

JUL 02 1990

Johnston Atoll Chemical Agent Disposal System
Final Second Supplemental
Environmental Impact Statement

VOLUME 2

Comments Received from the Public and Agencies
on the Draft Second Supplemental
Environmental Impact Statement

JUNE 1990

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MASTER

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DISCLAIMER

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Reproduced in this volume are the public and agency comments received on the JACADS DSSEIS. Each submission was assigned a code (for recordkeeping purposes). The comments excerpted from these submissions are responded to in Vol. 1, Appendix E. The following items are included:

Letters Received from Agencies

CA-1	[Deleted; comments given in CA-6]
CA-2	Richard E. Sanderson, Office of Federal Activities, Office of Enforcement and Compliance Monitoring
CA-3	E. C. Fullerton, U.S. Dept. of Commerce, National
CA-4	Oceanic and Atmospheric Administration
CA-5	David Cottingham, U.S. Dept. of Commerce, Ecology and Environmental Conservation Office
CA-6	Jonathan P. Deason, U.S. Dept of the Interior, Office of Environmental Affairs
CA-7	Frank E. Bingham, Environmental Protection Division DOE/Nevada Operations Office
CA-8	Capt. W. D. Straight, U.S. Navy, Defense Nuclear Agency
CA-9	Vernon N. Houk, M.D., U.S. Department of Health and Human Services

Comments Received from the Public

Written comments submitted at the public hearing

PH-1	Representative Annelle C. Amaral
PH-2	Ho'oipo Decambra
PH-3	Sane Nuclear Freeze
PH-4	Paul P. ("Skip") Spaulding, III
PH-5	Moanikeala Akaka
PH-6	Annelle C. Amaral
PH-7	Isabel Hacskaylo
PH-8	Jon M. Van Dyke
PH-9	Anders Daniels
PH-10	Bill Dougherty

Written comments mailed to the U.S. Army

C-1	Michael S. Binder
C-2	Giff Johnson
C-3	Harry E. Wilson
C-4	Annette Sherry
C-5	Mr. and Mrs. Robert Dyson
C-6	Chester Dott
C-7	Poka Laenui (Hayden F. Burgess)
C-8	Dr. Ronald S. Carlson
C-9	Marsha Joyner
C-10	Bill Dougherty
C-11	Anonymous
C-12	Linda W. Kim
C-13	Sue A. Prellwitz
C-14	Bulent J. Erkan
C-15	Greenpeace Pacific Campaign
C-16	L. F. Licht (Federated States of Micronesia's comments)
C-17	Patricia Mumford
C-18	Carl Young
C-19	Hazel Wong
C-20	Samuel J. Burris

Transcript of the Public Meeting

T-1	Ralph Rosenberg Court Recorders, <i>Public Hearing on the Johnston Atoll Chemical Agent Disposal System, Central Intermediate School, Honolulu, Hawaii, March 20, 1990</i>

**REPRODUCED LETTERS RECEIVED FROM
VARIOUS AGENCIES**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

CA-2
Date Rec'd:
Prior to
3/26/90

MAR 26 1990

OFFICE OF
ENFORCEMENT AND
COMPLIANCE MONITORING

Colonel (P) Walter L. Busbee
Program Manager for Chemical Demilitarization
ATTN: SAIL-PMM
Aberdeen Proving Ground, MD 21010-5401

Dear Colonel Busbee:

In accordance with our responsibilities under Section 309 of the Clean Air Act and the National Environmental Policy Act, the U.S. Environmental Protection Agency (EPA) has reviewed the U.S. Army's Draft Second Supplemental Environmental Impact Statement (EIS) for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile at the Johnston Atoll Chemical Agent Disposal System (JACADS). EPA is a cooperating agency for the preparation of this EIS. In this capacity, we reviewed a version of this EIS prior to publication. Most of our recommended changes and clarifications were made.

Since the publication of the Draft EIS, much additional information concerning the munitions and the proposed program has been declassified and made publicly available. We strongly recommend that the formerly classified information be included in the Final EIS.

0007

The incineration of the chemical munitions is regulated under the Resource Conservation and Recovery Act (RCRA). The Army's current RCRA permit needs a number of modifications; additionally, the incineration of the European chemical munitions at Johnston Atoll will require a further permit modification, since the current permit only allows disposal of the munitions currently on Johnston Atoll. Although these permit issues must be addressed separately in the RCRA permitting process, we have identified some of the relevant issues in the enclosure to this letter.

0008

EPA has identified a number of comments or clarifications, which are explained in more detail in the enclosed detailed comments. In accordance with our policies, we have rated this Draft EIS EC-2. (A description of the EPA rating system is also enclosed.) This means that we have environmental concerns and that we are requesting additional information. If we may provide further assistance, Dr. W. Alexander Williams (202-382-5909) of my staff is the contact for your staff.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard E. Sanderson", with a long horizontal flourish extending to the right.

Richard E. Sanderson
Director
Office of Federal Activities

Enclosures

Detailed Comments of the
U.S. Environmental Protection Agency
on the U.S. Army's
Draft Second Supplemental Environmental Impact Statement
for the
Storage and Ultimate Disposal of the
European Chemical Munitions Stockpile at the
Johnston Atoll Chemical Agent Disposal System

1. Section 3.2 of the Draft Second Supplemental Environmental Impact Statement (EIS) provides important information on the Army's decision process, particularly regarding the consideration of alternative disposal facilities for the European stockpile. The discussion of alternatives should be expanded to provide more details regarding the nature of the constraints placed on the Army. One constraint sets a December, 1992, deadline for the removal of the European stockpile from the Federal Republic of Germany; another (Public Law 99-145, as amended by Public Law 100-456) requires the destruction of the U.S. unitary munitions stockpile by 1997; another (Public Law 101-165) restricts funding and prohibits movement of the European chemical munitions from their current storage site "until the Secretary of Defense certifies to Congress that the Johnston Atoll Chemical Agent Disposal System has destroyed live agent chemical munitions and that adequate storage capacity exists on Johnston Atoll to safely accommodate any chemical munitions or hazardous materials transported to that site;" lastly, there are requirements in recent agreements to expedite the removal of the chemical munitions from Europe. All of these constraints and their effect on the program schedule should be discussed. The available schedule alternatives should be addressed in the Final EIS.

0009

2. The Draft EIS points out that the chemical munitions would be stored in MILVANS for as much as 120 days after the MILVANS are unloaded from the ships. We strongly recommend that this interim storage time be minimized to the extent that operational considerations permit.

0010

3. The Draft EIS states that "... the MILVANS will be monitored just as igloos are currently monitored" (page 2). However, the means by which this would be achieved is not included in the information presented in Section 5.6, "Monitoring and Mitigation," or elsewhere. The Final EIS should describe the redundant monitoring systems for the MILVANS with agent detection limits at least equal to the workplace time-weighted averages given in Table 5.4. The Final EIS should also describe the redundant monitoring systems that would be maintained in the existing exclusion area metal storage buildings as part of the storage contingency plan.

0011

0012

4. Section 3.1 describes the potential transfer of mustard filled munitions from concrete igloos to existing metal storage buildings in the exclusion area. This transfer would be required if the storage contingency plan is implemented to accommodate the European stockpile. The Final EIS should indicate what use is presently prescribed for the metal buildings. Would it be necessary to displace materials stored in these buildings? If the displaced materials include hazardous waste (e.g., incinerator ash or dried pollution abatement system brine) an alternate storage area would need to comply with the requirements of 40 CFR 264 Subpart I. Any construction related to this activity (e.g., secondary containment for storage of displaced ash) should be discussed in Section 1.1, Table 3.2, and elsewhere.

0013

5. The facility's permit under the Resource Conservation and Recovery Act (RCRA) will need to be modified before the incineration of the European stockpile may begin.

0014

6. If it is necessary to remove regulated hazardous waste (brine or ash) from the metal storage buildings, the storage section of the JACADS permit will need to be modified.

0015

7. Storage of the European stockpile on Johnston Atoll may necessitate EPA approval of a change under interim status. The Final EIS should explain why the Army does not believe the European stockpile is hazardous waste.

0016

8. An extension, continuation, or reissuance of the JACADS permit would be needed if the incineration of the European stockpile cannot be completed prior to the termination of the permit in 1995.

0017

9. The Final EIS should provide additional information concerning the trial burns under the Toxic Substances Control Act (TSCA) and operational verification testing. This should include the materials incinerated and compounds monitored. The available TSCA sampling results should be presented, as well as the planned sampling matrices under TSCA and operational verification testing. In addition, the Final EIS should include data for the stack gas toxicity monitoring program, which will be conducted along the lines of the Incineration at Sea program (Section 5.3.2.2, page 60). For work to be completed in the future, the Final EIS should indicate at what point and how the results of these three procedures will become available to the public.

10. The Draft EIS includes an analysis of the potential concentration of dioxins and furans in the sea surface microlayer. At this time, limited evidence supports the existence of a continuous microlayer in subtropical waters. Nonetheless, we provide these comments to clarify the analysis:

o Section 5.2 discusses several different potential sources of dioxin and furans, including mustard gas, plastic protective suits, PCPs, and PCBs. The run of the ISCST model indicated a threshold emission rate of 350 micrograms per hour, beyond which further study would be required. This rate will be compared to the TSCA burn emissions of dioxins and furans to determine the potential for adverse effects on aquatic organisms. Would the TSCA indicate emissions attributable to the combustion of all potential sources, or only to the combustion of the M55 rocket shipping and firing tubes known to contain PCBs?

0018

o The dioxin and furans analysis focused on the compound 2,3,7,8-TCDD, because it is one of the most hazardous (Page 59). Were the total dioxin and furan emission estimates assigned the toxicity of 2,3,7,8-TCDD for the purpose of a bounding calculation?

0019

o On page 60, the discussion of monitoring should include a reference to the RCRA permit, which will require monitoring of the emissions.

0020

11. Section 2.3, "Prior and Ongoing Experience," discusses several past incineration projects. It would be useful to include available emissions monitoring data in the Final EIS discussion of potential impacts.

0021

12. The "Analysis of Potential Accidents" focuses on the potential worst credible and catastrophic accidents associated with the proposed action. These have a very low probability of occurrence. What events have the highest probability of occurring? We recommend a discussion of the mitigation methods that will be employed to prevent or respond to the most likely accidental events, such as shipping or handling events.

0022

13. Section 5.5.1.1 "Effects on Humans" limits its analysis of impacts to Johnston Atoll personnel. The Final EIS should discuss the potential impacts on other populations (fishing fleets, etc.) at risk in the event of an accidental release.

0023

0024

14. Section 5.6.2 references a site safety operation plan as part of the mitigation for the project. EPA would like to review the plan. A concise summary would strengthen this section in the Final EIS. Among the mitigation actions under consideration are the following:

- o road improvements for on-island transportation safety
- o armed guards protecting dock, transport, and storage areas
- o daylight operations
- o expedited, special handling containers with leaking munitions
- o on-going monitoring of all munitions containers
- o additional safety orientations for Island personnel
- o use of safety equipment by all Island personnel

0025

15. Page 62 includes a discussion of the disposal of solid wastes from the incinerator operation. The discussion includes a reference to "hazardous waste." We recommend that the references to the waste be made consistent.

SUMMARY OF RATING DEFINITIONS
AND FOLLOW-UP ACTION*

Environmental Impact of the Action

LO--Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

CA-3
Date Rec'd
Prior to
3/26/90

CA-3
Date Rec'd:
Prior to
3/26/90

2/30/90

F/SWR14:ETN

Program Manager for Chemical Demilitarization
ATTN: SAIL-PMM (Col. R.R. Carestia)
Aberdeen Proving Ground, MD 21010-5401

Dear Sir:

This responds to a request from the Oak Ridge National Laboratory to initiate consultation under Section 7 of the Endangered Species Act of 1973, as amended, for potential impacts to endangered hawksbill turtles (Eretmochelys imbricata) and threatened green turtles (Chelonia mydas) at Johnston Atoll resulting from the proposed transport, storage and disposal of chemical agents from the U.S. Army European Chemical Stockpile. While endangered humpback whales (Megaptera novaeangliae) and Hawaiian monk seals (Monachus schauinslandi) have been observed at Johnston Atoll, sightings have been so infrequent that the proposed action should not affect these two species.

The Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile (DSSEIS) for JACADS provides sufficient information for our evaluation of potential impacts to listed species. Consultation will be considered initiated as of the date of this letter. Please advise whether the Oak Ridge National Laboratory is designated to represent the Department of the Army in this consultation. The primary National Marine Fisheries Service contact for this consultation is Mr. Eugene T. Nitta, Protected Species Management Branch, Pacific Area Office. He may be contacted directly at 2570 Dole St., Honolulu, HI 96822-2396 or at 808/955-8831 should there be any questions.

Sincerely,

E. C. Fullerton
E. C. Fullerton
Regional Director

cc: F/SWR14 - Nitta
Oak Ridge Nat. Lab. - Kanciruk



Address for cc:

Oak Ridge National Laboratory
P.O. Box 2008, 4500 N
Oak Ridge, TN 37831-6200



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southwest Region
300 South Ferry Street
Terminal Island, California 90731-7415

CA-4
Date Rec'd:
Prior to
3/26/90

CA-4
Date Rec'd
Prior to
3/26/90

March 16, 1990

F/SWR13:JJN

Program Manager for Chemical Demilitarization
ATTN: SAIL-PMM (COL. Carestia)
Aberdeen Proving Ground, Maryland 21010-5401

Dear Sir:

The National Marine Fisheries Service (NMFS), Southwest Region has reviewed the Draft Second Supplemental Environmental Impact Statement (DSSEIS) for the Disposal of European Stockpile of Chemical Munitions at the Johnston Atoll Chemical Agent Disposal System (JACADS), Johnston Atoll, central Pacific Ocean.

In order to provide as timely a response to your request for comments as possible, we are submitting the enclosed comments to you directly, in parallel with their transmittal to the Department of Commerce for incorporation in the Departmental response. These comments represent the views of the Southwest Region. The formal, consolidated views of the Department should reach you shortly.

Sincerely yours,

E.C. Fullerton
Regional Director

cc: F/SWR13, Naughton



NATIONAL MARINE FISHERIES SERVICE, SOUTHWEST REGION, DSSEIS
COMMENTS

The Draft Second Supplemental Environmental Impact Statement (DSSEIS), Disposal of European Stockpile of Chemical Munitions at Johnston Atoll Chemical Agent Disposal System (JACADS) has been received by the National Marine Fisheries Service (NMFS), Southwest Region for review and comment. The DSSEIS has been reviewed and the following comments are offered for your consideration.

General Comments

NMFS has been involved in associated research and review of the JACADS project since its inception in 1982. We were a cooperating agency during development of the original project EIS and all supplemental documents.

On January 9, 1990 NMFS participated in a meeting with the lead agency and all cooperating agencies at Aberdeen Proving Ground. The meeting was called by the Program Manager for Chemical Demilitarization to review the preliminary DSSEIS. NMFS is pleased to note that all our recommended additions, deletions and comments were included in the subject revised document.

Of particular value in reviewing the DSSEIS is the recently included section on alternatives to the proposed action, the addition of references throughout the document, and the corrections and additions included in the sections dealing with threatened and endangered species. We are presently in the process of reviewing the proposed action in response to the Army's request of 13 February 1990 to reinitiate consultation under Section 7 of the Endangered Species Act.

The Record of Decision for the disposal of JACADS generated process wastes was signed on December 20, 1989 by the Assistant Secretary of the Army. It is our understanding that all liquid process waste will now be handled by drying the brine, containerizing the dried salts and shipping the wastes to EPA approved hazardous waste landfills located in the continental United States. There will be no ocean dumping of any JACADS process waste.

Specific Comments

4.5.2.1. Coral

Page 47, paragraph 2. The sentence in this paragraph stating that "much of the coral lagoon near Johnston Island was destroyed..." should be corrected to read "much of the lagoon corals near Johnston Island..."

0026

0027 | 5.7 ENVIRONMENTAL REGULATIONS

Page 75, paragraph 8. This paragraph states that consultation under the Endangered Species Act has already been undertaken with NMFS and FWS for the proposed action. This should be corrected to indicate that consultation is presently underway.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Office of the Chief Scientist
Washington, D.C. 20230

March 27, 1990

CA-5
Date Rec'd:
Prior to
3/26/90

Program Manager for Chemical Demilitarization
ATTN: SAIL-PMM (Col. Carestia)
Aberdeen Proving Ground, Maryland 21010-5401

Dear Sir:

Enclosed are comments to your Draft Second Supplemental Environmental Impact Statement (DSSEIS) on the Disposal of European Stockpile of Chemical Munitions at the Johnston Atoll Chemical Agent Disposal System (JACADS). We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosure

* Comments identical to E.C. Dullerton
0026 and #0029.



NATIONAL MARINE FISHERIES SERVICE, SOUTHWEST REGION, DSSEIS
COMMENTS

The Draft Second Supplemental Environmental Impact Statement (DSSEIS), Disposal of European Stockpile of Chemical Munitions at Johnston Atoll Chemical Agent Disposal System (JACADS) has been received by the National Marine Fisheries Service (NMFS), Southwest Region for review and comment. The DSSEIS has been reviewed and the following comments are offered for your consideration.

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4.5.2.1. Coral

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5.7 ENVIRONMENTAL REGULATIONS

Page 75, paragraph 8. This paragraph states that consultation under the Endangered Species Act has already been undertaken with NMFS and FWS for the proposed action. This should be corrected to indicate that consultation is presently underway.



United States Department of the Interior

CA-6
Date Rec'd
4/13/90

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240



ER 90/120

C
13 APR 90

APR 9 1990

CA-6
Date Rec'd:
4/13/90

Colonel Ralph R. Carestia
Chief, Environmental and Monitoring Division
Office of the Program Manager for
Chemical Demilitarization
U.S. Department of the Army
Aberdeen Proving Ground, Maryland 21010-5401

Dear Colonel Carestia:

The Department of the Interior has reviewed the Second Draft Supplement to the environmental impact statement for Johnston Atoll Chemical Agent Disposal System (JACADS), Central Pacific Ocean, and has the following comments.

General

The transportation, storage, and disposal of chemical munitions from European stockpiles at the Johnston Atoll Chemical Agent Disposal System (JACADS) facility will have little direct adverse impact to the wildlife resources at Johnston Atoll National Wildlife Refuge. To date, the impacts to wildlife resources at the refuge from the construction and operation of the JACADS facility have been relatively minor. However, secondary impacts to the refuge may result from inadequate disposal and management of non-JACADS wastes generated by increased human populations on Johnston Atoll. The final supplement should adequately address mitigation of secondary impacts to the fish and wildlife resources of Johnston Atoll as earlier estimates of the number of people to operate and support the JACADS facility may be too low. Therefore the project provisions for disposal and clean-up of solid and hazardous wastes, including the JACADS and Red Hat Operations, may also be inadequate given the current human population on Johnston Atoll. This issue should be evaluated in the final supplement.

0029

SPECIFIC COMMENTS

Paragraph 4.5.1.2 Fauna, Page 40. The statement that populations of red-tailed tropic bird, black noddy, wedge-tailed shearwater, and white tern have increased on Johnston Atoll should be corrected. Populations of the red-tailed tropic bird, black noddy, and white tern have increased, while populations of the wedge-tailed shearwater have declined.

0030

Paragraph 4.5.1.2, Table 4.1, Page 43. Detailed population estimates of seabird nesting activities on Johnston Atoll have been collected and analyzed by refuge biologists. This information has been previously provided to the U.S. Army and should be included in the final supplement.

0031

Paragraph 5.3 Ecology, Page 55. This section should state that the temporary storage of military shipping containers shall be coordinated with the refuge biologist to minimize impacts to seabirds and vegetation.

0032

0033

Paragraph 5.4 Waste Management, Page 62. We understand that JACADS-system generated solid wastes will be disposed at off-island sites, scrap metal will be shipped to Hawaii for disposal; and nonsaleable waste will be shipped to a hazardous waste landfill in the continental United States. We support the disposal of solid wastes at locations off the refuge. The final supplement should discuss measures to improve the disposal of any other solid wastes generated on Johnston Atoll.

We hope these comments will be helpful to you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jonathan P. Deason', with a long horizontal flourish extending to the right.

Jonathan P. Deason
Director
Office of Environmental Affairs



CA-7
Date Rec'd
Prior to
3/26/90

Department of Energy

Nevada Operations Office
P. O. Box 98518
Las Vegas, NV 89193-8518

CA-7
Date Rec'd:
Prior to
3/26/90

FEB 07 1990

LC
2/12/90
Col. Ralph R. Carestia
Environmental and Monitoring Division
Office of the Program Manager for
Chemical Demilitarization
Aberdeen Proving Ground, MD 21010-5401

DRAFT EUROPEAN STOCKPILE SECOND SUPPLEMENT TO THE JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM SECOND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (SSEIS)

We have reviewed the draft SSEIS and have the following comments:

1. Page 5, Line 1: Refer to comment Page 59, Lines 7-10.
2. Page 5, Line 6: Reference is made to Public Law 99-45. Should it be Public Law 99-145?
3. Page 8, Lines 7, 8, and 9: These sentences do not provide enough information to convince the reader of the inhalation threat. Why does GB pose the greatest threat while VX is more toxic? Are you trying to relate the threat to the credible accident analysis in the SSEIS? Are there different environmental impacts between GB and VX? If so, these differences are not in Chapter 5, Environmental Consequences.
4. Page 59, Lines 7-10: There is no description as to the manner in which the feeding birds would be affected. If the birds using the feeding areas are affected, there should be qualification and quantification as to the entire bird population on Johnston Atoll.
5. Page 61, Line 6: There is no mention of a sunken mooring buoy in Chapters 3, 4, or 5. What are the impacts that are mitigated by retrieving or leaving the buoy?
6. Impacts to workers should be analyzed within the SSEIS.
7. A discussion of public participation should be included in the SSEIS. A list of persons, groups, and agencies contacted would be positive addition to the document.
8. Public participation including persons, groups, and agencies contacted.

0034

0035

0036

0037

0038

0039

0040

Col. Ralph R. Carestia

-2-

If you have any questions, please contact Les Monroe, of the Environmental Protection Division, at (702) 295-1744.

A handwritten signature in cursive script, appearing to read "Frank E. Bingham".

Frank E. Bingham, Director
Environmental Protection Division

EPD/ECB:LAM



CA-8
Date Rec'd
Prior to
3/26/90

Defense Nuclear Agency
6801 Telegraph Road
Alexandria, Virginia 22310-3398



19 MAR 1990

LEEE

SUBJECT: Draft European Stockpile SEIS

CA-8
Date Rec'd:
Prior to
3/26/90

3/26
Commander
Office of the Program Manager
for Chemical Demilitarization
ATTN: SAIL-PMM (COL Carestia)
Building E4585
Aberdeen Proving Ground, Maryland 21010-5401

1. Reference your 1 February 1990 letter and the February 1990 Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile.

2. The following comments and suggestions are provided regarding the above referenced Draft SEIS.

a. Page viii: Paragraph number '5.5.5.2' should be '5.5.2.2'.

0041

b. Page 4, Line 4; Page 49 Lines, 3, 27, & 29; Page 50, Lines 9, 10, & 12; Page 60, line 19; Page 70, Lines 8 & 11; Page 71, Lines 5 & 7: Numerous references are made throughout the document to 'green turtles'. These references should be corrected to 'green sea turtles'.

0042

c. Page 18, Lines 3-4: Reference should be made to the safety and/or contingency plan to identify actions required in the event that leakage of agent is found during retrograde operations from the ship(s) to the Chemical Exclusion Area.

0043

d. Page 18, Lines 6-7: Sentence should be updated to reflect that the MILVANS will be transported to the Chemical Exclusion Area on the road along the north seawall instead of the perimeter road.

0044

e. Page 18, Line 21: Current plans call for an operational and verification testing period to begin in March 1990 with full JACADS operation to commence in July 1991. Line 21 on page 18 contradicts lines 3-5 on page 10 in regards to the 'fully operational' date for JACADS.

0045

LEEE

SUBJECT: Draft European Stockpile SEIS

0046

f. Page 55, Line 5: The month indicated for the TSCA demonstration burn should be changed to reflect the current schedule.

0047

g. Page 71, Line 1: Paragraph number "5.5.5.2" should be "5.5.2.2".

0048

h. Page 77, Paragraph 5.8.3: The statement "saltwater is supplied from a well to use in the island's freshwater purification process" does not necessarily result in the conclusion, "Thus, no impacts to groundwater are anticipated.". Suggest that the word "thus" be removed from the last sentence in this paragraph.

3. The DNA point of contact for this issue is MAJ Berry, USA, (703) 325-7174.

FOR THE DIRECTOR:



W. D. STRAIGHT
Captain, USN
Director for Command Services

CY FURN:
FCLE

Date Rec'd
ORNL
4/21/90

CA-9
Date Rec'd:
ORNL
4/21/90

APR.20 '90 10:11 USATHAMA APG



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
Atlanta GA 30333

March 23, 1990

Colonel (P) Walter L. Busbee
Program Manager for Chemical Demilitarization
ATTN: SAIL-PMM
Aberdeen Proving Ground, MD 21010-5401

Dear Colonel Busbee:

We have completed our review of the Draft Second Supplemental Environmental Impact Statement (SSEIS) for the storage and Ultimate Disposal of the European Chemical Munition Stockpile. We are responding on behalf of the U.S. Public Health Service.

We noted in our review that the SSEIS addresses only the effects of the European stockpile activities within the 12 mile territorial limit of Johnston Island. The following comments are confined to those activities:

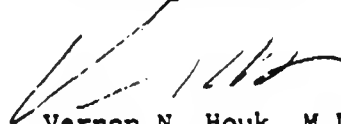
1. An international agreement which the U.S. agreed to remove the European stockpile is noted on pages 5, 7, and 19. More specific information regarding this agreement should be cited in this document. | 0049
2. We suggest changing "chemical agent control limits published by the Department of Health and Human Services" to evaluated and approved (pages 3, 54). | 0050
3. It is our understanding that mustard will be placed in temporary buildings should space become a problem for the Europe stock. Since mustard agent is considered a carcinogen and will persist in soil for long periods of time, it would be helpful if the rationale used for this proposal was presented in the final EIS (pages 2, 18). | 0051
4. If the ship(s) waiting offshore Johnston Island for unloading are in territorial waters, a discussion of precautions against natural and security/surety vulnerabilities should be included in this SSEIS (page 15). | 0052
5. Suggest changing second sentence of section 3.2.1 to reflect the 10 percent that may not be destroyed (page 19). | 0053
6. The general statement that the most compelling reason for not using CONUS facilities is the high risk associated with cross-country transport is not consistent with the table 3.1 specifically for Aberdeen/Edgewood and perhaps Umatilla (page 20). | 0054

Page 2 - Colonel Walter L. Busbee

- 0055 | 7. The Final EIS should be clear on whether the updated safety and contingency plans specifically address shipboard or handling incidents at the wharf (page 69).

Thank you for the opportunity to review and comment on this document. Please ensure that we are provided a copy of the Final EIS when it is becomes available.

Sincerely Yours,



Vernon N. Houk, M.D.
Assistant Surgeon General
Director
Center for Environmental Health
and Injury Control

**REPRODUCED WRITTEN COMMENTS RECEIVED
FROM THE PUBLIC**



PH-1
Date Rec'd:
3/20/90

HOUSE OF REPRESENTATIVES

STATE OF HAWAII
STATE CAPITOL
HONOLULU, HAWAII 96813

March 20, 1990

PEP ACA 9983

Representative Annelle C. Amaral

Statement of Objections to the Supplemental Environmental Impact Statement for the Johnston Atoll Chemical Agent Disposal System.

Chemical weapons are among the most terrifying weapons mankind has yet developed. Usually colorless and odorless, they strike without warning. They destroy the internal functioning of the body, causing hideous suffering. Due to the suffering and horror these weapons could induce, international treaties have banned the use of chemical weapons. This is virtually the only instance where nations have given up the use of a weapon.

Unfortunately, as is so often the case, with chemical weapons man's ability to create destruction is far more advanced than is his ability to remedy the destruction caused.

The United State Army now finds itself with vast supplies of aging chemical weapons, and is apparently set on a course action for the disposal of these weapons by incinerating them at Johnston Atoll--an island barely 800 miles from Hawaii's shores. As an elected official, this development is particularly bothersome, as there is no known safe way to dispose of these chemical weapons.

It is my understanding that Greenpeace International commissioned an expert review of the December 1988 Final Supplemental Environmental Impact Statement (SEIS) for the Johnston Atoll Chemical Agent Disposal System issued by the federal government. This review found critical problems with the quality of information provided in the SEIS. The result, in the opinion of the review, was that it was impossible for any reviewers, in or out of government, to evaluate the potential impact on public health or the environment of the disposal of chemical weapons on Johnston Atoll. Moreover, the review points out that incineration of these chemicals at Johnston Atoll may very well violate the Clean Air Act, as well as the Ocean Dumping Act.

The experts reviewing the SEIS noted that since the completion of the original Johnston Atoll Chemical Agent Disposal System Draft EIS in December 1983, which served as the basis for the 1988 SEIS, much more information has come to light about the effects of burning chemicals. For instance, it is now known that combustion can produce new hazardous chemical compounds, that combustion is often incomplete, and that the residue of chemical incineration is often even more hazardous than the original substances. None of this information was taken into account in the preparation of the SEIS. Even a layperson like myself could reasonably conclude that this information casts grave doubts on the wisdom of the decision to dispose of chemical weapons through incineration.

*Comments responded to as Comments
#0295 to #0302 (transcript section).*

*
0056

Representative Annelle C. Amaral
March 20, 1990
Page 2

Wouldn't it be much better to wait and leave the weapons safely stored, until new technologies provide us a safer, more effective, and more decisive way to dispose of these chemical weapons?

While some may argue that storage of these chemical weapons may pose hazards due to the possibility of their containers developing leaks or through accidents, I would note that the possibility of accidents occurring is much greater every time these containers are handled. Moreover, the possibility of an accident will be infinitely greater if this project is carried through--these containers will have to be shipped half-way around the world, during which trip they will probably have to be handled at least five times: loaded onto a train or truck in Europe, loaded onto a ship, unloaded from the ship to other vehicles at Johnston Atoll, placed in a storage area, picked up from the storage area, and placed in the incinerator facility. That is the minimum of handling I can envision. Add to that the threat caused by normal wear and tear during transport and the possibility of accident, or even sabotage, during transport. Add to this equation the law of human activity, that "if anything can go wrong it will go wrong."

The conclusion is clear: the risks created by transporting the chemical weapons from Europe to Johnston island far outweigh the marginal benefits of disposing of these weapons at Johnston Atoll versus disposing of them on-site in Europe or waiting for better solutions in the future.

It is my recollection that when the incineration of the chemical weapons stored on Johnston Atoll was being pressed, the reason given for the proposal was that deterioration of the containers due to the harsh marine environment necessitated action on the stored materials. The Army, in its 1983 EIS, stated that "There are presently no plans to dispose of chemical agents or munitions on Johnston Island that are not stored there at this time." Now, however, less than a decade later, the Army is attempting to overturn this statement of its intent and purpose in the development of the Johnston Atoll Chemical Agent Disposal System to allow itself to bring materials to Johnston Atoll from the four corners of the world for disposal, if necessary.

In summary, the Army's proposal to transport chemical weapons to Johnston Atoll for incineration poses extreme hazards to people and the environment. Its proposal faces the following problems: the obsolete nature of the Army's 1983 Draft Environmental Impact Statement and the inadequacy of its 1988 Supplemental Environmental Impact Statement; the dangers posed by incinerating these chemical agents; the extreme dangers posed by transporting the chemical agents from Europe to Johnston Atoll; the unresolved problem of how to dispose of the residual toxins after incineration; and the arbitrary reversals in policy regarding the justification and use of the Johnston Atoll Chemical Agent Disposal System. It is for these reasons that I urge the creation of a new and comprehensive environmental impact statement on this matter, or the abandonment of the project altogether.

A handwritten signature in black ink, appearing to read "Annelle C. Amaral", followed by a small upward-pointing tick mark.

AMERICAN FRIENDS SERVICE COMMITTEE

Hawai'i Area Program Office
2426 O'ahu Avenue, Honolulu, Hawai'i 96822 • Ph. (808) 988-6266

March 20 1990

Environmental Protection Agency
Region IX Administrator
215 Fremont Street
San Francisco CA 94105

The American Friends Service Committee has taken a position to object to the transport and incineration of nerve gas weapons from Europe to be disposed of at the Johnston Atoll Chemical Agent Disposal System Project.

Scientific studies of incineration processes (discussed in detail in an accompanying text submitted by Greenpeace) have shown that several classes of highly toxic compounds are generated in significant quantities, even in the most state-of-the-art incinerators.

Currently available scientific literature indicates that highly toxic, bioaccumulative chemicals such as polychlorinated dioxins and furans are formed in virtually every incinerator studied, when organic matter and a source of chlorine are burned together.

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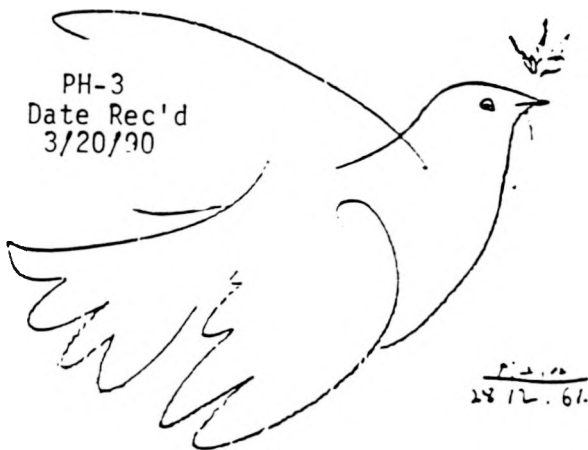
New research on incineration activities on incineration activities renders the information contained in both the Final Environmental Impact Statement (FEIS-1983) and the Supplemental Environmental Impact Statement (SEIS-1988) obsolete and the subsequent decision to burn chemical warfare agents worthy of substantial reevaluation and reconsideration.

0058

Respectfully submitted,

Ho'oipo De Cambra
Ho'oipo DeCambra
Program Associate

PH-3
Date Rec'd
3/20/90



PH-3
Date Rec'd:
3/20/90

SANE NUCLEAR FREEZE HAWAII
Post Office Box 3975, Honolulu, Hawaii 96812

3-20-90

0059 | SANE NUCLEAR FREEZE, HAWAII is a grassroots peace and justice organization of more than 1100 members throughout the islands and is an affiliate of SANE/FREEZE: Campaign for Global Security, the nation's largest citizens peace and justice organization, numbering 170,000 members.

SANE NUCLEAR FREEZE, HAWAII opposes the U.S. Army's plans to ship chemical weapons from Europe to Johnston Atoll and incinerate the chemical agents in these weapons at Johnston, unless the Army can prove: a) that the transport and incineration can be completed with absolutely no risk of harm to the ecosystem, and b) that the transport to, and incineration at, Johnston will be less dangerous to the environment than would transport to, and incineration at, a location nearer the present storage site of the weapons.

We would not be faced with the problem of destruction of these hideous weapons if they had not been built in the first place. Therefore, SANE NUCLEAR FREEZE HAWAII opposes any further research, testing or production of chemical weapons by the U.S. government. Continued research and production endangers all of earth's species. We call on our Federal representatives to make every effort to stop the chemical weapons buildup resumed by our country in 1987 after an 18 year hiatus, and to use our tax dollars instead to find safe ways and safe places to destroy the 30,000 tons of chemical weapons we already have. We believe it is in our best interest to stop producing chemical weapons, pledge never to use them and eliminate the existing stockpile in a culturally and environmentally sensitive manner.

Sincerely,

R. Rothschilder
Rick Rothschilder
SANE NUCLEAR FREEZE,
HAWAII

SIERRA CLUB **LEGAL DEFENSE FUND**

TESTIMONY SUBMITTED BY PAUL P. ("SKIP") SPAULDING, III
OF THE SIERRA CLUB LEGAL DEFENSE FUND
CONCERNING THE JOHNSTON ATOLL DRAFT SSEIS

March 20, 1990
Honolulu, Hawaii

My name is Skip Spaulding. I am an attorney with the Honolulu office of the Sierra Club Legal Defense Fund. I have been an environmental trial lawyer for 12 years who specializes in environmental impact statement and endangered species litigation. I speak tonight on behalf of the Hawaii Chapter of the Sierra Club, which has more that 3,500 members in Hawaii, concerning the Draft Second Supplemental Environmental Impact Statement ("SSEIS") dated February 1990 for the Johnston Atoll Chemical Agent Disposal System.

The Sierra Club favors destruction of nerve gas and other chemical agent weapons if it can be accomplished in a proven, environmentally safe manner at a proper location. However, after careful analysis of this Draft SSEIS, the Sierra Club vigorously opposes the Army's proposed transoceanic shipment of nerve gas from Europe for incineration at Johnston Atoll. This position is based on the legally deficient and scientifically incomplete analysis of environmental impacts, alternatives and accident scenarios contained in the SSEIS.

We believe that, in its rush to implement this proposed action, the Army has failed not only to comply with its federal statutory obligations, but has also failed to reach a scientifically valid conclusion. The Sierra Club's concerns fall into five areas: scope of the SSEIS, alternatives, environmental impacts, accident scenarios and public policy factors. I will briefly address each of these in turn.

SCOPE OF DRAFT SSEIS

The original purpose of this SSEIS was to address the transport, storage and incineration of the United States stockpiles of nerve gas agents VX and GB located in Europe. The SSEIS was intended to analyze comprehensively the environmental impacts, possible accident scenarios and alternatives to moving these deadly chemical agents halfway around the world to Johnston Atoll. As you know, this environmental analysis is mandated by the National Environmental Policy Act of 1969 ("NEPA"). 42 U.S.C. §§ 4321-4370a.

Unfortunately, however, the Army's Draft SSEIS is fatally flawed. Whereas the public ordered the environmental equivalent of a "filet mignon" steak, the Army has now served it with "ground beef." This transformation occurred in the following way:

First, the Army chopped the environmental analysis into three separate portions. The first portion -- handling and transportation of the nerve gas within Europe -- is not analyzed or disclosed in the SSEIS because the Army believes that NEPA does not apply (even though the Army will be supervising movement of U.S. chemical weapons). The important second portion -- transportation of the weapons by ship around the world -- also is not disclosed to the public because it is considered secret information. The third portion -- handling and incineration of the weapons once they reach the twelve-mile limit of Johnston Atoll's territorial sea -- is the only part which is both analyzed and revealed to the public.

This "divide and conquer" approach has perverted the environmental impact statement ("EIS") process. The original question that the Army was to analyze in this SSEIS was: How should the U.S.\NATO stockpiles of nerve gas located in Europe be destroyed? The SSEIS avoids this important issue entirely. Instead, by limiting the scope of the SSEIS, the Army substituted the following question: If ships loaded with nerve gas are located twelve miles off the coast of Johnston Atoll, how should this nerve gas be destroyed? Given this change in scope, it is not surprising that the Army recommended incineration at Johnston Atoll.

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0061 | Thus, after limiting its analysis to only one-third of its original mandate, the Army has recommended that the European stockpile be incinerated at Johnston Atoll. In so doing, it evades its duty to discuss the serious environmental impacts, potential accidents and alternatives associated with transporting the weapons out of Germany and around the world. Most importantly, by cutting the heart out of the SSEIS through this segmentation process, the Army has violated NEPA.

0061 | NEPA provides that an EIS must address all environmental impacts, effects and alternatives of the "proposed action." The applicable Council on Environmental Quality regulations give specific guidance on the scope of an EIS: 40 C.F.R. § 1508.25 requires that "connected," "cumulative" and "similar" actions be considered. A "connected" action is defined as a "closely related" action, including actions that "are interdependent parts of a larger action and depend on the larger action for their justification," and as actions that "cannot or will not proceed unless other actions are taken previously or simultaneously." 40 C.F.R. § 1508.25(a)(ii) and (iii). The regulations define "cumulative" actions as "actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same case." 40 C.F.R. § 1508.25(a)(2). The three portions of the Johnston Atoll incineration proposal are clearly "connected" and "cumulative" actions as defined above.

In case after case, federal courts have held that, for NEPA purposes, agencies cannot divide a proposed action into multiple individual decisions and thereby avoid analysis of connected actions and cumulative effects. See, e.g., Save the Yaak Committee v. Block, 840 F.2d 714, 720 (9th Cir. 1988) (the U.S. Forest Service must consider the impacts not only of the contemplated road construction, but also of the resulting timber harvesting); Foundation on Economic Trends v. Lyng, 817 F.2d 882, 885 n.7 (D.C. Cir. 1987) (an agency may not avoid the requirement for a programmatic EIS by "deliberately splintering its agenda"); Port of Astoria, Oregon v. Hodel, 595 F.2d 467, 480 (9th Cir. 1979) (an agency EIS should consider both the supply of federal power and the private magnesium plant that was to use it).

These legal authorities (and countless others) prohibit the piecemeal analysis of the European stockpile action contained in the Draft SSEIS.

I understand that the Army may be releasing a "sanitized" version of the secret "Global Commons" analysis it has prepared (dealing with the ocean transport segment of the proposed action), thereby hoping to overcome this legal deficiency. However, this limited release is unacceptable in view of the grave environmental risks of the proposed action. At the very least, the Army must prepare a thorough environmental analysis of European movements of these weapons (segment one) and must

release the complete text of the transoceanic shipment document (segment two). After this is accomplished, a full round of public hearings should be held.

ALTERNATIVES

0062 | There are two glaring legal deficiencies in the Army's SSEIS analysis of alternatives to the Johnston Atoll incineration of European chemical weapons. First, the Army improperly rejects (and completely avoids discussing) the obvious alternative of destroying the weapons at a European site on the basis that this alternative "is prohibited under existing international agreements." (Draft SSEIS, at 5.) Second, by refusing to publicly analyze the intra-Europe and ocean transport segments of the proposed action, the Army makes it impossible to compare the Johnston Atoll incineration with incineration at other potential sites inside and outside the United States.

0063 | The most obvious alternative to the proposed action is destruction of these NATO weapons at a location in or close to Europe. This alternative minimizes the movement and handling of (and therefore the high risks associated with) these lethal chemical weapons. However, the SSEIS summarily refuses to discuss this alternative because it allegedly is prohibited by "existing international agreements." (Draft SSEIS, at 5 and 19.)
0063 | Unfortunately, this statement is not substantiated in any way and

is highly suspect.

Indeed, it only raises a host of further questions. Exactly what international agreement allegedly prohibits this action? Since these are NATO weapons, why can't NATO provide for their destruction at an appropriate European site? If Chancellor Kohl wants the weapons out of Germany immediately, can they be stored temporarily in an adjacent NATO country while a European incinerator is built? Can a new agreement be reached to incinerate the weapons closer to where they are stored? We challenge the Army to directly address these questions. Until this is done satisfactorily, the Army's abrupt dismissal of this alternative violates NEPA.

The second fatal flaw in the SSEIS analysis of alternatives arises from the Army's refusal to discuss the first two segments (handling within Europe and transportation by ship around the world) of the proposed Johnston Atoll action. Since there is no analysis whatsoever of the potential environmental impacts, accidents or biological risks of conveying these chemical weapons to Johnston Atoll, it is impossible to compare this action to other viable alternatives.

For this reason, the alternatives discussion on pages 19-23 of the Draft SSEIS is deficient under NEPA. These potential alternatives involve incineration of the weapons at one of eight

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cont'd

continental United States locations where similar chemical weapons are currently stored. The Draft SSEIS rejects each of these alternative sites on a variety of grounds. For example, the Army rejects Aberdeen Proving Ground in Maryland because the site is "located near Chesapeake Bay, an ecologically sensitive area" and because the proposed incinerator is not currently designed for these particular chemical weapons. The Draft SSEIS rejects several other U.S. sites because "cross-country transport" is required.

0064 Yet, while rejecting alternatives on the ground that they involve risky transportation or crossing of ecologically sensitive areas, the Army refuses to fully disclose these same transportation aspects of the proposed Johnston Atoll action. Accordingly, the alternatives are not being compared on a level playing field. It is intellectually dishonest to reject viable alternatives on grounds that are not analyzed in a parallel manner for the Johnston Atoll action. In essence, the Army improperly attempts to compare pineapples to macadamia nuts.

For these reasons, the discussion of alternatives in the Draft SSEIS is seriously flawed and leaves the document vulnerable to a citizens' suit under NEPA.

ENVIRONMENTAL IMPACTS

As you know, NEPA requires a thorough discussion and analysis ("a detailed statement") of the environmental impact of the proposed action. 42 U.S.C. § 4332(C)(i). The case law that has evolved under NEPA mandates that a complete analysis be made of all environmental impacts associated with an agency action. Given the facts that Johnston Atoll is a National Wildlife Refuge and that mishandling of these chemical weapons could have catastrophic results, a rigorous NEPA review is necessary.

The Sierra Club has not had sufficient time to conduct a full analysis of the scientific research, models and conclusions reached in the Draft SSEIS. In general, the Sierra Club endorses the scientific criticisms expressed and shortcomings identified by Greenpeace USA in its August 2, 1989 Review of the prior environmental impact statements for the Johnston Atoll incineration project.

However, based on its initial review, the Sierra Club believes that the Draft SSEIS is legally and scientifically deficient in its analysis of environmental impacts. These deficiencies are as follows:

1. There is no comprehensive analysis of the environmental impacts, potential accident scenarios and risks associated with

removing the weapons from Germany and transporting them around the world to Johnston Atoll. A "sanitized" version of the transportation segment will be insufficient because of the huge environmental risks involved.

0065 | 2. Although the Army now admits that dioxins and furans will be produced in the Johnston Atoll incinerator and released into the air, the Army fails to provide any credible scientific evidence for its conclusion that they will cause no environmental impacts. Dioxin is one of the most deadly chemicals known to mankind and there appears to be no safe exposure level to it. Accordingly, the Army must undertake a better analysis of its impact on the Johnston Atoll environment.

0066 | 3. The Draft SSEIS is facially deficient in its discussion of the potential impacts of the proposed action on threatened and endangered species such as the humpback whale, green sea turtle, hawksbill turtle and perhaps monk seals. It also must analyze the impacts of the proposed action on marine mammals such as porpoises under the Marine Mammal Protection Act. 16 U.S.C. §§ 1361, et seq.

0067 | The Army now acknowledges that humpback whales with calves have been sighted in the area and that green sea turtles use Johnston Atoll as a feeding ground. (Draft SSEIS, at 49-50.) However, the Army then reaches the astonishing conclusion that

neither species will be affected by a chemical agent release. (Draft SSEIS, at 60.) The sole bases for these conclusions are the Army's unscientific belief that, when an accident occurs, the wind will probably be blowing away from the sea turtles and the humpback whales will not be in the area. These opinions are highly suspect and were arrived at without the benefit of consultation with the National Marine Fisheries Service and the U.S. Fish and Wildlife Service as required by federal statutes. As such, they are insufficient to satisfy NEPA.

0067
CONT'D

4. The Army's analysis of the impact of the proposed action on the fragile ocean surface ecosystem (commonly known as the "marine surface microlayer"), which is an important part of the marine food chain, is based on unproven assumptions concerning the rate of incinerator stack emissions. (Draft SSEIS, at 57-60.) Until this important variable is further investigated, it is impossible to conclude that there will be no adverse environmental impact on the marine surface microlayer.

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5. The Army still has not analyzed the effect on the emerging commercial fishery near the Atoll from operations or accidents at the Johnston Atoll incinerator.

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POTENTIAL ACCIDENT SCENARIOS

The analysis of potential accidents caused by the proposed action (see the Draft SSEIS at 62-71) also fails to meet NEPA's requirements. Once again, the major problem is the unreasonably limited scope of the accident scenarios.

0071a | The first and most obvious problem is the Army's failure to address the many possible accidents that could occur during handling of these weapons in Germany or in transportation over the high seas. These chemical weapons are highly susceptible to mishandling, terrorist attack, sabotage and countless accidents during their transit through Europe and around the world. The more they are handled, transferred and transported, the more likely an accident becomes. Without a complete public analysis of all such risks, no decision can be made on whether to proceed with the proposed action.

0072 | The second problem is that, for the accident scenarios that the Draft SSEIS does discuss (known in EIS jargon as "maximum credible events"), the range of possible scenarios is far too limited. For example, the Draft SSEIS does not analyze what the effect on Hawaii might be of an accident involving multiple storage igloos of weapons (or a terrorist attack on a loaded ship within Johnston Atoll's twelve-mile territorial sea) during Kona wind conditions, which would push a lethal chemical plume towards

| Hawaii. Instead, the Army adopts unduly conservative accident scenarios. Once again, this analysis must be expanded greatly before it meets the dictates of NEPA.

PUBLIC POLICY CONCERNS

The Sierra Club is extremely concerned with two public policy implications of the proposed action, neither of which is addressed in the Draft SSEIS. These concerns are as follows:

First, since the Johnston Atoll incinerator has not yet "proven out" as a safe and reliable method to destroy chemical weapons, it is premature to undertake risky transport of additional chemical weapons to the Atoll. In the Department of Defense Authorization Act of 1989 (section 118 of Public Law 100-456), Congress envisioned that the Army would "prove out" the Johnston Atoll incinerator through operational verification before any further incineration actions were taken. In the Draft SSEIS, the Army is putting the cart before the horse (and probably disregarding Congressional intent) by recommending transport of European stockpiles to Johnston Atoll before the prove-out occurs.

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Sierra Club's second public policy concern is that Johnston Atoll is in danger of becoming the world's chemical agent incineration center. The original purpose of the Johnston Atoll

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corr'd | facility was solely to incinerate the chemical weapons located there, which had been transferred from Okinawa in 1971. With this Draft SSEIS, the Army wants to expand its use to include incineration of European chemical weapon stockpiles. Is the next step to be incineration of all mainland U.S. stockpiles and then those of other countries? As part of its NEPA analysis, the Army must publicly disclose its true plans for this incinerator.

CONCLUSION

For the reasons above, we strongly urge the Army either to undertake the necessary environmental analyses for the proposed action or to abandon its plans to ship European chemical weapons to Johnston Atoll. In view of the potentially disastrous consequences of an ill-conceived decision, the Army's failure to perform a NEPA analysis of the European segment and its use of executive privilege as a shield for the ocean transport segment are insupportable. The Army must either shoulder its NEPA responsibilities or abandon the action.

Thank you for this opportunity to present the views of the Hawaii Chapter of the Sierra Club.



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS

1600 KAPIOLANI BLVD., SUITE 1500

HONOLULU, HAWAII 96814

(808) 548-8960

(808) 946-2642

TESTIMONY AGAINST THE DISPOSAL OF TOXIC CHEMICALS AT JOHNSTON ATOLL
SUBMITTED BY TRUSTEE MOANIKEALA AKAKA
MARCH 20, 1990

- *
0075
1. The idea of bringing nerve gas and other extremely toxic materials from western Europe to the Johnston Atoll in the middle of the Pacific Ocean does not appear to be a rational decision. If the incineration is such a safe process as stated in the Environmental Impact Statement, why not build these incinerators at the site where the nerve gas and chemicals are stored? This would immensely reduce the hazards involved in transportation and accidents associated with the transport.
 2. The implied reason seems to be that somehow the Pacific is a safer place for such hazardous activity because the people who live here do not matter as much as those living in western Europe. This is a most reprehensible thought.
 3. The Aberdeen Proving Ground near Edgewood, Maryland is suggested as a possible alternate site for disposal of the European stockpile. However, it is not recommended because it is close to Chesapeake Bay, an ecologically sensitive area! Johnston Island is a preservation area declared as a bird sanctuary. It is also an animal sanctuary and so is also an ecologically sensitive area. It is not a wise decision to use this atoll for storing and burning such highly toxic materials.

* Duplicates March 20, 1990 Public Meeting transcript.

Office of Hawaiian Affairs

March 20, 1990

Testimony Against the Disposal of Toxic Chemicals at Johnston Atoll

Submitted by Trustee Moanikeala Akaka

Page 2

4. The transport of highly toxic materials on ships has to be either through the Panama Canal or through the Suez Canal. This can constitute a major hazard to the neighboring land masses.
5. The process of combustion is not reliable and totally safe. The resulting products can be extremely toxic and be hazardous to those living in Johnston Island and to neighboring islands like Hawaii.
6. The chemicals being brought in are some of the most toxic ones known to man. Any accident happening in unloading and during combustion will be a serious hazard to the people and biological life in the atoll and in the neighboring areas.
7. Johnston Island is located in an area where seismic activities can occur. Tidal waves or tsunamis may also happen. This makes the area an unstable one and more susceptible to accidents.
8. Johnston Island is administered by the military. This means that monitoring and inspection activities by civilian agencies like the Environmental Protection Agency or the Occupational Safety and Health Agency will be minimal, if not absent. This makes it an extremely unreliable location.
9. Many of the chemicals have long term toxicity because they are not degradable. So any toxic chemical that accumulates in the ocean, land or air can have long term effects if it stays without breaking down.
10. The people living in this part of the globe reject this as a totally intolerable issue. If the United States has any respect for the people living in the Pacific community or has any concern for ecological health, this project must be abandoned.

HOUSE CONCURRENT RESOLUTION

*
0075

OBJECTING TO THE PROPOSAL TO TRANSPORT AND INCINERATE NERVE GAS WEAPONS AT THE JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM PROJECT.

WHEREAS, the Johnston Atoll Chemical Agent Disposal Project was established to destroy chemical agents and munitions including Nerve Agent GB, Nerve Agent VX, and Blistering Agent HD that were stored on Johnston Atoll at that time; and

WHEREAS, the project was part of the military's effort to devise "optimal methods of disposal on appropriate military installations, involving no hazards to the general population and no pollution to the environment"; and

WHEREAS, according to the final environmental impact statement prepared by the United States Army Corps of Engineers in 1983, although chemical agents were stored at ten locations in the United States and overseas at that time, the disposal actions for Johnston Island were "considered more pressing" due to factors such as corrosion and dangerous weather conditions on the atoll; and

WHEREAS, the final environmental impact statement also stated that "There are presently no plans to dispose of chemical agents or munitions on Johnston Island that are not stored there at this time."; and

WHEREAS, one of the major concerns of the public at the time was the possibility that the military would someday consider the shipment of chemical agents from other areas of the country through or within proximity of the State of Hawaii; and

WHEREAS, the military's new proposal to transport chemical weapons assigned to United States forces in Europe to Johnston Atoll for incineration seems to deviate from the understanding it originally sought to impress upon the public with regard to the intent and purpose of the project; now, therefore,

BE IT RESOLVED by the House of Representatives of the Fifteenth Legislature of the State of Hawaii, Regular Session of 1990, the Senate concurring, that the Legislature of the State of

* *Duplicator March 20, 1990*
Public Meeting Transcript.

H.C.R. NO.

Hawaii expresses its objection to the proposal to transport chemical weapons presently stored in Europe to Johnston Atoll for incineration; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent Resolution be transmitted to the Western Command Headquarters at Fort Shafter, the Governor of the State of Hawaii, and to each member of Hawaii's congressional delegation.

David R. Hays

OFFERED BY:

Cunille C. Amoral

John A. Tuedear
Nobun Yamanaka
Carol Fukushima
Tom Hama
Yagui Isabel
Beth C. Kawanishi
David Yoda
John Wilson
Clifford Hachemian

passed by 64 B. 10
**RESOLUTION OPPOSING NERVE GAS BURNING
AND OCEAN DUMPING AT
KALAMA (JOHNSTON) ISLAND**

2-25-84

Having due regard for the migratory nature of sea life,
the ever changing currents and unpredictable forces and range of
these currents throughout the Pacific Ocean;

Having due regard for the unpredictable direction,
forces and range of the air currents over and across the Pacific;

Having due regard for the fragile make-up of the ocean
and land ecology throughout the Pacific;

Having due regard to other people of the Pacific who
must share the same ocean and air currents with the people of
Hawaii;

BE IT HEREBY RESOLVED that

- 1. The Office of Hawaiian Affairs find that the pollution of
any part of the Pacific diminishes the integrity of all of
the Pacific and is intolerable;**

2. The program of burning nerve gases (including Agent GB and VX, both highly toxic organophosphate cholinesterase inhibitors, and HD, ^{MUSTARD GAS} a military blistering agent ^{Agent Orange,} damaging cells and preventing their healing process), on Kalama (Johnston) Island threatens the purity of the Pacific skies and constitutes an unpredictable and unreasonable risk to the life, health and general welfare of all Pacific peoples;
3. The program of dumping scrubber brine consisting of the residue from the burning of nerve gases, into the Pacific Ocean threatens the purity of the Pacific waters and constitutes an unpredictable and unreasonable risk to the life, health and general welfare of all Pacific peoples;

BE IT FURTHER RESOLVED that all of the islands of and surrounding Hawaii, irrespective of political status or geo-political boundaries, should be an integral part of any treaty among Pacific nations to assure a clean Pacific;

BE IT FURTHER RESOLVED that copies of this Resolution be forwarded to Hawaii's Congressional Representatives, the President of the United States, and to the governments of every nation of the Pacific.



WOMEN'S SUPPORT GROUP
of THE WAI'ANAE COAST

84-766 Lahaina St.
Wai'anae, HI. 96792
(808) 695-5344

PH-7
Date Rec'd:
3/20/90



March 20, 1990

Testimony presented before the
Environmental Protection Agency Hearing
held in Hawaii this day at
Central Intermediate School

The Women's Support Group of the Wai'anae Coast objects to the proposal to transport and incinerate nerve gas weapons at the Johnston Atoll Chemical Agent Disposal System Project.

In spite of Congress mandating the destruction of the existing U.S. stockpiles of chemical weapons by 1994, residents from Kentucky and Maryland have strongly objected to the Army's plan to destroy the stockpiles of chemical weapons by burning them at each of the eight U.S. storage sites and on Johnston Island in the Pacific Ocean.

We strongly object to the Army's plan to destroy the stockpiles of chemical weapons by burning them at Johnston Island in the Pacific Ocean.

In 1970, Okinawans and Japanese demanded the removal of nerve gas from their countries. Oregon citizens fought to keep the chemical weapons out of their state and won.

But we here in the Pacific lost because that same stockpile is now stored on Johnston Atoll, formally known as Kalama Island, a part of the Hawaiian Chain.

We women from the Wai'anae Coast join with our sisters from the Women's International League for Peace and Freedom and want to object to the transport and incineration of nerve gas weapons from Europe to be disposed of at the Johnston Atoll Chemical Agent Disposal System Project site.

There is new data submitted to your organization by Greenpeace that renders the information contained in both the Final Environmental Impact Statement (DEIS-1983) and the Supplemental Environmental Impact Statement (SEIS-1988) obsolete and the subsequent decision to burn chemical warfare agents worthy of substantial reevaluation and reconsideration.

The planet is alive and functions as a superorganism in which living things interact with geophysical and chemical processes to maintain conditions suitable for life.

* Duplicates March 20, 1990 Public
Meeting transcript.

*
0076

This theory implies that the earth acts with a sense of purpose. It has inspired a flood of research into the interaction between living systems and the atmosphere, earth and oceans.

The envelope of life surrounding the earth would be unsuitable for life if it were not regulated by the biosphere. Scientists have yet to uncover the actual mechanisms by which life processes

regulate earth's climate and atmosphere. Scientists maintain that this makes it all the more imperative that man halt the mass pollution of the environment.

Isabel Hacskeylo
Member

U.S. Department of the Army
Hearing
of March 20, 1990 in Honolulu, Hawaii
Regarding the Draft Second Supplemental
Environmental Impact Statement
For the Storage and Ultimate Disposal
of the European Chemical Munition Stockpile
(February 1990)

Testimony
of
Jon M. Van Dyke
Professor of Law, William S. Richardson School of Law
and
Director, University of Hawaii Institute for Peace

This testimony is offered in my personal capacity and does not represent an institutional position of the University of Hawaii, its School of Law, or its Institute for Peace. The titles listed above are for informational purposes only.

* * * * *

Introduction: This draft EIS concerns a proposal to transport 435 tons¹ of rocket cannisters containing the nerve agents VX and GB from West Germany to Johnston Atoll for storage and subsequent incineration. This document does not discuss the loading in Europe and subsequent travel by ship to Johnston, but says those activities will be discussed in other environmental impact statements.

These rocket cannisters will be placed in seabed steel containers and then placed in shipping containers (JACADS DSSEIS, p. 15). The shipping containers will then be loaded onto several ships for the voyage half-way around the northern hemisphere to Johnston Island. Only one ship can be unloaded at a time at Johnston, and unloading takes two weeks (id., p. 15). The other ships will wait offshore until their turns come (id.). The shipping containers will be placed in a designated area on Johnston and then will be transferred over a four month period into igloos that were built previously for the storage of other

¹ This figure is from Desmond Twigg-Smith, Saiki Praises Johnston's New Weapons Furnace, Honolulu Advertiser, Dec. 11, 1989, at D-3, col. 2. The draft EIS does not provide any specifics on the quantity of agents involved. See U.S. Department of the Army, Johnston Atoll Chemical Agent Disposal System (JACADS): Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile (Feb. 1990) (hereafter cited as JACADS DSSEIS)

poison gases (id. at 19). Mustard-gas projectiles may need to be moved out of the igloos to make room for the European nerve gas (id. at 18). Once in their igloos, the European nerve gas will remain there for up to four years, while other poisons are being incinerated (id. at 25), and then it will take some three and half months to burn the European rockets (id. at 19).

0077 | The JACADS DSSEIS states (at p. 7) that the United States has agreed to remove these nerve gas rockets from Europe by December 1992 but does not provide the details of this agreement. It also states that the preferred alternative for the obsolete nerve gas now at eight storage centers in the United States is to destroy them at their present location because of the risks of transportation (id., p. 20). No analysis is provided of the risks of transporting these agents from their location in Germany to the port and then on to Johnston, but those risks would appear to be significant ones. Logically, the preferred alternative form disposing of these agents would also be to destroy them at their present location.

Important Historical Matters and their Legal Consequences.

0077 a | How Johnston Became Part of the United States. It is difficult to be certain exactly how Johnston Atoll became part of the United States, but the most logical theory is that it was part of the Kingdom of Hawaii as of 1893 and became part of the United States by virtue of the annexation of Hawaii in 1898.² The United States did register a claim for the atoll pursuant to the 1856 Guano Islands Act,³ in the late 1850s,⁴ but this claim was apparently abandoned,⁵ and the Kingdom of Hawaii's claim to the atoll was recognized by at least one major foreign power, Great Britain, in the early 1890s.⁶ Furthermore, the territorial government of Hawaii exercised jurisdiction over Johnston in the early Twentieth Century as if it were part of Hawaii. If the atoll did become part of the United States pursuant to the 1898 annexation, then Native Hawaiians and the State of Hawaii have

² For a thorough discussion of the early history, see J. Van Dyke, T. Pettit, J.C. Clark, and A.L. Clark, The Legal Status of Johnston Atoll and Its Exclusive Economic Zone, 10 U. Haw. L. Rev. 183-204 (1988).

³ 48 U.S.C. secs. 1411-19 (1982).

⁴ Van Dyke, Pettit, Clark & Clark, supra note 2, at 192-93.

⁵ Id. at 193-94.

⁶ Id. at 194.

claims to the atoll and its resources that need to be considered.⁷

Johnston Is An Artificial Island and Thus Subject to International Regulation.

Once the U.S. military agencies gained effective control of the atoll, beginning in the late 1930s and early 1940s, the physical configuration of the atoll changed dramatically. The atoll originally consisted of two islets, Johnston and Sand. Johnston Island was expanded from 46 acres to 625 acres by dredge and fill operations during and after World War II. Today, the island is two miles long and one-half mile wide with an average elevation of eight feet above sea level. Sand Island, a barbell-shaped island lying one-half mile east of Johnston, was increased from 10 to 22 acres in area during this same period. An extensive dredge program completed in 1964 added two new islands --Akau (Hawaiian for "north") and Hikina ("east")--which are 25 acres and 18 acres respectively. The fill material was obtained from dredging seaplane landing areas, the harbor area, and a ship channel. The land areas of this atoll were thus increased dramatically from its original 56 acres to a current total of 690 acres, to serve various military missions.

These changes are significant because what we currently call Johnston Atoll is in effect an "artificial island," and thus subject to international regulation. In particular, the JACADS facility is totally on fill material. See JACADS DSSEIS, p. 35.

The 1972 London Dumping Convention⁸ has now been ratified by more than 60 nations, including the United States. These nations meet every year or two in consultative meetings at the International Maritime Organization in London, and it has become the governing international document regulating all ocean dumping.⁹

⁷ Id. at 200-01..

⁸ The Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, Dec. 29, 1972, 26 U.S.T. 2403, T.I.A.S. No. 8165, 11 I.L.M. 1294.

⁹ Under Article 210(6) of the 1982 Law of the Sea Convention, 21 I.L.M. 1261 (1982), all parties to this 1982 Convention must adopt national laws, regulations, and measures that are "no less effective" in controlling pollution from dumping than the rules established by the London Dumping Convention. The United States has not signed the 1982 Convention but has said that the environmental provisions of this Convention are generally reflective of customary international law.

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Article III(1)(a)(i) of the London Dumping Convention defines "dumping" as "any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea" (emphasis added). The words "platforms or other man-made structures at sea" are not otherwise defined in the Convention. Subsequent interpretations of the London Convention have made it clear that the definition of "dumping" quoted above includes incineration from vessels, platforms, or structures at sea. And at the 1988 Consultative Meeting the parties to the London Dumping Convention adopted resolution LDC.35(11) agreeing to work toward a phasing out of all ocean incineration over the next several years.

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The incineration scheduled to commence at Johnston should therefore be subject to the strict rules of the London Dumping Convention under the following approaches:

(1) The current land mass at Johnston Atoll is essentially a "platform or other man-made structure at sea" because its land area is more than ten times its original land area and it has been totally restructured. The current configuration of Johnston is thus akin to an "artificial island," a concept described in Article 60 of the 1982 Law of the Sea Convention. Although such structures are legitimate, they are subject to regulations established to protect the environment and the safety of navigation, they do not have the status of islands, and they do not generate territorial seas, continental shelves, or exclusive economic zones. If this characterization were accepted, incineration from Johnston would be forbidden in coming years because it would be ocean incineration which will be prohibited under the resolution adopted by the 1988 LDC Consultative Meeting. At a minimum, the activity conducted at Johnston must be carried out pursuant to a permit that meets the requirements of the London Dumping Convention.

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(2) All atolls should arguably be characterized as inherent parts of the marine environment, and thus chemical incineration from Johnston should be viewed as "dumping at sea" whether or not Johnston is viewed as an artificial installation or not. This argument is based simply on common sense. A low-lying atoll such as Johnston has its weather and ecology controlled by the surrounding sea and is subject to the typhoons and tsunamis (tidal waves) that are generated by marine weather systems and distant earthquakes. In August 1972, for instance, the U.S. Air Force evacuated the total complement of 580 military and civilian personnel from Johnston in anticipation of Hurricane Celeste.¹⁰ Celeste hit the atoll on August 20, and for six hours Johnston

0079

¹⁰ Honolulu Advertiser, Aug. 19, 1972, at A-12, col. 1.

was assaulted by winds in excess of 150 miles per hour which created 45 foot waves. The roofs of several buildings were blown away during this storm.¹¹ Twelve years later, in August 1984, all 370 military and civilian employees were evacuated as Hurricane Keli subjected the atoll to winds of 75 to 100 miles per hour and created waves of 35 to 40 feet which swept across the atoll.¹² (The risks created by a repetition of these incidents are not discussed in the JACADS DSSEIS.)

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CONT'2

(3) Under similar reasoning, Johnston could be characterized as a "rare or fragile ecosystem" under Article 194(5) of the 1982 Law of the Sea Convention which nations are required to "protect and preserve." Johnston has been a national wildlife refuge monitored by the U.S. Department of Interior's Fish and Wildlife Service since 1926,¹³ and in February 1986, the Fish and Wildlife Service identified Johnston as one of the ten of its wildlife refuges in greatest need of immediate cleanup.¹⁴ Johnston is still suffering from radioactive residues remaining from nuclear tests that occurred there in the late 1950s and early 1960s¹⁵ and from dioxin which spilled when Agent Orange was

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¹¹ Id., Aug. 21, 1972, at 1, col. 3; Honolulu Star Bulletin, Aug. 21, 1972, at A-1, col. 1.

¹² Honolulu Star Bulletin, Aug. 20, 1984, at A-1, col. 1; Honolulu Advertiser, Aug. 20, 1984, at A-2, col. 2. Honolulu Advertiser, Aug. 22, 1984, at A-2, col. 3.

¹³ Exec. Order No. 4467 (June 1926), reprinted in Logistics Planning Group, Holmes & Narver, Inc., Historical Report of Johnston Atoll [hereinafter Holmes & Narver] 21, fig. 3 (1974) (available in the Pacific Collection, Hamilton Library, University of Hawaii at Manoa).

¹⁴ Associated Press, Wildlife Refuges Threatened (Feb. 4, 1986) (press release).

The announcement by the Service focused on the nerve and mustard gases on Johnston as well as the dioxin and plutonium contamination.

¹⁵ Particular contamination resulted from three aborted test missile shots in 1962 that contaminated the missile launch emplacement area and other parts of the lagoon. U.S. Corps of Engineers, Pacific Ocean Division, Draft Environmental Impact Statement for the Johnston Atoll Chemical Agent Disposal System (JACADS) 38 (June 2, 1983).

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| mishandled in 1977.¹⁶ Because of these previous environmental insults, it is particularly appropriate to provide special protection to Johnston's ecosystem at present.

When these arguments are combined, one can make a persuasive case that Johnston's incineration should be viewed as "dumping at sea" and thus subject to the international supervision of the London Dumping Convention. If it is viewed as ocean incineration, it should be discontinued under resolution LDC.35(11) adopted by the parties to the London Dumping Convention in October 1988.

* * * * *

0081a
| In conclusion, however one looks at the matter, the "preferred alternative" cannot be to transport these highly poisonous wastes half way around the world to a fragile atoll where serious accidents have happened all too frequently in the past. Imagine, just to pose one possibility that the JACADS DSSEIS does not consider, that a hurricane arrives while one boat is being unloaded at the harbor and several others are waiting offshore, and all personnel must be evacuated from Johnston, as they were in 1972 and 1984, even though some of the most toxic poisons humans have ever made lie on Johnston waiting to be put into igloos, and 45 foot waves are expected. Surely some better alternative can be developed. As stated above, the best alternative would appear to be to dispose of these agents at their present location.

¹⁶ In 1977, one million gallons of the herbicide "Agent Orange" were incinerated aboard the Dutch vessel Vulcanus in an area fifty to sixty miles from normal shipping lanes in the open sea downwind of Johnson Atoll. Id. at 39. Mishandling of drums of the herbicide on the atoll resulted in ground contamination with dioxin in several areas of the island which are now off limits to all personnel. Since 1979, the contaminated areas have been monitored and the results suggest that degradation of dioxin continues. Id. The November 1, 1983 JACADS final Environmental Impact Statement stated on L-1 that the "ground in the former Herbicide Orange storage and operations areas is heavily contaminated with Herbicide orange and dioxin to a depth of at least 12 inches." Id.

TESTIMONY AT PUBLIC HEARING

given at the Central Intermediate school
Honolulu, Hawaii on March 20, 1990

REGARDING

The Johnston Atoll Chemical Agent Disposal System
Draft Second Supplement Environmental Impact Statement
for the Storage and Ultimate Disposal of the
European Chemical Munition Stockpile, February 1990

BY

Anders Daniels, Ph. D.,
Assoc. Prof., Department of Meteorology
University of Hawaii, Honolulu, HI 96822

I have reviewed above document and have some comments to offer. My specialty at the University of Hawaii is air pollution meteorology and I have taught and worked in this field for several years. My comments are about the air quality portion of the EIS draft. I will address the air quality estimates for normal operations and accidents separately.

Normal operations, section 5.2.

More information should have been given as to the model used. The basic assumptions in the model could have been included such as how the model handles zero wind or what minimum wind speed is used. Calculated concentrations in Table 5.1 are all well below standards. However here in the tropics we can have a well developed Land-Sea breeze circulation which can for several days transport pollutants back and forth. Such conditions produces e.g. a brownish haze here in Honolulu. The model used can not treat such conditions but concentrations can be considerable. E.g. a three day event would probably double the concentrations which then make them close to the standards. Such an analyses should be included in the EIS.

0082

Accidents, Appendix A.1

The EIS claims that a cloud would only disperse slowly (= stability class E) only during night time. Daytime heating over the ocean with a cloud cover is probably not much more than during the night as water heats much slower than does land.

00822

If we assume that stability category E would persist would the gases from an accident affect Hawaii? This question is not addressed by the EIS probably because the model used does not go this far since little information as to the spread of a cloud exist for such long distances.

Let me present a simplified calculation for this situation:

Assume that 14000 kg of mustard projectiles exploded and all became a gas during 20 minutes. The wind speed during the accident was say 3 m/s. The mixing height was 500 m. The horizontal standard deviation for a plume traveling 1300 km - the distance between Honolulu and Johnston island - is 500 km (F. A. Gifford: "Smoke as a Quantitative Atmospheric Diffusion Tracer", Atmospheric Environment, Vol 14, pp 1119-1121, 1980). Assume no fall out or rain out. The common Gaussian diffusion expression then yields the following concentration:

$$\begin{aligned} \text{Emission rate: } 14000 \text{ kg}/20 \text{ min} &= 12 \text{ kg/sec} \\ &= 12 \text{ E9 mvg}/\text{sec} \end{aligned}$$

$$\text{Conc (mvg/cum)} = 12 \text{ E9} / (3 \times 2 \times 3.14 \times 500 \times 500 \times 1000)$$

$$= 12 \text{ E9} / (3 \times 3.14 \times 0.5 \text{ E9}) = 2.5 \text{ mvg/cum}$$

This estimate is about a order higher than that provided by the University of Hawaii Environmental Center in a letter to Mr Hayden Burgess on October 24, 1985. The major reason for this is that I have used an observed value for the horizontal spread and not a value extrapolated from standard charts.

This value is 100 times lower than the death level presented in Table 5.4 of the EIS.

The dosage in above calculations would only last for 20 minutes. Averaging over 1 hours, the concentration becomes $2.5/3 = 0.83$ mvg/cum which is three times the allowable slack emission value in the table.

The average 8 hour concentration applicable to healthy workers is $2.5/3/8 = 0.1$ mvg/cum equal to the workplace standard.

The 72 hour average concentration applicable to the general public is $2.5/3/72 = 0.0125$ mvg/cum or four times above the value given in Table 5.4.

00822

Thus concentrations above standard could occur in Hawaii with an accident and the analysis of such an accident in the EIS should include Hawaii.

I am though well aware that southwesterly surface winds from Johnston Islands are very rare for long enough time to transport the gases here.

See John Run

On 'Pure' Water

Gov. John Waihee said nothing about contaminated drinking water in his State-of-the-State speech.

His Department of Health is now telling us that our pure and safe drinking water is improving. Water chief Tom Arizumi was interviewed on January 9 (tape available).

KGMB TV News (Lyle Galdeira): "I was at a legislative Ways and Means Committee hearing, a little bit earlier today, and both your boss and the deputy director was there to tell the senators that our drinking water, our quality, has improved substantially in recent years."

Tom Arizumi: *"That's true Lyle, I think in Hawaii we are blessed with two things. First of all the natural aquifers we have really provide us with pure drinking water."*

Pure water: A total of 11 chemicals were shown in drinking water maps in the Aug. 13 Advertiser. Chemicals in an aquifer are odorless, colorless and tasteless. The water is clear, not pure.

Aquifers do not "improve substantially" in a few years. For instance, the state claims DBCP will be about half gone in 120 years. The remaining level only halves each 120 years.

Arizumi continues: *"And the water suppliers themselves, you know, over the past few years have done an excellent job in insuring their operations are adequate to provide safe water to our consumers."*

Safe water: One "theory" used by the state was soundly debunked in the Oct. 1989 Consumer Reports. Last March, the Health Department

told the Board of Health, that the lifetime health effects of low-level chemicals are still unknown, and that mixture effects, synergistic effects, and generational effects are unknown.

A fetus is most vulnerable. While the state claims our water is "safe", no one knows if our babies will be harmed by pesticide mixtures in food, water and air.

KGMB TV News (about water): "How does what we have here compared with what we have on the mainland?"

Tom Arizumi: *"Well it's very difficult to compare. It's like apples and oranges. I think here in Hawaii if you just compare the federal standards, Hawaii is excellent by those standards. I think the standards that we set for ourselves are a lot more stringent. The standards, for example, for many of the contaminants are more stringent than what the federal government would establish. Compared to nationally, you really can't, Hawaii is doing a much better job than the rest of the mainland that we know of."*

But most mainland water looks good by weak federal standards. Our "stringent standards" do not include drinking water protection. For instance: Atrazine, found in aquifers on each island where sugar is grown, is still in use. Most of the 41 man-made chemicals detected in our aquifers are still in use.

KGMB TV News: "Then we do have some tough restrictions and standards here in Hawaii, as compared with the mainland."

Who blows the whistle?

Not our Board of Water Supply or University. They found DDE, DDT and Lindane in 1965 and 1966. They didn't tell us. Not the EPA that allowed us to use a few pesticides here after most mainland use was stopped. And not our Mayor, City Council, House & Senate, or even the State "Ethics" Commission.

The News Media? Gov. Waihee spends big tax-dollars on radio, TV & newspaper "public relations" ads. He looks good, but will this hurt investigative reporting, harm our free press, and be hazardous to the election process?

We should ask our health director to blow the whistle...

PH-10
Date Rec'd:
3/20/90

SIXTH REQUEST

John C. Lewin, M.D.
State Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96801

Dear Dr. Lewin:

Thank you for releasing the water contamination maps in last year's August 13 Advertiser.

This was good, but those maps show 11 man-made chemicals, while 41 were detected.

It is hoped your water data will reflect how so many wells were judged to be contaminate free on each island. Unfortunately, your offer for me to visit, find, and list these data is unrealistic, and the results may be unverifiable. This computation will take hundreds of hours, with these signed data in hand.

May I please have a copy of all the lab summary reports used to eliminate these 30 chemicals? Was the EPA provided a copy? These signed data should show each: well number, well name, chemical, chemical level, limit of detection, date of test, and laboratory.

History will record this pure water fraud. The News Media should help. Our "earth filter" is fouled all the way down to the drinking water aquifers on each island. The problem will not vanish. It grows. About ten million pounds of new pesticides are used over our aquifers, each year.

State claims of "improved" drinking water creates apathy and takes the heat off politicians who are concerned about short term goals. We should all ask each House and Senate member for protection.

Election Year: (a) Children need a strong morbidity and mortality data registry and birth defects monitoring program on each island. (b) Strong drinking water protection, such as the original "Proposition 65", should be passed - before we vote.



Sincerely, Bill Dougherty . Member
State Groundwater Technical Advisory Committee
1534-K Palolo Ave . Hon 96816 . Phone 735-5870

C-1
Date Rec'd
Prior to
3/26/90

Michael S. Binder
6107 Palo Pinto Avenue
Dallas, TX 75214-3615
(214) 754-6168/827-4891

C-1
Date Received
Prior to
3-26-90

8 March 1990

C
12 Mar 90
Program Manager for Chemical Demilitarization
ATTN: SAIL-PMI-Ms. Tischbin
Aberdeen Proving Ground, MD 21010-5401



MICHAEL S. BINDER

AEROSPACE HISTORIAN
CONSULTANT

6107 Palo Pinto Avenue • Dallas, Texas 75214
(214) 754-6168/827-4891



Dear Ms. Tischbin:

First, let me thank you for the photographs of Johnston Atoll (JA) and its JACADS facility, and for the copy of *JACADS Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile* (SSEIS). As a student of surface-to-air missiles, I am very interested in the history of JA because of Program 437, the Air Force's first-generation direct-ascent anti-satellite (ASAT) weapon system [Thor missiles with 1.4 MT nuclear warheads] based on Johnston Island (JI) between 1964 and 1975.

Because the SSEIS states that you are soliciting comments on your draft, I am writing to point out what I feel is an omission of some importance in terms of a candidate for potential serious accident. [I have not had access to any of the previous EISs, so my comments may not be as relevant as I believe.] The SSEIS discusses the possibility of a tsunami striking JA and inflicting damage, e. g., to transport ships in the shipping channel or harbor area. In the event of a tsunami alert, ships would have sufficient warning to leave the harbor or shipping channel for safer deep waters. Similarly, worst-case accidents are generally limited to airplane crashes into chemical agent storage facilities, or to traffic accidents involving vehicles carrying MILVANS.

0084 | By contrast, the likelihood of damage arising from storm surges is touched open only briefly (p. 36): "Waves from storm surges during the last 50 years may be more significant than the maximum historically recorded tsunami surge (0.5 m) at Johnston Island." The possibility of a hurricane striking JI, damaging or destroying chemical agent storage facilities (transport ships, MILVANS, igloos), and releasing toxics into the environment, should probably receive more attention based on JI experience during the 1970s. In 1970 a hurricane struck JI with sufficient force to partially destroy the nuclear warhead storage igloos on the north side of JI. [The warheads had to be removed from the damaged structures and stored in a less-secure area on the island under heavy guard.] In 1972, hurricane Celeste hit an evacuated JA with such ferocity that many structures, including the launching pads for the Thor ASAT missiles, were destroyed. Restoration cost millions of dollars. The ramifications of such meteorological events warrant some discussion in your SSEIS, I believe.

Now, because you were so generous the last time I asked for some JA materials, and because of my interest in the history of JA and my desire to know more about JACADS, I am requesting copies of two Environmental Impact Statements listed in the bibliography of the SSEIS:

U.S. Army 1983. *Final Environmental Impact Statement Johnston Atoll Chemical Agent Disposal System (JACADS)*, Toxic and Hazardous Materials Agency, Ft. Shafter, Hawaii.

U.S Army 1988. *Final Supplemental Environmental Impact Statement, Johnston Atoll Chemical Agent Disposal System (JACADS)*, prepared by U.S. Army Engineer District, Honolulu, Hawaii, for the Office fo the Program Manager for Chemical Demilitarization, Aberdeen Proving Ground, MD, December.

Thanks again for the photographs and SSEIS, and for your additional assistance.

Sincerely,

A handwritten signature in black ink that reads "Michael Bender". The signature is written in a cursive, slightly slanted style.

Member,
Aviation/Space Writers Association

Date Rec'd
Prior to
3/26/90

The Only Independent Newspaper in the Marshall Islands
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Telephone: (692-9) 3143/3251

Fax: (692-9) 3136

C-2
Date Received
Prior to
3-26-90

March 19, 1990

C
3/24
Col. Ralph R. Carestia
Chief, Environmental and Monitoring Division
Office of the Program Manager for
Chemical Demilitarization
Aberdeen Proving Ground, Maryland
21010-5401

Dear Col. Carestia:

Thank you for providing me with a copy of the Johnston Atoll Supplemental Environmental Impact Statement for the European Chemical Stockpile.

The following questions are posed in response to what I see as issues that were not addressed or satisfactorily answered in that document.

0085 | 1. How are the European chemical weapons to be transported?

0086 | 2. Will the EIS take into consideration the predominant wind and water currents in the region of the Pacific around Johnston?

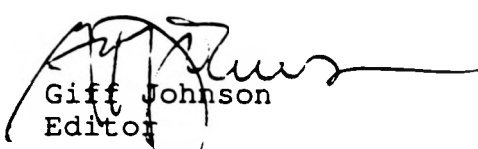
0087 | 3. Which countries in the region will be notified when transportation of the European stockpile begins?

0088 | 4. Will any chemicals or wastes besides the European chemical munitions be incinerated at Johnston? If so, what are these, and how will they be transported to Johnston?

0089 | 5. The supplemental EIS states that dioxin will be emitted during the incineration process but that this will be within United States Environmental Protection Agency guidelines. How were the U.S. EPA acceptable levels arrived at?

I look forward to your response and to more detailed research into this option before it is approved.

Sincerely,


Giff Johnson
Editor

C-3
Date Received
Prior to
3-26-90

Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908
March 21, 1990

C 4/4
Program Manager for Chemical Demilitarization
Attn: SAIL-PMM
Aberdeen Proving Grounds, MD 21010-5401

Dear Sir

Thank you for the opportunity to comment on the Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile, Johnston Atoll Chemical Disposal System.

Will there be any effect on the munitions from the heat inside the Milvans while the munitions are stored above ground? | 0090

Will the Milvans be decontaminated even if there is no spill in them for safety sake? | 0091

How will contaminated Milvans be decontaminated? Was this covered in the Final Supplemental Environmental Impact Statement, Johnston Atoll Chemical Agent Disposal System?

Thank you for your time and consideration.

Sincerely

Harry E Wilson

Harry E Wilson
2120 N Callow Ave
Bremerton, WA 98312-2908

C-4
Date Rec'd
Prior to
3/26/90

C-4
Date Received
Prior to
3-26-90

P. O. Box 1261
Pearl City, HI 96782
March 22, 1990

C
3/28
Col. Ralph Carestia
ATTN: SAIL-PMM
Building E4517
Aberdeen Proving Ground, MD 21010-5401

Dear Colonel Carestia:

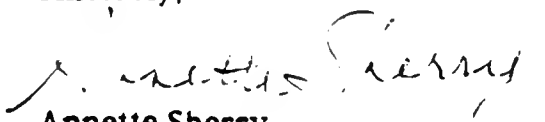
After reading an article in the *Honolulu Star-Bulletin* of March 21, 1990 concerning the proposed incineration of 100,000 chemical weapons from West Germany and other additional chemical arms at Johnston Atoll, I became extremely concerned. The questions that immediately arose in my mind were:

- 0092 | ☐ What is the Army's past experience with such disposal of chemical arms?
- 0093 | ☐ What is the human population count within a 100 mile radius of Johnston Atoll; within 200 miles; within 300 miles; and so forth?
- 0094 | ☐ What impact will this proposed disposal have on marine and animal life in the immediate vicinity?
- 0095 | ☐ What weather condition studies will be done prior to incineration and will they be factored into the equation for determining the date for incineration? For example, will incineration be cancelled if a period of high winds are predicted?
- 0096 | ☐ Has the "worst case scenario" been considered? If a potential disaster is imminent, such as toxic chemicals being released into a populated area, are there measures that can be employed to avert this condition?
- 0097 | ☐ What are the long term effects on humans and the environment from the incineration and over what geographic area?
- 0098 | ☐ How much effort was expended in publicizing this proposed incineration plan in a timely fashion to all who would be effected by the action?

Unless the report I read was sorely lacking in information, I do not think that the above questions have been adequately addressed. Living in Hawaii, only 750 southwest of Johnston Atoll, my concerns may seem to be motivated by the selfish reason of personal health interests. Such a reason is certainly a partial explanation of this letter. I would, however, raise these same questions were you to suggest the same solution to your chemical weapon disposal problem on the other side of the world.

Please be sure that the Army can answer these concerns with responses that indicate environmentally safe solutions before you incinerate any chemical weapons anywhere on our planet.

Sincerely,


Annette Sherry

C-5
Date Received
Prior to
3-26-90

Mr and Mrs Robert Dyson, Diamond Head Apts # 804, 2969 Kalakaua Ave, Honolulu HI 96815
Telephone: (808) 922 2431

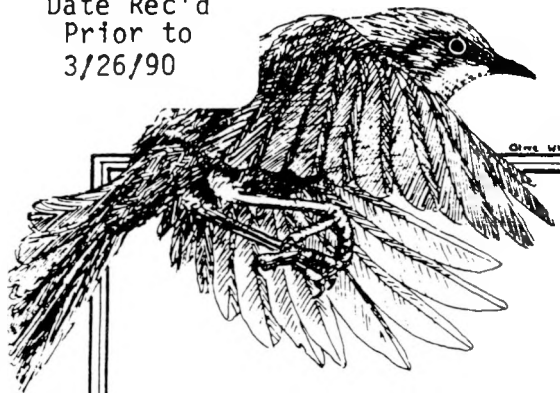
Dear Sir,
May 22 - 90
We vehemently oppose the
Transportation of Chemical Weapons
from Germany to Johnston
Island.
Robert Dyson

0099

C-6
Date Rec'd
Prior to
3/26/90

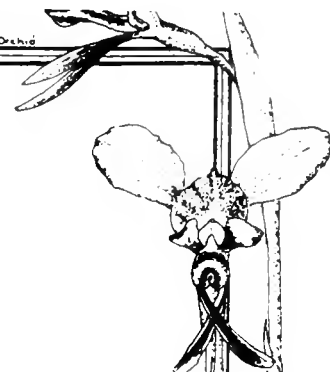
People for Peace Lismore

C-6
Date Received
Prior to
3-26-90



THE BIG SCRUB ENVIRONMENT CENTRE

INC.
88A Keen Street, Lismore 2480.
Phone (066) 21 3278



C 3/76
Department of the Army
Program Manager for Chemical Demilitarization
16 Nov 1990,

As you may be aware we have submitted
a submission. Thank you for the
copy of the project EIS. After discussing
the EIS we have formulated the
following objections.

Chester Dett.
Committee for People for Peace.



After careful scrutiny of the EIS for the proposed JACADS facility for the incineration and storage of chemical weapons at Johnston Island, we the citizens of the Pacific Region oppose the facility for the following reasons:

1. Johnston Island is a declared Wildlife Refuge. We feel these reserves are to be protected, not to be endangered with hazardous effluent to the sea and air. This is also a US Territory which is under the protectorship of the American government. It is an area to be protected, not simply to become a rubbish dump for material that is too hazardous to be dealt with on the US mainland. | 0100

2. As admitted in the abstract on page V., there is an increase in the potential accidents of the operation because of the additional² input. This is stated to be minimized by standard operating procedure. We feel that the 'standard' operating procedure is nowhere near good enough for an increased risk potential. | 0101

3. In section 1.3 it is stated that the solid waste brine will be shipped to the US mainland for landfill. We question the safety of transport of the material in the Pacific and the safety of the material for landfill anywhere. | 0102

4. Section 1.3 fails to address the need for an independent monitoring body for the entire process from relocation, incineration and dumping. We feel that with the bad track record of the US military for covering-up accidents and not revealing them to the general public until several years later, if at all, that an independent monitor of the operation is crucial. We would feel comfortable if the procedure continues that a group such as Greenpeace which operates under no political or national pressure would be adequate. | 0103

5. Section 1.4 states that the mainland is too environmentally sensitive for it to be a viable alternative. We feel that the Pacific is also too sensitive for this kind of procedure. | 0104

6. The NAAQS and TSCA is used as a guideline for acceptable levels of toxicity. However, the Clean Air Act, also of US origin is said to not be applicable in this case. Whereas these acts may be viable and acceptable to the US public, these are not acceptable to the citizens of the Pacific region and no International comment or act was considered. | 0105

7. Section 2.2 points out that the highest point on the island is only 6ft. above sea level. Whereas the risk of tsunami and cyclonic sea lift has been mentioned, and dismissed as trivial, the rise in sea level due to the Greenhouse effect has not been mentioned. This operation is only supposed to be in action for a short period of time, yet these facilities and their operations once approved seem to then draw waste products from other countries and sources. | 0106
| 0107

8. Section 2.3 speaks of past experience on the mainland, however the experience on the US mainland is very minimal. After researching a similar incinerator for the Australian hazardous waste, we realized how little research and experience with the waste hazards has been gathered. Also we have not seen any research on an incinerator around or near an ocean aquatic system. Most of the reference data is also of a military source and the producers of the EIS are all government employees with military weapon facilities. This is far from a UNBIASED opinion. | 0108

9. Within this EIS there is a blatant acceptance of the CSDP discussion that incineration is safe. Only one opinion on such a crucial issue is not good enough. Also this is only discussed as far as what is acceptable on US mainland, not what is acceptable in the Pacific basin.

0109

10. In table 3.2 we question the disposal of the hazardous waste brine. Further in the EIS it is said to be shipped to the US for dumping. Will the community near the dump site be notified/ if so how? Also it is not specified what the hazards are of this material and how toxic is it in reaction to sea water if there is an accident in transit.

11. Table 3.2 addresses the effect of atmospheric discharges and stated that there are no significant atmospheric impacts. This is the same statement that was given to the people of Pirmasens West Germany where most of the chemical weapon stockpile is stored at present. Recently the US government has admitted that the containers have been leaking for years and that it is only coincidence that the area around this depot has the highest cancer rate of respiratory and intestinal tracts. We feel it is not coincidence.

0110

12. Section 4.4 states that any atmospheric pollutants will be rendered harmless because of the dilution by "trade winds". We see this as extremely short sighted attitude to pollution. Every little amount of toxins from one source will join with the already accumulating mass of toxins from other sources. This then leaves us with the massive clean-up which we are faced with today on a global level. Also there is no consideration to the reactive effects of these toxins with other atmospheric pollution.

0111

13. The most worrisome aspect of this project is the release of dioxin and furan into the atmosphere. These particles will eventually settle on the oceanic microlayer. This microlayer is an important part of the oceanic ecosystem. Also these toxins are known to settle to the sea bed and the bio-accumulation with its hazards is well known. We oppose the pollution of the Pacific no matter how small. This release is not necessary.

0112

14. We also disagree with the burning of PCP treated pallets, plastic suits, and PCB firing tubes. The accumulation of these toxins when they are released into the atmosphere through burning is also well documented. It is also the topic of International summits on the depletion of the ozone layer and the greenhouse effect. This summits in which the US government has agreed to the serious nature of the threat. Surely this type of refuse management is outdated and must be discouraged on any level.

In summary we feel that this waste should be entombed on US mainland. This waste was created by the US government and is their responsibility to see that the creation no longer endangers the lives of people or ecosystems in the rest of the world. We feel that above ground internment will be useful to discourage the American people from allowing their government to create such toxic and hazardous waste in the future.

C-7
Date Received
Prior to
3-26-90

WORLD COUNCIL OF INDIGENOUS PEOPLES-Hawaii
86-649 Puuhulu Road
Wai'anae, Hawaii 96792-2723

Tel: (808) 696-5157 Fax: (808) 696-7774

March 25, 1990

Col. Ralph R. Corestia
Program Manager for Clinical Demilitarization
Chief, Environmental and Monitoring Division
Attn: SAIL - PMM
Building E4517
Aberdeen Proving Ground, Maryland
21010-5401

via John Fairbank, Public Information Officer
Fort Shafter, Hawaii

We, the undersigned, object to your present program for transferring of nerve gases from Europe into the Pacific.

There are numerous reasons for our concern to the Army's plan to transport nerve gases from Germany to Kalama Island. Before listing some of those which come most immediately to mind, we should mention that we are in agreement that these nerve gases along with all of the other chemical weaponry must be destroyed or disassembled in the safest way possible. We must be rid of such weapons.

But in the process of trying to achieve that result, we should not compound the problem. Transporting these gases on a secret convoy of ships half-way around the world, is an impermissible risk to human life and the environment. If the Army is so sure of the safety of incineration, than they should burn it where it's at, in Germany.

Here is a list of specific basic concerns:

First: The Second Supplemental Environmental Impact Statement (SSEIS) has been kept a virtual secret to most of us in Hawaii. The document has not been readily available for the general public. It was not available in the public libraries in order to prepare for the public hearing recently held. The Army, when requested to provide copies, would not do so willingly. Only one week before the public hearing, we were able to obtain a copy and from that, reproduced and distributed as much as we could.

10113

Much more study needs to go into that draft before a well-considered response can be made to the technological and scientific aspects of that document.

The purpose of an environmental impact statement is to present for public and administrative review the full range of a proposed activity. In this particular case, the Army has cut the SSEIS into three sections, claiming the first deals with activities in West Germany and therefore not subject to local scrutiny. The second section (regarding shipment from Germany to Kalama) is a secret for the sake of national security. The third, if one is fortunate to get a hold of the SSEIS, is subject to comment within the deadline, (March 26, 1990.) In this way, the Army has circumvented the intent and purpose of the Act.

0113-A | We are calling for an extension of the deadline to submit comments and for a second public hearing in Honolulu.

Second: The management of the gases from Europe to Kalama Island is a secret. We have no idea how close it will pass through Hawaii and what the effects upon Hawaii could be in the event of gas spillage in any amount.

Furthermore, we can not be limited in our concern only to the safety of ourselves here in Hawaii. We must also be concerned about the transport of these gases in other parts of the world. We can not close our eyes to the dangers occurring in unknown parts of the world by the transport, simply because those parts are unknown. The convoy of ships transporting these gases constitutes a clear danger to everyone whose backyard it passes through. For us in Hawaii to keep silent to those dangers is equivalent to the German citizens keeping quite to the gas chambers because it was beyond their specific knowledge. Common sense and common humanity dictates that we raise our voices against this transport scheme of Army phantom convoys.

Third: Some commentators have attempted to down-play the magnitude of danger by this shipment by confusing the much larger volume of nerve gases already on Kalama Island. The quantity of nerve gases to be transported can not be down-played. This quantity, irrespective of its proportionate volume to what is on Kalama, still has the potential to kill every human being along its path.

0114 | Fourth: If this nerve gas transshipment from the Europe to the Pacific is allowed, what precedent will it set for other stockpiles to be sent into the Pacific? What will stop the Army from shipping all of the stockpile from continental United States to us in the Pacific? What will stop further deals with other nations to ship their stockpile of nerve gases to us?

What will happen to the nerve gas now being produced? Will Kalama be the incinerator for all of those gases as well?

From nerve gases to what? What other waste will we in the Pacific have to tolerate from other regions of the world?

The U.S. Army told the public at the public hearing several years ago that this building of an incinerator was a "one shot deal" to get rid of the stockpile on Okinawa and on Kalama Island. They lied to us! Why should we believe today that this will be the only stockpile to be sent into the Pacific by them?

Fifth: Who will pay for a disaster, should one occur? Under the doctrine of Sovereign Immunity, any population killed off by the spillage of gas along the transport route, will not be able to assert a claim against the United States. Unlike Exxon Corporation, the government of the United States of America can not be held responsible. Those who will pay will be the innocent whose only fault will be to have been along the secret pathway of this Army convoy. Those who will pay will be the children and the grandchildren who will have to survive from their natural food source poisoned by such an accident. Those who will pay will be the fragile ocean ecology. If a disaster, large or small, should occur here in Hawaii, the U.S. government will have no legal liability for our injury and deaths.

10115

Sixth: The Pacific fate should be in the hands of the Pacific people. The decision to use the Pacific ocean as the dumping site for hazardous chemicals should not be made in Europe. It should be a decision taken by Pacific peoples. Any deal between former U.S. President Reagan and Chancellor Kohl, made half way around the world in Germany, should not become a dictate upon us here in the Pacific. This activity is an insult to the integrity to the peoples and nations of this Pacific region.

This is an issue properly before the South Pacific Forum or other regional intergovernmental organizations.

The 1990s will be an era of greater regional consciousness coupled with an understanding that to pollute one part of the Pacific is to pollute every part of the Pacific. The 12 mile zone around Kalama Island is not a reality to the physical environment and the Pacific food chain. That zone is an illusion. The sea life knows no such border. The bird life knows no border. The winds and currents will pause for not even a moment at these borders as they circulate throughout the Pacific.

In the event of an intentional attack upon Kalama by an enemy force, Kalama is defenseless. Multiple explosions on that island will spread all of those poisons throughout the Pacific, exceeding every guess contained in the Army's various EIS.

Thus, what gets put on that island is a concern for everyone in the Pacific, not just one or another political entity. The Pacific fate belongs to all of us in the Pacific.

Seventh: The Army has done a shoddy job in its research and disclosures to the public. It has failed to account for products of incomplete combustion which are present after incineration. These materials may themselves be more hazardous than the

0118

original substance. Significant new information now show the following:

0118
CONT'D | 1. Combustion of synthetic chemicals in state-of-the-art hazardous waste incinerators have documented the release--in gaseous emission, residual ashes and the effluents of pollution control devices--of significant concentrations of uncombusted chemicals, heavy metals and newly formed chemicals.

0119 | 2. The sea surface microlayer is one of the most biologically active zones of the marine water column, serving as a primary entry to the marine food chain. New scientific studies have documented the role of that surface in concentrating and recirculating toxic, persistent, bioaccumulative substances, such as the uncombusted chemicals and products of incomplete combustion released during incineration.

0120 | 3. The residue from incineration, i.e., scrubber brines, bottom ash and fly ash will contain heavy metals and highly toxic organic contaminants. Its treatment and disposal poses a very large problem. These solid wastes have not been tested under the new EPA RCRA performance standards for land disposal of dioxin contaminated wastes and therefore, any plan for transporting it back to America for land disposition is uncertain.

0121 | 4. Recent studies of incineration at sea have documented the accumulation of hexachlorobenzene in the sediment of the burnzone. Either, such incineration is incomplete or is itself producing hexachlorobenzene. This and related substances are found in fishes indigenous to such burnzones.

0122 | 5. "Destruction and Removal Efficiency (DRE)," the criterion used to measure incinerator performance, has been termed wholly inadequate by leading scientists in the field of combustion technologies. DRE is only a measure of the efficiency of the system in "destroying and removing" a particular chemical or array of chemicals; DRE offers no assessment of the full range of chemicals emitted from the incinerator. Achieving a 99.99% DRE does not guarantee that emissions are minimized.

0122 | The Army's 1988 Supplemental Environmental Impact Statement is further deficient in its lack of discussion, analysis and providing of data necessary for analysis by independent organizations to determine the advisability of the proposed actions. (See Greenpeace Review of Johnston Atoll Chemical Agent Disposal System (JACADS) December, 1988 Final Supplemental Environmental Impact Statement with Reference to the 1983 JACADS EIS, August 2, 1989)

0123 | Eighth: This proposed activity will violate international law, making each one of us who stand idly by, an international delinquent, and the United States of America, an international criminal.

0124

The London Dumping Convention is the governing international document regulating all ocean dumping. It has been ratified by more than 60 nations including the United States of America. That convention defines "dumping" as "any deliberate disposal at sea of wastes or other matter from vessels, aircraft, platforms or other man-made structures at sea." The vast majority of what is now considered "Johnston Atoll" is really an artificial island in which the original 56 acres of land mass has been extended by land fill to 690 acres of surface. The incinerator itself sits on parts of this landfill. Dumping has been defined to include incineration from vessels, platforms or structures at sea. In 1988, the parties to that convention adopted a resolution agreeing to work toward a phasing out of all ocean incineration over the next several years.

0124
cont'd

The Army's proposed activity goes against the convention in that rather than phasing out ocean incineration, the Army is proposing firing up such incinerators. At minimum, it must carry out its activity pursuant to a permit under the requirements of the London Dumping Convention. The Army has shown no intention of abiding either with the resolution or with the permitting requirements of the convention.

0125

Ninth, the Army claims its proposed activities can be done in a "environmentally acceptable manner. The environmental impacts of incident-free handling and disposal operations will be minimal." If that is truly the case, why not incinerate it in Germany? Why not incinerate it along the Chesapeake Bay at Aberdeen Proving Ground, Maryland, close to the Pentagon? Why not incinerate it at any of the other eight existing facilities in the continental United States, eliminating the need for hazardous shipment into the Pacific?

Aloha a hui hou,

Pōkā Laenui

Pōkā Laenui
(Hayden F. Burgess)

Carl Young

Carl Young
Name

85-555 Farrington Hwy, Waianae
Address

Conrad Vandyke
27th Vandyke
Name

Address

Name

Address

Miss Gumbertus
Miss Gumbertus

Name
3501 Auhimoku Rd.
Kailua, HI 96734

Address

Stratford Goodhue
Stratford Goodhue

Name

249 Nenua St.
Honolulu, Hawaii 96821

Address

Donna Coonse
DONNA COONSE

Name

1660 LUSITANA ST.
Honolulu, HI 96813
Address

RICK SIGLER
1463 LUSITANA ST #35
Hon HI 96813

Allen LEO ELIAS
Name

2450 MARINA DRIVE
HONOLULU, HI 96826
Address

J. JACKSON
Name

734-3 KAMOKU ST. HON HI 96826
Address

Ry. Takumi ROY TAKUMI
Name

1001 LUELU ST, PEARL CITY 96782
Address

H. DeWitt Barnett, H. DEWITT BARNETT
Name
1615 WILDER AVE., HONOLULU, HI 96822

Address

Ronald S. Carlson
Name

4211 Waiwae Ave ST400
Honolulu, Hawaii 96816
Address

DR. RONALD S. CARLSON

BIO-LOGICAL DENTISTRY

DENTAL HEALTH CARE, PREVENTING DISEASE
AND CREATING HEALTH...A MATTER OF YOUR CHOICE

C-8
Date Rec'd
Prior to
3/26/90

C-8
Date Received
Prior to
3-26-90

MARCH 26, 1990

MY WIFE MITSUE AND I STRONGLY PROTEST THE NOTION OF TRANSPORT AND INCINERATION OF POISONOUS NERVE GASES AT JOHNSTON ISLAND, IN THE PACIFIC OCEAN. THE HAZARDS OUTWEIGH THE PROPOSED BENEFIT AND THE PLAN IS DEFICIENT IN MANY RESPECTS.

0126 | RATHER THAN INCINERATION, I CALL FOR AN INTERNATIONAL FORUM OF SCIENTISTS, PARTICULARLY CHEMISTS, TO DEVELOP STRATEGIES FOR THE DECOMPOSITION OF THESE GASES BY SOME SORT OF "GAS ABSORPTION" PROCESS. THE GASEOUS COMPONENTS MAY BE BROKEN INTO ELEMENTAL GROUPS AND POSSIBLY UTILIZED IN OTHER INDUSTRIES. WHAT CAN BE COMPOSED CAN BE DECOMPOSED, AND THIS SEEMS MUCH SAFER THAN THE SIMPLE INCINERATION OF GASES. THE RESIDUES OF THIS PROCESS ESCAPE UNCONTROLLED AND AT HIGH RISK TO OUR PRECIOUS GLOBAL ENVIRONMENT.

0127 | THIS IS THE TIME TO CHALLENGE THE "BUSINESS AS USUAL" POINT OF VIEW AND PHILOSOPHY OF ACTION. WE CAN NOT NOT AFFORD TO HANDLE THIS DELICATE CIRCUMSTANCE WITH FORETHOUGHT AND DIVINE GUIDANCE AND WISDOM.

THERE ARE MANY UNANSWERED QUESTIONS THAT REMAIN AND I CALL FOR THE IMMEDIATE HALTING OF PROPOSED ACTIONS BY THE ARMY AND CONVEINING OF A CITIZENS ADVISORY BOARD. THIS BOARD IS MANDATED TO REVIEW THE SITUATION TO DATE AND SEEK ALTERNATIVE MEANS FOR DISPOSAL AND RECOMMEND A PRUDENT COURSE OF ACTION WITH HEALTH AS ITS PRIMARY CONCERN, AND NOT FINANCE OR TIME.

WITH GREAT RESPECT FOR OUR GLOBAL ENVIRONMENT AND WARMENTS
ALOHA!


RONALD S. CARLSON, D.D.S.


K. MITSUE COOK-CARLSON, M.A.

KAHALA OFFICE TOWER
4211 WAIALAE AVE., SUITE 400, 808-735-0282
HONOLULU, HAWAII 96816

malenka ō hawaii

March 26, 1990

COL. RALPH CARESTIA
OFFICE OF THE PROGRAM MANAGER FOR CHEMICAL DEMILITARIZATION
ABERDEEN PROVING GROUND, MD. 21010-5401

Dear Sir,

Why should Europe's success be the Pacific's failure? Why should we be the "back yard for the rest of the world? Whatever happened to the "AGE OF THE PACIFIC"? The era of soaring economic development in the Pacific Rim?

What happens to our largest product, TOURISM. which depends on fresh air, clean beaches and marvelous fishing if their preception is that the Pacific is contaminated? 23,000 small businesses in Hawaii alone depend on tourism, and countless thousands of others throughout the Pacific are also dependent on Tourism, shipping and fishing. What can you offer them? Who will pay if the Pacific is preceived to be contaminated?

We see this movement of Nazi Gas as further evidence of being pushed aside by developments in Europe. "This is sad" said Walter Dods, First Hawaiian Bank Chairman, "I see a turning away from the Pacific to Europe. There's no question that , east of the Mississippi, people think of Europe first. We were getting to the point where we were beginning to convince people that there was a Pacific, and that this was the Age of the Pacific." This proposal is proof that our leaders in Washington and the Eastern Establishment do not know we are here.

Why should we in the Pacific bear the brunt of a hand shake between Ronald Reagan and Helmit Kohl? The American government has not kept a treaty with the American Indians, a promise to the African-Americans, nor an agreement with the Native Hawaiians and now are renegeing on paying reparations to the Americans of Japanese Ancestry. So why then, is this promise so important that you are willing to compromise the integrity of the Pacific Nations?

Why should the re-unification of Europe in a "Common Market" be deterioralus to the "South Pacific Regional Environmental Programme"?

Since the Japanese, Russians, Koreans, etc. have hugh fishing fleets that operate in the Pacific Ocean--have they been consulted?

Since the Pacific Ocean is a major food source to the world--what about the fish? The large fish such as tuna travel thousands of miles across the Pacific following the current--can you be sure that they will not be contaminated?

0128

0129 | There are Pacific Island Nations who use Ocean water for food preparation. Is there no concern for them? Have they been consulted? Is there a reason, in the SSEIS, that these Islands do not appear on any of the Army's maps?

0130 | Will you please address more cigutary poison? The EIS states that there is no fishing in the Lagoon. Yet your "Officials" testified that the fishing is ok on Kalama Island (Johnston Atoll).

In Wai'anae, everyone talks of the Kapuna that died from eating the fish from Kalama Island. The Pathology Department of the University of Hawaii has case studies of Cigutary poison, yet your people down play it. Can we believe anything that you tell us?

0131 | Dioxins and dibenzofurans are absorbed or eaten by plankton and smaller marine organisms, accumulating in higher levels of the food chain. the New Jersey Department of Enviromental Protectional has already banned the sale of striped bass and American eels because of high contamination. To intentionally add more toxic substances to the oceans through incineration is irresponsible.

0132 | The big problem, as I see it, is shipping and the additional handling steps which increase the risks. And the fact that you can move this Convoy of 400 tons of lethal nerve gas across thousands of miles of ocean and around non-white nations and not notify anyone amounts to environmental terrorism. This is RACISM at its highest level.

The thing about RACISM is that it is so insidious that you don't even know you are doing it. You don't see us. The military's record of "people treatment in the Pacific since martial law was declared has been one of shame. I find it hard to believe that this is any different.

In preparing the EIS the statement was made that it (Kalama Island) is away from population centers. What you negelected to say is white population centers.

0133 | If there is fall out from Catastrophic natural events or spillage during transport, and the Army concedes risks from both, Can the City & county of Honolulu handle the medical problems in such? Does Civil Defense know what to do, does the general public, the police know what to do? Since the City & county of Honolulu is the largest medical center in the Pacific can we handle this problem?

And if there is a spill, you can not give us paper towels to clean up the beaches like they did in Valdez.

Until these and other concerns are satisfactorily addressed and the other Pacific Nations included , I asked that this clearly immoral and possibly illegal plan be scrapped.

Mahalo nui loa,

Marsha J. Jumper

March 25, 1990

Col. Ralph R. Carestia
SAIL-PMM
Bldg. E4517
Aberdeen Proving Ground, Maryland 21010

C-10
Date Received
Prior to
3-26-90

Also to: President George Bush
U.S. Senator Daniel K. Inouye
U.S. Senator Spark M. Matsunaga
U.S. Congressman Daniel Akaka
U.S. Congresswoman Pat Saiki
Gen. Colin Powell
Adm. Huntington Hardisty
Gen. Army Western Command
William Reilly - EPA
Daniel McGovern - EPA

re: Testimony and Federal Freedom of Information Act request
on European Chemical Munition Stockpile at Johnston Atoll

Dear Col. Carestia:

On March 20 of this year, Dr. Billy Richardson, Deputy Assistant to the Secretary of Defense for Chemical Matters, and 15 other people presented your plan to burn the European Chemical Munition Stockpile at Johnston Atoll, in our islands.

At that public hearing in Central Intermediate School, the Army removed Hawaii drinking water information from an empty table near the entrance, and hid it for about five minutes, face down, behind their sign-in desk (see encl.1).

At enclosure 2: the Army says Johnston Island is located 825 miles southwest of Hawaii. (John Reed of our Civil Defense office says Johnston is 605 nautical miles or 641 statute miles from the center of Honolulu.) The Kauai distance is much less.

0134

At enclosure 3: the distance is 820 miles. A state resolution was introduced to stop chemical burning, citing a 1983 Army Corps of Engineers environmental impact statement which says there are no plans to dispose of chemical agents on Johnston Island.

0135

At enclosure 4: the distance is about 700 miles. Assistant Defense Secretary Billy Richardson tells our press that the waters around Johnston are relatively safe with few reports of tidal waves or seismic activity. But at your hearing, the army admitted that Johnston island has been

page 2
Col. Ralph R. Carestia
March 25, 1990

evacuated twice, due to huge storm waves. About 1,100 people live on the atoll, including 200 military personnel.

U.S. Representative Pat Saiki was on Johnston in December, and said she found the operations to be "safe and efficient". Your court reporters transcript should reflect that an emergency was experienced while she was there.

At enclosure 5: the distance is about 750 miles.

0136

In your public hearing, citizens complain about your missing February 1990 draft environmental impact statement. It surfaced - at 11 o'clock at night - provided and *paid for* by concerned citizens, who said our Governor's Office, state Department of Health, and Hawaii EPA did not know of, or have, that document. Dr. Billy Richardson admits the state did not receive it. The meeting adjourned at 12:45 AM.

At enclosure 7: the problem is inadvertently expressed.

0137

In your transcript, our volcanic emissions reach Johnston Island. When trade winds reverse, Johnston Island air comes here. Numerical data presented at your hearing may or may not prove that catastrophic events could bring chemical levels to possibly harm certain babies and adults.

At enclosure 8: the distance is 825 miles.

Public concern is explained away as "misinformation" due to your missing impact statement. Our media may have become too lax and reluctant to harm tourism by reports of chemicals in our food, water and air. Please read enclosure 1 carefully. Candid federal responsibility and action is desperately needed in Hawaii.

I am sure you will get better questions, but under the

0138

0139

0140

0141

Federal Freedom of Information Act: (a) How far is Johnston Island from Hawaii? (b) Is it possible for a terrorist to hijack a plane or weld high explosives into a Johnston bound ship? (c) How many *hours* would it take for *what* levels of toxins to reach Hawaii? (d) Have Johnston weather patterns been studied since 1965? (e) Have you tested the meat of our large migrating fish? (f) May I please have a copy of the March 20 hearing transcript, and all the submitted testimony? (g) Finally, why is the army stealing drinking water information at a public school meeting?

Sincerely,



Bill Dougherty

Member, State Groundwater Technical Advisory Committee
1534-K Palolo Avenue . Honolulu 96816 . Phone 735-5870

See John Run

On 'Pure' Water

Gov. John Waihee said nothing about contaminated drinking water in his State-of-the-State speech.

His Department of Health is now telling us that our pure and safe drinking water is improving. Water chief Tom Arizumi was interviewed on January 9 (tape available).

KGMB TV News (Lyle Galdeira): "I was at a legislative Ways and Means Committee hearing, a little bit earlier today, and both your boss and the deputy director was there to tell the senators that our drinking water, our quality, has improved substantially in recent years."

Tom Arizumi: *"That's true Lyle, I think in Hawaii we are blessed with two things. First of all the natural aquifers we have really provide us with pure drinking water."*

Pure water: A total of 11 chemicals were shown in drinking water maps in the Aug. 13 Advertiser. Chemicals in an aquifer are odorless, colorless and tasteless. The water is clear, not pure.

Aquifers do not "improve substantially" in a few years. For instance, the state claims DBCP will be about half gone in 120 years. The remaining level only halves each 120 years.

Arizumi continues: *"And the water suppliers themselves, you know, over the past few years have done an excellent job in insuring their operations are adequate to provide safe water to our consumers."*

Safe water: One "theory" used by the state was soundly debunked in the Oct. 1989 Consumer Reports. Last March, the Health Department

told the Board of Health, that the lifetime health effects of low-level chemicals are still unknown, and that mixture effects, synergistic effects, and generational effects are unknown.

A fetus is most vulnerable. While the state claims our water is "safe", no one knows if our babies will be harmed by pesticide mixtures in food, water and air.

KGMB TV News (about water): "How does what we have here compared with what we have on the mainland?"

Tom Arizumi: *"Well it's very difficult to compare. It's like apples and oranges. I think here in Hawaii if you just compare the federal standards, Hawaii is excellent by those standards. I think the standards that we set for ourselves are a lot more stringent. The standards, for example, for many of the contaminants are more stringent than what the federal government would establish. Compared to nationally, you really can't, Hawaii is doing a much better job than the rest of the mainland that we know of."*

But most mainland water looks good by weak federal standards. Our "stringent standards" do not include drinking water protection. For instance: Atrazine, found in aquifers on each island where sugar is grown, is still in use. Most of the 41 man-made chemicals detected in our aquifers are still in use.

KGMB TV News: "Then we do have some tough restrictions and standards here in Hawaii, as compared with the mainland."

Who blows the whistle?

Not our Board of Water Supply or University. They found DDE, DDT and Lindane in 1965 and 1966. They didn't tell us. Not the EPA that allowed us to use a few pesticides here after most mainland use was stopped. And not our Mayor, City Council, House & Senate, or even the State "Ethics" Commission.

The News Media? Gov. Waihee spends big tax-dollars on radio, TV & newspaper "public relations" ads. He looks good, but will this hurt investigative reporting, harm our free press, and be hazardous to the election process?

We should ask our health director to blow the whistle...

SIXTH REQUEST

John C. Lewin, M.D.
State Department of Health
1250 Punchbowl Street
Honolulu, Hawaii 96801

Dear Dr. Lewin:

Thank you for releasing the water contamination maps in last year's August 13 Advertiser.

This was good, but those maps show 11 man-made chemicals, while 41 were detected.

It is hoped your water data will reflect how so many wells were judged to be contaminate free on each island. Unfortunately, your offer for me to visit, find, and list these data is unrealistic, and the results may be unverifiable. This computation will take hundreds of hours, with these signed data in hand.

May I please have a copy of all the lab summary reports used to eliminate these 30 chemicals? Was the EPA provided a copy? These signed data should show each: well number, well name, chemical, chemical level, limit of detection, date of test, and laboratory.

History will record this pure water fraud. The News Media should help. Our "earth filter" is fouled all the way down to the drinking water aquifers on each island. The problem will not vanish. It grows. About ten million pounds of new pesticides are used over our aquifers, each year.

State claims of "improved" drinking water creates apathy and takes the heat off politicians who are concerned about short term goals. We should all ask each House and Senate member for protection.

Election Year: (a) Children need a strong morbidity and mortality data registry and birth defects monitoring program on each island. (b) Strong drinking water protection, such as the original "Proposition 65", should be passed - before we vote.



Sincerely, Bill Dougherty Member
State Groundwater Technical Advisory Committee
1534-K Palolo Ave. Hon 96816 Phone 735-5870

Chem weapons will be destroyed on Johnston

By Jim Borg

Advertiser Science Writer **MAR 11, 90**

Chemical weapons assigned to U.S. forces in Europe will be brought to Johnston Atoll, 825 miles southwest of Hawaii, for destruction, the Army says.

A public hearing will be held in Honolulu March 20 to solicit comments on the Army's environmental impact report addressing the storage and disposal of the European stockpiles, the Army said in a statement from

Western Command headquarters at Fort Shafter.

The exact amount and type of munitions is classified, as is the method and timing of the weapons' transportation from Europe to Johnston Atoll, said Western Command spokesman John Fairbank.

The island is the site of the Army's newest chemical weapons disposal facility.

The public hearing will be held at 7 p.m. at Central Intermediate School, 1302 Queen Emma St.

ENCL 3

State urged to protest chem weapons shipments

By Stu Glauberman

Advertiser Capitol Bureau **MAR 10, 90**

State Rep. Annette Amaral wants the Legislature to take a stand against the Army's plans to ship chemical weapons from Europe to Johnston Atoll, 820 miles southwest of Honolulu.

Amaral, D-47th District (Ewa-Makakilo), and nine other House Democrats have introduced a resolution stating the Legislature's objection to recently announced plans to incinerate chemical agents at an Army installation on the atoll.

The resolution notes that an Army Corps of Engineers environmental impact statement done in 1983 said there were no plans to dispose of chemical agents on Johnston Island, where corrosion and weather factors posed potential problems.

The House measure said there is continuing concern

that the nerve agents and blistering agents would be shipped through or near Hawaii. If adopted, the resolution would be sent to Army headquarters at Fort Shafter and to Hawaii's congressional delegation.

Another resolution before the House would urge Congress to rethink the wisdom of basing the battleship USS Missouri at Pearl Harbor.

The resolution, introduced by Water and Land Use Chairman David Hagino, says Congress should reconsider whether the battleship group is needed and whether money should be spent to locate it here.

U.S. Sen. Daniel Inouye last week reiterated his support for bringing the battle group to Pearl Harbor.

A public hearing on a draft environmental impact statement for the project is set for 7 tonight at Central Intermediate School.

Army's plan to destroy chemical weapons at Johnston is opposed

By Benjamin Seto

Star-Bulletin

MAR. 20, 90

A local legislator is urging Hawaii residents to oppose the destruction of chemical weapons on tiny Johnston Atoll — a plan the Army hopes to begin this summer.

Rep. Annette Amaral yesterday said she introduced a resolution at

the state Legislature opposing the U.S. Army's plan to ship 435 tons of chemical weapons from West Germany and destroy them at the atoll, which is about 700 miles southwest of Honolulu.

A companion resolution was introduced in the Senate by Sen. Donna Ike-da.

"Part of the concern is when they're moving these weapons, we don't know when or how," Amaral said. "They're moving them across the Pacific. The potential for accidents and harm to the Pacific is heightened."

The Army has scheduled a public hearing on its plans at 7 p.m. today at Central Intermediate School.

Assistant Defense Secretary Bill Richardson has arrived in Honolulu to oversee the hearing, which will concentrate on an environmental impact statement conducted for the Army.

Richardson said the environmental report is a supplement to a study completed in 1983 when the U.S. government announced plans to build storage bunkers and an incineration plant on the atoll.

He said the recent report — looking at the transporting of weapons from West Germany to Johnston Atoll — found the waters around the atoll to be relatively

safe with few reports of tidal waves or seismic activity.

He said the sea routes are still under study, but noted that the alternatives are not being disclosed because of security reasons.

The atoll currently is the home for 72,000 tons of nerve gas — called GB and VX and commonly

known as mustard gas — which is set to be destroyed by a new \$150 million incineration plant.

About 1,100 people live on the atoll, including 200 military personnel.

Richardson said that once the Army receives approval of its plans, studies will be made to be environmentally sound, the incinerator may begin destroying weapons by

July or August.

He noted that the additional tons of chemical weapons from West Germany would add only three months of work.

Congress has mandated that the federal government destroy its stockpile of chemical weapons by 1997. Richardson said the job probably won't be done until 1998.

U.S. Rep. Pat Saiki last December visited the atoll and said she found the operations to be safe and efficient. She said it was the government's responsibility to destroy the weapons, and Johnston Atoll is the only reasonable site.

Still, Amaral said she does not support the Army's plans, especially because the Army has disclosed little information, usually citing security reasons.

"I want to know when the Army decided to make the Pacific the dumping ground for chemical weaponry," she added.

“
I want to know when the Army decided to make the Pacific the dumping ground for chemical weaponry.
”

Rep. Annette Amaral

Commenting on U.S. Army plans to destroy chemical weapons on Johnston Atoll

Isle activists decry plan to burn chemical arms

By David Oshiro
Star Bulletin

A proposal to destroy deadly chemical weapons at Johnston Atoll, about 750 miles southwest of Hawaii, came under heavy criticism last night.

The Army proposes to move about 100,000 projectiles later this year from West Germany to the atoll. There, the weapons would be incinerated, along with other chemical arms transferred from Okinawa in 1971.

Army and U.S. Defense Department officials held a public hearing last night at Central Intermediate School to hear comments on a supplemental environmental impact statement for the project.

Many people were unhappy that

the document was unavailable to the public until last week.

"Why have you kept this (environmental statement) a practical secret? Why has it been so difficult, if not impossible, to obtain copies of this document?" asked Hawaiian activist Hayden Burgess.

On that basis, Burgess said the period for public comment on the project should be extended for at least three months beyond the original Monday deadline.

Billy Richardson, deputy assistant to the Secretary of Defense for chemical matters, said an earlier 1983 environmental statement had been distributed to state agencies and public libraries.

Richardson acknowledged that the state did not receive copies of

the February 1990 supplemental statement for the project.

State Rep. Annelie Amaral said new information has come to light since the 1983 report was prepared, that the burning of toxic chemicals can produce other hazardous compounds.

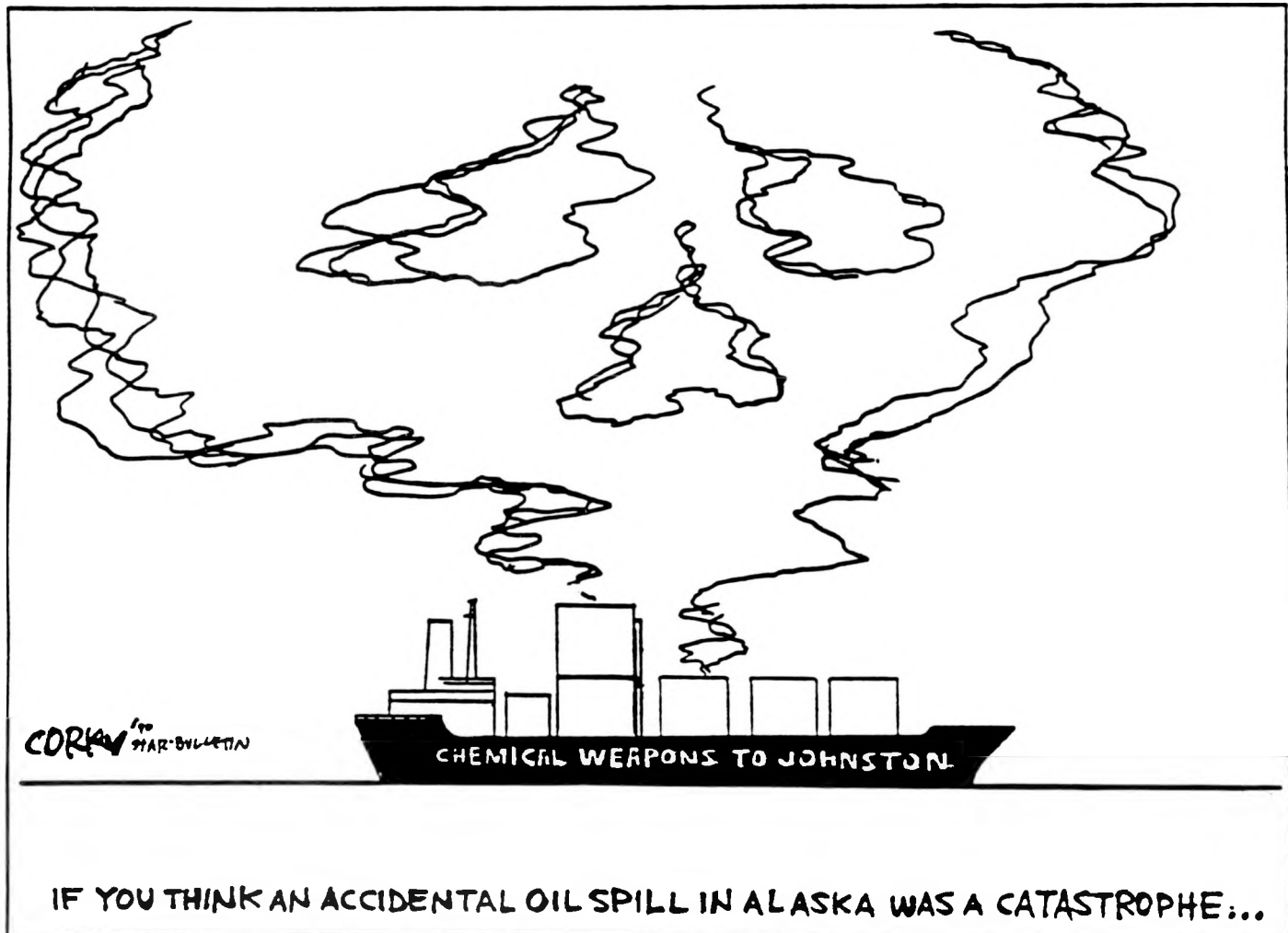
"Even a layperson like myself could reasonably conclude that this information casts grave doubt on the wisdom of the decision to dispose of chemical weapons through incineration," she said.

Moanikeala Akaka, a trustee from the Office of Hawaiian Affairs, said that if the process of destroying the weapons is as safe as Army officials claim, then incinerators should be built where the weapons are now stored.

"If it is so safe, incinerate it in Germany," Burgess suggested.

Comments on the project can be mailed before Monday to Col. Ralph Carestia, ATTN: SAIL-PMM, Building E4517, Aberdeen Proving Ground, MD 21010-5401.

ENCL 6



Kilauea 'vog' hazes over Island skies

Kilauea Volcano's long-running eruption resumed yesterday after a two-day pause and, with the help of kona winds, covered the Islands with haze.

Scientists at the Hawaiian Volcano Observatory reported flows were meandering down the side of Kilauea on the middle level of the east rift zone, between the 1,950- and 1,750-foot elevations, about four miles upslope of the Kalapana Bypass Highway.

The eruption paused Tuesday night, when surface lava flows stopped. But the activity resumed sometime early yesterday with a pre-dawn outbreak of activity.

It was only the third time in nearly three years that the eruption has taken a break. There was a one-week hiatus in April 1988 and a three-day halt in February.

Reggie Okamura, spokesman for the observatory, said the seismic activity was picking up yesterday and the level of the lava pond at Kupaianaha vent was rising.

Meanwhile yesterday, National Weather Service lead forecaster Hans Rosendal said kona winds were blowing the volcanic smog — "vog" — over the islands, causing the hazy skies.

The emissions from Kilauea normally drift south, around the Big Island's South Point, and wrap back up the Kona coast before being blown by prevailing trade winds west-southwestward toward Johnston Island and the Marshall Islands, Rosendal said.

This week, the pall was on its way to Johnston and the Marshalls when it encountered weak southwesterly winds that turned it around and blew it back to all the Hawaiian Islands.

~"The satellite picture shows pretty much the whole state is getting it," Rosendal said.

His forecast for today: pretty much the same.



Advertiser photo by T. Umf

This plover patrolling the Punchbowl yesterday had a hazy view of Honolulu. Normally, the buildings and Diamond Head in background would be much sharper.

HAWAIIAN ADVERTISER, APRIL 23, 1989

Hearing airs details, fears of Johnston arms disposal

By Jim Borg

Advertiser Science Writer

Shipments of nerve-gas weapons make everybody nervous.

That was clear from a public hearing last week on the Army's proposal to destroy U.S. chemical weapons now stored in Germany at a new incinerator on Johnston Island, 825 miles southwest of Hawaii.

But some of the public's response was based on misinformation, in part because copies of the Army's environmental impact report weren't easily available before the hearing.

While indisputably dangerous, the 100,000-round European stockpile represents only a small fraction of the chemical weapons earmarked for destruction at Johnston Island.

The \$150 million incinerator, officially called the Johnston Atoll Chemical Agent Disposal System or JACADS, was built to destroy the 300,000 pieces of obsolete munitions in storage on the island since they arrived from Okinawa in 1971.

The stockpile, weighing 13,000 tons, includes rockets, mines, artillery shells and 500-pound and 750-pound bombs that contain the nerve agents GB and VX and a blistering agent or mustard gas called HD.

By comparison, the German-based stockpile weighs 39 tons, said Bruce Jones, an Army spokesman at Fort Shafter.

It would take about three months to destroy the European munitions at Johnston, compared to three to four years for the weapons already at the atoll, the Army says.

The supplemental report did have some new information on the risks of chemical weapons disposal, however.

Since the initial environmental impact statement for the facility was issued in 1983, the Army has discovered that poisons called dioxins and furans

can form in the incineration process. These would float up the smokestacks and eventually settle onto the surface of the ocean around the atoll, which has a large population of green sea turtles.

"This opens a much larger can of worms," testified Jon Hinck of Greenpeace USA.

The Army says dioxins and furans could form from the combustion of the mustard agent, as well as from used plastic protective suits worn by personnel and some other minor sources. Levels of dioxin and furan in stack emissions can be monitored to ensure they remain below Environmental Protection Agency limits, the Army said in an appendix to the report.

The European stores include 155mm and 8-inch artillery rounds containing GB and VX, but no mustard gas, so they wouldn't generate those smoke-stack poisons.

Still, says John Naughton, Pacific Islands environmental coordinator for the National Marine Fisheries Service, the Army must do more work to analyze the effects of dioxins on the marine environment.

While the fisheries agency hasn't offered its official response to the Army's new assessment, Naughton said he considers the report adequate — aside from the dioxin question.

The Army acknowledges the turtles would be devastated by any serious accident at the disposal facility. Three turtles tagged at Johnston atoll later turned up at French Frigate Shoals, indicating they are part of the endangered Hawaiian turtle population.

On a positive note, the Army has abandoned plans to dump residues and solid wastes from the disposal process into the ocean. Naughton said in an interview. "Everything will be containerized and shipped to EPA-approved dump sites on

the continental United States," he said.

President Reagan in 1986 promised Chancellor Helmut Kohl that all U.S. chemical weapons would be removed from German soil by 1992, a timetable shortened by President Bush last year.

The Army favors Johnston Island because of the risks of hauling the shells by train to a Mainland facility. The Pentagon is keeping the ocean shipment plans secret so as not to tempt terrorists.

Several opponents argued at the hearing that the munitions should be destroyed where they are rather than shipped halfway around the world.

Jon Van Dyke, a University of Hawaii law professor and director of the Institute for Peace, testifying as an individual, suggested that the United States is bowing to pressure from Germany by agreeing to remove them by Sept. 30.

0-11
Date Rec'd
Prior to
3/26/90

C-11
Date Received
Prior to
3-26-90

The "ground-fisters" strike again: ~~the~~ Sick Design for Johnston Island:

Some contextual information

Evidence of contempt for Pacific Islands

In December 1987 the army began production of "Methyl phosphonic diisouride (DF) to make weapons designed to dispense a poison gas so potent that breathing a tiny bit causes vomiting, twitching and convulsive death from asphyxiation or heart failure within minutes. Thus ended the Pentagon's 13 year United States' moratorium on production of nerve agents. This opened up the door for wide deployment of a whole new mess of U.S. binary weapons which are designed to kill by way of odorless, invisible mists. So when we talk of Khadaffy's or Iran's or anyone else's biological or chemical warfare agents, it is simply to justify what we are already doing, and/or dupe the ignorant or unknowing into thinking we had to make it to protect ourselves. What we need to do is to protect ourselves from ourselves, not from some imagined enemy.

Background: IN the 1950's our stockpile was discovered to be deteriorating. ~~But~~ when we say we are getting rid of so much nerve gas the other half of that truth is that we are making more new nerve gas. It is designed to slay large masses of enemy troops swiftly and is far more potent than that which Iraq used to kill Iranian soldiers and Kurds with. An interesting side light is that the United States Senate voted 91 to 0 to condemn the above Iraqi deed.

United States new binary weapons put U.S. first in the latest of lethal weapons, and try to keep others from producing. IN the past there was the Khadaffy episode, and now in March 1990 it cropped up again. After all, our leaders are paranoid, which seems to have set off the entire military monster that has become out of hand. In Geneva negotiations, the U.S. wanted to free the army to make binary weapons under Reagan. Even though there was much congressional debate, Bush, the environmental rescuer cast the tie breaking vote 3 times to get the chemical arms production moving.

IN the 1990's the army plans to produce over 1 million binary weapons at a cost of \$3 billion. I'll skip the terrible details of the death process and just say that death occurs in about 10 minutes of agony.

Worse is BigEye which Reagan pushed ahead in 1986. There is a whole family of U.S. killer agents. The "in-thing" is R&D in the army that includes, besides chemical warfare materials, DNA recombinant - genetically engineered viruses/diseases too disgusting to bring up at this time.

IN 1991 the army has already made a move to increase nerve agents to

Travel 20-40 miles. Also studying
poison gas war - 20-40 miles
tactical man
several hundred -
over 1000
miles

in Pine Bluff they deal only with deadly chemicals (since 1942) - in 1945
14,000 people the people now support it. You guessed it; it created about
500 jobs. 1200 people produce thousands of tons of deadly sarin, a
component of nerve gas invented by the Nazis and which we considered a
war crime.) behind guard houses and barbed wire fences.

2 million gallons of chemicals brought from mainland to Kalamia Island

People are forbidden to fish anywhere near Kalamia Island as well as many
other US militarized islands. If ^{you} US military decision-makers don't
know which ones, I would suggest you research the matter. If you need
some help to find this information, I shall be happy to help you do so. Also
the terrible outbreak of ciguatera, fish poisoning is becoming more and
more threatening to the Pacific Islanders. Again, I will steer you into the
many sources ^{of} ~~research information for you~~ to find this necessary
information. YOU must do this research, for what you add to our ocean will
not be isolated, but instead mixed with millions of gallons of high and low
level radioactive waste dumped off Hawaii's shores by the navy, the fell
out and radioactive soil etc from our over 66 atomic and hydrogen bomb
testing, the continued nuclear testing by France etc. etc, *seeping dioxin*,

There are several stories of "monster" fish caught near Kalamia Island. The
usual type are about 3 times the size of the particular species. I recently
heard of a fish being caught off Oahu with 3 or 4 fins on one side and none
on the other, and the stories go on, *and on*.

The US military's contempt for islands is obvious, but please know that we
love islands. Rongelap, Utirik, Bikini, Eniwetok, etc. have been radiated. US
vaporized 3 islands. They're gone! Then what about Runit Island to where
US removed highly radioactive stuff from their island/people experiments
and capped it with concrete. Now the concrete is cracking open and some
say they are worried about plutonium leakage - the deadliest thing ever
created by man - deadly for at least 1/2 million years. The list of evil
doings goes on, but this should suffice to tell you that your poisons and
projects may be the last of the Pacific Ocean's ability to tolerate the
poisons created by those who are so paranoid that an "enemy" might get us.

As for whether or not there are risks at Kalamia Island, now can anyone
with even a 5th grade education not know. The records of ships sailing the
oceans over the past decades is enough to warn anybody of what might
happen. And of course we only know about a small number because of the
military's self-appointed right to censor via lies, half-truths, classifying
etc. even if it endangers our lives. (It is well known that civilians who
work there are "sworn to secrecy" that they will not reveal anything that
is there, what they've done, or what they've been told. Why? That we

→ might find out, or that
Khadaffi might? I
wonder if he
decides to
burn or

bomb alarms - is it because it's easy for enemy to burn or destroy enemy's
assets? why don't you move your targets somewhere else. 1. I don't like
2. make rights. Go home, leave us be. you are a threat to the world.

0142

About a month ago there was a fire in a furnace at Kurema. The air lock
side that takes in weapons caught fire and though they did get it under
control, there is no guarantee that it won't happen again. If you want to
know more information, I would suggest that you use your own means of
inquiry and I am sure you will retract your statements about safety etc.
It always astonishes me, in a letter, you read.

0143

~~Severely~~ questions lurk in my mind: 1. Will we become the world's or
even America's dumpster for such horrible materials? 2. Will Kurema be
the recipient of the next generation - binary weapons? Will you stockpile
your genetically engineered viruses there also? 3. Will you tell us when
there has been an accident so we can be evacuated should the wind blow
our way? 4. To where will we be evacuated? 5. Can you ask the civil
defense to let us have a few drills so we will know what to do and where
to go? 6. Do you only care about your jobs, promotions, p.r. and have you
no kids or grandkids whose environment you are presently creating? 7.

0144

0145

What will be the form of message should an accident, fire etc. happen on a
ship en-route, will you ~~float~~^{float} a sign on the ocean that ~~we~~^{we} cannot fish here? *Where?*
Can stop the fish from swimming and carrying the poisons? How can you
be so cruel? How can you create such a future? Who is the enemy of we
Pacific Islanders? How do you come to believe you own the ocean and can
do with it as you wish. I don't think anyone owns the ocean, but if there
was such a ridiculous "ownership" it obviously is we Pacific Islanders,
not some outsiders who created United States STRATEGIC TRUSTEESHIPS
whereby the military would set up dictatorships *in Pacific & Indian Oceans,*
whose ocean will it be, once its a toxic sewer

C-12
Date Received
Prior to
3-26-90

3/26/90

To Whom It May Concern,

The plan to move nuclear weapons from West Germany to Johnson Island has me deeply concerned. Have the long-term effects of these toxins been studied thoroughly enough to guarantee the safety of the residents? Have you considered the ramifications of a "spill" on the way to Johnson Island. I believe this issue needs to be studied more thoroughly, with additional environmental impact statements being done.

0145-A

0146

0147

Thank you,

Linda W. Kiri

92-956-65 Makakalo Dr.

Ewa Beach, HI 96707

672-9135

C-13
Date Rec'd
Prior to
3/26/90

C-13
Date Received
Prior to
3-26-90

March 26, 1990

*
0148

To Whom It May Concern,

The United States Government's plan to move nuclear weapons and nerve gas from West Germany to Johnson Island has me deeply concerned.

Have the longterm effects of these toxins been studied thoroughly enough to ensure the safety of the residents of Johnson Island and all surrounding areas?. Has the ramifications of a "spill" during shipment to Johnson Island been considered and precautions taken?

I believe that this issue needs to be studied more thoroughly and additional environmental impact statements need to be completed.



Sue A. Prellwitz
92-960-56 Makakilo
Ewa Beach, HI 96707

* Same as Comments # 146 and # 147.

C-14
Date Received
Prior to
3-26-90

March 26, 1990

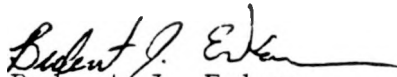
Incineration of chemical weapons at Johnston Island

To Whom It May Concern:

We are strongly opposed to the U.S. Government's proposal for the transoceanic shipment of chemical weapons from West Germany to Johnston Atoll for incineration. The hazards related to such transport and such a method of disposal are numerous and very serious.

The proposal poses extreme hazards to people and the environment; the Army's 1983 Draft Environmental Impact Statement is obsolete and its 1988 Supplemental Environmental Impact Statement is wholly inadequate; the dangers of residual toxins and new chemical compounds created by incineration to the environment are as yet unknown.

We urge those responsible to reconsider the transport of these chemical weapons to Johnston Island until new and safer technology for the disposal of these chemicals is developed.


Bulent J. Erkan


Patricia J. Erkan
92-960 Makakilo Dr. #57
Ewa Beach, HI 96707

0149

Hearing airs details, fears of Johnston arms disposal

By Jim Borg

Advertiser Science Writer

Shipments of nerve-gas weapons make everybody nervous.

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Still, says John Naughton, Pacific Islands environmental coordinator for the National Marine Fisheries Service, the Army must do more work to analyze the effects of dioxins on the marine environment.

While the fisheries agency hasn't offered its official response to the Army's new assessment, Naughton said he considers the report adequate aside from the dioxin question.

The Army acknowledges the turtles would be devastated by any serious accident at the disposal facility. Three turtles tagged at Johnston atoll later turned up at French Frigate Shoals, indicating they are part of the endangered Hawaiian turtle population.

On a positive note, the Army has abandoned plans to dump residues and solid wastes from the disposal process into the ocean, Naughton said in an interview. "Everything will be containerized and shipped to EPA-approved dump sites on

the continental United States," he said.

President Reagan in 1986 promised Chancellor Helmut Kohl that all U.S. chemical weapons would be removed from German soil by 1992, a timetable shortened by President Bush last year.

The Army favors Johnston Island because of the risks of hauling the shells by train to a Mainland facility. The Pentagon is keeping the ocean shipment plans secret so as not to tempt terrorists.

Several opponents argued at the hearing that the munitions should be destroyed where they are rather than shipped halfway around the world.

Jon Van Dyke, a University of Hawaii law professor and director of the Institute for Peace, testifying as an individual, suggested that the United States is bowing to pressure from Germany by agreeing to remove them by Sept. 30.

STAR Bulletin

We need answers on Johnston role

JOHNSTON Island has become the place where the U.S. military sends its poison gas and other chemical weapons to spend their last days.

The atoll, about 700 miles southwest of here, already has some 72,000 tons of nerve gas, which are to be destroyed in a new \$150 million incinerator plant by 1997, according to the intent of Congress.

As if that were not controversial enough, the Army is now planning to ship 435 tons of chemical weapons all the way from West Germany to Johnston, also for destruction.

Although Hawaii's U.S. Rep. Pat Saiki visited Johnston last December and found the operation to be safe and a reasonable site for such activity, there is renewed local concern about its threat to the regional environment.

A dozen members of the state Legislature object to the latest proposed transport of poisons to Johnston. Rep. Annelie Amaral, author of a challenging resolution, wants to know when the Army decided to make the Pacific a dumping ground for chemical weapons. Her resolution notes that the military's final environmental impact statement says no plans exist to add more chemical weapons to those already stored on Johnston.

The Sierra Club recognizes that destruction of chemical weapons from Asia has been a part of the Johnston mission since their transfer there from Okinawa in 1971. The expansion of that role to include European weapons raises questions about Johnston's future.

"Is the next step to be incineration of all mainland U.S. stockpiles and those of other countries?" asks Paul P. Spaulding III, a lawyer with the Sierra Club Legal Defense fund.

Hayden Burgess, a lawyer and leader here for the World Council of Indigenous Peoples, argues that any decision to use the atoll for chemical weapons incineration should involve Pacific peoples. If the chemicals are as safe to handle as the military insists, Burgess asks, then why not dispose of them in Germany or at Aberdeen Proving Grounds in Maryland?

Johnston's role as a lethal weapons incinerator seems grimly destined, but this latest deadly shipment should be blocked until those of us who live here and elsewhere in the Pacific, including 1,100 workers on Johnston, can get a better explanation of why hazardous chemical devices are traveling so far to be destroyed.

The visit to Hawaii this week of the Army's Gen. Colin Powell, chairman of the joint chiefs of staff, seems like a good opportunity for Hawaii to launch a fresh message of concern through the nation's military channels.

Chem weapons burning plan draws fire

By Jim Borg
Advertiser Science Writer

The Army's plan to destroy U.S. chemical weapons stockpiles from Germany at the just-completed incinerator at Johnston Island drew heavy fire last night from opponents who charged that it's unsafe and possibly illegal.

About 100,000 artillery shells containing deadly nerve agents will be shipped to Johnston Island on a route the military is keeping secret to guard against terrorist attacks.

For that reason, no one outside the government knows how close the shipborne stockpiles will come to Hawaii or any other coastline. The United States has agreed to remove the 155mm and 8-inch artillery shells from German soil by Sept. 30, with shipments beginning in July.

The \$150-million facility on Johnston Island, 825 miles southwest of Honolulu, was built to destroy the obsolete arsenal of chemical munitions already stored on the island.

At a public hearing to address the addition of the European weapons to the equation, several opponents urged the Army to scrap its plans and start over with a new environmental impact assessment. More than 100 people turned out for the meeting at Central Intermediate School.

**'The Pacific
will not be the
dumping
ground for the
world.'**

**— Annette
Amaral
47th District
Representative**

"The Pacific will not be the dumping ground for the world," vowed state Rep. Annette Amaral, D-47th District (Ewa-Makakilo). "We live here, we use her waters, we will fight to keep free of this obscenity."

University of Hawaii law professor Jon Van Dyke said the environmental impact statement fails to address the possible effects of hurricanes, which forced the evacuation of Johnston Island in 1972 and 1984.

Van Dyke also said the destruction of chemical weapons at the island may violate international law, particularly the U.S.-approved 1972 London Dumping Convention, which

prohibits deliberate disposal of wastes on "man-made structures at sea." He said Johnston qualifies as an artificial island because it was expanded 10-fold by dredge-and-fill construction.

The Army says there are "no viable alternatives" to destroying the weapons at Johnston Island, since to incinerate them at one of the eight installations on the Mainland "has many disadvantages," mostly associated with moving the deadly arms across country.

The Army's assurances about safety were assailed by several individuals and groups, including the Sierra Club Legal Defense Fund, Greenpeace International and the Office of Hawaiian Affairs.

"This is environmental terrorism," said Marsha Joiner.

State Sen. Donna Ikeda, D-11th District (Hawaii Kai-Aina Haina), chairwoman of the Senate Agriculture and Environment Committee, also voiced opposition.

Under a "worst case" scenario, the supplemental statement, dated last month, says the largest spill of the chemical agents would occur if a plane crashed into the island's storage igloos, exploding the munitions and causing a fire that raged for at least 30 minutes. That would be "devastating to the aquatic environment," but

the chemicals will eventually break down and become diluted, the report said.

A worst-case atmospheric release of the chemicals from a detonation or fire would produce a plume that would carry deadly concentrations no farther than 80 miles, the report asserts.

Now at a storage site near Clausen, West Germany, the shells, containing the fast-killing nerve agents GB and VX, will be placed in airtight steel containers and packed in 5,000 secure cargo boxes for the trip. At the port of Nordenham, West Germany, they will be loaded on two ships with equipment to detect and contain gas leaks, the Army said.

Transportation of the shells on the high seas to Johnston Island is covered under a separate "global commons" environmental report — classified secret. A summary of that assessment circulated last night said that, barring a catastrophe such as a fire or sinking, the transit should be safe.

Written comments may be sent by Monday to Col. Ralph Carestia, chief of the environmental and monitoring division, Office of the Program Manager for Chemical Demilitarization, Aberdeen Proving Ground, Md. 21010-5401.

Editorials

Tuesday, March 27, 1990

Chemical weapons

Better not to store them longer

The army is making the best of a bad situation with its plans to destroy obsolete chemical weapons at Johnston Island, including some U.S. munitions stockpiled in West Germany.

Plans to bring the Germany stockpile to Johnston have revived well-founded fears about the whole project. But continued storage of the weapons poses greater risks.

Rockets, bombs, shells and mines containing blistering mustard gas and deadly nerve gas were moved from Okinawa to Johnston in 1971. The aging stockpile is unstable and the containers sometimes leak. Congress ordered the munitions destroyed by 1997.

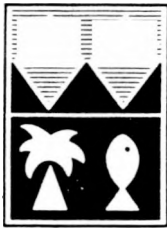
Johnston Island, 825 miles southwest of Hawaii, is part of a treeless atoll with two islets, one of the most isolated spots in the world. Construction of the \$150-million incinerator there was preceded by 10 years of prototype testing in Utah.

The project was reviewed by the National Academy of Sciences and National Marine Fisheries Service. Every step has been monitored by the Environmental Protection Agency.

The plan to add the relatively tiny European stockpile to munitions already on Johnston within the next year raises new safety concerns about shipping, added to old ones about moving emission wastes to the Mainland for landfill disposal.

No one can guarantee there won't be an accident. But a few years of limited risk seem far preferable to storing these awful weapons for another generation in the hope some other alternative can be found.

Pending evaluation during a 16-month trial of the incinerator, due to begin soon, it seems to be a tradeoff we should accept in return for the long-term security of being rid of the things for good.



GREENPEACE *Pacific Campaign*

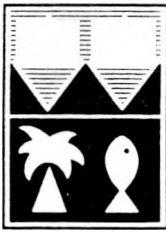
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GREENPEACE REVIEW OF

JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM (JACADS)

DRAFT SECOND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FEBRUARY 1990





GREENPEACE *Pacific Campaign*

GREENPEACE REVIEW OF

**JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM (JACADS)
DRAFT SECOND SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT (1990)
FOR THE STORAGE AND ULTIMATE DISPOSAL OF THE EUROPEAN
CHEMICAL MUNITION STOCKPILE
WITH REFERENCE TO DECEMBER, 1988 FSEIS AND THE 1983 EIS**

INCLUDING

**SIGNIFICANT NEW INFORMATION
RELEVANT TO ENVIRONMENTAL CONCERNS, AND BEARING ON THE
PROPOSED ACTION AND ITS IMPACTS**

Prepared by:

Alfred Picardi
Certified Hazardous Materials Manager (CHMM)
Registered Environmental Assessor (REA)
Environmental Science and Assessment Services, Inc.
1155 Connecticut Ave., Suite 400, Washington, DC 20036

with contributions and review from:

Sebia Hawkins
Paul Johnston
Lisa Bunin
Jim Puckett
Greenpeace International

Cynthia Moore
Pat Costner
Greenpeace USA

Ross Pickford (CHMM)
Environmental Science & Assessment Services, Inc.

Lindsay Audin, PE, Certified Energy Manager

Prepared for:

Greenpeace International
Pacific Campaign

March 26, 1989



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EXECUTIVE SUMMARY

In 1983 Greenpeace began registering concerns about the disposal of chemical weapons at Johnston Atoll. The concerns were two-fold: that the proto-type incineration process would harm the environment; and that the JACADS incinerators would be used to dispose of other chemical weapons stockpiles besides those stored there, in addition to other hazardous wastes. These questions have been raised repeatedly by Greenpeace in the EIS process regarding Johnston Atoll.

These concerns, among many others recently presented in the "Greenpeace Review of Johnston Atoll Chemical Agent Disposal System (JACADS)" (Aug 1989)¹, have been borne out. Since JACADS is the test site for the USA Chemical Stockpile Disposal Program (CSDP) many of the environmental dangers posed by chemical weapons incineration have a direct bearing on disposal at the eight other land-based continental US (CONUS) chemical weapon stockpile facilities.²

Chemical Stockpile Disposal Program

Each of the nine sites will face serious long-term environmental problems associated with: some of the most toxic chemicals known to science - including dioxins and furans - which will eventually bioaccumulate in living tissues; generation of hazardous wastes contaminated with dioxins and furans requiring storage in RCRA landfills - presumably within the same site, excepting Johnston Atoll; and health and safety problems associated with handling of the weapons during transport and operations.

GREENPEACE BELIEVES THAT ANY EXPOSURE TO DIOXINS, FURANS AND OTHER BIOACCUMULATIVE PRODUCTS OF INCOMPLETE COMBUSTION IS A GREAT CONCERN. STUDIES HAVE FAILED TO DEMONSTRATE ANY LEVEL OF DIOXIN EXPOSURE WHICH HAS NO EFFECT. RECENT REVELATIONS OF DATA MANIPULATION ON STUDIES OF HUMAN EXPOSURE MAY INDICATE THAT DIOXIN IS A POTENT HUMAN CARCINOGEN.

FURTHER, THE DOA HAS FAILED TO ADEQUATELY ADDRESS THESE CONCERNS IDENTIFIED IN THE "GREENPEACE REVIEW" IN THE DSSEIS.

1. Hereinafter referred to as Greenpeace Review.

2. Maryland, Kentucky, Alabama, Utah, Indiana, Oregon, Arkansas, Colorado.

The longer term problems identified in the earlier review, and this current review, may in fact become a perpetual environmental plague. According to the Conference Committee Report for Department of Defense Appropriations 1990, Nov. 13, 1989, in Amendment #107, "The Committee believes that it may be possible or desirable to continue to use these facilities for disposal or (sic) other wastes or conventional munitions. Such use might require some changes to the design of the furnaces before they are installed in the facility. The Committee directs the Army to investigate and report on the feasibility and desirability of using chemical weapon disposal facilities for other purposes after the primary mission is completed. Such report should address associated costs and design changes that may be required, as well as management alternatives for operation of such a plant." (emphasis added)¹

In a report often quoted by the Army and others, entitled "Disposal of Chemical Munitions and Agents" written by the National Research Council (NRC) in 1984, this idea of creating regional Department of Defense (DOD) hazardous waste centers was suggested. "In addition, the DOD generates a substantial quantity of industrial and hazardous wastes, which must be disposed of in an environmentally acceptable manner. It might be possible to increase substantially the life-cycle benefits of the disposal facilities for chemical weapons if the incineration systems could be subsequently modified to dispose of other DOD wastes."²

Since the DOD has no long term plan for the disposal of DOD hazardous wastes, with the exception of the unacceptable Chemical Stockpile Disposal Program, Greenpeace opposes this ad hoc attempt by the DOA and DOD to use incineration as the disposal technology anywhere in the world.

Greenpeace's concerns that JACADS would be used for other purposes, despite DOA claims to the contrary, seem to be validated by the Congressional and NRC proposals. In light of the Congressional directive for the Army to do the feasibility study for redesign of all of the chemical weapons disposal incinerators, and based on the Army's inadequate piecemeal approach to the CSDP, including JACADS, Greenpeace believes that THE

1. Under existing law - PL 99-145, sec. 1412 - the Army is required to dismantle all of the chemical weapon disposal facilities, and restore the sites to their original condition.

2. "Disposal of Chemical Munitions and Agents," NRC, National Academy Press, 1984, p. 68.

ARMY HAS A DUTY UNDER NEPA TO CONDUCT A COMPREHENSIVE ANALYSIS OF THE ENTIRE PROPOSED ACTION.¹

Other environmental concerns addressed in this review of JACADS, have specific relevance to Johnston Atoll in its marine environment. These concerns speak to impacts on the marine microlayer, an extremely bioactive zone in the water column; impacts on endangered and threatened species; possible impacts on pelagic fish stocks; the remoteness of the site in terms of monitoring and independent oversight activities; the transport of wastes from JACADS; the transport of the European chemical weapons stockpiles to Johnston Atoll; and health and safety problems associated with handling of the weapons during transport and operations at JACADS.

JACADS and European Chemical Weapons Disposal

Based on a March 1988 CSDP Implementation Plan budgeting for the removal of the European stockpiles by 1992, the "Greenpeace Review" called on the Army to file a Supplemental EIS to evaluate the Department of the Army's (DOA) plans to transport the European stockpile to JACADS. The DOA filed a Draft Second Supplemental EIS in February 1990. On March 7th, the United States and West Germany (FRG) announced that stockpiled chemical weapons stored in FRG would be shipped to Johnston Atoll as soon as August or September 1990.

Interestingly, the same March 1988 CSDP Plan quoted DOA Undersecretary James R. Ambose who stated that transportation is a "formidable, complex and uncertain task . . ." and that transportation would increase the likelihood of an accident and make the chemical weapons more vulnerable to sabotage or terrorism.

A June 1989 report entitled "Risk Associated with the Demilitarization of the United States Chemical Weapons Stockpile" prepared for presentation at the Air and Waste Management Association meeting, concluded that on-site disposal of the CONUS stockpiles was the preferred option because "of these three (a national disposal center, regional disposal centers, and on-site disposal) it was determined that the greatest environmental impact was due to abnormal operation (accidents) and transportation

1. For a more detailed discussion on this subject, see Discussion, Section 1: Failure to prepare a comprehensive Environmental Analysis, p. 3.

accidents. The impacts included human fatalities and chronic illness, destruction of wildlife and wildlife habitat, destruction of economic resources and adverse impacts on the quality of life in the affected areas."¹

The Army concluded in 1988 that on-site disposal was the preferred option for the CONUS weapons. The worst case scenario for a truck or rail accident in a populated area was between 5,000 and 10,000 fatalities, with a caveat that "although the efforts made to ensure that uncertainties about the values for accident and risk analyses were treated consistently and systematically for all alternatives, the actual values may still be in error by as much as a factor of 10 in either direction."² However, it seems political considerations are the motive force behind Chancellor Kohl's decision to move stockpiles from West Germany rather than any true analysis of the risks. The transportation risk assessment by which the U.S. Army reasoned that on-site disposal was the least dangerous of the three options should apply equally to shipment of the German stockpile.³

ADDITIONALLY, THE ARMY IS LEGALLY COMPELLED TO CONSIDER IN A SINGLE EIS ALL PARTS OF THE PROPOSED CHEMICAL STOCKPILE DISPOSAL PROGRAM. THIS INCLUDES NOT ONLY AN ANALYSIS OF THE CUMULATIVE EFFECTS OF ALL PROPOSED OR FORESEEABLE USES OF THE JACADS FACILITY BUT ALSO A COMPREHENSIVE CONSIDERATION OF THE FULL RANGE OF ENVIRONMENTAL EFFECTS ASSOCIATED WITH DISPOSAL OF THE EUROPEAN STOCKPILE (e.g., TRANSPORT, DESTRUCTION TECHNOLOGY).

1. Flanagan, G. F., Fraize, W, Kartachak, T., June, 1989. "Risk Associated with the Demilitarization of the United States Chemical Weapons Stockpile," presented at the 82nd Annual Meeting & Exhibition of the Air and Waste Management Association, Anaheim, California. Hereinafter referred to as the Flanagan report. It should be noted that G. F. Flanagan represented Oak Ridge National Laboratory, W. Fraize represented the Mitre Corp., and T. Kartachak represented the U.S. Army. Oak Ridge National Laboratories prepared the DSSEIS, and the Mitre Corporation conducted risk analyses for the CSDP FPSEIS - which are used, among others as the basis for the DSSEIS accident risk analysis. It is interesting to note that G. F. Flanagan was not a contributor to the DSSEIS, despite his affiliation with Oak Ridge in 1989.

2. Ibid, pp. 10, 11, 12, 13, 18, 19, 21, 22.

3. For more detailed discussion of the transportation risks see the Discussion Section, and the specific inadequacies related to technical problems associated with transport of the European chemical stockpile, p. 10.

Political Implications Associated with Transport of the German Stockpile

The DSSEIS states that "there are no viable alternatives to the proposed action (transferring the European stockpile to Johnston Atoll). Even the no action alternative, the continued storage and/or disposal of the European stockpile in Europe, is prohibited under existing international agreements." (pp. 5, 19, DSSEIS)

A MAJOR INADEQUACY OF THE DSSEIS IS ITS FAILURE TO CITE THE INTERNATIONAL AGREEMENT(S) REFERENCED IN THIS JUSTIFICATION FOR "NO ACTION" REQUIRING TRANSPORT OF THE STOCKPILE.

GREENPEACE SUPPORTS THE "NO ACTION" ALTERNATIVE TO LEAVE THE STOCKPILES IN WEST GERMANY IN MONITORED, RETRIEVABLE STORAGE UNTIL A SAFE DESTRUCTION TECHNOLOGY IS DEVELOPED.

In their decision to require transport of the European stockpile, both Chancellor Kohl and the U.S. Government fail to consider or address other significant agreements pertinent to the shipments: violation of the spirit and letter of two international agreements governing the transfer of hazardous wastes - the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (March, 1989) and the Lome IV Convention (December, 1989).¹

GREENPEACE BELIEVES THAT AS A MATTER OF POLICY THE U.S. AND WEST GERMAN GOVERNMENTS HAVE AN OBLIGATION TO COMPLY WITH THE SPIRIT AND LETTER OF BOTH THE BASEL AND LOME CONVENTIONS IN REFERENCE TO THE SHIPMENTS OF THESE WEAPONS (HAZARDOUS WASTES) THROUGH INTERNATIONAL WATERS AND/OR AIRSPACE TO THEIR DESTINATION.

IN PARTICULAR, THE THREAT OF THIS PROPOSED ACTION TO THE PACIFIC HAS BEEN INADEQUATELY ADDRESSED.

1. See Discussion Section on Transport of European Stockpile to Johnston Atoll, "European Stockpiled Chemical Weaponry--The Political Implications From a Waste Trade Perspective." The United States signed the Basel Convention on March 21, 1990.

As a region, the Pacific vehemently opposes the export of hazardous wastes to their ocean.¹ This sentiment was recently expressed by Hawaii State Representative Annelle Amaral during a public hearing on March 20, 1990, concerning the shipments: "The Pacific will not be the dumping ground for the world . . . we live here, we use her waters, we will fight to keep free of this obscenity."²

A resolution of the World Council of Indigenous Peoples based in Honolulu expresses this same sentiment:

"Whereas, having due regard for the migratory nature of sea life, the ever changing currents and unpredictable forces and range of these currents throughout the Pacific Ocean; and . . . Whereas, having due regard to other people of the Pacific who must share the same ocean and air currents with the people of Hawaii . . . the pollution of any part of the Pacific diminishes the integrity of all of the Pacific and is intolerable; the program of burning nerve gases . . . on Kalama (Johnston Atoll) threatens the purity of the Pacific skies and constitutes an unpredictable and unreasonable risk to the life, health and general welfare of all Pacific peoples . . . BE IT FURTHER RESOLVED, that all of the islands of and surrounding Hawaii, irrespective of political status or geo-political boundaries, should be an integral part of any treaty among Pacific nations to assure a clean Pacific."³

AS A MATTER OF POLICY, THE PRINCIPLE OF "PRIOR INFORMED CONSENT," WHICH GOVERNS THE EXPORT OF HIGHLY HAZARDOUS CHEMICALS SUCH AS BANNED OR SEVERELY RESTRICTED PESTICIDES SHOULD APPLY TO THE SHIPMENTS OF CHEMICAL WEAPONS THROUGH THE PACIFIC. THEREFORE, THE U.S. AND WEST GERMAN GOVERNMENTS SHOULD NOTIFY ALL THE COUNTRIES OF THE SOUTHWESTERN AND WESTERN PACIFIC ABOUT THE PROPOSED ACTION, AND THE INHERENT RISKS, AND SOLICIT COMMENT AND APPROVAL PRIOR TO THE

1. Ibid.

2. Borg, Jim. Honolulu Advertiser, "Chemical Weapons Burning Plan Draws Fire," March 21, 1990.

3. "Resolution Opposing Nerve Gas Burning and Ocean Dumping At Kalama (Johnston) Island," World Council of Indigenous Peoples

ACTION COMMENCING. THE BURDEN OF PROOF FALLS ON THE DOA TO ADEQUATELY ANSWER ALL CONCERNS.¹

In conclusion, there are many outstanding concerns and inadequacies which this review will address, and which require comment by the DOA.

WHILE GREENPEACE DOES SUPPORT THE DESTRUCTION OF CHEMICAL WEAPONS AND WELCOMES DISARMAMENT AGREEMENTS BANNING THE PRODUCTION OF UNITARY AND BINARY CHEMICAL WEAPONS, THE DESTRUCTION OF EXISTING CHEMICAL WEAPONS STOCKPILES MUST BE CONDUCTED IN AN ENVIRONMENTALLY SAFE WAY IN ANY COUNTRY WHERE THESE STOCKPILES EXIST. THE CURRENT CSDP WHOLLY FAILS TO MEET THESE REQUIREMENTS.

1. See Discussion Section on Transport of European Stockpile to Johnston Atoll, "European Stockpiled Chemical Weaponry--The Political Implications From a Waste Trade Perspective." The United States signed the Basel Convention on March 21, 1990.

BACKGROUND

Greenpeace has carefully reviewed the Draft Second Supplemental EIS (February 1990) Johnston Atoll Chemical Agent Disposal System (JACADS) Final Supplemental Environmental Impact Statement (SEIS) (December 1988), including the Final EIS supporting document (December 1983). Greenpeace has also reviewed supporting documentation for the JACADS Environmental Impact Statements. In conjunction with this review process, Greenpeace has searched the scientific and technical literature on the subject of incineration operations, emissions, residues and effects published between 1983 (when the final EIS was released), to the present.

Based on the vast accumulation and expansion of scientific and technical knowledge on the subject of incineration operations, emissions, residues, and threats to human health and the environment, Greenpeace finds that the Environmental Assessments on the Johnston Atoll Chemical Agent Disposal System (1983, 1988, 1990) provide an inadequate basis for commencing incineration operations on the Johnston Atoll.

Recent scientific studies of incineration processes (discussed in detail in the accompanying text) have shown that several classes of highly toxic compounds are generated in significant quantities, even in the most state-of-the-art incinerators. The types of chemicals, which give rise to the production and emission of these highly toxic and persistent incineration by-products, organohalogenes, are included in the waste material proposed for incineration at the JACADS facility. Currently available scientific literature indicates that highly toxic, bioaccumulative chemicals such as polychlorinated dioxins and furans ARE FORMED IN VIRTUALLY EVERY INCINERATOR STUDIED, when organic matter and a source of chlorine are burned together.¹

New research on incineration activities renders the information contained in both the Final Environmental Impact Statement (FEIS-1983) the Supplemental Environmental Impact Statement (SEIS-1988) and the Draft Second Supplemental Environmental Impact Statement (DSSEIS-1990) obsolete and the subsequent decision to burn chemical warfare agents worthy of substantial reevaluation and reconsideration.

1. de Fre, R. and T. Rymen, "PCDD and PCDF Formation from Hydrocarbon Combustion in the Presence of Hydrogen Chloride, Chemosphere, 19 (1-6) in press.

As provided for under the National Environmental Policy Act of 1969:

Agencies: (1) Shall prepare supplements to either draft or final environmental impact statements if: (i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. (40 CFR 1502.9(c)) (Emphasis Added)

There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. Greenpeace, therefore, calls upon The Department of the Army to reconsider its decision to incinerate highly toxic chemical warfare agents stored on the Johnston Atoll.

The Department of the Army's reevaluation should include a more comprehensive study where research has been conducted in the following areas:

1. Recent studies of the combustion of synthetic chemicals in state-of-the-art hazardous waste incinerators have documented the release--in gaseous emissions, residual ashes and the effluents of pollution control devices--of significant concentrations of
 - * uncombusted chemicals
 - * heavy metals and
 - * newly formed chemicals, so-called products of incomplete combustion (PICs).

Where carbon-based substances and halogens, in any form, are present during the combustion process, the PICs can be expected to include polychlorinated dioxins (PCDD's) and Polychlorinated furans (PCDFs).^{1,2,3,4,5,6,7}

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1. Ibid.
 2. "Summary Report: Dioxin Analysis of Philadelphia Northwest Incinerator," U.S. EPA, Region III, January 1986.
 3. National Dioxin Study: Report to Congress, U.S. EPA, 1987; EPA/530-SW-87-025.
 4. National Dioxin Study Tier 4: Combustion Sources: Initial Literature Review and Testing Operations, U.S. EPA 450/4-84-0146.
 5. Envirocon Ltd., "Report on Combustion Testing Program at the SWARU plant, Hamilton Wentworth," for Ontario Ministry of the Environment, quoted in Commoner et al, "The Origin and Health Risks of PCDD and PCDF" in Waste Management and Research, 1987: V:327-346.
 6. "The Origin and Health Risks of PCDD and PCDF" Commoner et al, Waste Management and Research, (1987), V:327-346.
 7. Department of the Environment, Central Directorate of Environmental Protection (1989). Dioxins in the Environment. Pollution Paper No. 27 HMSO London 102pp.

2. New scientific studies have documented the role of the sea surface microlayer in concentrating and recirculating toxic, persistent, bioaccumulative substances, such as the uncombusted chemicals and products of incomplete combustion released during incineration. Since the sea surface microlayer is also one of the most biologically active zones of the marine water column, it serves as a primary entry to the marine food chain.^{1,2,3,4,5,6,7,8,9,10,11,12,13}

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3. Due to the presence in the incinerator residuals--scrubber brines, bottom ash and fly ash--of heavy metals and highly toxic organic contaminants, which can be expected to include the polychlorinated dioxins and furans, the treatment and disposal of these residuals is highly problematic in the extremely vulnerable environment of a coral atoll, such as Johnston Atoll. In reference to the land disposal option, these solid wastes have not been tested under the new EPA RCRA performance standards for land disposal of dioxin contaminated wastes.
4. Recent studies of incineration at sea have documented the accumulation of hexachlorobenzene in the sediment of the burnzone. The significance of this finding is that hexachlorobenzene is both a substance burned at sea and a product of incomplete combustion, synthesized during the incineration of organohalogen compounds.^{1,2} Further preliminary assays have also demonstrated the bioaccumulation of hexachlorobenzene and related substances in fish indigenous to the burnzone.³ Bioaccumulation of the polychlorinated dioxins and furans have been reported at levels many times higher than that of hexachlorobenzene.⁴
5. "Destruction and Removal Efficiency (DRE)," the criterion used to measure incinerator performance, has been termed wholly inadequate by leading scientists in the field of combustion technologies. DRE is only a measure of the efficiency of the system in "destroying and removing" a particular chemical or array of chemicals; DRE offers no assessment of the full range of chemicals emitted from the incinerator. In fact, achieving a 99.99% DRE does not guarantee that emissions are minimized.⁵

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1. A. Tremholm, R. Hathaway and D. Oberacker, 1984, "Products of Incomplete Combustion for Hazardous Waste Incinerators," Proceedings of 10th Annual Research Symposium On Incineration and Treatment of Hazardous Waste, EPA 600/9-84-022, September 1984.
 2. Lohse, Joachim, 1988, "Ocean Incineration of Toxic Waste: A Footprint in the North Sea Sediment," from The Marine Poll. Bull. 19(8): 366-371.
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 4. "Work/Quality Assurance Project Plan for the Bioaccumulation Study," U.S. EPA, Monitoring and Data Support Division, Office of Water Regulations and Standards, September 1985.
 5. "The Formation of Products of Incomplete Combustion in Research Combustors," G. L. Huffman and L. J. Staley in "Incineration and Treatment of Hazardous Waste, Proceedings of the Eleventh Annual Research Symposium," EPA/600/9-85/028, September 1985.)

6. Consequently, the cursory assessment given in the 1983 FEIS, 1988 SEIS and the 1990 DSSEIS fail entirely to account for the full range of products of incomplete combustion which are, according to new scientific studies, present in incinerator stack gases in quantities equal to those of the chemicals upon which the DRE is based.¹

Greenpeace further finds the 1983 FEIS, 1988 SEIS and the 1990 DSSEIS to be notably deficient in its technical discussion and analysis of the following areas:

- A. Contaminant plume modeling in the 1990 DSSEIS of JACADS toxic air emissions is based in part on arbitrary and unsupported input parameters.
- B. No data are provided on the quantities of nerve gas components and other substances proposed for incineration on Johnston Atoll.
- C. No characterization is offered of the identities and quantities of uncombusted chemicals, products of incomplete combustion (PICs) and heavy metals that can be expected to be released in the incinerator stack gases. The DSSEIS-1990 does not address the full range of PICs including some toxic bioaccumulative species nearly as toxic as TCDD.
- D. The characterization in the SEIS of the identities and concentrations of contaminants expected to be present in scrubber brines, bottom ash and fly ash is wholly simplistic and incomplete. A complete characterization is also absent from the 1990 DSSEIS.
- E. The potential impacts of accidental releases of nerve gas components and related substances on operating personnel, Johnston Atoll itself and the surrounding environment have not been sufficiently evaluated.

1. Travis, C. C., et al., "Inhalation Pathway Risk Assessment of Hazardous Waste Incineration Facilities," C. C. Travis et al, ORNL/TM-9096, U.S. Environmental Protection Agency, Washington, D.C., October 1984.

- F. The potential environmental impacts of accidents during transportation of dried and drummed brines, and shipment of the European Stockpile of chemical munitions to Johnston Atoll have not been sufficiently evaluated.
- G. The environmental impacts on the Johnston Atoll bird sanctuary and endangered species, and marine life, including fisheries, have not been adequately addressed.
- H. The current level of radionuclide and dioxin contamination at Johnson Island should be surveyed in order to develop an accurate risk assessment of worker exposures to contaminated ambient airborne particulates.

Without the abovementioned data, a meaningful evaluation of the potential impacts of this proposal on public health and the environment cannot be accomplished by reviewers within the government or those in the private sector.

Further, Greenpeace finds as follows:

- I. Numerous substantive comments and criticisms submitted by the public and other interested parties have been arbitrarily dismissed without adequate consideration or discussion, this important aspect of the NEPA process has been shortchanged.
- J. The JACADS technology is a prototype that could be installed on a worldwide basis, yet it is seriously flawed in terms of environmental impacts.
- K. Comments on the 1983 EIS have not been integrated into the 1990 JACADS DSSEIS, including some transportation concerns, ocean dumping issues and new scientific information.
- L. The entire CSDP fails to adequately consider the "no action" alternatives. The DOA's intent to ship the European stockpiles does not adequately consider the no action alternative.
- M. The DOA stated in 1983 that the European stockpile of chemical weapons would not be transported to JACADS.

- N. There is a threat of opening up the JACADS incinerator, and CONUS incinerators for other stockpiled hazardous wastes such as PCBs, pesticides, CFC's etc. as mentioned in the Appropriations Report (101st Congress, 1st Session, House of Representatives, Report 101-345, November 13, 1989.)
- O. The Executive Order governing the Global Commons environmental impact assessment allows for suppression of information and cuts off public access to relevant information in the name of "national security."
- P. The DSSEIS states that the host country (FRG) is responsible for the land-based transportation EIS of U.S. chemical weapons stocks from FRG to JACADS. Germany may not have the infrastructure and/or resources to undertake such a project. Furthermore this circumvents the NEPA process and is unacceptable.

Greenpeace is concerned that:

- Q. CONUS chemical weapons will be shipped to JACADS for disposal.
- R. Other types of chemical and/or biological weapons will be incinerated at JACADS.

Based on the historical concerns Greenpeace has about all operations at Johnston Atoll, Greenpeace opposes using Johnston Atoll as a "test" site for a hazardous technology designed to incinerate chemical munitions stockpiles, referred to as JACADS. Any accidental release of the products involved during transportation or any release of toxic material during incineration could damage the marine ecosystem.

The Greenpeace position on the JACADS project as a whole is as follows:

1. Greenpeace opposes using the Pacific as a testing ground for hazardous technologies because of the impact on the region's inhabitants and the environment.
2. Greenpeace opposes any and all attempts to introduce incineration or any other environmentally unsound technologies into the Pacific region.
3. Greenpeace opposes any and all attempts to import hazardous materials, in particular, stockpiled chemical weapons from other parts of the world, into the Pacific region.

Greenpeace makes the following six recommendations:

1. Greenpeace recommends that existing chemical weapons stockpiles remain segregated in above-ground, monitored, retrievable storage and that strict precautionary measures are taken to prevent environmental damage or harm which could result from an accident, leak, spill, fire, explosion, or natural disaster. Waste streams should remain in segregated storage until such time as a safe and suitable detoxification or treatment method becomes available.
2. Recognizing the extreme toxicity and potential use of the stockpiled weapons, Greenpeace recommends the following set of conditions for decommissioning the weapons:
 - a) eliminate the weapons utility of the material;
 - b) eliminate the toxicity and other hazards of the material;
 - c) NO MATERIAL WHATSOEVER should be released to the environment in gaseous, liquid or solid phase during the decommissioning process. By-products resulting from the process must be non-hazardous.
3. Greenpeace urges that the DOA comply fully with all procedures set forth in the national legislation: the Endangered Species Act, Marine Mammal Protection Act, Migratory Bird Act, and National Wildlife Refuge Administration Act regarding the potential consequences of the proposed agency action on wildlife, including solicitation of necessary or appropriate biological assessments and opinions from the National Marine Fisheries Service.
4. Greenpeace urges that the DOA comply fully with the intent and political consequences of agreements and procedures set forth governing the trade and transport of hazardous wastes: including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and Lome IV.
5. Because of the dangerous implications of transferring the JACADS technology to the continental U.S. and possibly the USSR and following on the positions and recommendations outlined above, Greenpeace urges that a joint research program be established between U.S. and Soviet scientists to research environmentally sound detoxification processes adhering to the set of conditions outlined in recommendation 2 above.

6. Within the scope of the NEPA process, Greenpeace insists that the Army prepare a comprehensive environmental analysis of the impact of all the proposed uses of JACADS including the cumulative effects of these proposed uses. The analysis of transportation of the European Stockpile must not ignore the consequences of transportation of these weapons from West Germany to a point 12 miles from Johnson Island. A programmatic EIS for the cumulative impacts of the entire CSDP should be prepared to include JACADS the transportation of the European stockpiles and CONUS operations.

I. DISCUSSION

Greenpeace reviewed and commented on the December 1983 Johnston Atoll Chemical Agent Disposal System (JACADS) Draft EIS, including the Public Comments and Response, and has submitted a review of the Final 1988 EIS in light of new and compelling scientific data.

Greenpeace has reviewed the December 1988 Johnston Atoll Chemical Agent Disposal System (JACADS) Final Supplemental Environmental Impact Statement (SEIS), including the public comments and response. The Oceanic Society has commented on the Draft JACADS SEIS on behalf of Greenpeace Hawaii.

Greenpeace has reviewed the Draft Second Supplemental EIS (1990) and certain supporting documentation for the above mentioned 1983 EIS and 1988 SEIS. In addition, Greenpeace has searched the scientific literature relevant to the proposed program and its impacts.

The processing of lethal chemical munitions is one of the most dangerous technological endeavors of humankind to date. Because the substances being handled are so lethal, minor operational errors could result in human injury or even death. A greater mishap most certainly would be catastrophic for the region, causing long-term ecosystem damage and chronic health effects. Given the dangerous nature of this proposed activity, the 1983 Final JACADS EIS, the Final Supplemental 1988 SEIS, and the 1990 DSSEIS provide an inadequate basis for ensuring the protection of human health and the environment, particularly in the future.

New Scientific Information Relevant to Environmental Concerns

The accumulation of scientific knowledge since 1983, especially of the environmental impacts of incineration technology, have made the 1983 EIS obsolete. The decisions and

conclusions in this obsolete 1983 EIS, in light of currently available scientific knowledge, represent unacceptable dangers to the environment and human life and limb.

Since 1983 there has been much added to our knowledge base concerning dangerous toxic compounds generated and dispersed by incineration processes; the JACADS preferred agent destruction method is incineration. Some compounds generated in the incineration process are the most toxic currently known to mankind. The materials which give rise to these highly toxic incineration by-products are included in the chemical munitions and process additives which are proposed to be put through incinerators. Currently available scientific data indicate that highly toxic bioaccumulative products of incomplete combustion (PICs), including polychlorinated dibenzo dioxins (PCDD's) and polychlorinated dibenzo furans (PCDF's) are formed in virtually every incinerator operation studied, in which organic materials and chlorine sources were burned together. Dioxins are known to be toxic contaminants of "Agent Orange." The potential dispersal of these compounds into the environment must be assessed, and the conclusions of the 1983 EIS reconsidered in light of the intent of the National Environmental Policy Act (NEPA), as quoted above. New scientific information is discussed in detail in Section II of this document.

Products of Incomplete Combustion (PIC's)

The 1988 supplemental EIS and the 1990 DSSEIS are notably deficient in complete chemical characterization of scrubber and pollution equipment "brines" and dried brines for PIC's and residual chemical agents and in the consideration of the potential damages to the environment that could be caused by accidental release of these potentially contaminated brines or intentional dumping of these brines in the sea. Products of incomplete combustion, according to available scientific data, will be present in air emissions. Health hazards to personnel handling the brines have not been considered in the 1990 DSSEIS or the 1988 SEIS. The 1988 SEIS and the 1990 DSSEIS include no quantitative

analyses from similar or pilot operations of nerve agent residue in pollution system air scrubber "brines," nor have there been characterizations of incomplete combustion products.

Without quantitative analyses of these highly toxic materials, informed evaluation of the potential environmental impacts of this proposed project is not possible.

Destruction of one (controlled) group of toxic compounds in trade for the generation and potential for uncontrolled release of yet another series of toxic compounds (PICs) likely to be present in the brines, dried brines, scrap materials, ash, and air emissions is an unwise trade-off.

SPECIFIC CATEGORIES OF INADEQUACIES

Specific categories of inadequacies addressed in this document include the failure to prepare a comprehensive environmental analysis. Additional areas of inadequacies include transportation; air emissions; ocean disposal; land disposal; the "no action" alternative; consideration of new technologies; health and safety; effects on wildlife; plutonium contamination and worker health; and arbitrary response to public comment.

1. Failure to Prepare a Comprehensive Environmental Analysis

In the DSSEIS, the Army fails to satisfy its legal obligation to analyze the environmental impact of its plan as a whole. First, the DSSEIS considers solely the incremental environmental effects of incineration of the European stockpile at JACADS, not the cumulative effects of all proposed uses of JACADS. Second, the DSSEIS discusses only the environmental effects of transport of the European stockpile from 12 miles offshore at Johnston Atoll and the incineration of those weapons at JACADS. It ignores the consequences of transportation of these weapons from West Germany to the point 12 miles off Johnston Atoll.

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NEPA mandates consideration of the environmental effects of federal action in a comprehensive manner and assessment of the environmental effects of all viable alternatives to that action. As a result of the Army's piecemeal approach to its environmental analysis, the Army has precluded any meaningful comparison with alternative proposals and has subverted the purpose of NEPA.

In fact, the Army's segmentation of its environmental analysis results in a complete failure to address the real "no action alternative"—monitored retrievable storage of all chemical weapons stockpiles in their current locations.¹

The Endangered Species Act (ESA) similarly requires all agencies to address the cumulative effect of all parts of the proposed agency action. Due to the many endangered and threatened species that may be affected by JACADS and transportation of the European stockpile, the Army must review the cumulative effects on such species from the chemical weapons disposal program. This must involve not only substantial revision of the DSSEIS but also review and approval of the entire Army proposal by the agencies responsible for enforcement of the ESA.

Thus, the Army must completely revise its environmental analysis of the chemical weapons disposal program and prepare a single EIS which discusses: (1) all parts of the plan for disposition of the European stockpile; and (2) the cumulative effects of the entire chemical weapons disposal program (including, but not limited to the cumulative

1. In the DSSEIS, the Army contends that continued storage or on-site disposal of the European stockpile in Europe "would be a violation of international agreement." DSSEIS at 7. However, there is no reference to a specific agreement or analysis of that agreement. The Army must disclose the specific agreement on which it relies and consider all options for disposition of the European stockpile that are consistent with any reasonable interpretation of any such agreement.

effects of the use of JACADS). In this process, the Army must seriously evaluate the full range of alternatives to the currently proposed action and must consider alternatives to the program as a whole, not merely to individual steps of the process.

For example, it is unacceptable to consider "no action" alternatives only to the individual steps of the European stockpile disposition proposal. Similarly, an analysis of the cumulative effects of the proposed use of an analysis of the cumulative effects of the proposed use of JACADS warrants evaluation of a "no action" alternative under which no chemical weapons would be incinerated at that facility.

The Army has a duty under NEPA to conduct a comprehensive analysis of the entire proposed action

NEPA requires federal agencies to prepare a detailed statement of the full range of environmental impacts of a proposed action including both short and long term consequences. Furthermore, all agencies are compelled to "recognize the worldwide and long-range character of environmental problems." 42 U.S.C. 4332.

The Counsel on Environmental Quality's ("CEQ") regulations implementing NEPA specifically provide that "(p)roposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement." 40 C.F.R. 1502.4(a).

In addition, those regulations provide that, "connected actions" must be discussed in the same EIS. Connected actions include actions that "(c)annot or will not proceed unless other actions are taken previously or simultaneously" or that "are interdependent parts of a larger action and depend on the larger action for their justification." 40 C.F.R. 1508.25(a)(1). See Thomas v. Peterson, 753 F. 2d 754 (9th Cir. 1985) (duty to prepare in advance of any part of the agency action a single EIS covering all connected actions.)

Finally, those regulations require consideration of "cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts." 40 C.F.R. 1508.25(a)(2). Cumulative impacts are those "which result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency . . . or person undertakes such other actions." 40 C.F.R. 1508.7.

An agency may not evade these regulations and the mandate of NEPA by "deliberately splintering its agenda." E.g., Foundation on Economic Trends v. Lyng, 817 F.2d 882, 885 n. 7 (D.C. Cir. 1987); West Chicago v. NRC, 701 F.2d 632, 650 (7th Cir. 1983) (an agency may not divide its plan into smaller parts "with less significant environmental effects.") These regulations are intended to prevent an agency from dividing its decision into multiple individual actions as the Army has sought to do for the chemical weapons disposal program. See NRDC v. Hodel, 865 F.2d 288, 297 (D.C. Cir. 1988).

The Army is legally compelled to consider in a single EIS all parts of the proposed chemical weapons disposal process. This includes not only an analysis of the cumulative effects of all proposed or foreseeable uses of the JACADS facility but also a comprehensive consideration of the full range of environmental effects associated with disposal of the European stockpile (e.g., transport, disposal technology).

In choosing to address only the effects of the proposed action from 12 miles offshore at Johnston Atoll through the incineration process, the Army apparently relies on the erroneous conclusion that NEPA is only applicable within the territory and territorial waters of the United States. However, the plain language of the statute confirms its international scope. E.g. 42 U.S.C. 4331(a) (statement of policy reference to "all components of the natural environment" and "overall welfare and development of man"); 42 U.S.C.

4332(2)(F). Furthermore, the Act directs federal agencies to prepare an EIS for actions significantly affecting the quality of the "human environment" as a whole, not merely the United States environment. 42 U.S.C. 4332(2)(c). This language reflects a consistent intention to assure consideration of environmental consequences of United States activities, wherever they occur.¹

In addition, the CEQ has consistently held that NEPA's mandate extends outside the United States. In fact, CEQ has stated that the Act "requires analysis . . . of significant impacts of federal actions on the human environment--in the United States, in other countries, and in areas outside the jurisdiction of any country."² This conclusion has also been reached by agencies which have prepared EIS's for extraterritorial actions (e.g., AID pesticide program) and validated by the courts.³

1. Congress created no exemption from NEPA's mandate, even for agencies whose conduct primarily relates to areas outside the United States. Robinson, "Extraterritorial Environmental Protection Obligations of the Foreign Affairs Agencies: The Unfulfilled Mandate of NEPA," 7 N.Y.U. J. Int'l. L. & Pol., 257, 264 (1974). The legislative history of NEPA reaffirms the conclusion that NEPA applies to agencies' activities worldwide. For example, the Senate Report notes concern for "demands and pressures upon the finite resources of the earth." S. Rep. No. 91-296, 91st conference report, Senator Jackson stated that the Act will eliminate actions "which endanger the continued existence or health of mankind" or "do irreparable damage to the air, land and water which support life on earth." 115 CONG. REC. 40,416 (1969).

2. Council on Environmental Quality, "Memorandum to Heads of Agencies on Applying the EIS Requirement to Environmental Impacts Abroad" (Sept. 24, 1976), reprinted at, 42 Fed. Reg. 61,068 (1977).

3. Sierra Club v. Coleman, 405 F. Supp. 53 (D.D.C. 1976) and 421 F.Supp. 63 (D.D.C. 1976). See also Wilderness Society v. Morton, 463 F.2d 1261 (D.C. Cir. 1972) (allowing intervention by foreign nationals in NEPA proceeding). Agency actions authorizing conduct with extraterritorial effects arise within the United States. Thus, acts triggering NEPA occur in United States jurisdiction. Mandelker, NEPA Law and Litigation: The National Environmental Policy Act 5:16 (1984).

Consequently, NEPA applies to all elements of the proposed chemical weapons disposal program and mandates that the Army prepare a single, comprehensive EIS analyzing the entire proposal for disposition of the European stockpile and the cumulative effects of all foreseeable uses of JACADS.¹

The Army must perform a comprehensive analysis of the cumulative impacts of its proposed actions pursuant to the ESA

Pursuant to the ESA, an agency must describe the comprehensive and cumulative effects of the agency's proposed action on endangered and threatened species. E.g., Bob Marshall Alliance v. Hodel, 852 F.2d 1223 (9th Cir. 1988); Conner v. Burford, 848 F.2d 1441 (9th Cir. 1988); North Slope Borough v. Andrus, 642 F.2d 589 (D.C. Cir. 1980). In other words, a proper analysis of the effects of agency activities on endangered and threatened species requires consideration of the entire agency action, not merely the pieces of that action. "Incremental-step" consultation with the agencies charged with enforcement of the ESA is not an acceptable alternative. Furthermore, a lack of complete information does not relieve the agency of this obligation. Conner, 848 F.2d at 1454.

DIS 7

The DSSEIS and all EIS materials that have preceded it have attempted to address the impacts on endangered species and threatened species in a piecemeal manner. Moreover, that piecemeal process has neglected significant potential effects on such species.

1. The Army apparently concedes that it must prepare an EIS for the transportation of the European stockpile pursuant to Executive Order 12114. However, the mandate of that Order with regard to such activities is equivalent to that of NEPA itself. Executive Order 12114 2-4(b)(i). Thus, it is wholly inconsistent with the letter and spirit of that Executive Order to address the environmental consequences of the European stockpile proposals in a piecemeal fashion.

Thus, the information compiled by the Army to date does not meet the mandate of the ESA that the comprehensive and cumulative impact of the entire agency action (i.e., the chemical weapons disposal program as a whole) on protected species be considered. This, in turn, raises substantial questions regarding the propriety of the Army's compliance with the consultation and permitting processes under the ESA to date. Thus, not only must the Army revise the DSSEIS to address this deficiency but it must also pursue with the National Marine Fisheries Service and any other relevant agency a review of compliance with the ESA and renewed analysis of all issues potentially raised under that statute.

2. The "No Action" Alternative

In view of the new information on incineration technology and the attendant environmental impacts, as well as new potentially less hazardous and environmentally damaging technologies, a supplemental EIS should be prepared and the "No Action" alternative reconsidered.

According to the JACADS EIS, the chemical agent stockpile at Johnston Atoll currently poses an unacceptable risk because of corroding containers and deteriorating packaging due to the Johnston Atoll marine environment. Greenpeace recommends monitored retrievable storage, with measures taken to mitigate further deterioration of the stockpile, such as improvement of storage facilities.

3. Transport of the European Stockpiles

One of the major inadequacies previously cited in this review is the failure of the DOA to programmatically assess the risks associated with the transport of chemical weapons from West Germany. The Army will assist in an advisory capacity to the FRG, but states in the DSSEIS that "movement of the chemical munitions within Europe will be com-

pleted under the auspices of the host nation and will not be addressed in this Draft SSEIS. Under the provisions of Executive Order 12114, ocean transport of the European stockpile will be addressed in a separate environmental review that will assess the potential impact to the "Global Commons." Specific information regarding the schedules, exact routes, and types and number of vessels involved will be, "classified for operational security reasons."¹

There are many risks associated with the transport of chemical munitions cited by the U.S. Army in its Final Programmatic Environmental Impact/Assessment for the Chemical Stockpile Disposal System (FPEIS/CSDP, 1988), and summarized in the report: "Risk Associated with the Demilitarization of the United States Chemical Weapons Stockpile" (1989). Based on the high risks associated with transport of the CONUS stockpile to either regional or national disposal centers, the DOA determined that on-site disposal was the preferred option.

THERE ARE SEVERAL DISTURBING ELEMENTS RELATED TO THE DOA'S OWN ASSESSMENTS AND DOCUMENTATION WHICH HAVE A DIRECT BEARING ON THE EUROPEAN SHIPMENTS (BOTH IN THE FRG, ON THE OPEN OCEAN, AND AT JOHNSTON ATOLL) AND WHICH MUST BE ADDRESSED BY THE DOA AND THE FRG.

Greenpeace concerns can be summarized as follows:

1. In the worst case truck/rail accident scenario developed for the CSDP FPEIS, between 5000 and 10,000 deaths can be expected using risk analyses which may be off by a factor of 10.²

1. See previous discussion on "Failure to Prepare a Comprehensive Environmental Analysis, pp. 3.

2. Flanagan, *supra* - reference to footnote 6 in Introduction, risk analysis tables also found in the 1988 FPEIS; DSSEIS, p. 63, 65.

Sandia National Laboratory (SNL) developed one of the data bases used.¹ In addition, Mitre Corporation and GA Technologies, Inc. accident risk analyses were used in the CSDP FPEIS. The SNL study was completed almost 15 years ago and did not include many of the flammable materials and accident environments (such as crush) that are common on today's highways and rails. Simulated data was used or created involving numerous unreviewed engineering judgments regarding the length and intensity of fires and the severity of collisions. Several accidents that the SNL study considered nearly impossible have subsequently occurred. The record of shipments and/or accidents associated with shipments of nerve gas weapons, leaking or otherwise, is not very large. The Army stated that "none of these accidents has ever taken place . . . so it is extremely difficult to quantify their likelihood."²

Standard methodology of risk assessment was used, however, no attempt was made to examine similar studies for similarly hazardous materials such as irradiated nuclear fuel or raw plutonium powder.

The lack of a serious consequence analysis in the D2PC computer program is also reminiscent of early accident simulations in the nuclear transport field. Where are evaluations of water and agricultural contaminations in FRG? Why assume that everyone is fully clothed in protective gear - especially in a tropical environment like Johnston Atoll? Are there no beaches near the transport route(s) or transfer points between land and water?

1. Flanagan, *supra*, p. 3

2. "Global Commons Environmental Assessment," statement presented by DOA to public hearing, Honolulu, March 20th, 1990 - herein after referred to as Global Commons Statement.

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2. THERE IS NO EVIDENCE THAT THE TRANSPORT CONTAINERS: SECONDARY STEEL CONTAINERS (SSC's - VAPOR TIGHT) AND MILITARY VANS (MILVANS - NON-VAPOR TIGHT) HAVE EVER BEEN PHYSICALLY TESTED: "THESE MILVANS PROVIDE SOME PHYSICAL PROTECTION BUT ARE NOT VAPOR TIGHT . . . THERE ARE NO ACCIDENTS IN THE FPEIS DATABASE FOR MILVANS . . ." (DSSEIS, pp. 18, 66). THERE IS NO DISCUSSION OF THE TESTS (OR LACK THEREOF) ON THE SSCs. WITHOUT ACTUAL TEST DATA, ANY ASSUMPTIONS ABOUT CONTAINER LEAKAGE (OR THE LACK THEREOF) ARE LITTLE MORE THAN DANGEROUS CONJECTURE.

There apparently have been no significant accidents to stress the containers. However, this does not mean the shipments are safe; rather it means there is no actual information to support the assumptions regarding the response of the containers or their accompanying escorts to an actual transportation accident event.

Additionally, it appears that the concept of the MILVAN; a non-vapor-tight container (ten SSCs will be placed in one MILVAN) is the same as the CAMPACT concept discussed for the US CSDP. The CAMPACT design, initially known as the TRUPACT, is identical to a container once proposed to ship transuranic-contaminated (TRU) nuclear waste from atomic weapons fabrication plants. The design was found to be deficient from several standpoints, not the least of which was its ability to maintain a leak-tight seal under simulated accident stresses such as fire and collision. The TRUPACT was designed with filtration systems to remove plutonium particles while venting the gases. Since such a lack of seal on a nuclear shipping container was a violation of federal Department of Transport (DOT) regulations, DOE attempted (unsuccessfully) to obtain a waiver of DOT's rules. When it failed, TRUPACT was completely abandoned.

3. THE LAND-BASED TRANSPORTATION SCENARIO OF THE GERMAN STOCK-PILE THROUGH POPULATED AREAS IN FRG, CONSIDERING THE ABOVE-MENTIONED DEFICIENCIES MUST BE ADDRESSED IN A PROGRAMMATIC TRANSPORTATION ASSESSMENT.

According to an article in Der Spiegel, in December of 1989, a probable transportation action was described: Three modes of transportation will be required including truck, rail, and ship. The stockpiles are currently stored in Clausen, which is not accessible to rail lines. The weapons will be loaded onto trucks for transport to the nearest rail lines located in Miesau. Trains will carry the stockpile north to the seaport located at Nordenham, where the weapons will be transferred to ships (the type of vehicles/vessels and their escorts is not identified - it is unclear whether these will be military or commercial shipments). It is estimated that the shipments will be 7000 tons of deadly weapons, and require 25 truck convoys to move the shipments to rail lines. Each convoy would have 80 vehicles, 20 of them loaded with the weapons, the others would carry rescue and decontamination equipment, armed security guards and technical and medical personnel. Each convoy would be protected by 1000 guards.¹

TO EXPECT THE FRG (WHICH MAY HAVE NO INSTITUTIONAL EXPERIENCE OR REQUIREMENT FOR FORMAL ENVIRONMENTAL ASSESSMENTS) TO PERFORM AN ACCEPTABLE RISK ASSESSMENT OF LAND TRANSPORTATION IS TO CREATE A FALSE NOTION THAT THE PROBLEM IS BEING SUFFICIENTLY ADDRESSED.

1. "Todlich in 20 Kilometern," (Death Within 20 Kilometers) Der Spiegel, 25 December 1989, p. 58-63. NOTE: This scenario for truck transport is similar to transportation scenarios identified in the CSDP FPEIS, and for which the worst case accident scenarios - the basis for the limited DSSEIS - were developed for the national and regional disposal options - later rejected because of risks associated with transport, i.e., between 5000 and 10,000 deaths associated with a truck or rail accident.

4. ROUTING: Use of generic routes may seriously limit the results of a safety study. In the U.S., some commonly used hazardous materials routes have accident rates 5 times higher than others but, when averaged with others, this hazard is lost amid the statistics. Similarly, some routes have special localized hazards, such as tunnels or facilities (such as propane storage tanks) that, if involved in a derailment, could create conditions not seen in most typical scenarios. Finally, the use of "sensitive" environmental areas (such as wildlife preserves and endangered species habitats) as a central criterion misses the more common and vital, in the case of the FRG, commercial facilities that could be destroyed by a gas release. Fish hatcheries, farmland, potable reservoirs, etc., that could all be affected. There is a need for route specific analyses. There are only a few real options, so the failure to do so borders on the absurd.

0162-A 5. ACCIDENT MITIGATION/EMERGENCY PREPAREDNESS: In reference to the transportation scenarios cited above (Der Spiegel 1989, CSDP FPEIS), no attention appears to have been paid to the response of local emergency preparedness forces (i.e., municipal fire and police departments) or to evacuation and public response training. What does the DSSEIS assume will occur when people hear that nerve gas has been released in their area? Few people would sit still. On the contrary, they may panic, yielding many accidents and injuries when they flee - this is true for both Johnston Atoll and FRG. What then happens to assumptions regarding orderly evacuation? Are local emergency preparedness personnel equipped or trained to make any reasonable response? If an accident occurs, the shipment escorts (who may be injured themselves) cannot be assumed to be in the best shape to address a confused public. Similarly, what legal power does the DOA have to direct the public or local forces in FRG? Past hazardous materials accidents have revealed just how chaotic a situation can become absent a written, tested plan involving trained public safety personnel.

The Flanagan paper states that "maximum accidents with shorter lethal downwind distances would be expected to be less affected by the implementation of emergency planning and preparedness, since individuals close to the accident site may only have time to take shelter and don respiratory protection gear (e.g., gas masks); the effectiveness of the warning (who hears the warning and knows the protection action to take as a result of the warning), the availability of shelter and respiratory protection at the time of the accident, and the effectiveness of the protective actions taken."¹

6. ACCIDENT RECOVERY: If containers were damaged or lost under water, the adjacent areas would have to be evacuated during recovery. The DSSEIS does not address the economic costs of such disruptions, the hazards of small (but chronic) underwater leakages until recovery, or the dangers and effects of the recovery process. (e.g., chemical neutralization, or dredging) necessary for a complete cleanup of water-soluble agents. In studies of nuclear accidents, it was the cleanup that led to some of the worst economic and environmental effects, even when there were no fatalities. The DOA should consider this possibility among many others: If an accident occurs during transfer between modes (i.e., truck to rail, rail to ship) how will this affect other uses of this transfer point until cleanup? Simply planning shipments when an accident could have the least effect may reduce risk, but such possibilities remain unexplored by the DSSEIS.

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7. GLOBAL COMMONS: A programmatic EIS is needed to evaluate Department of Army (DOA) plans to transport the European Stockpile of chemical weapons to JACADS at Johnston Island in 1992. (Chemical Stockpile Disposal Program, Implementation Plan, Program Executive Officer - Program Manager for Chemical

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1. Flanagan, supra, p. 28, see also p. 6.

Demilitarization, Aberdeen Proving Ground, Maryland, 15 March 1988, Section 8.2.1.13). In the words of DOA Undersecretary James R. Ambose, transportation is a much more ". . . formidable, complex and uncertain task . . ." than incineration. Further, he warned that transportation would increase the likelihood of an accident and make the chemical weapons more vulnerable to sabotage or terrorism. He said the Army considered shipping the agent (from Aberdeen, Maryland) to Johnston Atoll for destruction, as Maryland residents requested, but dropped the plan as a result of concerns about the potential for damaging the environmentally sensitive Chesapeake Bay (quoted in "Environment Reporter," The Bureau of National Affairs, Inc., (BNA), Volume 18, Number 44, February 26, 1988). It would seem that movement of the European Stockpile to Johnston Atoll would entail the same types of risks. Army Major Phil Soucy told BNA on January 5, 1988, "We feel destroying it (chemical munition stockpiles) where it is, is the safest way possible to get rid of it. It's much better than moving it all over the planet." (quoted in "Environment Reporter," The Bureau of National Affairs, Inc., Volume 18, Number 37, January 8, 1988). Concerns over transportation and the use of Johnston Island for disposal of wastes from other parts of the world were voiced by Greenpeace in 1983¹; these concerns have yet to be addressed in an EIS.

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The Committee on Demilitarizing Chemical Munitions and Agents has cautioned of the hazards of chemical weapons transport:

"As discussed earlier, however, a good safety record in itself is no guarantee that a serious accident will not occur during future transportation operations. Further, the situation has changed since those shipments were made. For one thing, terrorism has increased dramatically. In addition, the general public and citizen activist groups have displayed increased concern about chemical munitions and agents either being located near or transported through their communities, let alone brought there from elsewhere for processing." (Committee on Demilitarizing Chemical Munitions and Agents, 1984)

1. Comment by James Puckett (4-12-83) Greenpeace to Division Engineer, Pacific Division, Corps of Engineers, re: JACADS Public Scoping Meeting.

Personnel on the transport vessels should have the benefits of the same type of health and safety equipment, medical supplies and personnel, training and contingency planning as the personnel on Johnston Island. The DOA should develop a Safety Assessment and Accident Prevention Plan for Agent Transport Aboard Ships. The DSSEIS makes no consideration of such a health and safety plan, a major inadequacy.

Finally, the timeframe chosen for shipboard transportation through the Atlantic Ocean, July through October, could not have been worse. This is hurricane season in the South Atlantic. Heavy weather will increase the likelihood of shipboard accidents due to cargo shifting, water intrusion, and crew operations accidents due to stress and fatigue, let alone the peril to the vessel(s) themselves.

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The DSSEIS is notably deficient in consideration of the environmental impacts of ocean transportation of chemical munitions. The analytical level of the transportation risk analysis must be brought up to par with that of the movement of similarly hazardous materials, such as some radioactive materials (e.g., irradiated nuclear fuel, plutonium and plutonium-bearing wastes).

EUROPEAN STOCKPILED CHEMICAL WEAPONRY--THE POLITICAL IMPLICATIONS FROM A WASTE TRADE PERSPECTIVE

The European Stockpiles of Chemical Munitions addressed in Department of the Army (Department of Defense) Executive Order 12114 are, once decommissioned, to be considered as toxic wastes. As such they are then subject to a variety of policy decisions and international fora. What follows is a review of pertinent fora and the obstacles to transport that are present in each of these global and national decisions and policies:

Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal

This Convention was recently adopted on March 22, 1989. And is not expected to enter force before 1991. The convention was initiated under the auspices of the United Nations Environment Programme in response to an increase in the transport of waste to avoid reducing, storing, or otherwise disposing of wastes in the generating country. This issue was particularly of concern to less-industrialized areas of the world, as various waste trade dumping schemes were launched toward the Pacific, Asian, African and Latin American regions in the late 1980s.

Although the Convention failed to meet the needs of many developing countries and prohibit the transboundary movement of wastes, it did lay down certain commitments of particular relevance to the European Stockpile situation:

Article 4--General Obligations

2. (b) Each Party shall take the appropriate measures to ensure the availability of adequate disposal facilities, for the environmentally sound management of hazardous wastes and other wastes, that shall be located to the extent possible, within it, whatever the place of their disposal.

(d) Each party shall take appropriate measures to ensure that the transboundary movement of hazardous wastes and other wastes is reduced to the minimum consistent with the environmentally sound and efficient management of such wastes, and is conducted in a manner which will protect human health and the environment against the adverse effects which may result from such movement.

9. (a) Parties shall take the appropriate measures to ensure that the transboundary movement of hazardous wastes and other wastes only be allowed if the State of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question in an environmentally sound and efficient manner.

Analysis: Article 4 section 2 (b) and (d) and 9 (a) together serve as a clear requirement to prove that the wastes should only be transported "if the State of export does not have the adequate technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question . . ." Thus if Germany or the U.S. has the technical capacity to build similar facilities in Germany, it will be difficult to justify the export of the wastes.

Further, there is a general obligation for the FRG to "ensure the availability of adequate disposal facilities, for the environmentally sound management of hazardous wastes and other wastes, that shall be located to the extent possible, within it . . ."

Lome IV Convention

On December 15th, 1989, the 12 EC (European Community) nations and the 68 nations of the ACP (African, Caribbean and Pacific) group signed Lome IV, the latest aid and trade treaty between these two groups. As part of this treaty an agreement was made to:

- a) ban all exports from EC to ACP states of radioactive and hazardous wastes.
- b) ban all imports of radioactive and hazardous wastes into all ACP states from any nation.

0168 | Analysis: This ban instates a growing commitment on the part of industrialized countries to prohibit the export of wastes to less-industrialized areas of the world. If Germany sends this waste to Johnston Atoll, despite it being the legal territory of the United States, it will be allowing wastes into a region that has for the most part declared itself a "waste import free zone."

Countries that refuse all forms of waste import in the region, include:

Pacific Lome Countries:

The Solomon Islands

Papua New Guinea

Vanuatu

Kiribati

Fiji

Tonga

Tuvalu

Western Samoa

Non-Lome Countries:

Philippines

EC Directive and Policy

Currently the EC directive simply requires prior informed consent (PIC) of the receiving nation before allowing shipments of wastes to proceed across national boundaries. This will now have to be amended in light of the Lome IV agreement cited above. It is expected that the EC will echo the sentiments of the European Parliament, which voted on

May 25th, 1989 to prohibit all waste shipments to developing countries, by they ACP countries or not.

Analysis: If the EC decides to ban all exports to developing countries, as expected, it will be aligning itself with a policy against exports to less-industrialized regions. Meanwhile, the policy of PIC speaks of a moral obligation for EC countries to inform affected countries of their intent to ship waste to the region and an obligation to receive consent before the dangerous waste is shipped.

USA, National Policy

The USA delegation attached a Declaration to the Final Act of the Basel Convention which states that the "President has decided to seek legislative authority to ban all exports of hazardous wastes, except where we have an agreement with the receiving country . . ." The USA has signed Basel on March 21, 1990, indicating that it intends to ratify it.

Analysis: Although not legally binding, the general principle of reciprocity would lead one to believe that waste imports into the territory of the United States would also be reduced to a minimum and subject to a special bilateral agreement between the exporter and the USA. According to the declaration made by the USA referred to above, a special bilateral agreement must address these chemical weapon wastes. It is uncertain how long or by what difficulty a separate bilateral agreement between the USA and the Federal Republic of Germany will take. But any bilateral agreement cannot derogate from Basel obligations. Especially relevant are the Basel provisions listed above.

Federal Republic of Germany, National Policy

In a press release in October of 1989 the FRG Ministry of Environment announced legislation "banning all exports to developing countries."

Analysis: As mentioned above regarding the USA national policy, Germany will not be allowed to export to the USA without a special "bilateral agreement." In addition, the commitment by the Ministry of Environment to ban exports to developing countries is inconsistent with the notion of exporting waste to undeveloped regions of the world.

The commitment to abstain from shipping wastes to developing countries is presumably based, at least partially, on the recognized danger in exposing non-industrialized areas of the world (such as the Pacific) to pollution hazards. Although Johnston Atoll is an unincorporated territory of the United States, it shares many of the characteristics of developing nations, especially as part of a geo-political region and ecosystem that has almost entirely rejected waste imports (see Lome IV Convention above).

As have already been mentioned and listed, a majority of Pacific Island nations by their outright prohibitions (Lome IV and national legislation) have clearly expressed the desire to prevent hazardous or nuclear wastes from entering the region. Such prohibitions have been called for by many less-industrialized nations throughout the globe. However, even if we were to disregard this global trend toward the abolishment of the transboundary movement in hazardous wastes, and merely apply the less progressive and well established principle of "prior informed consent" (PIC) established in RCRA (40 C.F.R. Part 262) as well as the directive of the European Community (EC/84/631) or the principles of the Basel Convention whose final act was signed by the United States on March 21, 1990, WE MUST, AT THE VERY MINIMUM, REQUIRE THAT AFFECTED STATES RECEIVE NOTIFICATION AND MUST CONSENT TO IMPORT OR EVEN TRANSIT THROUGH

THEIR TERRITORIES. Although legally, the United States or Germany can ignore the principles of (PIC) vis a vis the Pacific Island states, the spirit of this long established principle should not be ignored for political and environmental reasons. A legal obligation to notify and receive consent from transit states in Europe as well as the territorial waters of such states as Panama may well exist depending on navigational routes chosen.¹

4. Air Emissions

Lack of throughput data in the EIS make air emissions estimates impossible for reviewers. A notable deficiency in the EIS is that no throughput data or quantitative air emissions estimates are given.

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No mention is made in the 1988 SEIS or the 1983 EIS of the applicability of the Clean Air Act. Emissions of greater than 250 tons of particulates or other regulated pollutant annually must undergo extensive permitting and pollution control compliance under the Prevention of Significant Deterioration (PSD) provisions. Determination of PSD applicability will result in requirements for pollutant-by-pollutant analysis of projected emissions from the JACADS operation. Section 165 (42 U.S.C. 7475) prohibits construction of a facility without first obtaining a permit and installing Best Available Control Technology (BACT). Triggering PSD would result in the following required analyses for each pollutant emitted in significant quantities: 1) BACT analysis, 2) an air quality impacts analysis, and 3) additional impacts analyses (40 CFR Section 52.21).

1. Basel Convention, Article 6, paragraph 4: "Transboundary Movement between Parties" - "Each State of transit which is a Party shall promptly acknowledge to the notifier in writing, within 60 days, consenting to the movement with or without conditions, denying permission for the movement, or requesting additional information. The State of export shall not allow the transboundary movement to commence until it has received the written consent of the State of transit."

The Clean Air Act is currently (August 1989) undergoing reauthorization, and there will be additional air toxics regulations. The applicability of these new air toxics regulations to the JACADS facility will have to be determined.

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Air emissions from the JACADS incinerator facility which settle onto the sea may be prohibited as "ocean dumping" under the Ocean Dumping Act. The applicability of the Ocean Dumping Act in this context has not been addressed in the 1990 DSSEIS, 1988 SEIS or the 1983 EIS. The Ocean Dumping Act states that "incinerator residue" is not to be dumped in U.S. territorial waters or the contiguous high seas (33 U.S.C. Sections 1401-1445, prohibitions in 1411).

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The ultimate partitioning of PCDD's, PCDF's and products of incomplete combustion between JACADS incinerator air emissions, baghouse fines, scrap, ash and wet scrubber brine is impossible to predict with currently available data.

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5. Environmental Impacts of Contaminant Releases

Residual chemical agents and toxic products of incomplete combustion (PICs), as well as heavy metal particulates will be released into the air from fugitive emissions, the incinerator scrubbers and other pollution control equipment. No air pollution control equipment performs with 100% efficiency. No estimates of the quantities of PICs and particulates have been made in either the EIS or the SEIS, nor has there been air dispersion plume modeling. These contaminants will eventually settle out of the air contaminant plume onto the sea.

Greenpeace considers the incinerator fallout tantamount to ocean dumping because the environmental impacts are of the same nature.

The air contaminant dispersion and risk analysis model presented in the 1990 DSSEIS has several major flaws. The model does not take into account the full range of bioaccumulative toxic PICs that can be anticipated in the JACADS air emissions. Furthermore, the model assumes that these PICs, many of which are hydrophobic, will mix to a depth of 16 feet upon settling onto the ocean surface. In this manner, the concentration of PICs at the sea surface microlayer (multiplied by 100 after a physically unlikely dilution of factor of 5000) is minimized in the model. A more realistic model for the environmental fate of the hydrophobic PICs would be to assume that they remain in the sea surface microlayer after settling onto it. The dilution model is unsupported by scientific research, and is unlikely due to the hydrophobic nature of the PICs.

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6. Residual Chemical Agent, Products of Incomplete Combustion, Heavy Metals

These types of contaminants are known to concentrate on the ocean surficial microlayer, a locus of microbial activity and the primary levels of the food chain, including larval fish species. The concentration of contaminants in the surficial microlayer has been observed at over 10^4 times the contaminant concentration in the water column. The sea microlayer is an important zone of biological activity and in this zone important and fragile species can be brought together with concentrated contaminants. From the sea microlayer these contaminants can bioaccumulate in the food chain. Once in the food chain, contaminants can effect environmental resources, including human and animal populations remote from the original source of contamination.

The effects of biomagnification should not be underestimated, certain products of incomplete combustion (PICs) and heavy metals have been found to multiply $10^4 - 10^7$ times from ambient water concentrates to levels found in the body tissues of poisoned seabirds and important fisheries species, such as Tuna and Swordfish.

The effects of biomagnification of heavy metals and PICs from air emission fallout have not been considered in the EIS, the SEIS or the DSSEIS.

Heavy metals can be methylated by microbial activity in the environment. These bio-transformed heavy metal complexes are orders of magnitude more toxic than their inorganic forms. Biotransformed heavy metals, such as methylmercury, have been observed to biomagnify in the food web in such species as Tuna, other wildlife, and humans. Methylmercury is neurotoxic in humans.

7. Health and Safety

0179 | Review of the 1983 JACADS EIS with regard to public comment and response has revealed basic inadequacies in contingency planning and an unacceptable lack of health and safety feasibility study or planning.

In fact, this project may not be feasible on the grounds that adequate measures for the health and safety of operations personnel cannot be achieved with current technology.

The 1983 EIS lacks quantitative analyses for such considerations. Health and safety and contingency planning are of paramount importance to the evaluation of environmental damage potentials because accidents for which there is no preparation can quickly degenerate into full-blown disasters. Incapacitated personnel cannot respond to environmental releases of lethal materials. Health and safety and contingency planning inadequacies are discussed in Section IV of this document.

8. Existing Plutonium and Dioxin Contamination and Johnston Island Worker Health

Studies published with the 1983 JACADS EIS, Appendix L indicate that residual dioxin from an Agent Orange spill as well as radionuclide (Plutonium) contamination already

exist on Johnston Island. Both of these contaminants are mobile in the environment as particulates. A comparison of the areas of greatest radionuclide contamination ("Figure 7" from 1983 JACADS EIS) with the transport route between the wharf and JACADS (Figure 3.2 from 1990 JACADS DSSEIS) to be used for on-island shipment of the European stockpile indicates that the radionuclide contamination area will be traversed. JACADS worker transport vehicles as well as the weapons shipment trucks will entrain particulates from the roadway into the ambient air.

The 1990 DSSEIS does not address the health and safety implications of the entrainment of dioxin and radionuclide-contaminated particulates by personnel and weapons transport vehicles. While the radionuclide-contamination area is downwind of the residence area (windrose data, 1990 DSSEIS), personnel could be exposed when using the perimeter road between the residence and JACADS where it traverses the area of contamination. Exposure would be through inhalation of radionuclide contaminated particulates. The Herbicide Orange-contaminated area is apparently northwest of the perimeter road, but it is impossible to determine its proximity to the perimeter road from the information available. Dioxin exposure is possible both from the inhalation of contaminated particulate as well as transdermally (Brewster et al, 1989). The International Atomic Energy Agency ranks plutonium (Pu) as the most radiotoxic element (IAEA 1962). The trend in recent years has been toward more stringent guidelines concerning allowable radionuclide exposure based on health risk. The movement of the European stockpile will result in increased traffic on the perimeter road as well as a prolonged JACADS operations schedule. Increased particulate levels (dust) will also result from construction near the wharf (pg. 77 DSSEIS) and roadway and milvan storage area soil stabilization (pg. 52 DSSEIS). This increase in worker exposure has not been addressed.

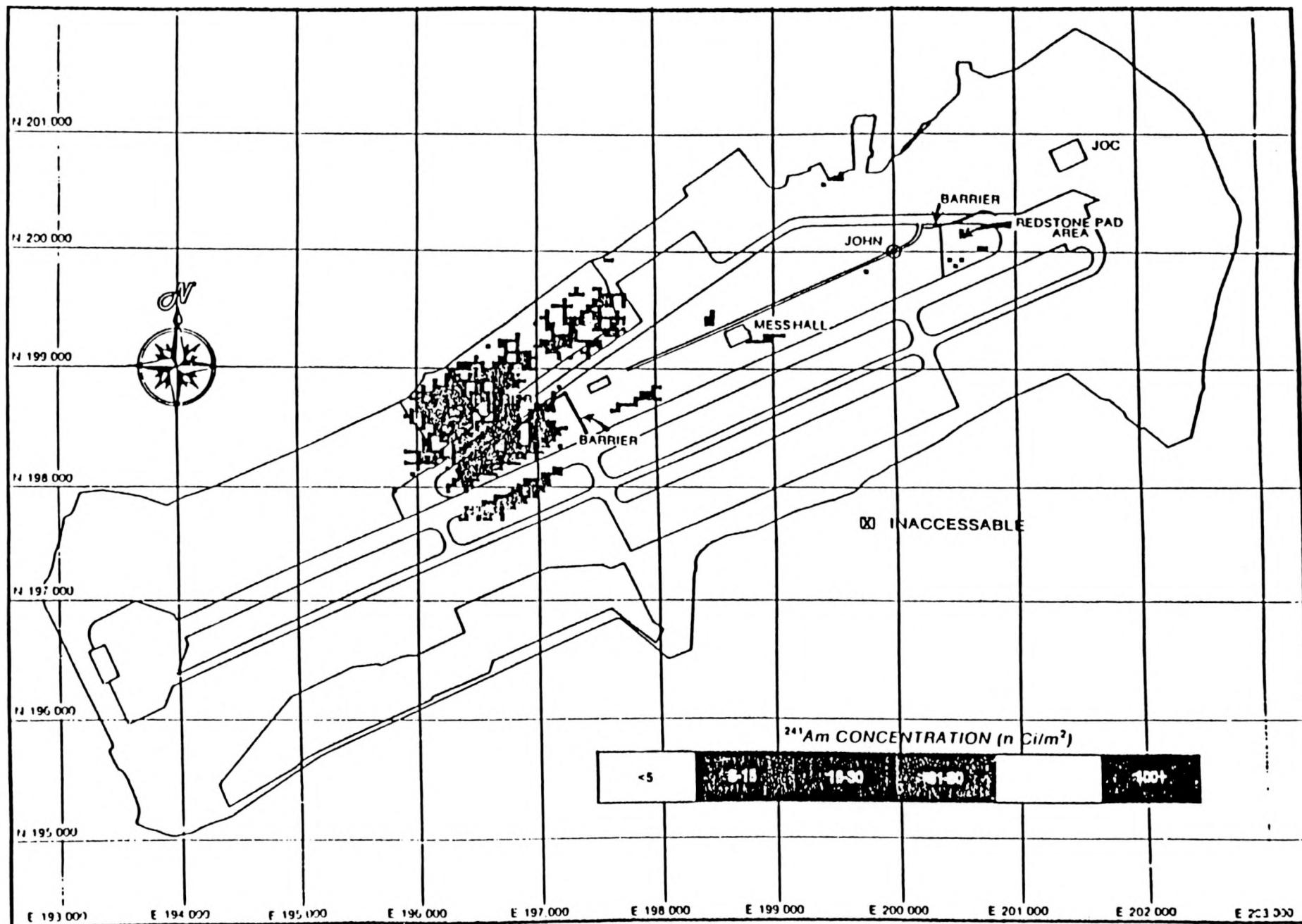


Figure 7. FINAL ^{241}Am IN SITU MEASUREMENT RESULTS FOR JOHN ISLAND. Results for all measurement locations are categorized into six color-coded concentration intervals, with values given as equivalent surface concentration in nCi/m^2 .

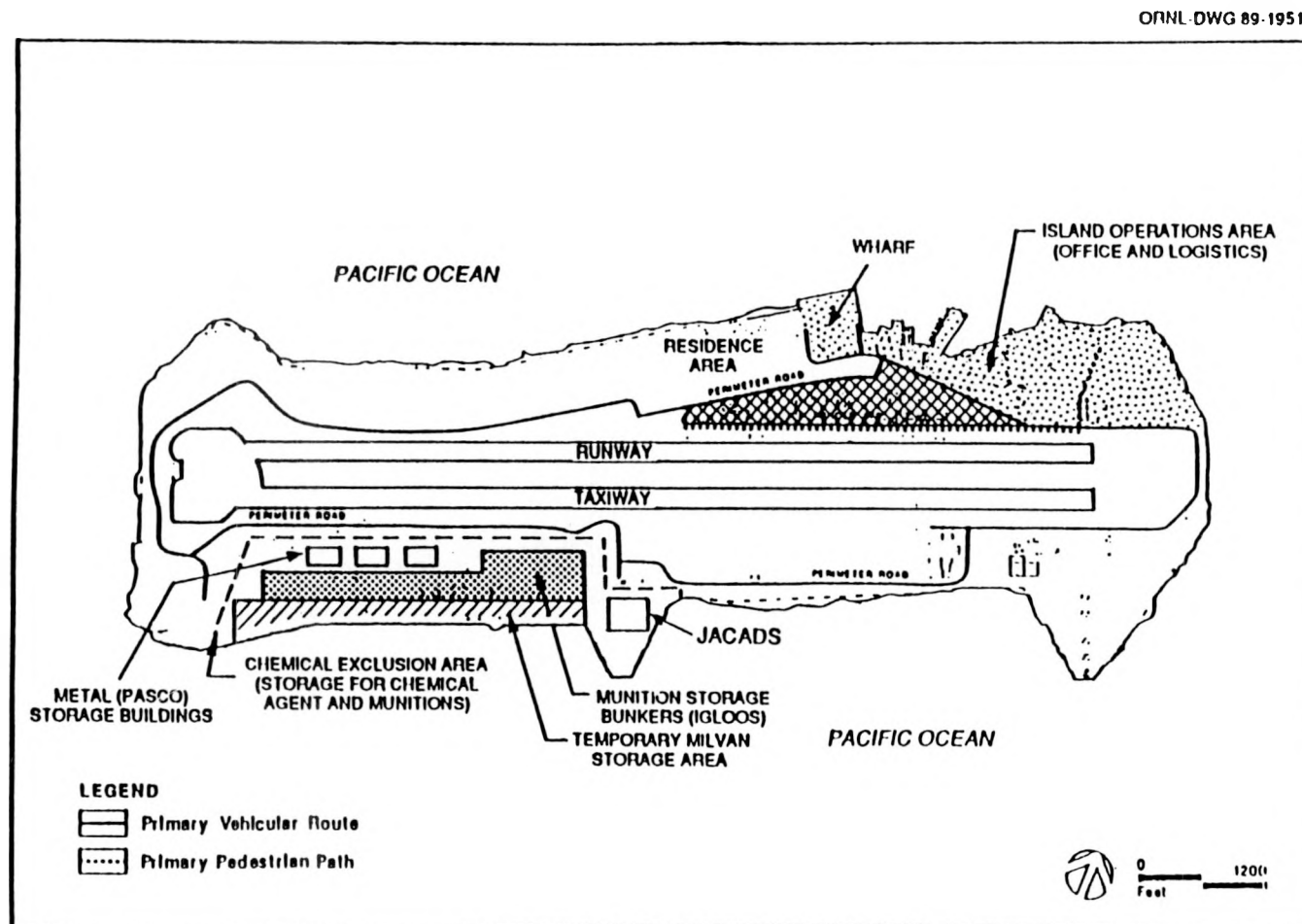


Fig. 3.2. Location of facilities and major roadways on Johnston Island.

The current level of radionuclide and dioxin contamination should be surveyed in order to develop an accurate risk assessment of worker exposures to these contaminants. In light of positive exposure risk findings of such surveys, personnel protection criteria should be formulated, as well as health monitoring plans, such as urine and fecal samples for radionuclide exposure.

According to available sources (Bramlitt 1988), the cleanup of plutonium contamination at Johnston Island is not scheduled to commence until 1992. The omission of these health and safety considerations is a major deficiency of the JACADS FEIS 1983, SEIS 1988 and DSSEIS 1990.

9. Effects on Wildlife

Johnston Atoll, designated as a National Wildlife Refuge by Executive Order in 1926, provides essential habitat (throughout the year or during migration) to a number of endangered and threatened species (e.g., Monk Seal, Green Sea Turtle, Hawksbills Turtle, Humpback Whale, Peregrine Falcon and Newell's Shearwater), marine mammals and migratory birds. Pursuant to the Endangered Species Act, Marine Mammal Protection Act, Migratory Bird Act and National Wildlife Refuge System Administration Act as well as NEPA, DOA must assure that the operation of JACADS and disposal of its waste causes no harm to such wildlife or their habitat. Furthermore, each of those specifically identified statutes requires DOA to obtain from other designated agencies a determination that there will be no jeopardy to such species and/or a permit for such action.

Air contaminant plume modeling (DSSEIS-1990; Memorandum for: Office of Program Manager of Chemical Demilitarization-1988) indicates that the ground-level location of highest contaminant concentration is 2500 feet downwind of the JACADS facility. This is the area used by sea turtles to graze on algae (JACADS EIS 1983). Chronic exposure

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to the air contaminants discussed herein as well as short-term releases of high concentrations of contaminants from process upsets and start up may spell disaster for the near shore fauna, including sea turtles.

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The DSSEIS fails to consider either the direct or indirect (e.g., bioaccumulation, damage to habitat) effects of the proposed agency action on these species. The lack of discussion of these issues apparently reflects a failure by the DOA to obtain any of the necessary reviews or permits. As a result, both the DSSEIS and the DOA's efforts to comply with the laws listed above are wholly inadequate with regard to these issues.

Discussion of these issues and agency determinations obtained earlier in the JACADS planning process do not correct this deficiency. New scientific information regarding these species, the documented presence of species not considered in earlier steps of the process, and the failure to consider the serious damage to wildlife and its habitat from the disposal of JACADS waste, all necessitate thorough consideration at this time of the consequences of the proposed action on wildlife, and compliance with the mandates of federal laws specifically addressed to protection of such wildlife.

10. Ocean Disposal Option

Greenpeace concurs with DOA that the ocean disposal option for solid wastes is unacceptable, for legal reasons. Furthermore, Greenpeace contends that the ocean disposal option is unacceptable for environmental reasons, which the DOA has not addressed adequately in response to public comment or in the 1983 EIS and 1988 SEIS. In light of new EPA performance standards for dioxin contaminated wastes, land disposal in the continental U.S. may not be a viable option either.

11. Land Disposal Option

0184 The JACADS air scrubber brines have not been tested for compliance with new EPA performance standards (solidification) for disposal of dioxin contaminated wastes in landfills. The SEIS states that ocean disposal of these wastes is the preferred alternative, and since this is prohibited by the Ocean Dumping Act, landfilling of these wastes in the continental United States is the chosen alternative. There is a history of environmental releases of contaminants from hazardous waste (RCRA) landfills. Such releases have contaminated groundwater and contaminants have the potential to biomagnify. The JACADS 1983 EIS and 1988 SEIS are deficient in discussion of environmental impacts of land disposal, and the risks of solid waste transport from Johnston Atoll to a disposal facility in the U.S.

12. New Technologies

The available abiotic processes for detoxification of organosphosphates such as the nerve agents VX and GB include hydrolysis. There are new technologies available for metal catalyzed hydrolysis in conjunction with UV light which have shown effectiveness on explosives and pesticides. These new and potentially less hazardous and less environmentally damaging technologies should be explored.

13. Public Comment on 1983 JACADS EIS, 1988 SEIS

Greenpeace objects to the arbitrary dismissal of certain public comments regarding the 1983 JACADS Environmental Impact Statement. Scientific data not available in 1983, and recent environmental catastrophies of global import, bear out the validity of the concerns expressed by commenters on the 1983 JACADS EIS. The response to these comments was arbitrary and capricious. Public comment and response is discussed in Sections III and IV of this document.

The EPA comment on the 1988 JACADS SEIS has raised the issue of inadequate characterization and discussion of products of incomplete combustion (PIC's) in scrubber brines and other solid waste streams. PIC's were mentioned in the JACADS RCRA permit but not in the SEIS, according to EPA comment. Response to this EPA comment was arbitrary, and this issue was not addressed in the final SEIS, a serious deficiency. (Response to EPA comment is discussed on page 69.)

In light of recently available scientific data, and the arbitrary responses to public comment on serious environmental concerns, the Final SEIS is inadequate.

INADEQUACIES OF 1983 JACADS EIS, SUPPORTING 1988 EIS AND 1990 DSSEIS

Not only is the 1988 SEIS inadequate to serve the needs for which it was intended, the serious concerns raised as a result of new scientific data also point out the inadequacy of the 1983 Final JACADS EIS. The 1983 Final JACADS EIS must currently be found to be inadequate for the purpose for which it was intended. The accumulation of scientific knowledge since 1983, especially of the environment and incineration technology, have made the 1983 EIS obsolete. The decisions and conclusions in this obsolete 1983 EIS, in light of currently available scientific knowledge represent unacceptable dangers to the environment and human life and limb. A supplement to the 1983 EIS should be undertaken, including current knowledge and the draft made available for public comment.

- o Many of the analyses and conclusions of the 1983 JACADS EIS forming the basis for the 1988 JACADS SEIS are not based on the currently (1989) available body of scientific knowledge relevant to this project.
- o In light of the currently available body of scientific knowledge relevant to this project, many of the analyses and conclusions and responses to public comment of the 1983 JACADS EIS and the 1988 SEIS may be seriously in error.
- o New scientific data presented in the 1989 Greenpeace Review was not adequately reviewed in the 1990 DSSEIS.

The entire JACADS project must be re-evaluated in light of currently available relevant scientific data which indicates that serious injury to human health and the environment will result if the JACADS project is implemented as proposed.

II. NEW SCIENTIFIC DATA

Literature on the products of incomplete combustion from incinerators and the sea surface microlayer are reviewed below.

Most of these findings were published in the literature after the 1983 Final JACADS EIS, and therefore constitute relevant new scientific data that have tremendous importance in evaluation of the JACADS SEIS.

This information constitutes, as per (40 CFR 1502.9(c)), "significant new information relevant to environmental concerns, and bearing on the proposed action and its impacts."

A. Products of Incomplete Combustion

According to EPA's National Dioxin Study, Incineration of chlorinated hazardous and municipal waste are major sources of dioxin in the environment. Polychlorinated dioxins are formed at high temperatures, are emitted in air and concentrated in ash and sludge residues. Ambient air, water, soil and fish tissues in the vicinity of incinerator facilities are often contaminated with polychlorinated dibenzo dioxins (PCDD's) and polychlorinated dibenzo furans (PCDF's). (U.S. EPA, 1987)

In 1986 a U.S. EPA Summary Report stated, "The formation of dioxins is generally understood to occur as a result of burning organic material with chlorine-containing materials . . ." (R de Fre and T. Ryen)

The JACADS chemical agents and dunnage including wood, plastics and paper packaging, are organic materials, while the chlorine containing materials to be burned at JACADS include the following sources shown in Table One.

TABLE ONE

<u>JACADS Incinerator</u>	<u>Halogen (Chlorine and Fluorine) Sources</u>
DFS	PCB contaminated fiberglass to be burned in deactivation furnace system
DUN	PCP (pentachlorophenol) in packaging material to be burned in the dunnage incinerator. (PCP has also been found to be contaminated with dioxin).
LIC	Decon solutions for nerve agent VX and blister agent HD are calcium or sodium hypochlorite.

(Chlorine is a halogen that reacts with organics in a similar manner to other halogens. Nerve agent GB contains the halogen fluorine. While fluorine is known to be quite toxic in the environment, little is known about the toxicity of fluorinated products of incomplete combustion).

Extensive testing of incineration of a variety of fuels and wastes and organic and inorganic chlorine sources all yield synthesis of PCDD's and PCDF's, (U.S. EPA, 1987 and U.S. EPA, Region III, 1986) and many other highly toxic products of incomplete combustion (see Table Two below).

There is no proven method that prevents formation of dioxins, furans and other toxic organochlorines when hydrocarbons and chlorines are burned together. Organochlorines, dioxins and furans have been found in emissions from municipal incinerators burning chlorine-containing materials even at extremely high temperatures. A study by the Ontario Ministry of the Environment stated that high temperatures did not prevent dioxin and furan formation:

TABLE TWO
TOXIC POLLUTANTS FORMED IN
HYDROCARBON/CHLORINE INCINERATION
Partial List

<u>Organochlorines</u>	<u>Volatile Hydrocarbons</u>
* Dioxins (PCDDs)	acetone
* Furans (PCDFs)	acetophenone
* Chlorobenzenes	benzaldehyde
* Chloroethanes	benzene
* 1,2-Dichloroethane	benzenedicarboxaldehyde
1,1,1-Trichloroethane	benzoic acid
* Chloroethylenes	chlorocyclohexanol
* 1,1-Dichloroethylene	cyclohexane
* Tetrachloroethylene	cyclohexanol
* Trichloroethylene	cyclohexene
* 2-Chloroethyl Vinyl Ether	dimethyl ether
* Chloromethanes	dioctyl adipate
* Chloroform	ethenyl-ethylbenzene
* Carbon Tetrachloride	ethylbenzaldehyde
* Methylene Chloride	ethylbenzene
* Vinyl Chloride	ethylbenzoic acid
	ethylphenol
<u>Semi-Volatile Hydrocarbons</u>	(ethylphenyl) ethanone
* Naphthalene	ethynylbenzene
Phenol	methane
* Phthalates	phenylacetylene
* Bis (2-ethylhexyl) Phthalate	phenylbutenone
Butylbenzyl Phthalate	phenylpropenol
Dibutyl Phthalate	propenylmethylbenzene
Diethyl Phthalate	tetramethyloxirane
	toluene
	trimethylhexane

* Denotes one or more species are known or suspected carcinogens

SOURCES:

A. R. Trenholm, "Total Mass Emissions from a Hazardous Waste Incinerator," Land Disposal, Remedial Action, Incineration and Treatment of Hazardous Waste, Proceedings of the Thirteenth Annual Research Symposium at Cincinnati, Ohio, May 6-8, 1987, EPA/600/9-87/015.

"Analysis of PIC and Total Mass Emissions From An Incinerator," A. R. Trenholm and C. C. Lee, in "Incineration and Treatment of Hazardous Waste," Proceedings of the Eleventh Annual Research Symposium, EPA/600-9-85/028, September 1985.

"The lack of positive trends between dioxin and furan concentrations (in the emitted flue gas) and parameters examined, including furnace top temperature, overfire air port flow, total air, THC and CO concentrations, suggests that none of these parameters can be used as the single parameter to minimize dioxin and furan emissions." (Commoner et al. 1987)

An extensive review of available literature on temperature and combustion efficiency in several municipal incinerators found no correlation between combustion factors and dioxin emissions. The authors wrote:

"In sum, the available data regarding the relationship between the rate of PCDD/PCDF emissions and either furnace temperature or combustion efficiency contradict the widely held view that these substances can be destroyed and emissions reduced by operating an incinerator at a sufficiently high temperature and/or combustion efficiency." (Commoner et al, 1987)

This literature review stated that: whatever the furnace temperature, dioxins are most commonly formed at lower temperatures in other parts of the incinerator, including the pollution control devices or the smokestack.

The Ontario study found that PCDD/PCDF concentrations were significantly higher in flue gas after cooling pollution control devices than before them. Dioxin measurements were 20 times higher after the incinerator's heat-exchanger than before it, and furan concentrations were 8 times higher. (Commoner et al. 1987)

Another incinerator study in Canada found that almost no PCDD/PCDFs were leaving the incinerator's furnace, but that significant amounts were forming at the base of the smokestack. The literature review concluded:

"This confirms that PCDDs and PCDFs are literally synthesized in the incinerator system after the flue gas leaves the furnace and that the process occurs at temperatures (200-500 degrees C) consistent with this theory . . . Because these reactions take place in the cooler parts of the incinerator which are downstream of the furnace, PCDD/PCDF emissions are not effected by the destructive influence of the high temperatures that occur in the incinerator furnace." (Commoner et al. 1987)

A recent review in the UK (DOE 1989) concluded that:

"The presence of PCDDs and PCDFs in flue gas and fly ash of municipal incinerators is universal. Comprehensive tests have established that all waste incinerators, independent of type of incinerator or waste composition, are likely to produce all of the possible 75 PCDD and 135 PCDF isomers and congeners as well as about 400 other organic compounds." (Department of Envir., London, 1989)

INADEQUACY OF PCB DISCUSSION IN DSSEIS-1990

As discussed in various segments of these comments, published scientific reports and U.S. EPA studies suggest that highly toxic, persistent, bioaccumulative pollutants, including the dioxins and furans, can be expected to be released from JACADS as air emissions and as contaminants of airborne particulates, flyash, bottom ash, and thermally-treated scrap metal. That such contaminants will indeed be formed and released at JACADS has been at least partially verified by tests at the Army's CAMDS facility. The Army reports that, in burning only PCB-contaminated M55 rocket shipping and firing tubes at the CAMDS facility, the following releases were reported:

"(1) . . . a very small amount . . . of uncombusted PCBs.

(2) no detectable furan (sic), and

(3) a very small amount of dioxins . . . (U.S. Army 1986)."

(DSSEIS, p. 54)

Given that less than 6 weeks time was allotted by the Army for response to the DSSEIS and the Army's failure to provide in the DSSEIS the actual quantitative data on the emissions, feed rates and analytical parameters at the CAMDS test, it is not possible to evaluate these results in relationship to JACADS. However, even the vague description of the CAMDS results given in the Army's DSSEIS corroborates Greenpeace's comments on the issues of the potential environmental impacts of PIC emissions, including the dioxins, and releases of unburned agents, vesicants and other materials at JACADS.

In providing this anecdotal description of the CAMDS burn results, the Army described the quantity of unburned PCBs released as being in a "concentration much less than

permissible workplace exposures." (DSSEIS, p. 54) It must, of course, be emphasized that meeting such permissible workplace exposures in no way implies adequate protection for public health and the environment since such standards apply only to adult humans with limited exposure, usually 8 hours, by inhalation.

Pollutants released to the environment from JACADS will include the following:

- o unburned agents, vesicants and other unburned substances such as PCBs-- present both as gases and as adsorbants on airborne particulates;
- o hydrolytic products of the agents and vesicants;
- o contaminants known to be present in some of these materials; and
- o products of incomplete combustion associated with all materials to be burned.

INADEQUATE DISCUSSION OF BIOACCUMULATION IN 1990 DSSEIS

Once they are released into the environment, exposures to these pollutants--many of which, such as the dioxins and furans, are both extremely toxic and persistent--are not limited to 8 hours per day. Many of the pollutants identified in incinerator stack gases, such as the dioxins and furans, are also bioaccumulative. I.e., these pollutants will concentrate in the tissues of exposed organisms at levels many times higher than the concentrations found in the air or water, as discussed in other sections of these comments. This situation is exacerbated when, as also discussed in other sections, the more stable pollutants concentrate in the microlayer, thus creating a discrete portion of the aquatic environment having extremely high concentrations of toxic pollutants available for bioaccumulation in aquatic organisms.

INADEQUATE DISCUSSION OF FURANS IN 1990 DSSEIS

In their anecdotal description of the CAMDS results, the Army also contended that the air emissions contained "no detectable furan (sic)." This finding raises issues with the

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sampling and analytical procedures used in the CAMDS tests, since the combustion of PCBs is especially well-known as a source of furans:

"... any burning of PCB can be an important environmental source of hazardous PCDF (furans)." (Choudhary, et al. 1983)

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INADEQUATE DISCUSSION OF DIOXINS IN 1990 DSSEIS

Further, in their anecdotal description of the CAMDS results, the Army characterized dioxin air emissions as "a very small amount that do not pose a threat to human health." (DSSEIS, p. 54). It must be pointed out that U.S. EPA's risk-specific dose (the quantity that is associated with a cancer risk of 1 in 1 million), is an extremely small quantity: 0.006 pg/kg/day -- little more than 0.00000001 grams of 2,3,7,8-TCDD for an average adult's entire lifetime. (EPA 1988) Again, in the absence of explicit data--stack gas, flowrates, sampling and analysis protocols and limits, dioxin emission rates, and congener-specific analyses of the dioxins--it is not possible to evaluate this vague information in terms of the potential environmental impacts of JACADS. Was this statement made on the basis of acute exposure, chronic exposure, exposure by inhalation, or exposure through all media, including contributions via the food chain, transplacental and lactational transfer, and dermal absorption--routes which are generally of far greater consequence than inhalation given the persistent and bioaccumulative properties of the dioxins? Were the human health effects evaluated inclusive? I.e., besides carcinogenicity, were the other well-known consequences of dioxin exposure and accumulation addressed--immune suppression, developmental effects, etc.?

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Human health effects are of paramount interest, however, they are not the only issues of concern in the environmental assessment of JACADS. Many species of fish and wildlife, particularly predatory birds, are known to be extremely sensitive to dioxin exposure. (Eisler 1986)

INADEQUATE DISCUSSION OF PICs IN 1990 DSSEIS

Even the most cursory assessment of the potential environmental impact on the proposed destruction of on-site and European stockpiles of chemical weapons at JACADS must address the full range of PICs that can be anticipated to be emitted into the air, concentrated in the microlayer and further concentrated in the aquatic organisms that feed in and within immediate proximity to the microlayer.

"The formation of stable intermediate products of incomplete combustion (PICs) is inherent to all practical combustion processes including incineration of hazardous waste operating under optimum steady-state design conditions." (EPA, October 1989)

In the review of August 1989, Greenpeace raised the issues of the quantities, toxicities and environmental impacts of products of incomplete combustion (PICs) that will be released into the environment in JACADS air emissions and solid residues. With no explanation and no substantiating evidence or documentation, the Army has dismissed the broad issue of PICs almost in its entirety:

"There are no significant effects on the aquatic biota from normal atmospheric releases from the JACADS incineration process." (DSSEIS-1990, p. 57)

With no defense or explanation, the Army preceeded this dismissal of the formation and impacts of PICs with statements limiting their response to the one specific category of PICs, the dioxins and furans. The Army's limited response is based on a completely unsubstantiated assumption, which is fully contradictory to current scientific knowledge:

"An issue raised since the 1983 EIS is the production of dioxins and furans during incineration. TO PRODUCE DIOXINS AND FURANS, CHLORINATED ORGANIC MATERIALS MUST BE PART OF THE MATERIAL TO BE INCINERATED. Of all agents to be incinerated, only the mustard agent provides the chlorine necessary for the production of dioxins and furans. The European stockpile contains only GB and VX agents and therefore would not supply additional chlorine in materials to be incinerated." (emphasis added).

"Other sources of chlorinated organic materials to be incinerated at JACADS are the plastic protective suits . . . These are now planned to be incinerated daily at the rate of approximately 24 10-lb suits per day. Other minor sources of chlorinated organic materials are penta-chloropheno (PCP) treated wood pallets and polychlorinated biphenyl (PCB) shipping and firing tubes for the M55 rockets. Tests at the

Army's CAMDS facility concluded that stack gases from the incineration of these M55 rocket shipping and firing tubes produced (1) only a very small amount (concentration much less than permissible workplace exposures) of uncombusted PCBs, (2) no detectable furan (sic), and (3) a very small amount of dioxins that do not pose a threat to human health (U.S. Army 1986)." (p. 54)

Greenpeace's comments of August 1989 cited both governmental and published scientific papers which described the formation of dioxins and furans during the co-incineration of carbon-based materials with halogen-containing substances (see Background, p. viii, ref. 1, p. viii, refs. 2-7, p. ix) I.e., during incineration, dioxins and furans are potential PICs, irrespective of the organic or inorganic nature of the halogen sources.

For the JACADS incinerators, the availability of halogens is a basic limiting factor in the formation of halogenated PICs such as the dioxins and furans. I.e., carbon is abundantly available from all components proposed for incineration--GB, VX, H, HD, HT, plastic suiting, wood pallets, auxiliary fuels, etc.

For the materials proposed for incineration at JACADS, halogen sources include GB (which contain the halogen, fluorine), H, HD, HT and materials shown in Table One above, all of which contain the halogen, chlorine. Among these, the decontamination solution--sodium and calcium hypochlorite--appear to be the largest sources of the halogen, chlorine. In fact chlorine is in such abundant supply that the deposition of salt, sodium chloride, on furnace walls demands special process equipment:

"Spent decon solution is used to cool the gases in this (secondary combustion) chamber, which in turn provides a vehicle for evaporating the water from the spent decon solution, allowing the salt to concentrate on the furnace walls."

"Salt removal system: The last major component is the salt removal system: The last major component is the salt removal system which is designed to provide a receptacle for the molten salt that sloughs off the walls of the secondary chamber." (Source: Safety Assessment and Accident Prevention Plan, Part II, Agent, April 1989)

Furthermore, test burns of VX have yielded HCl emissions (VX Test Burn RCRA Compliance Report, Vol. 1, p.4-8), even though VX does not contain chlorine. The source of the chlorine was thought to be ". . . the water used in the secondary combustion chamber to cool the primary chamber exhaust gases and in the in-line quench to cool the LIC exhaust gases before the modulation damper." Water used for these purposes at Johnson Island comes from reverse osmosis plants, which are probably only 98% efficient in removing the salt content of seawater. Therefore, large quantities of chlorine will be supplied to the combustion chambers through the use of water in combustion chamber internal cooling and quench operations as well.

In other words, JACADS is abundantly supplied with the components and conditions associated with the generation of halogenated PICs, including the polychlorinated dioxins and furans and other halocarbons. In addressing the generation of halogenated PICs other than dioxins and furans during the incineration of hazardous waste, U.S. EPA has found as follows:

" . . . as the oxygen concentration decreases and the chlorine concentration increases, PICs become more numerous, complex, and difficult to destroy . . . High yield PICs include trichloroethylene, tetrachloroethylene, and dichloroacetylene regardless of chlorine level; however, high chlorine levels also produce 1,3-hexachlorobutadiene, hexachlorobenzene, and octachlorostyrene." (EPA, October 1989)

In addition to the polyhalogenated dioxins and furans, many other halogenated PICs can be anticipated as products of the chemical weapons incineration proposed for JACADS. For example, hexachlorobenzene and octachlorostyrene are highly toxic and are known to bioaccumulate to extremely high levels. U.S. EPA has reported the bioaccumulation of hexachlorobenzene at levels as high as 90,000. Bioaccumulation of the polychlorinated dioxins and furans have been reported at levels many times higher than that of hexachlorobenzene. (EPA, Sept. 1985). Likewise, octachlorostyrene is known to bioaccumulate in aquatic organisms. (Verschuere 1983) I.e., a broad spectrum of aquatic organisms, including bacteria, algae, shrimp, trout, dolphins and whales, have

been found to accumulate concentrations of these and other halocarbons in their tissues that are many times higher than those found in the surrounding water.

0196 | In addressing the potential impacts of dioxins and furans, the Army further limited their response to the potential fate and impacts of only one of these 210 chemicals: 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD):

"The most hazardous compound in the dioxin and furan category is 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). This compound is more toxic by orders of magnitude than other dioxin and furan compounds. Therefore this assessment focuses on this compound, for which EPA has established an aquatic toxicity limit of 0.00001 ug/L (EPA 1977)." (p. 59)

0196 | With this statement, the Army has once again predicated their response on unsubstantiated information that is contradictory to prevailing scientific knowledge. Specifically, 2,3,7,8-TCDD is not "more toxic by orders of magnitude than other dioxin and furan compounds." The international scientific community has agreed that at least two congeners--1,2,3,7,8-pentachlorodibenzo-p-dioxin and 2,3,4,7,8-pentachlorodibenzofuran--have relative potencies that are at least 50 percent of that of 2,3,7,8-TCDD. (NATO, 1988). In other words, due to the high toxicity of other dioxin and furan congeners that can be expected to be present in the air emissions of the JACADS incinerators a meaningful assessment of the environmental impacts of even this sub-set of the potential PICs cannot be made in the absence of congener-specific analyses.

Rather than offering data substantiating the quantities and identities of the dioxins and furans expected to be emitted into the air at JACADS, the Army has picked an arbitrary release rate, 350 ug/h, of 2,3,7,8-TCDD, which, according to their modeling procedure, will exert no environmental impact:

"The above modeling indicates that the concentration of 2,3,7,8-TCDD in the 1-mm sea-surface microlayer downwind of the incinerator will not exceed the EPA chronic toxicity limit if the 2,3,7,8-TCDD stack emissions do not exceed 350 ug/h." (p. 59)

"If the total dioxin and furan emission rate is less than the critical value for the most toxic of these compounds (350 ug/h), then no adverse effects on aquatic organisms would be expected." (p. 59)

In other words, the Army is contending that there is no cause for concern over the emission of 2,100,000 ug/yr.* of 2,3,7,8-TCDD—a quantity of this extremely toxic, bioaccumulative substance that is 55 times larger than U.S. EPA's risk-specific doses** for the entire population of the U.S. for one year.

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On page 59, the Army contends that "(m)onitoring of the content and toxicity of the stack gases themselves will be employed during JACADS operation," without offering specific information on those substances to be monitored, information which is essential to a rational environmental assessment and to the evaluation of such an assessment. For example, during test burns of VX at Tooele, only carbon monoxide (CO) was continuously monitored in stack gas, allegedly as a means of estimating PIC emissions. (VX Test Burn, RCRA Compliance Report, 7 November 1989). The Science Advisory Board of U.S. EPA has criticized the inadequacies of CO monitoring as a method of estimating PIC emissions:

"The Subcommittee found the data base characterizing PICs in emissions would not allow a correlation to be established with CO or THC (total hydrocarbon) levels for various combustion devices and/or conditions." (EPA-SAB-EC-90-004, October 1989b)

PICs AND PARTICULATES

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Besides air emissions of gaseous PICs, JACADS will also release quantities of particulate matter into the air, an estimated 1.1 g/sec. (p. 53) At the estimated 6,000 hr./hr. of operation, JACADS will release approximately 52,000 pounds per year of particulate

* Based on 6000 hrs./yr. operation of JACADS.

** U.S. EPA's risk-specific dose, the daily intake of 2,3,7,8-TCDD that carries a cancer risk of 1 in one million, is 0.006 pg/kg/day. ("A Cancer Risk-Specific Dose Estimate for 2,3,7,8-TCDD," Review Draft, EPA/600/6-88/007Aa, U.S. Environmental Protection Agency, Washington, D.C., June 1988.)

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matter into the environment. As documented in numerous studies of particulates from hazardous waste and municipal incinerators, unburned agents and vesicants, the less volatile metals and PICs, including dioxins and furans, can be expected to concentrate in these particulates. (Trenholm, 1988). Nowhere in the FSEIS or the DSSEIS does the Army address the potential environmental impacts of these contaminated particulates.

INADEQUATE DISCUSSION OF WASTE PRODUCTION IN THE 1990 DSSEIS

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Although the issue of potential toxic contaminants in the brine have been previously raised by Greenpeace and others, the Army again failed to provide analytical data identifying and quantifying such contaminants or even the quantity of dried brine expected. In its response, the Army failed to disclose information that is essential to an adequate environmental assessment of JACADS and the destruction of the European stockpile; i.e. the incremental and cumulative quantities of brine associated with the destruction of the European stockpile relative to the existing stockpile; (on page 78, the Army states that the dried brine "will increase by 18%," without revealing there or anywhere else in the report the quantity that will be so increased.)

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On page 61 of the DSSEIS, the Army references an earlier report in which the quantity of scrap metal to be generated by JACADS was estimated as 6650 tons. On page 78 of the DSSEIS, the Army estimates an 85 percent increase in scrap metal generated by the additional incineration of the European stockpile at JACADS. Nowhere in the previous SEIS did the Army provide data substantiating the absence of or the quantities and identities of air emissions or ash concentrations of metals that may be expected from the thermal treatment of contaminated metal materials. In the DSSEIS the Army again fails to quantify or otherwise identify the additional air emissions, solid residues, and decontamination solution required for the decontamination and thermal treatment of 24.6 million pounds of scrap metal as compared with the 13.3 million pounds originally expected at JACADS. Nor does the DSSEIS address the incremental worker and

environmental safety issues posed by this near-doubling of scrap metal to be treated and shipped from JACADS.

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In addition to the formation of PICs including PCDDs and PCDFs, the JACADS deactivation furnace system is projected to be a rotary retort system. In an evaluation of rotary kiln processes Cundy et al. (1989) describes a newly initiated multifaceted experimental and theoretical program to elucidate rotary kiln performance. He notes that the design of such incinerators tends to be governed by "rule of thumb" evolved over years of design and that manufacturers consider the afterburner the determinant of process efficiency. These workers conclude from a study of kiln operating parameters that:

"These results should not be taken to apply generally to other kiln incinerators. The results presented here demonstrate the complexity of the process occurring within a kiln environment. A proper generalization of these results will require the development of a proven model."

The studies further suggest that non-uniformity of conditions on an as yet unquantifiable basis may well determine incinerator efficiency. This was evaluated for a relatively homogeneous liquid input. The effect of variability of feedstock between liquid and solid waste, particularly the input of high specific heat metals need evaluation. (Cundy, 1989)

The metal parts furnace similarly will be subject to discontinuities of waste input with unpredictable effects upon process stability.

The fluorine containing GB agent will result in the formation of HF gas and fluoro-organics. These latter are toxicologically poorly understood. In addition, GB agent could be expected to act as a significant aerial input of eutrophication materials to the local area as a result of flue gas emissions of acidic gases and particulates. The potential effects of these are not evaluated in the EIS.

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This aspect of aerial deposition could conceivably, over the period of operation of the facility, cause eutrophication within the lagoon. Bell et al. (1989) regard the input of nutrients as of greatest importance in the potential destabilization of the reef and that small elevations in available phosphorous may exert a disproportionate effect. (Bell, 1989) This aspect of the proposed facility needs extensive evaluation.

A review of some of the literature on the toxicology, bioaccumulation, aquatic toxicity, and environmental persistence of PCDD's, PCDF's, and other products of incomplete combustion (PICs) follow.

Toxicity of Polychlorinated Dioxins and Furans and Other Organochlorines

Polychlorinated dioxins and furans are toxic to the genetic material, immune systems, reproductive systems, nervous systems, endocrine systems, liver, kidneys, and skin of a wide variety of organisms, including humans, at extremely low concentrations. Dioxins are also potent cancer-causers and cancer-promoters, and are agents of birth defects, all at unimaginably low doses. Many other organochlorines--from chloroform to complex chlorinated pesticides--are also toxic; however, they usually require greater doses for the manifestation of either acute or chronic toxicity.

The most extensive testing of dioxin toxicity has involved 2,3,7,8-TCDD. Despite the relative lack of toxicity data for the other PCDDs and PCDFs, EPA has written that "the patterns of disease that other toxic dioxins and dibenzofurans produce is indistinguishable from that observed with TCDD . . . The public health risk should be assessed by calculating aggregate exposure to all of these chemicals, not only to TCDD." (Moore, EPA)

Carcinogenesis

Because of the ethical impossibility of conducting dioxin tests on humans, the lack of a valid control population because of the omnipresence of PCDDs/PCDFs in the world's human population, and the long lag-time necessary to see dioxin's chronic effects on complex organisms, argument continues over the validity of some studies showing apparently conclusive evidence of the carcinogenicity of 2,3,7,8-TCDD in humans.

Nevertheless, the weight of evidence demonstrates that the risk of carcinogenesis from dioxin exposure warrants great concern. EPA has written that "2,3,7,8-TCDD is the most potent animal carcinogen ever tested. It is 50 times more potent than aflatoxin B1 on a per mole basis and 50 million times more potent than vinyl chloride." (Bayard, EPA, 1988) EPA's Dioxin Work Group concluded that "in the absence of adequate data on humans, it is biologically plausible and prudent to regard agents for which there is sufficient evidence . . . of carcinogenicity in experimental animals as if they presented a carcinogenic risk to humans . . . 2,3,7,8-TCDD is a potent promoter of carcinogenesis (and) the possibility that 2,3,7,8-TCDD acts as a direct-acting, complete carcinogen cannot be eliminated." (Bayard, EPA, 1988)

Dioxin's effect as a cancer-promoter is of as much concern as its ability to cause cancer on its own. Since dioxin acts to increase the carcinogenic potential of other cancer-causing material in the environment (including other toxic pollutants from incinerator emissions), its risks are unquantifiable and significant at any dose. According to the head of EPA's Carcinogen Assessment Group, TCDD's potency as a cancer-causer and cancer-promoter makes it dangerous in any amount:

"There is no theoretical basis for making even ballpark estimates of the risk posed by promoters and carcinogens to exposed persons because the mechanisms for promotion is not well understood and the degree of total exposure of the human population to the numerous carcinogens in the environment cannot be well quantified. However, it is possible that TCDD could significantly increase human cancer as

a promoter of cocarcinogen at exceedingly low levels of TCDD exposure." (Albert, EPA)

No Safe Dose

At the lowest doses ever tested (as low as 1 part per trillion), exposure to dioxin has caused cancer in laboratory animals. Dioxin's other toxic effects to living systems have also been demonstrated at the lowest concentrations detectable by laboratory equipment. Any exposure to PCDD thus poses a significant and unacceptable risk to biological life.

TCDD's chronic toxicity has been compared to plutonium and is greater than aflatoxin. No "no observed effect levels" have ever been determined in lab animals for cancer, birth defects, and immune system effects from TCDD exposure. Animals exposed to doses in the parts per quadrillion range have contracted birth defects and other reproductive damage. According to an EPA study, 2,3,7,8-TCDD is the most potent animal teratogen known, and it causes other reproductive and immune system effects at extremely low doses as well.

Risk assessment relating to the handling of contaminated incinerator ashes and dried brines from the JACADS facility will probably require extensive reevaluation following the recent publication of two papers on the dermal absorption of dioxins. This route has been considered important in the uptake of PCBs through occupational exposure for some time (Lees et al. 1987; Smith et al. 1982). Brewster et al. (1989) found significant dermal uptake of dioxins and dibenzofurans and concluded that while acute exposure was unlikely to lead to systemic toxic symptoms:

"chronic low-level dermal exposure to those compounds which are poorly metabolized (i.e., TCDD and PCDF) could result in bioaccumulation of body burdens sufficient to induce toxicity."

Kissel & McAvoy (1989) concluded on the basis of a fugacity-based dermal exposure model that the U.S. Center for Disease Control (CDC) assessment of dermal bioavailability was not conservative as had been assumed but in fact seriously underestimated exposures by this route. These workers conclude:

"Since the dermal bioavailability of TCDD appears to be larger than has been previously assumed, adequate estimation of dermal pathway risk requires that human exposure to soil be well quantified."

This is equally true of exposure to other dioxin contaminated solids.

Recent revelations of data manipulation on studies of human exposure may indicate that dioxin is a potent human carcinogen (U.S. EPA, Feb. 1990).

Another potential exposure pathway to combustion residues does not appear to have been considered in depth in the 1983 EIS, 1988 SEIS or 1990 DSSEIS. Alarie et al. (1989) describe changes in the lung tissues of guinea pigs exposed to high concentrations of municipal incinerator ash over a 45-day exposure period. Although no direct dioxin toxicity effects were apparent, multi focal pneumoconiosis and interstitial infiltration by macrophages was observed. These workers note that:

"The constantly changing nature of ashes from refuse incinerators makes it impossible to predict health effects that may be caused."

The contaminated incinerator scrubber brines are destined to be evaporated, drummed and removed. The Supplemental SEIS and DSSEIS do not appear to have considered the volatilization of semi-volatile contaminants from the brines during the evaporation process (see: Harkov 1989). Elevated levels of semi-volatiles, in particular, PCBs in the vapor phase have been described in the vicinity of superfund sites in the U.S. (Hermanson & Hites 1989). Higher levels are related to higher temperatures in the summer months. A similar temperature dependence was described for semi-volatile PCBs in the Great Lakes area by Manchester-Neesvig & Andren (1989). Subsequent redeposition to water and land may take place as described by Chevreuil et al. (1989) for the Ile de France

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area. Hence, the evaporation of the scrubber brines should be investigated as a potential source of semi-volatile compounds to the environment as part of the DSSEIS. To date, this does not appear to have been done. There are likely to be implications for human exposures as a result of this process. It may also result in higher than anticipated levels of these compounds being deposited close to the island, since the stack dispersion models do not apply to this route.

Toxicity to Aquatic Life

Dioxins, furans, and other complex organochlorines have similar effects in fish and aquatic mammal populations as those documented in laboratory animals and humans. Organochlorine contamination has been linked to depleted and damaged fish stocks and mammal populations in fresh water and seawater around the world.

According to U.S. EPA, "2,3,7,8-TCDD has been shown to be bioavailable to fish from sediment and fly ash. Preferential uptake of PCDD/PCDFs substituted in the 2,3,7,8-positions has also been demonstrated . . . Concentrations as low as .056 per trillion have been reported to affect coho salmon survival. More recent work identified effects on rainbow trout survival at .038 parts per trillion." (U.S. EPA, 1987) Dioxins and furans enter the tissues of fish through the gills and through the food chain. According to EPA,

"Exposures of organisms to chemicals originating from liquid hazardous waste incinerators on land and at sea . . ., will surely include absorption through the mobilization of organic compounds from sediments and the entrainment of settled particles constitute transport and fate pathways . . ." (U.S. EPA, 1985)

Throughout the world, fish and aquatic mammals already carry a significant burden of dioxins, furans, PCBs and other organochlorines in their tissues.

Fate of Organochlorines in the Environment

The tendencies of PCDD/PCDF and other complex organochlorines to persist for long periods in the environment and to accumulate in living tissues makes them especially

great threats to the health of the ecosystem. As such, low-level emissions build up in the environment over time and accumulate in species near the top of the food chain. Infinitesimal concentrations thus pose a significant threat to humans, large fish, mammals, and many birds.

Persistence

Many polychlorinated chemicals, particularly the dioxins and furans, are highly resistant to degradation by biological, chemical and physical processes as well. Organochlorine chemicals, such as DDT and the polychlorinated biphenyls (PCBs), which have been banned for more than a decade, are still ubiquitous in the air, water, sediments, soils, and human, fish and wildlife populations of the world.

No definitive estimate of the life-span of PCDD/PCDF in the environment has been determined. One EPA study cautiously estimated that PCDD may have a half life of approximately 29 years in the environment, suggesting that one-time emissions of dioxins to the environment will remain significant for hundreds of years. The tendency of the polychlorinated dioxins, furans and related chemicals to be absorbed into the tissues of living creatures--where they are less susceptible to physical and chemical breakdown--means that half-life approximations based on free circulation in the environment may significantly underestimate the time period in which these chemicals are available to act upon living tissues.

Bioaccumulation

Once dispersed in air, water, soils and sediments, complex organochlorines bioaccumulate: they migrate from the ambient environment into the tissues of living things and build up in higher and higher concentrations as they move up the food chain. Over time, quantities of bioaccumulative chemicals like dioxins and furans will concentrate in living

tissues. Species near the top of the food chain serve as living reservoirs for these toxic chemicals.

Fish have been shown to accumulate dioxins at concentrations 30,000 times greater than their concentrations in ambient water. (U.S. EPA, 1985) A human who eats 8 ounces of such a fish will receive a dioxin dose equal to drinking 15,000 pints of the water in which the fish swam.

EPA's Dioxin Work Group cited even greater bioaccumulation factors for 2,3,7,8-TCDD in fish in areas with dioxin-contaminated sediment: 66,000 times greater concentrations in carp than in water, and bioconcentration factors of 97,000 to 159,000 for fathead minnows exposed to dioxin-contaminated water at two different concentrations. (U.S. EPA, 1988)

Such action in the environment means that undetectable emissions of PCDDs and PCDFs can pose a significant risk to biological life, especially those organisms which eat fish. PCDDs, PCDFs, chlorinated pesticides, and other complex organochlorines are already building up in the tissues of humans across the world. The average American carries 1,000 parts per trillion of total polychlorinated dioxins and furans in his or her fatty tissues--1,000 times greater than doses at which toxic and carcinogenic effects have been demonstrated in laboratory animals.

Nursing babies are at even greater risk, since they accumulate pollutants which are passed to them through their mother's milk. It has been estimated that, in just one year of breast feeding, an average infant in the U.S. will accumulate twenty-seven times EPA's recommended lifetime intake value of 2,3,7,8-TCDD for an adult (U.S. EPA, 1976). Ninety-nine percent of mother's milk samples collected in the United States a

decade ago showed significant levels of organochlorine pesticide residues (Schechter, 1987).

Most risk analyses by industries and governmental officials do not consider all routes of potential exposure, and they usually ignore bioaccumulation, cancer promotion, immune suppression, reproductive effects, developmental effects, the synergistic effects of concurrent exposures to many toxic chemicals, and the already-existing levels of toxic contaminants in the exposed populations. The tremendous toxicity, persistence, and bioaccumulative potential of organochlorines (especially polychlorinated dioxins and furans) makes their discharge--in any quantity--an unacceptable risk to human and ecosystem health.

B. Sea Surface Microlayer - A Zone of Concentrated Pollutants and Intensive Biological Activity

The air contaminant dispersion model presented in the 1990 DSSEIS does not take the full range of highly toxic material known to be released by hazardous material incinerators into consideration. Dioxins and furans, the species discussed, will not be the only toxic PICs emitted from JACADS. The dispersion model does not utilize a substantial estimate of toxic material release rates, but instead postulates an "acceptable" limit of 350 ug/h.

Some of the input parameters used in the 1990 DSSEIS to model the dispersion of toxic JACADS emissions onto the sea surface microlayer are arbitrary and unsupported. The model assumes a mixing zone to a 16-foot depth in the ocean for hydrophobic airborne particulates that settle onto the sea surface. This arbitrary parameter is unsupported by actual data and seems to contradict the expected behavior of the largely hydrophobic PICs. The results of the use of this "mixing zone" parameter in the dispersion model are that an unrealistic and greatly diminished risk are claimed through dilution (5000 X) of

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the PICs in a huge volume of water. A more realistic model would calculate the concentration of hydrophobic PICs in the sea surface microlayer prior to any assumed "mixing zone" dilutions.

The DSSEIS (p. 57) gives a cursory treatment to potential contaminant interactions with the marine microlayer and implies a degree of ephemerality to this discrete interface. This is at variance with the main body of evidence confirming its existence and the effects of contaminants upon it. The cited paper by Duce et al (1972) is not representative of the extended knowledge of recent years.

The point is also made and supported by reference to Compaan (1988) that there is a great deal of uncertainty relating to the role of the microlayer as a "sink" for incinerator emissions. In fact, Compaan (1988) identifies the layer as of potential importance as an impacted biotope and recommends research to clarify matters. The work of Sodergren et al. (1989) cited below has served to emphasize the real problems which may exist.

New environmental data is available concerning the concentration of heavy metal and organic pollutants in the sea surface microlayer. There are many species which interact with the microlayer environment that should be taken into account in the evaluation of the impacts of ocean dumping of brines, potential solid waste spills, and air emissions from the incinerators. The as-yet unevaluated potentials for the brines to be contaminated with highly toxic materials (PICs) now known to be products of incineration operations as well as air emissions from the incineration operations, make this evaluation particularly important. **This lack of evaluation of environmental impacts on the sea surface microlayer and the connected food web is a serious deficiency of the SEIS and EIS and DSSEIS.** Joyce M. Wood commenting for NOAA on the 1983 JACADS EIS, outlined the scope of this deficiency, which has never been fully researched or considered by the DOA.

Albright (1980) considered that

"it has been repeatedly shown that the near surface microlayers of both fresh and marine waters are regions which are distinctly different from other portions of the aquatic environment."

Enrichment of such layers with algae, bacteria, fungi and protozoa were described from the mid 1960s as was the presence in these layers of organic and inorganic dissolved materials (see: Garrett 1967). The microlayer comprises an organic film, particles, and organisms, and is found on virtually all natural bodies of water (Sodergren 1987).²¹ Microlayers can be detected by remote sensing. The microlayer or neustonic community is stable in some cases at wind speeds in excess of twenty knots and reform rapidly after disruption (Hardy 1987).

The importance of the sea surface microlayer to a wide variety of organisms is drawn from the literature by Hardy et al (1987) in a study on Chesapeake Bay. The neustonic community includes the eggs and larvae of many commercially and tropically important fish and shellfish and is, moreover, of critical importance to decapods and fishes during the principle reproductive season. During this time, degradation of the layer could have detrimental effects upon the populations of dependent species. Such species include squid, crabs, lobster, hake, bluefish, mullet, mackerel and flounder.

The properties of the surface microlayer were found by Williams (1986) to be extensively dependent on biogenic materials present. Algae produce a wide variety of extracellular products which may contribute to the character of the layer (see: Fogg, 1966). Although considered largely autochthonous in origin, the microlayer may be modified extensively by allochthonous material. The microlayer ecology can be impacted by an effect on one species in the microlayer. Sodergren (1987) notes that this biotope arises from the interaction of buoyancy, electrostatic attraction physical and chemical adsorption and surface tension.

In early studies, it was appreciated that the microlayer environment might be rigorous due to the conditions likely to be encountered by organisms associated with the films and it was suggested (see e.g. Duce et al. 1972) that one of the important factors might be anthropogenic contamination of this layer. Hardy et al. (1986) showed that, when present, pollutants also tend to concentrate in natural surface slicks. Hardy et al. (1987) suggested that spatial co-occurrence of organisms and pollutants, negative impacts of sea-surface contaminants on eggs and larvae are accentuated. The same will be true of other components of the neuston.

Kocan et al (1987) note that anthropogenic enrichment of the microlayer has been recorded for metals, PAHs, PCBs and chlorinated hydrocarbons between 10 and 10,000 times over levels found in subsurface water. Due to the composition of the layer (lipids, fatty acids, polysaccharide/protein complexes) which tends to concentrate many non-polar compounds entering from either the water or the atmosphere. When tested on herring and cod eggs, extracts or microlayer from contaminated areas caused an increase in physical defects and reduction in hatching success. Cross et al. (1987) demonstrated that offshore microlayer extracts were less toxic than those sampled from inshore areas near Los Angeles. They remark that a number of contaminants identified in the microlayer samples can break chromosomes and inhibit cell division and that these could be responsible for the 100% embryonic malformation rate produced in surviving larvae by Los Angeles harbor microlayer extract.

These researchers further note that the effects of sea surface microlayer contaminants on neustonic organisms in situ are largely unknown and that the toxicity of their samples suggests that pelagic eggs and larvae may suffer increased mortality following exposure to contaminated microlayers. (Cross et al, 1987) Von Westernhagen et al. (1988) briefly review a number of studies in which developmental defects have been found in pelagic

fish embryos from polluted areas. Von Westernhagen et al. (1989) note that up to 50% of whiting embryos from the German Bight were deformed. These eggs develop partly in association with the microlayer.

Sodergren et al. (1990) has shown that products likely to be formed by the combustion of chlorinated organic compounds may be concentrated in the microlayer and ultimately at higher trophic levels. A further consideration is the restricted dilution likely within the coral lagoon due to relatively poor seawater exchange. Contaminants entering the lagoon system are likely to circulate within the lagoon from sediment reservoirs. The cycling of persistent contaminants from sediments is now well established (See: Larsson & Sodergren 1987; Larsson & Okla 1987a & b; Larsson 1985). Such compounds may enter the food chain directly since in many cases sediment sorbed compounds are bioavailable to benthic organisms (See eg. Knezovich & Harrison 1988).

The DSSEIS makes the statement that dioxin and furan sediment contamination appears to be a critical link to aquatic bioaccumulation based on the work of Tanabe (1988b). While this may be true, the author asserts that the long range atmospheric transport of PCDDs is rather unlikely based upon residue profiles in open ocean marine mammals. Given this, the argument that the bioaccumulation potential for fish species is reduced due to plume impingement over deepwater is specious. It is far more likely that under these conditions the open ocean water will constitute the major reservoir of semi-volatile contaminants such as PCBs and PCDDs (Tanabe 1988a) and that the JACADS installation could result in elevated levels in deep waters, associated with particulates and localized above the thermocline. Cycling through pelagic systems is highly likely and bioaccumulation could occur.

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The use of the proposed toxicity test systems outlined in the DSSEIS (p. 60) provides for larval tests. This is prudent given the possibility of the developmental aberrations

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referred to above observed in contaminated microlayers, but which could equally take place in contaminated waters below the surface (see: Besten et al. 1989). Nonetheless, there are serious shortcomings associated with single species tests used for prediction of ecosystem effect (See Cairns 1984) and these problems are exaggerated when assessing complex discharges or patterns of deposition (Johnston & Stringer 1989). These authors conclude:

"It is clearly naive to hope that materials discharged to the environment will not interact in some way, either on a global basis or upon compartments of the global system. In ecotoxicological terms it is equally naive to hope that the many potential interactions can ever be fully evaluated."

Heavy metals and organic contaminants are known to concentrate on the ocean surficial microlayer. The contaminant enrichment factor in the microlayer has been observed to be as much as 10,000 times the contaminant concentrations in the water column. (Duce, 1972) In the Final SEIS, Philip Lobel concludes (SEIS Appendix E-1-32):

". . . results indicate that the brine waste will probably sink slowly due to rapid mixing and will likely remain in the ocean's mixed layer (less than 100 m). Thus, its advection will be affected most by surface currents."

In the ocean disposal option, the brine waste was to be dumped near the surface, and, according to study, would remain the upper mixed strata of the ocean. Here it will be available for potential biotransport or physical processes that concentrate pollutants at the ocean microlayer. The potential for impacts on the microlayer from incinerator fallout remains.

The 1988 SEIS dispersion model for ocean dumping of brines is inappropriate given what we know of environmental partitioning and concentration of heavy metal and toxic organics at the ocean surficial microlayer. Even if contaminants were temporarily dispersed at the ocean dumpsite, they could be concentrated again by biological and physical processes. Moreover, the projected development at Johnston Atoll will inevitably give rise to aerial emissions, of which a proportion may be expected to result in elevations of hydrophobic materials in the microlayer. The extent of this potential

problem cannot be fully evaluated since the concentrations of chemicals in the brines are not estimated. The potential effects of spills and fugitive emissions upon the surface microlayer have not been evaluated. Direct exposure of reef corals to the microlayer could arise as a result of tidal and wave action and indirectly through the food chain as neustonic animals are dispersed through the water column.

There is a possibility that this could affect the integrity of the reef as a whole. The local enhancement of contaminants over a long period may provide additional stress on what is known already to be a depauperate coralline fauna. Geographical isolation would cause species replenishment to be difficult. This would also be the case following a catastrophic spill.

III. SPECIFIC CASES OF ARBITRARY RESPONSES TO PUBLIC COMMENT, 1988 JACADS SEIS

The National Environmental Policy Act (NEPA) process as defined (in 40 CFR 1503.4(a)1-5 pertaining to allowable responses to public comment) clearly states that the Department of the Army has a duty to thoroughly review and fully respond in a non-arbitrary manner to all public comments. **New scientific data has borne out the validity of the concerns expressed in many of the comments discussed below, for which only arbitrary response was given.** In most cases these concerns are not discussed, or are given inadequate discussion in the SEIS. The "preferred option" of the SEIS remains ocean dumping of the brines, and is rejected only because of the prohibition of ocean dumping under the Ocean Dumping Act. The overwhelming thrust of public comment and scientific data indicates that ocean dumping is not the "preferred option," for environmental reasons.

A. John R. Haglelgam, President, Jack Warndorf, Attorney General, Federated States of Micronesia

In the Comments of the Government of the Federated States of Micronesia on the Draft Supplemental Environmental Impact Statement, concern was expressed for the effects of ocean dumping of JACADS waste on Tuna species.

The Final SEIS and response to this comment promised further study of Tuna in the Johnston Atoll area and a review of scientific information about Tunas.

The Final SEIS entirely omits a discussion of the potential impacts of the heavy metals in the JACADS emissions on higher trophic levels of pelagic fish such as Tunas. The SEIS discussion has also failed to address the issue of the impacts of bioaccumulation, of products of incomplete combustion on commercial fisheries and human populations exposed to these toxic material through consumption of contaminated fish. Contaminated fish may be consumed in areas far away from the JACADS source of contamination.

The ocean surficial microlayer is a locus of microbial activity and the primary levels of the food chain, as well as larval fish species. The effects of an ocean dumpsite contaminant plume on the primary levels of the planktonic food chain, and the effects of the biomagnification of toxins in successively higher levels of the food chain have not been considered. The effects of biomagnification should not be underestimated, certain products of incomplete combustion and heavy metals have been found to multiply 10^4 - 10^7 times from ambient water concentrations to levels found in the body tissues of poisoned sea birds and important fisheries species, such as Tuna and Swordfish.

The effects of biomagnification of contaminants from ocean dumping of brines have not been adequately considered in the SEIS.

Certain heavy metals are subject to methylation (biotransformation) in the ocean environment, increasing toxicity as much as four hundred times. Flesh of Tuna and Swordfish has been found to contain methylated mercury. The concerns for commercial fish species, such as Tuna, that are liable to food chain concentration of toxic contamination, such as heavy metals in the brines, have not been adequately addressed.

B. Doyle E. Gates, Administrator, NOAA National Marine Fisheries Service

The Tuna fishery was also the subject of comment by Doyle E. Gates, Administrator, NOAA National Marine Fisheries Service:

"Disposal by vessel at the proposed ocean dumping site may conflict with existing domestic and foreign tuna fishing operations in this area. The statement (page 51 of the DSEIS) that there is presently no significant commercial fishery for tuna resources in the Johnston Atoll area should be deleted. Historically foreign longline vessels have fished the tropical Pacific primarily targeting on deep swimming yellowfin and bigeye tuna. The U.S. domestic purse seine fleet has recently expanded fishing operations throughout the tropical Pacific for surface schools of yellowfin and skipjack tuna. Fishing effort from these fisheries occurs in the waters surrounding Johnston Atoll."

The response to the NMFS Administrator was as follows:

"Rather than delete the statement regarding commercial fishing in the Johnston Atoll area (200 mile Exclusive Economic Zone (EEZ)) we have consulted with your office to obtain data on fishing activity in the Johnston EEZ, particularly the location and frequency of fishing. In addition, we have consulted with the U.S. Coast Guard to determine foreign vessel activity, and with WESTCOM consultants to obtain anecdotal information about the activity of Hawaiian fishermen in the Johnston EEZ. In addition a review of scientific information about tunas by Dr. Lobel and a creel censuses (polling of local fishermen) by University of Hawaii researchers at Johnston Atoll will help determine general trends in fishing and the extent of fishing outside the lagoon near the Atoll. The combined integrated summary of these sources of information will allow us to put together a complete evaluation of fishing activity."

This response does not address the recent expansion of the U.S. domestic purse seine fleet into the area and evades the issue of expanding new fisheries by a promise to collect historical data. This is an arbitrary refusal to recognize the issue of expanding fisheries in the area.

C. Bruce Blanchard, Director, Environmental Project Review, U.S. Dept. of Interior

The specific comment (referencing page 68, paragraph 5.3e of the SEIS) by Bruce Blanchard, Director, Environmental Project Review, United States Department of the Interior (and the commenters of the Oceanic Society) on the inadequacy of the bioassays performed for the SEIS is as follows:

"Page 63, second paragraph. The draft statement does not indicate what test organisms were bioassayed to yield a Limiting Permissible Concentration of 0.00012. The Service recommends the use of more standardized toxicological terms, such as LC₁₀ to show significance from a bioassay test using a one percent concentration factor (Limiting Permissible Concentration). All bioassays should be done in accordance with standard published methodologies for such tests.

The Service recommends that Limiting Permissible Concentrations of wastes be determined using marine fishes and invertebrates that are known to occur within the areas to be affected by ocean or outfall disposal of liquid wastes. Specifically, the Service endorses the use of all the species listed on pages E-4-39 through E-4-41 for bioassays. It is recommended that the EPA's approved three-tiered bioassay approach be utilized. A minimum of one nearshore and one pelagic fish species, one shallow reef and two pelagic invertebrates, and suitable substrate should be used. Species selection should be accomplished in consultation with Service biologists.

Page 63, third paragraph. The Service questions the validity of using a box model of 10 square miles to calculate dilution factors for determining compliance with the EPA's Water Quality Criteria for certain organics and metals. These dilution factors were based on dilution of the brine over the entire area of the model and appear unrealistically low. The final statement should indicate that dilution of wastes below the LC₁₀, Limiting Permissible Concentration, or some standards toxicological term, be achieved instantaneously. The calculation of dilution should consider vessel speeds that achieve these concentrations within a maximum of 6 hours."

The response to this comment only cited EPA approval and a promise to publish the bioassay species selection in the final SEIS:

The list of test organisms used for the bioassays will be incorporated into the body of the final SEIS. The species used and the test protocol were approved by Environmental Protection Agency (EPA) in 1984, and EPA will approve the species list and protocol for any future tests. Your recommendation for changing the toxicity criteria are inconsistent with EPA bioassay criteria for ocean toxicity. You should consider forwarding your comments directly to EPA for their consideration as a policy matter.

The Oceanic Society also commented on the inappropriate selection of (high salinity-tolerant) bioassay organisms. The natural habitat of the brine shrimp used in the bioassays is not the South Pacific, but seasonal desert brine lakes in which salinity and trace element chemistry vary tremendously.

Mr. Blanchard also states:

" . . . Additionally, the final statement should address indirect impacts due to disturbances and food web dynamics from both short-term and chronic exposures of biota to brines."

The arbitrary response to this important comment states:

"We will inform the FWS biologist on JA of our plans for the future bioaccumulation and bioassay tests. Keep in mind that EPA has the final decision on species and testing protocol to be used; however, they do rely on the review comments of federal fish and wildlife agencies."

The final SEIS was entirely deficient in the discussion of any bioaccumulation effects or indirect impacts due to disturbances and food web dynamics from both short-term and chronic exposures of biota to JACADS air scrubber brines. These considerations are central to the JACADS SEIS decision making process and are absent from the Final SEIS.

In fact, serious indirect environment impacts resulting in human poisonings, thought to be a result of ecological disturbances have been noted in the EIS as resulting from dredging activities at Johnston Atoll. The EIS notes that ciguatera poisoning from local fish has been noted at Johnston Atoll after dredging disturbances. Pollution stress from ocean dumping of brines, accidental releases, and incinerator fallout and subsequent biomagnification and biotransport of contaminants could potentially lead to this effect, or more disastrous ecological diseases. Red tide is thought to be triggered at times by pollution stresses which lead to a shift in the plankton ecology—a massive bloom of one type of organism.

The ecological effects of residual nerve agent, and new compounds resulting from incomplete combustion which are likely to be present in the brines are not considered. These effects could include temporary changes in the make-up of plankton communities and direct toxic effects.

Studies of coral communities at Johnston Atoll have established a theoretical ocean current link to and from Hawaii for coral oocytes. (Maragos, 1986) (This information seems contradictory to theoretical current flow patterns developed in the SEIS). There are no doubt other interdependencies of the Johnston Atoll-Hawaii invertebrate communities. Changes in the plankton communities near Johnston Atoll are likely to affect the invertebrate communities in the open ocean and at Hawaii through the ocean current linkages. Massive toxicities or other invertebrate community changes could be disastrous for dependent higher organisms. The SEIS did not consider these effects, termed biotransport of contaminants and ecological disease from pollution stress. (The SEIS establishes the probable direction of brine flow toward the Marshall Islands, see below).

Some of the salts proposed for ocean dumping are biogenic (nutrient) salts, which have the potential to substantially alter the ecological balance of the plankton communities. Anaerobic metabolism of sulfur-bearing compounds in the deep ocean can produce (hydrogen sulfide) compounds noxious to other species. The microbial communities will react rapidly to the addition of substrates (biogenic salts in the brines) - these effects have not been considered in the SEIS. Biotransformation of heavy metals and certain organics can produce methylated metals orders of magnitudes more toxic than the original contaminants.

The assertion in the SEIS that residual nerve agent below the short term drinking water standards will have no adverse **ecological** effects is unfounded and unsupported. The drinking water standards were not intended to protect against environmental damages.

D. Thomas G. Cole, Forester, American/Pacific Islands Forestry Research

The comment by Thomas G. Cole, Forester, American/Pacific Islands Forestry points out that according to the SEIS, the direction of drift of the brine waste, if ocean dumped, is

toward the Marshall Islands. (The Marshall Islands have been left out of all maps in the SEIS). Mr. Cole further expresses concern for the ecological effects of pollutants in the brines on the Marshall Islands. Using the current data in the SEIS, he points out that water borne contaminants would be estimated to reach the Marshall Islands in 50 to 100 days. The response to Mr. Cole's comment is not a discussion of potential ecological effects with support of conclusions through appropriate bioassays, but a flat denial:

"The total amount of brine proposed for disposal is about 7 million gallons. It will take about three years and 70 to 100 individual trips to the site to dispose of this quantity. As a point of comparison, the total brine volume is only about ten percent of the daily discharge from the Sand Island outfall on Oahu. The brine is not highly toxic and when diluted as proposed it would not be hazardous to any marine life, nor would it be detectable above the normal levels of the substances normally found in sea water." (emphasis added)

In light of the discussion above, this is hardly an adequate response to the serious concerns of biotransport of contamination, biomagnification in the food chain, and other indirect ecological impacts.

E. Vernon M. Houk, M.D., Assistant Surgeon General, Director, Center for Environmental Health and Injury Control

The comments of Vernon M. Houk, M.D., Assistant Surgeon General, Director, Center for Environmental Health and Injury Control, included concern for residual lethal chemical agents in the brines and solid waste:

"We also noted on p.22 of the document that all brines and other process waste will be agent free. Also p.280 states 'All of the solid waste will be certified agent free.' We would like to see a brief discussion of the basis for these statements. Is it based on data or theoretical considerations? Also, on page J-1, U.S. Army XXXX criteria is mentioned as guidance for certifying scrap metal as 'agent free.' Are there studies to validate these criteria? Do similar criteria exist for brines and other project wastes?"

and further:

"We would like to see a brief discussion of the basis for saying that 'All brines and other process waste will be agent free' (p.22), and 'All of the solid waste will be certified as agent free' (p.280). What is the process for certifying waste as 'agent free'?"

The response to the Assistant Surgeon General was as follows:

"We agree with your recommendation to include a brief discussion about how the Army 'certifies' material as agent free. The Army has established procedures for accomplishing such certification, both for brines and scrap metals. A discussion of the procedures will be included in the final SEIS."

The response to the comment ignores the request to know the basis, theoretical or data, of the statements (p.22) that all brines and other process wastes will be agent free. **The final SEIS does not contain any data from actual analyses of brines or any other JACADS solid waste for residual agents.** Testing for agent residuals in the brines was promised in the 1983 EIS for JACADS. The response also ignored the Assistant Surgeon General's request to know if there were studies to validate the "agent free" criteria.

The response ignores key issues of the Assistant Surgeon General's concern for the basis and validation of criteria and arbitrarily states that "The Army has established procedures . . ."

The response promises "a discussion of procedures in the final SEIS." The final SEIS has a very brief description of certification of agent free scrap and criteria for agent free brines; however, the basis of the criteria are not explained as per the Assistant General's request, nor is there any analysis of brines or scrap to validate that the "agent free" criteria can be feasibly met.

1219 | **No discussion is given for procedures should brine or scrap not meet the "agent free" criteria.**

No toxicological data on the ability of the nerve agents or incomplete combustion products to cause delayed neuropathy syndrome were given in the JACADS 1983 EIS or the 1988 SEIS. The nerve agent GB is known to cause delayed neuropathy syndrome. (Chemical Stockpile Disposal Program, 1988) Delayed neuropathy syndrome in humans

gives rise to paralysis and degeneration of the nervous system. The onset of the neuropathy is typically 10 days after exposure. The dosage which will induce delayed neuropathies is typically a very small fraction of the acute dose. (Abou-Donia, 1981) Some organophosphates with fluorine containing groups (such as GB nerve agent) have been seen to cause delayed neuropathies in humans in microgram quantities. (Bidstrup, 1953) GB nerve agent residuals and possibly some of the products of incomplete combustion will have the ability to induce delayed neuropathies. Humans and other animals including birds are susceptible to delayed neuropathies. (Abou-Donia, 1981)

F. U.S. EPA

The U.S. EPA comment discussed the contamination of the brines with products of incomplete combustion as represented in the JACADS RCRA permit:

"The Final EIS should clarify or include more information on the following items:

- a) The reference to 'certified agent-free' on p. 28 should be explained. The Final SEIS should thoroughly describe how this determination is made. The JACADS RCRA permit lists potential products of incomplete combustion (PICS) for the DFS. The Final SEIS should also explain whether PICS are expected in the JACADS brines and how they will be monitored."

The response to the EPA comment states:

"We agree with your recommendation to include a brief discussion about how the Army 'certifies' material as agent free. The Army has established procedures for accomplishing such certification. A discussion of the procedures will be included in the final EIS. Additionally, a screening for organics in the brines will be performed at the beginning of each initial agent burn." (emphasis added)

Screening for organics in the brines is not a characterization of the products of incomplete combustion. The purpose of characterizing the products of incomplete combustion is to allow the SEIS process to determine the environmental impacts of disposal options should contamination be found. The Army is not responsive to the intent of the SEIS by refusing to obtain this data, and insisting on theoretical grounds that the brines, ash, and

scrap will be "agent free" and that disposal will not constitute serious environmental damages. No characterization of pilot plant brines for products of incomplete combustion is included in the SEIS.

According to the available Final EIS and SEIS information, only GB agent has been test burned in a pilot scale incineration operation. Not only is there no data given in the SEIS on the products of incomplete combustion and residual agent in the brines, ash and other solid incinerator waste, there is no pilot scale incineration data whatsoever on the other nerve agent, VX. The data promised for future testing of nerve agent VX in the final 1983 EIS is not given in the 1988 SEIS.

In fact, recent scientific studies on incineration products of incomplete combustion indicate that some of the most toxic substances known to man will be generated in the incineration operation, and are likely to be present, along with agent residuals in air scrubber brines, scrap and ash, (and could be dispersed in the air emissions from the JACADS incinerators).

Volatile toxics from uncombusted nerve gas and incomplete combustion products will volatilize from brines during drying operations and subsequent handling, and after ocean dumping. No estimates of hazards to operations personnel or environment from these fugitive emissions have been made. In the case of ocean dumping, brines will be stored in confined places at dockside tanks and onboard ship. There is no indication in the SEIS that measures have been taken to avoid hazards to operations personnel handling brines in confined spaces. Toxic volatiles will also be present in the head space of drummed salts. Hazards to personnel can lead to accidents and environmental releases.

G. The Oceanic Society, also on behalf of: Conservation Council for Hawaii; Greenpeace Hawaii; Hawaii's Thousand Friends; and Pacific Whale Foundation

The Oceanic Society comment included the statement under (2) Waste Characterization and Bioassays:

"As the JACADS facility is not yet operational, the actual material designated for disposal is not available for analysis and testing. The DEIS refers to brines from two other similar facilities. Because of rapidly improving incinerator technology, a state-of-the-art incinerator installed at JACADS might produce a brine of substantially higher concentration whose impact on the marine environment would increase accordingly. Because the exact nature of the waste cannot at present be known, it is either premature, or inappropriate, to consider the ocean disposal alternative."

"We reject the notion stated in the DEIS that since the promulgation of the 1983 FEIS and ROD, 'enough information is now available to establish the feasibility of ocean disposal.'¹³ As mentioned above, a chemical analysis of the waste is not available and the limited bioassay performed in 1984 has not been supplemented." (emphasis added)

Additionally, the Oceanic Society comments:

3. Chemical Analysis

"The greatest shortcoming of the chemical analysis performed on brines generated at the Colorado and Utah facilities is that no search for synthetic organics was performed. The destruction efficiency of incinerators is not 100%. Trace organics may be collected in the scrubber brine. Again this is further reason to dispense with this alternative. (emphasis added)

The brines from Colorado and Utah were found to contain high levels of heavy metals (see results under Bioassays). The DSEIS's bioassay states: 14 metals which are generally toxic to aquatic life (copper, cobalt, chromium, lead, mercury, nickel, zinc) were present in the brines in concentrations several orders of magnitude higher than normally occur in seawater."

The response to these comments is arbitrary and entirely inadequate:

"There appears to be some confusion about the toxicity of the liquid waste from the JACADS Pollution Abatement System (PAS). The toxicity appears to be due to the high concentration of inorganic salts, pH and perhaps osmotic balance. The chemical agent will be destroyed in the incineration process. The actual JACADS brines will, however, be analyzed for agent prior to disposal. We expect to find no agent, but have established criteria that requires there to be no agent above drinking water standards in the brines. The final SEIS will contain a discussion of this issue."

0222

In this response the assertion is made that toxicity observed in the brines is due to the "high concentration of inorganic salts, pH, and perhaps osmotic pressure." Since there has been no complete characterization of toxics in the brines, this assertion is unsupported and arbitrary. Currently available scientific studies indicate that a great number of highly toxic products of incomplete combustion may be present in the brines (see section II herein).

The response states that, "The chemical agent will be destroyed by the incineration process."

There has been no analysis of chemical agent residue in the brines, and therefore this statement is unsupported and arbitrary.

The response states that the brines will be analyzed for chemical agent prior to disposal (not as part of the EIS process!) and that "We expect to find no agent, but have established criteria that requires there to be no agent above drinking water standards in the brines."

The application of drinking water standards to disposal in the marine environment is unsupported and arbitrary.

The response states, "The final SEIS will contain a discussion of this issue." The final SEIS does not contain an adequate discussion of this issue.

The JACADS wastestreams have still not been characterized for products of incomplete combustion, and therefore informed environmental risk assessment and management decisions cannot be made.

The response addressed the chemical character of the brines and potentially environmental impacts in the following additional paragraphs:

"We believe ocean disposal of brine has little likelihood of resulting in adverse impacts, as with land disposal, because of the nature of the material to be disposed. The brine will consist of inorganic ions which are already found in the ocean. Further, ocean disposal would result in the liquid brine ultimately being dispersed and eventually undetectable.

We have a good understanding of the brine waste composition, and the results of chemical analyses of similar waste streams were included in the draft SEIS. During the ocean disposal permit process a complete analysis of the actual JACADS brine will be required and included as part of the ocean dumping permit application.

A laboratory screening for organics in the brines will also be conducted on the JACADS brines, and published during the permitting phase, if ocean dumping is the selected alternative."

The statements made in these paragraphs are directly contradictory; on the one hand the brines ". . . will consist of inorganic ions which are already found in the ocean," on the other hand we see there is no basis for this claim: "During the ocean disposal permit process a complete analysis of the actual JACADS brine will be required and included . . ." A complete analysis has not yet been made.

The next paragraph is also in total contradiction to the assertion that there is no toxic chemical make-up of the brines; the respondent states, "A laboratory screening for organics in the brines will also be conducted on the JACADS brines . . ." referring to tests promised in the future.

These are arbitrary and unsupported responses to the Oceanic Society's concerns for characterization of the brine waste for potential toxic substance contamination.

The comments of the Oceanic Society must be taken in light of new information, presented herein under, "II. New Scientific Data," which underscores the inadequacy of the

environmental impact assessments in the SEIS; namely, that the waste materials, in particular the brines, have not been fully characterized, and are likely to contain toxic organics. Based on this ignorance of toxic chemical contamination of the wastes, informed environmental risk assessments and management decisions for the disposal of the various JACADS wastestreams cannot be made. The Final SEIS did not include a complete screening for the toxic products of incomplete combustion now known to be produced from all incineration operations in which halogens and organics are burned together (see Section II, New Scientific Data, A. Products of Incomplete Combustion, herein).

IV. ARBITRARY RESPONSE TO PUBLIC COMMENT, FINAL 1983 JACADS EIS

A. Bruce Blanchard, Director, Environmental Project Review, U.S. Dept. of Interior

Mr. Blanchard's comments included the need for a disaster contingency plan:

"The statement relating to the potentially hazardous storm or high wave conditions raises the question of what contingency measures are in effect should these conditions arise now or during the course of the proposed activity. A brief description of these measures would be appropriate in the EIS."

This important comment was not addressed in the final EIS, a serious deficiency. Hazardous wastes have been released during hurricane events, most notably in Texas. Disaster contingency plans are currently required for all facilities applying for RCRA Part B status as treatment storage and disposal (TSD) facilities."

The comments also addressed the "detectors" for lethal chemical agents as described in the EIS:

"The relationship between the sensitivity and response time of the monitoring systems and potential health effects should be briefly addressed here."

While the response pointed out that the comment had been received late, a promise that these issues would be addressed in the EIS was also made:

"Unfortunately, your letter was received nearly a month past the closing date of September 6, 1983 for comments on the draft Environmental Impact Statement (EIS). However, we were able to consider all of your comments, and revisions to the EIS were made where appropriate."

Mr. Blanchard's concern for the response time of the monitoring systems is well founded. A lethal dosage of the nerve agents GB and VX can be inhaled and absorbed in seconds; the fastest response time given in the EIS for "detectors" was 2 minutes.

It is clear that the response time of monitoring technology at JACADS is not sufficiently fast to protect human life.

0226

For this reason alone the JACADS project is not, in our opinion, technically feasible. How can personnel respond to spills and process upsets if they are likely to be killed before becoming aware of the hazardous condition?

Nerve agent GB can cause delayed neuropathies (Dept. of the Army, 1988). While the exposure needed to induce delayed neuropathies is not given in the EIS (another notable deficiency), the dosage is typically a small fraction of the acute dose. Some organophosphates with fluorine-containing groups (such as nerve agent GB) have been seen to cause delayed neuropathies in microgram quantities (Bidstrup et al., 1953). Humans and other animals, including birds are susceptible to delayed neuropathies (Abou-Donia, 1981).

The effects of irreversible cholinesterase inhibitors such as VX and GB are cumulative (Abou-Donia, 1981). After exposure, up to one month or more is required to regenerate the former levels of cholinesterase. The exposure limits in Appendix K of the 1983 JACADS EIS are for 8 and 10 day maximum exposure limits. Will JACADS personnel be rotated every 8 to 10 days?

According to the EIS, provisions (including "detectors") will be made within the JACADS process building to protect personnel from the hazards of lethal chemical agents. These safeguards include positive air pressure in the control room, remote control of munition dismantling and a decon room with protective suits (4) for personnel. These protective suits are tethered to the compressed air supply system. There is no discussion in the JACADS EIS of provisions for personnel protection outside of the facility building.

Mention is made of a "decon truck" which will accompany transport of lethal chemical munitions from storage to the JACADS process building. The materials to be transported

from the storage to JACADS facility are highly volatile. No mention is made in the EIS of the ability of the decon truck equipment to knock down lethal vapor from potential spills. No mention is made of a backup truck in case the first is destroyed in an explosion. No details are given as to the personnel protective gear to be carried on the decon truck, their effectiveness, probable consequences of a spill and contingency plans, monitoring of areas outside the JACADS building or personnel training.

Personnel protective clothing for decon truck operators is not mentioned, nor are protocols for its use. Given that delayed neuropathies can be induced by extremely low exposures, a decontamination facility for personnel would seem essential. No mention is made in the EIS of such a facility.

The lack of health and safety and contingency planning in the EIS is a notable deficiency.

**B. Joyce M. Wood, Chief, Ecology and Conservation Division,
National Oceanographic and Atmospheric Administration**

Ms. Wood's comments included concern for the impact of fallout from the incinerator effluent plume on the marine environment.

4. Incinerator Emission Fallout

The DEIS does not provide adequate information on which to judge potential impacts on the marine environment from the fallout of incinerator plume substances. Although such risks appear remote based on studies of the incineration of other hazardous materials at sea, they should nonetheless be fully explored, particularly in light of the extreme hazard posed by the chemical agents under consideration. Information should be made available on:

- plume composition trajectories, and constituent concentrations
- characterization and projected quantities of products of incomplete combustion
- description of local oceanographic regime and monitoring plan to assure that localized accumulation of combustion products will not persist through eddy formation
- description/inventory of the marine resources of the area subject to fallout, including but not limited to, feeding and reproductive activities of marine organisms, transportation, recreation, etc.

The response to this comment follows:

"The description of the air pollution abatement technology planned for JACADS is discussed in paragraph 3.b(2)(a). The DEIS concluded there would be no effect from the air emissions based on meeting the air pollution emission standards referenced in Appendix K. This conclusion was applicable to the marine as well as the terrestrial environment. The height of emission stacks, strength of prevailing winds, and demonstrated ability of the abatement equipment to meet stringent standards eliminated the need for extensive dispersion modeling.

All four of the important and key issues detailed by Ms. Wood are ignored by this arbitrary response, including characterization and projected quantities of products of incomplete combustion. The response evades these issues by the unsupported contention that there will be no toxic air emissions. Studies of highly toxic incinerator-generated and dispersed airborne contaminants in Section II herein bear out Ms. Wood's most serious and well founded concerns. These concerns were not adequately addressed in the response to Ms. Wood's comment or in the EIS.

It was once thought that incineration was a method to completely decompose toxic compounds into their innocuous components. **The 1983 EIS and 1988 SEIS uses these inaccurate assumptions in the environmental impacts evaluations.**

New scientific data indicates that highly toxic materials may be formed in three of the JACADS incinerators.

New studies that have been carried out since 1983 have shown a variety of highly toxic compounds including dioxins and furans and other products of incomplete combustion are formed when organic materials (such as JACADS liquid waste, plastic, PCP contaminated wood, PCB contaminated fiberglass) are incinerated in the presence of halogen sources, such as JACADS decon solutions containing chlorine, and GB agent containing fluorine.

The dioxins, furans, and other toxic products of incomplete combustion are generated even in state-of-the-art hazardous waste incineration systems. Dioxins and furans are some of the most toxic chemicals known to science.

The JACADS incinerator emissions have not been fully characterized in regard to the agent residuals or the products of incomplete combustion, such as dioxins, furans and others. According to EPA sources, up to 99% of the products of incomplete combustion have not yet been characterized.

In light of potentially toxic air emissions from the incinerators, the 1983 EIS is deficient in toxic air emissions estimates, contaminant plume modeling, and consideration of the environmental effects of the contaminants once they settle onto the ocean. The human health and environmental effects of highly toxic incinerator emissions at Johnston Atoll should be reconsidered.

Lack of throughput data in the EIS make air emissions estimates impossible for reviewers. A notable deficiency in the EIS is that no quantitative air emissions estimates are given.

Since virtually no volume estimates or chemical characterizations are made of air emissions from the JACADS operations, the applicability of the Clean Air Act to the JACADS operations is impossible to determine. This is a basic deficiency in the 1983 EIS. New air toxics emissions standards are expected in late 1989. Again, the applicability of the air toxics standards and the ability of the JACADS facility to comply with these standards is difficult to access, due to the complete lack of air emissions volume estimates and chemical characterizations.

The ultimate partitioning of PCDD's, PCDF's and products of incomplete combustion between JACADS incinerator air emissions, baghouse fines, ash and wet scrubber brine is impossible to predict with currently available data.

According to the EIS, 5.4 tons of refractory solids will be removed from LIC secondary chamber over the life of the project. These are likely to be contaminated with dioxin, furans, and other toxic products of incomplete combustion. This wastestream is to be ". . . disposed of in the same manner as other nonsaleable solid waste."

The JACADS scrubber brines and other solid wastes have not been tested for conformance with the new EPA performance standards (solidification) for landfill disposal of dioxin contaminated wastes.

Ms. Wood's comment also included concern for impact from potential leaks, spills, or other accidental release of chemical agents to the marine environment, and is quoted below:

5. Accidental Release of Chemical Agents
into Marine Environment

The accidental release of these chemical agents is at once reason for caution as well as motivation to destroy them. The DEIS should evaluate the potential for spills, leaks, or other modes of chemical agent release into the marine environment by either human error or incinerator malfunction, and outline response mechanism and contingency plans. Although the DEIS states that their monitoring system will shut down the incinerator if necessary, no reference is made to the effect on the marine environment of substances emitted during incinerator cool-down, which, based on other incineration operations, often include increased emissions of parent compound and products of incomplete combustion.

The response did not address key points of the comment, including the effect on the marine environment of increased emissions of lethal chemical agent and products of incomplete combustion during incinerator cool-down. Increased emissions of chemical agent and PICs would also be expected during incinerator start-up operations and process

upsets. The response states that there are emergency plans in effect to counter accidental releases, but these plans are not detailed in the response or in the Final EIS.

The statement is unsupported. The response was as follows:

"The release of agent is no more probable because of the JACADS than it is due to the present storage operations, and there are presently emergency plans in effect to counter such an accident. The plant is designed for total containment of agent and explosives. Additionally, the operation of the plant will limit the number of munitions in the plant at any one time as well as the amount of untreated agent. The control system is designed so that rapid shut-down of operations can be accomplished in the event of an accident.

The comment of Ms. Wood pertaining to spill emergency and contingency planning concerned matters of key technical importance to the credibility of the JACADS EIS.

There are no contingency plans for releases of residual chemical agent or PICs from the incinerator during start-up phases of the project, during process upsets, or incinerator cool-down. These are three operational phases when releases are most likely to occur. There are no estimates of what effects these releases could have on operations personnel, the bird sanctuary or the marine environment. Will the JACADS incinerator be shut down during periods of unfavorable wind direction? Has an estimate been made of the minimum wind velocity and direction ranges for safe operations? In fact, it may not be technically feasible to protect the bird sanctuary and nesting populations in the event of accidental spills, explosions or process upsets involving deadly and volatile materials.

The following review of health and safety and contingency planning illustrates that the technical feasibility of JACADS is not demonstrated in the EIS.

Pg. 64 (4) 1983 EIS:

"The consequences of an accidental release are considered during project planning and are reviewed by the U.S. Department of Health and Human Services under the provision

of P.L. 91-121 and P.L. 91-441. Their recommendations will be incorporated into the design and operation of the facility and emergency plans and procedures."

Comment: Given the potential lethality and environmental impacts of potential accidents, these very important mitigative plans should be part of the EIS. Since 1983 through several major environmental disasters involving spills we have seen that the consequences of accidental spills and releases can be full blown disasters without the proper emergency preparedness and contingency planning, in conjunction with the necessary emergency and spill control equipment ready at hand to mobilize on a timely basis. In the case of a lethal chemical munitions leak or spill, there is little response time indeed--exposure to the smallest quantities of these air-borne volatile toxics will cause rapid death. An operation that is without these emergency preparedness and contingency plans, trained emergency personnel, and ready mobilized and appropriate emergency response equipment has a great potential to allow accidents to go out of control and create serious environmental damage as well as disastrous injury to human life and limb.

Pg. 64 (9) 1983 EIS:

It is stated in this section that no activities will take place on other islands than Johnston Island in order to mitigate impacts on seabird and migratory birds, yet no air emission plume modeling has been performed to estimate ground concentrations of contaminants, accumulation of heavy metal contaminants, and bioaccumulation of contaminants in food web. The EIS does not propose a monitoring program on body tissues of fish species used by the bird sanctuary species as food.

0234 | The EIS fails to demonstrate that it is technically possible to safeguard the bird sanctuary from lethal fugitive emissions, lethal chemical agent emissions during process upsets and lethal chemical agent emissions from transportation spills.

Pg. 64 (10) 1983 EIS:

"During transportation of munitions from storage igloos to the destruction facility, a decontamination truck will escort each load. Munitions will be monitored for leakers prior to moving. Procedures have been established for decontamination of leakers which may occur during transport. Procedures will also be established for the control and cleanup of transportation related spills."

The "procedures . . . established for decontamination of leakers which may occur during transport . . ." have not been detailed in the 1983 EIS.

This is another example of the lack of adequate treatment of key technical issues in the JACADS EIS. The overall technical feasibility of this project, with regard to human life and limb, let alone environmental concerns, is highly questionable. The EIS fails to demonstrate that JACADS is technically feasible.

Since leakage of these highly volatile and lethal chemical weapons can cause serious damage to human health and the environment, these "procedures" should have been a central part of the 1983 EIS and discussed in detail. Leakage during transport is one of the chief potentials for environmental damage and it is not adequately discussed or detailed in the EIS. In actual fact the control of a transportation related spill of volatile and lethal chemical weapons may not be technically feasible, and has certainly not been demonstrated in the EIS. This inadequacy, bearing the potential for disaster in mind, should be grounds for stopping the project until such time as the feasibility of controlling spills, and the impacts of potential spills, has been put through the EIS review process.

Pg. 66 (f) Health and Safety - 2 paragraphs on maximum credible event (MCE) in JACADS and storage, maintenance and surveillance of munitions:

The MCE in JACADS process building is considered to be detonation of one M-55 rocket in the punching/shearing operation. The EIS asserts that ". . . the facility has been designed . . . to totally contain all fragments, agent and overpressure with no hazard to personnel or release to the environment."

This is a very tall order, and no details are given on how a release to the environment is prevented, beyond a description of steel plated walls. Explosion hazard rooms are usually designed so the blast forces are directed out the roof or a wall in such a manner that damages are not incurred in the other protected directions. In the JACADS EIS, no avenue for direction of blast forces is given. Available avenues for blast forces, and attendant volatile, lethal chemicals release include the doors, roof, entrance and exits for munition materials, and the air filtering system. Should the blast forces exit the munitions entrance conveyor, there is a potential for further sympathetic detonations and releases of greater quantities of lethal chemical weapon materials.

No indication of how destruction of the air filtering system or release of lethal chemical agent will be prevented should explosions occur is given in the EIS.

There is also no evaluation of the effects of a release of lethal chemicals after an explosion, only the unsupported statement that there will be no release, which is somewhat incredible, given the forces involved. Surely the room will not remain as a sort of pressurized "bomb" after a detonation within.

The liability of the air filtering system to destruction from this Maximum Credible Event (MCE), and the potentials for environmental damages, not to mention the potential destruction of human life should this MCE occur, are too serious to be discussed without detail or technical support. The analysis of Maximum Credible Events, their potential

environmental impacts, and mitigation technologies should have been a major focus of the 1983 EIS and the lack of such a discussion is a major deficiency. Only two paragraphs of the EIS are devoted to health and safety, and these are devoid of a credible analysis of personnel hazards or health and safety precautions.

In the first paragraph on health and safety, the 1983 EIS states:

"Additionally, the Department of the Army has determined the MCE (Maximum Credible Event) during routine storage and transportation is a detonation of one rocket in a pallet with the remaining sympathetic detonation of a second rocket which results in the leaking of the remaining 13 rockets on the pallet."

The EIS states that this is the current Maximum Credible Event (MCE) for the storage, maintenance and surveillance of these munitions and ". . . is unaffected by the proposed JACADS operation and is independent of the disposal options considered by this project."

No other analysis of the potential damages of this MCE, or procedures and equipment available to respond to such an "event" are given in the JACADS EIS. Accidental detonation of munitions during transportation from storage to the process building must certainly be a potential that should have been addressed in the EIS. Leakage of munitions during transportation from storage to the process building is given consideration. Why not accidental detonation?

0235

The JACADS operation is highly dangerous with great potential for damages both to the environment and human health and safety; but potential explosion is perhaps the most dangerous aspect of the operation and one that should have received detailed analysis. This analysis should have included potential damages; technologies to mitigate such an occurrence; response plans including equipment needs and personnel training; contingencies in the case of multiple events; contingencies for equipment failures and the availability of trained back-up response personnel. Release of lethal chemicals with the volatility of those considered for JACADS from explosions during transportation

could quickly kill all exposed personnel, rendering any spill response impossible, as well as response to any further related events.

No indication is given in the EIS of a capability to respond to toxic releases from explosions outside of the JACADS process building. Without this capability of response the JACADS operation is unacceptably dangerous and potentially destructive of human lives as well as damage to the environment. A fugitive cloud of lethal volatile chemical agents would quickly destroy all terrestrial life in its path. Effects of such a release on the marine life and the bird sanctuary have not been given adequate consideration in the EIS.

C. Doyle E. Gates, Administrator, National Marine Fisheries Service,
National Oceanographic and Atmospheric Administration

0237 | In his comment, Doyle Gates, Administrator of the National Marine Fisheries Service points out that the DEIS fails to mention the fact that humpback whales have been sighted at Johnston Atoll, and may in fact breed at Johnston Atoll.

Page 56. (4) Endangered, Threatened and Rare Species,
Paragraph (b) Mammals.

This paragraph states that "no listed, proposed or candidate endangered or threatened species of mammals are known to use JA area as a breeding or major feeding area." The humpback whales sighted in 1983 over the shoal in the southern portion of Johnston Atoll included a cow and calf. In addition, it is generally accepted that humpback whales migrate to lower latitudes in the winter to breed. Therefore, it is quite possible that humpback whales breed at Johnston Atoll.

Humpback whale sightings and the possibility that they breed in the area of Johnston Atoll was mentioned in the final EIS; however, the deficiency in the JACADS Final EIS is that the potential impacts on an important, "... endangered, threatened or rare ..." species, at Johnston Atoll were not discussed. The discussion of the impacts of projects on endangered, threatened or rare species is central to the environmental impact statement process as detailed in NEPA and relevant court decisions. The probable use of Johnston

Atoll as a breeding ground for such an important endangered species as the humpback whale, protected by the federal Marine Mammal Protection Act, augments that the lack of impacts discussion is a major deficiency of the JACADS EIS.

The comment of Doyle E. Gates, NMFS, also points out that the endangered humpback whales may also feed in the Johnston Atoll waters:

Page 62, b. Biological and Ecological Resources. Paragraph (3). Endangered Species. This paragraph states that "although Humpback Whales are rarely sighted in the waters near JA, they do not feed while there . . ." The draft Biological Opinion states that "humpback whales apparently do not feed at their wintering grounds." At this time we do not know if these whales feed while they are in tropical waters.

As discussed herein, there are new scientific data on the generation and dispersal of highly toxic bioaccumulative products of incomplete combustion from incineration operations. The bioaccumulation of these highly toxic substances in the food chain could have a severe negative impact on the endangered humpback whales, should they ingest contaminated food in the Johnston Atoll area. The potential impacts on feeding humpback whales were not discussed in the Final 1983 JACADS EIS.

0237

The response to the comment of Doyle Gates, Administrator, National Marine Fisheries Service, were not included in the copy of the Final EIS as supplied.

D. Eileen R. Anderson, Mayor, City and County of Honolulu

Mayor Anderson expressed concerns for operations personnel health and safety, and attention to construction and operating details in order to safeguard against serious problems of contamination. She briefly reviewed past accidents resulting in environmental releases of highly toxic materials at Johnston Atoll and cautioned that, ". . . relatively innocent inattention to minute details (temporary storage of containers) can result in serious problems of contamination." The "containers" to which Mayor Anderson referred contained Agent Orange.

Mayor Anderson continued:

"We believe that the kinds and levels of assurances that federal agencies, civilian and military, are willing to provide to ensure that the proposed JACADS facilities are well engineered and constructed must be addressed. In addition, assurances should ensure that operations of the facilities are rigorously monitored, that attentiveness to even the minutest construction and operating details are guaranteed, and that environmental impacts resulting from the proposed projects will not be significant. We strongly request that all possible precautions be taken to ensure the health and safety of the workers who will be operating the facilities, as well as other Johnston Island personnel.

The response to Mayor Anderson's comment stated that, ". . . the U.S. Army Toxic and Hazardous Material Agency (USATHAMA) is extremely safety conscious, and will insure the JACADS facility is designed, constructed and operated so that neither the health and safety of JACADS workers and other island personnel, nor the atoll environment is jeopardized . . ."

Notwithstanding the above response to Mayor Anderson, the final JACADS EIS is deficient in health and safety and contingency planning. Some details of these deficiencies are given above in the discussion of comments by Bruce Blanchard and Joyce M. Wood. As detailed above, the feasibility of the proposed JACADS has not been demonstrated in terms of an ability to detect lethal chemical agents and warn personnel prior to their receiving a potentially lethal dose. This consideration pertains to all operations personnel on Johnston Island.

Additional health and safety concerns which were not addressed in the JACADS EIS are detailed below:

Medical Facilities and Personnel Monitoring

The EIS does not mention emergency medical facilities or personnel at Johnston Island. Given the potential lethalties and the cumulative effects of irreversible cholinesterase inhibitors, this should be a basic consideration.

Toxic Chemical Spills

Potential releases of lethal chemical agents is discussed briefly above, in addition, chlorine gas cylinders, presumably one ton size, will be stored outside of the JACADS process building. There is no mention in the EIS of response to a potential chlorine gas spill, leak stemming equipment, or consideration that such a spill could take place. Spillage from a one ton cylinder of chlorine gas can be lethal for miles downwind, putting JACADS personnel and the bird sanctuary at risk.

Fire and Fire Fighting Equipment

The JACADS EIS makes no mention of fire fighting equipment or training of fire fighting personnel. The JACADS facility will include several high temperature incinerators, and explosive material will be processed in the facility. The compounds to be burned in the incinerators and their combustion products are highly corrosive. This augments the possibility of equipment failures, increasing the chances with continued use. Uncontrolled fires or explosion could result from incinerator equipment failure. The JACADS EIS is deficient in contingency planning and equipment design for fire and explosion. Fire fighting personnel and adequacy of on-site equipment to deal with incinerator and process area fires and explosions are not considered. Lethal volatile chemical agents as well as highly toxic products of incomplete combustion are likely to be released during fires and secondary explosions are likely, compounding the equipment and personnel protection problems.

The EIS fails to mention if an adequately trained fire brigade will be present for JACADS operations. The EIS does not evaluate if the fire fighters will have the endurance to fight a relatively long-term fire using the personnel protective equipment available. No mention is made of the availability and response time of adequately trained and equipped relief personnel.

The release of contaminated fire fighting water into the Rhine river from a chemical plant storage facility fire caused massive environmental damages. The EIS does not mention how fire fighting, decontamination solution and vapor knock down waters will be contained. These could be released to surface waters or infiltrate into groundwater and discharge to surface waters over time. Highly toxic volatile compounds will be released into air from surface waters and soil in the case of uncontained spills or uncontained fire fighting waters.

Preventive Maintenance and Equipment Inspection Program

The JACADS EIS made no mention of preventive maintenance or equipment inspection protocols. Industrial scrubbers frequently break down from exposure to corrosive gases. In the case of the JACADS scrubbers, many human lives and environmental resources rely on the efficiency of the air scrubbing system. No mention is made of a backup scrubber system or contingency plans in the case of scrubber systems malfunction.

E. Susumo Ono, Chairperson, State of Hawaii, Department of Land and Natural Resources

The comment by Susumo Oho included concerns for the proposed JACADS impacts on fisheries used by Hawaii's citizens, from dispersion of air emission contaminants, transport of contaminants by ocean currents, biotransport and bioaccumulation:

"The project could affect State interests if the poison gases or their toxic degraded projects were transported into Hawaiian waters, or waters utilized by Hawaii's fishermen, in effective concentration. Several mechanisms are conceivable: transport through the air by winds; transport in the water by currents; and transport within the bodies of aquatic organisms (either directly, inside fishes which migrate long distances, or more gradually, recycling through generations of planktonic and pelagic organisms.)

We concur that if scrubber salts are repacked and stored at Johnston, there is little basis for immediate concern that they would contribute toxic substances to Hawaiian waters or to our aquatic life, and we recognize that open-ocean currents typically flow eastward past Johnston. However, if dumping scrubber brine

at sea is still being considered, we strongly urge careful consideration and thorough public discussion of the following:
(emphasis added)

- . Anticipated concentrations of the gases and potentially toxic breakdown products (henceforth "toxic products") in seawater solution;
- . Toxicity levels of the toxic products, in saline solution, to humans swimming or ingesting the seawater;
- . Natural breakdown of the toxic products by natural marine physiochemical and biochemical processes;
- . Concentration of toxic products anticipated in Hawaiian waters under "worst case conditions" (including sustained atypical current patterns such as "El Nino");
- . Potential for bioaccumulation of toxic products in planktonic species and in species with value as fishery resources;
- . Concentrations of the toxic products anticipated in food fishes in Hawaii waters; and
- . Potential risk to humans who ingest fishes which have absorbed the toxic products directly or which have accumulated them through the food chain."

None of these extremely important concerns in reference to ocean dumping were addressed in the Supplemental EIS. The contention of the Supplemental EIS is that once diluted, environmental toxicants will be harmless. This ignores the concerns for the toxic substance bioaccumulation and biotransformation effects seen in fisheries throughout the world.

The arbitrary response to this comment ignores the effects of bioaccumulation and biotransformation of the heavy metals known to be in the JACADS wastestreams, as well as the potential for products of incomplete combustion to be dispersed. These concerns were also ignored in the Supplemental EIS. The response follows:

"No toxic gases or their breakdown products could be transported into Hawaiian waters or waters utilized by Hawaii's fishermen in sufficient concentration to cause any effect. No gases will be dumped into the ocean and, if an accidental release of agent occurred on the island, it would be a small quantity which would be rapidly broken down and diluted to non-detectable levels. All of

the agents hydrolyze in water, and the dilution factor would be such that even the breakdown products would be undetectable a short distance from the atoll.

As stated in Paragraph 1.3, page 11 of the DEIS, if it is determined ocean disposal of the scrubber brine is environmentally feasible and safe, a supplemental EIS will be prepared and distributed as part of the permitting process. Your concerns about ocean dumping will be addressed in that document as appropriate."

Heavy metals (known to be in the air scrubber brines) and JACADS materials to be burned volatilize in incinerators and condense as particulates. The particulate is difficult to remove from the incinerator air emissions. No estimates are given in the JACADS EIS for total emissions of heavy metal particulates, or the impacts of this fallout on the marine environment. There are no analyses of baghouse fines for heavy metals or PICs from similar operations given in the JACADS EIS. These analyses are essential for determining environmentally acceptable disposal options.

F. Doak C. Cox, Director, University of Hawaii at Manoa

Comment by Doak Cox included suggestion for air toxics monitoring to assess impacts of the JACADS project:

Air Quality and Toxics

Air quality and background toxics monitoring including soil analysis are vital to determination of the impact of this facility on Johnston Atoll. Monitoring should be instituted prior to construction to provide baseline data. Intensive monitoring following project start-up is desirable with future monitoring schedules dependent on early results.

The response and EIS consider only air monitoring for fugitive chemical agent:

Air Quality and Toxics

Monitoring of air quality will be initiated prior to the start-up of demilitarization operations to establish baseline conditions and as part of the initial operational checks of the on-site laboratory equipment. Soil samples have been monitored as indicated in Appendix "L" of the DEIS. Since there has never been a significant release of agents at Johnston, the baseline level of agent-related toxicants in both the air and soil is assumed to be zero, and actual sampling is not considered necessary.

No plans for monitoring airborne particulates (heavy metals, dioxins, dibenzo furans) from incinerator emissions are addressed in the response or the Final EIS.

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The comment by Doak Cox also included a statement on the importance of the "ecologist position" as proposed in the EIS:

Ecologist Position

Having an ecologist added to the Johnston Atoll staff (page 65) to oversee fish and wildlife conservation programs is one of the most important environmental provisions of the project. Unofficial reports of harvesting abuses associated with the local reef fauna and flora support the need for a resident ecologist. The doubling of population on Johnston Island dictates that effective control of recreational uses is imperative. A resident ecologist would also help assure comprehensive background air and toxics monitoring, as noted in the DEIS.

The "ecologist" will have oversight of impacts of recreational activities, as his duties are described in the EIS. The response indicates a "staff" position:

Ecologist Position.

We agree that the addition of an ecologist to the island staff is the key element in the mitigation plan.

In addition to a staff position for an ecologist, there is an extreme need for on site regulatory authority with independent laboratory and monitoring equipment for a project of this magnitude, given the project's attendant potentials for lethality and environmental damages. These regulatory personnel must have the authority to suspend operations should conditions threatening to human health or the environment obtain. Independent laboratory verification is a must considering the potentially lethal consequences of laboratory errors in monitoring.

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Congress issued a mandate in NEPA to the Federal government to "improve and coordinate" its

plans and functions, programs and resources to the end that the nation may

(1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

- (2) assure for all Americans safe, healthful, productive and aesthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences (42 U.S.C. Sec. 4331(b)(1)(2).)
(emphasis added)

The responsibilities of this generation as detailed in the above quote would be fulfilled through on-site regulatory authority at Johnston Atoll.

**G. Melvin K. Koizumi, Deputy Director for Environmental Health,
State of Hawaii Department of Health**

Among the concerns expressed by Mr. Koizumi was the following:

"We are concerned about the possible danger of inadvertant contamination of the marine food chain as it would affect Hawaii.

The reply to Mr. Koizumi did not address this important concern in any manner, nor did the 1983 EIS, or the 1988 Supplemental EIS. The incineration operation, according to currently available scientific data, is likely to generate products of incomplete combustion (PICs), some of which are highly toxic and bioaccumulative in the food chain. There has been no adequate assessment of the potential dispersion of PICs from air emissions, ocean dumping, or accidental spills of solid wastes. Heavy metals are also toxic and bioaccumulative and will be partitioned between air emissions and solid wastestreams. Once again, these important environmental concerns have not been addressed in the JACADS 1983 EIS or the 1988 SEIS.

V. CONCLUSIONS

The JACADS Final SEIS is inadequate to meet the criteria for environmental impact statement set down in the National Environmental Policy Act and subsequent court interpretations of the Act:

1. One of the major failures in the DSSEIS is the lack of an integrated programmatic assessment of the entire transportation scenario. The Army has identified three stages of transportation activity, only one of which is addressed in the DSSEIS. The failure to address the other two stages in a comprehensive manner in this DSSEIS is a violation of NEPA and must be corrected.
2. Additionally, the Army is legally compelled to consider in a **single EIS all parts of the proposed chemical stockpile disposal program**. This includes not only an analysis of the cumulative effects of all proposed or foreseeable uses of the JACADS facility but also a comprehensive consideration of the full range of environmental effects associated with disposal of the European stockpile (e.g., transport, destruction technology).
3. Assessments of potential environmental damages are based on unsupported assumptions of the benign character of JACADS waste materials and air emissions.
4. No attempt has been made to fully characterize potentially toxic components of air emissions, the brines, and other wastes, even with pilot plant or laboratory test brines. The DSSEIS does not address the full range of products of incomplete combustion (PICs) as discussed in the 1989 Greenpeace Review.
5. The brines, as well as other solid wastes of the JACADS process can reasonably be assumed to contain residual nerve agent as well as toxic products of incomplete combustion.
6. Recently available scientific data inadequately addressed in the DSSEIS on a broad range of incinerator operations and incinerated materials reveal that there are a broad variety (and as yet not fully characterized) products of incomplete combustion (PICS) generated in virtually all incinerator operations where organic material is burned in the presence of halogen (such as chlorine) source.

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7. Recently available scientific data support that polychlorinated dibenzo dioxins (PCDD's), and polychlorinated dibenzo furans (PCDF's) are always among the products of incomplete combustion generated by incinerators which burn organics and a halogen (chlorine) source. Other PICs discussed herein are nearly as toxic.
- 0250
8. The JACADS incineration operations as planned will burn organics and halogen sources in the DFS, DUN and LIC incinerators, and can therefore generate PCDD's and PCDF's. The DSSEIS gives an incomplete listing of halogen sources proposed for incineration.
- 0251
9. PCDD's and PCDF's are the most toxic substances known to man. They display a variety of toxic effects at lower exposure levels than any other known chemicals. **There is no known "safe" exposure level.** Recent revelations of data manipulation on studies of human exposure may indicate that dioxin is a potent human carcinogen.
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10. PCDD's and PCDF's from incineration facilities have been found to accumulate in fatty tissues of fish, birds, humans and other organisms. Bioaccumulation has been inadequately discussed in all of the DOA environmental impact statements to date.
- 0253
11. Once dispersed into the environment, these virulent toxicants are persistent and biomagnify, that is, increase in concentration in the food chain, with commercial fish such as Tuna and Swordfish, sea turtles, seabirds and humans ultimately receiving the highest accumulations.
- 0254
12. Recently available scientific data inadequately addressed in the DSSEIS indicate that the biologically active sea surface microlayer is an area where contaminants are concentrated. Furthermore, the sea surface microlayer provides an environmental pathway for concentrated contaminants to enter the primary levels of the foodchain and bioaccumulate in the successive layers of the foodchain.

13. The sea surface microlayer is liable to pollution with PCDD's, PCDF's and other toxic products of incomplete combustion (PIC's) as a result of exposure to JACADS waste materials from incineration operations. PIC's have been found in fish and sediments in incineration burnzones in the North Sea. The environmental fate and transport of these materials are not adequately addressed in the DSSEIS.
14. Serious failures and deficiencies of the 1983 JACADS EIS, 1988 SEIS and 1990 DSSEIS include the failure to characterize products of incomplete combustion, including PCDD's and PCDF's in scrubber brines, baghouse fines, scrap, ash and air emissions.
15. The atmospheric deposition modeling in the DSSEIS uses unsupported assumptions concerning dilution of PICs in the upper 16 feet of the ocean. These materials are largely hydrophobic and are more likely to concentrate directly into the microlayer upon deposition.
16. The 1983 EIS, 1988 SEIS, and 1990 DSSEIS fail to discuss and analyze cumulative environmental impacts of contaminated incinerator fallout and solid wastes.
17. The 1983 EIS, 1988 SEIS, and 1990 DSSEIS fail to consider secondary environmental impacts such as bioaccumulation and biotransformation of heavy metals and toxic organics in the food web.
18. The available abiotic processes for detoxification of organophosphates include hydrolysis in acid or base, pyrolysis, and oxidation. Heavy metal catalysts can speed hydrolysis, and there are new technologies available for catalyzed hydrolysis in conjunction with UV light, which show effectiveness on explosives and pesticides. Studies cited in the DSSEIS are dated (NRC 1984, A.D. Little 1985) concerning chemical neutralization. New and potentially less environmentally damaging technologies should be explored.
19. The 1983 EIS, 1988 SEIS, and 1990 DSSEIS are seriously lacking in health and safety planning for operation and transport. In fact, the technical feasibility of the project in this regard is not demonstrated. The most rapid nerve agent

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detectors take two minutes, far too slow to prevent death from an acute dose. Delayed neuropathies from GB exposure will occur at far lower exposure levels. There are no antidotes discussed in the JACADS health and safety plan for delayed neuropathies. The Safety Assessment makes no mention of delayed neuropathies (JACADS Safety Assessment, Part II Agent, April 1989).

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20. The 1990 DSSEIS is notably deficient in land and ocean transport contingency planning. Given the inherent hazards of this proposed undertaking, this is a serious deficiency. This lack of analysis and the failure to demonstrate the technical ability to deal with accidents, equipment failures and other contingencies brings the feasibility of the proposed project into question. In 1972, Johnston Island had to be evacuated (Ocean Disposal Site DEIS, September 3, 1985), yet there are not evacuation contingencies given in the 1983 EIS, 1988 SEIS, or 1990 DSSEIS.

- 0263
21. The potential effects of accidental releases of chemical agents, fugitive emissions and accidental spills in the FRG, open ocean, on the bird sanctuary and the marine environment are not adequately addressed in the 1983 EIS or the 1988 SEIS or 1990 DSSEIS.

- 0264
22. The transportation of chemical munitions to JACADS constitutes grave environmental risk and has not been adequately addressed in 1990 DSSEIS. Given the risk analysis decision to dispose of the CONUS stockpiles on site, this failure to apply the same reasoning to the European stockpiles is unsupported.

- 0265
23. Deposition of "incinerator residue" in the ocean is prohibited under the Ocean Dumping Act, incinerator air emissions fallout will have similar environmental affects, and may be tantamount to ocean dumping.

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24. The current level of radionuclide and dioxin contamination at Johnson Island should be surveyed in order to develop an accurate risk assessment of worker exposures to contaminated ambient airborne particulates.

The Greenpeace position concerning the JACADS project as a whole is as follows:

1. Greenpeace opposes using the Pacific as a testing ground for hazardous technologies because of the impact on the region's inhabitants and the environment. 0267
2. Greenpeace opposes any and all attempts to introduce incineration or any other environmentally unsound technologies into the Pacific region. 0268
3. Greenpeace opposes any and all attempts to import hazardous materials, in particular, stockpiled chemical weapons from other parts of the world, into the Pacific region. 0269

Greenpeace makes the following six recommendations:

1. Greenpeace recommends that existing chemical weapons stockpiles remain segregated in above-ground, monitored, retrievable storage and that strict precautionary measures are taken to prevent environmental damage or harm which could result from an accident, leak, spill, fire, explosion, or natural disaster. Waste streams should remain in segregated storage until such time as a safe and suitable detoxification or treatment method becomes available. 0270
2. Recognizing the extreme toxicity and potential use of the stockpiled weapons, Greenpeace recommends the following set of conditions for decommissioning the weapons: 0271
 - a) eliminate the weapons utility of the material;
 - b) eliminate the toxicity and other hazards of the material;

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c) NO MATERIAL WHATSOEVER should be released to the environment in gaseous, liquid, or solid phase during the decommissioning process. By-products resulting from the process must be non-hazardous.

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3. Greenpeace urges that the DOA comply fully with all procedures set forth in the national legislation: the Endangered Species Act, Marine Mammal Protection Act, Migratory Bird Act, and National Wildlife Refuge Administration Act regarding the potential consequences of the proposed agency action on wildlife, including solicitation of necessary or appropriate biological assessments and opinions from the National Marine Fisheries Service.

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4. Greenpeace urges that the DOA comply fully with the intent and political consequences of agreements and procedures set forth governing the trade and transport of hazardous wastes: including the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, and Lome IV.

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5. Because of the dangerous implications of transferring the JACADS technology to the continental U.S. and possibly the USSR and following on the positions and recommendations outlined above, Greenpeace urges that a joint research program be established between U.S. and Soviet scientists to research environmentally sound detoxification processes adhering to the set of conditions outlined in recommendation 2 above.

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6. Within the scope of the NEPA process, Greenpeace insists that the Army prepare a comprehensive environmental analysis of the impact of all the proposed uses of JACADS including the cumulative effects of these proposed uses. The analysis of transportation of the European Stockpile must not ignore the consequences of transportation of these weapons from West Germany to a point 12 miles from

Johnson Island. A programmatic EIS for the cumulative impacts of the entire CSDP should be prepared to include JACADS the transportation of the European stockpiles and CONUS operations.

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Since the 1920's, Johnston Atoll has been a bird sanctuary. The EIS mentions that three populations of the largest sea birds, Wandering Albatross, Laysian Albatross and Bluefoot Bobby, no longer nest at Johnston Atoll. They are listed as former nesting populations. No explanation is given for the obliteration of the nesting population of these three sea bird species. It is apparent that the mission of Johnston Atoll as a bird sanctuary has been subrogated by the current administrative authority. It is imperative that all JACADS operations be overseen by on site environmental regulatory authorities.

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While Greenpeace does support the destruction of chemical weapons and welcomes disarmament agreements banning the production of unitary and binary chemical weapons, the destruction of existing chemical weapon stockpiles must be conducted in an environmentally safe way in any country where these stockpiles exist. The current CSDP wholly fails to meet these requirements.

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United States Department of State

Washington, D.C. 20520

April 9, 1990

Mr. Michael W. Owen
Deputy for Chemical Demilitarization
Office of the Assistant Secretary of the Army for
Installations, Logistics and Environment
Room 2E614, The Pentagon
Washington, D.C. 20310-0103

Dear Mr. Owen:

Attached for your information and action, as appropriate, are three copies of a "Memorandum with Regard to the United States Department of the Army's Plan to Incinerate the European Stockpile of Chemical Weapons on Johnston Island." The memorandum was delivered to our office on April 6, under cover of a diplomatic note, also attached, from the Embassy of the Federated States of Micronesia. We are aware that the closing date for comments on the draft Second Supplementary Environmental Impact Statement was March 26, 1990, and will so inform the Embassy when we acknowledge its note.

A copy of this letter, with Attachments, is being provided to the Director, East Asia and Pacific Region, Office of the Assistant Secretary of Defense for International Security Affairs.

Sincerely,

A handwritten signature in cursive script, reading "Louis F. Licht".

Louis F. Licht
Acting Director

Office of Freely Associated State Affairs

Attachments.

1. Diplomatic Note
2. Memorandum

02-90

The Embassy of the Federated States of Micronesia (FSM) presents its compliments to the United States Department of State and has the honor of transmitting the following Memorandum to the United States Government.

This Memorandum is with regard to the United States Department of the Army's plan to incinerate the European stockpile of Chemical weapons on Johnston Island. The Government of the Federated States of Micronesia presents this Memorandum because the Environmental Integrity of the Pacific Ocean is of Paramount Importance to its Citizens. The Federated States of Micronesia Cherishes the Environmental Integrity of the Pacific Ocean.

The Embassy of the Federated States of Micronesia would appreciate the assistance of the Department of State in ensuring that copies of this Memorandum ^{are} ~~is~~ provided to the appropriate department/agencies in the U.S. Government.

The Embassy of the Federated States of Micronesia avails itself of this opportunity to renew to the U.S. Department of State the assurances of its highest consideration.

U.S. Department of State



FEDERATED STATES OF MICRONESIA

MEMORANDUM WITH REGARD TO
THE UNITED STATES DEPARTMENT OF THE ARMY'S PLAN
TO INCINERATE THE EUROPEAN STOCKPILE OF CHEMICAL WEAPONS
ON JOHNSTON ISLAND

I. The Government of the Federated States of Micronesia Presents This Memorandum Because the Environmental Integrity of the Pacific Ocean Is of Paramount Importance to Its Citizens.

A. The Federated States of Micronesia Cherishes the Environmental Integrity of the Pacific Ocean.

U.S. authorities attracted to Johnston Island as a disposal site are clinging to an outmoded view of the Pacific Ocean as a vast, empty region where unwanted things can be quietly dumped, and where high-risk activities can be conducted without interference. Generations of Micronesians suffered while our region was used as a war zone and a testing ground, and now we are told it is suitable as a toxic waste disposal area.

That view is entirely at odds with the economic, social and political realities of today's world. The mid-Pacific Ocean alone is home to a growing population numbering in the millions, among whom are the citizens of the Federated States of Micronesia. Unlike the world's settled continents and land masses, the surface and subsurface of the oceans are the basic earth environment in which islanders live. Our waters are in constant motion, subject to winds and currents. Marine life is highly migratory. Physical events in any one place, however remote, potentially affect lands and peoples thousands of miles away. The living and non-living resources of the Pacific are consumed not only by Pacific peoples, but increasingly, by people all over the world.

These indisputable facts caused the founders of our Nation to establish the protection of the marine environment as one of our highest governmental priorities. It is not enough, however, for any one country to be responsible within its own borders. It has been recognized for many years that the world as a whole must protect both territorial and international waters against environmental blight. For this reason the Federated States of Micronesia has been deeply concerned from the outset over the disposal activities at Johnston Island, and now feels compelled to question once again the latest U.S. plans for the facilities located there.

B. The Federated States of Micronesia Is Compelled To Raise These Concerns at This Time and In This Manner.

The United States Department of the Army ("the Army") recently released an environmental impact statement ("EIS") evaluating the consequences of storing and disposing of the European stockpile of chemical weapons on Johnston Island.¹ The Federated States of Micronesia ("FSM") has monitored the Army's chemical weapon incineration project on Johnston Island (known as the Johnston Atoll Chemical Agent Disposal System or simply

¹ Office of the Program Manager for Chemical Demilitarization, Department of the Army, Johnston Atoll Chemical Agent Disposal System (JACADS): Draft Second Supplemental Environmental Impact Statement for the Storage and Ultimate Disposal of the European Chemical Munition Stockpile (Feb. 1,

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"JACADS") for several years.² The Army's new proposal -- to transport the European stockpile to Johnston Island -- raises issues which the FSM has not previously examined.

As an independent country, it would not be appropriate for the FSM to submit comments directly to the public docket. Nevertheless, the FSM is compelled to voice its concerns regarding the plan set out in the Army's Draft SSEIS. Because the Johnston Island environs lack a constituency within the United States, the FSM respectfully requests the attention of the Army's Program Manager for Chemical Demilitarization to the following concerns.³

II. The Army's Plan To Ship the European Stockpile to Johnston Island Subjects the Pacific Basin to Risks Which the Army Was Unwilling to Subject the CONUS.

After considering "a number of programmatic alternatives by a system of weighting of priorities," the Army adopted the "environmentally preferred alternative of on-site incineration" for the chemical weapon stockpiles stored at eight CONUS

² On two previous occasions, the FSM submitted public comments on JACADS EIS documents. In 1985 and again in 1987, the FSM commented on the effect which ocean disposal of scrubber brines would have on marine life.

³ The FSM lacks the technical expertise to assess the accuracy of certain aspects of the Army's plan. For this reason, the FSM is forced to assume that the Army accurately (1) identified the worst case accident scenarios and (2) estimated the human and environmental consequences of such accidents. To the extent comments submitted to the public docket suggest inaccuracies in either of these two areas, the FSM respectfully requests that the Army pay special attention to such comments. The FSM will review the Army's Final SSEIS with particular interest in the Army's response to any such comments.

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facilities.⁴ In connection with that decision, an Army Undersecretary explained that transportation is a much more "formidable, complex, and uncertain task" than is incineration and that, with specific reference to a proposal to transport the stockpile stored at Aberdeen Proving Ground to Johnston Island for incineration, the Army was concerned "about the potential for damaging the environmentally sensitive Chesapeake Bay."⁵ Another Army official involved in plans to dispose of the chemical weapons stockpile stated that on-site incineration is "much better than moving it [the stockpile] all over the planet."⁶

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Transporting the European stockpile to Johnston Island necessarily involves risks similar to those which caused the Army to abandon its plan to transport the Aberdeen Proving Ground stockpile to Johnston Island. If concerns about "the potential for damaging the environmentally sensitive Chesapeake Bay" caused the Army to abandon the former plan, then the potential for damaging the Pacific Ocean should similarly require the Army to abandon the current plan. Moreover, given the "heavy wave and swell action" to which Johnston Atoll is subject⁷ and the poten-

⁴ Draft SSEIS, supra note 1, at 10. The Army adopted this policy in the Chemical Stockpile Disposal Program ("CSDP") Final Programmatic Environmental Impact Statement ("FPEIS"). Id.

⁵ 18:44 BNA Environment Reporter 2229 (Feb. 26, 1988) (statement by Undersecretary James R. Ambrose).

⁶ 18:37 BNA Environment Reporter 1939 (Jan. 8, 1988) (quoting Major Phil Soucy).

⁷ Draft SSEIS, supra note 1, at 44.

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tial for tsunamis⁸ the current plan is more likely to encounter difficulties than would have the aborted plan to transport the Aberdeen Proving Ground stockpile through the Chesapeake Bay.

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The FSM is well aware of the principal difference between the plan set out in the Draft SSEIS and the aborted plan for the Aberdeen Proving Ground stockpile. Transporting the European stockpile to Johnston Island does not involve cross-country transport of chemical weapons on the CONUS. Rather the current plan externalizes all the risks of transporting the European stockpile by adopting transglobal -- as opposed to cross-country -- transport. From that perspective, the FSM is forced to conclude that the Army is willing to subject the global commons (and in particular the Pacific basin) to risks to which it would not subject the CONUS.

In proposing the current plan, the Army succumbed to a deplorable manifestation of the "NIMBY" syndrome --- Not In the Backyard of Anyone with Political Clout. The inconsistency between the Army's disposal plans suggests that the Army's preferred alternative for the European stockpile was based more on geopolitical than on environmental concerns. In deference to the Army, it is important to recognize that the Army felt severely restricted as to the alternatives it could consider in detail. However, the FSM believes that the Army misperceived the restrictions under which it labored.

⁸ Id. at 36. The Army proposes to mitigate the risks posed by tsunamis by monitoring the Pacific Tsunami Warning Center.

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From the FSM's perspective, the Army's policy of on-site destruction of the CONUS stockpiles is obviously more desirable than transporting the CONUS stockpiles to Johnston Island.⁹ Whether the Army is legally bound to adhere to representations in the CSDP FPEIS regarding on-site incineration of the CONUS stockpiles appears to be unsettled under U.S. law.¹⁰ Nevertheless, the FSM understands that the Army would, at a minimum, be obligated to prepare a supplemental EIS prior to deviating from the on-site destruction policy.¹¹

III. The Army's Plan To Ship the European Stockpile to Johnston Atoll Violates the Policy Underlying the Emerging International Legal Principle Requiring Consent to the Destination of Hazardous Materials.

Regrettably, international law has not evolved to the point of prohibiting transfrontier movements of hazardous material.¹²

⁹ It also seems right that the United States should internalize the risks associated with stockpiling chemical weapons. This would be more consistent with the spirit of the Basel Convention's stated preference for disposal of hazardous wastes "in the State where they are generated." Basel Convention on the Control of Transboundary Movements of Hazardous Waste and Their Disposal, UNEP/IG.80/3, opened for signature March 22, 1989, at 2.

¹⁰ In this regard, the FSM notes with interest the remarks of the current General Counsel of the President's Council on Environmental Quality ("CEQ"). Dinah Bear, A Primer on an "Old" Law With Solutions to New Problems 19 ELR 10,060, 10,066 n. 66 (Feb. 1989) ("Bear").

¹¹ Deviations from the policy of on-site incineration would constitute "substantial changes in the proposed action that are relevant to environmental concerns" requiring the preparation of a supplemental EIS under pertinent rules. 40 C.F.R. § 1502.9-(c)(1)(ii).

¹² As represented by pronouncements of the Organization for Economic Cooperation and Development ("OECD"), the developed world's position is that exportation of hazardous material should

Neither U.S. nor European Community ("EC") law is designed to halt transfrontier shipments of wastes or to encourage on-site treatment.¹³ The FSM believes, however, that the Basel Convention¹⁴ holds greater promise. The Basel Convention contains several provisions which favor the management of hazardous wastes without resorting to transfrontier shipments. The Convention

- recognizes "the increasing desire for the prohibition of transboundary movements of hazardous wastes and their disposal in other states, especially developing countries."¹⁵
- expresses an awareness of "the need as far as possible to reduce [the transboundary movement of hazardous

only be prohibited if the country from which the material is to be exported "has reason to believe" the material will not be disposed in an environmentally sound manner. OECD, Finalisation of the Draft International Agreement on Control of Transboundary Movements of Hazardous Wastes, art. VI(4)(a) (Sept. 5, 1988), cited in F. James Handley, Hazardous Waste Exports: A Leak in the System of International Legal Controls 19 ELR 10,171, 10,181 (Apr. 1989) ("Handley").

¹³ Handley, supra note 12, at 10,178, citing "Answer to Written Question O. 543/85, Commission of the European Communities," Spokesmen's Service (Sept. 11, 1985) (statement by Hon. Clinton Davis, President of the EC Commission, that "The Commission does not think that the management of hazardous waste on a national basis is a valid objective."). See also 42 U.S.C. § 6938 (U.S. statutory provision governing hazardous waste exports).

¹⁴ See note 9, supra.

¹⁵ Id. at 2. Consistent with this desire, the Convention requires all contracting parties to "undertake to review periodically the possibilities for the reduction of the amount . . . of hazardous wastes and other wastes which are exported to other States, in particular to developing countries." Id. art 4(13).

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waste] to a minimum."¹⁶

- calls upon the contracting parties to "consider the adoption of a complete or partial ban of transboundary movements of hazardous wastes and other wastes in light of the latest scientific, environmental, technical, and economic information."¹⁷

Despite the lagging evolution of international law in this area, there does appear to be a newly emerging international legal consensus which -- while stopping short of embracing a total ban on transboundary movement of hazardous materials -- does embrace two important concepts: notice and consent. A 1983 OECD "Decision and Recommendation" contained a specific notice requirement to "transit" countries.¹⁸ Similarly, the Basel Convention requires the consent of both the importing and transit countries prior to the commencement of the transboundary movement

¹⁶ Id. at 3. In addition to embracing this principle, the Basel Convention imposes specific obligations on the contracting parties to uphold this principle. The Convention imposes a general obligation on all contracting parties to "[e]nsure that the transboundary movement of hazardous wastes and other wastes is reduced to the minimum consistent with the environmentally sound and efficient management of such wastes." Id. art. 4(2)(d). Parties to Convention are further obligated to "take the appropriate measures to ensure that the transboundary movement of hazardous wastes and other wastes only be allowed if . . . [t]he state of export does not have the technical capacity and the necessary facilities, capacity or suitable disposal sites in order to dispose of the wastes in question in an environmentally sound and efficient manner." Id. art. 4(9)(a).

¹⁷ Id. art. 15(7). As an interim measure, the Convention requires all contracting parties to transmit, on an annual basis, information regarding "[e]fforts to achieve a reduction of the amount of hazardous wastes or other wastes subject to transboundary movement." Id. art. 13(3)(b)(iv).

¹⁸ OECD, Decision and Recommendation on Transfrontier Movements of Hazardous Wastes, OECD Document (83) 180 (final) reproduced at 72 Int'l Legal Mat'l 211-215 (1987) cited in

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of hazardous wastes.¹⁹ Both U.S. and EC hazardous waste export rules require the advance notification of, and consent by, the destination country.²⁰

If the Army's plan can be reconciled with this emerging international legal consensus, it is only because neither the U.S. nor the EC has solicited the consent of the Pacific basin community. Because the destination of the European stockpile (i.e., Johnston Island) is an "unincorporated U.S. territory,"²¹ only the consent of the U.S. would appear to be required under this emerging legal principle.²² But considering the U.S. as the only interested party -- by reason of its authority over Johnston Island -- is an affront to the purpose for requiring consent.

¹⁹ Basel Convention, supra note 9, arts. 6(3)(a), 6(4).

²⁰ Handley, supra note 12, at 10,172 n. 19 and accompanying text. See 42 U.S.C. § 6938(a)(1)(C) (requiring that "a copy of the receiving country's written consent" be attached to the shipping manifest for hazardous waste destined for overseas disposal).

²¹ Draft SSEIS, supra note 1, at iii.

²² The FSM regrets that the more enlightened Basel Convention would appear to accommodate the charade by which the U.S. could consent to the transfrontier movement of the European stockpile to Johnston Island by reason of the U.S.'s authority over Johnston Island. The case of Johnston Island, located far from the CONUS, is the quintessential example why the Basel Convention should not include "any land, marine area, or airspace within which a State exercises administrative and regulatory responsibility in accordance with international law" within the definition of "area of the national jurisdiction of" a state. Basel Convention, supra note 9, art. 2(9). Without some consideration of geographic remoteness from the bulk of the land mass of the importing state, the Basel Convention unwittingly encourages the type of tomfoolery by which the United States can consent to the shipment of hazardous waste to a man-made island distant from and with no ecological connection with the

Irrefutably, the community actually affected by the Army's plan is the Pacific basin, and the Army has not solicited the consent of the states in that region.

0279 | IV. The JACADS Program Is Inconsistent With the Intent, If Not the Letter, of the U.S. Ban on Ocean Incineration.

At first blush, the operation of the JACADS incinerators would appear to be legally inconsistent with the U.S. Congress's ban on ocean dumping. In the Ocean Dumping Ban Act of 1988,²³ which amended the Marine Protection, Research, and Sanctuaries Act ("MPRSA"),²⁴ the U.S. Congress prohibited the Environmental Protection Agency ("EPA") from issuing new ocean dumping permits.²⁵ The EPA interpreted the Ocean Dumping Ban Act to preclude the issuance of permits to incinerate at sea,²⁶ and one year ago, the EPA's position was upheld in court.²⁷

Closer examination reveals that the operation of the JACADS incinerators is not technically inconsistent with U.S. domestic

²³ Pub. L. No. 100-688, Title I, 102 Stat. 4139.

²⁴ 33 U.S.C. §§ 1401-1444.

²⁵ Ocean Dumping Ban Act § 1002, adding MPRSA § 104B(a)(2), 33 U.S.C. § 1414b.

²⁶ The FSM understands that the EPA interpreted its "ban-without-permit" authority to extend to "incineration at sea" even prior to the Ocean Dumping Ban Act. See 39 Fed. Reg. 37,058 (Oct. 17, 1974) ("in any case where it can reasonably be anticipated that incineration of wastes at sea will result in any such material, or emission from the incineration of such material, entering ocean waters, such incineration will require a permit," emphasis added). See also Seaburn Inc. v. U.S. Environmental Protection Agency, 712 F.Supp. 218, 219 (D.D.C. 1989) ("Seaburn").

²⁷ Seaburn, supra note 26. The Seaburn decision was issued

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law. Apparently because the JACADS incinerators are considered to be "land based," the Army obtained operating authority under alternate statutory authority.²⁸

But understanding why the JACADS incinerators technically comply with U.S. domestic law leaves international observers like the FSM dissatisfied. Despite its consistency with the letter of U.S. domestic law, the operation of the JACADS incinerators is certainly at odds with the policy which the U.S. Congress adopted in 1988. In this regard, the FSM respects the view of the jurist who upheld the State position that the 1988 prohibition on issuance of new ocean dumping permits also prohibited issuance of ocean incineration permits. Judge Pratt said, "It is . . . highly unlikely that Congress intended to prohibit the dumping of industrial waste while permitting the dumping of other materials included in the original statute, such as chemical and biological warfare agents or stack emissions."²⁹

The FSM believes that the reason the JACADS incinerators continue to escape the application of more recent, enlightened environmental policy is suspect. To pretend that the operation of the JACADS incinerators does not constitute "incineration at

²⁸ The Army obtained permits for the JACADS incinerators under the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. § 6901 *et seq.* Draft SSEIS, supra note 1, at 54. See also 40 C.F.R. Part 264, Subpart O (RCRA regulations for incinerators). The FSM understands that incineration of the European stockpile will require a modification of the Army's RCRA permit for the JACADS incinerators.

²⁹ Seaburn, *supra* note 25, 512 F. Supp. at 662-63.

sea" is chicanery.³⁰ The effects of incineration at Johnston Island, whatever they may be, are not absorbed by any land mass. They are visited upon the sea, and peoples living within and subsisting upon it. The Army admitted that Johnston Island "has been altered considerably by construction since 1942."³¹ An examination of the Army's construction activities reveals that the JACADS facility sits on what is essentially an earthen platform.³² Reference to Figure 4.3 in the Army's Draft SSEIS indicates that the incinerators themselves are "land based" solely by reason of the Army's having dredged the ocean floor.³³

0280 | The FSM respectfully suggests ~~that, when the Army applies~~
for a modification of its RCRA permit for the JACADS incinerators, U.S regulatory authorities should re-examine the issue of whether the operation of JACADS constitutes "incineration at sea."

³⁰ As far as the FSM has been able to determine, the EPA has not promulgated clear standards by which to judge when incineration constitutes "incineration at sea" (see 40 C.F.R. § 220.3) subject to the Ocean Dumping Ban Act prohibition. It is clear, however, that the EPA will not grant permits to ocean-going incinerator vessels, Seaburn, supra note 26, and most likely will not grant permits to incinerators on fixed platforms at sea.

³¹ Draft SSEIS, supra note 1, at 34.

³² The Army's dredging increased Johnston Island's land mass to thirteen times its original size. Draft SSEIS, supra note 1, at 34.

V. The FSM Believes That the Army Violated U.S. Domestic Law By Not Evaluating a True "No Action" Alternative. 0281

U.S. domestic law required the Army to consider alternatives to the proposed action.³⁴ The FSM recognizes that U.S. domestic law expressly accommodates "essential considerations of national policy"³⁵ and supports actions "consistent with the foreign policy of the United States."³⁶ But the FSM does not believe that the existence of treaty obligations exonerates the Army's failure to evaluate a true "no action" alternative.

The Draft SSEIS considered the alternative of "continued" storage of the European stockpile on Johnston Island to be the "no action" alternative.³⁷ That "continued" storage of the European stockpile on Johnston Island could represent "no action" is an outright deception. The Army identified the true "no action" alternative but stated that, "[e]ven the no action alternative, the continued storage and/or disposal of the European stockpile in Europe, is prohibited under existing

³⁴ National Environmental Policy Act ("NEPA") § 102(2)(C)-(iii), 42 U.S.C. § 4332(2)(C)(iii). The CEQ's regulations for implementing NEPA specifically require the Army to evaluate

-- "all reasonable alternatives," 40 C.F.R. § 1502.14(a);
-- "reasonable alternatives not within the jurisdiction of the lead agency," *Id.* § 1502.14(c); and
-- "the alternative of no action," *Id.* § 1502.14(d).

³⁵ NEPA § 101(b), 42 U.S.C. § 4331(b).

³⁶ *Id.* § 102(2)(F), 42 U.S.C. § 4332(2)(F).

³⁷ Draft SSEIS, supra note 1, at 5-6.

international agreements."³⁸

0282 | In the FSM's considered opinion, the Army violated NEPA in failing to consider in detail the true "no action" alternative.³⁹ NEPA requires that federal agencies consider all alternatives that are "reasonable," not just those that "the proponent or applicant likes or is itself capable of carrying out."⁴⁰ For these purposes, "reasonableness" is determined by practicality or feasibility from the "technical and economic standpoint" -- not from the legal or geopolitical standpoint.⁴¹

In the FSM's considered opinion, the Army was wrong to conclude that treaty obligations obviated the need to evaluate

³⁸ Id. at 5, 19. The Draft SSEIS stated further,

Pub. L. 99-145 (as amended by Pub. L. 100-456) directs the U.S. Department of Defense to dispose of the U.S. stockpile of unitary chemical munitions by April 30, 1997, along with the acquisition of the binary chemical weapons system. In conjunction with this law, the United States has agreed that the stockpile of U.S. unitary chemical munitions would be removed from Europe by December 1992.

Id. at 7.

³⁹ Cf. Sierra Club v. Lujan, No. Civ. 89-979 PCT PGR (D. Ariz. July 7, 1989) (The National Park Service incompletely and unfairly considered alternatives, including the alternative of no construction, in connection with plans to build a hotel on the North Rim of Grand Canyon National Park.) Moreover, the true "no action" alternative in this instance was neither "remote" nor "speculative," and the Army did not have to make "a crystal ball inquiry" in order to identify it. Cf. Natural Resources Defense Council v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1982).

⁴⁰ CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18,027, answer to question 2a (Mar. 23, 1981) ("Forty Most Asked Questions").

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the true "no action" alternative. NEPA compelled the consideration of a true "no action" alternative even though it may be "outside" the Army's jurisdiction.⁴² Since neither "[a] potential conflict with local or federal law"⁴³ nor inconsistency with a "court order or legislative command to act"⁴⁴ necessarily render an alternative "unreasonable," it was inconsistent for the Army to conclude that an international agreement would render the true "no action" alternative in this situation "unreasonable" (and hence outside the scope of alternatives which must be considered).

Moreover, as a matter of policy, it is important for the Army to evaluate a true "no action" alternative, which "provides a benchmark, enabling decisionmakers to compare the magnitude of environmental effects of the action alternatives" and which "is necessary to inform the Congress, the public, and the President as intended by NEPA."⁴⁵ The FSM supports the wisdom of this policy and deplores the Army's apparent disregard for it.

⁴² 40 C.F.R. § 1502.14(c). See also Natural Resource Defense Council v. Morton, supra note 39, 458 F.2d at 834 ("While the consideration of pertinent alternatives requires a weighing of numerous matters, such as economics, foreign relations, national security, the fact remains that, as to the ingredient of possible adverse environmental impact, it is the essence and thrust of NEPA that the pertinent Statement serve to gather in one place a discussion of the relative environmental impact of alternatives.")

⁴³ Forty Most Asked Questions, supra note 40, answer to question 2b.

⁴⁴ Id., answer to question 3.

⁴⁵ Id. See also 40 C.F.R. § 1500.1(a).

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VI. The Risks Identified in the Draft SSEIS Counsel Against Proceeding With the Army's Plan.

A. The Consequences of Accidental Releases Are Simply Too Great.

The FSM recognizes that U.S. domestic law does not establish a substantive level of risk which is acceptable for federal actions having adverse impacts on the environment.⁴⁶ Rather, the U.S. has adopted an "action-forcing" statute,⁴⁷ which requires federal agencies to consider the environmental harm which a proposed action will cause before proceeding with the action.⁴⁸ The FSM further recognizes that a U.S. federal agency cannot be forced to adopt an alternative where the agency believes there are legitimate, overriding reasons for pursuing a different alternative.⁴⁹

Nevertheless, the FSM believes that, if NEPA is an "action forcing" statute, then the "action" it "forces" is the true "no action" alternative which the Army failed to consider in detail (*i.e.*, leaving the European stockpile in Europe). It is difficult to imagine that the consequences which would arise from accidental releases as identified in the Draft SSEIS could "force" implementation of the Army's plan. The consequences of

⁴⁶ Cf. Vermont Yankee v. National Resources Defense Council, 435 U.S. 519, 548 (1978).

⁴⁷ 40 C.F.R. § 1500.1(a).

⁴⁸ Cf. Bear, *supra* note 10, at 10,063.

⁴⁹ Stryckers Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 229, 237-28 (1980).

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accidental atmospheric or marine releases are -- in the Army's own estimation -- devastating.

To focus on the consequences from just two potential accidental releases:

Transportation and handling of the European stockpile adds 34 miles to the maximum worst case ("WC") "no-deaths distance" due to an accidental atmospheric release from JACADS (from 76 to 110 miles).⁵⁰

The Draft SSEIS worst case marine spill of 59,200 pounds of chemical agent being disposed into Pacific Ocean would have an unquantified but admittedly "devastating" impact.⁵¹

These consequences are quite obviously completely at odds with U.S. environmental policy.

The Army predicted that an accidental atmospheric release "could cause significant loss of life among unprotected personnel."⁵² That is to be expected since, as the Draft SSEIS explained, "[e]xposure to high doses [of nerve agent] can result in convulsions and death due to paralysis of the respiratory system," and death "can occur quickly."⁵³ What is missing in the Draft SSEIS, however, is an estimation of the effects of atmospheric release beyond the "no-deaths" distance. That is to

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⁵⁰ Draft SSEIS, supra note 1, at 67.

⁵¹ Id. at 71.

⁵² Id. at 69.

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say, while an atmospheric release may not cause death beyond 110 miles from Johnston Island's shores (under the WC scenario), such a release would also have serious sublethal effects.⁵⁴ The Draft SSEIS fails to estimate how far beyond the shores of Johnston Island these sublethal effects will be felt.

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With respect to the Army's consideration of the consequences of an accidental marine spill, the Draft SSEIS made a glaring omission. The Draft SSEIS did not quantify the human and environmental consequences of the maximum worst case spill of 59,200 gallons of chemical warfare agent.⁵⁵ The Draft SSEIS admitted that such a spill would be "devastating" and would result in fishkills,⁵⁶ but it provided no quantification of the extent of fish, reptile, or marine mammal kills. In the FSM's estimation, the Draft SSEIS is incomplete without that information.⁵⁷

The FSM finds no solace in the Army's unsubstantiated representations regarding the low likelihood of accidental releases. The Draft SSEIS repeatedly attempted to minimize the

⁵⁴ Among the sublethal effects identified in the Draft SSEIS are paralysis; central nervous system disturbances and convulsions; and bronchoconstriction, vomiting, and diarrhea. *Id.*

⁵⁵ *Id.* at 71.

⁵⁶ *Id.* The FSM finds little comfort in the Army's unsubstantiated representation that the hydrolyzation of the spilled nerve agent would render it less toxic. *Id.*

⁵⁷ 40 C.F.R. § 1502.16.

likelihood of accidental releases.⁵⁸ However, the Draft SSEIS did not explain how the Army calculated the "odds" of an accident occurring. For that reason alone, the FSM declines to rely on the Army's "odds."⁵⁹ Moreover, the Army's "odds" are necessarily suspect given the notorious inaccuracy of forecasts in EIS documents.⁶⁰

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Even if the Army can justify its method for calculating the "odds" that an accident might occur in connection with handling the European stockpile in and around Johnston Atoll, the FSM does not believe that the Army is free to gamble with a resource as valuable as the Pacific Ocean. Even with the most well-planned materials-handling procedures, the very real likelihood of human error will never be eliminated,⁶¹ and, given the nature of the

⁵⁸ Draft SSEIS, supra note 1, at 62 ("low likelihood" of accidents), at 66 (likelihood of accident estimated to be "1 in 10,000,000").

⁵⁹ The FSM wonders what odds the Army would have placed on the Exxon Valdez's running aground using the same predictive model.

⁶⁰ The FSM is wary of casting unwarranted aspersion but finds support for this concern in the current CEQ General Counsel's observation that few agencies "systematically assess the predictions in an EIS in light of the actual after-the-decision impacts." Bear, supra note 10, at 10,066. "The first study examining this issue . . . concluded that EIS forecasts were generally 'not accurate,' though many of the forecasts were 'accurate' solely by virtue of vagueness and generalities." Id. (citation omitted).

⁶¹ A 1987 DOT report identified human error as the cause of 64 percent of hazardous material incidents during transport. U.S. Department of Transportation, Annual Report on Hazardous Materials Transportation (1987) cited in W.E. Kenworthy and M.H. Snow, Transportation of Hazardous Materials: A Management Guide (1987) at 100-101. (See also, W.E. Kenworthy and M.H. Snow, Transportation of Hazardous Materials: A Management Guide (1987) at 100-101.)

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materials being transported, that fact counsels against proceeding with the Army's plan.

**B. To Achieve the Goals of U.S. Environmental Policy,
the Army's Plan, With Its Attendant Consequences,
Must Be Abandoned.**

NEPA section 2 declares U.S. national environmental policy to "encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man."⁶² One could probe the far reaches of science fiction and not find an event which would cause greater injury to the "harmony between man and his environment" than would the accidental release of 52,900 pounds of chemical warfare agents into the Pacific Ocean. Moreover, transportation of the European stockpile across the globe for disposal at Johnston Island is a direct affront to NEPA's goal of promoting efforts to "prevent or eliminate damage to the environment."

Perhaps it is possible to reconcile the Army's plan with U.S. environmental policy, but only if one takes a cynical view of that policy. If one accepts the premise that, an agency can implement an alternative wholly inconsistent with U.S. environmental policy so long as the agency complies with statutory procedural requisites, then the Army's preferred

the potential for human error.

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alternative can be reconciled with U.S. environmental policy.⁶³ But such a reconciliation can only be made at some expense to NEPA's true goals.

Last year, on the occasion of the NEPA's twentieth anniversary, a former CEQ General Counsel called for the abandonment of just such a cynical view of NEPA. He explained that NEPA does not allow for environmental considerations to be "simply noted and ignored." "Sometimes environmental injury can be so egregious (and other essential considerations of national policy so without competing force) that a decision in the face of such environmental considerations may be said to violate the arbitrary and capricious standard and be a reversible error."⁶⁴ The FSM believes that if the Army strived to act in concert with

⁶³ While U.S. law seeks to ensure environmentally responsible decision-making, some experts have concluded that a federal agency can currently comply with the statutory requisites and still lawfully choose an action inconsistent with U.S. environmental policy. Nicholas C. Yost and James W. Rubin, "The National Environmental Policy Act" in NEPA Deskbook (ELI 1989) adapted from Yost, "Administrative Implementation of and Judicial Review Under the National Environmental Policy Act," in S. Novick (ed.) Law of Environmental Protection (1987). See also Michael C. Blum, The Origin, Evolution, and Direction of the United States National Environmental Policy Act 5 Env. L. and Planning Jnl. (Aust.) 179, 184 (1988) ("Thus, while NEPA requires detailed consideration of the environmental impacts of proposals and also gives agencies the authority to undertake environmental alternatives, ultimately it does not elevate environmental considerations over other essential national policy considerations.").

⁶⁴ Nicholas C. Yost, Outline for Remarks Entitled "NEPA's Goals, Action-Forcing Provisions, and Accomplishments, and the Role of the CEQ," Presented at Lewis & Clark Northwestern School

22

NEPA's environmental goals, it would reject the plan to transport the European stockpile to Johnston Island.

C. Proceeding With a Plan With Cataclysmic Attendant Risks When the Portion of the Global Community Subjected to the Risks Lacks Effective Legal Remedies Is an Unprincipled Policy.

If the European stockpile were destroyed on the CONUS, then the population subjected to the risk (i.e., U.S. citizens residing in the area surrounding the incinerator) would presumably have the opportunity to seek legal redress, in U.S. courts and under U.S. law, for damages caused by accidental releases. If the European stockpile were destroyed on-site in the host country, then the affected population (i.e., citizens of the host country) could similarly seek legal redress in the courts of and under the laws of the host country. In either instance, the affected population could also exercise their political rights to assure that their elected officials saw that the damage was redressed.

Regrettably, neither U.S. nor international law has evolved to the point of providing an adequate remedy for the injury which the Army's plan might cause to the environment twelve miles beyond Johnston Atoll. Both principal U.S. hazardous wastes statutes, CERCLA and RCRA, lack extraterritorial reach in this regard.⁶⁵ The scope of the existing international conventions is similarly limited, and those conventions do not, as far as the FSM has determined, provide a cause of action for a tort to the

global commons.⁶⁶ The FSM recognizes the promise of the Basel Convention in this regard but also recognizes that promise will not be realized for some time.⁶⁷

It is unprincipled international policy to shift the risk of accident to an area of the globe which is beyond the scope of effective legal remedies. Moreover, the existence of a legal remedy is, in itself, an effective check on reckless activity in that the actor who is subject to potential liability for reckless conduct is sure to curb such conduct.

If the accident occurs in the country where the waste is generated, the generator or transporter will probably be held accountable. If, however, the spill occurs abroad, or damage results from improper disposal abroad, the legal mechanisms for imposing liability are often weak or absent. The lack of an international system of accountability for hazardous waste spills and improper disposal allows generators to escape liability and thus externalize the costs of their careless or improper activities.⁶⁸

⁶⁶ See id. at 10,177.

⁶⁷ It is gratifying that, at long last, the Basel Convention recognizes that "States are responsible for the fulfillment of their international obligations concerning the protection of human health and protection of the environment, and are liable in accordance with international law." Basel Convention, supra note 9, at 2. It will be even more gratifying, however, when the Basel Convention's promise of a "protocol setting out appropriate rules and procedures in the field of liability and compensation for damages resulting from the transboundary movement and disposal of hazardous wastes" is realized. Id. art. 12. The FSM encourages the United States to participate in discussions about such a protocol and to support "the establishment of a revolving fund to assist on an interim basis in case of emergency situations to minimize damage from accidents arising from transboundary movements of hazardous wastes".

VII. The Draft SSEIS's Assessment of the Risks Associated With Incineration Left Certain Issues Unresolved.

In comprehensive comments submitted in August 1989, the environmental group Greenpeace claimed that incineration of chemical weapons could cause the creation of toxins in the incinerator smokestacks (*i.e.*, products of incomplete combustion or "PICs") which would be "dumped" into the ocean as emission fallout.⁶⁹ Greenpeace contended that the decontamination solution for the nerve agent VX and the fluorine component of the nerve agent GB could result in the production of highly toxic dioxins and furans.⁷⁰ Greenpeace further contended that the incinerator emission fallout would concentrate in the "ocean surficial microlayer"⁷¹ and would "biomagnify" as it accumulated in the tissues of fish species further up the food chain.⁷²

In the Draft SSEIS, the Army expressly denied that incineration of the European stockpile could result in the production of dioxins or furans. The Draft SSEIS indicated that the European stockpile did not contain the additional chlorine which would be required for dioxin or furan production.⁷³ The

⁶⁹ Greenpeace, Review of Johnston Atoll Chemical Agent Disposal System (JACADS) December 1988 Final Supplemental Environmental Impact Statement With Reference to the 1983 JACADS EIS Including Significant New Information Relevant to Environmental Concerns, and Bearing on the Proposed Action and Its Impacts i-v, 4-21 (Aug. 1989) ("Greenpeace Review").

⁷⁰ Id. at 11, 13.

⁷¹ Id. at 5, 24, 25.

⁷² Id. at 5.

⁷³ Draft SSEIS, supra note 1, at 54.

Army further claimed that "the existence of a sea-surface microlayer . . . that might concentrate toxic materials" in the open ocean is "tenuous"⁷⁴ and that, even using the most conservative estimates, the concentration of the most toxic possible PIC would not exceed the EPA chronic toxicity limit.⁷⁵

The Army's response to Greenpeace's concerns left important issues unresolved. First, Greenpeace apparently believed that halogens other than chlorines, namely fluorine, could lead to the production of PICs. The Army has not sufficiently addressed this contention. Second, the Army has not provided a persuasive reason why the "difference in scientific opinion" regarding the existence of a sea-surface microlayer should necessarily be resolved in the Army's favor.

0286

The FSM does not intend by these observations to endorse the technical propositions advanced by Greenpeace, nor does the FSM necessarily reject them. What is clear is that there exist concerns which cannot be summarily rejected by the party in interest. The FSM calls upon the Army to undertake a more thorough evaluation of Greenpeace's concerns.

VIII. The FSM Strenuously Urges Reconsideration of the Army's Plan.

An EPA official involved in implementing U.S. regulations governing hazardous waste exports aptly observed that "the long-term, 'whole-world' solution to the hazardous waste problem is

⁷⁴ Id. at 57.

⁷⁵ Id. at 58.

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not simply to play a shell game by moving wastes around the globe, but to prohibit all waste exports and to address the problem directly, at its sources."⁷⁶ In a similar vein, a U.S. Congressman observed:

Like water running downhill, hazardous wastes inevitably will be disposed of along the path of least resistance and least expense. Conditions are ripe for finding "safe havens" for hazardous waste around the globe.⁷⁷

The FSM believes that, with respect to the European stockpile, the Army is simply playing a "shell game." Moreover, the Army has chosen "the path of least resistance" by selecting the Pacific basin, a region lacking a vocal constituency and without substantial political clout. It especially appalls the FSM that the Army is willing to subject the Pacific basin to risks to which it would not subject the CONUS. For these, and all the foregoing reasons, the FSM objects to the Army's plan to dispose of the European stockpile at Johnston Island and strenuously urges its reconsideration.

Respectfully submitted this sixth day of April 1990 by:

THE GOVERNMENT OF THE FEDERATED STATES OF MICRONESIA

⁷⁶ Handley, supra note 12, at 10,182.

⁷⁷ Id. at 10,171, citing Porterfield & Weir, "The Export of U.S. Toxic Wastes," The Nation (1987) (statement of Rep. James

27

For further information contact --

Embassy of the Federated States of Micronesia
706 G Street, S.W.
Washington, D.C. 20003
(202) 544-2640

Thomas R. Munteer
Stovall & Spradlin
2600 Virginia Avenue, N.W., Suite 820
Washington, D.C. 20037
(202) 333-8181



C-17
Date Rec'd
4/2/90

The Hawai'i Council of Churches

1300 Kailua Road, Room B-1 • Kailua, HI 96734 • Phone 808 263-9788

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Friends Meeting

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United Church of Christ

The Rev. Gaius Thede
United Methodist

Mr. Robert Turgeon
Unitarian

The Rev. Ralph Willers
Presbyterian

SUPPORT STAFF

Elizabeth Bergenheim
Linda Gray

March 26, 1990

Rec'd
C-17
2 Apr 90

C-17
Date Received
4/2/90

Col. Ralph Carestia
Office of the Program Manager for
Chemical Demilitarization
Aberdeen Proving Grounds, MD 21010-5401

Dear Col. Carestia:

Although I have learned that today is officially the last day for comments on the proposed movement of nerve gas from West Germany to Johnston atoll, I am writing to you because I am unable to join the people who are to present their protest to your representative here in Honolulu. I realize that this will be received after your deadline, but I do hope that you will take my message into consideration.

At a recent Hawaii Council of Churches Board of Directors meeting this issue was discussed at great length, and it became clear that there is not nearly enough accurate information for us to make a responsible decision. Our concern for the well-being of our island neighbors, for the many others who could be horribly affected during the transport of these gasses, and for the potential of irreversible damage to the environment causes us to raise serious questions.

We must have time to study this situation in order to be able to effectively participate in the required public review as set forth in the National Environmental Protection Act, and urge that no further action be taken until full public involvement can be accomplished through well-publicized public hearings held here and in the South Pacific.

Thank you for considering my comments.

Sincerely,

Patricia Mumford
Executive Director

PM/eb

0287

Rec'd
C
2/26/90
3/26/90

C-18
Date Received
4/2/90

RR CARESTIA
PROG MGR (HEM DEMILZN
ATTN: SAIL-PAM
ABERDEEN PROVING GRD, MD 21010-5701

RE PUBLIC COMMENT DSSEIS/JACADS

- I. ATMOSPHERIC CONTAMINATION: THE
1. WILL ARMY RELEASE TO PUBLIC, FOLLOWING:
 - A. DEFENSE EXPLOSIVES SAFETY BD. TECH. PAPER NO. 10 *
 - B. ORG REPORT 44 *
 2. WHAT WILL BE IMPACT ON HAWAII DURING THAT "RARE" OCCASION WHEN NERVE AGENT WILL REACH HAWAII?
 - A. SPECIFICALLY, HOW WILL THOSE WITH EMPHYSEMA, ASTHMA, ETC. BE AFFECTED? (A TRAINED METEOROLOGIST TELLS US THAT THESE PEOPLE DEFINITELY WILL BE AFFECTED)

0288

* SEE ATTACHED LETTER
FROM U. OF HAWAII ENV. CENTER LETTER
TO HAYDEN BURGESS, 10/24/85

II FOOD CHAIN CONTAMINATION

- 1289 1. WILL PACIFIC NATIONS BE GIVEN THE OPPORTUNITY TO HAVE U.S. ARMY-SPONSORED PUBLIC HEARINGS LIKE THE ONE HELD IN HONOLULU 3/20?
- 1290 2. HAS A FORMAL HEARING BEEN HELD AT A FORMAL MEETING OF THE ^{SOUTH} PACIFIC FORUM'S SOUTH PACIFIC REGIONAL ENVIRONMENTAL TREATY GROUP ON THIS 2/90 DISEIS? (CONDUCTED BY THE USEPA OR U.S. ARMY)?
- 1290 3. WILL THE U.S. ARMY RESPOND AS FULLY AS POSSIBLE TO GREENPEACE'S REBUTTAL TO THEIR PREVIOUS EISE ON JACADS?

III

GENERAL

- 0291 1. WHY WAS THE STATE OF HAWAII'S OFF. OF ENV. QUALITY CONTROL, HONOLULU OFFICE OF THE EPA, AND STATE LIBRARY NOT PROVIDED WITH A COPY OF THE DISEIS?
- 1292 2. WHAT IS YOUR PROCEDURE FOR NOTIFYING THE UNITED NATION'S ENVIRONMENTAL OFFICE AND SOUTH PACIFIC FORUM IN REGARDS TO ENVIRONMENTAL IMPACTS OF JACADS?

Carl Young

CARL YOUNG

3048 LAKIMAU ST.

HONOLULU, HAWAII 96815

(C: WORLD COUNCIL

INDIGENOUS PEOPLES

U.H. ENVIRONMENTAL CENTER

LUNG ASSN. OF HAWAII

UNITED NATIONS ENVIRONMENTAL OFFICE

SOUTH PACIFIC FORUM (SPREP)



University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7361

October 24, 1985

RG:0062

Mr. Hayden F. Burgess, Trustee
Office of Hawaiian Affairs
567 South King Street, Suite 100
Honolulu, Hawaii 96813

Dear Mr. Burgess:

Johnston Atoll Chemical Agent Disposal System (JACADS)

In response to your request of August 20, 1985, we have reviewed the two hazard analysis reports on handling and storage of chemical agent/munitions and the Barge Process Feasibility Study for Johnston Atoll. We have been assisted in this review by Brian Murton, Geography; James Morrow and Eileen Anthony, Environmental Center.

Hazards Analysis for the JACADS, January 1983

This hazard analysis document summarizes the results of calculations of a maximum credible event (MCE) for the proposed chemical agent disposal system at Johnston Atoll. The hazards analysis assumes a worst case scenario (MCE) involving a detonation during transport and estimates a maximum hazard distance of 4.04 km. Since we did not have access to the methodology used (Defense Explosives Safety Board Technical Paper No. 10) nor did the analysis document indicate actual agent concentrations (in mg/m³, for example) for 1% lethality, 0% lethality, or "no effects," we are unable to evaluate the methodology. We also have no information on which to assess the basis of the assumed MCE in which one M55 rocket explodes in a pallet causing one additional M55 to explode and the remaining 13 rockets to leak. This MCE was apparently based on field testing at Tooele Army Depot in Utah. The meteorological data of neutral stability (Pasquill-Gifford Class D) and 25 degrees temperature are appropriate for over water pollutant dispersion. The results do suggest that should such an accident occur on Johnston Atoll, there would be no hazard to Hawaii since it is some 1,328 kilometers away while the farthest "no effects" distance for agent VX was 10.25 kilometers.

Hazards Analysis Report H-58, February 1985

This document estimates the MCE and the resultant hazard distances associated with the current storage configuration of M55 rockets in igloos at Johnston Atoll. It also provides guidance as to the effect of various meteorological conditions on the hazard distances. The same constraints were experienced in reviewing this analysis as the previous one due to the lack of details on the analytical methods employed. Further complicating the review was the reference to data from ORG Report 44, a document classified confidential.

C-19
Date Rec'd
4/4/90

C-19
Date Received
4/4/90

Rec'd
4 APR 90

March 23, 1990

Dear Colonel Ceresia:

I protest your plan to transport chemical weapons from Europe to Johnston Atoll.

You will be endangering the lives of the people of Hawaii which is so close to Johnston Atoll. In case of an accident, the beaches and land of Hawaii may be ruined forever.

If you think it's so safe, why don't you build an incinerator in Europe instead of transporting the chemical weapons to Johnston Atoll?

Sincerely,
(Mrs) Hazel Wong
1462 Maluawai St.
Pearl City HI 96782

0293

PEACE ALLIANCE
Hilo, Hawaii

C-20
Date Received
4/6/90



Women's International League
for Peace and Freedom
Big Island Committee for
Peace in Central America
Big Island Nuclear Free
Zone Committee
Physicians for Social Responsibility
Clergy for Peace
Astronomers and the Arms Race
Keiki Kokua
Bahai Faith
Peace Institute Hawaii
Peacewave

April 2, 1990

Col. Ralph Carestia, Chief
Environmental and monitoring Division
Office of the Program Manager for
Chemical Demilitarization
Aberdeen Proving Ground, MD 21010

Dear Col. Carestia:

The members of the Peace Alliance, island of Hawaii, are strongly opposed to the U. S. Army's plan to destroy U. S. chemical weapons stockpiled in Germany at the incinerator on Johnston Island. We feel that it is not only unsafe to ship such materials over our oceans but also illegal. We agree with the assessment of Jon Van Dyke of the University of Hawaii at Manoa when he said that the incineration should be subject to the strict rules of the London Dumping Convention. We also agree that Johnston should be characterized as a "rare or fragile ecosystem" under Article 194(5) of the 1982 Law of the Sea Convention.

In our opinion, the best alternative would be to dispose of these chemical agents at their present location rather than attempting to ship them all the way to the Pacific Region.

In conclusion, our Pacific region has been a victim over and over from the fighting in World War II, the American nuclear tests in the Pacific and the continued tests by the French in Tahiti. No more violations of our environment please.

Sincerely,
Samuel J. Burris
Samuel J. Burris, President
1875 Kalaniana'ole Ave. #705
Hilo, HI 96720
Tel: 1-808-935-9126

cc President Bush
U. S. Congresspersons
Governor Waihee

0294

TRANSCRIPT OF THE PUBLIC MEETING

1 -----
2 PUBLIC HEARING
3
4

5 ON THE
6
7

8 JOHNSTON ATOLL CHEMICAL AGENT DISPOSAL SYSTEM
9
10

11 CENTRAL INTERMEDIATE SCHOOL
12
13

14 HONOLULU, HAWAII
15
16

17 MARCH 20, 1990
18
19 -----

20 BEFORE:
21

21 DENNIS J. YANKEE, CSR NO. 285
22

22 Certified Shorthand Reporter

PROCEEDINGS

(3/20/90 - 7:00 P.M.)

MS. TISCHBIN: It's a pleasure to be here tonight. My name is Marilyn Tischbin. I work for the program manager for the chemical demilitarization office. We're headquartered in Maryland. Our office is responsible for the disposal of the chemical stock stored at Johnston Island.

We have a very simple agenda tonight. Our purpose in being here is to take your comments on our draft supplemental Environmental Impact Statement for the Johnston Island facility. We will be doing a couple of very short presentations to outline the scope of the proposed action.

Following those presentations we will take comments from the public, yourselves. Those of you that signed in at the door, we will be taking your comments in the order in which you registered tonight.

1 As soon as we finish the comment
2 period we will take a short break, reconvene,
3 and take your questions and try to provide
4 answers for you.

5 There is a restroom facility. If
6 you go down this back door over here, down the
7 steps, it's almost under where we are right
8 now. As soon as the meeting is over tonight,
9 the gates will be locked in the parking lot,
10 so if you'd remove your cars as soon as the
11 meeting is finished.

12 That's basically what the meeting
13 will consist of tonight. It is an honor to be
14 here and see all of you. I would like to
15 introduce our host this evening, Doctor Bill
16 Richardson, deputy assistant to the Secretary
17 of Defense for chemical matters. Thank you.

18 DR. RICHARDSON: Thank you very
19 much, Marilyn, and thank you all for being
20 here. We appreciate your interest in the
21 program. We were happy to have this
22 opportunity to address it with you.

1 I'll restate the purpose very
2 briefly. People are still getting settled.
3 Of course, we are here to discuss the Draft
4 Second Supplemental Environmental Impact
5 Statement on the storage and disposal of
6 chemical munitions at Johnston Atoll.

7 I would say that Draft Environmental
8 Impact Statement was issued on seven February.
9 The comment period, the period for public
10 comment on the draft extends through 26 March.

11 We will show you and tell you at
12 various times in the evening and we'll have on
13 the projection screen an address to write to
14 if you have comments after this evening so
15 that those can be taken into consideration.

16 We take those comments back, take
17 questions and answers that we get here. Other
18 things that we get by mail, those get
19 considered in the revision of the
20 Environmental Impact Statement, which will be
21 issued about mid-June, and there will be a
22 further 30-day period for public comment.

1 I'd like to take a moment and
2 introduce some of the local representatives of
3 Hawaii that are here, people of the local
4 government.

5 First, State Representative Annell
6 Amaral is in the audience. Good to have you
7 with us. I understand that Representative Pat
8 Saiki couldn't be with us, but we have Carolyn
9 Lee of her office with us. Carolyn, thank
10 you.

11 And, also, Miss Akaka, who's trustee
12 of the Office of Hawaiian Affairs. Good to
13 have you.

14 In the course of the evening we have
15 experts that will be seated at the table in
16 the first row of seats up in the front whom we
17 hope can answer many of the questions that you
18 may raise in the course of the evening.

19 Certainly questions we cannot answer
20 or cannot answer in the depth that you'd like
21 to have, we'll take back with us. Those
22 questions, again, will be addressed in the

1 next edition of the Environmental Impact
2 Statement.

3 We'll start the evening by having
4 two short presentations on what it is that we
5 propose to do. Those are intentionally kept
6 short so that we can focus on the real purpose
7 of the meeting, which is for us to listen to
8 you, take your comments and statements,
9 questions, and get that sort of public
10 involvement in the activity we're conducting.

11 As Marilyn mentioned, we will do a
12 couple of short presentations. We will open
13 up the floor for statements. After that we'll
14 take a short break and do question and
15 answers.

16 Okay, with that I'll introduce our
17 first speaker, who will cover some of the
18 events leading up to the activity at Johnston
19 Atoll, and that is Colonel Jerry Pate, who is
20 of Army headquarters. Jerry?

21 COL. PATE: Good evening. I'm
22 representing General Gordon Sullivan, the Des.

1 Ops. of the Army. The Army has been acting on
2 behalf of the Joint Staff in the planning
3 effort that has gone into the chemical
4 retrograde thus far. This is a planning
5 effort that has continued over the past four
6 years to reach the point that we are at
7 tonight.

8 My first slide talks to the
9 requirement to remove the chemical munitions
10 from the Republic of Germany. That was first
11 stated in the F.Y. 86 Defense Appropriations
12 act and later amended in the Defense
13 Authorization Law in '87, the following year.
14 That requires that the munitions be physically
15 removed from Germany by 1997.

16 The agreement between the two heads
17 of state, President Reagan and Chancellor
18 Kohl, in May of '86 then was that the
19 munitions would be removed no later than 1992.

20 The Secretary of State in a
21 subsequent address, the New Horizon speech in
22 Vienna of '89, March of '89, further committed

1 the United States government to seek ways to
2 accelerate this withdrawal and, although no
3 date was specified, the goal was set at the
4 end of this calendar year.

5 Through subsequent planning efforts
6 on behalf of the retrograde task force that I
7 represent and various planning groups within
8 the German government, this was further
9 refined and announced on the 8th of March,
10 that the end country movement would be
11 accomplished between the 1st of July and the
12 30th of September of this year.

13 This slide addresses the movement
14 that we have planned. We will be moving
15 approximately 100,000, 155 and eight-inch
16 artillery projectiles filled with chemical
17 agents GB and VX.

18 These agents will be removed from
19 their current storage bunkers near the town of
20 Clausen in the Federal Republic of Germany.
21 They will be banded onto pallets and placed in
22 airtight secondary steel containers that have

1 been especially designed and fabricated and
2 tested to safely transport these munitions.

3 A third overpack then will be the
4 standard steel military container, or MILVAN.
5 These MILVANS will then be transported by road
6 35 kilometers from their storage site to the
7 railhead at Miesau Army depot.

8 From there they will be loaded upon
9 German trains, Buendesbohn trains, some of the
10 best rail systems in the world, and
11 transported some 13 hours trip to the port on
12 the North Sea of Nordingham.

13 From there they will be transloaded
14 onto two ships which will transport them
15 across the ocean to Johnston Atoll. That is
16 our proposed transport action.

17 This last slide then talks to the
18 environmental considerations that have gone
19 into our planning effort. The movement within
20 the Federal Republic of Germany is addressed
21 under the auspices of the German government
22 out to their 12 mile territorial limit.

1 The movement by sea is being
2 environmentally assessed by a special global
3 commons environmental assessment. Within the
4 territorial waters then of Johnston Island,
5 covering the offload from the ships and the
6 transport on the island to their ultimate
7 storage site within the chemical exclusion
8 area and ultimate destruction and disposal by
9 the JACADS facility is covered by the
10 Supplemental Environmental Impact Statement,
11 which we are here to address tonight.

12 This briefly then covers our
13 planning efforts and proposed actions. Thank
14 you.

15 DR. RICHARDSON: Thank you,
16 Jerry. Let me mention. I don't think I said
17 this as clearly as I should have earlier. If
18 you would, I'd ask that you note any questions
19 you have and, to get through these
20 presentations expeditiously, hold those
21 questions for a question and answer period
22 later after the statements.

1 Our second speaker is Colonel Ralph
2 Carestia. He is with the program manager for
3 chemical demilitarization, which is our office
4 which in the Army has the single goal and
5 point responsibility for the destruction of
6 the unitary chemical stockpile.

7 Ralph?

8 COL. CARESTIA: Good evening.
9 My presentation will focus on a broad but
10 brief chemical overview of the chemical
11 stockpile operation. I plan to cover with you
12 four topics of interest.

13 First, to say a little bit about the
14 specific areas or thrusts covered by the
15 Supplemental Environmental Impact Statement.

16 Secondly, to look back at the
17 previous environmental documents that were
18 issued for JACADS, assuming we all know that
19 JACADS stands for the Johnson Johnston Atoll
20 Chemical Agent Disposal System.

21 I'd like to mention a few words
22 about our operation verification testing

1 schedule and our compliance with environmental
2 regulations.

3 And, lastly, present a short process
4 description of the chemical plant operations.

5 As a point of departure, let's look
6 at this first overhead which depicts the six
7 main areas covered by the current Supplemental
8 Environmental Impact Statement we're here
9 gathered about tonight to discuss.

10 As you can see, and I'll try not to
11 read it verbatim, it assesses a transport from
12 the 12-mile limit to JI, Johnston Island, and
13 also covers the loading of the munitions from
14 the two ships; discusses the transportation
15 from the port of unloading to the existing
16 storage area, which is a red hat area at
17 Johnston Atoll, or Johnston Island. It talks
18 about the actual storage of those munitions on
19 the Island; also, about the disposal, as well
20 as removal of the hazardous waste to an
21 approved E.P.A. hazardous landfill.

22 Lastly, the last bullet shows you

1 that it does update the '83 EIS as well as the
2 1988 First Supplemental Environmental Impact
3 Statement.

4 This transparency shows the two
5 previous documents as well as an explanation
6 under each of what it covered. I won't
7 necessarily repeat those. I think you can see
8 them from the transparency. I might add that
9 that last one did have a record of decision of
10 a date 20 December, 1989.

11 Currently, as a matter of fact, as
12 we're gathered here tonight, the JACADS plant
13 is in the process of a shakedown in order to
14 meet our congressionally-directed operation
15 verification testing schedule. Let me just
16 pause here a moment and say a few words about
17 that schedule.

18 It basically involves four campaigns
19 with different types of munitions, which
20 include nerve agents and mustard, lasting
21 approximately four months each for a total of
22 16 months.

1 Each campaign will have an interim
2 report with a final summary report at the end
3 of that verification testing program.

4 It's also important to mention that
5 we are in the process of complying with our
6 environmental permits by following a scheduled
7 testing protocol.

8 This transparency is a schematic
9 which depicts the four main areas of the
10 chemical DEMIL operation. It shows roughly
11 the transport to the DEMIL building. It shows
12 containment within containment, and I'll say a
13 little bit more about that later as one sees
14 on the explosive agent containment area.

15 It depicts incineration with the use
16 of four separate incinerators with their own
17 subsequent pollution abatement systems, that
18 is, scrubbers, de-misters, quenching towers,
19 et cetera, and, lastly, it shows the solid
20 waste.

21 Let me point out a few key points
22 with the schematic. The drainage and

1 disassembly occurs within the ECR explosive
2 containment room, as I mentioned, containment
3 within containment, capable with improvement
4 to withstand a blast from a potential
5 explosion as well as containment of the agent.

6 After drainage and disassembly, as I
7 mentioned earlier, there are four separate
8 incinerators. One can see a dunnage
9 incinerator which is, as the name implies,
10 accounts for incinerating the dunnage and
11 various packing materials affiliated with the
12 munition.

13 A metal parts furnace, which is used
14 to incinerate, as the name implies, metal
15 parts, bulk containers, projectiles, land
16 mines, et cetera.

17 A deactivation furnace here shown as
18 an explosives incinerator for a main M-55
19 rocket munition which incinerates propellants
20 and charges of that weapons system and,
21 lastly, what we call the liquid or liquid
22 incinerator, which is the main incinerator to

1 burn, if you will, all the liquid agent
2 drained from that first drainage and
3 disassembly station.

4 Another important point to point out
5 here is that once the munition is brought to
6 the containment within containment, or the
7 DEMIL building, it no longer is touched by
8 human hands.

9 It's remotely controlled by a
10 sophisticated automated processing system
11 which has many inherent safety and interlock
12 features for shutdown contingencies.

13 Finally, at the end we have, as it
14 shows, waste disposal systems. Be aware that
15 our waste is solid, such things as scrubber
16 brines and dried salts, scrap metal, which
17 some will be resaleable or reusable, and ash
18 residues from the furnaces.

19 I also might add that all of these
20 residues will be characterized for components
21 of hazardous waste.

22 That precludes my presentation. I'd

1 like to put the next slide up, which shows my
2 name, address and phone number, for those of
3 you who wish to comment subsequent to
4 tonight's meeting in order to meet the 26
5 March deadline of this Draft EIS.

6 MS. TISCHBIN: We're going to
7 take a few moments to move the microphone out
8 to the center aisleway, if you will. We will
9 begin taking comments on that draft document
10 now.

11 We currently have about 15 people
12 that have registered to make a statement. I
13 would ask that you attempt to limit your
14 comments to five minutes to allow everyone the
15 opportunity to speak.

16 We have a Court Reporter sitting
17 immediately to my right - I always have
18 trouble telling left from right - that is
19 taking a verbatim transcript tonight to insure
20 that your comments as made tonight are
21 incorporated into our final Environmental
22 Impact Statement.

1 The first person I have on my list
2 is Annelie Amaral.

3 MS. AMARAL: Thank you very
4 much for allowing me to testify this evening.
5 I've provided you, I believe, with one copy of
6 my statement which, with your permission, I'd
7 like to read. If additional copies are
8 needed, I'd be more than happy to provide
9 them.

10 I'm representative Annelie Amaral.
11 I represent the 47th District of the State
12 House.

13 Chemical weapons are among the most
14 terrifying weapons that mankind has yet
15 developed. Usually odorless, colorless, they
16 strike without warning. They destroy the
17 internal functioning of the body, causing
18 hideous suffering.

19 Due to the suffering and the horror
20 these weapons can induce, international
21 treaties have banned the use of chemical
22 weapons. This is virtually the only instance

1 where nations have given up the use of a
2 weapon.

3 Unfortunately, as is so often the
4 case, man's ability to create destruction is
5 far more advanced than is his ability to
6 remedy the destruction caused.

7 The United States Army now finds
8 itself with vast supplies of aging chemical
9 weapons and apparently has set on a course of
10 action for their disposal by incinerating them
11 at the Johnston Atoll, an island barely 800
12 miles from Hawaii's shores.

13 This is comparable to the distance
14 from Waimea, Kauai, to South Point, Hawaii.

15 As a resident, a lifetime resident
16 of the Island of Hawaii, this development is
17 particularly troubling as there is no known
18 safe way to dispose of these chemical weapons.

19 Greenpeace International
20 commissioned an expert review of the December
21 1988 Final Supplemental Environmental Impact
22 Statement for the Johnston Atoll Chemical

1 Agent Disposal System issued by the federal
2 government.

3 This review found critical problems
4 with the quality of information provided in
5 the SEIS. The review, the result and the
6 opinion of the review was that it was
7 impossible for any reviewers in or out of
8 government to evaluate the potential impact on
9 public health or the environment on the
10 disposal of chemical weapons at Johnston
11 Atoll.

12 Moreover, the review points out that
13 incineration of these chemicals at Johnston
14 Atoll may very well violate the Clean Air Act
15 as well as the Ocean Dumping Act.

16 The experts reviewing the SEIS noted
17 that, since the completion of the original
18 Johnston Atoll Chemical Agent Disposal System
19 Draft EIS in December, 1983, which serves as
20 the basis for the 1988 SEIS, much more
21 information has come to light about the
22 effects of burning chemicals.

1 For instance, it is now known that
2 combustion can produce new hazardous chemical
3 compounds. That combustion is often
4 incomplete, and that the residue of the
5 chemical incineration is often more hazardous
6 than the original substances.

7 None of this information was taken
8 into account in the preparation of the SEIS.
9 Even a lay person like myself can reasonably
10 conclude that this information casts grave
11 doubts on the wisdom of the decision to
12 dispose of chemical weapons through
13 incineration.

14 It would be much better to wait and
15 leave the weapons safely stored until new
16 technologies provide a safer, more effective
17 and a more decisive way to dispose of these
18 chemical weapons.

19 While some may argue that storage of
20 these chemical weapons may produce hazards due
21 to the possibility of their containers
22 developing leaks or through accidents, I would

1 note that the possibility of accidents
2 occurring is much greater every time these
3 containers are handled.

0298 | 4 Moreover, the possibility of an
5 accident will be infinitely greater if this
6 project is carried through.

7 These containers will have to be
8 shipped halfway around the world, during which
9 trip they will probably be handled at least
10 five times, loaded onto the train or truck in
11 Europe, onto a ship, unloaded from ship to
12 other vehicles at Johnston Atoll, placed in a
13 storage area, picked up from a storage area,
14 placed in the incinerator facility. That is
15 the minimum of handling I can envision.

0299 | 16 Add to that the threat caused by
17 normal wear and tear during transport and the
18 possibility of an accident or even sabotage
19 during transport. Add to this equation the
20 law of human activity that, "if anything can
21 go wrong it will go wrong".

22 The conclusion is clear. The risk

1 created by transporting chemical weapons from
2 Europe to Johnston Island far outweigh the
3 marginal benefits of disposing these weapons
4 at Johnston Atoll versus disposing of them
5 on-site in Europe or waiting for better
6 solutions in the future.

7 It is my recollection that when the
8 incineration of chemical weapons stored at
9 Johnston Atoll was being pressed, the reasons
10 given for that proposal was that the
11 deterioration of the containers due to the
12 harsh marine environment necessitated action
13 on all stored materials.

14 The Army in its 1983 EIS stated, and
15 I quote: "There are presently no plans to
16 dispose of chemical agents or munitions on
17 Johnston Island that are not already stored
18 there at this time".

19 Now, however, less than a decade
20 later the Army is attempting to overthrow this
21 statement of its intent and purpose in the
22 development of the Johnston Atoll Chemical

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1 Agent Disposal System to allow itself to bring
2 materials to Johnston Atoll from the four
3 corners of the world for disposal, if
4 necessary.

5 In summary, the Army's proposal to
6 transport chemical weapons to Johnston Atoll
7 for incineration poses extreme hazards to
8 people and the environment.

9 Its proposal faces the following
10 problems: The obsolete nature of the Army's
11 1983 EIS and the inadequacy of its 1988
12 supplemental EIS, the dangers posed by
13 incinerating these chemical agents, the
14 extreme dangers posed by transporting them
15 from Europe to Johnston Atoll. The unresolved
16 problems of how to suppose of residue toxins
17 after incineration and the arbitrary reversal
18 in policy regarding the justification and use
19 of Johnston Atoll Chemical Agent Disposal
20 System.

21 It is for these reasons that I urge
22 the creation of a new and comprehensive EIS on

1 this matter. It is for this reason that I
2 call for a moratorium of additional storage or
3 incineration of chemical weapons pending
4 further information.

5 It is for this reason that I say
6 seriously to you: the Pacific will not be the
7 dumping ground of the world. We will not
8 allow you to pretend we do not exist. We live
9 here, we use these waters, we will fight to
10 protect and keep the Pacific free of this
11 obscenity.

12 Thank you for your time.

13 MS. TISCHBIN: Thank you. The
14 next name I have on my list --

15 MRS. JOYNER: I think that this
16 whole thing is the height of insensitivity to
17 have our Representative stand here and talk to
18 you with her back turned to us. I want the
19 microphone moved up here.

20 DR. RICHARDSON: Let me say, if
21 we offended anybody by the placement of the
22 microphone, we certainly didn't intend it,

1 and, Miss Amaral, that's certainly the case.

2 If that did offend anyone in the
3 audience of where we placed this, we had no
4 intention of doing so. If you want to stand
5 here facing the audience, we'll be happy to
6 have it that way.

7 MS. TISCHBIN: The next name I
8 have on my list is Ms. Akaka and, if I
9 mispronounce names, please forgive me.

10 MS. AKAKA: Aloha mai. My name
11 is Moanikeala Akaka, and I'm trustee for the
12 Office of Hawaiian Affairs, elected statewide
13 to represent the Hawaiian people.

14 I'm here representing not just
15 myself, but my other eight trustees from the
16 Office of Hawaiian Affairs, as well.

17 I'd also like -- I'll be making a
18 statement and I'd also like to give you a copy
19 of a resolution that we passed in February 28,
20 1986 against the storing of these nerve gases
21 and incineration at Johnston Island.

22 The idea of bringing nerve gas and

1 other extremely toxic materials from Western
2 Europe to the Johnston Atoll in the middle of
3 the Pacific Ocean does not appear to be a
4 rational decision.

5 If the incineration is such a safe
6 process, as stated in the Environmental Impact
7 Statement, why not build these incinerators at
8 the site where the nerve gas and chemicals are
9 stored?

10 This would immensely reduce the
11 hazards involved in transportation and
12 accidents associated with the transport.

13 The implied reason seems to be that
14 somehow the Pacific is a safer place for such
15 hazardous activity because the people who live
16 here do not matter as much as those living in
17 Western Europe. This is a most reprehensible
18 thought.

19 The Aberdeen Proving Ground near
20 Edgewood, Maryland is suggested as a possible
21 alternate site for the disposal of the
22 European stockpile, however, it is not

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1 recommended because it is close to Chesapeake
2 Bay, an ecologically-sensitive area.

0304 | 3 Johnston Island is a preservation
4 area declared as a bird sanctuary. It is also
5 an animal sanctuary, and so it is also an
6 ecologically-sensitive area. It is not a wise
7 decision to use this Atoll for storing and
8 burning such highly-toxic materials.

0305 | 9 The transport of highly-toxic
10 materials on ships has to be either through
11 the Panama Canal or through the Suez Canal.
12 This can constitute a major hazard to the
13 neighboring land masses.

0306 | 14 The process of combustion is not
15 reliable and totally safe. The resulting
16 products can be extremely toxic and be
17 hazardous to those living on Johnston Island
18 and to neighboring islands like Hawaii.

0307 | 19 The chemicals being brought in are
20 some of the most toxic ones known to man. Any
21 accident happening in unloading and during
22 combustion will be a serious hazard to the

1 people and the biological life in the Atoll
2 and in the neighboring areas.

3 Johnston Island is located in an
4 area where seismic activities can occur.
5 Tidal waves or tsunamis may also happen. This
6 makes the area an unstable one and more
7 susceptible to accidents.

8 Johnston Island is administered by
9 the military. This means that monitoring and
10 inspection activities by civilian agencies
11 like the Environmental Protection Agency or
12 Occupational Health and Safety will be
13 minimal, if not absent. This makes it an
14 extremely unreliable location.

15 Many of the chemicals have long-term
16 toxicity because they are not degradable. So,
17 any toxic chemical that accumulates in the
18 ocean, land or air can have long-term effects
19 if it stays without breaking down.

20 The people living in this part of
21 the globe reject this as a totally intolerable
22 issue. If the United States has any respect

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1 for the people living in the Pacific community
2 or has any concern for ecological health, this
3 project must be abandoned.

4 I represent -- myself and my office
5 represent over 62,000 registered Hawaiians
6 throughout this state and we represent many,
7 many like-minded people that happen to be
8 non-Hawaiian, who are residents here as well.

9 Just because we're out in the middle
10 of the ocean out of sight and out of mind, we
11 don't want this garbage that could have
12 horrible effects, when even the head of the
13 fire department of this Island several years
14 ago said because we are downwind from Johnston
15 Island there could be an accident and the
16 people here could be impacted greatly with
17 these nerve gases.

18 Mahalo. Please listen to our pleas.

19 MS. TISCHBIN: Mr. Hayden
20 Burgess.

21 MR. BURGESS: A no ai me
22 kealoha, a ena poi o pauloa. O Poka Laenui ko

1 ino Hawaii, e Hawaii au.

2 I come before you on behalf of the
3 World Counsel of Indigenous Peoples. It is a
4 non-governmental international organization
5 with consultative status with the United
6 Nations and, having been in contact with the
7 headquarters of the organization, I was also
8 informed that we have also recently taken
9 another position in opposition of the Soviet
10 Union placing a nuclear manufacturing plant
11 about 600 kilometers next to the Somi area in
12 Somiland.

13 First, in this very limited time to
14 comment on a 106 page draft of the Second
15 Supplemental Environmental Impact Statement, I
16 want to highlight seven points of concern.

17 First, why have you kept this SSEIS
18 a practical secret? Why has it been so
19 difficult, if not impossible, to obtain copies
20 this document?

21 Only last week we were able to
22 obtain it. Why is it that it is not available

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03/11 | 1 in the public libararies?

2 On what basis or on that basis alone
3 I insist that the deadline for comments be
4 extended for at least three months and a
5 second public hearing be held here in Honolulu
6 prior to that deadline.

03/12 | 7 Second, I want to know how close
8 your convoy of over 400 tons of nerve gas
9 munitions will pass by Hawaii? In what season
10 will it pass by? How will it be handled
11 enroute from Europe to Kalama Island?

12 That information should be contained
13 in your global comments report. Why is it
14 that that report is not available? National
15 security, you claim.

16 What about the security of every
17 living person in Hawaii? What about the
18 world's environmental security? What about
19 the security of the lives placed at risk of
20 over a billion people by your secret
21 transporation scheme?

22 How has this government ever

1 developed the audacity to insist that it can
2 be the guardian over the security of the
3 world's peoples and on that basis keep secret
4 such plans?

5 That attitude flies in the face of
6 the
7 very foundation of democracy which is based on
8 an informed public in control of its
9 government. How did the Department of Defense
10 get so out of control?

11 Third. You attempt to downplay the
12 quantity of nerve gases to be transported from
13 your European stockpile as compared to what is
14 already stored at Kalama Island, yet all we
15 have is your word of these amounts, not
16 knowing if you're simply deceiving us in the
17 name of your national security.

18 Tell me, how many lives can all of
19 those European stockpile of nerve gas kill?
20 One million, two, a billion? Isn't that a
21 more accurate measure of amounts of nerve
22 gases rather than a mere comparison to what is

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1 now existing on Kalama Island?

2 The point in all of this is that by
3 this shipment halfway across the earth you
4 will have set a precedent for bringing into
5 the Pacific more and more of your waste from
6 all parts of the world.

7 If you get away with this, what will
8 stop you from transporting the rest of your
9 nerve gases, as well as other nation's gases,
10 to the Pacific as an American sign of
11 friendship and economic or military alliance?

12 Fourth. Who will pay for a
13 disaster,
14 should one occur? The United States of
15 America?

16 Is the United States of America
17 ready to waive any defense of sovereign
18 immunity against any individual or group who
19 are injured by this plan?

20 Is the United States of America
21 ready to place a minimum of 100 billion
22 dollars in an escrow account for payout to any

1 and all injured by this plan?

2 Is the United States of America
3 willing to abide by an independent
4 international or regional commission's
5 decision on the issue of liability and damages
6 to be paid out to victims?

7 If your answer to any of the above
8 is
9 negative, then you're not all that sure about
10 the safety of the plan, are you?

11 Fifth. Why aren't the peoples of
12 the
13 Pacific consulted on this plan?

14 The 12-mile zone around Kalama
15 Island is nothing but an imaginary political
16 boundary. The sea life in the Pacific knows
17 no boundary.

18 The fish I ate last night may have
19 come from three thousand miles away from
20 Hawaii. To pollute just one part of our
21 Pacific is to pollute the whole Pacific.

22 Winds blow throughout the Pacific

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1 without pausing for a moment at your 12-mile
2 limit, carrying every poison you shoot up
3 there.

4 You cannot and will not predict the
5 wind patterns of the Pacific. Remember, the
6 nuclear tests on Bikini Atoll resulted in what
7 your government called an unforeseen wind
8 change which carried radioactive fallout,
9 ruining the homeland and lives of thousands of
10 people.

11 Who gave you the right to place the
12 lives of all of us in the Pacific in jeopardy?

13 This is a matter of primary
14 importance
15 to be placed before these or before Pacific
16 Islands forums. Your hearing should be taken
17 to every island nation in the Pacific.

18 Only if and when the Pacific peoples
19 consent to any such inter-regional
20 trans-shipment, storage and incineration of
21 these nerve gases on Kalama Island should the
22 United States Department of Defense take the

1 first steps toward that program.

2 Sixth. At the last public hearing
3 held several years ago here in Hawaii on the
4 building of the incinerator on Kalama Island
5 we were assured by a government representative
6 that the building of the incinerator was a
7 one-shot deal to take care of the supply
8 presently on the island or to be shipped from
9 Okinawa. That was a lie.

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10 Why were the people lied to?

11 If the truth was told that the
12 incinerator may be used for this expanded
13 purpose, the public response would probably
14 have been significantly different.

15 This raises the issue of whether or
16 not your very process in conducting these
17 public hearings are defective in that the
18 information given to the public several years
19 ago and upon which the public responded was
20 simply not true.

21 If that is the case, we should have
22 a rehearing on whether or not the incinerator

1 itself should be built.

2 My seventh point. Your Second
3 Supplemental Environmental Impact Statement
4 concludes that your proposed activity can be,
5 quote, -- or can be done: "in a safe and
6 environmentally acceptable manner. The
7 environmental impacts of incident- free
8 handling and the disposal operations will be
9 minimal".

10 Okay, if it's so safe, incinerate it
11 in Germany. If it's so safe, incinerate it
12 next to the Pentagon. If it's so safe,
13 incinerate it where was manufactured.
14 Incinerate it in the home state of the U.S.
15 president who authorized their production.

16 Why jeopardize half the world with
17 your transporting it here from Europe to the
18 Pacific?

19 In closing, I reiterate my protest
20 over the secrecy in which the United States
21 government is rushing forward with its plan to
22 transport and store these nerve gases.

1 I insist on an extension of at least
2 three months before the closing date for
3 public comments on this report at this point
4 in time.

5 Mahalo.

6 MS. TISCHBIN: Russ Josephson.

7 MR. JOSEPHSON: The world is
8 changing. It appears that finally the
9 superpower governments are changing their
10 approach to the world.

11 Agreements to destroy chemical
12 weapons are an indicator of a slowly-changing
13 attitude. Ever so slowly these superpowers
14 are heeding the words, not only of the peace
15 movement, but also of other well-known
16 radicals such as Douglas MacArthur and Dwight
17 D. Eisenhower.

18 The voices of the peace movement and
19 the Generals both have echoed what Einstein
20 told us in 1946. Everything changed with the
21 unleashing of the power of the atom.
22 Everything, except our way of thinking.

1 Einstein's warning could be the
2 subject of many hours of discussion if we had
3 the time, but we do not.

4 Suffice it to say that any
5 modernizing of our thinking is good. However,
6 I urge you to consider carefully the proposal
7 before us.

8 Consider the irony that the chemical
9 and nuclear ordinance and warheads that were
10 created to protect the people of the
11 superpowers now sit useless, but threatening
12 the very people that they were supposed to
13 protect.

14 I'm unable to comment in detail on
15 the EIS because so much it is classified. I
16 find this intolerable.

17 The public cannot be expected to
18 comment knowledgably on such an EIS.

19 I close with this one thought: If
20 the claim is that the chemical munitions could
21 be moved halfway around the world safely, then
22 I believe that the munitions logically could

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cont'd

1 be destroyed just as safely nearer to where
2 they are.

3 Again, how ironic that the munitions
4 now threaten not only the people that they
5 were somehow supposed to protect, but also
6 other innocent people, not to mention the
7 entire environment.

8 This plan is not proved safe and
9 should be put on hold or dropped in favor of a
10 safer plan.

11 Thank you.

12 MS. TISCHBIN: Marsha Joyner.

13 MRS. JOYNER: Aloha. I am
14 Marsha Joyner, and I thank all of you for
15 being here. It's wonderful to see so many
16 people turn out.

17 The last hearing they said there
18 were only five comments. You look awfully
19 good to me tonight. Thank you so much for
20 being here.

21 And to the front rows on both sides
22 and the front table, I'm absolutely appalled

1 by this racist policy.

2 The high level of insensitivity and
3 inhumanity demonstrated throughout the Army's
4 EIS has been a hallmark of the Reagan-Bush
5 era.

6 To move highly-toxic nerve gases
7 which, incidentally, kill within ten minutes,
8 by the Army's own admission, across vast miles
9 of ocean, from white Europe down here to us
10 little brown people, amounts to environmental
11 terrorism.

12 To move awful chemical weapons by
13 ship from West Germany to Kalama Island would
14 mean going through either the Suez Canal or
15 the Panama Canal.

16 In any event, it would be going
17 through a non-white country. They don't have
18 to notify them. The global commons is secret.
19 They don't have to tell our non-white brothers
20 that they are moving it through their
21 countries.

22 All of the Islands, quote, "downwind

1 of Kalama Island are non-white". Because they
2 are not American citizens they did not need to
3 be included in the EIS, nor do they need to
4 have public hearings.

5 The mid-Atlantic Ocean was ruled out
6 by public outcry, according to their own
7 documents.

8 The Aberdeen Proving Ground ruled
9 out because it is near, quote: "the Chesapeake
10 Bay, which is environmentally self-sensitive".

11 And, I might add, 50 miles from our
12 white patriarchal headquarters, the Pentagon.

13 The Pacific is home for almost a
14 billion people, whales, Hawaiian monk seals,
15 green sea turtles, fish of all kind, and the
16 food source for most of the world. Is that
17 not environmentally sensitive?

18 It is the Kissinger mentality all
19 over
20 again, and I quote: "Who gives a damn about
21 90 thousand people"?

22 I dare say, if you asked any of

1 these people, any of our congressmen in
2 Washington, any of the top brass, where
3 Johnston Atoll is, they don't know. It's just
4 a little dot on the map, it's just out there
5 somewhere.

6 I want you to know it's part of the
7 Hawaiian archipelago. They took it from us in
8 1931. The Attorney General declared it a
9 derelict island.

10 Can you imagine Kalama Island a
11 derelict island?

12 It is not strange to you that
13 throughout the Army's EIS that hundreds of
14 other island nations do not appear on their
15 maps.

16 If you look through the EIS and you
17 see the Army's maps, they show Hawaii, they
18 show Johnston Atoll, which they created by
19 taking Kalama Island and Sand Island, dredging
20 it up, filling it in, killing the coral reef,
21 and they called it Johnston Atoll. It looks
22 strangely like a battleship to me.

1 Nonetheless, if you look at their
2 maps, there are no other islands out there. I
3 mean, hundreds of island nations and they
4 don't show up on their maps.

5 As a matter of fact, I did not see
6 where they addressed us. What would happen to
7 us here in the City and County of Honolulu if
8 there was fallout from catastrophic national
9 events or from a spillage during transport?

10 The Army concedes risk of both.

11 Can the City or any of the Islands
12 handle the medical problems inherent in such?
13 Does civil defense know what to do? Do the
14 police know what to do? Does the general
15 public know what to do?

16 Since Honolulu has by far the
17 largest medical facilities in the Pacific, can
18 we handle the problem?

19 If they had a problem on Johnston
20 Atoll, can you airlift 300 people in here?
21 Can our hospitals hold 300 more people?
22 That was not addressed.

0318

1 If a spill occurs, they can't give
2 us paper towels to wipe up the beach like they
3 did in Valdez, and I have some questions I
4 want answers to.

5 Why has there not been dialogue with
6 the native Hawaiians, with the Hawaiian
7 nation? With the American Samoans, with the
8 American Guamanians and the other Pacific
9 nations?

10 Since the Pacific Ocean is a major
11 food source of the world, what about the fish?
12 The Japanese, the Russians, the Koreans, et
13 cetera, have huge fishing fleets that operate
14 in the Pacific ocean. Have they been
15 consulted?

16 Do the fish they catch know that
17 they are supposed to stay within 12 miles of
18 Johnston Atoll?

19 The large fish, such as the tuna,
20 travel thousands of miles across the Pacific.
21 They follow the current. And what about the
22 contamination?

1 And for you that don't know, the
2 currents travel in a circular motion in the
3 North Pacific. So, everything that leaves
4 Johnston Island going west comes back east,
5 and the large tuna follow this.

6 The large tuna also provide most of
7 the canned fish and by-products that are sold
8 around the world. They eat little fish. Do
9 they know that that fish is contaminated?

10 We do know that the runoff from
11 Johnston Island has affected them.

12 And have you addressed more
13 ciguatera poisoning? That was not mentioned,
14 and I do want an answer.

15 If you make a mistake, which is very
16 likely in moving 400 tons of nerve gas, given
17 the record of shipping here lately, who will
18 pay? Who pays for that?

19 And what ships do you use? Shipping
20 was so bad last year the Navy had to shut
21 down, and you're going to tell us you can move
22 it? I don't think so.

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Cont'd

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1 The record of oil spills is
2 incredible, and oil is a lot more stable. Who
3 is liable?

4 There are about a billion people who
5 live along the Pacific Ocean. If you
6 contaminate the food source, who pays? There
7 are Pacific Island nations who use ocean water
8 food for preparation. Is there no concern
9 about them?

10 Have you ever been to Samoa and you
11 watched how they prepare the food using ocean
12 water? Have they been consulted, the other
13 nations in the Pacific? Have they? Does
14 anybody care?

15 It seems to me that a group of white
16 men made a big, big decision without any
17 regard to little brown people, their culture,
18 their customs, their very existence. This is
19 environmental terrorism.

20 In preparing the EIS, white
21 communities in Utah and Oregon, as well as the
22 native American, the Indian nations were

1 consulted. Why then were we not consulted?

2 Is it not a clear violation of the
3 1964 Civil Rights Act when the U.S. government
4 gives one group of Americans preferred
5 treatment over another?

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6 In preparing the EIS, the statement
7 was made that Kalama Island was away from
8 population centers. What you neglected to say
9 is white population centers.

10 Let me tell you that my earliest
11 memories date back to martial law. I know
12 what the Army did to the "natives". Maybe you
13 people in the Army aren't old enough to
14 remember what the Army did to the natives, but
15 this to me is more of the same. The total
16 lack of regard.

17 The thing about racism is that it is
18 so insidious that you don't even know that
19 you're doing it. You don't see us as people.

20 The military's record of people
21 treatment in the Pacific since martial law is
22 abhorrent, it's awful, and I find it hard to

1 believe that here we are all these years and
2 nothing's changed.

3 I think, since this was issued
4 February the 6th, that we did not get a copy
5 of the EIS until Carl arm-wrestled it from the
6 Army last week, that we demand at least a
7 90-day continuance so that we have time to
8 read this, to understand it, and for you to
9 consult with the native Hawaiians and the
10 other Pacific people before you go any
11 further.

12 Thank you.

13 MS. TISCHBIN: Mr. David Poe.

14 MR. POE: I may not know
15 everything about what makes the world tick but
16 I do know once something is gone, it's gone
17 forever, and I don't want my future to be gone
18 and I don't think that you want your
19 children's future to be gone.

20 I am just one student, but there are
21 other students out there who think the same
22 way I do. You can say things are safe.

1 Well, people also said the Titanic
2 was unsinkable and also that things like the
3 earthquakes wouldn't happen, but they do.

4 What if a ship sinks? What if
5 something leaks?

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6 I'm afraid for the future. And I
7 don't think that you should pollute the whole
8 culture like the culture of the Pacific for
9 something that you created.

10 If you don't think that your future
11 is worth anything, well, think of my future
12 and my other generations that are now. Thank
13 you.

14 MS. TISCHBIN: Mr. Carl Young.

15 MR. YOUNG: Aloha ai a e kakou.
16 My name is Carl Young. Five years ago I did
17 research for the Office of Hawaiian Affairs on
18 the nerve gas issue, the same issue tonight,
19 the same unanswered questions.

20 Tonight I speak to you as a farmer,
21 a taro farmer, and a fisherman. I'd like to
22 start off by asking two questions.

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1 One: Why was there no EIS at the
2 top state environmental office? Why was there
3 no EIS at the Department of Health,
4 Environmental Office, the EIS review office?

5 Secondly. I went down to the
6 E.P.A.,
7 Environmental Protection Agency office. Why
8 was there no meeting announcement available at
9 the federal environmental office? Why?

10 I speak to you tonight with great
11 emotion because for eight years I lived in
12 Micronesia, Guam and Micronesia; had many,
13 many friends living in the Marshalls. I never
14 got to Curivos, but I've been to Nauru and
15 many other Pacific island nations.

16 It was there that I first got to
17 fully
18 appreciate the ocean. I was born and raised
19 in Hawaii, but I never got to really fully
20 understand the ocean until living in
21 Micronesia and also the last few years living
22 in a native Hawaiian community.

1 Also, I speak to you as a Vietnam
2 veteran. I was in Vietnam in 1968. I can
3 remember the training we went through. We
4 went through gas, poison gas training, and the
5 young soldiers just froze.

6 I can speak from almost firsthand
7 experience that it is indeed a weapon of
8 terror. Even in training, people just
9 completely freak out.

10 Also, it very difficult - I speak
11 personally and I'm sure I speak for many other
12 people - very difficult to believe what we're
13 told about the safety of the project because,
14 as some of you know, plutonium, there's been
15 plutonium contamination on Kalama Island,
16 which some people call Johnston Island.

17 One of the most, if not the most
18 toxic substance known to man, plutonium, and
19 yet it was kept secret, for how many years,
20 I'm not sure. Many, many years.

21 To me, I see the issue as an issue
22 between the Jeffersonian democrats and the

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1 Hamiltonian elites and whether one wears a
2 uniform, an Army uniform, it doesn't matter
3 because even within the Army you have both
4 types of Americans: you have the Jeffersonian
5 democrats and the Hamiltonian elites.

6 I think if Jefferson were alive
7 today he would be labeled the worst labels.
8 He'd be called all kind of names because, for
9 one, he was critical of the big banks, the
10 banks that profit from the manufacture of
11 chemical weapons.

12 He was critical of the -- today he
13 would probably be critical of the lack of a
14 truly free press. Are we really getting both
15 sides of the issue in our local press or the
16 press in America?

17 Jefferson was also critical of
18 established religion. Where are the voices,
19 where are the ministers? How many ministers,
20 how many people of the cloth are going to
21 testify tonight? One or two, maybe none?

22 Also, Jefferson was critical of

1 militarization, and Eisenhower not too long
2 ago also warned of this military/industrial
3 complex.

4 I think we often hear that cry,
5 especially from the people of the South
6 Pacific, for a nuclear-free Pacific, a
7 nuclear-free and independent Pacific.

8 Maybe tonight we can begin a
9 movement for a nuclear-free and nerve gas-free
10 Pacific and world.

11 I'd like to conclude by sharing with
12 you some of the wisdom that I have learned
13 from the first people, indigenous people of
14 the Islands, the kupuna, the elders. They
15 say: there's no such thing as a problem, we
16 have only challenges.

17 So I'd like to offer a challenge
18 tonight but, before I do that, I'd like to
19 also share one more bit of wisdom from the
20 poikahiko, the old people. They say hoe hoe.
21 Hoe hoe means to return.

22 One of the spokespeople of the

1 Concerned Citizens in America Against Toxic
2 Wastes - I forget his name - he calls this
3 nerve gas disposal issue probably the single
4 most important environmental issue in America
5 today.

6 In other words, hoe hoe, it's
7 returning. What you sow, you reap. If you
8 hana inu the land, the ocean, it's going to
9 bounce back.

10 The challenge is that hopefully tonight
11 can be a beginning among those of us here
12 earlier, those of us on the Island, the nation
13 of Hawaii, the other Pacific Island nations,
14 the nation of America, for a reform movement
15 which is sweeping the world.

16 America is next, I think in this
17 reform movement, for the Jeffersonians to get
18 together to malama aina, as Jefferson would
19 have said today.

20 Thank you.

21 MS. TISCHBIN: Mr. Jon Van
22 Dyke.

1 MR. VAN DYKE: Thank you. My
2 name is John Van Dyke. I'm director of the
3 University of Hawaii Institute for Peace and a
4 professor of law, but I'm here in my
5 individual capacity tonight.

6 And with the others I want to
7 express my concern at the fact that it's been
8 difficult to have effective input into this
9 process because we did get the Environmental
10 Impact Statement so late, and only through the
11 diligence of Carl Young.

12 And even in the EIS there's a lot of
13 information that is missing. Some of it was
14 supplied tonight, and so I want to start with
15 some kind of practical comments and then turn
16 to some of the legal issues that are raised by
17 this action.

18 We're told that there will be
19 100,000 projectiles brought from Western
20 Europe to Johnston Atoll pursuant to this
21 project.

22 Our information is that there are

1 presently 72,000 projectiles on Johnston,
2 which were brought there in 1971 from Okinawa,
3 and that the present JACADS facility is
4 designed to incinerate those 72,000
5 projectiles.

6 Now, the EIS that we have says on
7 page 25 that the incineration process, before
8 these West German projectiles come, was
9 expected to last three to four years.

10 Three to four years, apparently, to
11 incinerate the 72,000 projectiles there.

12 The EIS also says that the 100,000
13 projectiles are going to be incinerated in
14 three and a half months.

15 There's some inconsistency there as
16 to how these new projectiles could be
17 incinerated in a mere three and a half months
18 if the others take three to four years to
19 incinerate.

20 We also have been told that the
21 environmental assessment process is a
22 three-part process. The first part is done in

1 Germany, the second part is done pursuant to
2 what they call a global commons, global
3 commons environmental assessment.

4 There's a handout given to us to
5 tonight that says that that will remain
6 classified. The assessment either has or will
7 be done, we're not told, but it will remain
8 classified so that no public input can be
9 received on that.

10 The matter, apparently, is being
11 done in serious haste because of an agreement
12 that our Secretary of State, Mr. Baker,
13 recently made with our German friends to get
14 these products out of Germany by September
15 30th of this year.

16 That means that the projectiles,
17 according to this scenario, will be moved
18 sometime this summer or early fall, and could
19 very well arrive at Johnston Atoll during the
20 hurricane season. Again, we are not told
21 that.

22 It is public record that on two

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1 occasions in the last two decades the entire
2 population of Johnston Atoll has been removed
3 because of hurricanes.

4 In 1972, Hurricane Celeste passed
5 through Johnston with 150 mile-an-hour winds
6 and 45-foot waves, and all 580 military and
7 civilian personnel were evacuated.

8 In 1984, once again, Hurricane Keely
9 passed through that area, and there were 100
10 mile an hour winds and 35 to 40-foot waves
11 and, once again, the entire population of the
12 Atoll was evacuated.

13 I think we could all just imagine
14 the kinds of problems that might arise if we
15 have one boat being unloaded, the other boat
16 sitting out there waiting to be unloaded.

17 The hurricane comes through,
18 everybody is evacuated, the nerve gas is lying
19 there on Johnston Atoll untended, and 45-foot
20 waves are sweeping over this insular
21 structure, which is only eight feet above sea
22 level as it's now configured.

1 The other interesting thing that the
2 environmental impact assessment does tell us
3 is that there's an enormous amount of nerve
4 gas at the eight existing chemical munitions
5 plants in the Mainland of the United States
6 and that the Army has decided that the
7 preferred alternative for disposing of these
8 gases is to incinerate them at their present
9 site.

10 In other words, the transportation
11 risks have been determined to be far more
12 significant than the incineration risks, and
13 so the alternative that was rejected for all
14 the gases in the United States has been
15 accepted for these European gases, and I think
16 it's logical to ask why with regard to the
17 European gases our European friends are not
18 being asked to accept the same risks that the
19 citizens of the United States are accepting
20 with regards to these gases being incinerated
21 in the Mainland of the United States.

22 The gases were in Europe to protect

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1 our European friends, and it's logical to ask
2 them to accept the risk if, in fact, the risks
3 of incineration at the site are less than the
4 risks of transporation.

5 Let me now turn to some of the legal
6 questions that are raised, and I apologize
7 because some of this is a bit technical, but I
8 think it is important to understand that there
9 are some significant legal questions.

10 Again, the EIS tells us that the
11 reason that this is coming to Johnston is
12 pursuant to international agreement, and that
13 the international agreement prevents them from
14 remaining in Germany.

0331 15 Well, my research informs me that
16 the international law also prohibits the
17 action that is anticipated at Johnston. That
18 it is a violation of the commitments that our
19 government and other governments have made to
20 protect the marine environment to undertake
21 this kind of an activity.

22 Before getting to that, though, let

1 me just mention that there is an internal
2 Hawaii issue here as well.

3 One of the interesting things about
4 Johnston is that nobody is 100 percent sure
5 exactly how Johnston became part of the United
6 States.

7 There was a claim made by Americans
8 to remove the guano in Johnston in the 1850s.
9 This claim was recorded, but it apparently was
10 abandoned.

11 There is strong evidence that it was
12 abandoned in the latter part of the 19th
13 century, and the international community
14 appeared as of the early 1890s to recognize
15 the claim of the Kingdom of Hawaii to this
16 Island. Hawaii, the Kingdom of Hawaii called
17 it Kalama and had made an earlier claim as
18 well.

19 Great Britain was thinking of
20 putting a facility on the Atoll at that time
21 and was negotiating with the Kingdom of Hawaii
22 in January of 1893, just a few days before the

1 United States assisted with the overthrow of
2 the Kingdom here in Honolulu.

3 If this historical record is
4 accurate and Johnston then became part of the
5 United States by virtue of the annexation in
6 1898, it's logical to conclude that native
7 Hawaiians through the Office of Hawaiian
8 Affairs have a justified right to the
9 resources of that Atoll and its surrounding
10 marine environment.

11 Second, let me turn to the question
12 of how we would define the present
13 configuration of Johnston. Johnston was
14 originally two separate islands, Johnston and
15 Sand, which together constituted a total of
16 approximately 46 acres.

17 During the late 1930s, extending
18 into 1964, dredge and fill operations took
19 place, two new islands were created.

20 Johnston and Sand were both
21 expanded, and the present acreage is
22 approximately almost 700 acres.

1 In other words, the total land mass
2 of the Atoll has been increased more than 10
3 times, and the current JACADS facility is one
4 hundred percent on fill material, according to
5 the EIS that we have.

6 This change, in my judgment, means
7 that what we have at Johnston is an artificial
8 island. It is no longer a real island.

9 It has been totally redone and, as
10 an artificial island, it has a status under
11 the 1982 Law of the Sea Convention and the
12 London Dumping Convention of being viewed as
13 part of the marine environment and being
14 subject to rules and regulations that govern
15 activities on the marine environment.

16 The governing international
17 instrument governing ocean pollution is the
18 London Dumping Convention, which the United
19 States is a party to, and the London Dumping
20 Convention defines dumping as any deliberate
21 disposal at sea of waste or other matters from
22 vessels, aircrafts, platforms, or other

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1 man-made structures at sea.

2 Johnston is now a man-made structure
3 at sea. That's what it is. There's no other
4 way of looking at it. Any of you that have
5 been is there can see it in that fashion.

6 And incineration, the London Dumping
7 Convention has meetings every year of its
8 consultative members. I've been going to the
9 last three meetings as the representative of
10 the Republic of Nauru, and an agreement was
11 made in 1988 to phase out ocean incineration
12 completely.

13 In other words, this was supported
14 by the U.S. delegation. In other words, ocean
15 incineration because of its risks to the
16 marine environment has been declared to be
17 unacceptable.

18 The reasons for this is because of
19 the micro layer on the ocean environment and
20 the difficult technology that's involved,
21 difficult to monitor and control.

22 Taking these different ideas

1 together, one reaches the conclusion that it
2 is improper for the United States to proceed
3 alone and that any further action at Johnston
4 should be pursuant to a permit that would meet
5 the international regulations of the London
6 Dumping Convention.

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7 Johnston, as also other people have
8 mentioned, it's logical to think of it as a
9 rare or fragile ecosystem which, under Article
10 194, paragraph two, of the Law of the Sea
11 Convention, must be protected pursuant to
12 special status and regulations.

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13 The U.S. has considered Johnston to
14 be a fish and wildlife preserve since 1926.
15 Hundreds of thousands of sea birds nest there
16 every year. Green turtles also thrive in that
17 environment. All these creatures are at risk
18 because of the planned action that we are
19 discussing tonight.

20 There have been accidents at
21 Johnston. In 1962 there was a serious
22 plutonium accident as a result of a misfiring

1 of a nuclear warhead.

2 In 1977 there was a serious spill of
3 Agent Orange as a result of an attempt to
4 incinerate Agent Orange on a Dutch ship
5 adjacent to Johnston.

6 There is every reason to think that
7 this procedure that we're talking about today
8 could lead to accidents once again, and I
9 think it's proper, as others have called for;
10 for further study and further review.

11 There's no reason to proceed in
12 haste just because the Germans want us to, and
13 it's logical, I think, to ask them to accept
14 the risks that instead are being foisted upon
15 the Pacific.

16 Thank you very much.

17 MS. TISCHBIN: Senator Donna
18 Ikeda.

19 SENATOR IKEDA: Thank you for
20 giving me the opportunity to testify before
21 you this evening. My name is Senator Donna
22 Ikeda and I am chairman of the Senate

1 Committee on Agriculture and the Environment.

2 I am here this evening to tell you
3 that I am very much opposed to your plan to
4 transport and incinerate nerve gas weapons at
5 the Johnston Atoll.

6 I am opposed to it for a number of
7 reasons. I don't believe that you have done
8 adequate studies to assure us that there will
9 be no environmental impact on us, particularly
10 with these toxic agents getting into the ocean
11 and into the food chain.

12 I also feel that we have been misled
13 because, according to the final Environmental
14 Impact Statement prepared by the United States
15 Army Corps of Engineers in 1983, although
16 chemical agents were stored at 10 locations in
17 United States and overseas at the time, claim
18 that the disposal action for Johnston Island
19 were considered more pressing due to the
20 factors such as corrosion and dangerous
21 weather conditions on the Atoll.

22 The final Environmental Impact

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1 Statement also states that: "There are
2 presently no plans to dispose of chemical
3 agents or munitions on Johnston Island that
4 are not stored there at this time."

5 At the time one of the major
6 concerns of the public was the possibility
7 that the military would some day consider the
8 shipment of these chemical agents from other
9 areas of the country through or within the
10 proximity of the State of Hawaii, and at that
11 time the military assured us that this was not
12 going to happen.

13 Now it seems that you're deviating
14 from the understanding originally sought to
15 impress upon the public with regard to intent
16 and the purpose of this project.

17 I therefore hope that you will
18 reconsider your decision and take your
19 chemicals and dispose of them elsewhere.

20 I might also add that, as the
21 chairman of the Committee on Agriculture and
22 the Environment, we have taken tremendous

1 steps in passing legislation to protect our
2 environment, among them including passing a
3 bill to protect the ozone layer and being the
4 first in the United States to do so. We do
5 not take these steps lightly.

6 We have taken these steps because we
7 feel that once the environment is negatively
8 impacted upon. There is very little we can do
9 to turn those effects around.

10 One mistake like this can cause us a
11 great deal of tragedy, and I hope you will
12 rethink your position.

13 Thank you.

14 MS. TISCHBIN: Skip Spaulding.

15 MR. SPAULDING: Good evening.

16 My name is Skip Spaulding, and I'm an attorney
17 with the Honolulu office of the Sierra Club
18 Legal Defense Fund.

19 I have been a practicing
20 environmental trial lawyer for 12 years, and I
21 specialize in endangered species litigation
22 and environmental impact statement litigation.

1 I'm pleased to be able to testify
2 here today on behalf of the Sierra Club, which
3 has over half a million members around the
4 country and over 3,500 members here in Hawaii.

5 In general, the Sierra Club is in
6 favor of incineration of chemical weapons if,
7 and only if, the incineration can be done in a
8 proven, safe environmental manner and can be
9 done in an appropriate location.

10 After reviewing this Supplemental
11 Environmental Impact Statement, the Sierra
12 Club vigorously opposes the proposed plan to
13 transport the European stockpile of chemical
14 weapons to Johnston Atoll and to incinerate
15 them there.

16 This position is based on our belief
17 that the Environmental Impact Statement is
18 seriously deficient both legally and
19 scientifically.

20 I prepared a 14-page set of written
21 comments, which I will hand to the committee,
22 in which I analyze five different aspects of

1 the Environmental Impact Statement which are
2 not properly done.

3 However, in my remarks I'd like to
4 deal with just two areas. The first one deals
5 with the scope of this particular
6 Environmental Impact Statement.

7 The original purpose of the EIS was
8 to analyze the transport, storage and
9 incineration of the European stockpile of
10 chemical weapons at Johnston Atoll.

11 It was supposed to look at all the
12 possible accident scenarios. It was supposed
13 to look at all the potential alternatives and
14 it was supposed to evaluate the potentially
15 serious environmental consequences.
16 Unfortunately, this SSEIS does not do that.

17 Whereas the public ordered the
18 environmental equivalent of a filet mignon
19 steak of an EIS, what the Army has served us
20 is ground beef.

21 This particular EIS has been
22 transformed beyond, far beyond, its original

1 purpose.

0336 | 2 Now, how is this done? First of
3 all, the Army carved the EIS into three
4 separate pieces.

0336 | 5 It said the first piece is the
6 internal handling of the chemical weapons
7 within Germany. The Army said we will not
8 analyze this particular aspect of the project
9 because we do not believe that the United
10 States environmental laws apply.

11 This is true even though these are
12 United States chemical weapons, and the
13 actions being undertaken under the auspices of
14 the U.S. Government, although it is occurring
15 in Germany.

0336 | 16 Under the National Environmental
17 Policy Act of 1969, it is required that this
18 action and this segment of the action be
19 considered as part of this particular EIS.

0336 | 20 The second part of the EIS that
21 should have been done is the trans-ocean
22 shipment of the materials from Europe to the

0336 | 1 United States.

2 We have been told again here tonight
3 that this portion of the EIS is classified
4 under the executive privilege.

0336 | 5 The third part of the EIS is the
6 handling and incineration of the materials at
7 Johnston Atoll. This is the only part of the
8 EIS which has been publicly disclosed at this
9 time.

10 Unfortunately, this handling of the
11 EIS has perverted the original purpose of it.
12 By dividing and conquering the EIS in this
13 manner the Army has made it virtually
14 impossible to analyze the comprehensive
15 environmental impacts of the action.

16 The original idea was to analyze
17 what do we do with these chemical weapons
18 sitting in Europe.

19 Instead, what this Environmental
20 Impact Statement analyzes is, what do we do
21 with a ship full of chemical weapons sitting
22 12 miles off Johnston Atoll?

1 Given the way the Army has framed
2 the question, it's not surprising that they
3 reached the conclusion that we have to
4 incinerate them at Johnston Atoll.

5 The most important thing from my
6 point of view as a lawyer, arising out of the
7 way in which this EIS has been handled, is
8 that it is now highly vulnerable to a citizen
9 suit.

10 By failing to comprehensively
11 analyze all aspects of the handling of these
12 chemical weapons in Europe, the Army has
0336 13 improperly segmented the action under a
14 well-developed series of cases under the
15 National Environmental Policy Act of 1969, and
16 leaves the entire action open to a citizen
17 injunction.

18 At the very least, at this point the
19 Army has got to release in full the global
20 commons statement. There is no backing in the
21 case law that I know of for the executive
22 privilege which is being asserted.

1 The Army must prepare a
2 comprehensive environmental assessment of the
3 handling, transportation and movement of the
4 chemical weapons within Germany, and then the
5 Army must hold new public hearings and allow a
6 new round of public comment for the public to
7 be able to analyze and participate in the
8 Environmental Impact Statement process.

9 Doing so now is very difficult for
10 all of us. We're trying to do our best but,
11 because of the truncated nature of the EIS,
12 it's almost impossible to provide meaningful
13 comment.

14 The unreasonable limitation and
15 scope of the EIS has also affected all of the
16 aspects of the EIS.

17 As a lawyer, I look to the
18 environmental impacts which are discussed in
19 the EIS. In this case, how can one assess the
20 environmental impacts if we don't know about
21 what might happen to these shipments through
22 sabotage, terrorist attacks and accidents when

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1 they are going halfway around the world or as
2 they are being handled in Germany?

3 I also looked to alternatives that
4 are being discussed in the EIS. Well, in this
5 EIS how can one evaluate possible alternatives
6 if we don't know what all the possible
7 consequences of this particular action are?

8 How can we compare it to other
9 potential actions, such as incinerating these
10 weapons on-site in Europe?

11 Finally, how can one look at the
12 potential accident scenarios if we're not
13 allowed and are not given any glimpse into the
14 Army's environmental analysis of these
15 materials while they are going over the ocean
16 or while they are being transported in Europe?

17 The answer to all of this is that
18 it's
19 impossible to analyze, given the current state
20 of this EIS.

21 In our opinion, in its haste to
22 complete this EIS and to transport the

1 weapons, the Army is ignoring its statutory
2 obligations under NEPA, as well as under the
3 Endangered Species Act and the Marine Mammal
4 Protection Act, and this particular EIS is
5 highly vulnerable to a legal challenge.

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6 The other subject I just wanted to
7 briefly touch on is an important public policy
8 concern that the Sierra Club has.

9 The Sierra Club is seriously
10 concerned that Johnston Atoll is in danger of
11 becoming the world's chemical agent
12 incineration center.

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13 This was not the original purpose of
14 the Johnston Atoll incineration. Indeed, the
15 original purpose was simply to incinerate the
16 weapons that were sitting on the Island and
17 which had been transported there in 1971 from
18 Okinawa.

19 However, now we understand that
20 other chemical weapons coming from Europe will
21 probably be incinerated there. What is the
22 secret agenda?

1 Isn't it possible that the next step
2 is to have all of the chemical weapons stored
3 at the eight sites throughout the Mainland
4 United States also be incinerated at Johnston
5 Atoll?

6 And isn't the next logical step to
7 take all of the chemical weapons from other
8 countries in the world and incinerate them at
9 Johnston Atoll?

10 Any EIS must consider and must
11 disclose the future plans and future
12 implications of this action. The current one
13 does not.

14 In conclusion, for all of these
15 reasons, the Sierra Club strongly urges the
16 Army either to undertake and fully disclose
17 all of the environmental consequences
18 associated with this action or to abandon its
19 plans to ship the European stockpile of
20 weapons to Johnston Atoll.

21 The Army must either shoulder its
22 burden and responsibilities under the

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1 environmental laws of the United States or it
2 must abandon this action.

3 Thank you very much.

4 MS. TISCHBIN: Jon Hinck.

5 MR. HINCK: Hello, my name is
6 Jon Hinck. I'm a member of the board of
7 directors of Greenpeace U.S.A., formerly in
8 charge of all of the international toxic work
9 for Greenpeace.

10 Greenpeace is an international
11 environmental organization with offices in 22
12 countries.

13 I welcome the opportunity to testify
14 here today. I'd like to summarize some of my
15 organization's concerns about the plan to
16 incinerate chemical munitions at Johnston
17 Atoll, or Kalama, as it's been called prior,
18 and point out some of the critical
19 inadequacies of the Army Department's draft
20 Second Supplemental Impact Statement for
21 disposal of the European chemical munition
22 stockpile.

1 Due to the impact on the Pacific
2 region, its inhabitants, the environment,
3 Greenpeace adopted the following position
4 relevant to JACADS:

5 Greenpeace opposes the use of the
6 Pacific as a testing ground for hazardous
7 technologies. Greenpeace opposes the
8 introduction of waste burners, including
9 high-temperature incinerators, and all
10 other
11 environmentally-unsound technologies in
12 the
13 Pacific region.

14 Greenpeace opposes the importation
15 of
16 hazardous materials from other regions
17 into
18 the Pacific, including stockpiled chemical
19 weapons from Europe or the U.S. Mainland.

20 In 1988 D.O.A. under-Secretary James
21 Ambose correctly stated that transportation of
22 chemical munition stockpiles to Johnston Atoll

1 is a formidable, complex and uncertain task.

2 At the time they were arguing that
3 stockpiles in the United States should not be
4 shipped to other locations, that they should
5 be burned on-site. He made very strong
6 statements about the risks.

7 Ambose further warned that
8 transportation would increase the likelihood
9 of an accident and make the chemical weapons
10 more vulnerable to sabotage or terrorism.

11 The uncertain task of shipping
12 dangerous and vulnerable cargo from the other
13 side of the world to the Mid-Pacific is now
14 scheduled to be tested as early as August.

15 As speakers before me have
16 eloquently pointed out, this whole concept
17 violates principles of common sense. I
18 believe they violate the dignity of the people
19 in the Pacific. It is an affront to the
20 people that live here and, as recently has
21 been pointed out by a couple of attorneys, law
22 professors, it violates the law.

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1 The National Environmental Policy
2 Act regulations require the Army to prepare a
3 comprehensive EIS covering the transportation
4 of European origin stockpiles and the final
5 disposition of waste by-products. In other
6 words, the entire program should be included
7 in one analysis.

8 As was pointed out, it is not legal,
9 it is not legally correct to break it down.
10 It violates the law.

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11 Additionally, the EIS should cover
12 the cumulative impacts. This is required
13 under the National Environmental Policy Act.

14 That means you've got to take the
15 waste that's being burned that's presently on
16 the site, plus the waste that's added from
17 Europe, and then analyze the cumulative
18 effects. This hasn't been done.

19 The environmental impact procedure
20 so far is incorrect. It's illegal. By
21 failing to consider the total environmental
22 effect, the European stockpile storage and

1 disposal at Johnston Atoll, and by failing to
2 consider the total environmental effects of
3 all agents disposed at Johnston Atoll, the
4 Army has precluded meaningful comparison with
5 alternative proposals. That was discussed.

6 I could go into more detail. Let's
7 move on.

8 The Army should reveal the basis for
9 its belief that storage or on-site disposal
10 would violate international agreement. That's
11 mentioned in their D.S.S. EIS.

12 There's no reference to the specific
13 agreement. It's quite possible that if an
14 international agreement covers that, then
15 perhaps international law or U.S. law should
16 cover the shipment of the materials when they
17 are in Europe.

18 Even though the chemical munitions
19 are designated retrograde stockpiles, implying
20 a return to sender or country of origin
21 policy, the D.S.S. EIS fails to address the
22 environmental impacts at the initial land

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1 transport.

2 Perhaps it's not as immediate to
3 people here, but it's quite obvious that
4 there's a tremendous potential impact of the
5 shipment in Europe. It would probably be
6 better to burn the material there than to face
7 these shipments.

8 For one, they need to be, as was
9 pointed out, they need to be transferred
10 several times. Initially trucks, then trains,
11 then to the vessels.

12 The U.S. government officially
13 assumes jurisdiction 12 miles off-shore. It
14 is estimated that the shipments will be seven
15 thousand tons of deadly weapons, will require
16 25 truck convoys to move the shipments to rail
17 lines.

18 According to an article in Der
19 Speigel, 25 December 1989, each convoy would
20 have 80 vehicles, 20 of them loaded with
21 weapons. The others would carry rescue and
22 decontamination equipment, armed security

1 guards and technical medical personnel. Each
2 convoy would be protected by 1,000 guards.

3 It is uncertain what risks have been
4 considered, what measures for public safety
5 have been accounted for and what plans exist
6 for accident scenarios there.

7 There's more to be said on that
8 issue, but I'd move on to the concerns raised
9 about the burning out at Johnston Atoll.

10 Greenpeace pointed out to the Army
11 Department a number of years ago that there's
12 an issue of the products of incomplete
13 combustion in an incinerator. That
14 essentially was ignored or denied by the Army
15 until their latest document in which they
16 acknowledge that dioxins would be produced.

17 If you look at the document, it's
18 not entirely satisfactory what they say about
19 the dioxins, but now they acknowledge they'll
20 be produced.

21 The reason this happens is an
22 incinerator acts in one sense a bit like a

1 chemical factory.

2 The part that the technicians who
3 support the technology like to point out is
4 that it breaks down the compounds that are put
5 in.

6 What they don't like to acknowledge
7 or they have been slow to acknowledge is, once
8 it's broken down into component parts, these
9 materials recombine. They do it in the
10 stacks, in the stacked gases.

11 Now, there are studies that have
12 concluded, notably in Canada, that when they
13 look at this they were finding it didn't
14 matter what temperature the materials were
15 being burned at.

16 The temperature rose, they still got
17 these materials. There are no incinerators
18 that operate without producing dioxins. This
19 opens a much larger can of worms than the Army
20 Department is willing to look at.

21 So what they did in this DSSEIS was
22 they chose one compound, tetrachlorinated

1 dibenzo-P dioxin, and said this is a bad one,
2 we'll look at it. It will represent all the
3 other compounds. That's not true.

4 There are a number of isomers of
5 dioxins, there are also cousin chemicals,
6 dibenzofurans. There's hexachlorobenzene to
7 look at, there are fluoridated hydrocarbons.
8 Many other chemicals that can be produced.

9 If you don't look for them, you're
10 not going to find them. If you look for them
11 in the wrong place, you're not going to find
12 them.

13 It's difficult to find them, it's
14 expensive to find them. None of this work has
15 been done adequately in advance to approve
16 this system.

17 They have got to take it and start
18 again, if they want to do the job right.

19 I think it's going to be difficult.
20 I'm reminded of the guy who is expected home
21 in the evening at 10 o'clock. He's not home
22 for an hour later and his wife looks out in

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1 the yard and sees him near the lamp post
2 looking all over on the floor.

3 She calls out to him, "What's going
4 on out there, Henry?" And he says, "Well,
5 I've lost my keys."

6 So she comes out to help and she's
7 looking with him underneath the lamp post, and
8 finally she says, "Are you sure you lost them
9 here?" He says, "No, I didn't. I lost them
10 over on the other side of the yard."

11 She says, "Why are you looking
12 here?" He says, "That's because the lamp was
13 on here and it's a better light."

14 I think we've got a process that's
15 somewhat similar. The Army is finding only
16 what they want to find and, unfortunately, the
17 process is probably driven by a desire to get
18 the incineration underway.

19 I think it's very appropriate, as
20 people have pointed out, that the Pacific may
21 not figure prominently in the planning back at
22 the Pentagon or back in the East Coast of the

1 United States or in Europe, and this is a
2 political decision as well as a technical
3 decision.

4 That they are not officially taking
5 political comments, but I think it's very good
6 that people have offered a few, and while the
7 comment period is open it might offer a few
8 more, also examine the document and look at
9 some of the technical questions.

10 Greenpeace is still waiting for the
11 Army Department to comprehensively analyze the
12 materials that we passed on in August of last
13 year.

14 There is a brief mention in the
15 DSSEIS of the marine micro layer.

16 That's a very top surface of the
17 ocean. As might be expected, it's more fatty
18 than the rest of the ocean; a slick almost.
19 You can almost pick it up with the naked eye.

20 It actually proves to be very, very
21 important in the function in the ocean.

22 The unfortunate thing about the

0345 | 1 products of incomplete combustion that come
2 out of an incinerator is that they have a
3 nasty characteristic that is the subject of
4 continued research. Every year more is known
5 about it. Its knowledge has not been tapped.
6 Quite a bit more is known since 1983, when the
7 process began at JACADS.

0345 | 8 Those chemicals are fat seekers.
9 They are actually called hydrophobic because
10 they avoid water, they seek fat.

0345 | 11 The implications of that is they are
12 going to collect in organisms that have fat:
13 animals, the marine mammals, fish, human
14 beings.

0345 | 15 If they don't find those organisms
16 right away, they collect in the marine micro
17 layer. The Army did not want to address that
18 issue so, instead, they cited a couple of
19 sources.

20 I was very disturbed to see it. I
21 haven't looked at this project too much in the
22 last couple of years, but the Greenpeace

1 report listed 15 or 16 sources of information
2 on the marine micro layer, raising many of the
3 problems that can be addressed with
4 contaminating the marine micro layer with
5 complex hydrocarbons.

6 The Army chose not to even read
7 those, if you believe their document, because
8 they didn't list them as resources. They
9 didn't quote those.

10 They quoted in one case an
11 individual, who I'm personally familiar with
12 who's represented the Netherlands at the
13 London Dumping Convention, and his career has
14 been designing and monitoring incinerators.

15 He does not know, I mean, his
16 expertise is not in oceanography, chemical or
17 biological sciences. It has to do with
18 hardware.

19 He is the person whose study is
20 referenced with regard to the marine micro
21 layer. The Army Department said we're not
22 sure if it's even there but, if it's there, it

1 won't be hurt.

2 This doesn't instill confidence.

3 The National Marine Fishery
4 Services' draft opinion concludes with the
5 reinitiation of consultation section, which
6 states that: "Consultation must be reinitiated
7 if new information reveals impacts of the
8 identified activities that may affect listed
9 species or their critical habitat at that
10 time."

0346 11 I didn't have the time, a few people
12 here tonight went into it, to address the
13 potential impact on endangered species, green
14 turtles, even whales, Hawaiian monk seals,
15 perhaps.

0346 16 The analysis was inadequate,
17 particularly if you're ignoring the compounds
18 that are coming out of the incinerator. You
19 take that issue, you take the issue of the
20 land-based transport in Europe, you take the
21 issue of the cumulative effects not being
22 examined, the issue of the entire program not

1 being examined, then there's the dangerous
2 emissions that would come out of the
3 incinerators, the products of incomplete
4 combustion, the effects on marine ecology and
5 endangered species, all of that suggests that
6 the reinitiation of consultation must begin
7 again.

8 The Army has to do some work first.
9 I think you people have been very open and
10 hospitable to these individuals who come
11 representing the government to give this
12 program, and you've asked humbly for 90 days
13 more.

14 I think that you should have as many
15 days as it takes the Army to redo the whole
16 process and come back to you and ask for your
17 hospitality again and ask perhaps if you'll
18 listen to them with a new plan, with new
19 studies, with new legal rationale for carrying
20 this out.

21 It might be better if they looked at
22 the alternatives. They have ignored them.

1 They call them the no-action alternative.

0347 | 2 Work on the materials where they are
3 presently stored or where they are produced in
4 the case of other toxic wastes, instead of
5 thinking about nuking them, incinerating them,
6 burning them, whatever.

0348 | 7 Why not just de-construct them back
8 to their component parts. Some of those parts
9 may be useful again. Put them into something
10 that is useful.

11 The other ones, we've got a problem.
12 Until that's done, monitor them, keep them in
13 monitored retrievable storage.

14 So, if they slow the process down
15 like they should, somebody ought to go out to
16 Johnston Atoll and make sure the bunkers are
17 in good shape, reinforced, have them take back
18 the plans, recall the EISS, shore up the
19 storage tanks and start all over again.

20 Thank you for your time. For more
21 detail on explicit concerns, Greenpeace is
22 going to submit written comment for the

1 record.

2 I thank you again.

3 MS. TISCHBIN: We have about 13
4 people left that would like to speak this
5 evening, but I think our reporter needs about
6 a 10 minute break. So, if we can break for
7 about ten minutes and we'll start back up.
8 (Short break in proceedings)

9 MS. TISCHBIN: Let's get
10 started again. The staff at the school here
11 has asked me to ask all of youm if you go
12 downstairs to use the restrooms, please do not
13 open any of the exit doors downstairs.

14 The doors have been locked, and they
15 would appreciate it if we use this door only
16 as entrance and exit from the building.

17 Thank you.

18 The next name I have, and I
19 apologize in advance, I'm sure I'm going to
20 mispronounce it.

21 Mr. Kahooohanohano. Was I close?

22 MR. KAHOOHANOHANO: Thank you.

1 You did well on that. Good evening. My name
2 is Frank K. Kahooohanohano.

3 I'm the recently-retired fire chief
4 for the City and County of Honolulu. I'm here
5 tonight just for two reasons. You've heard a
6 lot of testimony, a lot of good testimony, a
7 lot of good points made.

8 In early or late '85, possibly early
9 '86, I had sent a written testimony in
10 defining the construction of the site at
11 Johnston Island, and this evening I'm here to
12 reinforce that and
13 to share one particular concern amongst the
14 many other concerns.

15 My concern is, when an accident
16 occurs during trans-shipment or during
17 incineration, and I say when, because when
18 you're dealing with electricity you're dealing
19 with electrical power, rather, and you're
20 dealing with mechanical power, and you're
21 dealing with human beings.

22 Those are the ingredients for an

1 accident or a catastrophe, and you have that
2 during trans-shipment and during incineration.

3 So I say when an accident occurs, my
4 main concern, and I can't speak for the fire
5 service now since I'm retired, but my main
6 concern as a citizen is, are we prepared to
7 handle such a situation, and I say we're not.
8 Emergency-wise, first response-wise, we're
9 not.

10 How can we prepare for the emergency
11 when we don't know what the emergency will be,
12 and we cannot train because we know nothing of
13 the emergency.

14 So this is a question that I raise
15 as a firefighter for 37 years and recently
16 chief for five years. I have not the answer
17 for that so I don't know.

18 And my main concern is, are we
19 prepared, and I say we are not.

20 Thank you.

21 MS. TISCHBIN: I have another
22 name that I'm going to have trouble with.

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1 Setso Okubo.

2 MS. OKUBO: Aloha. About four
3 or five years ago I made this banner for the
4 Nuclear Free and Independent Pacific, because
5 the Pacific peoples have been victimized over
6 and over and over again, and then I read again
7 in the paper about the chemical weapons that
8 would be destroyed on Johnston, and I thought
9 I'd use this banner as a kind of a reminder to
10 the number of times that Pacific peoples have
11 been victimized.

12 I'll start with the north and the
13 Aleutian Islands and tiptoe where the United
14 States tested a nuclear weapon. Then in the
15 Marshall Islands at Eniwetok there were 43
16 bomb tests by the United States.

17 At Bikini, 23 bomb tests by the
18 United States, and going down to Australia, at
19 Montebello and Marlinga, there were 12 tests
20 done by Australia and Great Britain.

21 Then to the Society Islands at
22 Fangataufa and Mururua, they don't announce

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↓ no specific
comments
on SSEIS.

1 the tests but officials have detected as of
2 now 163 tests.

3 At the time I made it there were 96,
4 I believe, so I have to revise that number.

5 Then at Christmas Island, of course,
6 you understand that the Society Islands, the
7 tests were all performed by the French.

8 At Christmas Island there were 25
9 tests done by Great Britain. Johnston Atoll,
10 12 tests done by the United States. In Hawaii
11 we didn't have any tests, but we have an
12 arsenal. At least five years ago, about three
13 thousand nuclear weapons.

14 The news article said the exact
15 amount and type of munitions is classified, as
16 is the method and timing of the weapons
17 transportation from Europe to Johnston Atoll.

18 I thought the best message for the
19 audience might be this poster that was made by
20 a South Sea Islander, and it reads: If it is
21 safe, dump it in Tokyo, test it in Paris, or
22 store it in Washington, D.C., but keep my

1 Pacific nuclear free.

2 We don't want our Pacific peoples
3 and the life in the Pacific to be further
4 endangered these many times.

5 Mahalo.

6 MS. TISCHBIN: Carol Aiken.

7 MS. AIKEN: Some of the things
8 that I expected to say have already been
9 brought up, so I don't want to be redundant.

10 But I think that there's a lot of
11 gaps here, and one of them is not paying any
12 attention to what's happened to the ocean
13 already, and people have talked about that,
14 all of the testing, all of the dumping, and it
15 doesn't matter who does it.

16 It doesn't matter whether the French
17 do it, or Khaddafi or the Soviets, or whoever.
18 The ocean is the ocean and it's still alive,
19 maybe.

20 So I don't think that anybody has
21 got any right to make decisions for the ocean
22 as if they owned it. It doesn't matter what

1 your reasons are. So that's one point I want
2 to make before I go on.

3 Just kind of scanning some points,
4 though, I'm looking at some information that I
5 had taken down earlier, and one of them is
6 that the Navy, for instance, tried to get the
7 E.P.A. to let it sink 100 outdated nuclear
8 submarines, and this is the comment from the
9 E.P.A. official: "There is general agreement
10 that past ocean dumping of low-level
11 radioactive materials are not harmful to man
12 or marine life".

13 So I don't know whether those have
14 been dumped or not but, if so, we better pay
15 attention to that.

16 Then the Cesium and Strontium and so
17 forth, and Eniwetok, which has been referred
18 to before, those materials have penetrated
19 very deep into to the soil of the Atoll, and
20 now they cannot be removed and have
21 contaminated the groundwater at this point. I
22 don't know what's going to happen next.

1 100,000 cubic yards of radioactive
2 debris and soil from Eniwetok due to U.S.
3 atomic testing were removed to Runit Island,
4 dumped into a 350-foot wide crater caused by
5 weapons testing and so on, capped with 18
6 inches of concrete that the experts said would
7 make it safe somehow.

8 And from what I understand from
9 different things that I've read that the G.A.O.
10 has since reported that plutonium may migrate
11 out of this crater on this Island, and the
12 Defense Nuclear Agency does admit that this is
13 only a temporary storage site for this
14 plutonium-laced soil and debris.

15 It scares me to think, you know,
16 who's going to decide what to do about this
17 mess? I mean, we don't have to look around
18 over at the Soviet Union or Khaddafi or
19 somebody for an enemy.

20 Before 1969, the U.S. Army routinely
21 dumped in the ocean and planned to drop 27
22 thousand tons of chemicals and munitions into

1 the ocean and, of course, nobody has to
2 confirm or deny anything if they are scared
3 the Russians are going to get us, or whoever.

4 So, because of all the secrecy, who
5 knows what's in the ocean? It doesn't go
6 away. Poison is poison. It doesn't matter
7 who does it.

8 Enemy is enemy, okay, and anybody
9 that is anti-environment has to be the enemy,
10 because that's all we have in the world.

11 Other Pacific Islands, in the
12 Marshall Islands, for instance, are to be used
13 as a toxic dump site for the United States'
14 toxic wastes of all sorts.

15 Another Pacific dumpster is created
16 then, another trashed island. More ships
17 carrying dangerous toxins on the ocean with
18 all of the risks for the reasons of accidents,
19 of fires, of weather conditions and so on.

20 Somebody made 140 million deal on
21 that, the Island people were offered this, you
22 know, as usual, get them dependent on aid, and

1 so on.

2 So far they plan on 15.5 million
3 tons. Two reasons were given that these
4 Marshall Islands, I forget which of those
5 Islands but, anyway, one reason was they would
6 earn money.

7 Always, it's the money thing and,
8 secondly, they said it would raise the land
9 level, the height of the land up higher, up
10 out of the ocean. So that's coming up.

11 As of December 1981 the Navy needn't
12 tell the public about any possible hazards
13 regarding any nuclear weapons, et cetera, at
14 Pearl Harbor. This was by a nine to zero vote
15 in the Supreme Court where it said:
16 "Protecting military secrets is more important
17 than protecting the environment". This
18 statement was made December 1st, 1981.

19 I come back to the original fact: I
20 don't care who does it, I don't care whose
21 secrets they are. If it's in the ocean or in
22 the air, it's the same thing. It doesn't

1 matter who does it.

2 In the late 1960s and early
3 seventies the Army proposed destroying leaking
4 chemical weapons in a nuclear explosion. That
5 was one plan you guys had. I don't know
6 what's gone on with that but, you see, there's
7 no caring about anything.

8 Top level U.S. officers from the
9 E.P.A., the State Department, and the
10 Department of Defense opposed an international
11 pollution treaty that would ban all dumping of
12 radioactive materials and wastes in the
13 world's oceans. The United States objected to
14 that plan that would ban it. So now what's
15 going on?

16 I mean, the list goes on and on. I
17 don't want to take time because it's getting
18 late, but I do want to mention also the
19 ciguatera poisoning that has been going on.
20 It has been mentioned, and more and more of
21 it.

22 In the April-May, 1989 Pacific

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↓

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1 Islands monthly magazine it has an article
2 there that should make your hair stand on end.

3 This is coming from some physicians,
4 I believe, from Australia, and it came out in
5 the British Medical Journal from England.
6 Offhand, I can't tell you the name of it now.

7 Of course, usually we have to find
8 out these things from other nations, but they
9 have established the link between military
10 activity and the potentially fatal toxin
11 ciguatera poisoning.

12 Outbreaks, they said in this
13 article, are far more serious than have been
14 admitted, and they only account for about 60
15 percent of what they figure the fish poison
16 cases are and, this again, is published in the
17 British Medical Journal.

18 If any of you are physicians, the
19 journal is Lancet, L-a-n-c-e-t, Lancet.

20 It goes on to explain that the
21 nuclear explosions, anything that damages the
22 coral reef, missile testing, port facilities,

1 airfields, submarine movements, dredging of
2 channels, blasting, sea bed drilling, dumping,
3 and all of these things are destroying the
4 coral reefs. And from that comes the fish
5 poisoning, and I don't think I need to say any
6 more about that.

7 A lot of this is from French nuclear
8 testing. What more can I say?

9 So I am begging you people to, you
10 know, if you look at the islands that have
11 been trashed already, I see nothing but
12 trashing islands from Kwajalein, Bikini, some
13 islands have been vaporized.

14 This island is 26 percent U.S.
15 military. Some tell me that we can never step
16 foot on certain parts of this Island because
17 of unexploded ordnance, and then we've got
18 Kahoolawe, and the list goes on and on.

19 So I really, I really want you guys
20 to, you know, to give a darn, and as a
21 responsible adult I feel that I have to say
22 these things, and I thank you for the

1 opportunity.

2 MS. TISCHBIN: Rick
3 Rothschiller.

4 MR. ROTHSCILLER: My name is
5 Rick Rothschiller. I'm representing
6 Sane/Nuclear Freeze, Hawaii and, firstly, I'd
7 like to express my appreciation to the
8 previous speakers.

9 It seems that my tally so far is
10 about 14 to nothing in opposition to the
11 Army's plan.

12 I want to add my voice to the
13 chorus. I have submitted some written
14 testimony, and there were some copies on the
15 table and there may still be some left.

16 Sane/Nuclear Freeze, Hawaii is a
17 grassroots peace and justice organization with
18 more than 1,100 members throughout the
19 islands, and we're affiliated with Sane
20 Freeze, a campaign for global security, the
21 nation's largest citizens' peace and justice
22 organization, numbering 170,000 members across

1 the country.

2 Sane Freeze, Hawaii opposes the U.S.
3 Army's plans to ship chemical weapons from
4 Europe to Johnston Atoll and incinerate the
5 chemical agents in these weapons at Johnston.

6 Unless the Army can prove without a
7 doubt, A, that the transport and incineration
8 can be completed with absolutely no risk of
9 harm to the ecosystem and, B, that the
10 transport to and incineration at Johnston will
11 be less dangerous to the environment than
12 would transport to and incineration at a
13 location nearer the present storage site of
14 the weapons.

15 At this point the Army's plan is not
16 even beginning to satisfy these demands. We
17 also would like to draw attention to the fact
18 that we wouldn't be faced as a society with
19 the problem of destruction of these weapons,
20 these hideous weapons, if they had not been
21 built in the first place.

22 Therefore, Sane/Nuclear Freeze,

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1 Hawaii opposes any further research testing or
2 production of chemical weapons by the U.S.
3 Government.

4 Continued research and production
5 endangers all of Earth's species. We call on
6 our federal representatives to make every
7 effort to stop the chemical weapons build-up
8 resumed by our country in 1987 after an
9 18-year hiatus and to use our tax dollars
10 instead to find safe ways and safe places to
11 destroy the 30,000 tons of chemical weapons we
12 already have.

13 We believe it is in our best
14 interests to stop producing chemical weapons,
15 to pledge never to use them, and to eliminate
16 the existing stockpile in a culturally and
17 environmentally sensitive manner, which the
18 current Army proposal is not. Thank you.

19 MS. TISCHBIN: Anders Daniels.

20 MR. DANIELS: My name is Anders
21 Daniels. I'm an associate professor of
22 meteorology at the University of Hawaii, and

1 my specialty is air pollution meteorology and,
2 as such, I am offering my testimony.

3 It is rather technical, so I won't
4 go through all the numbers. I'll give you a
5 written copy of it.

6 During normal operations at the
7 Island, the Army or the EIS estimates that no
8 standards will being exceeded -- no air
9 quality standards will be exceeded.

10 However, they fail to take into
11 account something called the land-sea breeze
12 that will move the stuff out over the ocean,
13 but then come back in during the night.

14 During such an occasion the
15 concentration might be considerably higher
16 than are indicated in the EIS.

17 During an accident, will there be
18 any danger to Hawaii? Well, the EIS does not
19 address this, such an accident. I've done
20 some simple calculations to show what the
21 concentration would be if that was to happen.

22 Suppose 14 tons of this material

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0354 | 1 would blow up and burn during 20 minutes, as
2 is the scenario in the EIS.

0354 | 3 If the winds were such, this stuff
4 might come to Hawaii, and here the
5 concentration would be about two and a half
6 micrograms per cubic meter of air. Is this a
7 high number?

8 Well, the EIS has a table for limits
9 for the gases. One of them gives the numbers
10 required or which would cause death. This is
11 200.

12 My number is, in other words, 100
13 times less than that number; in other words,
14 way below this limit.

15 The EIS also lists a number that is
16 allowed for stacked gases right at the top of
17 the stack. This number is about one-third of
18 the concentration I'd estimated.

19 It also gives the numbers that
20 healthy workers can be exposed to during an
21 eight hour working day. That number is .1
22 microgram. If I convert my number to an eight

1 hour average, it will also come out to .1
2 microgram per cubic meter.

3 If there is also a number given for
4 the general public, that number is an average
5 for 72 hours, and if I convert my number to a
6 72-hour average, my number is four times
7 higher than that allowed or suggested in this
8 table.

9 I therefore suggest that Hawaii
10 should be included in an analysis of the air
11 pollutant situation.

12 I realize, though, that the
13 probability of having surface air traveling
14 from Johnston Island to Hawaii is very, very
15 rare.

16 Thank you.

17 MS. TISCHBIN: Peter Rosti.

18 MR. ROSTI: Good evening,
19 ladies and gentlemen. My name is Peter Rosti.
20 I'm an oceanographer, but I want to address an
21 issue which doesn't have much to do with the
22 details of oceanography. It's a real simple

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1 issue, it's a simple idea. It's the idea of
2 secrecy.

3 There's a great deal of public
4 skepticism about the military and its
5 activities because of the military's passion
6 for secrecy.

0355 | 7 Why is it that Johnston Atoll is
8 favored for this facility? It's not just some
9 sort of racism. It's not eco-terrorism alone.
10 It's because Johnston Atoll is remote.

11 How many of you have been to
12 Johnston Atoll? Of these people, maybe a few.
13 Most of you, probably never, and you won't be
14 able to, either. It's pretty hard to get to.
15 It's in a big ocean. That's why it's favored.

16 It's remote from public scrutiny.
17 It's remote from any possible protest actions
18 at the site, should anything happen that the
19 public wouldn't like. It's conveniently
20 invisible, in general, to the public, both the
21 American public and anyone else from any of
22 the Pacific nations.

1 If accidents were to happen at
2 Johnston Atoll, large or small, they would be
3 easier to hide than they would be at any other
4 facility located anywhere near any population
5 center.

6 There's another secrecy issue that's
7 important to consider. Why is it that the
8 military has not fully disclosed what it's
9 doing, or at least why does the public believe
10 that the military has not fully disclosed what
11 it's doing?

12 Well, has it ever occurred to you
13 that maybe the military is already doing some
14 things that the public will never know about,
15 and it doesn't want the public to know about?

16 Is there incineration of hazardous
17 chemical wastes or hazardous military weapons
18 already occurring on Johnston Atoll? If there
19 is, the military won't tell you.

20 Other hazardous actions the military
21 might undertake at Johnston Atoll will also
22 never been told to you.

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1 So, in principle, it's a very
2 convenient place.

3 What the Army is asking for here in
4 this forum is for the public to comment on an
5 incomplete set of facts. Just that simple.

6 They give you part of the story,
7 maybe a little bit of the bad stuff, but most
8 of the bad stuff you won't hear in this forum
9 because it's classified.

10 So I have two simple suggestions,
11 very simple: I suggest that the military
12 should fully declassify their proposed
13 activities at Johnston Atoll and then reopen
14 the issues for public discussion here and
15 elsewhere. First suggestion.

16 Now, I realize that the military,
17 and my suggestion isn't going to do that, nor
18 is it going to do that without a lot of effort
19 on a lot of peoples' part.

20 So I have a second suggestion. I
21 suggest that the citizens in the State of
22 Hawaii and elsewhere should undertake a

1 citizens' lawsuit under the National
2 Environmental Policy Act to force the military
3 to closer, to full disclosure of their
4 proposed actions in this case and their other
5 proposed actions, their possible hidden agenda
6 for Johnston Atoll.

7 Thank you very much.

8 MS. TISCHBIN: I have an
9 initial A. Manoharan. I know I mangled
10 another name.

11 MR. MANOHARAN: Thank you. I
12 am A. Manoharan. I am a physician. I am the
13 health and human services officer for the
14 Office of Hawaiian Affairs. I'm a consultant
15 to the World Health Organization and
16 International Labor Organization, and I work
17 for UNICEF, A.I.D. and other international
18 organizations.

19 Oh, you can't hear me?

20 But today I speak as an individual,
21 not for any organization that I represent.
22 Since I am a public health person, I am very

1 keen on prevention.

2 Rather than wait for hazards to
3 happen and then take remedial action, I would
4 recommend that we avoid situations where
5 potential hazards are present.

6 In looking at this, to me this
7 appears like a bad dream. I can't believe
8 this is real. Are these real human beings
9 sitting there at the head of the table? Do
10 they have a real scheme to bring such
11 dangerous chemicals?

12 Or have they been so dehumanized in
13 the military that they have no idea about the
14 harms that can happen?

15 Because I know in the military you
16 are taught to obey orders. Not to think, to
17 criticize, or to even represent a different
18 viewpoint. If you did that, you won't raise
19 to any high ranks that you gentlemen have
20 risen.

21 Now, I mean this seriously. I mean
22 this seriously, because that's how you develop

1 a career in the military, to show your loyalty
2 with all rights and concerns. If you read
3 about Prince Machiavelli, it says he loved his
4 country more than his soul.

5 That means he didn't care for moral
6 principles because he wanted national security
7 to be the issue and not his own moral
8 responsibilities.

9 If such kind of leadership decides
10 many decisions like this, then this may just
11 be an exercise you're going through which you
12 have to for the sake of law, and then business
13 will be as usual from tomorrow.

14 I hope that won't be the case,
15 because here we're talking about an issue that
16 that has racial overtones.

17 When South Africa is letting loose
18 some of its control and Nelson Mandela has
19 been released, here you find the United States
20 making a decision to bring the dangerous
21 chemicals which may affect the poorly
22 represented people in Pacific Island

1 communities.

2 Isn't that strange why we should be
3 setting the clock back when the rest of the
4 world seems to be moving forward?

5 I don't think technically there is
6 any
7 doubt that this is a foolhardy project.

8 Incineration has never been a
9 satisfactory way of disposing of dangerous
10 chemicals, although some companies now are
11 coming forth that they can do this.

12 And then if you do this
13 incineration, I know you're going to take back
14 the residue back to some place in the
15 Mainland. Does that make sense?

16 To me, the whole thing has an air of
17 unreality about this, and people who sit and
18 make these kind of plans must think about the
19 environment as a responsibility that we have,
20 not only for us but for coming generations,
21 and we have no moral or ethical right to
22 destroy the environment for our own short-term

1 advantages.

2 I would like an impartial agency,
3 say, like the United Nations, a committee on
4 environment, like the World Health
5 Organization, to look at this and make some
6 comments.

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7 Is this a sensible, feasible,
8 realistic, scientifically sound proposal?

9 And then to carry this out I'd be
10 very glad if any agency other than the
11 military, even the Environmental Protection
12 Agency with all of its shortcomings would take
13 responsibility for handling this.

14 Because I know in the Army the first
15 casualty is the troops, because you have to
16 maintain morale and loyalty, and the troop is
17 not top priority.

18 When people like this run the
19 affairs and go through the democratic process,
20 so-called, it's sort of -- it's like a big
21 lie.

22 So I would appeal to you gentlemen

1 that if you really believe that you want to do
2 something to solve the problem, don't go ahead
3 with this. This has potentially a great deal
4 of hazards.

5 If you want technical experts, ask
6 technical experts from other organizations who
7 don't have to be loyal. Don't ask defense
8 contractors and other agencies that take money
9 from you to give their opinion.

10 There are plenty of people in the
11 world from other countries, from Third World
12 countries. Get some local people from Hawaii
13 and Micronesia to serve on a committee to
14 advise you.

15 There are scientists in many parts
16 of the world who will be happy to give their
17 opinion and, based on that, please reconsider
18 this, and I hope the agenda is still open to
19 drop this proposal, and common sense and
20 humanity will win over militarism and national
21 security.

22 Thank you.

1 MS. TISCHBIN: DeCambra.

2 MS. DeCAMBRA: I am Ho'oipo
3 DeCambra. I work with the Quakers. I'm
4 testifying on behalf of the American Friends
5 Service Committee. I apologize I only have
6 one copy, which I'll submit to you to go on
7 record, that the American Friends Service
8 Committee has taken a position to object to
9 the transport and incineration of nerve gas
10 weapons from Europe to be disposed of at the
11 Johnston Atoll Chemical Agent Disposal System
12 and project.

13 I am also a native Hawaiian. I
14 reside on the Island of Oahu in the
15 predominantly native Hawaiian community on the
16 Waianae coast.

17 I also want to go on record as
18 speaking as a native person and to represent
19 the views of women on the Waianae coast of a
20 group that I am a member.

21 I'd also like to go on record that I
22 think this is not a good idea. My brother,

1 who worked at Johnston Atoll, died at a very
2 early age of cancer. We attribute it to his
3 occupation. I believe that Johnston Island is
4 not a secret. We know what goes on there.
5 Our menfolks tell us.

6 I have sat on the plane next to
7 Hawaiian men who have gone to work on Johnston
8 Island. They have told me that they must
9 carry vials of injection that, if there is a
10 situation of exposure, they must immediately
11 inject two vials into their bodies wherever
12 they can penetrate their clothing.

13 We know what goes on at Johnston
14 Island. It is not a secret. We protest what
15 goes on there. Our family members die because
16 of what goes on there.

17 The Women's Support Group of the
18 Waianae coast objects to this proposal. We do
19 not support the transport and incineration of
20 nerve gas weapons at this Atoll.

21 In spite of Congress mandating the
22 destruction of the existing U.S. stockpiles of

1 chemical weapons by 1994, many residents in
2 the United States, residents of Kentucky and
3 Maryland have very strongly objected to the
4 Army's plan to destroy the stockpiles of
5 chemical weapons by burning them at each of
6 the eight United States storage sites and on
7 Johnston Island in the Pacific Ocean.

8 We women strongly object to the
9 Army's plan to destroy the stockpiles of
10 chemical weapons by burning them at Johnston
11 Island in the Pacific Ocean.

12 In 1970, Okinawans and Japanese
13 demanded the removal of nerve gas from their
14 countries. Then Oregon citizens fought to
15 keep those very same chemical weapons out of
16 their state, and they won.

17 But we here in the Pacific lost
18 because that same stockpile is now stored on
19 Johnston, formerly known as Kalama Island, a
20 part of the Hawaii chain.

21 We women from the Waianae coast join
22 with our sisters across the globe, and

1 especially with the Women's International
2 League for Peace and Freedom, and we want to
3 object to the transport and incineration of
4 nerve gas weapons from Europe.

5 We understand from the testimony
6 tonight there's new data. We're not
7 scientists and we will never claim to be, but
8 we want a future for our children and our
9 mo'opunas, and this new data submitted by many
10 people who gave testimony tonight but,
11 particularly, by the organization of
12 Greenpeace, tells us that the information
13 contained in both final Environmental Impact
14 Statements in '83 and the the Supplemental
15 Environmental Impact Statement of '88 are
16 obsolete and, therefore, it's worthy of
17 substantial reevaluation and reconsideration
18 by you.

19 The planet is alive and functions as
20 a superorganism - we Pacific people know this
21 - this superorganism in which living things
22 interact with the geophysical and chemical

1 processes to maintain conditions suitable for
2 life.

3 This theory implies that the earth
4 acts with a sense of purpose. It has
5 inspired, this theory has inspired a flood of
6 research into the interaction between living
7 systems and the atmosphere and the earth and
8 the ocean.

9 The envelope of life surrounding the
10 Earth would be unsuitable for life if it were
11 not regulated by the biosphere. Scientists
12 have yet to uncover the actual mechanisms by
13 which life processes regulate the Earth's
14 climate and atmosphere.

15 Scientists maintain that this makes
16 it all the more imperative that man halt the
17 mass pollution of our environment.

18 I might interchange that to say the
19 Army halt the mass pollution of our Pacific
20 environment.

21 Thank you for listening to the
22 testimony given to you tonight. It's given

1 with the greatest respect for the people who
2 have died who have worked on Johnston Island
3 and for the people yet to come who are our
4 future here in the Pacific.

5 Thank you, gentlemen.

6 MS. TISCHBIN: Bill Dougherty.

7 MR. DOUGHERTY: My name is Bill
8 Dougherty, and I can't top that. That lady
9 talked about people who died, and I can say
10 what about the ones that are going to die on
11 Johnston Island? What of the ones that are
12 going to die?

13 It's who the person is, and to the
14 person in charge of this I would ask under the
15 Freedom of Information Act, here and now,
16 where is this soot, this rubbish, this dust,
17 the residue? Where will it be taken in an
18 E.P.A. approved dump and buried?

19 Here and now, please.

20 DR. RICHARDSON: I would prefer
21 to cover questions during the question and
22 answer period that we'll be having later in

1 order to allow everyone --

2 MR. DOUGHERTY: Under the
3 federal Freedom of Information Act, here and
4 now, I believe it's the right of this audience
5 to know now, right now, where this dust, these
6 ashes will be buried?

7 MR. RICHARDSON: Okay, quickly,
8 the question you're asking, as I understand it
9 is, the dried salt that we end up with as
10 waste from this process, where is it taken,
11 and it is, as I say, to be dried, packed,
12 taken to approved and established landfill
13 burial operations in the continental United
14 States.

15 MR. DOUGHERTY: Where, sir?

16 MR. BARONIAN: Let me see if I
17 can help the gentleman out. The contractor
18 for the operation, Sterns Rogers, is busily
19 right now negotiating the final selection of
20 where that location would be. In about two
21 weeks we can tell you who it is and where it
22 is, but we're in the process of negotiating

1 right now, sir.

2 MR. DOUGHERTY: Well, then
3 under the Freedom of Information Act is it
4 possible to have a 90-day moratorium, and at
5 that time when the audience here, interested
6 people, reconvene to find out where that stuff
7 is going to be buried?

8 We have an energy, garbage-to-energy
9 project here on Oahu, and the residue, as I
10 understand it, is going to be buried in a
11 landfill here.

12 MR. BARONIAN: We are not
13 negotiating, sir, with any company in Hawaii.

14 MR. DOUGHERTY: I'm not
15 suggesting that.

16 MR. BARONIAN: Oh, I'm sorry.

17 MR. DOUGHERTY: I'm suggesting
18 that there's a very big problem here tonight
19 in trying to steamroll this thing down the
20 drain, and I think you may have gotten an idea
21 of how the audience feels.

22 I would draw the attention, again,

1 to this sheet which describes some problems
2 with our drinking water, and our E.P.A. and
3 their neglect and our Department of Health and
4 their neglect and downright lies, and I would
5 suggest that this thing was over there and is
6 over there now on that table.

7 The Army decided that it wasn't
8 going to have this thing on their table, and
9 it was hidden behind the desk where people
10 sign in.

11 I had to inform the people over
12 there that this was a high school, it was
13 public land, it is our land, and it's over
14 there, and I would ask anybody that's
15 interested in water to pick it up.

16 This site on Johnston Island where
17 the the lady in the audience's brother died at
18 a young age after being exposed to that Island
19 of cancer is, in the newspaper it says it's
20 800 miles, I heard another figure, seven
21 hundred something miles, from here.

22 And another testifier made the point

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1 that it's in the loop of the winds that go in
2 a circle in the Pacific and, if it's 800 miles
3 away, at 15 miles an hour it would take
4 something like two and a half days to hit this
5 Island, in our Island chain, right down the
6 line.

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7 What happens if there's an
8 explosion, as was brought up earlier? What
9 happens to the fish that migrate? What
10 happens to us?

11 What I would suggest is that, yeah,
12 we
13 need a moratorium on this. That, no, we don't
14 need it jammed down our throat, and if you've
15 got to burn this stuff and it's so very safe,
16 that it should be burned right there in the
17 Pentagon.

18 And in closing, I don't have
19 anything to say, because everyone here has
20 said it so well, and I believe that the
21 message is getting clearer and clearer to you
22 that, yeah, we all live on one world and,

1 yeah, we're all messing it up.

2 And we just got to stop saluting and
3 saying yes, sir, and we got to say, by God,
4 you can't do that. You can't haul this stuff
5 in from all over the world, you just can't do
6 that.

7 The idea of burning what is there is
8 appalling, but the idea of making this a
9 world-wide place to burn, there's no word for
10 it.

11 MS. TISCHBIN: Lopeti Senituli.

12 MR. SENITULI: Good evening. I
13 am fortunate to be the general coordinator of
14 the Pacific Concerns Resource Center. Pacific
15 Concerns Resource Center is the secretariat of
16 the Nuclear Free and Independent Pacific
17 Movement.

18 The Nuclear Free and Independent
19 Pacific Movement has member organizations in
20 35 countries within the Pacific Islands, and
21 the Pacific Rim.

22 A number of speakers that have

1 spoken before me are involved in the Nuclear
2 Free and Independent Pacific Movement.

3 I am from Tonga. I'm not a citizen
4 of the United States. I work out of New
5 Zealand at the moment, and I think it's a
6 shame that I have to come all this way in
7 order to voice an opinion of people from
8 non-U.S. territories in the Pacific, people
9 who will be directly affected by the proposals
10 which you have circulated at a very late
11 stage.

12 I have at least seven specific
13 comments which refer directly to the second
14 supplement of the Environmental Impact Study,
15 and I would have preferred to get immediate
16 answers for them but, seeing that it's a bit
17 late, I'd rather -- I would send these in and,
18 hopefully, the answers can be circulated
19 amongst not only those of us here but also
20 other interested people, not only within the
21 United States but also in the Pacific region.

22 The first question has to do with

1 consultation. What other governments in the
2 South Pacific can be consulted? That is, have
3 the governments of the Republic of Curivos,
4 Western Samoa, the Federated States of
5 Micronesia or Tahiti Polynesia, have they been
6 consulted on this?

7 I have cited these four countries
8 because those are the countries that are
9 geographically closest to Johnston Island,
10 apart from the Hawaii chain.

11 Related to this which or has any of
12 the regional organizations that deal with
13 environmental protection been consulted with
14 regards to this proposal?

15 And here I refer to the South
16 Pacific Commission, of which the United States
17 is a member and, of course, the South Pacific
18 Commission has an environmental program called
19 the South Pacific Regional Environmental
20 Program, or SPREP.

21 I also refer to the South Pacific
22 Forum, which has the South Pacific nuclear

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1 freeze on treaty. Those are the two specific
2 questions with regard to consultation.

3 The second question is with regard
4 to downwind, as referred to in the SSEIS. The
5 EIS here considers that the human population
6 of Johnston Islands will not be affected by
7 the burning as they live upwind of the
8 disposal site.

9 I remind you of the Bravo deaths of
10 1954 which was conducted on Bikini and, due to
11 a change in wind direction the Islands of
12 Rongelap and Utrik and the crew members of the
13 Lucky Dragon, the Japanese fishing boat that
14 was in the region, were, unfortunately, as the
15 U.S. Army said, contaminated.

16 Given the prevalent typhoon and
17 tropical cyclone season in the region, this,
18 again, is subject to almost, almost - can't
19 get the word for this - unpredictable changes
20 in the weather patterns.

21 The third question is with regards
22 to the federal acts which the proposal needs

1 to comply with, and I refer here to page 76 of
2 the SSEIS under the number of federal
3 environmental laws that need to be complied
4 with.

5 There are two specific laws which
6 have been clearly stated that do not need to
7 be complied with.

8 One of them is the Clean Air Act,
9 which the EIS states that this is not
10 applicable, and the compliance status, they
11 say that they will, they put substantial
12 compliance.

13 Now, for a footnote they say that
14 they will only comply with the substance of
15 the Act, but not with the administrative
16 procedures of this particular Act.

17 And earlier, on page 54 of the
18 SSEIS, the reason they give for not complying
19 with the Federal Clean Air Act is because, and
20 I quote: "It does not apply because Johnston
21 Atoll is not a state with an institutional
22 plan".

1 Now, if that's the reason, if the
2 reason is because Johnston Island is not a
3 state, should the other Pacific Islanders, do
4 they need -- what else do they need to do in
5 order to get their voices heard?

6 The fourth question I refer to is
7 with

8 regards to air pollutant emissions. Now, the
9 SEIS bases its conclusions with regards to air
10 pollutions is based on data from tests done at
11 the Tooele Army depot in Utah, because no
12 similar data is available from Johnston Atoll.

13 Now, given the different prevalent
14 climatic conditions over the continental
15 United States and the ocean that surrounds the
16 Johnston Atoll, I am suggesting that this data
17 is completely erroneous and, therefore, it is
18 not a good foundation on which to base this
19 particular proposal.

20 And that is only one illustration of
21 the various loopholes in the arguments and the
22 logic that has been used in this particular

1 proposal.

2 The EIS also admits that the dioxins
3 will be released into the atmosphere, but they
4 also suggest that this is within the E.P.A.
5 acceptable levels.

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6 Now, the question is, what are these
7 levels and how about the dioxins that gets
8 into the food chain? Who decided these
9 levels? Are these levels being referred to
10 the people?

11 There is reference to the possible
12 repercussions of seismic activity in the
13 region and the possible repercussions from the
14 tsunamis that will be generated by these
15 earthquakes.

16 Given that the harbor in Johnston
17 Atoll is only useable during calm conditions,
18 and in the Johnston Island region you get calm
19 conditions in two months in a year.

20 Every time there is a change, a
21 radical change in the weather, the ships will
22 be regarded to get out of the harbor and hang

1 loose in the open ocean.

2 Five. I refer to the stockpile that
3 is being moved from Rhineland in West Germany.
4 On the 8th of March, the government of West
5 Germany revealed that the chemical weapons
6 from the depots in Rhineland are expected to
7 leave by rail and sea between July and
8 September this year through a north seaport.

9 Now, they have not identified which
10 particular route and, of course, the EIS
11 states that the routes and the repercussions
12 or the environmental impact statements for the
13 routes that will be used is the responsibility
14 of the host nation. In other words, it is the
15 responsibility of West Germany.

16 The chemical weapons, of course,
17 belong to the United States.

18 The related question to this is,
19 what happens after the chemical weapons,
20 you've run out of chemical weapons to dispose,
21 to burn off?

22 My theory is that after they have

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1 done with all of the chemical weapons then
2 they will continue into industrial and toxic
3 waste, which the U.S. government or the
4 various U.S. corporations are trying to sell
5 to the Third World, to Africa.

6 Now they are trying to sell them to
7 the Pacific Islands. Offers have been made to
8 the Marshall Islands to accept the import of
9 toxic waste to use as landfill.

10 Because of the greenhouse effect,
11 they are suggesting that use this toxic waste
12 to raise the land levels.

13 So I'm suggesting that this is
14 something that is in the pipeline, which they
15 are not -- they are not willing to reveal or
16 not even willing to discuss.

17 The sixth point that I refer to is
18 the alternatives, alternative sites, that is.

19 Now, no alternative has been
20 forwarded in this second supplement, and I
21 quote here, It says: "Destroying the European
22 stockpile at one of the proposed CONUS, that's

1 the sites on Mainland U.S. chemical munition
2 installations, has many disadvantages. The
3 most compelling disadvantage being risk
4 associated with cross-country transport of
5 chemical munitions within the United States".

0367 | 6 Yet no revelation of the risks of
7 ocean transportation is addressed here, and I
8 give you the Exxon Valdez as an illustration.

0368 | 9 Finally, I refer to waste
10 management, and this also refers to a question
11 that was raised earlier. In page 61 of the
12 SSEIS they classify three different types of
13 wastes which will not be burned off, and the
14 first one is liquid processed waste.

15 What they will do with this is dry
16 the brine, that is, the salt that has
17 accumulated, then containerize them, put them
18 in containers and then ship them to
19 E.P.A.-approved hazardous landfill sites in
20 the U.S. continent.

0368 | 21 The second is with regard to solid
22 waste with value, and I underlined the words

1 'with value'. What they will do with this is
2 to ship the scrap metal from Johnston Atoll to
3 Hawaii for sale at market price.

4 There's a clear reference here to
5 Hawaii.

6 Now, the third category of waste is
7 solid waste with no value, this is on page 62,
8 and it states they will ship the non-saleable
9 waste to hazardous landfills on continental
10 United States. That's a sign of things to
11 come.

12 So, by way of conclusion, I would
13 like to make two statements of appeal. And
14 the first one is really directed at those of
15 you that are in the audience, and I believe
16 Ho'oipo, my Hawaiian sister there, mentioned
17 it.

18 This is with regards to your
19 successes, is the failure, is our failure,
20 that is the failure of the Pacific Islanders.
21 Because of the stringent environmental laws
22 here on the U. S. Mainland and in Europe,

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1 these guys are forced to export them into the
2 Pacific.

3 So, my appeal would be that, in
4 pushing for stringent laws, in pushing against
5 this proposal, that you keep in mind those of
6 us in the Pacific Islands who are not even
7 being consulted.

8 My second appeal is for you to take
9 back your proposal. Don't review it, don't
10 review your proposal. Take it back and dump
11 it. We do not need a review. Please, don't
12 do it.

13 The basic reason for this, in Army
14 jargon, the reason is because this proposal is
15 fucking offensive.

16 MS. TISCHBIN: I know I can't
17 pronounce your first name. Prejean is the
18 last name.

0369 19 MR. PREJEAN: Ano ai ahiahi ka
20 kou apau o Kawaipuna Prejean ke ia e Hawaii
21 hau.

22 You know, the last time we got into

No specific comments
on 3 SEIS.

1 this subject, the gentleman with the camera,
2 Carl Young, invited me down to Moilili, a
3 small little library, had a few uniformed
4 people in there, a couple of fire people, and
5 we mentioned to them that they should keep
6 mustard for hot dogs and not for gas, which
7 kill people.

8 And I look at tonight and I'm
9 reminded about Hawaii's history, a very long
10 history of invasion by the U.S. government.

11 On January 17th, 1893, 97 years
12 later, without our consent they continue to
13 come up with ideas that are asinine. And what
14 we really fear is that they are out of touch
15 with humanity and very desensitized.

16 I get very concerned, because we
17 just came back from a journey that took me to
18 Washington, Deceit, and why I say deceit is
19 because as Poka, Laenui, and many of the
20 people here that's been concerned about
21 justice with dignity, including Moani and many
22 other members, Lela, and people that have been

1 concerned, is that we had treaties that were
2 broken also with Hawaii.

3 So, who is to protect us from the
4 protectors?

5 The woman just mentioned the
6 unconstitutionality of the martial law which
7 ran for 34 months in our homeland while the
8 lands were grabbed illegally, never paid for,
9 and you still occupy those lands, and you
10 expect us to look, you know, with glee that
11 you folks come up with another proposition of
12 what you think is a good way to dispose of
13 murderous weapons.

14 Who is to protect us from people
15 like you that come to our land. Now you claim
16 it through some kind of trickery, swindle and
17 fraud, and tell us that you have an idea of
18 how to dispose of something that we never
19 created.

20 I looked all in the front row, I
21 looked up at the front group, and I don't see
22 anybody that I'm related to, and I even got

1 family name, Bush.

2 But I think that's really dangerous
3 is again to pretend, make this pretense that
4 you're doing it for our behalf for national
5 security, and yet our nation has been trampled
6 under by the invadeers.

7 I also had an opportunity to be in
8 Geneva, Switzerland for the 46th session of
9 the Human Rights Commission, and the the main
10 theme at this Commission was human rights and
11 the environment, and what you propose is a
12 direct violation of not only my human rights,
13 but every person's human rights in this room
14 or in the Pacific, which is going to be the
15 dump site for your weapons.

16 I noticed earlier when I was
17 watching some of the people, they seemed very
18 agitated, jumpiness, shaking around, smiling
19 to one another.

20 I would really be fearful because I
21 know that you folks are ready to turn on the
22 incinerator as soon as its built. But these

1 are the kind of things that I like to impress
2 on you as fellow human beings, even above the
3 monk seal and above the kohola, the whale, and
4 above all of the other creatures that claim
5 Mother Earth as a living environment, that
6 give you a hoot, like that owl says, and don't
7 pollute.

8 And I would also, when I looked up
9 there, talk about demilitarizing the Pacific.

10 Hawaii, some of you may know, was
11 really ahead of its time in disarmament. They
12 decided to lay down the arms, that war was
13 stupid.

14 So that's what we're looking for.
15 Hawaii is the Aloha State, spirituality,
16 commonality, we're all on this Earth together.

17 So we have to decide to make
18 solutions so Pua and Poka's children, who are
19 here tonight, and some of the other young
20 people have something to lead when it's their
21 turn, because of all of the others that came
22 before us that gave a damn, that were

1 concerned, that stood up, that came tonight
2 instead of staying home and watch television.

3 I'm really happy to be here and to
4 add my voice to the opposition of moving any
5 gas anyplace on Mother Earth.

6 Mahalo.

7 MS. TISCHBIN: Claudia Kinsey.

8 MS. KINSEY: My name is Claudia
9 Kinsey. I'm a nutritionist, and I want to
10 commend the organizers for this meeting this
11 evening. I'm very grateful.

12 I understand that this hasn't been
13 done since possibly 1983. I just have a few
14 questions and statements to make.

15 I've worked on dumping of
16 agrichemicals and other toxic waste products
17 before with some of the U.N. agencies, and I
18 realize that the U.S. has not signed the Basal
19 Agreement, which provides guidelines for waste
20 disposal of toxic waste products.

21 And I'm just wondering if the
22 procedures you've described in your documents

370 | 1 here this evening, are you meeting the Basal
2 Convention standards that have been set out?

3 This was set by the W.H.O. and
4 F.A.O. groups. Do you happen to know that?
5 Basal Convention is something that was -- was
6 designed by W.H.O. and F.A.O., specifically
7 looking at the dumping procedures of toxic
8 waste products. We have not signed it, but
9 are you meeting these standards, anyway?

10 MR. BARONIAN: Let me see if I
11 can answer your question. Basically, there
12 are no liquid discharges from the plant. All
13 liquids are sunk, go through the brine drives,
14 go into those drums, and will go to that
15 E.P.A.- licensed landfill on the Mainland,
16 with which we're negotiating now, as I
17 mentioned earlier.

18 The laws that we are meeting is
19 under the Resource Conservation and Recovery
20 Act. We must get a permit from the E.P.A.

21 They have set the requirements for
22 that permit and have established some very

1 elaborate terms that we must meet before
2 E.P.A. will allow us to operate, but I'm not
3 familiar with the particular --

4 MS. KINSEY: I'm hoping that
5 we'll find some public disclosures of this
6 meeting in the media, both national and, you
7 know, in the international press as well. I
8 think, you know, there's been a lot of concern
9 as to whether the United States is going to
10 sign the Basal Agreement.

11 I mean, there's a lot of discussion
12 amongst the Soviets as well. Different
13 colleagues I've met, they've said: Claudia,
14 you know, if you go ahead and sign the Basal
15 Agreement, we certainly would think about it,
16 too. And I think abiding by the standards and
17 guidelines would certainly set a precedent.

18 MR. BARONIAN: The Army has
19 made a commitment that, and I'm sure I'm
20 speaking for for Doctor Richardson and Colonel
21 Busbee and everybody else, we will abide by
22 all federal and state regulations.

1 We'll be enforced by E.P.A.,
2 Department of Health and Human Services, and
3 they will make sure that we meet all
4 applicable state and federal standards. That
5 much I can assure you.

6 The Army will not do this program in
7 a vacuum.

0371 | 8 MS. KINSEY: All right, another
9 question. A lot of the R and D for disposal
10 of these waste products has been done in
11 Pakistan, having heard some testimony at the
12 East-West Center.

0371 | 13 Has this gas, have you been testing
14 this methodology in Pakistan as well, the
15 nerve gas?

16 MS. TISCHBIN: If I understand
17 the question, you're asking if we've ever used
18 this gas?

19 MS. KINSEY: Have you been
20 testing its disposal capability at the
21 Pakistan site?

22 It's been conducted on disposal of

1 agrichemicals, pesticides, on the Pakistan and
2 Afghanistan border. Are you also testing them
3 there?

4 DR. RICHARDSON: No, by no
5 means.

6 MS. KINSEY: Okay, well, this
7 would be another area that I think should be
8 publicly disclosed. What are the results of
9 the testing in Pakistan of the different toxic
10 waste products, pesticides and Agent Orange
11 and others?

12 You have been testing that, but I
13 don't believe it's been publicly disclosed.
14 You know, those are the only comments I would
15 make.

16 I mean, we're all concerned about
17 the dumping of these toxic waste products and
18 currently drafting a project in Southeast Asia
19 on these issues.

20 And if anyone is concerned with
21 participating or fund raising for the project,
22 they can contact me.

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1 My name is Claudia Kinsey, or
2 possibly Colonel Carestia, or at the
3 University, Doctor Bob Woods.

4 Thank you.

5 MS. TISCHBIN: Lela Hubbard.

6 MS. HUBBARD: My name is Lela
7 Hubbard. I'm a Hawaiian. I used to be proud
8 of being an American, but I'm no longer proud.
9 And my family signed the Declaration of
10 Independence. We have a seat in the D.A.R.,
11 et cetera.

12 You know, it took millions and
13 millions of years for our world to evolve. In
14 roughly 300 years we're doing a pretty good
15 job of destroying it, and we don't want this
16 death in the Pacific.

17 No one has mentioned this: Who gets
18 the bucks? That's the bottom line in this
19 country. This is a good way in a budget
20 crunch for the military to inflate their
21 budget and force taxpayers to pay more money.

22 Furthermore, it's pretty obvious

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Nospecific Comments
on SSEIS

1 that our Senator Daniel Inouye knew about
2 this. I accidently heard about the Johnston
3 Island construction before anybody really knew
4 about it because I ran into a democrat who was
5 in on the construction bid there.

6 You know, the bottom line is: Our
7 country is no longer motivated by patriotism,
8 goodness, idealism, everything that our
9 country was founded on.

10 It's motivated by greed and by me-
11 first, and I think it's time that we stop it,
12 and the only way that we can really stop it, I
13 mean, the military is just a symptom.

14 Our Executive controls them, our
15 Congress controls them, and the military
16 mentality is a pretty sad one because, if they
17 have a goal, no matter what, they reach it.

18 And we have a big fight. We're
19 going to stop any further movement in the
20 Pacific and, in reality, getting down to the
21 basics and the practical part of this, we're
22 going to have to put a rush on Senator Inouye.

1 He has power in Washington D.C. Is
2 he going to use it for us? Or is he going to
3 use it for the monied interests, who seem to
4 be his friends? That's my question.

5 Thank you.

0313
* | 6 MS. TISCHBIN: Stratford
7 Goodhue.

8 MR. GOODHUE: Hi, my name is
9 Stratford Goodhue. I would like to thank you
10 for all being here tonight. I think that
11 everybody in this room would like to see this
12 world become a better place. I think we all
13 have that in common.

14 I think that the method is what
15 we're discussing here, and I think that we
16 need to, based on the testimony we've heard
17 already tonight, there's serious reason to
18 reconsider what's going on here, and I don't,
19 I find it hard to believe that there is
20 significant flaws in what's been mentioned
21 tonight.

22 I think the fact that the Colonel

* No specific
comments on
SSEIS.

1 here is in charge of a part of the military
2 called the chemical demilitarization, that's
3 interesting terminology.

4 You know, chemical demilitarization.
5 To get rid of these chemicals,
6 demilitarization. The term right there, to
7 me, it sums up an awful lot of how the
8 military, people in the military, view an
9 awful lot of what's going on.

10 They adjust the logic to fit in
11 terms of they're compatible with, what they
12 can live with, and I'd like to suggest that
13 the adjusted logic is actual insanity, it's
14 irrational.

15 I'm not a scientist, and I don't
16 have a bunch of facts to give you. I'd just
17 like to -- and I don't know -- what I'm about
18 to say has no bearing on whether it's going to
19 be fulfilled or not, but I don't know if all
20 of you believe in God, but I think that God is
21 going to hold each one of us responsible for
22 every action that is done, and I think below

1 our justifications we know in our heart
2 whether this is right or wrong, and I hope
3 that you act on your heart.

4 Thank you.

5 MS. TISCHBIN: That was, I'm
6 sorry, Mr. Goodhue was the last person I had
7 on my list. Is there anyone else that would
8 like to make a comment or a statement, please?

9 If you would give us your name.

10 Thank you.

11 MS. KRUSENRAK: I didn't know I
12 was going to do this. My name is Silvia
13 Krusenrak and I'm an Islander who lives in
14 California a lot, for the last 38 years, and I
15 happened to be living there in the 1960s
16 during the Vietnam era, and I kind of woke up
17 at that time and started asking some very
18 serious questions.

19 Up until that time I went blindly
20 along, believing: oh, we're this wonderful
21 place and we do wonderful things for everybody
22 all over the world, la, la, la.

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* No specific
comments on
SSEIS

1 When President Kennedy was
2 assassinated, that was my first wake up. And
3 then I heard the word 'Vietnam' and began to
4 ask serious questions. I could not get
5 answers for two years. I was hearing an
6 argument on two sides of the issue. I had to
7 dig very deep to try to get real answers.

8 I heard a lot of rhetoric on both
9 sides. It took me two years to make my
10 decision about where I was, and I joined the
11 Peace Movement in the San Francisco Bay Area.
12 I believe we were all being lied to.

13 Our sons were being taken to put
14 into a military machine. Nobody knew what was
15 going on, and I thought my country was about
16 freedom and democracy.

17 My city, Mill Valley, California,
18 was the first city in the United States to
19 vote against the war. We did that by
20 educating the whole population, having the
21 leading hawks and generals come and talk to
22 us, with the doves on the other side of the

1 stage in debate.

2 We had long discussions about this,
3 and then we put up a peace vote and the people
4 of Mill Valley voted against the war. They
5 were satisfied that we were all being lied to.

6 Later we found out through the
7 Watergate hearings that President Nixon had
8 spent great funds in discrediting the Peace
9 Movement, calling them pinko-commie dupes, and
10 today there are still many, many Americans who
11 still think that we in the Peace Movement were
12 pinko-commie dupes.

13 We were all divided then, and our
14 kids were sent to kill and be killed, and the
15 Vietnam vets came back and, I think up until
16 10 years ago, 130,000 young Vietnam vets
17 committed suicide. They couldn't stand what
18 their country had done to them and what we
19 were doing to them.

20 But part of my awakening, one of the
21 questions was what was this Nuremburg stuff,
22 this Nuremburg precedent about?

1 That was about all of us taking
2 responsibility for our conscience. It was the
3 United States that called the tribunal, the
4 trials, and all the Germans said: I was only
5 following orders.

6 So from then on we had this new
7 precedent.

8 We were supposed to ask our own
9 consciences first. The last 40 years I've
10 been appalled that that is not common thinking
11 in our society.

12 And I'm an activist so I listen all
13 the time to the radio, and I take part in all
14 kinds of things. But nobody thinks about
15 conscience or speaks the word. It's not in
16 our moving, daily vocabulary.

17 Tonight I sit here listening to all
18 this madness about germ warfare.

19 Who have we been committing germ warfare
20 at? Why do we need so much of this crazy
21 stuff? And I look at the military men and I
22 wonder, what have you been thinking? Where is

1 your conscience about things like this?

2 Not too long ago we suddenly bombed
3 Panama. I watched for three days on TV to
4 everything that happened. It was pure
5 madness.

6 The press was not allowed there,
7 except for the Pentagon press pool. So the
8 American people do not know yet what really
9 happened there. This is our democracy, isn't
10 it?

11 I keep wondering if Colonel North
12 shredded our whole constitution, because I
13 believe that this was a democracy. We have
14 the freedom and the right to know what's going
15 on so that when we go to the polls to vote we
16 can vote intelligently.

17 I can't vote intelligently if I'm
18 not given all the information to weigh and to
19 look at, and no one is given that. There's
20 too much -- there are too many secrets.

21 We've moved onto a course where
22 everything is covert and secret, and it is as

1 though the electorate doesn't have the sense
2 to make decisions for themselves.

3 That to me is getting very
4 dangerously close to what Germany was all
5 about. People had to be told what to do and
6 what to think.

7 So, I guess I want to say in closing
8 here, I beg all of you militarists to really
9 search your consciences, and I have a
10 question.

11 I want to know what good all of this
12 was? I've heard wonderful passionate speakers
13 who seem seem to be well braced with all of
14 the technology and the details of this issue.
15 Will this make a difference? Who has the
16 power among the military men here, who has the
17 power to say: Okay, the people have spoken.

18 That is madness, that is crazy.
19 We've got to think of something else or we've
20 got to take another three months or six
21 months, or whatever it takes.

22 Or is this another one of those

1 hearings that really doesn't result in
2 anything? And it's all quieted down and the
3 chemicals may well be on their way already,
4 for all we know.

5 I'd like to, will someone answer
6 that question? Does this make a difference,
7 this kind of a hearing, and to whom, who has
8 the authority to say, yes, it does, yes, it
9 will?

10 DR. RICHARDSON: Let me answer
11 that briefly, and then we can talk in more
12 detail later if you like.

13 First, let me hit one thing. You
14 said maybe the chemicals are on their way.
15 Certainly, that is not the case.

16 It is a proposed action that we are
17 taking, taking a look at now. The decision
18 authority for the action is the Assistant
19 Secretary of the Army for Installation and
20 Logistics in the Pentagon.

21 Certainly, I expect that individual
22 and all of us to study very carefully the

1 comments we've gotten here.

2 I will carry back, others in this
3 group will carry back immediate comments on
4 what we have heard here and, as we get them,
5 we'll get the complete transcript to look at.

6 The magnitude of the difference it
7 will make, I can't say at this time. There
8 may be things that we'll do differently, maybe
9 alteration in schedule, different approach. I
10 really can't say how much a difference it will
11 make.

12 MS. KRUSENRAK: Are you
13 confident that some of the suggestions made
14 will be carried forth?

15 DR. RICHARDSON: I am confident
16 that every suggestion made will get the very
17 fullest consideration we can possibly give it.

18 MS. KRUSENRAK: I said carried
19 forth. Are you confident that there's a
20 possibility that suggestions will be carried
21 forth?

22 This man suggested a three-month

1 hiatus to reconvene in three months. There
2 were some wonderful suggestions here. Are you
3 confident that our voice counts?

4 DR. RICHARDSON: Yes, I am
5 absolutely confident of that.

6 MS. KRUSENRAK: Thank you. I
7 really need to hear that because I've lost a
8 lot of faith in our government and our
9 military. I think it's gone mad.

10 Thank you, everybody.

11 MS. TISCHBIN: Are there any
12 others?

13 MS. SHIMUTSU: Good evening.
14 My name is Susan Shimutsu, and I'm grateful to
15 all of you who have come before me to speak
16 against this plan to incinerate toxic chemical
17 wastes at Johnston Atoll.

18 In many ways I echo the concerns of
19 all of you, but I cannot go home without
20 speaking at this critical time.

21 I hope all of you will pick up a
22 program that is made available by the United

1 States Army. It's there on the table.

2 I've had to put my own page numbers
3 on there. On page 5, I'd like to read a small
4 paragraph from what they've written on the
5 focus on safety:

6 The procedures to be followed and
7 equipment to be used will be tested at the
8 chemical agent munitions disposal system near
9 Tooele, Utah. It's just the procedures and
10 equipment that will be tested but a full-scale
11 facility will first be operated at the
12 isolated Johnston Atoll in the Pacific to
13 destroy chemical agents in storage on the
14 Island. This facility will be fully tested to
15 insure public and worker safety before any new
16 disposal plants become operational in the
17 United States.

18 And that means that we are the
19 guinea pigs and that they are sure that will
20 be doing this in Johnston Atoll.

21 On page 3, they state that: The
22 Army, supported by certainly several

1 independent studies and analyses, decided from
2 a programmatic viewpoint that the safest way
3 to dispose of the chemical weapons was by
4 on-site incineration, which eliminates the
5 risk of transporting the chemical weapons to a
6 centralized facility, and it confines the
7 disposal process to the eight sites where the
8 weapons are stored.

9 Well, they have the eight sites in
10 the continental United States, but I don't see
11 any difference with extending it to Germany.

12 So, why have you deviated from these
13 first decisions? I mean, you contradict
14 yourselves on page 3 and 5 at the same time.

15 I represent my two children, who are
16 four and seven. They have silent voices for
17 now, and I have just a few questions for you.

18 How long will it take to dispose of
19 the German stockpile? Is this facility to be
20 a permanent facility? Will other countries be
21 allowed to suppose of their chemical munitions
22 there?

1 These questions have been asked
2 before. And is there a possibility of this
3 facility being converted to a nuclear waste
4 disposal facility permanently, also? And what
5 is the length of storage to be?

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6 All it takes, it seems, is an
7 apology
8 from the government for not following through
9 with any of its agreements, but then at that
10 point what can we do about it?

11 So far there has been nothing that
12 we can do if something is in progress and the
13 government refuses to continue.

14 What is the expected length of the
15 incinerated waste? Why not dispose of these
16 toxic wastes on the continent as you had first
17 planned, in a place where there is less
18 violent earth activity?

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19 The Pacific is well-known as the
20 ring of fire, and there are constant
21 earthquakes, tsunamis, hurricanes with 150 per
22 mile an hour winds. All these earth and

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0378 | 1 atmospheric activity occurs frequently and
2 will wreak havoc to any facility put on
3 Johnston Atoll.

4 What would happen to the facility in
5 this case? I think you seriously need to look
6 at this point of what happens if something
7 happens because I think the 'if' is what
8 happens when it happens, not if.

9 The contamination to the sea and the
10 air will affect our children by mutation, by
11 cancer and by death.

12 Isn't it easier to contain a spill
13 on land than at sea? Because at the sea, the
14 toxic chemicals will be immediately dispersed
15 in any and all of 360 degrees, affecting all
16 coastlines of South America, North America,
17 Canada, U.S.S.R, China, Japan, Australia, and
18 especially Hawaii, the Pacific Islands.

19 I hope for all our children and
20 future generations that you will abandon this
21 ridiculous plan.

22 Thank you.

1 MR. CARLSON: My name is Ron
2 Carlson. I'm a biologist, a chemist and a
3 dental surgeon, and I speak against the issue
4 of incineration of toxic chemical waste
5 products.

6 There are other processes that could
7 be utilized very effectively in the
8 recombination of much of this chemical
9 substance. It is expedient to incinerate it.
10 It might take a bit more time, energy, input
11 and resources to be able to recombine these
12 substances into meaningful, productive
13 chemical forms.

14 An issue at point is, I think, the
15 information lack here right now. I think that
16 in the resources that are available, decisions
17 have been made, and this is something that
18 it's not an evil thing.

19 It's, I think, a lack of
20 information, a lack of perhaps some other
21 input from other sources.

22 So that I don't see the military as

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1 the bad guys and checking out a place on the
2 planet that we could store products that we've
3 created that are devastatingly over our heads,
4 hanging over our heads.

5 In 1945 they initiated the use of
6 fluoride in communal water supplies, and for
7 many years this has been assumed to be a very
8 positive thing for society.

9 In the last five or six years though
10 a lot of information has come out to indicate
11 that it's not as wise to do this.

12 Recently, the national toxicology
13 program produced some evidence showing the
14 carcinogenicity or the cancer-producing quality
15 of flouride. And so that's just an analogous
16 situation.

17 I think we don't have all the
18 information, the information is not in, and I
19 would charge the people in the places of power
20 and authority to begin to reassess the ideas.

21 I know there's a lot of investment
22 in it, too. I mean, you've got the facility

1 there and all the mobilization and the ideas
2 and, you know, I didn't even hear about this,
3 and I don't normally come to these kinds of
4 things, except when it affects the water
5 supply or air here locally.

6 But I was riding in my car this
7 morning and I happened to hear it on KHBH - or
8 not KHBH - but KHPR, the public radio station.

9 It briefly mentioned this meeting,
10 and for some reason it clicked in my ear and
11 so I was kind of like waivering whether to
12 come tonight, and I'm very pleased that I did
13 because I did not know this was as formidable
14 as it was.

15 My question also is, where is the
16 news media in this regard? I mean, you know,
17 I went out at before halftime and called KHON
18 and suggested that they have a reporter down
19 here on their news media to really cover this
20 because this is an issue of great concern to
21 my heart and to my family.

22 I've been here for 20 years. This

1 is my home and this is my planet, and I take
2 the authority and power to stand before you
3 and say that this is something that will not
4 be done, should not be done, and I will do
5 everything within my power to see that the
6 issue is diverted for a period of time
7 sufficient such that some other strategies can
8 be put forth, and I thank you for the
9 opportunity and time to be able to speak.

10 MS. TISCHBIN: Are there any
11 other statements or comments?

12 MR. GOODHUE: I would just like
13 to make an offer to all the people in uniform
14 here that are working here that, as you learn
15 more about things going on, I know you know an
16 awful lot about what some of us here would
17 call one side of the story.

18 As you learn more about everything,
19 if any of you decide to resign I'd be happy
20 to, if you wanted to live here, I'd be happy
21 to take charge of the task force that could
22 help you find jobs. That could help you out.

1 Thank you.

2 DR. RICHARDSON: Thank you.

3 MS. TISCHBIN: If there are no
4 other statements or comments right now, we'd
5 like to take about ten minutes, rearrange the
6 table, and then we will come back and attempt
7 to answer your questions.

8 (Short break in proceedings)

9 DR. RICHARDSON: I do want to
10 again state that we, of course, are recording
11 everything that's been said in the statements.
12 We will record the questions and answers. We
13 will take these back and they will get very
14 careful study. I want to reassure anyone that
15 has doubts that we are listening. We'll pay
16 attention to what is being said by you people
17 tonight.

18 What we'll try to do at this point,
19 I've got many people here, not only from the
20 Army, but from other agencies that have
21 participated in the preparation of the Draft
22 Environmental Impact Statement, people who

1 serve in roles of reviewing it, commenting on
2 it.

3 We will try to answer questions you
4 have. On taking questions, we'll take them
5 from where you are or up here at the podium.
6 I think it would help coming up to a
7 microphone. It would help our Reporter hear
8 what is being said, and I'd have to say, I
9 think I'm a little bit deaf and I have trouble
10 hearing sometimes myself.

11 So, what do we have in the way of
12 questions?

13 MRS. JOYNER: One of the
14 questions that you did not address and several
15 of us asked is, and I'm aware that the EIS
16 didn't address, and that's the ciguatera
17 poisoning. You don't talk about that at all.

18 DR. RICHARDSON: I'm sorry, the
19 question is what now?

20 MRS. JOYNER: Ciguatera, fish
21 poisoning, ciguatera poisoning, ciguatera.

22 DR. RICHARDSON: Okay. Let me

1 get some of the people here.

2 MRS. JOYNER: It's not in the
3 EIS, and it's very basic here. People can
4 die from it, from eating the fish, and nowhere
5 have I read that.

6 DR. RICHARDSON: Come up to the
7 microphone, please.

8 MR. PORSELL: Ciguatoxin comes
9 from a dinoflagellata which inhabits algae,
10 usually coming after a disturbance of
11 dredging. We had a large amount of dredging
12 at Johnston Island in the 1960s. We had
13 ciguatoxin in the fish for a number of years
14 afterwards. We haven't had any there for the
15 last 10 years.

16 MRS. JOYNER: People die from
17 it.

18 *FORSELL*
MR. ~~PORSELL~~: Here or at
19 Johnston? Well, you have local dredging.
20 I've never heard of any people die from eating
21 fish from Johnston Island, so --

22 The last tests that were done, only

1 our eels and sharks had ciguatoxin in the
2 1970s.

3 MRS. JOYNER: What is your
4 name?

5 ~~MR. PORSELL~~ ^{FORSELL}: Excuse me, my
6 name is Doug. I'm the refuge manager at
7 Johnston Island. I've been living there for
8 the last three and a half years.

9 MRS. JOYNER: Then your figures
10 are different from the U.H., because theirs
11 are totally different from that.

12 ~~MR. PORSELL~~ ^{FORSELL}: I'd have to see.
13 We have people who eat an awful lot of fish
14 out there and fish for just about everything.

15 DR. RICHARDSON: Could I ask
16 that the questioners and the people answering
17 the questions from our team please state your
18 name at the start. While we may have heard
19 you before, it will help our keeping of the
20 record.

21 Other questions?

22 MR. DOUGHERTY: I'll get to

1 that one later. At approximately 11 o'clock
2 tonight I got my first glimpse of the
3 Environmental Impact Statement, and are we to
4 ask questions about this Environmental Impact
5 Statement now?

6 DR. RICHARDSON: If you wish.

7 MR. DOUGHERTY: As I digest
8 this, it's 19 after 11 and I've been looking
9 at it a little bit. You've got a box full of
10 those things back there. Didn't see them, no
11 indication that this information was
12 available.

13 I'd like to register a protest that
14 nobody's seen these things until now. Can't
15 think of any questions, but maybe somebody can
16 bring up some.

17 The ciguatera thing, was there a
18 straight answer on that? Did you understand,
19 Mr. Reporter, the questions that that lady
20 asked? Did you get those down?

21 COURT REPORTER: I didn't get a
22 name.

1 MRS. JOYNER: My name is Marsha
2 Joyner, J-o-y-n-e-r.

3 DR. RICHARDSON: I will treat
4 your comment on the time of getting the
5 document as a question and respond to that a
6 bit.

7 I am sensitive to having heard the
8 recurring theme by several people this evening
9 that they had a short time in getting the
10 document or that it was not readily available,
11 that sort of thing.

12 We certainly are going to go back
13 and look at how we distributed it, what the
14 problems may have been, and see if that
15 requires any other remedial action.

16 MR. DOUGHERTY: I'm thinking
17 that we don't need a PR answer. I'm thinking
18 that the Army is swiping this flyer and
19 bringing this stuff out later.

20 I don't believe that there is a PR
21 answer for that, and I'll be, I mean, knock it
22 off, will you? You held these things back

1 from the audience until approximately 11
2 o'clock tonight, and we're supposed to
3 intelligently discuss this stuff.

4 We don't need no PR answers and we
5 don't need no PR man. We need the Army, the
6 United States Army and not a guy -- you don't
7 have any general stripes on.

8 We need people to give straight
9 answers, and one of the questions was, where
10 does this stuff get dumped and we hear, well,
11 there's a contract, that that's being
12 finalized.

13 Well, I don't think it takes much
14 intelligence to remember that the Army and the
15 military has dumped quite a bit of toxic
16 stuff, nuclear stuff. Little tiny things in
17 the paper that shows up that the military has
18 dumped stuff in the ocean.

19 So, what happens if there's a little
20 wind and some of that stuff is on its way to
21 Johnson Island and it gets a little rough and
22 they say well, let's pull the plug and dump it

1 over?

2 Can you guarantee me, somebody from
3 the military, that that's not going to happen?

4 MRS. JOYNER: I just want to
5 interrupt. While he was talking about the
6 EIS, because I think it needs to be on the
7 record because it -- I intend to scream about
8 it.

9 The Army did not post notices. The
10 Governor's office got the copy of the EIS from
11 us. The Health Department got the copy of the
12 EIS from us. I heard one announcement.

13 We called the radio station and they
14 said yes, that's what's so, and that's what
15 they are up to. This whole secrecy has been
16 too much. We published the notices, we called
17 the newspaper, we handed out the EIS, and for
18 anybody that got one, it came from us.

19 We took the time, the money, the
20 effort, to print it and to distribute it, and
21 I want to be on the record about that, and I
22 think since the Army did such a piss-poor job,

1 that we are entitled to at least a 90-day
2 period when everyone in the State, especially
3 the Health Department, the Civil Defense, the
4 Governor's office, has the time to read this.

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5 And to go any further is ludicrous,
6 and, as everyone has said. If it does go any
7 further, it means that it's a done deal and
8 you have lied to us again.

9 MR. JOYNER: We've been posing
10 questions for four hours.

11 DR. RICHARDSON: I'm sorry. If
12 you have a question I'll try to answer it.
13 What I've been writing down in the last four
14 hours is just notes on what people have been
15 saying that I felt that we should be paying
16 attention to. Certainly, things like I've
17 just heard on concerns about distribution.

18 MR. JOYNER: Will there be a
19 public disclosure of the minutes that this man
20 is recording here tonight? Is there going to
21 be a public disclosure of everything that went
22 on here?

1 DR. RICHARDSON: Yes, there
2 will be.

3 MR. JOYNER: How?

4 DR. RICHARDSON: Well, first
5 one route of disclosure of it is in the next
6 version of the Environmental Impact Statement,
7 all the statements, all the questions and
8 answers would be addressed. Do we publish a
9 separate transcript of the document, of the
10 proceedings?

11 MS. TISCHBIN: The transcript
12 itself will be finalized probably at the end
13 of the week. As soon as we get copies, it
14 will be available at the WESCOMM public
15 affairs office.

16 MR. JOYNER: Where will it be
17 available?

18 MS. TISCHBIN: U.S. Army
19 Western Command - excuse me for the acronym -
20 at Fort Shafter. If you would like a copy
21 please get in touch with that office and we
22 will get you a copy of the transcript.

1 We expect to have the transcript
2 finished in about a week. It takes him time.

3 MR. JOYNER: Everything is
4 tentative about the week --

5 MS. TISCHBIN: I apologize for
6 that. We expect him to deliver his final
7 product -- one copy of the transcript will be
8 available on Friday. We would like to make
9 copies it at that point and get it to our
10 office.

11 MR. JOYNER: Why can't you send
12 us a copy?

13 MS. TISCHBIN: We'll send you a
14 copy, sir, as soon as the document is copied.

15 MR. JOYNER: We can count on
16 it?

17 MS. TISCHBIN: Yes. I need a
18 name and address.

19 MR. BARONIAN: Would you give
20 us your name and address and we'll see that
21 you personally get a copy.

22 (Inaudible Discussion)

1 MR. JOYNER: He gives his
2 address. Could I have your name?

3 MR. BARONIAN: Your name.

4 MR. JOYNER: Are you going to
5 send a copy of the transcript to everybody
6 who's signed in or --

7 MS. TISCHBIN: I'm going to
8 send it to the people that request it.

9 COURT REPORTER: Could I have
10 your name, please?

11 MR. MIURA: (Inaudible) Would
12 you be kind enough to summarize your thoughts
13 that page 62, starting at page 62, 63, 64
14 (Inaudible).

15 DR. RICHARDSON: Could I have
16 your name please?

17 MR. MIURA: Bob Miura.

18 MR. ZIMMERMAN: My name is Greg
19 Zimmerman from Oak Ridge National Laboratory.
20 I did assist with the preparation of the EIS
21 and, if I understand the very complex question
22 that was asked, I'll attempt to summarize the

1 assessment of accidents and their consequences
2 and how we took credit or discredit for some
3 of the environmental pathways that were used
4 to quantify the effects of those accidents and
5 assess the environmental insult from those
6 accidents.

7 In a nutshell, there is a
8 programatic document that was released,
9 published in January of 1988 for the
10 continental United States, programatic
11 environmental impact assessment for this
12 Chemical Stockpile Disposal Program.

13 In support of that document, a host
14 of authors published a very detailed risk
15 assessment. It involved the same kinds of
16 munitions, the same kinds of agent that were
17 stored at Johnston Island, the same kind of
18 munitions and agents that are involved in the
19 European movement.

20 We borrowed very heavily from that
21 risk assessment and looked at the scenarios
22 and sequences of things that could occur and,

1 specifically, those things that could occur in
2 such a manner as to release chemical agent.

3 We looked at two primary
4 environmental pathways, the first one being
5 atmospheric dispersion and the second one
6 being a liquid spill that could reach, in this
7 case, the ocean.

8 I do not want to go into detail at
9 this time about how we looked at atmospheric
10 dispersion. Let me just say that it involves
11 meteorology, it involves approved and reviewed
12 computer models and codes that deal with how
13 vapor propagates through the air and how it
14 diffuses and dilutes with distance from the
15 site of the accident.

16 We look at doses that are developed
17 to human dose response at downwind distances
18 from the accident and, based on those doses
19 and toxicological information, we make an
20 estimate of the potential for human fatality.

21 The same kinds of techniques can be
22 used for other species, non-human species.

1 When we look at the other
2 environmental pathway, which is a liquid
3 spill, we get into, instead of the atmosphere,
4 we get into the ocean or the water as a medium
5 of propagation, and we look at how those same
6 kinds of doses of chemical agent would affect
7 aquatic biota.

8 To summarize, let me get back to the
9 specific question. Table 5.2 on page 65
10 identifies those events that we identified as
11 the worst possible events that could occur.

12 That table is divided into two
13 sections. There's present activities, things
14 that could occur now, and then there's
15 activities or accidents that could occur as
16 part of the proposed action.

17 Table 5.3 on page 68 is the result
18 of the atmospheric dispersion model, and it
19 indicates how far downwind the lethal doses
20 would propagate from those accidents that were
21 stated in the previous table. Does that
22 answer your question, sir?

1 MR. MIURA: What type of
2 accident viewed and what were basic
3 (Inaudible).

4 MR. ZIMMERMAN: The particular
5 model we used is known as D2P.C. It's
6 developed by the U.S. Army. It's a
7 battlefield type dispersion.

8 the model itself is known as D2P.C.
9 It was developed at Aberdeen Proving Ground by
10 the U.S. Army. It's a battlefield type of
11 atmospheric dispersion code. It has been
12 modified to specifically deal with a wide
13 variety of agent quantities in a wide gamut
14 spectrum, if you will, of atmospheric
15 meteorological condition.

16 MR. MIURA: And a mixture of
17 gas inside that?

18 MR. ZIMMERMAN: The model is
19 limited to basically one agent type, one gas,
20 if you will, but it does take the other
21 parameters you mentioned, temperature,
22 pressure, other characteristics, the stability

1 of the atmosphere, the wind speed and those
2 things as input parameters to the model.

3 MR. MIURA: What type of model
4 (Inaudible).

5 MR. ZIMMERMAN: Yes, sir, there
6 are inputs that can be added to the model. An
7 appropriate use to model either what we call a
8 puff, which would be a detonation, or a
9 long-term release, such as you would have from
10 an evaporation.

11 MR. MIURA: The model about
12 (Inaudible).

13 MR. ZIMMERMAN: Yes, sir.

14 MR. MIURA: And concentration,
15 what finding (Inaudible).

16 MR. ZIMMERMAN: The dose,
17 right, that we're looking at with this
18 particular model is the 50 percent lethal dose
19 for healthy adult males.

20 MR. MIURA: (Inaudible).

21 MR. ZIMMERMAN: I'm not sure I
22 know the body weight.

1 MR. BARONIAN: 70 kilograms, I
2 think, sir, is my recollection.

3 MR. MIURA: Exposure into the
4 salt water, would the effects (Inaudible).

5 MR. ZIMMERMAN: I'm not a
6 toxicological expert. It's my understanding
7 that, because these are nerve agents, any
8 organism with a nervous system would be
9 affected or could be affected.

10 There have been laboratory studies
11 on species other than human. There are very
12 limited or in some cases extrapolated studies
13 for human dose response, but there are lab
14 type data for rabbits, rats, the lower life
15 forms.

16 MR. MIURA: Any others?

17 MR. ZIMMERMAN: I'm not that
18 familiar with the data, but I seem to
19 recollect that there are some data for
20 invertebrates.

21 MR. MIURA: (Inaudible).

22 MR. ZIMMERMAN: Yes, there are

1 data for fish.

2 MR. MIURA: (Inaudible).

3 MR. ZIMMERMAN: Let me address
4 the confidence interval by saying that we
5 attempt to assign an error band to the results
6 of our modeling. The error band, I might add,
7 covers the uncertainties in not only the
8 dispersion model, the propagation of agent,
9 but the uncertainty in the way the organism
10 responds to the dose and, in fact, that
11 confidence interval is a plus or minus 50
12 percent.

13 MR. MIURA: I'm sorry, I didn't
14 hear that last number.

15 MR. ZIMMERMAN: Plus or minus
16 50 percent.

17 MR. MIURA: Is that a
18 guesstimate?

19 MR. ZIMMERMAN: It's a
20 guesstimate.

21 ~~MR. DAVIS:~~ DR. LEFFINGWELL: The D2P.C. model
22 has a capacity of looking at a variety of

1 doses. It customarily handles three different
2 doses. A 50 percent lethality, chosen because
3 that's a fairly sharply-defined point on a
4 dose response curve.

5 It is not, however, of much interest
6 to us in public health. We're interested more
7 in the no deaths, which is not a very
8 precisely-defined term.

9 There's a lot of uncertainty about
10 exactly what that point is on a curve, or the
11 one percent lethality which is a little better
12 defined, but, again, not what we really want
13 to know in public health issues, but the model
14 does have a capacity of plugging in any dose
15 of interest you want and giving you contours
16 based on that.

17 The data on mammalian species, we
18 know from a variety of different species these
19 agents have been tested on the toxicity is
20 fairly similar among mammalian species.

21 It's not like what we'll say the
22 dioxins, where there's a range of several

1 orders of magnitude between toxic doses for
2 different species.

3 I don't have any -- and my expertise
4 is only in human health, obviously, so I have
5 no information on fish or on other
6 invertebrates.

7 We were concerned about this. We
8 have sort of a regulatory function with
9 respect to disposal of liquid chemical agents,
10 and we were concerned about the adequacy of
11 the model. So we brought in some outside
12 consultants, meteorologists, to look at the
13 D2P.C. and other models.

14 The ultimate conclusion we came up
15 with is you're within a factor of two and
16 maybe three within any two models you care to
17 pick.

18 The EPA's source term model D2P.C.,
19 whatever, you're lucky if you get within a
20 factor of two. And that's probably good
21 enough for this type of purpose -- that's --
22 that amount of uncertainty is something that

1 you can live with.

2 Some of the comments, let me go on
3 beyond your questions a little bit. Some of
4 the questions earlier in the evening suggested
5 the possibility of a release on Johnston could
6 endanger Honolulu. That's not really
7 credible.

8 By the time you got transportation
9 over that distance the agent would be so
10 thoroughly diluted that the dose received by a
11 person breathing air at this distance would
12 not be dangerous.

13 ZIMMERMAN
13 MR. ~~DAVIS~~: Let me thoroughly
14 concur with that observation. Given the model
15 and inputs that we're using, there's no
16 conceivable way, under any atmospheric
17 condition, lethal doses would reach Hawaii.

18 MR. MIURA: Worst case scenario
19 (Inaudible).

20 ZIMMERMAN
20 MR. ~~DAVIS~~: The risk assessment
21 that I mentioned a second ago that supported
22 the chemical stockpile disposal program for

1 the continental United States analyzed
2 approximately three thousand such accidents,
3 as you just described.

4 Human error as well as mechanical
5 failure, electrical failure, failure of a
6 sensor to detect an accident, a whole sequence
7 of low probability events that, when
8 compounded, resulted in a release of chemical
9 agent.

10 Well-known experts throughout the
11 country contributed to that analysis.

12 MR. MIURA: You can get three
13 thousand. What is the probability of an
14 accident occurring? If you have done all
15 these studies, plus the probability of
16 failure, that's a converse statement. I don't
17 see any data on your probability of failure.
18 You haven't disclosed that in the EIS.

19 ~~ZIMMERMAN~~
MR. ~~DAVIS~~: In general, the
20 probability for, let me call it a campaign --

21 MR. MIURA: (Inaudible).

22 ~~ZIMMERMAN~~
MR. ~~DAVIS~~: Let me answer it

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1 this way. The probabilities for a sequence of
2 events occurring can be disclosed in the EIS.
3 The probability of that sequence of events as
4 applied to the X number of ~~emissions~~ ^{MUNITIONS}, which is
5 a classified number that is available, may not
6 be possible to disclose that without revealing
7 classified information, but the probability of
8 a certain named event occurring, yes, sir,
9 that can be disclosed, and the EIS would be
10 happy to add that to the file.

11 MR. MIURA: But you couldn't
12 disclose what your probability of failure of
13 the entire system going? I mean, what risk --

14 ~~ZIMMERMAN~~ MR. ~~DAVIS~~: Yes, sir, for the
15 entire set of three thousand accidents, if
16 you're asking if there's a sum, yes, sir, that
17 information exists.

18 MR. MIURA: Would you happen to
19 have that data available?

20 ~~ZIMMERMAN~~ MR. ~~DAVIS~~: I don't have that
21 in my back pocket.

22 MR. MIURA: I'm sorry, I've

1 taken too much of your time.

2 MR. BARONIAN: No, sir, that's
3 quite all right. That's what we're here for,
4 but I think Colonel Moss wants to address one
5 of the comments you made.

6 COL. MOSS: I'm the commander
7 out at Johnston Island. I have the troops who
8 work for me that work on the munitions and
9 will, in fact, do the unpacking of the
10 munitions from Europe, and your comment about
11 the stability of the munitions, I feel, for
12 the record, I need to correct.

13 MR. MIURA: What was that?

14 ~~MR.~~ ^{COL.} MOSS: Your comment about
15 the stability of the munitions. The Army does
16 very detailed, expert surveillance of all of
17 the munitions, and we do periodically test the
18 stability of the explosives in the munition,
19 and there is no reason to believe that the
20 munitions either currently stored on Johnston
21 Island or coming from Europe are unstable, as
22 far as explosives goes. Those are tested. So

1 the statement that if you blow on them they
2 are liable to blow up is simply not true.

3 MR. MIURA: Maybe I
4 exaggerated. How old are these munitions?

5 COL. MOSS: The newest
6 munitions in the U.S. stockpile of the unitary
7 variety were produced in 1969, so we're
8 talking 20 plus years old, but we do do
9 surveillance on stability of the explosives in
10 the munitions.

11 MR. MIURA: So you've never had
12 an accident or anything that occurred?

13 ~~MR.~~ COL. MOSS: In terms of an
14 explosive failure at Johnston Island, the
15 answer to that is no, we have not.

16 MR. MIURA: There's no inherent
17 problems for keeping these things stored,
18 there's no deterioration or chance they would
19 deteriorate and release?

20 ~~MR.~~ COL. MOSS: Well, anything will
21 deteriorate through time, so the answer to
22 your -- the long-term storage, yes, you do

1 risk catastrophic failure at some point in
2 time and, you know, we've also had -- we have
3 had munitions leak.

4 The agent eats its way out of the
5 munitions, but we have not had explosive
6 failure. But those, in an indefinite storage,
7 in fact, would occur at some point in time.

8 MR. MIURA: So, in other words,
9 you might not have had a detonation there, I
10 mean spontaneous detonation. Maybe I'm not
11 using the right term, but the chemical agents
12 are caustic enough to leak out of the case?

13 COL. MOSS: Yes. When
14 Representative Pat Saiki visited in December,
15 we, in fact, were in the middle of the leaker
16 campaign of finding one rocket out of three
17 thousand in the ^{igloo}~~Navy~~ that was leaking and
18 subsequently overpacking that.

19 And she came back here to Hawaii,
20 your representative, and said the storage
21 indefinitely is a non-starter.

22 MR. MIURA: So that long-term

1 storage is not a feasible alternative.

2 COL. MOSS: Yes. That's
3 correct, in my opinion, yes. I absolutely
4 agree with Pat Saiki.

5 MR. BARONIAN: May I answer one
6 of his questions and then we'll go on with it.

7 You raised an interesting point that
8 I want to comment on. You mentioned the
9 problem with electricity on the Island, the
10 reliability of the electricity.

11 What we've done is we've added as
12 part of the plant emergency generators to the
13 plant that come on-line as soon as we lose
14 electricity, and allow to us safely shut the
15 plant down. So there is emergency generator
16 capability associated with the plant site.

17 MR. MIURA: You generate
18 electricity. How old are your generators out
19 there now?

20 MR. BARONIAN: I'll let Colonel
21 Moss answer that, because I don't know.

22 COL. MOSS: There's a whole

1 variety of generators on the Island in
2 addition to the emergency generators in the
3 plant, and I have back-up generators in my red
4 hat area. We have back-up generators for the
5 joint operations center, the command center,
6 if you will.

7 The basic generators on the Island
8 are being traded out right now and we, in
9 fact, are using borrowed generators from the
10 Army at Fort ~~Eller~~^{Belvoir} that have responsibility
11 for supporting that sort of thing. So we're
12 in the process of putting in four new diesel
13 generators over the next year.

14 MR. MIURA: Those are rated at
15 two megawatts, as I understand, aren't they?
16 Because you need about five megawatts out
17 there to maintain your facility.

18 And Mr. -- you're saying that you
19 have had four for this facility, you have
20 emergency back-up solely dedicated to this
21 facility?

22 MR. BARONIAN: That's correct.

1 To safely shut it down. We don't plan on
2 operating on only half a failure, so we don't
3 have enough to operate it a --

4 MR. MIURA: So you're not
5 depending on the main generators that the
6 Colonel is talking about, is that correct?

7 COL. MOSS: That's correct, for
8 not only for the main plant there, but the
9 other places that absolutely have to have
10 power on the Island.

11 MR. MIURA: You have a 100
12 percent redundancy?

13 COL. MOSS: Yes.

14 MR. MIURA: How are you taking
15 care of your salt water corrosion of your
16 problems out there?

17 COL. MOSS: We're doing what
18 you do with salt water corrosion, the same
19 thing that you do on ships and so on. We're
20 chipping and painting and replacing the
21 mechanical parts that need to be replaced, the
22 valves and that sort of thing.

1 MR. MIURA: I was more
2 concerned about your electronic things that
3 weren't designed to take that heavy salt air,
4 and you've had some corrosion problems, as I
5 understand.

6 Is that correct, has that that be
7 rectified so that you have some reliability of
8 your computers and in your sensors and
9 everything else, is that correct?

10 COL. MOSS: Yes

11 MR. MIURA: You've rectified
12 that problem?

13 MR. BARONIAN: We are
14 experiencing corrosion, you're absolutely
15 right. We've got a very active p.m. program
16 addressing the corrosion, including the
17 electrical inspections, and we are making
18 replacements and trying to incorporate more
19 corrosion-resistance material, but we're
20 spending probably 10 people full-time dealing
21 with the p.m. associated with corrosion.

22 MR. MIURA: I guess the line of

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0382 | 1 questioning is that these, you know, were
2 these plugged into your risk assessment,
3 therefore, failure? Were these considered,
4 because you're basing a lot of your
5 information there that was developed in Utah
6 that there was a generic thing that, you know,
7 -- Johnston Island is a very harsh
8 environment.

9 MR. BARONIAN: Yes, sir, we're
10 finding that out to our chagrin, yes, sir.
11 I'm not an expert in this area, so please take
12 my answer with a grain of salt but, as far as
13 I know, that kind of thing was not plugged
14 into the risk analysis. I'll have to check
15 that out to see if I'm right, sir.

0382 | 16 MR. MIURA: If these things
17 weren't plugged in, then it might be a little
18 bit, so you're risk of failure may be a lot
19 higher than you project.

20 MR. BARONIAN: Possibly. I'm
21 not saying I agree, but I agree it's possible
22 if we haven't plugged it in we don't know, so,

1 yes, sir.

2 MRS. JOYNER: I perhaps
3 misunderstood your answer to the question
4 about accidents. Did you say there were none?

5 COL. MOSS: Yes, he asked me if
6 there was an explosive accident, and the
7 answer to that is there has been no explosive
8 accident on Johnston Island or in Germany.

9 MRS. JOYNER: So the operative
10 word is explosive, is that it? Because
11 Senator Inouye's office told me there have
12 been accidents down there but no one -- there
13 were no deaths. Now, is the operative word
14 explosive then?

15 ~~MR. DAVIS:~~ ^{COL. MOSS:} We were talking
16 about the explosive nature of munitions.
17 There was one which really classified properly
18 is an incident not an accident, on Johnston
19 Island, that occurred in March of 1987 where
20 four individuals were exposed to the extent
21 that you could detect it medically through the
22 astero-colon asterates in the bloodstream. One

1 of those gentlemen was treated with the first
2 aid treatment for the nerve agent.

3 At the point where you do that that
4 becomes a reportable incident. He was
5 evacuated to Hawaii. All of this is public
6 record. I'm not telling you anything that
7 isn't already known.

8 MRS. JOYNER: So that's why I
9 was asking if the operative word was
10 explosive.

COL. MOSS:

11 ~~MR. DAVIS:~~ Yes, we were
12 talking, if you will remember, he said if you
13 blow on the munitions they are liable to blow
14 up. That's simply not true.

15 MS. TISCHBIN: We're using a
16 mike because we're having problems picking up
17 your questions with our audio system.

18 MR. YOUNG: In your Army 1986
19 draft EIS --

20 DR. RICHARDSON: Excuse me,
21 could you state your name, please?

22 MR. YOUNG: Carl Young. There

1 was an estimate of 15,000 deaths under a worst
2 case accident, and another figure was 1,500
3 deaths in another worst case accident for an
4 on-site disposal center.

5 My question is, my reading of what
6 the meteorologist tonight said, Anders
7 Daniels, that's his name, is that when
8 Hurricane Iwa happened several years ago, the
9 winds came up from Johnston and reached
10 Hawaii. He said that it's going to be under
11 very rare circumstances, but my reading is
12 that there could be some poisoning from
13 Johnston.

14 So my question is, specifically,
15 what is the, under those circumstances, those
16 very rare circumstances, what is the estimate
17 of deaths, what is the estimate of people with
18 emphysema, with asthma, being affected?

19 DR. RICHARDSON: Let me ask of
20 our people here that we try to answer that in
21 terms of -- my understanding of the dates of
22 the hurricanes that were referenced earlier in

1 the presentations we had, the chemical
2 munitions on the Atoll at that time.

3 Dave, can you give historical
4 information and talk a little bit about what
5 happened with the hurricanes coming through?
6 **COL. MOSS**
~~MR. DAVIS:~~ What happened with
7 the -- the older hurricane that was mentioned
8 in the earlier testimony I'm not familiar
9 with.

10 The hurricane that came through, I
11 believe, in November of '83, I may be off a
12 little bit on that date, in fact, that
13 hurricane, they evacuated the whole Island,
14 everybody left the Island.

15 Our current plan is to not do that
16 because of the upgrades in the J.O.C. We'll
17 use the joint operations center as a safe
18 haven, and the minimum people who are
19 necessary to restart the Island, if you will,
20 would remain.

21 In the context of the retrograde
22 operation, the plan now is if. Hurricanes

1 don't just magically appear 10 miles out of
2 the breakwaters.

3 The plan is, if a hurricane
4 threatened Johnston Island we would cease the
5 retrograde operation, move the ships out of
6 the hurricane way. We would not continue to
7 offload while we waited for the hurricane to
8 come in.

9 Therefore, the munitions would
10 likely be stored in the covered 18-inch
11 concrete earthen-covered bunkers, and I'm no
12 expert on what the hurricanes can do, but I
13 have difficulty in understanding how they
14 break down the bunkers.

15 MR. ZIMMERMAN: If I may take a
16 moment to talk a little bit about the
17 dispersion model and how far downwind hazards
18 can go. Some things you might need to know
19 about that, there's some kind of
20 counter-intuitive things with this dispersion.
21 Your longest downrange hazards do not come
22 with high wind conditions where there's a

1 rapid transfer of material from one place to
2 another.

3 The longest downwind hazards come
4 with very low wind speeds, one or two miles an
5 hour, under conditions where there is sort of
6 an inversion layer, the kind of conditions
7 that you get at night that do not last more
8 than two hours after day break, nor do they
9 appear more than an hour before sundown.

10 So you can get the models. They are
11 sophisticated in one sense and stupid in
12 another. If you ask them the wrong question,
13 they will give you the wrong answer with a
14 great deal of precision.

15 If you ask them how far downwind the
16 hazard would go at two miles an hour with
17 what's called stability condition F, an
18 inversion layer with low ceiling. You can get
19 answers for some of these storage events, in
20 particular, where very large amounts can be
21 released that run into hundreds of miles,
22 however, at two miles an hour it's going to be

1 daybreak, and that stability F will vanish
2 well before it covers hundreds of miles.

3 So, again, if you get an answer that
4 gives you something more than 150 miles, go
5 back and look at the assumptions you made that
6 you've plugged into that model and they will
7 probably find they don't make sense in the
8 real world.

9 MRS. JOYNER: Well, then if the
10 Islands downwind from Johnston Atoll -- that's
11 the wrong Island -- if the Islands downwind
12 from that get the volcano haze from the Big
13 Island, why do you say that they won't get
14 anything from this? They do get it. It might
15 not be scientific, but they get it.

16 MR. ZIMMERMAN: The volcano
17 haze is discharged at rather high altitudes in
18 huge volume, and it's that combination of
19 things that allows it to go down to that
20 extent. The agent is discharged near the
21 surface and percolates above the surface
22 slowly.

1 If it does get above the surface
2 then the dilution is proportionally greater,
3 and, hence, the downwind hazard distance is
4 smaller.

5 Again, it's this condition where it
6 stays very low to the ground that is
7 associated with the longest downwind hazard
8 distances.

9 If it gets up and mixes up there in
10 the stratosphere with the volcanic ash, they
11 just don't release enough from Johnston, you
12 know, gosh, I don't know how to say it, but
13 the tons that go up in an explosion.

14 MRS. JOYNER: Kalama.

15 MR. ZIMMERMAN: How do you
16 spell that?

17 MRS. JOYNER: K-a-l-a-m-a.

18 MR. JOYNER: Let's get down to
19 the bottom line. All the technical bullshit
20 aside, you know. What is the worst case
21 scenario if everything is working right and
22 some asshole that's working over there drops

1 something or is not paying attention or is
2 drunk, human error? How about the Challenger?
3 Everything is working right, we had all these
4 high-powered scientists, and every one of them
5 is dead.

6 MR. BARONIAN: Let me see if I
7 can answer your question as best I can and
8 perhaps, Greg, you can augment as one of the
9 Oak Ridge guys.

10 The worst case scenarios involve
11 storage of the agent. Why? That is where the
12 most agent exists in a common place. The
13 plant, even Professor Daniels' calculations,
14 he estimates a release of around 30,000
15 pounds. The plant will never have 30,000
16 pounds in it at any given time.

17 The worst case scenarios involves
18 what -- a natural phenomena, or an earthquake
19 crash that basically releases the entire
20 contents of one igloo, sir. Under that kind
21 of scenario is where we have the largest
22 plume, source strength and greatest distance

1 the plume may travel.

2 MR. JOYNER: How far is that?

3 MR. BARONIAN: Our calculations
4 show that under that scenario and I think that
5 Professor Daniels' calculations confirm it, it
6 doesn't reject it.

7 There will be measureable --
8 Professor Daniels' calculations say there will
9 be measureable agent here, but not anywhere
10 near harmful concentrations. That's what
11 Professor Daniels' came up with. Not my paper
12 but Professor Daniels' paper. I know you're
13 not satisfied with that answer, but that's the
14 best answer we can give you.

15 MR. JOYNER: What kind of
16 testing was made before you made these weapons
17 operational?

18 MR. BARONIAN: As old as I am,
19 those weapons were made operational before my
20 time, sir. I'm afraid I can't answer you.

21 MR. JOYNER: So you don't know
22 what the capabilities of destruction of the

1 weapons are?

2 MR. BARONIAN: We can calculate
3 the source strengths involved in our
4 accidents, maybe that's a technical thing. We
5 can calculate under whatever accident scenario
6 we can conceive, how much agent would be
7 released under that scenario. We have
8 information, DHHS has, on how much agent
9 concentration it takes to cause problems. So
10 we do, yes, we can do those calculations.

11 MR. JOYNER: You release one
12 weapon, how far is the danger?

13 MR. BARONIAN: Depending on the
14 weapon, and the reason I got to say that is
15 different weapons have different amounts of
16 agent in them.

17 MR. JOYNER: Okay, your most
18 serious weapon.

19 MR. BARONIAN: Okay, let me see
20 if I can. Can you help me here?

21 COL. ~~FATE~~^{MOSS}: An MC1 bomb, which
22 is the most serious weapon I've got down

1 there, and the artillery pieces now that are
2 coming out of Europe are considerably smaller
3 than this, so I can answer it for the
4 artillery pieces out of Europe or I can answer
5 it for what I've already got on the Island.

6 The MC1 bomb that I have on the
7 Island has 220 pounds of GB in it.

8 MR. JOYNER: How is that
9 detonated?

10 **MOSS**
COL. ~~PATE~~: They currently have
11 no detonators in them. They do have a fuse
12 well four burster if they were used in a go to
13 war scenario, before they were loaded on the
14 aircraft, we would put a burster inside the
15 munition.

16 MR. YOUNG: The gentleman mentioned
17 the wrong answer. You mentioned that Mr.
18 Daniels said that agent can't be detected
19 here. But my question is still unanswered.
20 If you're not going to put input on the, I
21 think your figures are on healthy people. Are
22 you disregarding those with lung diseases?

1 MR. BARONIAN: Greg, didn't we
2 factor in a safety factor into our
3 calculations for no effects? Help me out.

4 MR. ZIMMERMAN: Oh, we used a
5 very pessimistic calculation. That's part of
6 my answer I gave a second ago when I said it's
7 within 50 percent. We always assume the
8 worst. We take very pessimistic credit for
9 how people will respond to the dose.

10 In effect, we've taken into account,
11 infants, people with lower body weight, that
12 we talked about a second ago, and taking into
13 account further distances than we would ever
14 expect to see. So we've taken credit by being
15 conservative and overestimated what we really
16 expect to see under real life conditions. I
17 don't know if that answers your question, but
18 it's about the best I can do.

19 MR. YOUNG: In other words,
20 this is going to be like zero deaths under
21 (Inaudible).

22 MR. BARONIAN: Yes, and we, he

1 even, I think, comes up with that.

2 MR. JOYNER: Why does Germany
3 want to get rid of it if they are so safe?

4 ~~MR. ZIMMERMAN:~~ **DR. LEFFINGWELL** That's another
5 thing that came up earlier. The point was
6 made rather strongly that it's only 800 miles
7 from Johnston to Honolulu, and that's about
8 the distance from one end of the archipelago
9 to another.

10 By contrast, it's 800 meters from
11 the storage areas to civilian housing at some
12 of the depots. Why Germany wants to get rid
13 of them I don't know. It doesn't make a lot
14 of sense to me either but they have their own
15 problems.

16 MRS. JOYNER: So their protests
17 mean something and ours don't, is that what
18 you're telling us? I mean that's what I hear.
19 That everybody else's protest means something
20 but ours, because the way you presented it to
21 us it's a done deal.

22 DR. RICHARDSON: No, I don't

1 know how I can keep this from sounding like a
2 PR answer that was mentioned earlier, but it
3 isn't a done deal. We will try to take
4 everything we've got here very seriously.

5 On the overall operation, I think
6 the task of the Army is to find a way to
7 dispose of these munitions with the least risk
8 to people and the environment, and I believe
9 the approach that's been laid out here is that
10 least risk approach and, you know, we're
11 dealing with people everywhere and the least
12 risk to people in general.

13 Charlie, anything else on that?

14 MR. MORIARITY: My name is Mike
15 Moriarity. I have one question is, are the
16 temporary facilities already built, the
17 temporary storage facilities to be built
18 behind the present igloos, are they built
19 already?

20 DR. RICHARDSON: The facilities
21 to be used on Johnston Island?

22 MR. MORIARITY: Yes.

1 DR. RICHARDSON: I think the
2 answer to your question is yes, if I
3 understand it. If you want to give me a page,
4 I'll look at it real quick.

5 MR. MORIARITY: Oh, no, you
6 have the present chemical storage area or the
7 present munition area already there on
8 Johnston Atoll.

9 DR. RICHARDSON: That is
10 correct.

11 MR. MORIARITY: And then behind
12 it you have temporarily built --

13 DR. RICHARDSON: What page are
14 you on?

15 MR. MORIARITY: 17 figure, 3-2.
16 I take it that President Reagan and Chairman
17 Kohl have already set, that's a done deal,
18 it's got to leave Germany.

19 DR. RICHARDSON: I'm just
20 trying to make sure we understand. The
21 munitions will go into existing igloos on the
22 Island.

1 COL. PATE: Yes, and the Pasco
2 buildings is the three buildings there that
3 the arrow points to and the answer is, it
4 already exists.

5 MR. MORIARITY: Yes, the
6 temporary MILVANS storage area, which has got
7 to be built for the new munitions coming in,
8 that's already built already, right?

9 COL. MOSS: That's -- no, it is
10 not. We're in the final process of doing
11 that. You've got to understand what that is.
12 That is not a major building effort per se,
13 it's just leveling out and stabilizing the
14 coral ~~air~~^{there}. So I set the MILVANS on something
15 good and hard.

16 MR. MIURA: I'm sorry, but
17 since all the experts are here, is there
18 someone that can answer something on figure
19 2-2 on page 11 on your schematic for
20 incineration, could you describe incineration
21 process, are you going to have the additional
22 sea bearing -- using, what temperature will

0383
0383
1 you be using, how will you base that
2 temperature out there on pollution abatement
3 and on your residue, approximately how many
4 pounds or tons of this residue would you have
5 to, you know, ship out of Johnston Island, and
6 when you look at your metal parts
7 decontamination, what type of end product are
8 you looking at and some of your residues, how
9 toxic are these and what precautions and
10 mechanisms will you be undertaking to ship
11 them to your landfill on the Mainland, and
12 that could be possibly more of a hazardous
13 process than the actual shipment of your
14 material to the Island.

15 MR. BARONIAN: I'm sure I won't
16 remember, sir, all the points you made so I'll
17 try my best to answer it and then remind me
18 what I didn't answer.

19 We basically got four incinerators
20 as part of the process. Each one with a
21 specialty unique to itself.

22 Incinerator one, if I may, is what

1 we call a liquid incinerator. It basically
2 incinerates the agent. It's got an
3 afterburner -- a primary chamber, an after
4 burner, and it basically injects the liquid
5 into the primary, passes through the
6 afterburner and then goes through the
7 pollution abatement system that's specially
8 designed for that particular incinerator,
9 which consists primarily of scrubbers to take
10 out the acidness that are created in the
11 incineration process, as well as particulate,
12 particularly P205.

13 Those are the main by-products of
14 the agent destruction.

15 MR. MIURA: Could I ask a
16 question?

17 MR. BARONIAN: Please, any
18 time.

19 MR. MIURA: On your liquid
20 incineration, what temperature are you looking
21 at?

22 MR. BARONIAN: I think, Myron,

1 you've got to help me because I always forget
2 the numbers, but I think it's 2,500 degrees.

3 ~~COL. PATE:~~ ^{MOSS} It's 2,700 on the
4 primary, Charlie, and 2,000 on the secondary.
5 All the secondaries are 2,000 for at least
6 half a second, I think.

7 MR. MIURA: How do you get your
8 temperature up there? Once you get it
9 started, are you going to be using natural gas
10 or something like that?

11 MR. BARONIAN: No sir, in CONUS
12 we will, but it's difficult to get natural gas
13 there so we're using J.P. fuel as the primary
14 fuel. We started out with propane and then we
15 switched to J.P.

16 ~~COL. PATE:~~ ^{MOSS} But because some of
17 the agent does have energy itself, we dropped
18 the J.P. fives to bring the agent in.

19 MR. BARONIAN: Now, once you
20 start the process, all you need is basically a
21 pilot, because the fuel itself, the agent is a
22 very good fuel, that's why we can incinerate.

1 Now, that's the liquid incinerator.
2 What do we generate? Basically, what we
3 generate as waste product is --

4 MR. MIURA: One more question,
5 I'm sorry.

6 MR. BARONIAN: Please, go
7 ahead.

8 MR. MIURA: Do you have a
9 standby incinerator? Do you break that down?
10 You know, for your liquid incineration here, I
11 mean, you must have some down time, right? Is
12 there a standby incinerator?

13 MR. BARONIAN: No. Basically,
14 as we drain the munitions, that goes in our
15 hold tank and then it's fed from hold tanks
16 and into the incinerator.

17 If there's any problem with the
18 incinerator, temperature, pressures, whatever,
19 they all have automatic shutdowns that occur,
20 and we just stop feeding and we use the
21 storage tank, of course, to hold it until we
22 get the process back into operation.

1 MR. MIURA: Are you using an
2 electrostatic precipitator?

3 MR. BARONIAN: No, sir, no,
4 sir, we're not using an electrostatic
5 precipitator. We're using a Bringsta mister
6 and a Venturi to primarily knock down the
7 particulate rather than the elctrostatic
8 precipitator.

9 You want to ask a question or should
10 I try to finish answering his, sir?

11 MR. MIURA: You can finish his.

12 MR. BARONIAN: He's not taking
13 the time, I am with my answer.

14 Now, what are we generating? We're
15 basically generating the brines from the wet
16 scrubber systems.

17 There's sodium salts and inorganics,
18 sodium flouride, sodium carbonate, that kind
19 of thing. However, the agent itself, either
20 during the manufacturing process or perhaps
21 during the loading process, has picked up
22 trace point of these heavy metals, primarily

1 lead, and I think cadmium.

2 Now, we're in parts per million and
3 our scrubber systems are picking up that lead,
4 are picking up that cadmium and, because of
5 that, we're going to have to declare those
6 brines or those resultant salts, because we go
7 through a dry and evaporate the water just to
8 reduce the bulk, are going to have to be
9 declared hazardous wastes because of the heavy
10 metal content in parts per million.

11 That's why we're busily negotiating
12 now a contract for a licensed EPA landfill in
13 CONUS to ship those scrubber salts to.

14 MR. MIURA: Now, are you going
15 to have a drying process or something, are you
16 going to concentrate this?

17 MR. BARONIAN: Yes. We're
18 going through an evaporator as well as a drum
19 dryer.

20 Let me just take his question and
21 then I'll come back to the other incineration
22 to you, sir.

1 Sir?

2 MR. YOUNG: I think one of the
3 major concerns in Hawaii and probably
4 throughout the Pacific was the impact on the
5 food chain, and will your experts put our
6 fears to rest?

7 MR. BARONIAN: I'm going to
8 turn it over to the expert. I'm the engineer,
9 he's the expert on food chains.

10 DR. LEFFINGWELL

11 ~~MR. ZIMMERMAN~~: Well, my
12 expertise is in human health, not so much
13 biology. I can describe to you some tests
14 that were done by the U.S. and Britain after
15 World War I and then by the Yugoslavs after
16 World War II where they deliberately killed
17 animals with one or another of the agents and
18 then fed the meat immediately to volunteers
19 and there was essentially no effect from any
20 of the agents.

21 They did have one case where using a
22 nerve agent they got a depression in colin
asterates.

1 But that, combined with chemical
2 arguments about how these things work, would
3 lead you to believe there would not be
4 accumulation of agent in the food chain.

5 MR. YOUNG: Could you be more
6 specific? Not so much the nerve agent, but
7 the plume, the incinerator ash going into the
8 ocean.

9 From tonight's discussion it seems
10 pretty clear to some of us that it violates
11 international law, that impact on the food
12 chain from that incinerator ash.

13 MRS. JOYNER: It impacts on the
14 water and impacts on the fish that we eat for
15 food. They don't understand runoff from the
16 land. I was told by -- how does it impact on
17 the food chain?

18 MR. SAYLOR: Hi, I'm Rich
19 Saylor from Oak Ridge National Laboratory.
20 One of the big questions raised by Greenpeace
21 on this same issue is the idea of the
22 potential of dioxin material that's coming out

1 of the stack and, since we did not have any
2 real data of, test data of what possibly could
3 come out of here, we went back and we looked
4 at what could produce dioxins and furans if
5 you were to burn it from the incinerator and,
6 looking at that, if you read the EIS, there
7 really isn't a feed product that will produce
8 this stuff in large quantities. Even though
9 we can't say that it's zero.

10 So we were left with a dilemma. How
11 do we try to put this in perspective to show
12 people that we have looked at what the stack
13 missions do?

14 And so what we tried to do was to
15 take the dioxyin that was the most potent, the
16 most toxic, and assume that everything that
17 came out of the stack that was in this family
18 of dioxins and furans was that component.

19 We took a very pessimistic
20 meteorological condition. We assumed that
21 there was a micro layer, which you could
22 debate if you wanted to, but we didn't even

1 get into the idea of debating is there is or
2 isn't there a micro layer, and we went back
3 and we looked at E.P.A.'s recommendations for
4 what could you have for this dioxins and
5 furans in the micro layer that would affect
6 the organisms.

7 We went back and what we did is we
8 modeled this out. We put it in the water and
9 then we worked the model backwards to say that
10 if you stay below a certain value that there
11 would be no problem with the fish.

12 And so what we've tried to do, and
13 we believe that the incinerator will not be
14 putting that out at this level, but not
15 knowing without doing the test burns, at least
16 we have a level saying for sure because, if
17 you read the document, we state how
18 conservative we are.

19 We are very conservative in every
20 one of the assumptions, so, just, you know,
21 meteorology, taking the most toxic chemical,
22 assuming there's a micro layer, everything is

1 done very conservatively to set an upper bound
2 on what should come out, and so that's how we
3 tried to handle that.

4 MRS. JOYNER: Well, now, it's
5 apparent that you know nothing of Pacific
6 cultures, but they cook with ocean water.

7 What about that? I mean, you know,
8 they actually use the seawater for seasoning.
9 What effect does that have?

10 MR. SAYLOR: The stack gases
11 themselves, yeah, will not have that type of
12 effect right away -- you know, over those
13 distances and will not concentrate in the
14 water's surface, especially even at its
15 maximum concentration we won't have problems,
16 but, especially, as it would go out and dilute
17 even more. So there wouldn't be a problem.

18 MRS. JOYNER: Now, my big
19 question, since we have been hurt by the
20 American government and by the military so
21 often over these last years, what assurance
22 can you give us that any of this isn't

1 hurting?

2 What can we expect to use that will
3 make us believe that you're telling us the
4 truth? See, we have no experience of you
5 telling us the truth. We have no experience
6 of the American government or the military
7 having ever done anything.

8 So, how can you assure us that what
9 you're telling us the truth, especially under
10 the cloak of such secrecy, the cloak of
11 secrecy that has permeated this whole thing?
12 What can you tell us?

13 DR. RICHARDSON: I'm not sure
14 what I can tell you that would be convincing
15 to you at this time. What I can certainly try
16 to say is we will feedback to you what we
17 have, you know, what we see in the response to
18 the concerns that you've mentioned.

19 We will look at the issue you've
20 raised on the openness and the visibility of
21 this sort of thing. I will personally see
22 that it gets very real attention when we get

1 back.

2 MR. JOYNER: What is the
3 possibility that after this is completed
4 tonight, you wrap this up, you compile it and
5 distribute it, you advertise for another
6 public hearing, and let's discuss it further?

7 DR. RICHARDSON: I can't put a
8 percentage on the possibility, and I can't say
9 it's --

10 MR. JOYNER: Why can't you
11 commit to that?

12 DR. RICHARDSON: Because I
13 don't have at this moment all the factors in
14 mind that should be involved, and I personally
15 don't make that decision.

16 MRS. JOYNER: Who does?

17 DR. RICHARDSON: I believe that
18 decision will be primarily made by the
19 decisionatory in this case, which is the
20 Assistant Secretary of the Army for
21 Installation and Logistics.

22 MRS. JOYNER: They are not here

1 tonight?

2 DR. RICHARDSON: No, I'm sorry,
3 they are not.

4 MRS. JOYNER: Oh, and you
5 expect us again to believe? You see, well,
6 I'm saying --

7 DR. RICHARDSON: Certainly,
8 representatives are here.

9 MRS. JOYNER: I mean, look at
10 the payroll here, is there nobody that makes
11 decisions? This is a big payroll. His
12 retirement is more than the rest of us makes.

13 Come on, somebody makes decisions.
14 Is there nobody that can tell us that we can
15 have an extension, that our comments are heard
16 and that we need time, we absolutely need the
17 time to read this and digest it.

18 DR. RICHARDSON: I can tell you
19 that we'll give it every consideration that we
20 can. No, I cannot make that decision, and I
21 do think that there are other factors to
22 consider into it.

1 MR. JOYNER: This meeting
2 tonight then is final, this public hearing is
3 final? You're not going to continue this? Is
4 this public hearing final?

5 MRS. JOYNER: Is this it?

6 DR. RICHARDSON: No. The
7 procedure that we've discussed earlier is, of
8 course, you have an additional period here for
9 comment. If we did nothing in response to the
10 concerns you've raised on the visibility and
11 scheduling, you would have another opportunity
12 to comment on a redraft of the Statement. So
13 no sense can I see that --

14 MR. JOYNER: So you're saying
15 right now that there will be another
16 opportunity to comment on this?

17 DR. RICHARDSON: That's
18 definitely the truth, yes.

19 MR. JOYNER: And another public
20 hearing?

21 DR. RICHARDSON: That I don't
22 know.

1 MRS. JOYNER: How will we
2 comment then?

3 DR. RICHARDSON: Say again?

4 MRS. JOYNER: How will that be
5 done then?

6 DR. RICHARDSON: The revised
7 package will be distributed. Certainly, after
8 the comments this evening we're going to go
9 back and look very carefully at how we have
10 distributed this one in the past and how we do
11 it again. But, if we just did what we had
12 planned anyway, we would be doing that.

13 MRS. JOYNER: Now, we went over
14 this very lightly and it was, you know, four
15 hours ago, but it's a clear violation of the
16 Civil Rights Act.

17 MR. JOYNER: Five and a half.

18 MRS. JOYNER: For you to enter
19 into discussions from the EIS in Utah and
20 Oregon with the American Indian and not do it
21 with the native Hawaiians.

22 In assessing their EIS, you got

1 together with the community, you got together
2 with the natives in what you call the native
3 Americans, the Indian nation.

4 You included them, you got their
5 input, you made the decision. There was not
6 an attempt at all to include the native
7 Hawaiians, the native Samoans, who are
8 Americans, the Guamanians, who are Americans.

9 At no point in any of this EIS is
10 there any indication, and I know you did it
11 with those others because it's in your
12 documentation. That is a clear violation of
13 the Civil Rights Act to discriminate against
14 us that way. Is there an opportunity to do
15 that, are you going to do that? Are you going
16 to have a discussion with them?

17 DR. RICHARDSON: John?

18 MR. FAIRBANKS: May I address
19 that? I'm public affairs, Jon Fairbanks.

20 There was no single group singled
21 out. An announcement was made to the general
22 public in Washington D.C., and that includes

1 everybody, black, white, Americans, so we know
2 all the factors.

3 Then an announcement was made in
4 Hawaii with the Associated Press, U.P.I., the
5 newspapers here, radio, everyone, not just to
6 white Hawaii residents or to the Japanese
7 Americans or the Chinese Americans. The
8 native Hawaiians are part of the Hawaii
9 community, and a state release was sent to the
10 Pacific, all south Pacific areas in the
11 newspapers.

12 MRS. JOYNER: A news release.
13 On the drawing up of the planning of the EIS
14 in your documents you said you went to the
15 Indian nations in Utah and Oregon, you went to
16 them --

17 DR. RICHARDSON: Let me answer
18 it --

19 MRS. JOYNER: Not today, not in
20 the news release, but in your beginning in
21 drawing it up.

22 DR. RICHARDSON: I hear you. I

1 personally can't address that history. I
2 don't know if I've got anyone here who can.

3 We'll get down to the record, we'll
4 look at it. That's -- I just don't have
5 enough information here.

6 MR. YOUNG: No one here can
7 answer that?

8 MRS. JOYNER: No one here knows
9 that?

10 MR. YOUNG: No lawyers, nobody
11 here from the legal department?

12 MRS. JOYNER: Your
13 documentation clearly states that that's what
14 happened, that you did enter into a dialogue
15 with those communities.

16 DR. RICHARDSON: We'll take a
17 look at it. It could be that we did something
18 differently there, it could be that we have
19 stated --

20 MRS. JOYNER: It's a clear
21 violation --

22 DR. RICHARDSON: It is possible

1 we had hearings there and got the same kind of
2 groups represented that we had here. I just
3 don't know.

4 MR. YOUNG: Is there somebody
5 here from the legal department?

6 DR. RICHARDSON: Say again?

7 MR. YOUNG: Is there somebody
8 here from the legal department?

9 DR. RICHARDSON: No.

10 MR. YOUNG: Well, I have a
11 legal question and I --

12 DR. RICHARDSON: We'll do our
13 best on a non-legal basis. We'll take it
14 down.

15 I will say that at sometime soon, if
16 we can, I would like to get our questions down
17 and give the people that have this school a
18 chance to close up, because we're imposing on
19 them.

20 Please, go ahead.

21 MR. YOUNG: I asked a couple of
22 questions about the EIS, and maybe you can

1 answer it now. It was -- is it in your
2 procedure to send a copy of the EIS to the
3 state library, to the local E.P.A. office?

4 DR. RICHARDSON: I'll give you
5 a general answer and then I'll go to more
6 specifics. We work from a mailing list, and I
7 think it's a fairly extensive mailing list,
8 and cover that thing. Now, we're going to be
9 giving that a lot of attention.

10 Can somebody amplify who and what is
11 on the list?

12 Tom?

13 MR. BENSON: We just have a
14 regular mailing list.

15 DR. RICHARDSON: Do we have
16 local libraries here, local offices here, what
17 have you?

18 MR. BENSON: No, we haven't
19 been using the local libararies.

20 (Inaudible discussion)

21 MR. BENSON: The original '83
22 EIS was mailed to the State agencies and to

1 the local libraries.

2 MR. YOUNG: Excuse me. Are you
3 with the legal department, which department
4 are you in?

5 DR. RICHARDSON: No, as we
6 said, we have no legal guy here.

7 MR. BENSON: Tom Benson, with
8 the Assistant Secretary of the Army of
9 District Involvement.

10 One reason there was a difference in
11 distribution between the EIS in 1983 and 1988
12 was that both of those documents were prepared
13 by the Pacific Ocean division of the Corps of
14 Engineers, and they had distributed some of
15 their own on the Islands, since they are
16 located here. And we did not have that
17 available to us for this one.

18 MR. YOUNG: So I understand it,
19 is not your procedure to send -- to deliver
20 it, to send it to the library or to the local
21 E.P.A. office, it is not in your procedure to
22 do so?

1 MR. BENSON: It goes into the
2 State E.P.A.

3 DR. RICHARDSON: Let me try to
4 help on this. I can assure you, as I've said
5 before that, you know, with the questions that
6 came up on the length of time, the
7 distribution and that sort of thing, we're
8 going to go back and I'm going to look at it
9 personally.

10 If we didn't do that well, I can't
11 do much about what's already done, but
12 whatever we do on the distribution again, if
13 we've missed libraries or organizations out
14 here we missed, we'll add it. I don't know
15 much else we could do on that.

16 MRS. JOYNER: Well, considering
17 that we got it last week, Wednesday, to be
18 exact, then why should our closing date for
19 comments be on the 26th?

20 DR. RICHARDSON: I can say that
21 we'd look at it, and what I'd like to do is
22 take the information we've got, go back, try

1 to get a feel of, you know, it was your
2 experience in getting it last week, did we
3 blow that in some fashion?

4 How did we do it, and we can look at
5 was it right, do we extend it, do we have a
6 new period, this sort of thing.

7 MRS. JOYNER: It seems
8 ludicrous that our Health Department didn't
9 have it, our Governor's office didn't have it.

10 You know, is there no effort to see
11 that these people get these things?

12 DR. RICHARDSON: All I can tell
13 you at this point is we're certainly going to
14 look at it, see what was done and what should
15 we have done.

16 MR. DOUGHERTY: Isn't this
17 thing just in the pipe and flowing right
18 along? I mean, you're giving kind of vague
19 answers. She's asking very good questions.
20 I'm not hearing any answers.

21 If the Department of Health don't
22 have it, the libraries don't have it, nobody's

1 got it. What are we having a meeting for?

2 MRS. JOYNER: How can we
3 comment in a timely fashion? You know, the
4 questions this gentleman has been asking are
5 all very technical, and I'm sure every
6 technical department has tons of questions to
7 ask but, if the document is not available for
8 their dispatch to read, how can they?

9 DR. RICHARDSON: I hear what
10 you're saying. You know, if that represents
11 the situation of everybody out here and, you
12 know, there was some particular glitch, that
13 sort of thing, all I'm saying is we're going
14 to look at it and do the best that we can with
15 it.

16 MRS. JOYNER: Or do we get to
17 send you a bill for our printing costs,
18 because that's what we did.

19 We got one copy and printed it and
20 hand carried it, this gentleman hand carried
21 it to the Governor, the Health Department and
22 all these other things to everybody that was

1 here.

2 MR. JOYNER: Are all of our
3 questions going to be answered to our
4 satisfaction that we asked tonight?

5 DR. RICHARDSON: I can
6 guarantee you we will answer all your
7 questions. I, of course, can't guarantee
8 they'll be answered to your satisfaction.

9 MR. JOYNER: That's going to be
10 in this public disclosure of the transcript?

11 DR. RICHARDSON: The transcript
12 is simply a transcript, I think. I'll have --
13 you'll get whatever answers --

14 MR. JOYNER: Will you answer
15 the questions?

16 MR. BARONIAN: The questions
17 will be addressed.

18 MR. JOYNER: It won't be done
19 personally in another hearing?

20 DR. RICHARDSON: I can't say
21 that it will at the present time. As covered
22 earlier, we'll stay on the track we've been

1 on.

2 MR. JOYNER: How long are these
3 people going to be here?

4 DR. RICHARDSON: Many of these
5 people will be leaving early in the morning,
6 during the day tomorrow. Some of the people,
7 of course, are assigned here.

8 MRS. JOYNER: So you're telling
9 me that none of these people live here, none
10 of these people operate in this environment?

11 MR. RICHARDSON: No. Please, I
12 didn't say that.

13 MRS. JOYNER: How? I'm begging
14 you, how? All of you white men, all of you --
15 oh, there's one, two women, okay, all of you
16 are going to tell us, reassure us of things
17 you haven't done before, to reassure us.

18 See, your record is bad. You have
19 lied to us, you have deceived us time after
20 time after time, and you had a hundred people
21 here telling you that. We don't believe you.

22 What are you going to do? How are

1 you going to tell us? How? What can you say
2 to us?

3 You know, the Army, the Army
4 injected 400 black soldiers with syphilis, and
5 you see what that did. And they lied about
6 it, they lied about it.

7 I would bet my life that you very
8 people created AIDS in a test tube and you
9 lied about it. You have lied to us over and
10 over again, and you're not here answering
11 questions tonight.

12 Please tell us what you say to us,
13 thousands of us out here, that's going to make
14 us believe that this is not a done deal, that
15 you're not going to pollute the food chain,
16 that you're not going to have a shipwreck?

17 DR. RICHARDSON: I honestly
18 have to say I don't know what I can say to you
19 that would make you believe. That's a
20 question I could ask you.

21 What could I say to you that would
22 give us the credibility that you talk about?

1 We do our best. We will do our best
2 going back. Some of the people do work here,
3 some of these people work on Johnston Atoll.
4 We will do our very best to address what you
5 brought this evening. We are sincere in the
6 effort.

7 Everyone that has sat through the
8 evening has a definite feeling of the depth of
9 feeling you people have on the matter.

10 We will try to deal with it
11 sincerely. If I may, I would like to close
12 the meeting.

13 If you have additional questions or
14 comments that we haven't covered, try to get
15 them to us. We'll take back everything you've
16 given us on the problems of getting the report
17 that you tell us, the comment period, all
18 this. I can guarantee consideration.

19 MR. DOUGHERTY: Maybe the
20 question is, who exactly is in charge?

21 DR. RICHARDSON: The individual
22 listed as being in charge of this particular

1 document that we're talking about, the
2 Supplemental Environmental Impact Statement,
3 is Susan Livingston, Assistant Secretary of
4 the Army for Installational Logistics. When
5 you look at the whole effort that we're
6 involved in --

7 MR. DOUGHERTY: Is there a name
8 for this person?

9 DR. RICHARDSON: Susan
10 Livingston, Susan Livingston. She's the
11 Assistant Secretary of the Army for
12 Installational Logistics.

13 MR. DOUGHERTY: She here
14 tonight?

15 DR. RICHARDSON: No, I'm sorry,
16 she is is not here.

17 MR. DOUGHERTY: Then what are
18 we talking about?

19 DR. RICHARDSON: Well, I hope
20 -- we're gathering the information. I and the
21 others here have served as her representative,
22 representative of the Department as a whole.

1 MRS. JOYNER: How will we know
2 if we get a continuance? How will we know, or
3 will this be handled -- mishandled like the
4 rest of this has been? How will we know if we
5 get an extension on the comments?

6 DR. RICHARDSON: Let me say,
7 I'm sure that we'll put out a press release
8 and an announcement. Are there other things
9 to say with that?

10 MS. TISCHBIN: We'd also have
11 to announce that in the Federal Register to
12 make that same offer available to everyone.
13 So, if a continuance is granted, it will be
14 widely announced.

15 MR. DOUGHERTY: Can we give you
16 an address?

17 MS. TISCHBIN: Certainly. Mrs.
18 Joyner, we'll give you an address.

19 MR. YOUNG: Martha Joyner's
20 address.

21 DR. RICHARDSON: For everyone,
22 we appreciate your attention, interest,

1 durability in a long evening. Good night.

2
3 (Deposition concluded at 12:40 a.m.)
4

5 C E R T I F I C A T E

6 STATE OF HAWAII)

7) SS.

8 CITY AND COUNTY OF HONOLULU)
9

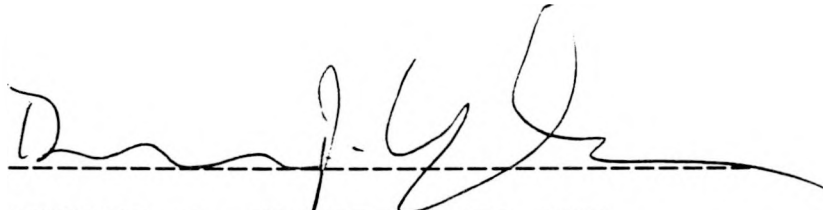
10 I, DENNIS J. YANKEE, do hereby certify;

11 That on March 20, 1990, commencing at
12 about 7:00 p.m. the foregoing proceedings were
13 taken down by me in machine shorthand and were
14 thereafter reduced to typewritten form under
15 my supervision; that the foregoing represents
16 to the best of my ability, a true and correct
17 transcript of the proceedings had in the
18 foregoing matter.

19 I further certify that I am not attorney
20 for any of the parties hereto, nor in any way
21 concerned with the cause.

22 DATED this 25th day of March, 1990,

1 in Honolulu, Hawaii.

2
3
4 

5 DENNIS J. YANKEE, CSR 285