.900025)

TU 08.03.83 02:10 INCINERATOR 1 FRT
ON COMAIR BLOWER FLOW1: 26700 m3/h FLOW2: 26800 m3/h FLOW3: 26725 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 08.26 m3/h

TEMP.UPP.1	1074 DEG C (ALM< 0900)	SHELLTEMP.1	117 DEG C (ALM> 200)
TEMP.MID.1	1282 DEG C (ALM< 1100)	SHELLTEMP.2	140 DEG C (ALM> 200)
TEMP.MID.2	1194 DEG C (ALM< 1100)	SHELLTEMP.3	108 DEG C (ALM> 200)
TEMP.MID.3	1164 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0950 DEG C (ALM> 1350)	CO2	:09.03 % (ALM> 15%)
TEMP.THR.2	1119 DEG C (ALM> 1350)	O2	:10.40 % (ALM< 03%)
TEMP.THR.3	1022 DEG C (ALM> 1350)	COMB.EFF.	:00.0001 % (<99.900025)

TU 08.03.83 03:00 SAT POSITION: ON GURATOR PP. 1 OFF CARGO TK. 1 P
54:21.44 N OFF GURATOR PP. 2 OFF CARGO TK. 1 S
06:49.97 E OFF GURATOR PP. 3 OFF CARGO TK. 2 P
OFF GURATOR PP. 4 OFF CARGO TK. 2 S
WIND: 077 DEG ON GURATOR PP. 5 OFF CARGO TK. 3 P
14.2Kn-Bft 04 OFF GURATOR PP. 6 ON CARGO TK. 3 S
ON INC.ROOM VENT OFF WATER INJ.PP. ON CARGO TK. 4 P
OFF CARGO TK. 4 S

TU 08.03.83 03:00 INCINERATOR 2 STB
ON COMAIR BLOWER FLOW1: 24750 m3/h FLOW2: 27037 m3/h FLOW3: 26100 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 07.52 m3/h

TEMP.UPP.1	1046 DEG C (ALM< 0900)	SHELLTEMP.1	133 DEG C (ALM> 200)
TEMP.MID.1	1248 DEG C (ALM< 1100)	SHELLTEMP.2	103 DEG C (ALM> 200)
TEMP.MID.2	1226 DEG C (ALM< 1100)	SHELLTEMP.3	116 DEG C (ALM> 200)
TEMP.MID.3	1250 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0994 DEG C (ALM> 1350)	CO2	:08.73 % (ALM> 15%)
TEMP.THR.2	1000 DEG C (ALM> 1350)	O2	:10.64 % (ALM< 03%)
TEMP.THR.3	0977 DEG C (ALM> 1350)	COMB.EFF.	:00.0001 % (<99.900025)

TU 08.03.83 03:05 INCINERATOR 3 AFT
ON COMAIR BLOWER FLOW1: 26700 m3/h FLOW2: 24337 m3/h FLOW3: 25087 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 08.26 m3/h

TEMP.UPP.1	1008 DEG C (ALM< 0900)	SHELLTEMP.1	131 DEG C (ALM> 200)
TEMP.MID.1	1216 DEG C (ALM< 1100)	SHELLTEMP.2	102 DEG C (ALM> 200)
TEMP.MID.2	1200 DEG C (ALM< 1100)	SHELLTEMP.3	152 DEG C (ALM> 200)
TEMP.MID.3	1204 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)
TEMP.THR.1	0954 DEG C (ALM> 1350)	CO2	:07.18 % (ALM> 15%)
TEMP.THR.2	0900 DEG C (ALM> 1350)	O2	:12.15 % (ALM< 03%)
TEMP.THR.3	1018 DEG C (ALM> 1350)	COMB.EFF.	:00.0001 % (<99.900025)

TU 08.03.83 03:10 INCINERATOR 1 FRT
ON COMAIR BLOWER FLOW1: 25275 m3/h FLOW2: 25350 m3/h FLOW3: 26137 m3/h
ON BURNER 1 ON BURNER 2 ON BURNER 3
OFF FUEL OIL INJ. OFF F.O.FEED PP.1 ON F.O.FEED PP.2 FLOW:0000.00 l /h
ON CHEMICALS INJ. ON QUITY-CON PPP. FLOW: 08.26 m3/h

TEMP.UPP.1	1028 DEG C (ALM< 0900)	SHELLTEMP.1	117 DEG C (ALM> 200)
TEMP.MID.1	1230 DEG C (ALM< 1100)	SHELLTEMP.2	101 DEG C (ALM> 200)
TEMP.MID.2	1218 DEG C (ALM< 1100)	SHELLTEMP.3	107 DEG C (ALM> 200)
TEMP.MID.3	1128 DEG C (ALM< 1100)	CO	: 0.0000 % (ALM>0.005%)

file

League of Women Voters of Texas • League of Women Voters of Texas Education Fund
1212 Guadalupe Suite 109 • Austin, Texas 78701 • Tel. 512/472-1100

February 14, 1984

Frank R. Krohn
Vice President
Chemical Waste Management, Inc.
[redacted]

Dear Frank,

Many thanks from the League for your $1,000 donation. As our solicitation letter noted, there are many projects that can be carried out only with the support of civic-minded businesses.

I have enclosed a copy of your check and enclosure card. We are not sure whether the donation was intended for LWV-Texas or LWV-Texas Education Fund. The organizations and the accounts are separate. (Donations to the Ed Fund fund education-only activities like my trip to the North Sea. They are tax-deductible per se. Donations to LWV-Texas are especially appreciated because we don't get as many of them!) Would you be kind enough to clarify to which account the money should go?

Thanks again for your support.

Sincerely,

Diane B. Sheridan

League of Women Voters of Texas Education Fund
1212 Guadalupe, #109 • Austin, Texas 78701 • Tel.512/472-1100

[redacted]

Dear NR or Hazardous Waste Chairs
in Other Gulf Coast Leagues,

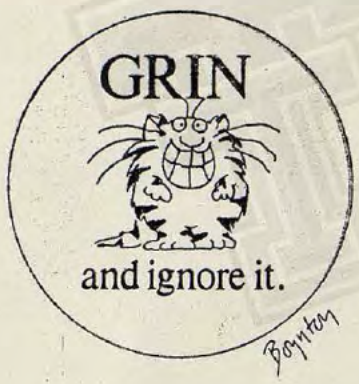
I wanted to let you know that I am about to take a "tour" that may be of interest to you and to invite your comments. I have been asked to be an observer on the Vulcanus II when it does its next burn in the North Sea in early November. As long as all the logistics work out, I shall be leaving November 2. Rather than waiting to inform you until all plans are made, I'm writing now to give you a chance to write back if you have suggestions for things I should observe or questions I should ask.

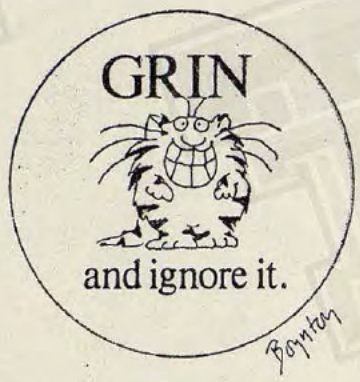
Chem Waste is taking four observers on this trip: one from Greenpeace in England, one from Greenpeace in Germany, one from either the National Wildlife Federation or the Environmental Defense Fund in Washington, and one from Texas, namely me as League Hazardous Waste Director. We may look, ask questions, take pictures, etc. While I have my own thoughts about what to do, I am encouraging comments from others so I can make the most of this unusual opportunity.

The Texas League has only lately begun to research the ocean incineration issue, in relation to the Chem Waste permit application to burn in the Gulf of Mexico. There is a significant amount of organized opposition in Texas but there is no group we know of trying to look at both sides of the issue. That is the role we expect to play, and we believe this chance to observe the Vulcanus burn firsthand will add to our knowledge on this issue.

If your League has been involved in the Gulf burn site issue, I'd appreciate knowing. If you have comments about what I should watch for or ask about, please write or call as soon as possible. I expect to go directly from this trip to the LWVEF Hazardous Waste Training Seminar, so I hope to meet some of you there.

Diane Sheridan
[redacted]




GRIN
and ignore it.
Boynton

10-21-83

Scott--

Enclosed is my itinerary. It is my sincere hope that the arrangements for the other three people were not as confusing to make as these were.

As far as the LWV-Texas Ed Fund funding of my fare goes, it will make it obvious that I must be objective and fact-finding, that I cannot come home and testify pro or con the burn site. Rest assured that I shall be adding WMI to our list of potential contributors. In fact, I had recently seen the list and decided you all belonged there since BFI was also there.

Once I get back to Washington on the 13th, I will very much appreciate being picked up at the airport, as you suggested. I suspect my meeting clothes will indeed need laundering, as you also suggested. The League has made me a reservation at the hotel where the h/w seminar will be: the Gramercy Inn on Rhode Island Avenue. My roommate will also be coming in on Sunday.

I shall look forward to meeting you during the stay in Washington. Like all good LWV meetings, it goes from 1:00 Monday till 10:30 p.r and continues to fill every moment till it ends Wednesday about 1:00. I'd like to visit my congressman that afternoon, like good League members do when they're in Washington. All of which is to say that Monday morning or Sunday appears to be the time in which we could meet face to face without benefit of telephone.

Your comment today about getting people to ask the right questions is one of the concerns shared by those of us who participated in the Keystone siting workshops. The handbook we wrote includes an extensive section on issues. When the state agencies finish printing it, I want to send you a copy--and will be glad to proselytize at great length if you wish.

I am still feeling overwhelmed by this most unusual opportunity--thanks!

Anne

League of Women Voters of Texas
1212 Guadalupe Suite 109 • Austin, Texas 78701 • Tel. 512/472-1100

December 3, 1983

Scott Clarkson
Waste Management, Inc.
600 Maryland Avenue, S.W. Suite 607
Washington, DC 20024

Dear Scott:

Knowing that the last couple weeks have been filled with more pressing matters for you, I have not sent my babysitting expenses, which totaled $42.50. I appreciate the reimbursement a great deal; despite the fact that this is not a huge amount of money, it will help compensate for my phone bill of $175 which breaks all previous records in the Sheridan household. Until it came, I thought it had been prudent to get people's suggestions for being a good observer before I left. After I saw the bills, I had my doubts. Anyway, the babysitting is a realistic expense for volunteers that often gets neglected in reimbursements, so I appreciate your help.

Though I hope I already made it clear, I also want to say again how much I appreciate being given the chance to see the Vulcanus in action. Bit by bit, I am convincing skeptics that there indeed is a lot to be learned from traveling on the ship. Frankly, there would probably be a lot to be learned from living at a landfill for a week, but it wouldn't have been as enjoyable. Please convey the League's thanks to all appropriate people. I am writing the OCS people directly, though I did speak briefly to Gert Heinemann in Brownsville to convey my thanks for their hospitality.

The League decided to publish my observations on ocean incineration after being on the Vulcanus in an effort to add to the educational material available on the subject. I made a great effort to collect information and verify it while on the ship, and I have tried hard not to make any errors. However, as you know, I did not submit the material for review and comment by anyone associated with the Vulcanus. To have done so would have negated the independence of the observations in the eyes of many people here interested in the subject. I made this point in a speech to representatives of statewide environmental groups and state agency personnel in Austin Thursday. I urged that they consider my observations, both written and in speeches, to be one of the resources available on the subject, not the sole source of what they might wish to know. If you find any errors when you read the publication, please let me know. My intention is to be fair and unbiased in my comments.

If you have time, I'd like to know what happened after the first day of the Brownsville hearing. I had to leave for a plane at 9:00 p.m. and things were still going strong then. Now that I've gotten involved in this subject, I'll need to keep reading and talking to people to stay updated. I have several more speeches lined up between now and March, and I expect the subject to be of longterm interest. The materials you have provided in the past have been very informative, so keep me on your mailing list if you will.

The speeches to groups smaller than that at the hearing are providing a chance to make clear that I am trying to provide information rather than take action. The audiences seem receptive to hearing neutral comments and have some good questions.

I believe that the role the League has chosen of providing additional and independent information on this controversial subject is a valuable one in Texas. Describing my experiences "humanized" the issue, according to one of the people in Austin this week. I again appreciate Chem Waste's willingness to take observers along on a voyage so that our understanding of ocean incineration could be increased.

Sincerely,

Diane

Diane B. Sheridan

[redacted]

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01 WASHINGTON,D.C. 25 OCTOBER, 1983

MRS. DIANE SHERATON
[redacted]

MRS. SHERATON:

I HAVE TODAY RECEIVED THE FOLLOWING MESSAGE FROM OUR OFFICE IN THE NETHERLANDS:

1. WASTE TYPE: CHLORINATED HYDROCARBONS
   EX: THE NETHERLANDS/BELGIUM/GERMANY/FRANCE.

2. SUFFICIENT LAUNDRY FACILITIES ON BOARD.

3. MRS. SHERATON WILL BE MET AT ORLY AIRPORT AND TAKEN TO LE HARVE. ON RETURN WE WILL TAKE CARE SHE ARRIVES AT BRUSSELS AIRPORT. (THE USUAL CWM/OCS VIP TREATMENT!)

4. JUST IN CASE: TEL. NO. PARIS: OUR AGENT, MR. GODEFROY, OFFICE: 7557700 AFTER HOURS:7716280

5. ADDRESS IN LE HARVE: SOGESTROL PIER

6. HOTEL RESERVATIONS FOR 3RD OK. PLEASE PROVIDE AIR FLIGHT DATA / PARIS AND BRUSSELS.

7. THANK YOU.

END OF MESSAGE.

DIANE, PLEASE GIVE A CALL WITH THE FLIGHT DETAILS AND MORE QUESTIONS ETC. WHEN YOU HAVE A CHANCE. ALSO, LET ME KNOW IF I CAN HELP REGARDING YOUR D.C. SIDE TRIP ON 13-16TH NOV.

BEST REGARDS,

SCOTT C. CLARKSON
[redacted]

10:03 EST

MGMCOMP

5241 (R 7/82)

TO REPLY BY MAILGRAM MESSAGE, SEE REVERSE SIDE FOR WESTERN UNION'S TOLL - FREE PHONE NUMBERS

League of Women Voters of Texas Education Fund
1212 Guadalupe, #109 • Austin, Texas 78701 • Tel.512/472-1100

December 6, 1983

Gert Heinemann
Ocean Combustion Service BV
Noordsingel 199B
Rotterdam
The Netherlands

Dear Mr. Heinemann,

My very sincere thanks to you and all the OCS personnel who made my trip on the Vulcanus II possible, informative, and enjoyable. Your effort to increase public understanding of the ocean incineration process on the Vulcanus was a success; I really learned a great deal.

The publication enclosed is my report on my observations. It is an attempt to highlight the issues people I spoke to before I left considered important. It forms the basis of the speeches I have given and will give in the coming months. I tried very hard to be sure all information was accurate. However, I did not submit the report for review and comment by anyone associated with the Vulcanus. To have done so would have negated the independence of the observations in the eyes of many people here interested in the subject. My intention is to be fair and accurate, and I hope that I have been. As witnessed by the hearing in Brownsville, the subject is both controversial and complex to many in Texas. My organization believes that providing information rather than taking a position in favor of or against the process or the permits is a valuable role to play. Without the opportunity to travel on the Vulcanus, our educational efforts would not have been as extensive.

There are many people deserving special thanks for their efforts to make my stay pleasant as well as educational. Mr. Verdegaal is to be commended for all the time he spent explaining things in response to my daily two hours of questions. Both he and Mr. Haubourdin were also helpful interpreters! The dinner in LeHavre with you three, M. Godefroy, and Madame Duclos was a delight. In fact, one of the most interesting things about the trip was spending time with people from other countries and talking not only about waste disposal but also all sorts of other interesting topics. I greatly appreciated the arrangements that allowed Alice Mallie to show me Paris. And having Mr. and Mrs. Haubourdin show me Belgium allowed me to see the country in a way not possible when traveling alone or with other Americans. The Vulcanus II crew

Journal-5

The weather is now a bit chilly but still not parka weather. I have on a turtleneck + wool crewneck, cords, + one pair of socks, and that seems adequate. I try to go outside a lot because the cabin is fairly claustrophobic. When one wakes, there is no light and no feeling of time.

In judging how operations are going on the ship, I'm becoming aware how much one's sense can help- not just seeing. Vibrations can be felt- you can feel the ship change course, e.g. If a burner isn't operating right, etc, You can hear the difference. Smell is a great indicator of leaks + spills. The shiny paint makes it easy to spot drips + leaks.

I still have my patch on and have not felt any signs of seasickness. I'm being teased and warned that storms may come because I so obviously want to avoid. Staying busy would be bound to help. For now, the seas remain calm.

Dinner comes shortly. There is an amazing amount of food, even if you don't eat it all. Mr. Hermann assures me they have large food bills. You can always help yourself to drinks + fruit and are free to raid the cookie tins. The 5 of us eat together because we are kept somewhat out of the crew's way. Some crew members are friendly; many do just non-reaction. No one is hostile. In time, they'll probably warm up

Journal - 6

After dinner, I went to the engine room to watch the startup. It took several hours to reach temperature + find the proper blend of waste to maintain the combustion efficiency. I tried to blend into the control panel but did not, being dressed in my day-glo orange CWU coveralls. After awhile, two of the crew whose English is good began to tell me a little of what they were doing, which helped. Surprisingly I was able to understand all the critical details.

Sunday - this morning I slept late and alarmed M. Verdegaal and the Captain since I didn't show up at breakfast. (The Chief mate mentioned this when I went for a 30x trek around the bridge. He actually spoke + smiled - things are looking up. At dinner, two crew members actually spoke to us and a few more smile in passing.

11-7 It's hard to keep track of days. Today was spent getting answers to my book of questions and then reading the contingency plan. I visited the control room twice and vowed gladly live there if I didn't feel de trop. The lack of German is distinctly a problem since most of the crew speak German or Dutch. Two of the engineers have good English and will politely speak it occasionally so I don't feel completely lost.

Journal 7

Journal 11-8

Disappointment because the analyzer will not work and we must return to port for a new one. Helmut explained that this is not only because of the govt. but also because the crew needs this info to ensure they are burning efficiently.

11-9 We arrive at port in Antwerp about 4 pm, having passed Holland's dikes and dunes and windmills very close to shore. Mr. Heinemann and Mr. Vander Velde came aboard and we conversed about our impressions during dinner. After dinner and after everyone discovered where they were going, I was invited to go ashore with the Chief Mate, a Chief Engineer, the Third Mate, and the Captain of the V/I. The third bar was nearby and one of those homey pub-like places that's been around since old Antwerp was a port. I was invited to drink Trappist beer, a brown beer drunk warm. Celebrating being ashore was probably typical for these sailors but it was a little uncomfortable for me as they got progressively drunker. I had to guide the Chief Mate "home" while a Belgian police officer watched his drunken walk. The third mate stayed behind as did the Captain or I might have had to guide them all home.

Journal

Mme. Haubourdin picked me up ~~Friday~~ Thursday am and gave me a tour of Antwerp. It's a big port and a very old city, some of which is being cleaned and is really beautiful. We saw an interesting housing project that mimics the old style quite successfully. While walking we also passed the offices of the Delaware River Port Authority, strangely enough. The evening before Dittman Schultz had mentioned that his favorite port is Wilmington. Mme. used to work for Packard in Antwerp handling DuPont accounts — such a small world.

Thursday night was kind of sad as I packed & realized I had to leave the ship. Some of the friendlier crew members (Helmut & Joost) were gone and no farewells could be said.

On Friday the Haubourdin's picked me up at coffee time, so I got to say a few words to the remaining crew members before I left. We traveled to Liege then on to the Ardennes having lunch in Remouchamps and spending some time in Vielsalm. Traveling the route my father did during the war was a strange but gratifying experience.

My hotel in Brussels is the Metropole, a most amazing relic of the 18 90's Belle époque. It's terribly elaborate Art Nouveau. I spent Saturday wandering the city and shopping, and am now ready to take off for Washington in the morning.

The last ten days have been an unusual experience in many ways. I've been almost exclusively with Europeans and am not sure I can speak American without a German or British accent. Cultural differences were often discussed. Being at sea was one of the most enjoyable things I've ever done, and I want to sail again. Having 24 hrs. a day to learn what a waste process allows for experiencing details in a way impossible on land.

Dear Mr. Heinemann,

I'm on my way back to the U.S. and trying to think of ~~the best way~~ what I can say to thank you adequately for the experience of the last 10 days. Learning first hand about O/I permitted a greater understanding of the process than could ever have been gained otherwise. The unique effect of ~~be~~ that being operating on a ship ~~and the~~ has on the crew as well as the process ~~is a key to the attitudes that prevail about doing jobs well~~ cannot be easily ignored, but is critical to the operation as well. The V/II is beautifully designed and cared for, and I can honestly say I've looked her over enough times to be sure that's a true statement. Having the opportunity to meet OCS personnel at dinner in Le Havre, on the ship, and after were also ~~important~~ helpful in getting an overall impression of the O/I operation.

11-5-83

Dear Kathy,

Greetings from the middle of the North Sea! This is a most amazing adventure, and time exists to do things we can't do at home, like write letters.

I arrived in Paris Thursday am and was met by an American-David woman who now lives in Paris and works for CWM's French agent. With a chauffeur-taxi, we toured Paris for 3 hours, seeing everything famous from the window and going inside Notre Dame. The time was too short but still much fun. Seeing all those old buildings from art + history classes was a treat.

CWM: Chosen Leader 1984, pictured w/ company CEO (Olson Combustion Services)

The train ride to Le Havre was uneventful except for one of those amazing things that happen in Europe, except the first meal upon arrival. I was starved by lunch time + ordered tournedos aux legumes. My tray appeared w/ my meal and contained prosciutto-wrapped salty cheese, pickled meats, bread, dessert, etc. The steak was very salty + filling but I gamely ate a bit, laughing at how American tournedos weren't the same as French tournedos. At which point the steward hung the tray with the tournedos + legumes, which I could barely sleep in at all at that point!

I was met at Le Havre by Mr. Godefroy, the CWM French agent, and Mr. Verdegaal (from Rotterdam, of course). They took me to a hotel and I slept till dinner. At dinner we were joined by OCS's president, Gerd Heinemann, from Rebstein employee named Madame.

11-9 Well, it's 9 a.m. and I just survived partying with part of the crew of a nearby bar. They couldn't believe I wanted to go home at midnight. But they were so pissed I was afraid I'd never make it if I waited any longer. The invitation came from the Chief Mate - when he commands, we obey. He ~~is~~ seemed to be a very quiet man but I literally had to guide him "home." We I had to make clear on several occasions that I would not be accompanying anyone to their cabins tonight. My souvenir was a bee. glass for Trappist beer, the Belgian specialty that was ostensibly the reason for the expedition. I still stay on the ship tomorrow night, and it might be amusing to see how these guys behave in the morning. I was offered a job tonight as a second steward or as an assistant engineer. I was also invited to someone's ~~wedding~~ silver wedding celebration mid August! Gee, but this trip has been an unusual experience, for the crew as well as me. They confessed tonight that most of them were scared of me and they had no idea what I was doing there. The Asst. Chief Mate spoke to me for the first time stating he'd heard a lot of stories about me. It's probably best that I don't know what they are. He revealed that I've been characterized

Segars. 2

Three days, 8 officers
Know any first names

Duclos (henna hair, etc.), and M. Auberdin, OCS's new chemist just hired last week.* Dinner was great fun with German, French, ~~or~~ Dutch & English being spoken at various times. conversation ranging from food preferences to nuclear disarmament.

The morning of the 4th was my wily sleeping afternoon & I rose to a shore and bright 8:15th the first date I saw. At the ship, we met 6 waste generators who were busy given a tour, ate lunch on the bridge, etc.

One incident marred the occasion when Greenpeace sent three men instead of two men and a woman — and expected me to share my cabin, which I refused to do. Their French lady had to go home & I regretted the clash of standards, but felt I really wasn't ready to do that. So I have my own cabin & share the ship with 23 men, in itself a strange experience, especially for here I think I'm the first woman to sail.* I am the only woman to have sailed with the ship.

The crew all speak some English but not necessarily by choice. (The Germans resist.) My language skills ought to improve a lot from this trip!

Yesterday we donned our coveralls & toured the ship extensively. And today our highlight was climbing an inclinator to peer over the top to see it before & after firing. Climbing a ladder to 55' above sea level a foot from the edge of the boat was a trifle scary but not too bad on the second & third trips up. Leaning into 300° heat was a bit more painful.

Lots Dinner has passed. The cook is German and we get

a lot of food. In fact, I plan to skip breakfast tomorrow since lunch at 11:30 is the main meal of the day. Five of us are guests on the ship: a European person from U.S., one from England who's a professional filmmaker and germanist to film the incineration, the Ocean Combustion Service chief of European operations, and their new chemist.

Tonight after dinner I went to the engine room for 3 hrs. to watch the startup of the incinerators. It was really fascinating, and I found the crew very good at working together. They're not thrilled having visitors on board, but they're slowly warming up, having started at deep freeze stage. And the 8 days together and we're bound to be old friends! (But hopefully not too good friends.)

Sailing itself is an experience. The seas are just now picking up, having been quite calm since we left on 2 pm. Nov. 4. Seasickness has not reared its ugly head at all, though I'm being teased about storms coming. It's so strange to be completely out of site of land and to see nothing but Russian trawlers. It's not very cold at all. I put on my parka at midnight watch tonight but have found a turtleneck + ~~sweat~~ shirt and am adequate. My room is quite nice. Two bunks, a table, bench, chair, closet, bathroom. (And I also share a bathroom with the two other guests, so far we've remembered to lock the other's door when we're using it.

Late note - we didn't always remember but managed to avoid any drastically bad experiences.

The Greenpeace people are really reluctant if you don't already know them. They have a boat they sail to prevent whalers from leaving port, have [illegible] a peace mission to Leningrad, etc. It's fun hearing their war record their arrests, etc. We seem to be getting along adequately, though we've been admitted & had our different our interests, + opposition etc.

This does rate as one of my stranger experiences.

To be continued,

Sunday ~~Saturday~~ ~~Monday~~ - it's hard to keep track of time here. Today I awoke at 8:30 - it might as well have been 4:30. Ships are noisy, especially the guys across the hall who come off watch as I'm getting ready to sleep. Big excitement today was a tour into the incinerator room, surprisingly not too hot unless you touch the incinerator. I also took some pictures in the control room and apparently embarrassed one of the engineers by getting him in the picture. The news is very shy. Tony, the filmmaker, wants to film the bridge. The captain agrees as long as he can wear his gas mask to keep his face out of print. The third mate is quite friendly as are one or two of the engineers, who actually will take time to explain something to me in English since they prefer to speak German. My cabin is missing its required gas mask & there was great speculation as to who would have [illegible] the thrill of searching my cabin for it. (So far noone has!)

Today is the cooks birthday and I have been forewarned to eat his cake even if it's terrible. The other American has

suggested that we sing to him, a custom the Europeans don't do apparently. Lunch today was the first meal when the crew (officers) sat at the same table with no guests. Conversation was mostly German and I [redacted] fear I was part of the topic of conversation, a strange sensation when I couldn't say anything.

Back to work working before the cook's party!

p.m. — Relations with the crew are decidedly less icy. Two of them even sat around and chatted after dinner instead of eating as fast as possible and running. I got terribly antsy from being confined to close quarters, so I went up to the bridge to ask permission to walk it for 30 minutes. The Captain, who appears to know & see nothing, inquired as to my health since I'd stopped breakfast and then jokingly said there was speculation as to my having gone overboard. (the 1st Taiwanese check on me!) Then I donned my contamination area wardrobe and spent a couple hours in the control room, my favorite space on the ship. (I think I must have latent Chem E leanings.../ The Chief Engineer was actually sociable. I think the crew dislikes us because ① we're in the way and ② they think we all 3 plan demonstrations against Olson incineration when really only the 2 men do. However, my innate charm will carry me thru, I'm sure!

Segue - 6

11-7 Today was spent seeking contingency plans and getting answers to my tons of questions. I found out the engineer who spoke to us last night went to the Chief of Energon Operations (M. Verdegaal) this am and said he hoped she hadn't done anything bad by answering my questions. Tonight Helmut the Good Looker and Lanky actually initiated a conversation (while standing watch at the incinerator, as romantic a scene as one get on this ship) (about plumes, the effect of incineration on migratory birds, etc.) M. Verdegaal is trying to convince Helmut to teach me some German but he is obviously humiliated at the prospect. As you've probably guessed, having any sort of normal conversation or an occasional smile and hello from the crew is something to be treasured.

Well it's 1:30 am so I'd best go to bed.

11-8 The inc. had to be shut down again and we're returning to port because the analyzer equip is not working. Helmut explained that we need the analyzer not just to satisfy the govt, but also because it help the crew know they are burning well. (significant point in my journal but not in your letter - sorry.)

→

as the lady who hangs around the incineration control room taking notes and who has beautiful eyes! There is much speculation as to why I visit the control room so much and whether it has to do with the crew who work there or my reason for being on the ship.

11-11-88

Had this visit lasted as long as it should have, it would have been even stranger to reread this letter and track relationships. It is not possible to consider the pros/cons of Ocean incineration without also noting the effect being on a ship has. It's the home as well as the workplace of the crew and it affects their attitudes a great deal.

On 11-10 I was given a tour of Antwerp by the chemist's wife. The evening was very depressing as I packed and had to admit that I didn't want to leave. Some of my favorite people were already on leave and I didn't get to say good byes to some. It may sound silly but this was a very intense experience and I'll really miss these guys. They have asked several times that I come on the ship when it comes to Mobile to begin Am. operations.

Just as I was ready to leave, I got a telex-ed message from Mark & Bird saying all was

began 9

well and signed "Love Beck and Mr. Mom."
(Isn't Mr. Mark absolutely adorable!)

On 11-11, the chemist + wife took me on a journey into my past, tracing part of the route my father traveled during WW II and visiting the town where he was when he discovered I had been born 6 wks. earlier. They dropped me in Brussels that night.

11-12 My hotel in Brussels is the Metropole an 1890's extravaganza where Enrico Caruso, etc. used to stay. I wandered the city on foot today, sightseeing + shopping. All the clothes here are grey, black, + red. I've never seen such uniformity.

It's now 10 pm and I leave in the am for Washington. I'm not sure how I'm going to adjust back on the farm after the last 10 days. I expect the transition will be difficult.

League of Women Voters of Texas Education Fund
1212 Guadalupe, #109 • Austin, Texas 78701 • Tel.512/472-1100
December 7, 1983

Mr. and Mrs. K. Haubourdin
Ocean Combustion Service BV
Elsenstraat 7
[redacted]

Dear Mr. and Mrs. Haubourdin,

While the enclosed thank you to Mr. Heinemann describes my gratitude to all the OCS people who made my trip on the Vulcanus II both educational and informative, it is not adequate to tell both of you how much I appreciated your efforts to help me see and learn about Belgium. You both did much more than was necessary to make the trip a memorable one.

Having promised a copy of my report to the crew members, I have enclosed it here assuming sending it to Antwerp is the easiest way to get it to the ship. My pictures of the ship turned out fairly well except for the ones with people in them. I had apparently hit a button on the flash by mistake which reduced the power and made everyone look like a shadow. The pictures from the day we drove to the Ardennes are beautiful, thanks to the scenery rather than my photography. I am compiling them with comments for a Christmas gift for my father.

If you visit the United States and come to Texas, please let me know. I should be delighted to do what I can to make your visit as pleasant as you made mine.

Best wishes for happy holidays!

Sincerely,
Diane
Diane B. Sheridan
[redacted]

FEB 22 1984

DS ✓
JD

DATE: Feb. 20, 1984

TO: Ms. Diane Sheridan

FROM: **FRANK R. KROHN** /ter

Please be advised that our contribution to the League of Women Voters should be allocated to the Texas Education Fund (Tax Deductible).

I apologize for the mix-up.

/ter Dish

cc: Dave Blomberg

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POSITION Vice President

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V-2

Volume 12 Number 1 **A Newspaper for Taylor Lake Village** **February 1984**

CONNIE CHAMPAGNE, SUZETTE SO, BERTHA LUX, AND BARBARA THEISS take time out to pose for photographer Richard So at the CLFWA's Annual Christmas Open House Parties.

CLFWA marks 1983 a successful year

With profits from its various fund raising endeavors, the Clear Lake Forest Women's Association has purchased and donated a table and benches for Baronridge Park. During 1983, the Women's Association donated money to the scouting programs, sponsored Teen nights in June at the pool and contributed toward the construction of the Mike Poor Memorial sidewalk.

The annual Christmas Open House parties were again a financial success netting a profit of over $700. Special thanks goes to Mr. and Mrs. Art Fichtner, Mr. and Mrs. Michael Buchanan, Mr. and Mrs. Larry Champagne, Mr. and Mrs. Jeffrey Theiss, and Mr. and Mrs. Richard Fellows who graciously donated their homes for these parties. Priscilla Ennis assembled and distributed luminarios donated by McCarver Realtors to each home to light the way. Serving on the committee were Jan Kessmann, Anne Marie Majewski, Lennie Johnson, Owen Whitlock, Ruth Beecher, Sheryl Vollrath, Sue Gros, Karla Olson, Jeanne Riordan, Connie Champagne, Bertha Lux, and Sharon Buchanan.

Upcoming plans include a luau tentatively scheduled at the Clear Lake Forest Pool on April 28 and a Ladies Spring Salad Luncheon to be held in late May. The next meeting of the Women's Association will be held February 21, 10:30 a.m., at the home of Bertha Lux, 522 Lorie Lane. All residents of Clear Lake Forest are invited to attend.

* * *

Family Outreach

On Wednesday, January 25, seven Bay Area police departments attended a meeting at Taylor Lake Village City Hall to hear a presentation on the local Family Outreach (FO) Child Abuse/Child Neglect (CA/CN) prevention program which is in the process of organizing. Harris County Children's Protective Services is willing to provide a social worker for our community to address the prevention of CA/CN in the Clear Lake/Bay Area. Placement of a social worker is contingent upon the support of the community specifically through (1) establishing a steering committee, (2) a minimum of ten volunteers willing to be trained and work in the center, (3) office space, (4) telephones, and (5) some funding source.

Bay Area police departments expressed an interest in seeing the FO Center operating here. The Texas Department of Human Resources has indicated they are willing to place a child protective service worker in the area on September 1, 1984, providing we have demonstrated our commitment to the project by fulfilling the above mentioned criteria. If you are interested in volunteering to work to prevent CA/CN in our community, please contact Jane Cox, 334-1427.

* * *

MARCH deadline for the LOG is February 15. Please submit your articles no later than this date. We will need your cooperation.

The Freeman Memorial Library, 16602 Diana Lane, Clear Lake City, has a story time for preschoolers every Tuesday at 10:30 a.m. On February 15 and February 29, they will have movies for preschoolers at 10:30 a.m. On Tuesdays through February 28, the library has an "Adventurers Club" for children 7 to 9 beginning at 3:30 and lasting until 4:00 p.m. Library hours are Monday, 1:00 to 9:00 p.m., Tuesday and Thursday, 10:00 a.m. to 9:00 p.m., Wednesday, 10:00 a.m. to 6:00 p.m., Fridays 12 Noon to 6:00 p.m. and Saturdays 10:00 a.m. to 5:00 p.m. Call 488-1906 for information.

CONGRATULATIONS to Clear Lake Forest residents Phil Segrest and Joe Kosmo who were recently elected District Captain (Segrest) and District Lieutenant (Kosmo) of the Pasadena Volunteer Fire Department.

Tumbling and Movement Classes for children age 3-8 will be offered starting mid-February. For more information call Iris, 474-4291.

The 9th Annual Gem and Mineral Show will be held Saturday and Sunday, February 18 and 19, 9:00 a.m. to 8:00 p.m. Saturday, and 10:00 a.m. to 5:00 p.m., Sunday, at the Pasadena Convention Center, 7902 Fairmont Parkway, Pasadena.

LOST - Prescription glasses in a black case on Manorfield, Cragmore, or Baronridge in Clear Lake Forest. Call 334-1053 if you found them.

Competing in the Miss Teen Houston Pageant recently at the Shamrock Hilton Hotel in Houston was Anne-Marie Meek, 14, daughter of Mr. and Mrs. William P. Meek of Clear Lake Forest. Anne-Marie is a freshman at Clear Lake High School and does modeling for InterMedia Modeling Agency in her spare time.

Timber Cove's February Yard of the Month went to Mrs. Mary Ellen Horton at 203 Whispering Oaks Drive.

The Clear Lake Forest Pool needs Assistant Managers--W.S.I. certified, Lifeguards--Advanced Lifesaving certified, Concessionaires, and Maintenance and Yard Workers. To apply call 482-5360.

* * *

LYNN KLEIN, MARIE DORNBACH, MARGARET MIK, AND MARY Meech seem to be enjoying the Rose Horticulture Presentation given at a recent meeting of the Timber Cove Garden Club in the home of Marie Dornbach.

T.C. Garden Club

Rose growing in the Houston area was the topic of the program at the Timber Cove Garden Club meeting on January 12 at the home of Marie Dornbach. Mr. Baxter Williams, a former President of the Houston Rose Society, spoke and illustrated with slides. The quality of the beds was most important with a depth of at least 12" above the ground level. Planting before February 5 was recommended.

Ruth Armour volunteered to head a Timber Cove Beautification Committee, sponsored by the Timber Cove Garden Club, and work in conjunction with the Timber Cove Civic Club Deed Restriction Committee.

The next meeting will be held at the home of Carol Cumming on February 9 at 7:30 p.m. when Mark Markley, Timber Cove resident, will discuss the future of the Clear Lake Area.

* * *

CLF luminarios sale nets $2,700 for LOG

Although the weather certainly did not cooperate with us, the luminarios sale to benefit The Log was a financial success. Approximately $2,700 was added to the coffers, which when combined with advertising revenue, is enough to keep The Log rolling another year. Thanks again to Chairman Lee Blanchard and her Zone Chairmen, Toni Turner, Barbara Archibald, Janet Valentine, and Nancy Rauscher for helping us out and to all of the Clear Lake Forest residents who at least purchased the luminarios even if they couldn't use them. Maybe next year the weather will be a little nicer to us.

* * *

Christmas decorations brightened holidays

The Clear Lake Forest Garden Club (morning) would like to thank all of their neighbors who decorated and participated in the annual Christmas Decoration Contest. Dig'n Design Garden Club of El Lago judged the event held December 15.

The winners of the contest for Traditional were Mr. and Mrs. Daniel Nebrig, 4107 Willow Hill, and Honorable Mention, Mr. and Mrs. Ronald Poffenberger, 4007 Manorfield. Mr. and Mrs. Philip Walden, 1223 Longledge won the Religious Award with Mr. and Mrs. Walter Segl, 4111 Plumtree, receiving Honorable Mention. The Fantasy Award went for the second year in a row (totally different display from last year) to Mr. and Mrs. James Hoffman, 4022 Bayou Grove, and Honorable Mention to Mr. and Mrs. William Templemen. Best Doorway was judged to be Mr. and Mrs. David Dartez, 1011 Cragmore, and Mr. and Mrs. George Franklin, 4250 Crownwood, received Honorable Mention. The Judges' Special Award was given to Mr. and Mrs. Jerry Woodfill, 4202 Crownwood, while Dr. and Mrs. Frederico Angel, 1026 Willowvale, took Honorable Mention.

The winners all received poinsettias and a certificate designating the year and category they won. First place winners had signs that were hand crafted by John Slaughter placed in their yards. Contributors who gave important financial support to the contest were Allen Realtors, Edmonson & Associates, Dorothy Stall & Associates and McCarver Realtors. Space City Realtors donated metal posts for the signs and Battey & Straty Bayline Properties underwrote the expense of printing and distributing flyers in The Log in November to announce the contest. The Committee that worked behind the scenes included May Walden, Iris Shouse, Peggy McBarron, Anne Knipe, and Owen Whitlock.

* * *

is published monthly on the first Thursday

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TAYLOR LAKE VILLAGE CLUBS: Ruth Beecher (474-2447) Janet Daubenspeck (538-2169)

ARTISTS: Mary Ann Bishop,

GENERAL REPORTERS:

Gene Barnes, Peggy Morrow, Peggy Nikseich, Joann Gatz, Nancy Harrington, Jim Knoedler, Iris Rigby

Report items by the 20th of the month to one of the Co-Editors.

CLFCA releases results of survey

At the January meeting of the CLF Community Association, results of the recent survey regarding capital improvement projects and an increase in the Community Service Charge were presented to the Board. Eighty questionnaires were returned and fifty-four households were contacted via the telephone poll. The questions and opinions voiced were:

1. Should the Clear Lake Forest Community Association start a facilities improvement and facilities development program, the first priority of which would be the swimming pool area, but which could also include the park area and the entryways into the subdivision?

	Questionnaire	Telephone Survey
Yes	81%	85%
No	14%	13%
No answer	5%	2%

2. Should the community service charge be increased?

Yes	83%	78%
No	17%	22%
No answer	0%	0%

3. Should a pool useage fee be initiated so that individuals and families who use the pool would support a larger share of its costs of operation and maintenance than those who do not use the pool? A fee structure of $35/year for an individual and $50/year for a family has been suggested.

Yes	44%	49%
No	56%	51%
No answer	0%	0%

4. Should an appropriate balance of both a pool useage fee and an increase in the community service charge be considered?

Yes	37%	26%
No	63%	74%
No answer	0%	0%

Under "comments", many respondents expressed support for the Community Association and emphasized that all of our property values are affected. Several respondents felt that the first priority should be an increase in expenditures for maintenance of existing facilities (especially the entryways and the pool area) and several respondents felt very strongly that a pool useage fee should only be considered as a last resort.

The Community Association would like to sincerely thank Jane Cox who was in charge of the telephone survey and her assistants Sue Eley, Ruth Fietelson, Kathy Somoano, and Robin Jenkins. Also, thanks go to Nancy Fleetwood who performed the analysis of the telephone survey responses, and to all the residents who participated by returning a completed questionnaire or by answering the questions in the telephone survey.

The next step is to prepare a five-year plan and to determine the increase in community service charge necessary to accommodate that plan. A petition will be circulated in February and signatures of a majority of property owners (based on square footage of lot) will be required to increase the community service charge. Anyone interested in helping with this petition project is encouraged to contact any Community Association member.

* * *

TLV POLICE REPORT

	Nov.	Dec.			
Calls	112	110	Fires	1	1
Auto Accidents	1	1	Suspicious Autos	3	4
Burglaries	0	0	Arrests	8	1
Criminal Mischief	4	1	Animal Calls	7	6
General Disturbance	1	2	Thefts	0	2
Suspicious Persons	4	3	Alarm Calls	4	14
Ambulance Calls	4	4	Assist Other Depts.	14	25
Miscellaneous	60	46	Family Disturbances	1	0

CASES OF INTEREST

On November 13 Officer Wilson assisted Nassau Bay officers in a search of the wooded area south of the Interfirst Drive-in bank after two black males had fired two shots at an officer who surprised them tampering with the machines. They were not located.

Officer Thomason assisted the El Lago police on November 17 to locate and arrest an armed subject who had threatened some citizens with a pistol. He was charged with Public Intoxication and Disorderly Conduct.

A tar-melting machine caught fire on the parking lot of Taylors' Cove on December 20. Pasadena Fire Department personnel from Station 6 responded and quickly extinguished the fire with little or no damage to the machine.

Information supplied by an eye-witness to an in-progress theft of hubcaps at the Clear Lake Garden Apartments in El Lago resulted in the arrest of two black males, recovery of 30 hubcaps, a stolen pistol, and assorted other items on December 24. One of the men was tentatively identified as the one who shot at the Nassau Bay officer on December 13. Officer Wilson was the Taylor Lake Village officer assisting in these arrests.

On December 14 and 15, a resident at Taylors' Cove was assaulted in his home. Complaints were filed with the D.A.'s office and two white males were arrested for trespass and assault with bonds totaling $1600 on each man.

On December 2 a van fire at Red Bluff and Kirby Road occurred shortly after midnight. The Pasadena fire dispatcher was notified by telephone and personnel from Station 6 responded to the scene in five minutes of notification. The truck had three fighters on arrival and two more showed up 5 minutes later. The fire was extinguished almost immediately. It was discovered later that the van had been stolen in Texas City.

On December 15, Officer Thomason was observing the streets of Clear Lake Forest from his parked patrol unit and witnessed three young men smashing a mailbox with an axe handle. Charges have been filed with the TLV Municipal Court. With the new laws now in effect, a person found guilty may be fined up to $219 per instance. Additionally, he may also be required to replace the damaged property at it's current replacement values.

A resident of Timber Cove reported a brick was thrown through his car window by unknown person(s) on December 16, during the night. No descriptions are available of those responsible. A surf board was reported stolen from an open garage on December 21.

On December 23 a 19-year-old man lost control of his vehicle, went over the curb and crashed into an unattended vehicle in a driveway. He then drove away from the scene, went home and retired after leaving his damaged car in front of his house. However, a witness had followed him and the police were called. Charges have been filed with a hearing in January.

On Christmas day, a resident attempting to thaw an outside water pipe set a small fire on his outside wall. After extinguishing it himself, the fire department was notified and responded to be certain all the fire was out.

A disabled vehicle, left for 2 nights on the roadside at Old Kirby and Timber Cove Drive was vandalized December 26. However, nothing was taken. This was an act of destruction with no reason.

Only one report was received this month concerning stolen Christmas lights. This contrasts favorably with previous December when upwards of 15 reports were made.

* * *

New Neighbors. . .

In spite of the inconvenience of moving during a holiday season, Taylor Lake Village welcomed several new families.

Gerald & Linda Dsouza
[redacted]
From: Aiken, S. Carolina

H. Wayne & Sherri Beck
[redacted]
From: Ashland, Ky.

Joe & George Henkel
[redacted]
From: Galveston, Tx.

Richard & Lesley Keenan
[redacted]
From: Victoria, Tx.

James & Kathy Field
[redacted]
From: Friendswood, Tx.

William & Penny Halsell
[redacted]
Boy 2; Girl, 3 months
From: Pasadena, Tx.

Darryl & Patty Morrison
[redacted]
Girl 10; Boy 17
From: El Lago

Phillip & Patsy Staggs
[redacted]
Boy 10; Girl 13
From: Pampa, Tx.

If you have moved into Clear Lake Forest and have not been contacted, please call JoAnn Gibb at [redacted] so that she can bring you a welcoming packet. Newcomers to Timber Cove who have been missed should call Mary Bob Ingram, [redacted], and she will deliver your welcoming packet.

Armand Bayou lists winter activities

A weekend field trip to Aransas National Wildlife Refuge is planned February 25-26, to observe our famous Whooping Cranes and a variety of other interesting wildlife residents. The tour of the refuge will be by car, on foot, and on the boat, "Whooping Crane," to see the birds at close range. This trip will leave the Nature Center parking lot at 6:00 a.m. Saturday morning and return around 10:00 p.m. Sunday night. There will be the option of spending Saturday night tent camping at Goose Island State Recreation Area or in a motel. Besides the Whooping Cranes, expect to see Sandhill Cranes, White-tailed Hawks, loons, caracaras, Wild Turkeys, javelinas, and many species of ducks. This trip will be led by two ABNC naturalists, and transportation from the Center is provided.

Cost is $60 per person which includes the boat ticket. A $20 non-refundable deposit is due by February 11 and the $40 balance on February 18. The trip is limited to 10 people. Contact Pat Grimes at 474-2551 for more information.

A beginning bread baking course will be offered Saturday, February 11, 11:45 to 3:00 p.m. Join us in the kitchen of the Hanson House as we dispel the myth that bread baking is difficult and time-consuming. We will grind wheat and discuss nutrition while baking bread in the woodburning stove. Come let us show you how you can make one slice of toast a complete breakfast.

Cost is $10, and the class is limited to 10 participants. Peggy Perkins is the instructor. Contact Pat Grimes for more information at 474-2551.

* * *

NICOLAS AND SEAN SOMOANO pose with Santa Claus (aka Bob Ennis). The Forest Garden Club sponsored Santa's visit giving area children a chance to make their wishes known and their parents a chance to have their child's picture made.

Winter Tennis Notes

Fall 1983 Men's Tennis League Results:

A League
1. Mike Grant
2. Dick Morris
3. Don Schaezler

B1 League
1. Bill Leliever
2. Monty Crawford
3. Tie with Charles Brod and Pete Frank

B2 League
1. Tom Archibald
2. Bob Key
3. Walt Stabell

B3 League
1. Wayne Hampton
2. Tie with Leo Craig and Al Schneider
3. Sudhir Bhutani

Tennis or Racquetball lessons available at reasonable rates. Call 482-5360.

Congratulations to Kella Johnson of Clear Lake Forest who took first place in the Fall CLF Tuesday morning Tennis League. Second place winner was Donna Fultz of Timber Cove.

Brook Forest Ladies' singles pyramid begins in March. For information call Karen Rozdilsky, 488-3614.

* * *

Harris County to repave Old Kirby Road

On December 7, 1983, the regular meeting of Taylor Lake Village City Council was held with all Aldermen and Mayor Greytok present. The resignations of Nick Minning, Court Clerk, Kim Williamson and Annette Aldape, Maintenance Department employees, were accepted.

City Council met again January 4, 1984 with Mayor Greytok, Aldermen Ed Stewart, Pete Goudreau, Susie O'Connor, and Jim Cumming present. Alderman Bob Ingram was absent. Mayor Greytok reported that Commissioner Jim Fonteno told her Harris County has budgeted funds to repave Old Kirby Road. However, Greytok suggested citizens call his office (221-6220) to get the job moving and let Fonteno know we are concerned about it.

During a public hearing to receive citizens' recommendations on the use of Revenue Sharing Funds for fiscal year 1983-4, a citizen suggested that action be taken to solve the continuing drainage problems in El Lago Estates. The $50,000 to $60,000 is to be used for special projects for which tax money is not available. Barbara Billetter was appointed at a salary of $4.50 per hour as Court Clerk, and Patsy Day at a starting salary of $1200 per month, replacing Ted Beason.

* * *

FASHIONATION

by: Peggy Morrow

Spring is just around the corner, and, with it, all those beautiful new clothes! But as I have mentioned before, a well coordinated wardrobe takes some time and planning on your part. Before you hit the stores with your money burning a hole in your pocket, consider a few preparatory steps.

It's not too early to get out all your Spring clothes and try them on. If you want the biggest selection from which to shop, you must know what you need and get shopping now. Set aside anything that doesn't fit and make a list of "wardrobe holes" that need to be filled. Buy all the newest fashion magazines and comb through them for the latest Spring/Summer fashion ideas. Especially look for ways to update your classic pieces, like pants, jackets, and skirts through the use of accessories. Don't overlook fashion shows and store mannequins and displays for fresh ideas. The fashion sections of the Houston papers also do a good job of highlighting the latest trends.

Make at least one "just looking" shopping trip so that you can see in person all that you've read about. Try on some things to see which of the new silhouettes or hem lengths look the best on you. Don't allow yourself to buy anything on this trip. This is planning time. Then go home and make an organized list of everything you would like to buy to pull your wardrobe together this season. Put the most important at the top so that you don't run out of money before you buy the most important pieces. Now you are ready to shop intelligently for your wardrobe! You will find that you will make fewer mistakes and not become overwhelmed by the sheer size of the selection that we have here in Houston. All it takes is a little of your time.

As you shop this season keep in mind some of these color trends:

The Fruity Brights: As in past seasons, we will again be confronted with a fiesta of bright colors but the newest are citrus spiked. The fashion sophisticate will wear several at one time mixing lime green, lemon yellow, and orange peel for instance. It's a clear, clean color palette and particularly suited to the Houston scene.

The Powdered Petals: These whitened colors look as if they were dusted with powder. Very pale and ladylike, they include such colors as peach, powder blue, baby pink and a full range of naturals. I viewed the Nippon Spring collection recently at Sakowitz and these colorations made up a large part of the collection.

The Classics: Of course the classics perennial favorites, navy and white and black and white, are still around. We just never seem to tire of a sailor motif done in navy and white and this year is no exception.

The Spicy Deeps: These rich dark colors such as sage, paprika, ginger and nutmeg look especially good in primitive prints and crinkle cottons. Combine them with black for a very sophisticated summer look.

Try to incorporate some of these new color stories into your wardrobe planning this season to give it a fresh look.

* * *

WEBELO DEN LEADER BILL CARTER recently was honored with a CPR District Award by the Bayshore District for breathing life into a dying unit--Pack 952.

Cub scouts plan banquet

During the Bayshore District Appreciation dinner held at Gilruth Center in early January, Pack 952's Webelo Leader Bill Carter was presented with a CPR District Award for breathing life into a dying unit. Carter was recognized for playing a key role in revitalizing Pack 952 when he moved into the area 3 years ago. He took on the role of Webelo leader when his son was a first-year Cub back in 1981-2, was Cubmaster 1982-3, and this year is a Webelo leader for his son's Den. He has also been very active as a Committee member during this time.

Pack 952 distributed luminarios to Brookforest and Middlebrook for McCarver Realtors and earned $300 for their organization. Following the distribution, the Cubs met back at the Scout Hut in Baronridge Park and had a Christmas party. Each Cub brought a gift that was distributed through St. James Presbyterian Church in LaPorte to the Gulf Coast Charities of LaPorte.

Sixteen Cub Scouts from Pack 952 greatly enjoyed hiking through Armand Bayou Nature Center on Super Bowl Sunday. Following the hour and half tour, during which Bayou guides pointed out various plants and animal tracks, Mr. George Mulcahy, an expert in survival equipment, showed the Cubs the wide variety of emergency gear available to Air Force pilots. Among the more interesting items demonstrated were parachutes, space blankets, flares, emergency lights, knives, and compasses. Some of the Cubs were also treated to the wonder of C Rations. This enjoyable program was arranged by Loren Shriver.

The annual Blue and Gold Banquet, always a highlight in the yearly activities, will be held Wednesday, February 22, 6:30 p.m., at Ed White School. A spaghetti dinner catered by the Colosseum Restaurant in Clear Lake City will be featured. Tickets are $4 per person and must be purchased by Wednesday, February 15. The guest speaker will be Space City Aquatic Team Coach George Breen who will speak on the subject "The Olympic Experience."

* * *

Dr. Alfred R. Neumann

UH-CL names library for Alfred Neumann

The Board of Regents of the University of Houston passed a resolution naming the library for Alfred R. Neumann, honoring the campus' founding chancellor who died May 23, 1983.

Neumann, who resided in Clear Lake Forest, was chancellor from 1972 until 1982. He was born in Frankfurtam-Main, Germany in 1921 and came to the U.S. in 1937. He earned a bachelor of arts degree at Marshall University, a master of arts at the University of Kentucky and Harvard University, and a doctorate in German Literature from the University of Michigan. In 1952, Neumann joined the University of Houston as assistant professor of German. He served as Dean of the College of Arts and Sciences from 1959 to 1972 where his principal interests were the university, community service, and music. For 17 years, Neumann wrote the program notes for the Houston Symphony. He chaired the national boards of numerous academic and professional organizations.

The Alfred R. Neumann Library consists of more than 650,000 volumes and microfilm reproductions of books and other publications. It serves 15,000 students, faculty, staff, and community residents each year and is the first Texas library to have fully automated catalogue and circulation operations. The automation makes it possible for the library staff to make better use of materials, and serve the public more swiftly.

The Neumann Library is housed on the second and third floors of the Bayou Building on the UH-Clear Lake campus in approximately 101,000 square feet, with a seating capacity of 950. There are various special collections including the largest collection of Women's Studies materials in the Southwest. The collection also includes 32 newspapers from the United States and Europe and the complete editions of the Galveston Daily News from the first edition in 1865 to the present. The Pollard and Redgrave, and the Wing Collections include every book published in England from 1475 through 1700. The Dee Wallace Poetry Collection consists of 1,500 volumes principally by Texas poets. The Colleen Farrington Collection deals with women in business.

The dedication ceremonies were held December 8 in the Bayou Building on the Clear Lake campus.

* * *

DEADLINE FOR MARCH LOG ISSUE FEBRUARY 15

Residents opinions heard by CLFCA

by Peggy Niksich

The Clear Lake Forest Community Association met November 21 with all members present: Ray Hischke, George Rigby, Bob Webb, Sallie Foster, Mark Sheridan and Secretary Nancy Fleetwood.

In a question concerning a possible increase in the community service charge, Jan Kessmann asked if the Community Association could decrease budget expenditures by cutting legal fees used in deed restriction enforcement. Kessmann questioned if the city (TLV) could take some responsibility under their zoning ordinances. Board members answered that they are bound by the deed restrictions and cannot release their legal responsibility, but they do cooperate with the city whenever possible. Kessmann also stated hope that, if the Community Association needs to initiate recreation fees, they would keep swimming pool and tennis court use together and not have separate memberships. When asked by Kessmann to take a stand on the fire protection issue facing the city, members decided to do their own research and express their opinion individually to the city council members.

With the insurance settlement due to Hurricane Alicia being nearly $30,000, repairs to the roof at the pool house, the pool fence, and park building will be made. The pool resurfacing project will also be done. Financing was discussed and members voted to accept the bid of Joe Alvarez of $22,490 to resurface the pools. The board will wait for results of mill tax survey and finance information before actually awarding the contract.

In other business Richard Whitlock presented the Cub Scout Pack 952 charter to the Board. The CLFCA sponsors the local troop. Thanks was expressed to Sallie Foster for acquiring and posting the signs announcing Community Association meetings. A written request was submitted by Peggy Morrow for use of the park building for a self-improvement course.

George Rigby reported the tennis courts' fences were straightened with the help of five CLF residents. All the lights are in working order and the Park building air conditioner was repaired for $30. The TLV city council requested cooperation in planting crape myrtles at the Willow Hill entrance. Members voted to purchase $30 worth of the trees.

* * *

SNOW IN TLV????? That's right, Timber Cove Drive looked like a New England village and was featured on several local TV stations.

"Arbor Day" by Grant Wood (1932), depicts the planting of a tree at a rural school in Northern Iowa. This beautiful picture brings to mind memories we have of many Arbor Days. Through the years it has been celebrated by school children, Boy Scouts, Girl Scouts, Conservation and Civic groups. The purpose is to impress the value on both children and adults and, frequently, the celebration honors famous naturalists, conservationists or others of renown.

The Arbor Day movement was begun in the 1800's when a number of public spirited persons, alarmed by the rapid deforestation of many sections of the United States, urged that trees be planted systematically. By April 10, 1872, a day set aside by the state of Nebraska, more than one million trees had been planted. Many organizations and individuals received awards for their efforts. Within 20 years, more than 100,000 acres of land in Nebraska were turned into forested preserves. Then Kansas, Tennessee, Michigan, Minnesota, Ohio and West Virginia followed Nebraska and adopted the observance. By April 22, 1885, Arbor Day was made a legal holiday. All of the United States, District of Columbia, Guam and Puerto Rico observe the occasion by declaration of a legal holiday or by a governor's proclamation. The date varies because of climatic conditions. Texas marks the third Friday in January, a legal holiday and a "special observance day".

Reforesting is particularly important on this Gulf Coast. The damage from Hurricane Alicia is still being assessed. The damage was astronomical. Tens of thousands of trees were lost. Others were damaged and stripped of their leaves. Careful pruning and nurturing helped to encourage new growth so that trees and shrubs wore the fresh green mantle of Spring in late August. Many plants, so confused, burst into "out of season" bloom. Time had been all too short by late December for plants to become dormant or plant material to harden before the blow of a lasting freeze. That old chestnut, "if you were away for the weekend--you missed Winter" would not apply to this.

The Gulf Coast experiences these freezes about every quarter of a century. It is difficult to say what will and what will not survive. Even very old plants look singed. We have been advised not to prune back or dig up freeze-damaged plants until spring arrives and new growth appears. Also, wait until your lawn shows new growth before disturbing the turf, then cut it close and discard the clippings and fertilize. We always hope a hard freeze will mean less bugs. "No", says a pest specialist of the area, "they survive by burrowing deeper". Freeze or not, this is the time to spray with a dormant oil. One spraying is enough to smother any insects or their eggs hiding in the leaves or bark of your outdoor plants. A garden diary becomes particularly important now. A record of what has and hasn't survived will prove valuable as you rework your garden plans.

* * *

CLFCA reaffirms vehicle ban in park

by Peggy Niksich

In attendance at the CLFCA meeting on January 16 were Sallie Foster, Ray Hischke, George Rigby, Bob Webb and Secretary Nancy Fleetwood.

Results tabulated from both the questionnaire printed in the Forest Log and the random telephone survey of residents are positive.

The pool resurfacing project is underway. The tiles around the edge of the lap pool stress-cracked during the December freeze and will be repaired. Pool Management Chairman Bob Webb reported that the contract has been signed with new manager Sarah Mosca. Applications are currently being accepted for assistant managers, life guards and maintenance crew members. Mosca reported she is still trying to locate an underground leak. Also new door locks and life guard chairs will be installed at the pool grounds. A new ice machine is needed.

Activities Chairman Sallie Foster said a Luau party sponsored by the CLF Women's Association will be held April 28 at the pool. George Rigby, Parks Chairman, found playground benches nearly destroyed by recent vandalism. The board wants to reaffirm their long standing policy of not allowing any type of motorized vehicles in any area of the park. They are requesting the TLV police to assist in the enforcement of this posted policy.

Richard Whitlock requested and was given permission for the Cub Scout Pack to hold a car wash at the swimming pool parking lot on April 8. The Community Association expresses their appreciation to the CLF Women's Association for their donation of a concrete picnic table set now installed in Baronridge Park. A request was received from the tennis group for $460 to replace some damaged windscreens at the tennis courts.

Clear Lake Forest Community Association elections will be held Saturday, April 7. The deadline to file for any of the three positions is Thursday, March 8. If you are willing to serve your community please forward a written letter of intent to run to Nancy Fleetwood, 4226 Honey Oaks by March 8.

* * *

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A VIEW OF THE DECK OF VULCANUS II. A ship especially designed to be used to incinerate hazardous wastes at sea, was recently observed in action by TLV's Diane Sheridan. Chemical Waste Management of Oakbrook, Illinois, invited Sheridan to watch their subsidiary, Ocean Combustion Services of Rotterdam, conduct the "burn" in the North Sea.

TLV resident observes North Sea incineration

by Peggy Niksich

When Diane Sheridan first got the call inviting her to spend a week in the North Sea, her reaction was "Who, me?" She received the invitation from the Washington, D.C., office of Chemical Waste Management, Inc., an Oakbrook, Illinois company whose subsidiary, Ocean Combustion Services of Rotterdam, was conducting a "burn"--incineration of hazardous wastes--at sea.

Diane is currently the Hazardous Waste Director for the League of Women Voters of the State of Texas. The League currently has no position supporting or opposing ocean incineration. Diane was sent by the League to gain firsthand knowledge about incineration of liquid organic wastes. Her purpose was to be an independent observer and, afterward, to write an objective description of her experience. She did not make a judgment as to whether this is a viable alternative for waste disposal. Upon her return, she did deliver her report at an EPA public hearing in Brownsville regarding the issuance of three incineration permits at a site in the Gulf of Mexico about 165 miles southeast of Galveston. To maintain the independence of her report, it was not seen by Chem Waste until after publication.

In preparation for her trip in November, Diane spent hours on the phone speaking with over 35 people on what to take and how to be a good observer. Among the suggestions were: "watch the dials, use your senses, and dress as if you were going camping in Northern Minnesota". On the plane from New York to Paris, she categorized all the suggestions into a notebook which later aided her in taking about 50 pages of notes while aboard the Vulcanus II.

The schedule allowed only a four-hour stop-over in Paris. So after a quick drive through town, she rode the train to Le Havre where she boarded the incineration ship. Two other observers representing Greenpeace, an international environmental group, were also on board. In the six days aboard, Diane spent many hours exploring the ship, taking pictures, asking questions of the 19 crewmen and managers, reading incineration literature, and taking notes. Crew members on Vulcanus II are of several nationalities, but all spoke enough English to adequately answer questions.

Expecting rough seas and cold temperatures in the North Sea, those aboard for this particular sail were surprised with "warm" 30° to 40° temperatures and seas of only three feet with little wind. Diane, not wanting to spoil the trip by getting seasick, stocked her bags with every known form of seasick medicine. She relied mainly on ear patches.

The ship is divided into a clean area and a contaminated area. Protective coveralls are worn at all times in the contaminated area and then kept in a locker room. Diane took old shoes to wear in the contaminated area which were left on ship to be eventually discarded with equipment cleaning rags in a drum headed for land incineration.

The Vulcanus II is one year old. It has been constructed for ease of operation and to include many safety measures. It was designed to minimize the risk of damage from collision and the risk of leaks or spills entering the environment. It is designed to incinerate only liquid organic waste usually chlorinated hydrocarbon. Emissions are controlled by limiting what waste is accepted. Restrictions are set by the permit under which the ship operates. Monitoring and enforcement of the North Sea site, half-way between England and Denmark, are the responsibility of the Dutch government.

Wastes being stored on land are loaded onto the ship through a series of valves and hoses in cargo tanks When the burn site is reached, waste is piped from the cargo tanks through a pipe tunnel, on to the pump room, through several filters and then into the incinerators. During incineration, a plume is emitted from the stack and trails into the sea behind the ship. Though not fond of heights Diane did join the other observers in a "before and after" inspection of one of the incinerator stacks by climbing up high to peer over its edge.

OCS has applied for a permit to operate their incineration ship at a designated site in the Gulf of Mexico. Ocean dumping regulations are international in scope. The EPA is in the process of writing regulation criteria for the Gulf and taking public comments before any permit is granted. Many questions have been raised--many remain unanswered. Diane stated in her report, "Many people feel that ocean incineration is a viable alternative to landfill or injection well disposal of hazardous waste. For others, the technology presents unacceptable risks to human health and the environment. Like most hazardous waste issues, ocean incineration can be a controversial topic with ramifications reaching beyond the technology itself to the environment, economics, and politics.

Some issues of public concern are not addressed by traveling on ship," says Diane, "but this excursion did permit almost a week to learn about the ship's design and operations, as well as the abilities of the crew, an opportunity that doesn't occur when touring a facility for a few hours." For Diane it was a week she will never forget.

* * *

—MARK YOUR CALENDAR!—

February 2

American Field Service, Clear Lake Park Building, 7:30 p.m.

February 3

"Government: Public Perceptions vs. Reality," G. Gordon Liddy, UH-CL, Bayou Building, Atrium II, 8:00 p.m., $3 with UH-CL identification, $5 General, Q&A after speech. Call 488-9288 for information.

One of the cleverest and most entertaining musicals of the American Theatre, "Once Upon A Mattress, will open its run on Friday, February 24, at 8:00 p.m. in the Bayou Auditorium at UH-CL. "Once Upon a Mattress is the musical version of the riotously funny love affair between Prince Dauntless the Drab and Princess Winifred the Wobegone. Real fairy tale fans will quickly recognize "Mattress" as the familiar story of "The Princess and the Pea."

February 6

Through April 30, CPA Examination Preparation Course, UH/CL, Bayou Building, Call 488-9533 for information.

February 9

CLF Garden Club, 1210 Goldendale, 9:45 a.m., "Bulb Selection, Culture, Etc." by Sally McQueen Squire.

Timber Cove Garden Club, 134 Lazywood Lane, 7:30 p.m. Mark Markley 'Future of Clear Lake Area."

February 11

Beginning Breadmaking, Armand Bayou Nature Center, 11:45 a.m. to 3:00 p.m., call 474-2551 for information.

February 13

Ed White PTA, 7:00 p.m., Ed White Elementary School.

February 15

LOG DEADLINE

Taylor Lake Village City Council, City Hall, 7:30 p.m.

February 16

Forest Garden Club, 4226 Honey Oaks, 7:30 p.m.

February 18 & 19

9th Annual Gem and Mineral Show, 9:00 a.m. to 8:00 p.m. Saturday; 10:00 a.m. to 5:00 p.m. Sunday, Pasadena Convention Center, 7902 Fairmont Parkway, Pasadena.

February 20

Washington's Birthday - CCISD Holiday

Baseball Field practice time sign-up, Baronridge Park Building, 7:00 p.m.

CLF Community Association, Park Building, 7:30 p.m.

February 21

CLF Women's Association, 522 Lorie Lane, 10:30 a.m. Call 538-1858 for information.

February 22

Cub Scout Pack 952 Blue and Gold Banquet, Ed White Elementary School, 6:30 p.m.

February 24

"Once Upon A Mattress, UH-CL, Bayou Auditorium, 8:00 p.m., $5 adults, $3 children under 12. Call 488-9334 for reservations or information. Also performed February 25, March 2, 3, 9, and 10, 8:00 p.m. and March 11, 2:00 p.m. No late seating.

February 25-26

Armand Bayou Nature Center Whooping Crane Watching Tour, Aransas National Wildlife Refuge. Call 474-2551 for information.

February 27

Bay Area Alzheimer's Disease and Related Disorders Group, St. John's Hospital Cafeteria, Nassau Bay, 7:30 p.m. Call 334-4147 or 334-1165 for information.

March 1

LOG Distributed

* * *

For BAY AREA LOCAL NEWS

THE CITIZEN

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488-1108

EXERCISE BY IRIS

IRIS RIGBY

So the holidays are finally behind us, the Christmas decorations have been put away, and everything looks as it did before the jolly season began--with the exception of you! Those jovial food galore parties may have been a little too much for your willpower and your scale mercilessly announces that you have managed to gain five pounds in five weeks. What's worse, your clothes are too tight and you feel tired and discouraged. All right, so you overindulged; but that is a thing of the past. Don't let nonproductive discouragement become overwhelming. This is 1984 and you can make it the year of a fitter and trimmer you. So let's devise a game plan for success.

1. Assess your current position. On a piece of paper write down how much you weigh now, how much you should weigh and how many pounds you would like to lose. Also write down how much you eat, how active you are, and how active you would like to be.

2. Re-evaluate the results of your previous diet and fitness plans. What went wrong. Did you choose a food plan that you could only adhere to for a short time because it was nutritionally unbalanced or simply too rigid? Remember that the real secret to long term weight loss lies with your ability to stay with your program for the rest of your life.

3. Set realistic goals. If you are unrealistic about your expectations, you will become discouraged and demoralized and your motivation will end up in shreds. So set short term goals that you know you can achieve. Success is the best reinforcement for more success. Losing 1 pound a week and exercising every other day are certainly achievable goals.

4. Overcome the "black or white" syndrome. This means do not expect yourself to be perfect. Nobody is perfect. Statements like "I will resist all temptations" or "I will stick to my diet plan every day" set you up for failure. Give yourself a chance. Every now and then you will go overboard with food, but do not let a little backsliding cause you to abandon your goals. Do not scold yourself but learn from your mistakes and go on to the next day and give it your best.

5. Get Started!! Thinking and planning are important but do not forget that the doing, not the thinking, gets the results. You must stop waiting for next Monday or next month when you think you will suddenly find the willpower to start walking daily or jogging or joining an exercise class. That perfect moment almost never comes. Start now and each day will bring you closer to your ultimate goal of becoming a fitter, slimmer, and healthier you in 1984. Remember that the keys to permanent weight loss are aerobic exercise, which burns off massive amounts of calories and a sensible, nutritionally balanced diet which does not starve you.

So what are you waiting for? Cast off the post-holiday discouragement, get motivated, get strong, and get into shape. Till next time stay healthy and happy!

* * *

TIMBER COVE PROGRESSIVE Dinner party was attended by over 100 residents. TC Garden Club would like to thank each of the hosts and hostesses for a successful evening. They are: Mr. and Mrs. Bill Frazier, Mr. and Mrs. Jim Armour, Dr. and Mrs. Amin Ebeid and Mr. and Mrs. Dale Cannon. Pictured above are: (left to right) Tony Galt, Samia Bichara, Jailane Ebeid, Amin Ebeid, Ava Galt and George Gibbons. They are in front of the Armours Christmas tree, which each year becomes the focal point of the dessert party.

UH-CL courses offered

A review course for anyone planning to take the Certified Public Accountant exam is being offered at the University of Houston-Clear Lake. The course, sponsored by the UH-Clear Lake Center for Administrative Development, will be held from 6:00 p.m. to 9:00 p.m. on Mondays and Wednesdays from February 6 to April 30, in the Bayou Building. The course will include discussions, lectures, and sample problems presented by UH-Clear Lake faculty members. It will be divided into three sections--business law, accounting theory and practice, and auditing.

The complete program, including all sections, will cost $595. Individual sections may be taken separately for a reduced fee. The fees include all necessary texts, any additional study aid materials, and parking. For registration information, call the Center for Administrative Development at 488-9533. Enrollment is limited, and registrations will be taken on a "first come" basis.

* * *

UH-CL to present "Once Upon a Mattress"

"Once Upon A Mattress" can be seen on Friday and Saturday evenings, February 24, 25, March 2, 3, 9 and 10 and Sunday afternoon, March 11. The play will be presented in the Bayou Auditorium on the UH-CL campus.

Curtain time is 8:00 p.m. for the evening performances and 2:00 p.m. for the matinee. There will be no late seating. Tickets are $5 for adults and $3 for children under 12 and are available at the University Information Desk or reservations may be made by phoning 488-9334.

In addition to these public performance, special matinees have been scheduled for area schools on Thursday, March 2 and 8. For more information, please call Dr. Roger Schultz, 488-9250.

The production is directed by Theatre Professor Roger Schultz with musical direction and choreography by UH-CL Alumni, Dick Kremer and Jennifer Webster. The scenic designer and costume designer are Theatre Professors Konrad Winters and Sallie Biggs Pate. Sylvia Wilson and Terry Ogden are assistant directors.

* * *

Seabrook Intermediate has a busy Fall

Seabrook Intermediate School students donated $379.65 for the restoration of the Statue of Liberty. Student Council officers, representatives and alternates sponsored a child for Christmas. By contacting the Harris County Welfare Agency, students were able to obtain the name of a student as well as his Christmas list. For a Christmas project, the Student Council officers and representatives were auctioned off to other students. The money collected, $283, was donated to the Stepping Stone, a home in League City for teenage girls.

Students are producing their own literary magazine this year. By a vote of the student body the title, The Spartan Spectrum, was selected from a number of student entries.

The SIS Honor Society sponsored a Scholastic Book Fair in December. The funds ($232) will be used to purchase software material for the school's computers.

* * *

NUMBERS TO REMEMBER

CL EMERGENCY MEDICAL CORPS: 488-0022
TVL POLICE DEPARTMENT: 333-9111
SEABROOK FIRE DEPARTMENT: 474-2101
CRISIS HELPLINE: 488-7222
CLCWA: 488-1164, Nights, Sundays, Holidays: 488-0022
TLV CITY OFFICES: 474-2843
TLV MUNICIPAL COURT & POLICE: (non-emergency): 474-2845
POISON CONTROL: 654-1701
EMERGENCY NUMBERS for CLF homes on Stacy, Lorie Lane, and Shady Springs, Pasadena 477-1221

ED WHITE STUDENTS waiting for the school bus are: (left to right) Nicky Somoano, Scott Bishop, David Whitlock, Darin Maroni and Kathryn Lott.

BAY AREA ORGANIZATIONS

AAUW: Elaine Larronde (486-8187 or 757-3491 / 2547)
ALZHEIMERS DISEASE & RELATED DISORDERS: Leona Cook (334-4157)
AMERICAN FIELD SERVICE: Barbara Ladoulis (334-4033)
APPRENTICE THEATRE: Claire Harmon (480-1459)
BAY AREA CHORUS: Steve Ingrassia (538-2026)
BAY AREA SYMPHONY LEAGUE: Priscilla Heidbreder (333-4377)
BETA SIGMA PHI: Mary Ann Cole (333-3848)
CHAPTER EB OF PEO SISTERHOOD: Jane Sloan (538-3247)
CHRISTIAN WOMEN'S CLUB: Jane Crawford (474-3858)
CLEAR CREEK ART LEAGUE: Martha Palmquist (482-3775)
CLEAR CREEK COUNTRY THEATRE: Joanne Carr (334-2310)
CLEAR LAKE HOSPITAL VOLUNTEERS: Pat Allen (332-2511 X 189)
CLEAR CREEK NEWCOMERS' CLUB: Barbara Fahrenbruck (334-2745)
DEMOCRATIC CLUB: Ken McConnico (474-5051)
JSC BIKE CLUB: Sylvia Kinzler (334-2449)
INDIAN GUIDES AND PRINCESSES: Louie dePaw (474-5896)
LEAGUE OF WOMEN VOTERS: Marie Tribble (480-6120)
PANHELLENIC: Anita Slaughter (474-5458)
REPUBLICAN WOMEN: Alicia Casmus (334-5743)
ST. JOHN'S HOSPITAL VOLUNTEERS: Jo Nelle Hunter (333-5503 X 2149)
SIGMA ALPHA IOTA: Wanda Yelverton (334-2079)
WELCOME NEIGHBOR' CLUB: Jeaneen Stasney (280-9569)

CLEAR LAKE FOREST ORGANIZATIONS

BOY SCOUTS: Jim Knoedler (334-3182)
CLF COMMUNITY ASSOCIATION: Ray Hischke (474-4885)
CLF GARDEN CLUB (Mornings): May Walden (474-2978)
CLF SWIM TEAM: Norm Cox (538-1147)
CLF TENNIS COMMITTEE: AnneMarie Majewski (474-5206)
CUB SCOUTS: Priscila Ennis (474-4019)
FOREST GARDEN CLUB (Evenings): Anita Slaughter (474-5458)
GIRL SCOUTS: Jane Anderson (334-2138)

TIMBER COVE ORGANIZATIONS

TC CIVIC CLUB: Ike Eichenauer (334-5770)
TC RECREATION ASSOCIATION: Bobby Hebert (334-3301)
TC GARDEN CLUB: Lavinia Beebe (334-5633)
GIRL SCOUTS: Jane Anderson (334-2138)
BOY SCOUTS: Jim Knoedler (334-3182)

EL LAGO ESTATES ORGANIZATIONS

EL LAGO PROPERTY OWNERS ASSOCIATION: Einar Goerland (334-1476)
DIG N' DESIGN GARDEN CLUB: Alice O'Donnell (334-5157)

COMMUNITY MEETINGS

TLV COUNCIL: First Wed., 7:30 p.m.; Workshop on Third Wed., City Hall
CLF COMMUNITY ASSOCIATION: Third Monday, 7:30 p.m. CLF Park Building, Baronridge Park
TC CIVIC CLUB: As Announced
CCISD SCHOOL BOARD: Fourth Tuesday, 7:30 p.m., Administration Building, Clear Creek High School, League City
TLV PLANNING & ZONING COMMISSION: Second and Fourth Mondays, 7:30

Pump room is cleaned after each trip. Waste → tank (wash water + solvents). Oil is sprayed again to oil the floor.

- ~~burners out~~
  - pipes go thru one bin → inc. ~~to~~ room. Certified pipes. If a spill, → back to pump room. No pressure pushes waste in. Burners suck waste in
- burners –
  air; then fuel, chemicals. Any leak → into incinerator
- cleaning a burner could open room drop.

10k. Box is built onto burner to catch any, Smaee possibility. Tap out the spill into a bucket. Bucket goes to plastic pipe → pump room floor for pumping back to a tank

- spill on inc room floor → go to oil separator first → water overboard → oil to a tank (spill tank). all ships have that.
- ~~Part~~ won't allow a connection from inc room to tank. as OCS wanted. Small pipes w/ no pressure.
- chemical sewage treatment plant (grey + black water) treated then can go to sea. One tank at each end of ship

- leaks in load lines. Deck is black so leaks are easily detected. Load line seals renewed every 3-4 trips. If one leak, it's an indicator that others may be bad so they are checked + replaced

- tanks -

look → void spaces

✓ check — inspected every ____ trips. (Hard to fit in there so people don't enjoy going.)

- a leak in void spaces → ballast
- can ~~spell~~ smell a spill when tank is opened. Salt water in ballast = hole → ship to dry dock ASAP

- ~~Pit~~ tunnel -

green floor so you can see drips. Can also smell/the room is ventilated first. before anyone enters.

- pump room is the most likely (99%) place to have a spill so it has special pump + ~~pump~~ equip. sit on grating + ~~floor~~ has black floor 1½' under. Greasy floor to help prevent corrosion if there are drips.
- smell a leak when you enter the room. ~~Don't~~ (even w/ a cold, you can smell like you do w/ ammonia)
- you can see a spill sloshing around w/ the roll of the ship.

✓ check pumps → start pump → pump directly to a tank — #4 Starboard

(~~Test~~ bilge pump is auto.

how do they do wen gas sample problem

BURN

Startup

Do you start with clean fuel → "clean" waste → old waste

clean fuel (Verdegas) – when temp. is reached in Europe, start heating 6 hr. before ship to 800° | use heavy fuel till 1200° when valve automatically switch to waste

How long does startup take –

First time on a voyage – 2-3 hours though 1-2 is probably more typical. When checking the systems before starting to burn, it was discovered the stack gas sampling didn't work. They finally got it going but could not burn more than 4 hrs. without it, therefore facing a trip back to Antwerp or else helicoptering in the next port.

After burner cleaning | 10-15 min.

How smoothly does it progress – Once the efgas was fired, it went well. When the burners are first fired, there is black smoke & flame. Then when waste is first pumped it is very hectic as they try to achieve the proper waste inflow from various tanks. 7 men are directly involved at this stage, & being around the control room to watch. Once one is proceeding on the right mix, they go well. One temp. indicator was malfunctioning but a computer on the control panel is used to see if the problem is really the temp. It was not, rather it was the control.

11-5 burning
1 port Mathis waste
2 port waste
to gas

(Choosing the tanks) – fuel → ~~waste~~ Tank 1 which has easily burned waste + Tanks 3 or 4 which don't burn as well. (Kcal/gm.)

about 3000°

~~the~~ Valve won't open to let chemical into the incin. until it hits 1200°. Can't do it manually. If a stop is required, ~~fuel~~ waste flow stops fuel, then the air, so whatis left in the line will be incinerated

BURN

temperature avail ? pcb content ?

Flame

1180° min. — Why Choose 1200 °C. ∴ Dutch govt chose + discussed in Oslo → here but 1303° for EPA

1200° avg. = 1200-1250

LDC - temp. at which the most dangerous wastes can be inc. low temp will heat waste enough. Dangerous area = 800 - 1000 because other products can be formed + only partially decomposed

1180° or lower valve shuts off 1200° - starts again but go to 1250° instead for a margin of error

Is flame homogeneous across the burner ?

How do we Know ?

each burner pulls in its own waste. During cleaning, temp will drop a bit Pyrolysis hoppers in the flame + each burner handles its own waste. A peephole also shows that all are burning.

How is flame kept consistent and within regulated limits

use air to control. Testing for O_2 in stack indicates whether there's too much or too little. Dials to read in ~~the~~ room + control rm. are big

what are the minimum / maximum / avg.

800° - heat up to 800° before site in Europe

1200° (1150°) - M. site - 1200° to make the valves auto. open can go down to 1180° before it shut off. (used to be 1150° but Govt. has rec. change to 1180°)

check figures

no max. temp - just no flames above the stack to check for flame coming out = TV in control rm plus person on bridge

Changing ~~tank~~ from one tank to possible waste will be of higher caloric value. People can hear waste changing as well as see on dials + more quickly to change dials

Flames went briefly above deck. The Port Inc. about 2:30 pm on Nov. 6. Someone came outside to check - flaming stopped in a couple minutes.

Discovered that burke sometimes get their wings singed + the crew collect them is boxes in the accommodations area. They don't seem to know that it's so hot. (via Steve)

Helmut described the birds who sat on the deck on migratory season. birds are attracted by the heat + light and fly in flocks high above the racer.

Due to bad waste, flames are coming up more than usual, yet still not frequently. I can't imagine how they can avoid this when ~~they~~ changing tanks. What seems crazy is that they notice it and do something quickly, which they do.

BURN

Efficiency

How is DE measured

Is it based on exotic sampling during test, + assumed from CE after that?

- was tested in the trial + other tests → formula
- put info → computer → DE measurement
- Dutch govt. invented the formula $\frac{CO_2 - CO \times 100\%}{CO_2} = 99.9\%$ CE

How is CE measured?

CO, CO_2, O_2

temp → CO, CO_2 levels

O_2 does not make the CE; it just helps keep the flames inside

How much is known about what goes on in the incinerator?

Years of experience ~ 10 yrs. — using basic design the same; but some equip to get waste into burner is improved (atomizer vs. old hose-type flow)

better traffic patterns in VII make controls easier

How is carbon buildup on rotary cup burners handled?

checked via pressure changes

cleaned as needed. Incinerator can run with 2 of 3 burners going at top speed. This permits 1 to be cleaned at that time, w/o shutting down. Fuel is also burned at this time.

- when waste flow → inc, there is resistance → pressure change → watch info, hole in flue. + if flame is not ~~incinerator~~ uniform → cleaning. The change is gradual + there's time to react. Not sudden

burner cleaner -
start incin fuel for a few minutes to clear
system. When clear, they switch it off +
remove burner (one man puts plate in
front to block heat - wearing gas mask).
Bucket used to catch fuel drips.
Brush carbon buildup off into drums for
land - incineration or can put it in
pump room floor & back to tank, if is
small enough (like dust) to be able to
go thru incin. again

~~test~~

BURN

feed

How is feed affected by roll of the ship?

not affected. Fuel or waste is sucked into the inc. and pumped in under pressure.
feed lines are under brakes + even if tank level sloshes, feed remains same

How is feed rate determined?

(No flow meter on VI) new VI also have flow meter

Flow meters exist for ~~each~~ incinerator. ~~[redacted]~~

However, because they burn so many different wastes, they cannot be calibrated for each waste; feed for each type. Consequently, the Dutch govt. allows them a reasonable (5-10 %) but undeclared discretion Thus, the waste they load + what they burn. They continue to seek a better system. (one Schwing Flow Meters) (micro-Motion & Brooks)

Meter work on specific gravity.

What residue remains?

V. says none because waste is as liquid.
Refractories get contaminated. Manu. checks after each 3rd type + crew checks. Contam. trucks presently go to a salt mine disposal. (can't be incinerated by nature). Contam. is not severe ~~[redacted]~~ as checked by testing. But govt. wants proper disposal (Dutch govt → to my salt mines)

Ambient temp of burner room? (incinerator burner room)

V- usual 25°-26° C - bearable

11-6-83. Visited vic. room + found temp pleasant. Inc. shells cannot exceed 200° and were hot but touchable at about 100°.
Engine room + sampling room have no ventillation system as they were previously too hot. Again, they are fine. There's a lot of air for ventillation

Producers of chl/hydrocarbons mostly in Bmy. Users are everywhere. About half of the producers waste → o/i, nbt alk & OCS.

CWM1

Belgium
70 Km x 200 Km area of Belgium where ind. is centered

269,500 m. tons a year total
6,000 " are chl. waste
(2%)

Bmy has most basic heavy chemical ind. in Theu France = 2000 tons/year

Ownership of V/I + V/II
Is any govt. # concerned - no

Flag Monrovia

Why Singapore? V/I always under Singapore

Why (~~did it used to be~~) Liberia? V/II
Monrovia is liberian flag. V/I under Singapore. V/II under L. Done for US tax purposes? (v) Most of the crew is certified in more than one nation.

Relationship of OCS to CWM1
History - ~~owner bought OCS 3 years ago.~~ OCS a subsidiary of CWM1
OCS started in '68. Big generators of chlor. waste like Shell Boyer Solvay
1 of other companies. Hansa Bremen bought dry cargo ship → used & dump in sea + Rhine
Chem tanker → design incorp., Inc. for these + but was expensive so Boyer + Solvay dropped out + returned to dumping. Bmy requested they stay
So Boyer + Solvay built the VESTA. Hansa abandoned them so they did their own
1980 - Hansa went bankrupt.
~~So subsidiary~~ the OCS (in 1979 - OCS formed their own co.)
So 1980, OCS for sale. A couple cos. in Holland + Bmy to buy. Meanwhile a person from US appeared + bought it w/in 2 hrs. Ship getting →

Market analysis
What % of waste available for o/i
Ltd. in Holland. | Bmy has most | Belgium + France also
England keeps their own waste + imports more.
East Bmy likes to import waste. Stories of problems

Check

Future plans - V/I
Ships - can sail for 5 yrs, on the current certificates
Sites - will depend on whether work is available
Parts V/II - due to sail for 20-25 yrs.

1982 was V/I's date for a ~~this~~ survey done every 4 yrs.
+ feared it wouldn't pass. Planned to scrap V/I +
build V/II. So people in Europe were upset. Matthew's had
bad rep. Vesta small + full. Oral request from Dutch
for V/I to be refitted. (won't put on paper ~~but~~ because
scares by Oslo Commission's desire to limit O/i).
Holland has old land-incen. Built V/II in Papenburg, Germ
V/I went from Australia → Singapore to have fore
ship refurbished. Got a permit then. Antwerp is
overhauling the engines. Hasn't burned yet.

Cleanup

inert gas to fill tanks to push the O_2 out + avoid explosions

Normal

How is ship cleaned

accumulated dirt parts cleaned daily w/ fresh water. Constant painting

What happens to equipment used – rags, etc. go into drums for inc. on land (saw rags kept in bucket in inc. room. Things appear pretty neat.

Where does rinse solution go – depends on where it is. On deck under incinerator, dust is rinsed into water + it goes overboard. (assuming NCI.) ~~Bilge or Port~~ Other areas generally are cleaned + waste collected to go by pipes to the tanks or to be put into barrels + later sent for on-land incin. in France

per book + conversation

If metal or other items are contaminated, how are they disposed?

V/I had to be cleaned ~~by~~ see above

? refitting. Cut in pieces + ~~incinerated~~ in Taiwan?

How are incinerators cleaned?

When? ~~daily~~ after "burn"

By whom? crew

Where does waste water go? no w/w – just fuel

Clean fuel burned at the end to clean the incinerator inside inc. deck – cleaned several times during burn. Final clean w/ seawater then with freshwater. This w/w goes overboard because ~~OH~~ HCl is believed the only contaminant

tanks often have a little waste left at end of burn. Causes no problem as each waste load is similar enough = chem. hydrocarbons

under loading valve
if half a mile full, you had pump it into a tank
(breaking a seal to do — must call govt. to get
it recealed — report must be filed — may have to
wait for govt to come so ship can sail but ship is never in a
hurry. Small spill; you clean + dispose of rags + stuff
in drums
On deck, spills run toward wells.
What's left would be washed w/ solvents. Can use leaks
paint will peel + it will get repainted
after cleaning.
if spill went over the side, you'd be able to see it
because you can't repaint exterior during a trip

add loading — hose's blind flange is opened over the big bucket
— use a vapor return line. You'd see drops on deck
wipe up + rags go to drum
— hose is now connected + tested for air to see if's it
leaking + tightened. A new seal every time the
ship loads (hose to loading valve)
— hose could burst — pressure on board drops. Valve
closes automatically. On shore, pressure ~~to~~ build
up + valve automatically closes. Spill on deck
→ if max. if cohop's in the line. On shore,
they could suck it back into tanks a phone,
Wells go straight to tanks,

CLEANUP

Protective clothing

Where kept if reused — Lockers in aft section showers there also + safety showers

Shoes during voyage - in locker just inside entrance.

Dress. Must be changed routinely. Said crew doing for the sake of routine, it's usually done except when in port + when ship is clean. 11-6 only seen someone not change shoes once so far.

Why reuse?

not sure whether Am. will want disposable or reusable

How cleaned? + water to sewage plant

Washed in washer near engine room. Washwater goes to ~~sewage plant~~ sewage plant. If too dirty, they are put in barrels for land incineration

badly stained → grey showers + coveralls → drum. (~1 a trip)

Ship has a fairly large sauna whose purpose is not just recreational but rather a way to cleanse the workers skin. Some crew don't like using it (Spaniard) but are made to do so by Capt. or Chief Eng. I've seen it taken empty but expect I better not try to use it myself.

Usually done every day or so. Captain + Chief Eng. require them to do so - can tell because they smell

~ 150 drums a year of waste - contaminates stuff + sludge < shore tanks

~ 1 drum a trip of junk from ship

CLIMATIC CONDITIONS

Storms

COTP can refuse to let vessel sail if storm looks likely
V/II has been out in the North Sea in storms.
Sometimes safer to ride out storm away from harbor.

Wet weather

Effect on burn? Wet air forms added sodden HCl quenches plume reaches ~~ground~~ sea fast.

Where do acid gas, particulate go
Gas checked once all falls to sea, except for what can't be measured. An older report also checked. Particulates are handled by limiting the ash & heavy metals in the waste, so it will be the only trace contaminants

Temperature

Effects of hot/cold not sure except as they may relate to humidity

Air stagnation restrictions?

if air is calm, ship can sail to create wind.
Sometimes must do so. Trip XII, it was foggy + calm.
Took to sail to create plume ~~for~~ ~~of~~ ship - by the time the ship circled the area, the plume was gone the same smell lingered.

if weather is foggy, they have to stay away from rigs, etc.

CONSTRUCTION + LAYOUT OF SHIP

Construction

Safety measures - foam fire ext. "guns". CO_2 ~~[illegible]~~ engine room. Gas inert gas to get rid of O_2 in fuel tanks, CO_2
Life boat stuff

Piping diagrams
Where does waste go - deck → upper or lower levels of pipe tunnel
Piping diagram is around but hard to read

* Where can it go if leaks occur. Leaks in tanks go to a void space. Can then be contained + pumped _____ Leaks on deck go to well to be pumped to tank. Leaks from loading valve empties in big tin → barrels. Extra tank on deck for spills in loading line
Internal shut offs to limit spills to small area
each tank is separately constructed + surrounded by void spaces

How is line carrying fuel to incinerators constituted
Does it filter the waste, filtered several times. Last filter stops 1 mm particles + this then goes thru grator which cracks them. type of metal

Can atomizers clog - atomizers are used
Effects of such - burner can - reduction in flow → pressure drop → need to clean.

* problem I see: the inc. room has no way to pump leaks back to tank. Dutch govt. refused to allow OCS to install a line to do so. They required that leak in floor be washed down + go to the oil separator with the → grey water going over the side. Oily stuff goes _____.

✓

CONSTRUCTION & LAYOUT OF SHIP

How is ship inspected after a voyage / what is checked
By whom
One a year - checked for seaworthyness
one every 2-4 yrs. full certification survey

Construction of stacks + vents

Will HCl corrode them - sea air + HCL cause frequent
In what time period painting, just like any ship
Para Inc. painted every 2nd trip.

Metals used

Welds

How is metal checked in cold + hot sides of incinerators
Shell temp at 3 points per incin. (at hottest part of
incin. near burner)
3 Mid-level
1- Upper level

CONSTRUCTION + LAYOUT OF SHIP

Equipment
2-way radio - can communicate w/ shore.
DECCA (like LORAN)

Vibration problems? vibration near fans in aft section
Causes? Vibration occurs for several minutes when switch is made from fuel to waste. Noticeable all over the ship
Solutions but not bad. It also ceases when the engine is revved up to handle the new demands. It usually resolves quickly. Switching from one tank to another may also be a problem.

What waste discharges are normal
~~From heat exchanger?~~
Collecting cooling water < engine
Sewage plant water
~~Bilge water~~
Separator water
Deck water → well
~~Storage~~ Cargo tanks - can only go to incin.

What happens if storm comes when tanks are 1/2 empty -
will slosh → metal fatigue
- one tank a the trip was not very full (matthis waste) metal fatigue not a problem. Constructor planned w/ this in mind. as tanks are used it various ~~at~~ various levels during the trip

CONTINGENCY PLAN

Contents of plan

Who decides to use it - in plan

What constitutes "emergency?"

Is cargo dumped if crew must be saved
Last resort - effort to be made to dump as little as possible if jettisoning is necessary

Does it address dock area - yes

Who is notified - list in plan

✓ Where is plan kept

✓ Has crew been trained to use the plan
Are there drills
Has it been tested
lifeboat drill in port / once a month fire drill > both ~~each~~ entered in log book
spill drills mostly done in port

Is it designed specifically for d/i - absolutely
Land based ~~w~~ modifications
Are they written

IMO/IMCO/handbooks = Contingency plan
books on bridge (lots)

CONTINGENCY PLAN

If dumping cargo is necessary
under what conditions can it happen
- Last resort is indescribable

how is the dump accomplished
- dumped at surface
- or pumped downward

how long does it take
- portable pump ~~does~~ 1 ft./hour
  20 days per tank
  to transfer to another ship, open hatch to CT + use other ship's pumps.

If fog, who decides to enter the port if there is a disagreement about danger
- shipowner
- pilot
- Captain
- waste owner

- COPT
- Captain would not come is alone

✓ Is this described in the permit?

CREW

Do they understand what they do? (over)

signs near mess room describe PCB contam. + how it can occur
Steve talked to Sam on 11-5. It's just a job to them. Start up crew in engine room worked well together. Each seemed to have a job but also performed others.

How long have they worked on vessel

Years of experience Eng. go to school at least 6 yrs before serving as an asst. (7 yrs. blends in experience)

4-5 men worked at the control panel / 2 outside. Even outsiders read the computer readout. Computer on panel can be read instantly. Seemed very knowledgable + don't like things to go wrong

Previous experience

Most of crew stays with the vessel. Captains of V/I + V/II will switch when V/II comes to America + V/II capt. doesn't like publicity. V/II crew will come also.

Protective clothing - orange blue suit, steel + twin work gloves, diff. shoes + paper suits

Required? for contam. area of ship.

Worn? yes - some wear in pants even.

Usage not perfect but still pretty good. Didn't see anybody go anywhere vulnerable w/o the suit.

How can/are workers (be) exposed?

chart explains PCB exposure potential. Crew to act as if all waste were PCBs

Is loading crew same as ship crew? - Same

Do they buy new jeans each trip?

Looks like they reuse

The crew is getting a little friendlier. I visited the control room tonight and the 2nd Chief Eng. was very talkative, explaining equipment and discussing the advantage of O/i. Commented that the control room personnel generally came to the job w.l.t. basic background in chemical handling many having served on chemical tankers. They work 4 months on duty and two months off. He explained why recovery of energy/steam from O/i was not realistic as the Dr would drop. Firmly convinced that this is the best method for waste destruction until something better comes along.

CREW – HEALTH

Record of crew exposure
Plans to decrease

Effects of 24 hr. exposure – they're not in the area 24 hrs. Some crew are essentially never there. Few occasions to be outside during burning. Engineers work 12 hr. shifts

Who monitors them

Regular physicals – every 2-3½ months examined on board by doctor + also for holiday / return / when they quit

Records kept
how – quit – sent to the Dr. at 3mos - 6 mos. Ship will pay
by whom – Records are in the computer

Any visible problems – no. I've been watching for clearance, etc. but they all appear healthy.

Request to shower regularly to cleanse their skin

OSC insures all crew for free incl. health + life

EMERGENCY SYSTEMS

How does automatic shutdown work
What triggers it
Residence time drops?
CO too high in stack? / CO_2 too low → shut down
Temp too low? yes / 1180° min.
Flame higher than stack - no auto. shut down
equipment failure - can do but analyzer can be done manually + burner by hand

How long to achieve shutdown - not long.
① Emergency stop & then if temp is superior, do slow shut down
② end - want to put at high temp + slowly shut down to let mix
How long does it take to start back up - cool slowly
30-60 min. - varies accord. to engineer

How has system been tested

Can it shut off if DE is too low - if CE is too low, DE is a formula based on CE // element knock → CE make it shut down.

Is computer readout correlated with shutoff - yes, it indicates all sorts of on-off items as well as analysis results + CE + navigational info

What happens if part of the equip breaks down?
Backups - carry a variety of extras but not duplicates of all
Emergency generator
Computer indicates remarks.

LIABILITY

What type of liability coverage?
*350,000,000 on V/II || Maritime ins co, P+I Club
Chem Waste manages the ins.

Amount?
How was it determined

How are damages assessed

Who has the power to file a claim

Who is likely to recover damages successfully

Limits of liability under law

MONITORING – WHO

History of who has performed tests - all book — TNO + EPA + TRW

What's required in this particular burn?

By what country? Holland – "yellow box" computer. Feedstocks fed by OCS computer or print outs. Regs based on LDC

Role of shipriders

EPA – Al Robin on first Gulf trip – can shut down incin.

Who else might be used - EPA can contract but well do themselves first

→ Who of crew is responsible for monitoring - engineers + electrician who fixes analyzers

Alarm system for both engine + incin. – eng has 2 minutes to respond (even if he's for + on call). If no response in 2 min ⇒ dead man's alarm. (apparently loud enough + general enough to wake the dead).

MONITORING - SYSTEM

Logs on board
- cargo loading
- bridge
- weather
- radio log
- engine log
- incident log
- oil spill log

Instruments ?

Feed rate Schenck Flow Meter (Micro-Motion ? Boulder)
analyzer is proprietary info.

Temp
- fire box
  - burner throat - 3
  - sheer - 3
  - middle level - 3
  - upper level - 1
- stack →

CO (where in system) holes for probes pretty near top ? inc.
CO_2 " " "
O_2
Air Input
Draft

Quality of instruments
Some items sealed to prevent some people
Location inside combustion system ?

Permanent record Kept
- How floppy disk + Dutch govt's own computer + print out + Logs
- Who sees it afterward Dutch govt. — My their own but may ask to see sheets
- Where is it Kept

Inc. Rm. log

Dutch computer is a prototype

11-8-83 Ship stopped burning at 8:10 am because analyzing equip was broken + couldn't be repaired. Dive not had problems with this system before but will start carrying a $2,000 spare next time.

On 11-7 in the early hours, O_2 was not working so they had to call Dutch govt. to seek permission to burn w/o it after ~ 4 hr. period to try to fix it. Permission granted because O_2 is not an indicator of CE but rather used to ensure flames won't go beyond the plane of the stack

MONITORING - SYSTEMS

How do you know where the probe is - fixed for cont. sampling
~~fixed or movable?~~ movable used by TRC in test burn

Is it giving a representative sample of the ~~flame~~ gases

How is sampling accomplished? sample comes via pipes from line to sampling room, goes auto. into equipment + ultimate readouts in control room + on Computers
Not touched by human hands.

History of temperature maintenance on V/II
√ Log Book
Has it left 1300 F trip - goes about every 10 days

How is long range data compiled and accumulated
Computer printout, floppy discs, Dutch computer

How are leads detected
Valves
Welds
Corrosion, etc
see other sheet

MONITORING - AIR

Plume

Behavior - Orangish on 11-6 due to high nitrogen const in the waste. blows off the ship + settles to sea w/in sight
Long on 11-7 because air is dryer

Does it fall on the boat - during start up while correct blend is being devised, some FO comes back on boat. Otherwise never come on deck. Ship can sail to prevent that.

Ammonia to make it visible? Not needed in U.S. but system is ready to be used

Are product of incomplete combustion monitored
Boat Ready, water, waste can make the refractori pop + slow as sparks
- Otherwise particulates are prevented by limits of the kind of waste accepted

✓ % and Kinds of particulates emitted ?

✓ Will the toxics emitted adsorb? ?

Long range effect on air emissions
Acid rain - Can add a small amount to the problem.

Location of storm paths

Have air masses been traced

MONITORING - AIR

Is the removal of Chlor. hydrocarbons checked by CE

If burn is less than 99.99, what contaminant result ?
→ sparks coming out → alarm

Wipe samples ?
8 hrs. accumulation?
do for PCB's -
also detected in accommodation

MONITORING- WATER

How is w/q monitored
Open-
~~Fe~~worker did so 2 trips ago.

While burning, are water samples taken?
fish samples?

followups a few days later?

Is bilgewater checked to be sure it's not contaminated
engine room — just oil
pump room —
~~eng~~ rec. room — no. line back to tanks

OPERATIONS

11-4 Ship is very clean. Seems very well equipped (e.g. bow thrusters w remote control to help get out of port easily)
Some painting going on while we toured. Accomodation + loc. deck are repainted after every 2nd voyage.
Decks + floors are kept shiny painted so as to make spills more obvious
Ships colors are the typical ship's coded colors:
blue lines = fresh water
green = ballast
red = fire fighting
orange = safety
Coveralls for ~~clean areas~~ e.g. are blue
" " contaminated area are orange, w/ CWH logo
(Engine room crew wear blue)

PORT FACILITIES - LOADING

Loading - missed the loading. Ship was clear by the time we got on.
Housekeeping -

Expertise:

How are connections disengaged

Vapor recovery systems
What's in the air leaving the tanks - vapor recovery line
→ ~~to~~ vapors back to tank on shore.

✓ Cryogenic system

Use vapor recovery system that the port has available. Le Havre has but Antwerp only did 3-4 mos. ago. OCS had been asking port to install. Some ports have none.

How are pumps/valves sealed?
Mechanical seals
Packing - specially designed w/ chlor. hydro. in mind
- seal on loading valves are replaced each trip
- other seals are checked at regular intervals

PORT FACILITIES - TRANSPORTATION

Routes
  how chosen
Mode
Who regulates

Rail transit
  car construction
    stronger, low-carbon wheel

REGS

Criteria used for independent verification of
compliance with permit

Who checks - Dutch govt. has their own computer tied directly
to sensors, not to CWM's computer. CWM has floppy disc at
request of Dutch. It cannot be erased.
Who funds - Dutch govt.

Criteria for granting a permit
How does EPA determine whether it's okay

Studies to show effects of d/i ?
Did EPA promise AG further risk assessment

Public notice didn't mention PCB's much - why?

Is equivalent good enough

Status of EPA/NOAA plan on long term monitoring
(referenced in CHo letter)
"to be released with permit"

REGS

Mar Ad plan to "aggregate" waste in San Antonio
at military facilities

Mar Ad investment in ASI

Do EPA / Mar Ad want DOD waste in Gulf
permit prohibits radiological, bacterial ~~biologic~~ Chemical waste ~~from~~

% of wastes available for o/i

Relative risk of o/i → l/i → North Sea o/i

Storage regs re: port facilities

SITE

Where is it North Sea = Dutch Inc. Site
W/in Dutch waters

History / use
Danish fishermen fish near the ship at times.
Russian trawlers nearby.

What's in the ocean in the burn area that could be affected by metals

Ship's
Keep head in the wind
Does ship travel so fumes don't find the rear – Yes is slightly off to the side also. Fumes don't come fore. In fact as of 1-6, fumes aren't bad at all. Engine exhaust smells worse.

How does it move w/in the burn area Sails to the side + winds shift + it sails back. You can feel the ship change course.

notice gain
How are other vessels in area notified 48hr. ahead – marine warning issued. 4X a day.

Do they ever go nearby – Saw some en route to site, but are seldom seen in the burn area

Can ship sail thru its own plume

SITE

How has site's productivity been established
North Sea — was used for dumping. Oslo Convention — to see wanted the site in this area. but OSC asked Dutch for permit + Dutch chose the site.

4-6 yrs. needed in science

How are storms tracked — chart room / observer — English have on site when Dutch site
Who decides what to do about them

Is there a safety zone to prevent contamination outside of the site
- Captain adds a 2 mi. margin. If a mate is on duty he adds 2 more miles. Gov't already made the site larger to have an implicit safety margin.

How often is navigational equipment used
Sat. Nav. — DECCA (like Loran) — radio direction finder — Auto. pilot — 2 radars - echo sounder — log book records
- compute prints Sat Nav figures

What happens if you leave outside the site

Limitation on route from port to site
Yes - ~~assigned~~ captain chooses a shipping lane

WASTE COMPOSITION & CHARACTERISTICS

How is waste analyzed before loading ~~OCS test~~ test

By whom

When

Batches or bulk - layers

Composition of this trip's waste

How much is h/w

How much is toxic

Any inorganics - can only take a max of 1/2% — won't burn

Flammable - not usually, low/high flash point

Aqueous waste & Matthias - took it on last trip, + learn what possible. This trip will try to learn more of the low-calorie waste. Will try again + eventually mix it full of needed

If ship catches fire, will waste shrink to a more toxic residual will burn

Any pretreatment

ship collision topitronally is hull only. Bow most likely is stavebow + bulbous bow

big energy to bow eventually

max of 1 high cased b/c waste's spec gravity is heavier than seawater + isn't soluble. So

- + foam system on deck
- inert gas system to tks, O_2 out

generator then all the know on a special form / then before accepting the waste OCS tests. Then to storage tank. Before loading, tank's various layers are tested. Use a interphase detector which measures sp. gravity → had many layers of waste there are. (Prefer only layers instead of mixing). Test each layer. Then tell the ship what to load where and into which tanks.

3 layers in LeHavre / 1 in Antwerp

residual probably will pump for Law.

fire bulkheads in bow, Pump room is vulnerable → CO_2 equip to put it out. Deck can't catch fire

① Pumproom engine room. center bow

② engine room. bow

①② - two def CO_2 systems rooms

stays on the bottom or moves in current a short distance
There are ships that can dredge away what's there
+ incinerate what remains
(Gulf - use hoses to do the same)
This sort of thing is in contingency plan

Engineering is sufficient

WASTE COMPOSITION + CHARACTERISTICS

flash point
- ? waste
- ? diluents

what diluents used

fuel

is fuel added - used to heat up burners to 1200°. Can be used (Mathias) ~~BBB~~

what fuel used - heavy diesel oil?

how much CO/CO_2 from fuel rather than waste

how much fuel is not combusted

Contacts

Peter Bowman
called Jackie Lockett - GCCPH
" Jon Hinch - Greenpeace
" Robin Alexander - GCCPH
Charlotte Fremeaux - LWV - LA
Carolyn Wenn - LWV - AL
Bobby Williamson - EPA VI
Al Davis - EPA VI
Marty Allen - EPA VI
Bob Vickery - EPA VI
Al Rubin - EPA - DC
Steve Fischman - GOV
David Merrick - NAS
Sharron Stewart - NACOA
Georgia Hasbrouck - ~~GCCPH~~ HTSTF
Barbara Bair - LWV-H
note to Paul Vavra - GBCPA
Jim Myers - TACB
Sue Ann Fuji - GCCPH
Elizabeth Otto - Greenpeace
David Steed - PISCES

Herman Rodenberg Sierra
Ken Kramer Sierra
Brian Berwick AG
Jackie Jacobson Sierra
Charles Branton TCMC
Catherine Perrin - LWV-T
Jeff Addicks Sen. Brown
Okie O'Brien Rep. Andrews
Jon Fischer TCC
Bob Mattern - Shell
Dave Stang (bfi messrs)

o/i = ocean incineration

From November 4 to November 9, 1983, I was an observer aboard the Vulcanus II. I was invited by Chemical Waste Management's Washington office and sent by the League of Women Voters of Texas to gain firsthand knowledge about ocean incineration of liquid organic waste. ~~chlorinated hydrocarbons~~. Two other observers were also on board: Steve McAllister of Greenpeace U.S.A. and Tony Mariner of Greenpeace U.K., ~~and~~ a professional filmmaker. We three were accompanied by the Chief of Ocean Combustion Services' European Operations, Mr. H. Verdegaal of Rotterdam, and OCS newly-hired Antwerp chemist, ~~Mr.~~ K. Haubourdin. HAUBOURDIN

As observers, we had free reign to do as we wished so long as we complied with safety rules. We could film and photograph at will. We were free to talk to the crew, all of whom speak some English, some very well. German, Dutch and Spanish are the major languages spoken aboard; ~~and I regretted that I couldn't speak~~ However, my speaking German would have made communication easier. The crew obviously had not been briefed and knew only that observers from Greenpeace would be aboard. I'm not sure that it was ever clear what I was doing there. Despite being a little uncomfortable about being watched all the time, they were very pleasant and willing to answer questions as time passed.

My goal in traveling on this incineration cruise was to learn in detail how the process works and what safeguards, if any, are employed that might make it a safe and effective method of hazardous waste disposal.

This report will discuss the history of the Vulcanus II, the ship's design, the kinds of waste incinerated, the loading of the waste, and the site at which it's incinerated. The incineration process will be described in detail and the monitoring explained. The crew will be discussed as will contingency plans. It is my hope that this description of the Vulcanus' operations as I saw them will help provide details to help others understand how ocean incineration works.

There are issues related to ocean incineration that are not described herein. They are mentioned in the attached list of questions. The report is not a recommendation pro or con ocean incineration, but it should provide useful information to those seeking to determine whether ocean incineration is a viable method of hazardous waste disposal.

1 It is important but difficult to convey the effect that being on a ship has on the disposal methods. A ship is a contained environment. It's home as well as workplace to the crew (and guests). It's small. Meals are communal. So is recreation. There's little privacy. A week aboard ship was an intensive intro. to o/i.

* ~~Though it is expected to meet this specifications~~ ~~it will be~~ ~~if it does not, adjustments will be made.~~
If it does not meet specifications, it will go into dry dock for modifications before sailing.

History

The Vulcanus II is a new ship, completed in November, 1982 and certified in January, 1983 by the Dutch government. The design was reviewed by the U. S. Coast Guard who must inspect the ship when it comes to the United States.* The Vulcanus II design was based on ten years of experience operating Vulcanus I, and it incorporates many features found lacking on the other ship. It is well-equipped and certainly seems state-of-the-art. Both European observers sail on their organizations' ships and were familiar with the kind of equipment a good ship should have.

The Vulcanus ships are owned by Ocean Combustion Services (OCS) of Rotterdam, a Dutch waste disposal company. The ships are privately owned, with no government investment of any sort. OCS began business in 1968 to meet a need to dispose of liquid chlorinated waste produced by four European firms: Shell, Bayer, Solvay, and (I believe) Esso. Some countries had passed regulations banning ocean dumping of this waste. Hansa Shipping Lines out of Bremen, Germany bought a dry cargo ship, converted it to a chemical tanker, and adapted it for ocean incineration. The method

was expensive however, and Boyer and Solvay returned to dumping until Germany requested that they stop. They then ~~brought~~ built their own smaller incineration ship, the Vesta, still in operation. In 1979 OCS formed its own company within Hanse. When Hanse went bankrupt in 1980, OCS was put up for sale. Companies in Holland and Germany were considering purchasing, but Chemical Waste Management, Inc. of Oakbrook, Illinois made the purchase. OCS has about 80 employees and seems to enjoy the family atmosphere and loyalty that small businesses often possess.

Though Chem Waste is obviously the parent company (their logo is everywhere!), OCS operate the ocean incineration pieces. Their former Chief of European operations is now based in the U.S. as Chief of Operations here. Their founder, Gert Heinemann, serves as Chem Waste's Managing Director of Ocean Incineration.

The Ship's Construction

1982 was the year Vulcanus I was to be resurveyed, as is done every four years. The need to upgrade it so it would meet survey requirements led OCS to consider scrapping it and building a new ship to use in the U.S. European generators regretted the potential loss of an ocean incineration vessel as the Vesta is too small to handle many

+ In order to be certified by the Dutch and to meet U.S. certifications requirements, the ship exceeds ~~the~~ Liberian requirements

customers and the Matthias, now out of business, did not ~~operate properly~~ incinerate efficiently. A decision was made to build the Vulcanus II in Papenburg, Germany with the ship due to last 20-25 years. ~~Meanwhile~~, After the Vulcanus I completes ~~its~~ ~~tour of duty~~ turns in the U.S. at Australia, it ~~was~~ went to Singapore to have the entire forechip replaced.

The Vulcanus I ~~is~~ was ~~presently~~ docked in Antwerp having its engines overhauled; ~~and~~ it is expected to ~~be~~ back in service soon. We had time to tour ~~that ship~~ it also and, despite its refurbishing, found it less impressively equipped than the Vulcanus II. Its incineration capabilities are the same as are its tanks and piping now. But the accommodations are next to the incinerators instead of at the other end of the ship. ~~The Captain and Chief Engineer of the ship~~ Despite its age, some of the crew who have served on the Vulcanus ~~the~~ I remain loyal to it. ~~Despite~~

The Vulcanus I flies under a Singapore flag and the Vulcanus II under a Liberian flag. Most of the crew is licensed in more than one country.*

The Vulcanus II has been constructed for ease of operations and also to meet or exceed many safety measures. ~~It is double~~ It was designed to minimize the risk of damage from collision and the risk of leaks or spills entering

(+) If someone wanted, he could probably circumvent the ~~suspected~~ safety features, but it wouldn't be easy or quick. ~~The~~ The ship's architectural plans are displayed around the ship and were checked to verify types of valves and so on, to the best of my ability.

the environment. Lloyd's insurance record statistics on what parts of ships collapse to what degrees during collisions were used as a baseline with a safety margin added to determine the size of all void spaces. The ship is double hulled, has void spaces around each cargo tank, has firewalls, etc. Piping and valves are designed according to both management and crew so that waste can only go from the tank to the incinerator and so that leaks can be captured. (*) The steel used is capable of standing up to rough weather and corrosive waste.

The ship has an accommodations area with kitchen, mess room, conference room, office, radio room ~~and~~ cabins, ~~and~~ exercise room, ~~and~~ lounge ~~on the bridge~~. The bridge is at the top of the accommodations area. The ~~after ship~~ stern contains the pump room, control room, incinerator room, cargo office, and three incinerators. The cargo tanks and pipe tunnel are in the middle of the ship.

A variety of means of handling fires exist: foam guns, seawater, and remote control delivery of CO_2 to the pump, control and incinerator rooms. Inert gas is used to minimize the risk of oxygen starting fires in partly empty tanks. The usual lifeboat-type of equipment is all there. All cabins have personal gas masks and all vulnerable areas have industrial-quality ones handy.

The ship is maintained beautifully, with frequent cleaning and painting. Because both the

* (N.B. At a League conference following the North Sea trip, an employee of Velsicol Chemical revealed that OCS had recently rejected as not up to their standards some waste Velsicol wished to have incinerated.)

waste and the HCl emissions are corrosive ~~and the HCl emissions~~ ~~from the stacked~~ would be easy to see leaks or spills. (None were seen other than ~~some of~~ small fuel leak near a burner.) Things are painted with glossy paint to ensure that spots are noticed.

The ship was inspected by a party to the London Dumping Convention before it could burn, in this case the Dutch government. This certification is repeated every 2-4 years, depending on the length of the original permit. Once a year the ship undergoes a safety and seaworthiness inspection. This inspection was done while we returned to port in Antwerp, since the ship had had its first birthday while we were gone.

Waste Accepted for Incineration

The Vulcanus ships are designed to incinerate only liquid, organic waste, usually chlorinated hydrocarbons. A waste generator initially describes the waste in detail on an OCS form. Before OCS accepts the waste, their personnel test it.* If accepted, it is stored on-shore. ~~in Antwerp or Haven~~ As it sits, the mixed wastes separate into layers. Therefore, prior to loading, an interphase detector is used to measure the specific gravity of the various levels of waste in the tank. The crew then knows which level to load when and into which cargo tanks. Voyage 14 of Vulcanus II

* Accepting non-typical waste could presumably change the emissions. In our case, the plume was initially orange due to the nitrogen content of the waste the government wanted burned.

loaded three layers of waste in Le Havre and one in Antwerp. (9) Included was some unusual waste belonging to the former Matthias owners. It had been in N. Shore storage and the Belgian government requested OCS to incinerate it. Though the Matthias vessel to accept such waste, OCS usually does not incinerate waste as aqueous as this and with its less-than-normal caloric value. However, the government did not want the waste stored any longer due to the risk involved there. The Matthias waste had already gone in the last burn, but only a small quantity was incinerated. Efforts were made to mix it with high caloric easy-to-burn waste this trip, but it apparently damaged the gas analyzer and we had to return to port with only half the cargo incinerated, an unusual situation. Eventually it will be mixed with fuel oil to ensure incineration.

Emissions are controlled by limiting what waste is accepted the quantities + quantities of some chemicals
In order to avoid limiting more than trace contaminants and HCl restrictions are set on the type of waste that can be accepted. Thus the Dutch permit and E.P.A. permit restrict various things such as the % of PCB's, the p.p.m. of dioxins or mercury etc.* OCS does not pretreat the waste they accept. * I don't know whether generators have pretreated the waste.

~~In Europe the greatest amount~~ of chlorinated ~~waste~~ is generated in Germany, ~~not France~~.

Since the emissions are essentially regulated by restricting what waste is accepted, ~~regulations~~

* If less than half full, it can be hand pumped to a small overflow tank on deck and eventually to a drum for land incineration.

European
Production of chlorinated hydrocarbons is primarily in Germany, but users are everywhere. About half the European chlorinated hydrocarbon waste is ocean incinerated, though not exclusively by OCS. In Belgium, about 27% of the 269,300 metric tons a year of waste are chlorinated hydrocarbons. This quantity of European waste is sufficient to ~~[illegible]~~ have kept the Vulcanus II going out on a week-to-ten-day trip about every ten days this past year. The Vulcanus I was in drydock being refitted much of this year. Though the U.S. permits were requested for both V/I & V/II, ~~[illegible]~~ OCS intends for the V/I to serve Europe and the V/II the U.S., at least initially.

Loading

Loading of the ship occurred before I was able to arrive. The usual crew handles the loading. The ship has a connection to hook into an on-shore vapor recovery system (gas ~~[illegible]~~ return line).* The loading valve is shielded and has a pan under it to catch any spills. If a spill into this box fills it more than half way, it is hand pumped into a cargo tank. To do so, the cargo tank hatch seal must be broken, a report filed, and the ~~[illegible]~~ government called to reseal the tank before the ship can sail.* If the spill is small, rags are used and disposed of in a drum for ultimate land incineration. Packing on the valves is specially

* If the port has no vapor recovery system, a flame arrester is available to handle vapors leaving the tanks when waste enters.

designed for chlorinated hydrocarbon waste and replaced each cruise.

If a spill occurs on deck, it is hard cleaned as soon if small. Otherwise, it will run toward wells that are at both ends of the deck. The wells are locked in part so that From the well it would go to a cargo tank. At sea, the wells are open because leaks on the open deck are expected. The deck would then be washed with solvents or water and ~~and~~ separated.

If a spill went over the side, corrosion would be obvious if it hit the hull.

During loading, the loading boss's flange is opened over the bib under the flooding valve. A vapor return line is tied. During loading The hose is connected to the valve and air tested to see if it's leaking before waste is fed. Should it burst, pressure on board would drop and the valve would close automatically. On shore, pressure would build and the valve close automatically. A spill from a rupture would then be the maximum of what's in the hose.

A radar system measures the ullage in each tank (the space between the highest level of liquid and the top of the tank.) This registers in the cargo office and also on a panel in the control room. An alarm sounds when the tank is 85% full. At 98%, the high level alarm activates

steam vs. probe / crew

automatic shutoff of the valve going to that tank, switching waste automatically to a tank with space. Tanks do not necessarily travel full. Cargo Tank # 4 St Bd. of Lindsay has some space to handle potential ~~contam~~ contam. water from element fall.

Though I did not see the loading process, I ~~did Occur just as it~~ did not see any signs of spills or leaks when I inspected the deck upon arrival.

The Incineration Site

The Vulcanus II incinerates at the Dutch incineration site, a 31 mile in diameter circle at the tip of Dutch territorial waters in the North Sea. (The North Sea is all divided into territorial waters.) The site is about 70 miles from the Dutch coast and equidistant from England and Denmark.

Travel to and from the site is at the discretion of the captain and the pilot. At times the sea was deserted of other ships. At other times not. On the way back to port, we travelled quite close to the Dutch coast. Traffic is heavy in the Straits of Dover, but I never felt the risk of an accident.

In choosing the incineration site, it is believed, though not confirmed, that the Dutch includes a safety margin. In addition, the captain voluntarily reduces the circumference of the incineration circle by two miles. If a mate or an apprentice

is at the bridge, each reduces the circumference further. Thus a margin of safety is created.

Should the ship ever incinerate outside its designed coordinates, the computer printout would verify where it had been. The ship uses several navigational aides to ensure they are where they should be: satellite navigation, DECCA, radio direction finder, automatic pilot, two radars, echo sounder. The log book ~~does~~ records ~~the~~ coordinates and the computer the Sat. Nav.

The Dutch chose this site because it had previously been used for ocean dumping, was within their waters, but was far from shore. The Gauf site, on the other hand, has not been used for dumping so any contamination can more easily be traced to ocean incineration.

A marine warning is broadcast to let other ships know that the Vulcanus is planning to burn and where the incineration site is. The site is marked on current navigation charts, but some ships may sail without current charts. If a ship appears on the Vulcanus' radar, ~~the captain or mate~~ he it is contacted and advised not to sail near the plume. However, some ships do. While we were out, a Russian trawler was warned, sailed through the plume, circled the Vulcanus and sailed through again. Ships sailing through the plume

later

backup encounter HCl and passengers get sore eyes and cough. Why they choose to do so is beyond my comprehension. Some ships approach the Vulcanus thinking she is on fire. On Voyage XIII, the Vulcanus was unaware that a floating drilling rig was stationed within the incineration area and through the rig knew they were there. Weather was calm and foggy and rig occupants began coughing etc.. ~~Before~~ ~~was~~ the The Vulcanus noted them in their radar and proceeded to sail fast enough to create a plume that would not affect the rig. The rig had since moved out of the site. Danish fishermen also fish close to the Vulcanus at times, despite knowing what she is.

The Incineration Process

The incineration process is in some ways simple, but it requires and has a skilled and experienced crew. When the ship is no more than four hours from the Dutch coast, it may begin firing the incinerators with heavy fuel oil and heating them to a maximum of 800°. Before firing, we climbed the incinerator stacks to peer over the edge ~~and~~ to see that they indeed looked like bottle-shaped vessels lined with refractory material. After they had been fired, we climbed again to see what a 300° well-lit incinerator

looked like. And after the burn, we looked inside the burners ~~through~~ to see the inside. A few pieces of broken refractory bricks were in the bottom at the start, and some discoloration was visible at the bottom at the end. Otherwise, they were empty.

When the burners are first fired with fuel, black smoke poofs out. ~~Intially~~. However, no black smoke was seen during the waste burn. The plume nearest the stack was multicolored when waste was first fed and then remained orange-ish due to nitrogen content of the Matthews waste. ~~This~~ was not normal. The plume is normally white in the North Sea and enters the sea shortly after leaving the stacks.

At the burn site, the incinerators are run on fuel oil until the middle level temperatures (~~at~~) average 1200°, a figure set by the Dutch government. At this point the valve opens automatically to admit wastes; fuel is manually shut off almost immediately, ~~and~~ The Combustion Efficiency (CE) was over 99.97% from the first entry of fuel. The temperature at which waste feed begins can be readjusted to meet permit requirements.

When waste is first fed and the engine

* ~~Some~~ Coffee A mug of coffee near me did not spill.

provides more power there are noticeable vibrations
but they ~~are~~ don't appear to be ~~not enough to be~~ damaging.* At ~~this~~
meters waste feet, ~~impact~~ there are also ~~big~~ flames exiting
the stack. briefly Each time a change in waste
source is made, smaller flames are likely to emerge and
with vibrations to occur. Their duration ~~is~~ was always brief,
usually less than a minute. flames occur when waste mix is changed Wastes in different levels of
causing ~~it~~ different tanks may have different caloric values.
~~what seemed important was that~~ The engineers attend
to necessary ~~the~~ adjustments quickly. ~~and that they did.~~ did so.

Determining which kind of waste to feed to which
burners is what requires skill. The computer system
exists to assist the engineers, not the
engineers to assist the computer. ~~All three~~
the observers were impressed by the competence and
dedication of the crew, especially in the way the incineration
crew, whom I observed most extensively. Their loyalty
to the company was also impressive as witnessed
by the chief engineer's being called in holiday
to apply his skills to handling the Matthews
waste. No resentment was obvious. When the burn
had to be terminated ~~—~~ frustration was the word,
not anger at having to stop.

The control room serves as both the engine
control room and the incineration control room.
The crew has an extensive array of instruments
~~and~~ indicators, and alarms to help them keep both

While the control room has equipment for navigation the ship, the boiler operator is notified by the water detector that from the bridge.

running efficiently.

Temperatures in the each incinerator are measured in 10 different places: 3 throat (1 each boiler), 3 mid-level (1 each burner), 1 upper level, and 3 stack (1 each incinerator). Each incinerator also has compressed air feed and damper controls, a fuel oil level indicator, and a digital waste flow meter. In addition, there is a panel of indicator lights and alarms for each incinerator, and an emergency stop. On the central panel is a KAMEG computer from which instant readings of CO, CO_2, O_2 etc. can be retrieved by engineer. All data is also fed to a computer which prints continuously on a floppy disc which prints out hourly statistics every and every 30 minutes or so, and the Dutch government's sealed computer.

The waste feed flow meter constantly registers the rate per hour as well as the total tonnage of waste incinerated. The meter is a Micro Motion from Boulder, Colorado and considered a good one. However, there is an inherent defect in that no flow meter can register accurately the mixture of waste the Vulcanus handles. This is because the meter is recalibrated before each run for a waste of a specific gravity. It can't be recalibrated each time the waste mix (and therefore sg) is changed, and specific gravity may change then does. Consequently, there will be slight variations

between the waste loaded and that incinerated if using the flow meter as an indicator. The Dutch government recognizes this by permitting a undefined margin of error. Meanwhile, the search for a better flow meter apparently continues.

The ~~test fuel~~ waste feed is not affected by the roll of the ship. Lines from the cargo tank to the incinerator are not pressurized to pump liquids in; rather the feed pump sucks wastes from the lines to the incinerators.

The Engine Control Room / Incineration Control Room is well ventilated, as is the incineration room. ~~The ventilation system is new.~~ modifications to the ventilation system were made this year. Even standing next to the incinerators, I was not uncomfortable despite having on a ~~thick~~ wool crewneck sweater, ~~and~~ a turtleneck, and heavy coveralls.

Soot - Plume

The Vulcanus II has incinerated under a variety of weather conditions in the North Sea. The ship sails into the wind so that the plume follows it. ~~No odor is~~ Chlorinated waste has a distinctive odor, but the odor is not apparent unless you are close to the stack. ~~unless you go aft.~~ The only people who do so during a burn are those with duties in the area, mainly engineers (or crazy observers).

Climatic conditions could prevent a ship from leaving port. In the U.S., the COTP Mobile has the choice of determining whether a ship leaves harbor

The goal of ocean incineration is to destroy 99.99% or more of the chlorinated hydrocarbons, depending on which government ~~regulations~~ standards apply. To measure this Destruction Efficiency, we applies a formula devised by the Dutch government after extensive sampling during several burns. The DE formula is based on Combustion Efficiency (CE). In a normal burn, the DE is assumed by applying the formula and the CE ~~measured by~~ monitored constantly.

The CE formula is $\frac{CO_2 - CO \times 100\%}{CO_2} = 99.99\%$ CE

Oxygen does not actually affect the CE; it just keeps the flames inside the stack.

The DE formula is $\frac{100 \times Wi - Fo\,Co}{W_1}$

where Wi = mass feed rate into the incinerator
Wo = mass emission rate in the stack gas before release to the atmosphere
$Wo = Fo\,Co$
where Fo = flow rate (dry) of combustion effluent in m^3/hr.
Co = Concentration of combustion effluent

Plume

~~To ensure that waste is liquid before it goes into the incinerator, it passes several filters, starting at loading, that filter out waste of more than 1 mm.~~

Then it goes to the gorater, a device that cracks the 1 mm particles. Waste is sprayed into the incinerator. (In the early days of Vulcanus I, it was fed ~~[illegible]~~ with a hose-type injection.)