

DETAILERS' SCRIPT 29 May 98

"The area of Japan in which NAF Atsugi is located suffers from poor air quality. During your overseas screening, your local medical treatment facility will provide you with detailed information regarding the current environmental conditions at Atsugi and possible related health effects."

Note: (On distribution email to all of Pers 40 29 May 98) "If you are pressed for additional information, provide the Sailor with the following: "Contact the Navy Environmental Health Center in Norfolk, VA at (757) 363-5548 or the NAF Public Affairs Office at 011-81-311-764-3141 for additional information."

"Do not get into a medical discussion of the air quality issues in Atsugi. Just refer them to the above phone numbers and remind them they will receive detailed counseling and can have their concerns addressed during their medical screening process." (Text on distribution email to all of Pers 40 29 May 98).



~~DETAILERS' A TEXT FOR ORDERS TO NAF ATSUGI AND TENANT COMMANDS~~

As per PERS 40 email of 29 May 98, the following A text was approved for orders issued to NAF Atsugi and tenant commands as of 28 May 98.

"Detaching command must verify the service member has been advised by the local medical treatment facility on the potential health risk associated with this assignment. Documentation will be IAW the Overseas Screening requirements and a page 13 will be signed. Japan is a heavily industrialized country and there is a waste incinerator very close to NAF Atsugi that affects the air quality in that area. Additional information is available from NAF Atsugi through the PAO (011-81-311-764-3141) or their website <http://www.atsugi.navy.mil> or the Navy Environmental Health Center in Norfolk, VA (757-363-5548 or DSN 864-5548."







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ASTE INCINERATOR, WHICH IS LOCATED NEXT TO THE FACILITY. AIR EMISSIONS FROM THE INCINERATOR PERIODICALLY BLOW DIRECTLY ACROSS THE FACILITY. PREVAILING WIND PATTERNS CAUSE THIS TO OCCUR MORE REGULARLY DURING APRIL THROUGH OCTOBER.

THE NAVY CONDUCTED AN ENVIRONMENTAL STUDY IN 1994 TO DETERMINE THE POSSIBLE HEALTH EFFECTS OF EXPOSURE TO AIR POLLUTANTS AT NAF ATSUGI. THE AIR QUALITY MEASURED IN THIS STUDY MET JAPANESE STANDARDS, BUT EXCEEDED UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) STANDARDS FOR RESPIRABLE PARTICULATES AND A NUMBER OF CHEMICALS. USING EPA METHODS TO DETERMINE RISK, THE STUDY SHOWED THAT EXPOSURE TO AIR POLLUTANTS AT THE FACILITY INCREASES BOTH CANCER AND NONCANCER HEALTH RISKS. AS WITH ALL EXPOSURES TO ENVIRONMENTAL POLLUTANTS, THE HEALTH RISK IS GREATER FOR CHILDREN LESS THAN SIX YEARS OF AGE. AN ADDITIONAL DETAILED ENVIRONMENTAL STUDY ASSOCIATED WITH THE INCINERATOR IS ONGOING AT NAF ATSUGI. THE STUDY IS FOCUSING ON EVALUATING THE POLLUTANTS DISCHARGED BY THE INCINERATOR AND MORE FULLY DEFINING THE HEALTH RISKS POSED BY THE POLLUTANTS. THIS INFORMATION WILL ASSIST THE NAVY IN TAKING ACTION TO PROTECT THE HEALTH OF NAF ATSUGI RESIDENTS. THE UNITED STATES GOVERNMENT HAS ALSO REQUESTED THE ASSISTANCE OF THE GOVERNMENT OF JAPAN IN REDUCING THE AMOUNT OF POLLUTANTS RELEASED BY THE INCINERATOR. THE NAVY IS COMMITTED TO PROTECTING YOUR HEALTH AND WELL BEING.

THE MOST CURRENT INFORMATION ABOUT THE STATUS OF THE ONGOING HEALTH RISK ASSESSMENT IS AVAILABLE FROM THE NAVENVIRHLTHCEN ENVIRONMENTAL PROGRAMS DIRECTORATE VIA PHONE (757-363-5548 OR DSN-864-5548) OR THE ENVIRONMENTAL PROGRAMS PAGE OF THE NAVENVIRHLTHCEN WEBSITE ([HTTP:SLASHSLASHWWW-NEHC.MED.NAVY.MIL](http://slashslashwww-nenc.med.navy.mil))

BEFORE YOU SIGN THIS DOCUMENT, ASK ANY QUESTIONS YOU MAY HAVE AND OBTAIN THE APPROPRIATE POINT OF CONTACT FOR ANY FUTURE QUESTIONS. THE MEDICAL OVERSEAS SCREENER CAN HELP COORDINATE GETTING ANSWERS TO ANY MEDICALLY RELATED QUESTIONS YOU MAY HAVE.

I HAVE READ THIS FORM AND UNDERSTAND IT.

BENEFICIARY SIGNATURE

DATE \_\_\_\_\_

HEALTH CARE PROVIDER SIGNATURE

DATE \_\_\_\_\_

END QUOTE

3. NAVY ENVIRONMENTAL HEALTH CENTER, NORFOLK IS THE FOCAL POINT FOR THE MOST RECENT INFORMATION RELATIVE TO THE ENVIRONMENTAL CONDITIONS AT ATSUGI. DIRECT YOUR OVERSEAS SCREENING PROVIDERS TO CONTACT NAVENVIRHLTHCEN SHOULD THEY HAVE QUESTIONS ABOUT THE SUITABILITY OF AN INDIVIDUAL FOR ASSIGNMENT TO THE ATSUGI AREA. CONDITIONS WHICH MAY BE

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AVATED BY THE ENVIRONMENT ARE DOCUMENTED IN THE FOLLOWING SCRIPT WHICH SHOULD BE PROVIDED TO MEMBERS OF YOUR MEDICAL STAFF WHO DO OVERSEAS SCREENING AND SUPERVISE OTHERS WHO SUPPORT THEM.

QUOTE: ENVIRONMENTAL FACT SHEET - MEDICAL SCRIPT

THE NAVY IS COMMITTED TO PROTECTING THE HEALTH AND WELL BEING OF SERVICE MEMBERS AND THEIR FAMILIES. IN KEEPING THIS COMMITMENT, WE HAVE PREPARED THE ENVIRONMENTAL FACT SHEET TO INFORM YOU OF THE ENVIRONMENTAL CONDITIONS AT NAVAL AIR FACILITY (NAF), ATSUGI AND THE KANTO PLAIN AREA OF JAPAN WHERE NAF ATSUGI IS LOCATED. THE FACT SHEET ALSO DISCUSSES THE POSSIBLE HEALTH EFFECTS OF LIVING IN THIS AREA OF JAPAN. THE PURPOSE OF THIS FACT SHEET IS TO PROVIDE YOU WITH THE INFORMATION NECESSARY TO MAKE AN INFORMED DECISION ABOUT TAKING YOUR FAMILY WITH YOU TO NAF ATSUGI. IN ADDITION TO ITS MODERATE CLIMATE, WHICH CAN CAUSE PROBLEMS FOR ASTHMA AND ALLERGY SUFFERERS FROM POLLEN COUNTS, THE AIR QUALITY ON THE KANTO PLAIN AND AT NAF ATSUGI IS GENERALLY POOR. OVERALL, THE AIR QUALITY IS WORSE THAN IN MOST MAJOR CITIES IN THE UNITED STATES (US). THREE FACTORS ARE INVOLVED:

1. THE FIRST IS POPULATION. JAPAN HAS ONE HALF THE POPULATION OF THE US IN A LAND AREA THE SIZE OF CALIFORNIA. THIS MEANS MORE VEHICLES IN A SMALLER AREA AND MORE POLLUTION FROM VEHICLES. IT ALSO MEANS THERE IS LITTLE ROOM FOR DISPOSAL OF WASTE AND GARBAGE. AS A RESULT, THE JAPANESE BURN THEIR REFUSE IN INCINERATORS WHICH ADDS TO THE AIR POLLUTION.

2. THE SECOND IS THAT THE KANTO PLAIN IS A MAJOR INDUSTRIAL CENTER IN JAPAN AND THERE ARE MANY SOURCES OF AIR POLLUTION. ENVIRONMENTAL LAWS RELATED TO POLLUTION ARE LESS STRICT IN JAPAN THAN IN THE US AND JAPANESE ENVIRONMENTAL OFFICIALS HAVE LESS ENFORCEMENT AUTHORITY WHEN VIOLATIONS ARE IDENTIFIED.

3. THE THIRD IS THE PRESENCE OF A PRIMARY AIR POLLUTION SOURCE, THE JINKANPO INCINERATOR, NEXT TO NAF ASTUGI. THIS INCINERATOR, WHICH IS LOCATED VERY CLOSE TO SEVERAL NAVY FAMILY HOUSING UNITS, THE DAY CARE CENTER, AND THE ELEMENTARY SCHOOL, BURNS BOTH RESIDENTIAL TRASH AND HAZARDOUS WASTE. THE PREVAILING WINDS BLOW AIR EMISSIONS FROM THIS INCINERATOR ACROSS THE BASE APPROXIMATELY SIX MONTHS OUT OF THE YEAR. THIS OCCURS PRIMARILY DURING THE MONTHS OF APRIL THROUGH OCTOBER. MANY NAF ATSUGI RESIDENTS BELIEVE THE INCINERATOR TO BE A MAJOR HEALTH AND QUALITY OF LIFE ISSUE.

THE NAVY HAS CONDUCTED AN ENVIRONMENTAL STUDY ON THE POSSIBLE HEALTH EFFECTS OF EXPOSURE TO AIR POLLUTANTS AT NAF ATSUGI. THE AIR QUALITY AT NAF ATSUGI IS ACCEPTABLE PER JAPANESE STANDARDS, BUT WELL ABOVE US ENVIRONMENTAL PROTECTION AGENCY (EPA) STANDARDS FOR RESPIRABLE

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IN EVERY THREE WOMEN WILL GET CANCER OVER THE COURSE OF THEIR LIFETIME (70 YEARS). THIS MEANS THAT IN A POPULATION OF 10,000 MEN, 5,000 WOULD BE EXPECTED TO GET CANCER DURING THEIR LIFETIME. LIKewise, IN A POPULATION OF 10,000 WOMEN, 3,333 WOULD BE EXPECTED TO GET CANCER DURING THEIR LIFETIME. PER US EPA STANDARDS, THE UPPER LIMIT OF ACCEPTABLE LIFETIME EXCESS CANCER RISK FROM ENVIRONMENTAL POLLUTION IS ONE ADDITIONAL CANCER CASE IN 10,000. THE EXCESS CANCER RISK FROM EXPOSURE TO AIR POLLUTION AT NAF ATSUGI REACHES ONE ADDITIONAL CASE IN 10,000 ADULTS AFTER SIX YEARS OF EXPOSURE AND ONE ADDITIONAL CASE IN 10,000 CHILDREN UNDER THE AGE OF SIX AFTER 36 MONTHS OF EXPOSURE AT PEAK EXPOSURE LEVELS. IN OUR EXAMPLE ABOVE, OF THE 10,000 MEN AND 10,000 WOMEN, EXPECTED CANCER CASES FOR ADULTS WOULD BE 5001 MEN AND 3334 WOMEN AFTER SIX YEARS AT ATSUGI. THE LIFETIME EXCESS CANCER RISK ATTRIBUTED TO EXPOSURE TO THE AIR AT NAF ATSUGI WILL NOT GO AWAY WHEN EXPOSURE ENDS, BUT WILL LAST THE LIFETIME OF THOSE EXPOSED.

THE NAVY CONSIDERS THE INCREASE IN CANCER AND NONCANCER HEALTH RISKS ATTRIBUTED TO THE AIR QUALITY AT NAP ATSUGI TO BE TOO HIGH. THAT IS WHY WE ARE WORKING WITH THE GOVERNMENT OF JAPAN (GOJ) TO REDUCE AIR EMISSIONS FROM THE JINKANPO INCINERATOR. SPECIFICALLY THE NAVY IS PRESSING THE GOJ TO CLOSE THE INCINERATOR OR CAUSE THE INCINERATOR

ATOR TO SIGNIFICANTLY MODIFY HIS OPERATION. THE NAVY IS  
TAKING ACTION AT NAF ATSUGI TO REDUCE EXPOSURE TO  
INCINERATOR EMISSIONS THROUGH FILTRATION OF INDOOR AIR AND  
ADOPTION OF OTHER PRECAUTIONARY MEASURES. AT THE SAME  
TIME WE ARE CONDUCTING FURTHER ENVIRONMENTAL STUDIES TO  
BETTER UNDERSTAND THE NATURE OF THE HEALTH RISKS SO THAT  
WE CAN BETTER PROTECT THE HEALTH OF OUR SERVICE MEMBERS  
AND THEIR FAMILIES.

ONCE AGAIN, THE NAVY IS COMMITTED TO PROTECTING THE HEALTH AND WELL BEING OF ALL OUR SERVICE MEMBERS AND THEIR FAMILIES. SHOULD YOU HAVE QUESTIONS OR DESIRE ADDITIONAL INFORMATION ABOUT THE HEALTH AND/OR ENVIRONMENTAL STUDIES AT NAF ATSUGI, PLEASE CONTACT THE NAVY ENVIRONMENTAL HEALTH CENTER'S (NAVENVIRHLTHCEN) WEB SIGHT AT WWW-NRHC.MED.NAVY.MIL AND CLICK ON ENVIRONMENTAL PROGRAMS OR CONTACT NAIVENVIRHLTHCEN AT (757) 363-5548.

END QUOTE

1. ASSIGNMENT POLICY IS NOT A FUNCTION WITHIN THE MEDICAL DEPARTMENT'S PURVIEW. IF A FAMILY MEMBER IS OTHERWISE MEDICALLY QUALIFIED TO TRANSFER WITH THEIR SPONSOR TO ATSUGI, BUT EXPRESSES THEIR DESIRE NOT TO DO SO, THEY SHOULD BE ADVISED TO DISCUSS THIS WITH THEIR SPONSOR AND TAKE THE MATTER THROUGH THE APPROPRIATE LINE CHAIN OF COMMAND.

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ADMINISTRATIVE MESSAGE

ROUTINE

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FM BUMED WASHINGTON DC//00//

TO AIG SEVEN SEVEN EIGHT THREE

\*\*\*THIS IS A 2 SECTIONED MSG COLLATED BY MDS\*\*\*  
UNCLAS //NO0000//PERSONAL FOR COMMANDING OFFICERS, OFFICERS IN CHARGE  
FROM RADM FISHER, DEPUTY CHIEF BUMED

MSGID/GENADMIN/BUMED//

SUBJ/UPDATED GUIDANCE ON MEDICAL OVERSEAS SCREENING FOR ASSIGNMENT  
/TO NAVAL AIR FACILITY AND TENANT ACTIVITIES IN ATSUGI JAPAN//

REF/A/MSG/BUMED WASHINGTON DC/262200ZFEB98//

REF/B/DOC/COMPRISKCOMHLTHCONPLN/31JUL98//

REF/C/DOC/REVIEWNAFATSUGI/28APR98//

REF/D/DOC/HLTHENVFACNAFATSUGI/8JUN98//

REF/E/DOC/OVERSEASSF600/8JUN98//

REF/F/DOC/ASTHMAGUIDENIH/1JUL97//

REF/G/DOC/NAVMEDCOMINST 1300.1C/23MAR98//

NARR/REF A, IS P4 MSG FM RADM FISHER, DEPUTY CHIEF BUMED, ADDRESSING  
OVERSEAS SCREENING REQUIREMENTS FOR NAVAL ACTIVITIES AT  
NAVAL AIR FACILITY (NAF) ATSUGI. REF B, IS A DETAILED COMPREHENSIVE  
RISK COMMUNICATION AND HEALTH CONSULTATION PLAN FOR NAF ATSUGI AND  
INCLUDES GUIDANCE FOR THE MEDICAL OVERSEAS SCREENING EVALUATION FOR  
SERVICE AND FAMILY MEMBERS EXECUTING A PERMANENT CHANGE OF STATION  
(PCS) TRANSFER TO NAF ATSUGI. REF B WILL BE PROVIDED SEPCOR IN NEAR  
FUTURE. REF C, IS A BACKGROUND DOCUMENT FOR ALL HEALTH CARE PROVIDERS  
WHO WILL PERFORM THE MEDICAL OVERSEAS SCREENING EVALUATION FOR  
INDIVIDUALS AND FAMILIES BEING ASSIGNED TO NAF ATSUGI. REF D, IS A  
HEALTH AND ENVIRONMENTAL FACT SHEET THAT DISCUSSES ENVIRONMENTAL  
CONDITIONS AT NAF ATSUGI, POSSIBLE HEALTH CONCERNS, AND OFFERS  
PERSONAL PROTECTIVE MEASURES TO DECREASE EXPOSURE TO AIR POLLUTION.  
REF E, IS THE STANDARD FORM (SF) 600 OVERPRINT TO BE USED TO DOCUMENT  
PROVISION OF RISK COMMUNICATION AND FINDINGS OF THE MEDICAL OVERSEAS  
SCREEN/HEALTH CONSULTATION. REF C, REF D, AND REF E ARE AVAILABLE ON  
THE BUMED WEB PAGE([HTTP://SLANTSLANTNMIMC-WEB1.MED.NAVY.MIL/ATSUGI](http://SLANTSLANTNMIMC-WEB1.MED.NAVY.MIL/ATSUGI)). TO  
TYPE IN THE ADDRESS, YOU MUST USE ALL LOWERCASE LETTERS. AFTER YOU  
HAVE BROUGHT UP THE ADDRESS, YOU MUST ENTER AN ID AND A PASSWORD TO  
ACCESS THE PAGE. THE ID IS >ATSUGI< AND THE PASSWORD IS GONAVY7. YOU  
MUST USE ALL LOWERCASE LETTERS TO TYPE IN BOTH THE ID AND THE



PASSWORD. REF F IS A NATIONAL HEART LUNG AND BLOOD INSTITUTE PUBLICATION # 97-4051A THAT PROVIDES GUIDELINES FOR THE DIAGNOSIS AND MANAGEMENT OF ASTHMA. REF F, IS AVAILABLE ON THE WEB PAGE (<http://slant.slant.www.nhlbi.nih.gov/slashnhlbi/hnhlbi.htm>) UNDER LUNG INFORMATION, ASTHMA INFORMATION FOR HEALTH CARE/OTHER PROFESSIONALS. REF G, IS THE INSTRUCTION ON SUITABILITY PROCESSING FOR OVERSEAS ASSIGNMENT OF NAVY AND MARINE CORPS MEMBERS AND THEIR ACCOMPANYING DEPENDENTS//  
POC/DAVIS/CAPT, MC, USN/MED-24/WASHINGTON DC/TEL:(202)762-3496  
TEL:DSN: 762-3496/TEL:FAX: (202) 762-3490//

RMKS/1. THIS MESSAGE CANCELS REF A AND PROVIDES DETAILED GUIDANCE FOR CONDUCTING MEDICAL OVERSEAS SCREENING FOR SERVICE AND FAMILY MEMBERS WITH PERMANENT CHANGE OF STATION (PCS) ORDERS TO NAF ATSUGI, JAPAN OR ONE OF ITS TENANT ACTIVITIES.

2. NAF ATSUGI IS LOCATED IN THE KANTO PLAIN OF JAPAN. THE WEATHER IN THE KANTO PLAIN IS SIMILAR TO THAT OF NORFOLK, VIRGINIA. AS THE MILD WEATHER PRODUCES HIGH POLLEN COUNTS YEAR ROUND, PEOPLE WITH ALLERGIES AND ASTHMA CAN HAVE MORE FREQUENT AND/OR MORE SEVERE ALLERGY AND ASTHMA SYMPTOMS WHEN LIVING THERE. IN ADDITION, NAF ATSUGI IS LOCATED IN ONE OF THE MOST DENSELY POPULATED AND HEAVILY INDUSTRIALIZED REGIONS OF JAPAN. THERE ARE MANY SOURCES OF AIR POLLUTION THAT DIRECTLY IMPACT THE NAF ATSUGI COMMUNITY, INCLUDING VEHICLE EXHAUST, GENERAL INDUSTRY, AND, PARTICULARLY, THE JINKANPO COMPANY WASTE INCINERATION COMPLEX. THE JINKANPO WASTE INCINERATOR IS DIRECTLY SOUTH AND ADJACENT TO NAF ATSUGI. GASEOUS AND PARTICULATE EMISSIONS FROM JINKANPO'S INCINERATORS AND WASTE HANDLING OPERATIONS VISIBLY BLOW ACROSS THE BASE, ESPECIALLY WHEN WINDS ARE FROM THE SOUTH.

3. THE NAVY HAS CONDUCTED SEVERAL ENVIRONMENTAL STUDIES SINCE 1991 TO DETERMINE THE POSSIBLE HEALTH EFFECTS OF EXPOSURE TO AIR POLLUTANTS AT NAF ATSUGI. THE AIR QUALITY MET JAPANESE STANDARDS, BUT EXCEEDED UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) STANDARDS FOR RESPIRABLE PARTICULATES AND A NUMBER OF CHEMICALS. USING EPA METHODS TO DETERMINE RISK, THE STUDIES SHOWED THAT EXPOSURE TO THE AIR POLLUTION AT NAF ATSUGI INCREASES BOTH CANCER AND NONCANCER HEALTH RISKS WHEN COMPARED TO US EPA STANDARDS. SOME INDIVIDUALS, SUCH AS CHILDREN UNDER THE AGE OF SIX YEARS OR PEOPLE WITH CHRONIC RESPIRATORY CONDITIONS SUCH AS ASTHMA, ARE AT GREATER RISK OF POSSIBLE HEALTH EFFECTS FOLLOWING EXPOSURE TO THE ENVIRONMENTAL CONDITIONS AT NAF ATSUGI.

4. REF B DIRECTS THAT ALL SERVICE AND FAMILY MEMBERS WITH PCS ORDERS TO NAF ATSUGI AND TENANT ACTIVITIES RECEIVE, AT THE TIME OF THEIR MEDICAL OVERSEAS SCREENING, SPECIFIC AND DETAILED INFORMATION REGARDING THE ENVIRONMENTAL CONDITIONS AT NAF ATSUGI AND POSSIBLE HEALTH EFFECTS. IAW REF B, HEALTH CARE PROVIDERS CONDUCTING MEDICAL SCREENING EVALUATIONS FOR OVERSEAS ASSIGNMENT TO NAF ATSUGI ARE DIRECTED TO CONDUCT RISK COMMUNICATION/ENVIRONMENTAL COUNSELING AS FOLLOWS:

- A. REVIEW REF C AS A READ AHEAD DOCUMENT IN ORDER TO BETTER DISCUSS THE ENVIRONMENTAL CONDITIONS AND POSSIBLE HEALTH EFFECTS WITH INDIVIDUALS AND FAMILIES ASSIGNED TO NAF ATSUGI.
- B. GIVE REF D TO EACH FAMILY MEMBER, AGE 18 AND OLDER, AND DISCUSS



THE INFORMATION PROVIDED;

- C. PROVIDE EACH FAMILY MEMBER WITH AN OPPORTUNITY TO DISCUSS CONCERNS AND ASK QUESTIONS REGARDING LIVING IN NAF ATSUGI;
- D. DOCUMENT ON REF E, THE NUMBER AND DATE OF THE HEALTH AND ENVIRONMENTAL FACT SHEET GIVEN TO THE FAMILY MEMBERS.
- E. EACH INDIVIDUAL AGE EIGHTEEN OR OVER MUST ACKNOWLEDGE RECEIPT OF ENVIRONMENTAL COUNSELING BY SIGNATURE ON REF E. PARENT OR GUARDIAN SIGNATURE WILL DOCUMENT COUNSELING FOR INDIVIDUALS YOUNGER THAN EIGHTEEN YEARS.

5. IAW REF B, ALL SERVICE AND FAMILY MEMBERS WITH PCS ORDERS TO NAF ATSUGI MUST UNDERGO A DIRECTED HEALTH CONSULTATION TO IDENTIFY ANY EXISTING MEDICAL CONDITIONS THAT MAY BE EXACERBATED BY EXPOSURE TO THE NAF ATSUGI ENVIRONMENTAL CONDITIONS. INDIVIDUALS (SERVICE MEMBERS AS WELL AS BENEFICIARIES) WITH STEP 3 OR STEP 4 ASTHMA, AS DEFINED BY REF F, ARE NOT MEDICALLY QUALIFIED FOR ASSIGNMENT OR TRANSFER TO NAF ATSUGI. SUITABILITY OF ASSIGNMENT FOR INDIVIDUALS WITH OTHER MODERATE TO SEVERE RESPIRATORY CONDITIONS SHOULD BE CONSIDERED ON A CASE BY CASE BASIS. THIS SHOULD OCCUR WITH CONCURRENCE OF BRANCH MEDICAL CLINIC ATSUGI, IN ACCORDANCE WITH REF G.

6. IN THE EVALUATION OF ASTHMA, THE PRESENCE OF EVEN ONE OF THE FOLLOWING FEATURES WITHIN A STEP DETERMINES THE PLACEMENT OF THE PATIENT WITHIN THAT CATEGORY. AN INDIVIDUAL SHOULD BE ASSIGNED TO THE MOST SEVERE STEP IN WHICH ANY FEATURE OCCURS ACCORDING TO THE FOLLOWING CRITERIA:

- A. STEP 3 ASTHMA, MODERATE PERSISTENT ASTHMA: HAS CLINICAL FEATURES BEFORE TREATMENT CONSISTING OF DAILY SYMPTOMS, DAILY USE OF INHALED SHORT-ACTING BETA2 AGONIST, EXACERBATIONS THAT AFFECT ACTIVITY, EXACERBATIONS THAT OCCUR MORE THAN TWICE A WEEK AND MAY LAST DAYS, NIGHTTIME SYMPTOMS THAT OCCUR MORE THAN ONCE EACH WEEK, FEV1 OR PEF GREATER THAN SIXTY PERCENT BUT LESS THAN EIGHTY PERCENT PREDICTED VALUE, OR PEF VARIABILITY GREATER THAN 30 PERCENT.
- B. STEP 4 ASTHMA, SEVERE PERSISTENT ASTHMA: HAS CLINICAL FEATURES BEFORE TREATMENT CONSISTING OF CONTINUAL SYMPTOMS, LIMITED PHYSICAL ACTIVITY, FREQUENT EXACERBATIONS, FREQUENT NIGHTTIME SYMPTOMS, FEV1 OR PEAK EXPIRATORY FLOW (PEF) LESS THAN OR EQUAL TO SIXTY PERCENT PREDICTED VALUE, OR PEF VARIABILITY GREATER THAN THIRTY PERCENT.

7. HEALTH CARE PROVIDERS CONDUCTING THE MEDICAL OVERSEAS SCREENING EVALUATION FOR SERVICE AND FAMILY MEMBERS ASSIGNED TO NAF ATSUGI ARE DIRECTED TO CONDUCT THE HEALTH CONSULTATION AS FOLLOWS:

- A. CONDUCT A MEDICAL RECORD REVIEW TO IDENTIFY CURRENT MEDICAL CONDITIONS POTENTIALLY EXACERBATED BY EXPOSURE TO ENVIRONMENTAL CONDITIONS AT NAF ATSUGI;
- B. OBTAIN A THOROUGH MEDICAL HISTORY AND DOCUMENT THE HISTORY ON A SF 93, REPORT OF MEDICAL HISTORY, USING REV 6/96;
- C. PERFORM A PHYSICAL EXAMINATION, IF INDICATED;
- D. DISCUSS MEDICAL FINDINGS AND RECOMMENDATIONS WITH EACH INDIVIDUAL AND DOCUMENT FINDINGS OF MEDICAL CONDITIONS THAT MIGHT BE EXACERBATED BY THE NAF ATSUGI ENVIRONMENT OR CONDITIONS THAT DISQUALIFY THE INDIVIDUAL FROM



- ASSIGNMENT TO NAF ATSUGI ON REF E;
- E. ADVISE INDIVIDUALS OF PERSONAL PRECAUTIONS THAT MAY MINIMIZE EXPOSURE TO AIR POLLUTION;
  - F. DOCUMENT SUITABILITY FOR ASSIGNMENT OR TRANSFER TO NAF ATSUGI ON REF E;
  - G. EACH INDIVIDUAL AGE 18 YEARS OR OVER MUST ACKNOWLEDGE RECEIPT OF HEALTH CONSULTATION BY SIGNATURE ON REF E. PARENT OR GUARDIAN SIGNATURE MUST DOCUMENT HEALTH CONSULTATION FOR INDIVIDUALS YOUNGER THAN AGE 18 YEARS.
9. ADDITIONAL INFORMATION CONCERNING NAF ATSUGI IS AVAILABLE FROM THE NAVENVIRHLTHCEN ENVIRONMENTAL PROGRAMS DIRECTORATE VIA PHONE: (757) 363-5548; DSN: 864-5548 OR ON THEIR WEB PAGE ([HTTP:SLANTSLANTWWW-NEHC.MED.NAVY.MIL/](http://slant.slant.www-nehc.med.navy.mil/)).
10. REQUEST COMMANDS CONFIRM RECEIPT OF THIS MESSAGE BY E-MAIL TO POC.
12. CAPT DAVIS E-MAIL IS [SRDAVIS@HQ.MED.NAVY.MIL/](mailto:SRDAVIS@HQ.MED.NAVY.MIL/)

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CDSN = MED585 MCN = 98187/24986 TOR = 981872210

Section 1: PSN

Section 2: PSN



## Response to Environmental Conditions at Naval Air Facility Atsugi: A Review

### Introduction

The Navy is committed to protecting the health and well being of Service members and their families. The Navy has conducted three air quality studies in 1991, 1994, and 1997, each of which demonstrated that the air quality at Naval Air Facility (NAF) Atsugi does not meet United States Environmental Protection Agency (EPA) Standards for breathable dusts (respirable particulates) and a number of chemicals. While air quality at NAF Atsugi does meet Japanese standards according to the Government of Japan (GOJ), the Navy took action to study the possible health effects that might occur from exposure to the air pollutants at NAF Atsugi. Two screening health risk assessments indicate that there is a potential for increased risk for both cancer and non-cancer health effects. A full health risk assessment is currently underway.

The U.S. Navy Bureau of Medicine and Surgery (BUMED) has prepared this review to assist medical personnel who are providing counseling to personnel and family members who are initiating or completing a Permanent Change of Station (PCS) move to or from NAF Atsugi. The intent of this document is to provide a concise review of:

- 1) the air quality at NAF Atsugi;
- 2) possible short term and long term health effects that may occur from exposure to the air quality at NAF Atsugi;
- 3) community outreach activities to inform the NAF Atsugi community of environment and health findings and to provide recommendations of personal actions community members can take to minimize exposure to air pollution;
- 4) past and present risk reduction activities at NAF Atsugi;
- 5) Navy Medicine's Comprehensive Risk Communication and Health Consultation Plan for NAF Atsugi.

An understanding of these components of the overall Navy response to the environmental conditions at NAF Atsugi will assist medical personnel in providing the necessary patient counseling and medical screening for personnel and family members undergoing overseas medical screening for PCS transfer to NAF Atsugi, currently assigned to NAF Atsugi.



considering extended tour length at NAF Atsugi, or departing from NAF Atsugi following tour completion.

1. Air Quality at Naval Air Facility (NAF) Atsugi.

a. Factors Affecting Air Quality at NAF Atsugi.

(1) Air quality at NAF Atsugi is generally poor. NAF Atsugi is located on Japan's Kanto Plain. The Kanto Plain is one of the most densely populated and heavily industrialized regions of Japan. There are many sources of air pollution, including vehicle exhaust as well as air emissions from industry. One major source of air pollution, which directly impacts NAF Atsugi, is the Jinkanpo Incinerator Complex. Jinkanpo is located adjacent to NAF Atsugi and has been in operation since 1985. There are three incinerators at Jinkanpo. Under its existing license, Jinkanpo operates 24 hours per day and burns up to 30 tons of waste per day. Approval to expand operations to 90 tons per day per incinerator is expected soon.

(2) Jinkanpo operates under a general waste disposal permit which means it can burn materials such as municipal and industrial wastes, wood products, plastics, industrial materials, construction debris, alkalis, waste oils, waste acids, and numerous other wastes. Incinerator operators frequently soak solid waste materials with liquid wastes prior to burning. In addition, on windy days piles of ash at the complex contribute to particulate emissions from the incinerators.

(3) The incinerators are equipped with control equipment consisting of a dry quench, an acid gas reaction chamber, an electrostatic precipitator, cyclone separators, and a wet quench scrubber. However, observations by Navy environmental professionals indicate that incinerator operators may frequently bypass the air pollution control equipment.

(4) The location of Jinkanpo in relation to NAF Atsugi influences the impact of incinerator operations on the air facility. Jinkanpo is situated in a small river valley south of NAF Atsugi. NAF Atsugi is positioned on a plateau at the head of the valley, about 20 meters higher than the tops of the incinerator stacks. The river valley channels the wind in the direction of NAF Atsugi, especially during the months of April through October when prevailing winds are from the south. During this portion of the year, fumigation incidents are common in the most densely



populated areas of the air facility, including family housing which has one high-rise/high density unit only 250 meters from the incinerator complex.

b. Navy Efforts to Evaluate Poor Air Quality and Impact of Jinkanpo at NAF Atsugi. The Navy is concerned with the poor air quality at NAF Atsugi and for the potential health effects on Navy personnel and their families. The proximity of Jinkanpo to the air facility particularly focuses concern on exposures to incinerator stack emissions and fugitive emissions from storage, handling and disposal of waste materials. Committed to protecting the health of our people, the Navy has engaged in a number of activities to address the situation.

(1) The U.S. first expressed concerns about Jinkanpo to the GOJ in September 1990. GOJ responded with a report that Jinkanpo was in compliance with Japanese law. Since that time the U.S. has engaged in continuous negotiations with GOJ to close Jinkanpo or mitigate emissions from Jinkanpo.

(2) The Navy has conducted three air quality studies in 1991, 1994, and 1997, to characterize air quality at NAF Atsugi. The air quality studies conducted by the Navy in 1994 and 1997 indicate that the air quality at NAF Atsugi meets Japanese air standards, but does not meet US Environmental Protection (EPA) Standards for breathable dusts and a number of chemicals, including benzene, dioxin, nitrogen dioxide, chromium, and several other metals.

(3) To evaluate the potential for human health effects from exposure to the poor air quality at NAF Atsugi, Navy Environmental Health Center (NEHC) used the data from the 1994 and 1997 air quality studies to conduct two separate screening health risk assessments (HRA). The findings of both screening HRAs are comparable and indicate that there is an increase in risk for non-cancer and cancer health effects with ongoing exposure to the poor air quality at NAF Atsugi.

(4) Both screening HRAs underwent civilian scientific review by the National Academy of Science's (NAS) Committee on Toxicology and the EPA. The NAS and the EPA confirmed the NEHC findings in the 1995 screening HRA. The 1995 screening HRA report was released to the public. As of June 1998, the external scientific review of the 1997 HRA was still ongoing.



(5) A full HRA is underway to evaluate more completely the health risks at NAF Atsugi.

2. Possible Health Effects. Individual susceptibility to air pollution varies, but the possible health effects are greatest for children less than six years of age and for individuals with chronic or severe respiratory diseases such as asthma. While suitability for assignment to NAF Atsugi will be evaluated on an individual basis, those persons with Step 3 or Step 4 Asthma, as described in the May 1997, National Institutes of Health National Heart Lung and Blood Institute Guidelines for the Diagnosis and Management of Asthma, are not suitable for assignment or continued residence at NAF Atsugi. Moderate to severe chronic upper or lower respiratory conditions will generally be considered disqualifying for assignment to NAF Atsugi.

a. Short Term Health Effects. Many of the air pollutants at NAF Atsugi are mucous membrane and lung irritants. Consequently, the predominant non-cancer health effects impact the respiratory system and the eyes. The severity of symptoms depends on a number of factors such as type of pollutants present, the concentrations of pollutants, duration of exposure, related weather conditions, and susceptibility of the exposed individual. As these parameters can vary widely during the course of a day or from day to day, the effect on an individual's health can vary considerably as well. For most individuals symptoms tend to be short-lived and directly related to exposure. Those with chronic respiratory conditions, such as asthma, chronic bronchitis, or sinusitis, and young children may be particularly sensitive to the irritating effects of air pollution and prone to more chronic symptoms as duration of exposure increases. Determination of suitability for assignment at Atsugi must be handled on a case-by-case basis. As stated earlier, moderate to severe chronic respiratory conditions will generally be considered disqualifying for assignment to NAF Atsugi. Development of significant acute health effects, such as exacerbation of asthma, sinusitis, or migraine headaches, while at Atsugi may require relocation of affected individuals.

b. Long Term Health Effects. Based upon the data from the two previous screening HRAs, the lifetime cancer risk is increased for adults and children exposed to the poor air at NAF Atsugi. However, methods used to calculate this increased risk are purposefully conservative. The actual cancer risk is likely to be less than that calculated from an HRA. Furthermore, all Americans have an inherent



probability of developing cancer. As per the American Cancer Society, American men have a one in two lifetime risk of cancer while American women have a one in three lifetime risk of cancer. Medical personnel should be aware of the following:

(1) Effect of Statistical Assumptions in HRA.

The HRA process involves the use of many statistical assumptions about exposures and the potential of health effects at low levels of exposure. The process is designed to apply assumptions conservatively to ensure protection of public health. As such the actual cancer risk is likely to be less than that calculated from an HRA.

(2) Adults and Children Six and Older. Based on the screening HRAs, for adults and children six and older, the air quality at NAF Atsugi could result in as much as one additional case of cancer in a population of 10,000 individuals after six years of exposure. The American Cancer Society states that during a lifetime, there will be 5000 cases of cancer in every population of 10,000 American men and 3,333 cases of cancer in every population of 10,000 American women. In other words, after six years of exposure at NAF Atsugi, with the additional cancer risk of one in 10,000, the number of men at risk for cancer is 5,001 in a population of 10,000 and the number of women at risk for cancer is 3,334 in a population of 10,000.

(3) Children Under Six Years of Age. For children under the age of six, the same level of risk, one additional case of cancer in a population of 10,000 individuals, is reached after three years of exposure.

(4) Comparison of Excess Cancer Risks. To help individuals put the excess cancer risk at Atsugi into perspective, the increase in cancer risk from exposure to cosmic radiation by living in Denver, Colorado, a mile above sea level, as opposed to living at sea level, is provided for comparison. For Denver residents, the excess cancer risk is one additional case of cancer in 10,000 individuals after two years of residence in Denver, when compared to a population living at sea level.

(5) Acceptable tour lengths at NAF Atsugi. With the inherent limitations and assumptions of the HRA process and limited air quality data from which the screening HRAs were conducted, normal tour lengths equating to six years for adults and children over six and to three years for children under six present acceptable levels of cancer risk



pending completion of the full HRA and complete definition of the environmental health risk.

3. Community Outreach Activities. Navy Medicine has served as a close consultant to NAF Atsugi in conducting a comprehensive and coordinated effort to inform and educate the NAF Atsugi residents concerning the air quality and possible related health effects.

a. Previous Community Outreach Activities. NAF Atsugi has had the lead in communicating the health risk to residents. Public health professionals with experience in health risk communication at the Navy Environmental Health Center (NEHC) have assisted the staff of NAF Atsugi and Branch Medical Clinic (BMC) Atsugi regarding effective risk communication tools to convey health risk in proper perspective and community health education to provide information on how individuals can reduce their health risk.

(1) NAF Atsugi has hosted the following formal events:

- Oct 95: Public Availability Session: The public exhibit reviewed the background and results of the 1994 air quality study and 1995 screening health risk assessment in understandable language, addressed health and medical issues, discussed base initiatives, and discussed related political issues.
  - Voluntary health screening was offered to concerned personnel.
  - A plan to educate base personnel on sensible precautions to protect their health was addressed.
- Feb 97: Shirley Lanham Elementary School teachers brief.
- APR 97: Public exhibit.
- Apr 97: Shirley Lanham Elementary School 4<sup>th</sup> Grade Class Brief.
- Nov 97: Public Availability Session:
  - NAF Atsugi hosted a Public Availability Session to update residents on ongoing efforts by the Navy to resolve the incinerator issue. Public exhibits and information booths with subject matter experts were set up to provide information on the nature of air pollution at Atsugi, related medical risk, and precautionary measures and engineering controls to reduce exposure to poor air quality and incinerator emissions.



- The CO NAF Atsugi and representatives from Commander Naval Forces Japan (CNFJ) and NEHC met with a group of concerned citizens to discuss specific issues.
- Jan 98: NAPRA (tenant command) safety standdown brief.
- Feb 98: Branch clinic sponsored training for Child Development Center, Youth Center and Family Home Care Providers.
- Mar 98: Branch clinic sponsored training for family members in measures to take to minimize exposure to air pollution and its fallout.

(2) NAF Atsugi has not used any formal means to evaluate the effectiveness of these past community outreach activities. However, sufficient information has been gathered via these previous activities to assemble a listing of common question. These questions appear in the Frequently Asked Questions (FAQ) Fact Sheet.

b. Current Community Outreach Activities. NAF Atsugi and the BMC Atsugi continue to be engaged in ongoing community outreach efforts designed to communicate health risk, evaluate potential health effects of poor air quality, and educate residents on effective measures to protect their health.

(1) NAF Atsugi conducts ongoing weather monitoring and issues regular weather advisory alerts to warn residents of the need to take additional measures to limit their exposure to air pollution.

(2) Through community service announcements and public affairs actions as well as educational briefings for specific groups, residents are provided updated information and recommendations concerning the air quality at NAF Atsugi.

c. Current Recommendations to Minimize Individual Exposure to Air Pollution. The following recommendations have been provided during community Public Availability Sessions, educational briefings, and during individual unit training sessions. They are also included in public affairs messages and announcements of weather advisory alerts.

(1) When air pollution levels are high, limit exercise to indoor activities.

(2) When air pollution levels are high, keep children indoors.

(3) Wash children's toys frequently.



(4) Keep surfaces in the home and workspace free of dust.

(5) Wash hands frequently.

(6) Recognize that children ingest more soil as a result of hand to mouth contact and take actions to lessen their exposure.

4. Past and Present Risk Reduction Activities at NAF Atsugi. Risk reduction efforts at NAF Atsugi pre-date the 1995 screening HRA. Early efforts consisted of posting placards to warn joggers about air emissions from the Jinkampo Incinerator and to inform the community on the status of negotiations with GOJ and the Kanagawa Prefectural Government (KPG) about the incinerator's emissions. With the release of the 1995 screening HRA, NAF Atsugi intensified risk reduction efforts. Actions have been taken on three fronts: (1) diplomatic initiatives, (2) engineering controls, and (3) community health education.

a. Diplomatic Initiatives. Diplomatic efforts have been ongoing with GOJ and KPG since shortly after the incinerator opened in 1985. Only recently has noticeable progress been made in that KPG has temporarily withheld approval for expanded operations at the incinerator and GOJ has begun to discuss the merits of raising the stack height to better disperse emissions. Negotiations continue regarding options to close the incinerator or otherwise significantly modify incinerator emissions and their impact on the environment.

b. Engineering Controls. Engineering controls include purchasing and distributing portable air cleaners to residents of Navy family housing. In addition, the design for retrofitting the existing heating, ventilation, and air conditioning system of the high-rise family housing units with a state of the art air cleaning system is nearly complete.

c. Community Health Education. Community health education efforts include providing education about minimizing exposure to incinerator emissions, providing education about minimizing exposure to soot from incinerator emissions and other sources of poor air quality, and developing a base wide pollution advisory and alert system which is broadcast over the local public access television station.



d. Epidemiologic Studies. BUMED and NEHC have initiated four epidemiologic studies in response to concerns about the environmental exposures at Atsugi and the potential for adverse health effects. The findings of these studies will assist the Navy in better characterizing the health risks at Atsugi and identifying further actions to reduce health risk.

5. Navy Medicine's Comprehensive Risk Communication and Health Consultation Plan for NAF Atsugi. BUMED has prepared a Comprehensive Risk Communication and Health Consultation Plan for NAF Atsugi to guide the risk communication and health consultation process and establish a coordinated and consistent message. The goal of risk communication is to provide factual information and reassurance to the community or individual.

a. Risk Communication. Medical providers will conduct risk communication during the time of overseas medical screening for all Service members and their family members executing PCS transfer to NAF Atsugi. Health risk communication is designed to provide factual information concerning potential health risks without causing unwarranted fear or concern. The plan lays out the mechanisms and accountabilities for informing all potentially affected parties about (1) the nature and magnitude of health risks associated with the air quality, (2) specific actions being taken and that can be taken by residents to reduce those health risks, and (3) the status of ongoing environmental studies, such as the full HRA designed to characterize more completely the health risk. Multiple communication channels must be used to ensure that appropriate information reaches the right audiences. Specific target audiences for these risk communication efforts include individuals and families prior to transfer to NAF Atsugi, individuals and families currently at NAF Atsugi, and former NAF Atsugi residents. From another perspective, key target audiences include active duty personnel, Navy and Department of Defense civilian personnel, family members of active duty and civilian personnel, and Japanese Nationals who work at NAF Atsugi. Different communication channels will be required to reach each target audience.

b. Health Consultation. In addition to establishing a program for risk communication, this plan provides for one-on-one health consultation for active duty personnel and their families at the time of the overseas medical screen.



prior to transfer to NAF Atsugi, and at the time of departure from Atsugi. The plan also provides for health consultations for current NAF Atsugi residents and employees who are at greatest potential health risk. Individuals potentially most sensitive to exposure to poor air quality include those with chronic respiratory diseases and children under the age of six years. In addition, the plan provides opportunities for other concerned individuals to receive health consultations. Principal health concerns potentially related to the air quality at NAF Atsugi, as expressed by area residents and employees, have included acute health effects such as mucous membrane and respiratory track irritation and headaches, as well as general concerns for the health of unborn and young children. Moderate to severe chronic respiratory conditions are generally disqualifying for assignment to NAF Atsugi. Development of significant acute health effects, such as exacerbation of asthma, sinusitis, or migraine headaches, while at Atsugi may require relocation of affected individuals. Pregnant women and families with children under six years of age will receive focused education on measures to take to minimize exposures to incinerator emissions and air pollution fallout.

6. Summary of Key Elements and Perspective for Delivering Risk Communication and Health Consultation on the Environmental Health Risk at NAF Atsugi. The key elements and perspective for provision of risk communication and health consultation on the potential environmental health risk at NAF Atsugi, as addressed in this forward, include the following:

a. The Navy is committed to protecting the health and well being of our people.

b. The Navy is aggressively engaged in diplomatic negotiations with GOJ to close Jinkanpo or significantly reduce incinerator emissions and will keep the Atsugi community informed regarding the status of negotiations.

c. The Navy will communicate current factual description of the environment at NAF Atsugi, the poor air quality due to pollution, and the impact of Jinkanpo on the facility. Related to this, the Navy is conducting a comprehensive Health Risk Assessment to characterize more completely the environmental health risk at Atsugi and several epidemiologic studies to evaluate the impact of the environment on the health of the people at Atsugi. The Navy



will provide status reports on these studies and share findings on these studies as they are completed.

d. The Navy will communicate the known and potential non-cancer and cancer health effects related to exposure to the air pollution and identification of those at greater risk.

e. The Navy will provide one-on-one health consultations for those identified to be at greater risk and will offer health consultations to all who request them.

f. The Navy will provide education to the Atsugi community regarding measures individual and families can take to reduce exposures to environmental pollution and incinerator emissions.

g. The Navy is pursuing the use of various engineering controls at NAF Atsugi to reduce exposure to air pollution and incinerator emissions. The Navy will keep the community apprised on the status and effectiveness of these efforts.





# Naval Air Facility, Atsugi, Japan Health and Environmental Fact Sheet

# 1

*This fact sheet is the first in a series designed to inform residents and other interested parties about health risks and the Navy's efforts to reduce those risks resulting from exposure to air pollution at Naval Air Station, Atsugi, Japan. Fact sheets will be produced periodically to keep individuals informed about ongoing health risk reduction efforts, health studies, and in response to other items of community interest. Distribution is coordinated through the NAF Atsugi Health Risk Communication officer, telephone: 011-81-311-764-4920/4921/4922/4923*

**Introduction.** The Navy is committed to protecting the health and well being of all our personnel and their families. In keeping this commitment, we have prepared this Health and Environmental Fact Sheet to inform you of the environmental conditions at Naval Air Facility (NAF), Atsugi and the Kanto Plain area of Japan where NAF Atsugi is located. This fact sheet also discusses the possible health effects of living in this area of Japan.

**Background.** In addition to a moderate climate, which can cause problems for asthma and allergy suffers from pollen counts, the air quality on the Kanto Plain and at NAF Atsugi is generally poor. Overall, the air quality is worse than in most major cities in the United States (US). Several Factors are involved:

1. The first is population. Japan has one half the population of the US in a land area the size of California. This means more vehicles in a smaller area and more pollution from vehicles. It also means there is little room for disposal of trash and garbage. As a result, the Japanese burn their refuse in incinerators, which adds to the pollution.
2. The second is that the Kanto Plain is one of the major industrial centers of Japan and there are many sources of air pollution. Environmental laws related to pollution are less strict in Japan than in the US and Japanese environmental officials have less enforcement authority when violations are identified.
3. The third is the presence of a primary pollution source, the Jinkanpo Incinerator, next to NAF Atsugi. This incinerator, which is located very close to

several Navy family housing units, the child care center, and the elementary school, burns both residential trash and hazardous waste. The prevailing winds blow air emissions from this incinerator across the base approximately six months out of each year. This occurs primarily during the months of April through October. Many NAF Atsugi residents believe the incinerator to be a major health and quality of life issue.

**Air Quality and Health Effects.** The Navy has conducted three air quality studies; 1991, 1994 and 1997. Two screening health risk assessments were done with data collected in 1994 and 1997 to study the possible health effects from exposure to air pollutants at NAF Atsugi. A full health risk assessment is now underway. While the air quality at NAF Atsugi meets Japanese air standards, it does not meet US Environmental Protection Agency Standards for breathable dusts and a number of chemicals, including benzene, dioxin, nitrogen dioxide, chromium, and several other metals. The results of the two screening health risk assessments indicate that there is a potential for increased risk for both cancer and non-cancer health effects.

These possible health effects are greatest for children less than six years of age, and for individuals who suffer from respiratory diseases such as asthma.

**Short Term Health Effects.** The health effects of short-term exposure to air pollution depend on a variety of factors. These include the type and amount of pollutants present, weather conditions, duration of exposure, and the susceptibility of the exposed individual. In view of the wide variability of these parameters,



the actual air quality and its effect on your health can vary considerably from day to day.

Many of the air pollutants present at NAF Atsugi are mucous membrane irritants. In high concentrations these can irritate your eyes, nose, and throat. This irritation can cause eye watering or redness, sneezing, and sore throat. Many pollutants, including several of those present in the air at NAF Atsugi, are lung irritants. These pollutants can cause bronchitis, coughing, shortness of breath, and wheezing. They may also make you more open to diseases such as the common cold, influenza, and pneumonia. Exposure to these pollutants can also result in asthma even if you have no prior history of that disease. Children can be especially open to asthma-like conditions caused by air pollution.

Clearly related to the poor air quality in the Kanto Plain is a condition known as Tokyo-Yokohama asthma. Although not really definable as asthma, this condition was first seen in soldiers and sailors living in the heavy industrial areas of Japan in the 1940s. The illness differs from true asthma in that most people affected have no history of allergy, and when they leave the polluted area their symptoms go away and don't return.

If you have a chronic respiratory disease, such as asthma or chronic obstructive lung disease, you may be more open to the affects of exposure to air pollutants. If you have asthma, you are likely to experience aggravation of your symptoms.

**Long Term Health Effects.** Based on two screening health risk assessments, the poor air quality at NAF Atsugi could result in as much as one additional cancer in a population of 10,000 adults after approximately 6 years of exposure. This represents an increase over and above the background incidence of cancer estimated by the American Cancer Society, which is 5000 cases per 10,000 men and 3,333 cases per 10,000 women. For children under 6 years of age, this same level of risk (1 additional cancer case per 10,000 population) is reached after an exposure period of approximately 3 years. Using the American Cancer Society background incidence, if 10,000 men and 10,000 women

lived at NAF Atsugi for six years we would expect 5001 men and 3334 women to get cancer. The added cancer risk from exposure to the air at NAF Atsugi does not go away after exposure ends. It lasts the lifetime of those exposed.

To help individuals put the excess cancer risk at Atsugi into perspective, the increase in cancer risk from exposure to cosmic radiation by living in Denver, Colorado, a mile above sea level, as opposed to living at sea level is provided for comparison. For Denver residents, the excess cancer risk is one additional case of cancer in 10,000 individuals after two years of residence in Denver, when compared to a population living at sea level.

#### Things You Can Do to Protect Your Health.

- Limit your exercise to indoor activities when air pollution levels are high.
- Keep your children indoors when air pollution levels are high.
- Wash your children's toys frequently.
- Keep surfaces in your home free of dust.
- Wash your hands frequently.
- Recognize that your children ingest more soil as a result of hand to mouth contact and take actions to lessen their exposure.

**Conclusion.** We are concerned for the health and well being of all our personnel and their families living at NAF Atsugi. That is why we are working with the Government of Japan (GOJ) to reduce air emissions from the Jinkanpo incinerator. Specifically, we are pressing the GOJ to close the incinerator or cause the incinerator owner to significantly change his operations. We are also taking action to reduce your exposures by filtering indoor air and providing information about other protective measures. At the same time, we are conducting additional health and environmental studies to better understand the nature of the health risks to ensure protection of your health.

**Additional Information.** For additional health information about health and environmental issues at NAF Atsugi contact the Health Risk Communication Officer at 011-81-311-764-4920/4921/4923/4924 or Navy Environmental Health Center in Norfolk, VA at (757) 363-5548



Revised SF 600 "To Be Retained in the Permanent Health Record"

This SF 600 is to document full disclosure of potential environmental exposures and possible health effects for all personnel and their families who are assigned to Naval Air Facility (NAF) Atsugi, Japan.

Before you execute a Permanent Change of Station (PCS) transfer to NAF Atsugi your health care provider will review the current and past medical history of you and all of your family members. Your health care provider will discuss the current environmental conditions at NAF Atsugi and possible related health effects. You will receive a Health and Environmental Fact Sheet with additional detailed information, including personal precautions that you may take to minimize exposure to air pollution. Your health care provider will discuss with you any medical conditions, current or past, that might worsen with exposure to environmental conditions at NAF Atsugi.

A full Health Risk Assessment is ongoing at NAF Atsugi. This study will evaluate the environmental conditions at NAF Atsugi and the pollutants discharged by a nearby incinerator to more fully define the health risk posed by the environmental conditions. The most current information about the status of the full HRA is available from the NAVENVIRHLTHCEN Environmental Programs Directorate via phone (757-363-5548 or DSN 864-5548) or the Environmental Programs Page of the NAVENVIRHLTHCEN Website ([HTTP://WWW.NEHC.MED.NAVY.MIL](http://WWW.NEHC.MED.NAVY.MIL)).

Your signature on this document indicates that you have been informed of the environmental conditions and possible health effects of living at NAF Atsugi. You have received the Health and Environmental Fact Sheet and have been advised of the medical findings from today's health consultation. Before you sign this document, ask any questions you may have.

Acknowledgment of Environmental Counseling and Health Consultation

Patient Statement:

Patient Statement must be completed by all individuals who are 18 years of age and older.

I have received information regarding the environmental conditions at NAF Atsugi and possible health effects of living at NAF Atsugi. I have read and understand the Health and Environmental Fact Sheet which recommends personal precautions that individuals may take to minimize exposure to air pollution. I understand the medical findings and recommendations of today's health consultation. I have had an opportunity to ask questions and know where to obtain additional information.

Patient signature \_\_\_\_\_ Date \_\_\_\_\_



Health Care Provider Acknowledgment of Completion of Environmental Counseling and Health Consultation for Individuals Executing a Permanent Change of Station Transfer to NAF Atsugi

Health care providers must complete the following:

1. This SF 600 was completed prior to PCS transfer to NAF Atsugi as a component of the medical overseas screen. Y\_\_\_ N\_\_\_
2. I have provided and reviewed with the individual the Health and Environmental Fact Sheet #\_\_\_ dated \_\_\_\_\_.

Health care provider statement

In accordance with the requirements for individuals undergoing Permanent Change of Station (PCs) transfer to Naval Air Facility Atsugi, Japan, I have discussed with the individual the current environmental conditions at NAF Atsugi and possible health effects of living in that area of Japan. I have completed a health consultation including a medical record review, completion or review of a current SF 93 (SF 93 must have been completed within 12 months of PCs transfer to NAF Atsugi), and identification of existing medical conditions that may be worsened by the current environmental conditions at NAF Atsugi. I have discussed these findings with my patient and make the following notation: (Circ. appropriate response.)

1. The patient has no current medical condition

potentially exacerbated by the environmental conditions at NAF Atsugi.

OR

1. The patient has the following medical conditions

potentially exacerbated by the environmental conditions at NAF Atsugi: (List medical conditions)

Potentially Exacerbated Potentially Disqualifying

---

3. Based upon these findings, I have determined that this individual (is /is not) suitable for overseas assignment to NAF Atsugi and have completed any necessary administrative paperwork. Y\_\_\_ N\_\_\_

Health care provider signature \_\_\_\_\_

Date \_\_\_\_\_



ADMINISTRATIVE REMARKS  
NAVPERS 1070/613 (REV. 10-81)  
S/N 0106-LF-010-6991

SHIP OR STATION: CUSTOMER SERVICE DESK, NAVAL AIR FACILITY ATSUGI, JA

\_\_\_\_\_: I certify that I/my family members listed below have received NAF Atsugi Health Risk Communication briefing in accordance with CINPACFLT msg dtg 042358Z May 98.

Family Service Member's Name	Age	Signature

I further acknowledge that:

- ☐ I or my dependents will exceed the "36/72 months" recommend tour length at NAF Atsugi on \_\_\_\_\_.
- ☐ I or my dependents already exceeded the "36/72 months" rule.
- ☐ I do/do not request a one-on-one health consultation or ☐ I defer the decision on a one-on-one health consultation until a later date.

\_\_\_\_\_  
Member's Signature

\_\_\_\_\_  
Witness by

NAME (LAST, FIRST, MIDDLE)	SSN	BRANCH AND CLASS
----------------------------	-----	------------------



ADMINISTRATIVE MESSAGE

ROUTINE

R 042358Z MAY 98 ZYB

FM CINCPACFLT PEARL HARBOR HI//N00//

TO COMNAVFORJAPAN YOKOSUKA JA//N01/N52//

INFO ASSTSECNAV IE WASHINGTON DC//PIRIE//  
ASSTSECNAV MRA WASHINGTON DC//ROSTKER//  
DASSTSECNAV ES WASHINGTON DC//MUNSELL//  
CNO WASHINGTON DC//N09/N4/N45/N931//  
USCINCPAC HONOLULU HI//J00/J01//  
BUPERS WASHINGTON DC//N00/N01/N4/N40/N454//  
BUMED WASHINGTON DC//N00/N02/N09//  
COMUSJAPAN YOKOTA AB JA//J00/J01//  
CINCLANTFLT NORFOLK VA//N00/N01//  
COMNAVAIRPAC SAN DIEGO CA//N00/N01//  
NAF ATSUGI JA//N00/N01//  
CINCPACFLT PEARL HARBOR HI//N00//

\*\*\*THIS IS A 2 SECTIONED MSG COLLATED BY MDS\*\*\*

UNCLAS //N01300//

NAF ATSUGI TO ENSURE WIDEST DISSEMINATION POSSIBLE

MSGID/GENADMIN/CINCPACFLT//

SUBJ/RISK COMMUNICATION AND HEALTH CONSULTATION PLAN FOR NAVAL  
ACTIVITIES ONBOARD NAVAL AIR FACILITY ATSUGI JAPAN//

REF/A/MSG/BUMED/262200ZFEB98//

REF/B/DOC/BUMED/COMPREHENSIVE RISK COMMUNICATION AND HEALTH  
CONSULTATION PLAN//

NARR/REF A IS P4 MESSAGE FROM RADM FISHER, DEPUTY CHIEF BUMED,  
ADDRESSING OVERSEAS SCREENING REQUIREMENTS FOR NAVAL ACTIVITIES AT  
NAF ATSUGI. REF B IS DETAILED GUIDANCE FOR EXECUTION OF  
COMPREHENSIVE RISK COMMUNICATION AND HEALTH CONSULTATION. REF B  
WILL BE PROVIDED SEPCOR.

POC/MARK WILSEY/ENS/CPF N131/COMM (808)471-8148/EMAIL:  
U131@CPF.NAVY.MIL//



RMKS/1. THIS IS A JOINT CINCPACFLT, BUPERS, BUMED MESSAGE. BUMED  
POC/CAPT SUE DAVIS/MED24/DSN 762-3496/EMAIL;  
SRDAVIS@US.MED.NAVY.MIL; BUPERS POC/CAPT MIKE OWENS/PERS40/  
DSN 227-0375/EMAIL P40@BUPERS.NAVY.MIL.

2. PROCEDURES FOR OVERSEAS SCREENING OUTLINED IN REF A WILL BE  
REVISED IN A SUBSEQUENT BUMED MESSAGE.

3. NAF ATSUGI IS LOCATED IN ONE OF THE MOST DENSELY POPULATED AND  
HEAVILY INDUSTRIALIZED REGIONS OF JAPAN. THERE ARE MANY SOURCES OF  
AIR POLLUTION THAT DIRECTLY IMPACT THE NAF ATSUGI COMMUNITY,  
INCLUDING VEHICLE EXHAUST, GENERAL INDUSTRY AND, PARTICULARLY, THE  
JINKANPO COMPANY WASTE INCINERATION COMPLEX. JINKANPO IS LOCATED  
DIRECTLY SOUTH AND ADJACENT TO THE NAF. GASEOUS AND PARTICULATE  
EMISSIONS FROM JINKANPO'S INCINERATORS AND WASTE HANDLING  
OPERATIONS  
VISIBLY FLOW ON-BASE, ESPECIALLY WHEN THE WINDS ARE FROM THE SOUTH.  
THESE EMISSIONS MOST IMPACT THE RESIDENTIAL AND RECREATION AREAS OF  
THE BASE, WHICH ARE LOCATED CLOSEST TO JINKANPO. THE POTENTIAL  
HEALTH EFFECTS OF AIR POLLUTION AND JINKANPO EMISSIONS CONCERN THE  
ATSUGI AND NAVY COMMUNITY.

4. THE NAVY AND UNITED STATES GOVERNMENT HAVE BEEN WORKING WITH  
THE  
GOVERNMENT OF JAPAN SINCE 1990 TO RESOLVE THE AIR QUALITY CONCERNS.  
JAPANESE LEGAL, POLITICAL AND PRIVATE SECTOR-GOVERNMENT  
RELATIONSHIPS  
COMPLICATE THIS ISSUE. HOWEVER, CONCERTED NAVY, OSD, AND  
INTERAGENCY  
EFFORTS CONTINUE TO PURSUE ULTIMATE CLOSURE OR RELOCATION OF  
JINKANPO'S OPERATIONS. THE NAVY IS CURRENTLY CONDUCTING A FULL  
HEALTH RISK ASSESSMENT (HRA) TO CHARACTERIZE MORE COMPLETELY THE  
POTENTIAL ENVIRONMENTAL HEALTH RISKS AT NAF ATSUGI, AND SEVERAL  
EPIDEMIOLOGICAL STUDIES TO EVALUATE THE IMPACTS OF THE AIR QUALITY  
ON INDIVIDUAL HEALTH. THE NAVY IS ALSO PURSUING THE USE OF VARIOUS  
ENGINEERING CONTROLS AT NAF ATSUGI TO REDUCE EXPOSURE TO AIR  
POLLUTION AND INCINERATOR EMISSIONS. PENDING COMPLETION OF THE FULL  
HRA AND COMPLETE DEFINITION OF THE ENVIRONMENTAL HEALTH RISK, THE  
SECRETARIAT AND CNO STAFFS CONCUR WITH EFFORTS TO INTENSIFY AND  
FORMALIZE HEALTH RISK COMMUNICATION, HEALTH CONSULTATION AND  
COMMUNITY OUTREACH ACTIVITIES WITH THE NAF ATSUGI COMMUNITY. THE  
PLAN AS OUTLINED BELOW WILL ALLOW FAMILIES AND SAILORS TO MAKE  
INFORMED DECISIONS REGARDING TOURS AT NAF ATSUGI WHILE MAINTAINING  
QUALITY OF LIFE AND PRUDENTLY MANAGING POTENTIAL HEALTH RISKS.



5. GENERAL GUIDANCE: AS PART OF REF B, EVERYONE CURRENTLY ONBOARD NAF ATSUGI WILL RECEIVE A FORMAL RISK COMMUNICATION BRIEFING ON THE NATURE AND MAGNITUDE OF HEALTH RISKS ASSOCIATED WITH THE AIR QUALITY, SPECIFIC ACTIONS FOR REDUCING THOSE HEALTH RISKS, AND THE STATUS OF ONGOING ENVIRONMENTAL STUDIES AND THE FULL HRA. THE BRIEFINGS WILL COMMUNICATE TO THE ATSUGI COMMUNITY THE KNOWN AND POTENTIAL NON-CANCER AND CANCER HEALTH EFFECTS RELATED TO EXPOSURE

TO AIR POLLUTION AND IDENTIFY THOSE INDIVIDUALS POTENTIALLY AT GREATER RISK. FACTORS WHICH MAY INCREASE AN INDIVIDUAL'S RISK INCLUDE AGE AND CHRONIC RESPIRATORY CONDITIONS, SUCH AS, ASTHMA. AFTER THE BRIEFINGS, ONE-ON-ONE HEALTH CONSULTATIONS WILL BE PROVIDED TO INDIVIDUALS WITH CHRONIC RESPIRATORY CONDITIONS, FAMILIES WITH CHILDREN UNDER THE AGE OF SIX YEARS, PREGNANT OR NURSING WOMEN, AND ANY PERSONNEL IN CONSECUTIVE OVERSEAS TOURS (COTS)

OR IN-PLACE CONSECUTIVE OVERSEAS TOURS (IPCOT) OR OVERSEAS TOUR EXTENSION INCENTIVE PROGRAM (OTEIP) STATUS OR PERSONNEL WHO HAVE RETOURED IN ATSUGI SINCE COMMENCEMENT OF INCINERATOR OPERATIONS (1985). MEDICAL AND PERSONNEL RECORDS WILL BE SCREENED TO IDENTIFY INDIVIDUALS IN NEED OF ONE-ON-ONE HEALTH CONSULTATIONS. ONE-ON-ONE HEALTH CONSULTATIONS WILL ALSO BE PROVIDED TO ANYONE UPON REQUEST.

6. IMPLEMENTATION PROCEDURES FOR PERSONNEL CURRENTLY RESIDING AT NAF ATSUGI (AND RESPONSIBILITIES):

A. COMPREHENSIVE RISK COMMUNICATION (BUMED AND NAF ATSUGI): BETWEEN JUN AND AUG 1998, ALL PERSONNEL AND FAMILIES ASSIGNED TO NAF ATSUGI WILL RECEIVE RISK COMMUNICATION BRIEFINGS AS OUTLINED IN REF B. BRIEFINGS WILL BE PROVIDED TO GROUPS OF NOT MORE THAN 50 TOTAL PERSONS AND WILL BE BASED ON THE FOLLOWING PRIORITIES: INDIVIDUALS WITH CHRONIC RESPIRATORY CONDITIONS; FAMILIES WITH CHILDREN UNDER THE AGE OF SIX YEARS; PREGNANT WOMEN AND NURSING MOTHERS; INDIVIDUALS WITH DOCUMENTED HEALTH CONCERNS; PERSONNEL WHO

ARE IN COTS, IPCOT, OTEIP, OR RETOUR STATUS; AND THEN ALL OTHERS.

A TEAM OF 3-4 PERSONNEL TRAINED IN THE AREA OF RISK COMMUNICATION, INCLUDING A HEALTH CARE PROVIDER, NEHC REPRESENTATIVE OR BUMED REPRESENTATIVE, PSA/PSD REPRESENTATIVE, AND NAF ATSUGI LEADER (OFFICER OR CPO, AS ASSIGNED) WILL COMPLETE THE BRIEFINGS AS SOON AS PRACTICAL. PRIORITY WILL ALSO BE AFFORDED TO MEMBERS ASSIGNED TO CVW-5 DURING LIMITED IN PORT PERIOD THIS SUMMER. FOLLOWING THE RISK COMMUNICATION BRIEFINGS, ALL SERVICE MEMBERS AND FAMILIES WILL INDICATE VIA PAGE 13 ENTRY, THAT THEY HAVE RECEIVED THIS COMMUNICATION, UNDERSTAND THE HEALTH RISKS, AND ELECT TO RECEIVE A HEALTH CONSULTATION OR DEFER THAT DECISION TO A LATER DATE. A



SAMPLE PAGE 13 WILL BE PROVIDED SEP COR.

B. HEALTH RISK CONSULTATION (BUMED): BUMED WILL CONTRACT A TEAM TO FACILITATE THE SCREENING OF ALL MEDICAL RECORDS OF PERSONNEL ASSIGNED TO NAF ATSUGI. PERSONNEL REQUIRED TO RECEIVE A ONE-ON-ONE HEALTH CONSULTATION CONDUCTED BY MEDICAL EXPERTS INCLUDE INDIVIDUALS

WITH A HISTORY OF CHRONIC RESPIRATORY CONDITIONS, FAMILIES WITH CHILDREN UNDER THE AGE OF SIX, PREGNANT OR NURSING WOMEN, AND INDIVIDUALS IN COTS, IPCOT, OTEP, OR RETOUR STATUS. ANY INDIVIDUAL OR FAMILY ASSIGNED TO NAF ATSUGI MAY REQUEST A ONE-ON-ONE HEALTH  
//

RMKS/

CONSULTATION, HOWEVER, REQUIRED HEALTH CONSULTATIONS WILL BE GIVEN

FIRST PRIORITY IN SCHEDULING. ALL OTHERS WHO ELECT A CONSULTATION FOLLOWING RISK COMMUNICATION WILL BE GIVEN SECOND PRIORITY. ONE SF600 WILL BE COMPLETED FOR EACH SERVICE AND FAMILY MEMBER WHO RECEIVES ONE-ON-ONE HEALTH CONSULTATION AND WILL BE RETAINED IN THE INDIVIDUAL'S PERMANENT HEALTH RECORD. THE BRANCH MEDICAL CLINIC WILL

REPORT ANY DISQUALIFYING CONDITIONS FOUND DURING HEALTH CONSULTATION

TO NAF ATSUGI. AS NECESSARY, NAF ATSUGI WILL DISCUSS OPTIONS FOR EARLY RETURN OF DEPENDENTS WITH SERVICE MEMBERS AND THEIR FAMILIES, ON AN INDIVIDUAL BASIS. AS REQUIRED, A 1306 REQUEST FOR MODIFICATION OF TOUR LENGTH WILL BE COMPLETED BY THE MEMBER.

C. OUTREACH PROGRAM (NAF ATSUGI): NAF ATSUGI OUTREACH EFFORTS HAVE BEEN ONGOING SINCE OCT 1995. REF B BROADENS AND INTENSIFIES THESE EFFORTS TO ENCOURAGE TWO-WAY DIALOGUE AND ENSURE THAT TIMELY,

ACCURATE AND CONSISTENT INFORMATION IS PROVIDED TO FUTURE AND CURRENT

MEMBERS OF THE NAF ATSUGI COMMUNITY. NAF ATSUGI, WITH THE ASSISTANCE

OF BUMED, IS RESPONSIBLE FOR DEVELOPING AN EXECUTION PLAN TO IMPLEMENT THE OUTREACH PROGRAM OF REF B, INCLUDING A FORMAL MEANS TO

EVALUATE EFFECTIVENESS OF OUTREACH AND RISK COMMUNICATION EFFORTS.

7. IMPLEMENTATION PROCEDURES FOR PERSONNEL WITH ORDERS TO NAF ATSUGI (AND RESPONSIBILITIES):

A. COMPREHENSIVE RISK COMMUNICATION AND HEALTH CONSULTATION (BUMED): ALL SERVICE AND FAMILY MEMBERS WILL BE INFORMED OF THE



CURRENT ENVIRONMENTAL CONDITIONS AND POSSIBLE HEALTH EFFECTS OF LIVING AT NAF ATSUGI. SERVICE AND FAMILY MEMBERS WITH ORDERS TO NAF ATSUGI WILL RECEIVE RISK COMMUNICATION AND HEALTH CONSULTATION AT THE

TIME OF THE MEDICAL OVERSEAS SCREEN. THE HEALTH CARE PROVIDER WILL IDENTIFY ANY EXISTING MEDICAL CONDITIONS THAT MAY BE WORSENER BY THE

CURRENT ENVIRONMENTAL CONDITIONS AT NAF ATSUGI. ONE SF600 WILL BE COMPLETED FOR EACH SERVICE AND FAMILY MEMBER AND WILL BE RETAINED IN THE INDIVIDUALS PERMANENT HEALTH RECORD. DURING THE MEDICAL OVERSEAS SCREENING PROCESS, A HEALTH AND ENVIRONMENTAL FACT SHEET WILL BE PROVIDED TO SERVICE MEMBERS.

B. HANDLING OF COTS, IPCOT, OTEIP, AND RETOURS (BUPERS AND NAF ATSUGI): ALL PENDING REQUESTS FOR COTS, IPCOT, OTEIP, OR RETOURS IN FY98 WILL BE APPROVED FOR PERSONNEL WHO CONTINUE TO MEET ELIGIBILITY REQUIREMENTS FOR OVERSEAS DUTY. THIS WILL MITIGATE OPERATIONAL IMPACTS AND ALLOW AFFECTED PERSONNEL TO RECEIVE RISK COMMUNICATION

AND HEALTH CONSULTATION AS SOON AS PRACTICAL. PRIORITY AND TIMING IS BASED ON CVW EMPLOYMENT SCHEDULING. FOLLOWING RISK COMMUNICATION/HEALTH CONSULTATION SCREENING, FOR THOSE LIMITED INSTANCES WARRANTED, SUBSEQUENT TOUR LENGTH ADJUSTMENTS WILL BE MADE

VIA NORMAL 1306 PROCESS.

8. THIS PLAN IS DESIGNED TO PROVIDE THE BEST POSSIBLE AND MOST COMPREHENSIVE HEALTH RISK COMMUNICATION AND HEALTH CONSULTATION AVAILABLE SO AS TO ALLOW OUR NAVY PERSONNEL AND THEIR FAMILIES TO MAKE PERSONAL AND INFORMED CHOICES. THE LONG TERM GOAL REMAINS TO CLOSE OR REMOVE THE JINKANPO INCINERATOR OPERATION. FURTHER GUIDANCE

WILL BE PROVIDED WITH REGARD TO CIVIL SERVICE AND DODDS PERSONNEL SEPCOR//

BT

NNNN

CDSN = MED191 MCN = 98125/00783 TOR = 981250047

Section 1: PSN

Section 2: PSN



ADMINISTRATIVE MESSAGE

IMMEDIATE

O 210900Z MAY 98 ZYB

FM NAF ATSUGI JA//00//

TO ALL COMMANDS NAF ATSUGI JA//N01//

INFO ASSTSECNAV IE WASHINGTON DC//PIRIE//  
ASSTECNAV MRA WASHINGTON DC//ROSTKER//  
DASSTSECNAV ES WASHINGTON DC//MUNSELL//  
CNO WASHINGTON DC//N09/N4/N45/N931//  
BUMED WASHINGTON DC//N00/N02/N09//  
CINCPACFLT PEARL HARBOR HA//N465//  
COMNAVFORJAPAN YOKOSUKA JA//N01/N52//  
NAVENVIRHLTHCEN NORFOLK VA//JJJ//

UNCLASS//N01300//

MSGID/GENADMIN/NAF ATSUGI JA//

SUBJ/RISK COMMUNICATION AND HEALTH CONSULTATION PLAN FOR NAVAL  
ACTIVITIES ONBOARD NAVAL AIR FACILITY ATSUGI JAPAN//

REF/A/MSG/CINCPACFLT/042358ZMAY98//

AMPN/REF A IS A JOINT CINCPACFLT, BUPERS, BUMED MESSAGE ADDRESSING  
PROCEDURES FOR COMPREHENSIVE RISK COMMUNICATION BRIEFING AND HEALTH  
CONSULTATION PLAN.//POC/REY REGIS/LT/NAF ATSUGI SPO/DSN 264-3064/EMAIL:

RBREGIS@EMH.ATSUGI.NAVY.MIL

RMKS/1. IAW REF A, ALL ADULT MEMBERS AND DEPENDENTS CURRENTLY ONBOARD  
NAF ATSUGI SHALL RECEIVE A FORMAL HEALTH RISK COMMUNICATION BRIEFING DUE  
TO AIR QUALITY AT NAF ATSUGI. GROUP BRIEFINGS WILL BE SCHEDULED, TWO TO  
THREE PER DAY, STARTING 8JUN98.

2. THE HEALTH RISK COMMUNICATION BRIEFINGS WILL BE STRUCTURED AS  
FOLLOWS: INTRODUCTION, HEALTH RISK ASSESSMENT, CURRENT EFFORTS TO  
DECREASE RISK AND CURRENT HEALTH ASSESSMENT ACTIVITIES. THE  
PRESENTATIONS WILL BE FOLLOWED BY QUESTION AND ANSWER AND POSTER  
SESSIONS TO LAST A TOTAL OF ABOUT TWO HOURS.
3. A SCHEDULE OF BRIEFS, ASSIGNING TIMES AND COMMAND TO PROVIDE  
ATTENDANCE, WILL BE PROMULGATED VIA SEPCOR. TENANT COMMANDS WILL BE  
RESPONSIBLE FOR FILLING ASSIGNED BRIEF PERIODS WITH FIFTY ATTENDEES  
PER PERIOD. FAMILY UNITS, INCLUDING SPONSOR AND ALL ADULT DEPENDENTS,  
SHALL BE ASSIGNED TO ATTEND TOGETHER. A SERVICE RECORD REVIEW  
WORKSHEET (DESCRIBED IN PARA. 4) SHALL BE COMPLETED AND TURNED IN BY  
THE COMMAND PRIOR TO EACH MEMBERS' SCHEDULED BRIEF. IT IS IMPORTANT  
TO FRONT LOAD PRIORITY BRIEF RECIPIENTS. BRANCH CLINIC WILL PROVIDE A  
PRIORITY LIST OF COMMAND MEMBERS TO EACH COMMAND AND WILL CONTACT  
MEMBERS REGARDING HEALTH CONSULTATION APPOINTMENTS. CLINIC POC: HMC  
ANDY MARTIN, DSN 264-4125.
4. A SERVICE RECORD REVIEW WORKSHEET HAS BEEN DEVELOPED TO ASSIST  
COMMANDS IN IDENTIFYING OTHER PRIORITY RECIPIENTS BASED ON LENGTH OF  
TIME ASSIGNED TO ATSUGI (36/72 MOS RULE). COMMANDS SHALL DESIGNATE  
REPRESENTATIVES TO SCREEN INDIVIDUAL SERVICE RECORDS USING THE



WORKSHEETS, AND SUBMIT THE WORKSHEETS TO NAF POC NLT TWO WORKING DAYS PRIOR TO THE INDIVIDUAL'S SCHEDULED HEALTH RISK COMMUNICATION BRIEF. ACCURATE COMPLETION OF THE WORKSHEETS IS PARAMOUNT. REQUEST PROVIDE NAF POC WITH COMMAND REPRESENTATIVES' NAME, TEL NUMBER AND EMAIL ADDRESS NLT 1 JUN98. SERVICERECORD REVIEW WORKSHEETS WILL BE MAILED TO EACH COMMAND AND WILL BE EMAILED TO TENANT COMMAND REPRESENTATIVES UPON REQUEST OR CAN BE PICKED UP IN ATSUGI HEALTH RISK COMMUNICATION OFFICE, RM B-2, BLDG 66.

5. TENANT COMMANDS' SUPPORT IS VITAL IN THE SMOOTH COMPLETION OF THE HEALTH RISK COMMUNICATION AND HEALTH CONSULTATION PLAN. REGRET SHORT

FUSE AND APPRECIATE ASSISTANCE//



# POSTER AVAILABILITY SESSION

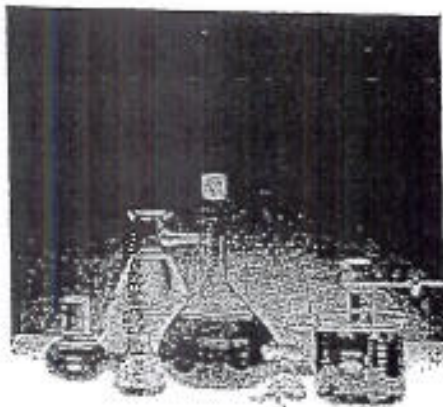
RISK COMMUNICATION BRIEF  
NAF ATSUGI, JAPAN  
JUNE-AUGUST 1998



# WHAT'S IN THE AIR AT ATSUGI

## Metals

- Arsenic
- Beryllium
- Cadmium
- Chromium



## Solvents

- Acetaldehyde
- Benzene
- Carbon Tetrachloride
- Chloroform
- Chloromethane
- 1,2-Dichloroethane
- 1,2-Dichloropropane
- Formaldehyde
- Vinyl Chloride

## Particulates

- PM<sub>10</sub> - Particulate Matter less than 10 microns in size

## By-Products

- Dioxins/Furans



# ACTIVITIES UNDERWAY TO IMPROVE AIR QUALITY

## Political Actions

- Negotiation with the Government of Japan to modify the incinerator operating procedures
- Negotiation to install new and improved air pollution control equipment on the incinerator



## Technological Actions



- Installation of air cleaners
- Indoor and outdoor air monitoring

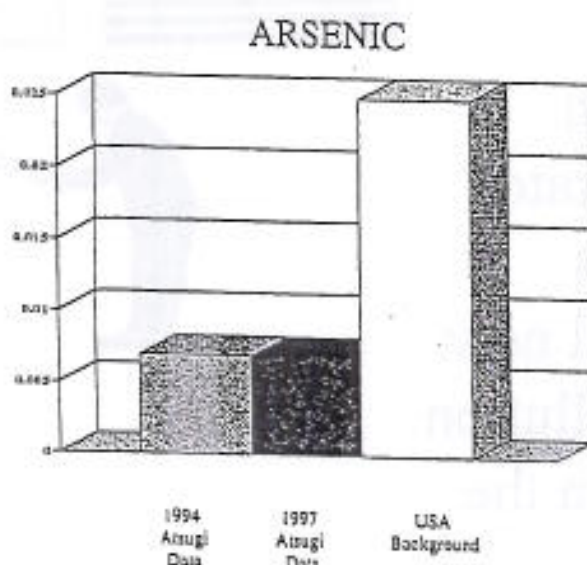
## Community Health Education

- Provide information about minimizing exposure to air pollution
- Develop a base wide air quality advisory system

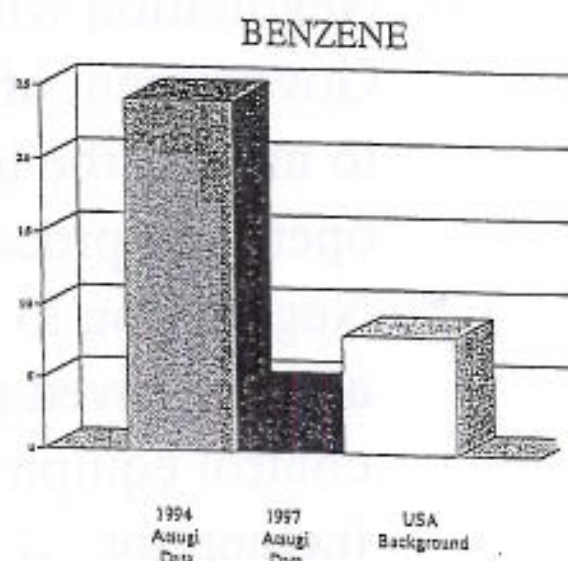




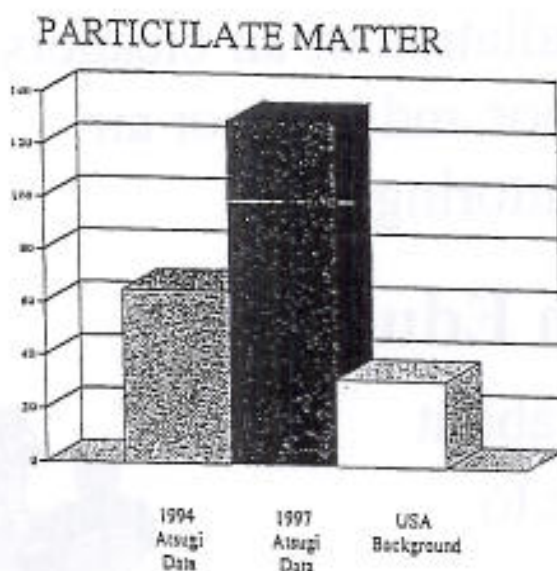
# AIR QUALITY COMPARISON CHART



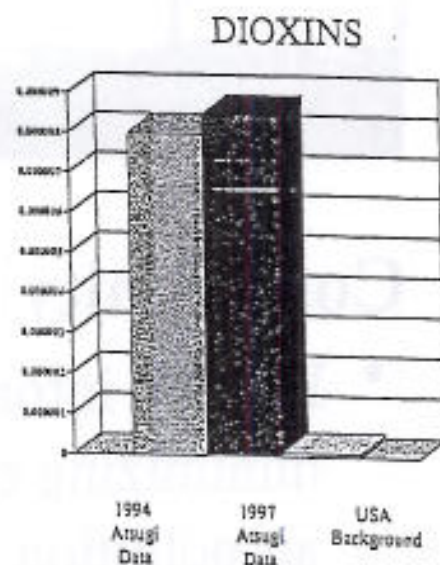
USA Background value from the United States Department of Health and Human Services



USA Background value from the United States Department of Health and Human Services



USA Background value from the World Health Organization



USA Background value from the United States Environmental Protection Agency

\* All Data in the charts above is in ug/m³. One ug equals one millionth of a gram (0.000001 grams). One gram equals 0.035 ounce.



# HEALTH RISKS

Health studies indicate that the primary health risk from poor air quality is to people with respiratory conditions.

Other people that may be more susceptible to poor air quality include:



- Children
- People with heart disease
- The elderly
- People with extended stays

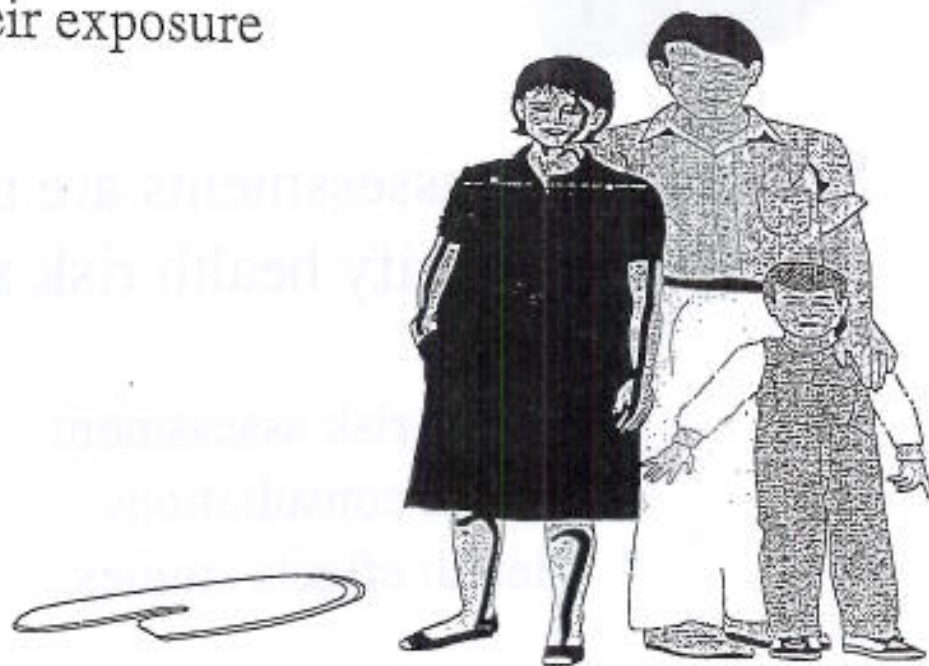
Several health assessments are now underway to clarify health risk at Atsugi.

- Health risk assessment
- Health consultations
- Health effects studies



# THINGS YOU CAN DO TO PROTECT YOUR HEALTH

- Limit your exercise to indoor activities when air pollution levels are high
- Keep your children indoors when air pollution levels are high
- Wash your children's toys frequently
- Keep surfaces in your home free of dust
- Wash your hands frequently
- Recognize that your children ingest more soil as a result of hand to mouth contact and take actions to lessen their exposure





# RESPIRATORY AND SKIN CONDITIONS

*Can the air quality affect my breathing?*

*My family seems to get more colds since we've been here, is this related to the incinerator?*

*My child has a rash, is it related to the incinerator?*

## RESPIRATORY CONDITIONS

The air quality at Atsugi can:

- ◆ Aggravate asthma
- ◆ Increase the likelihood of occurrence for respiratory illnesses such as colds and flu



## SKIN CONDITIONS

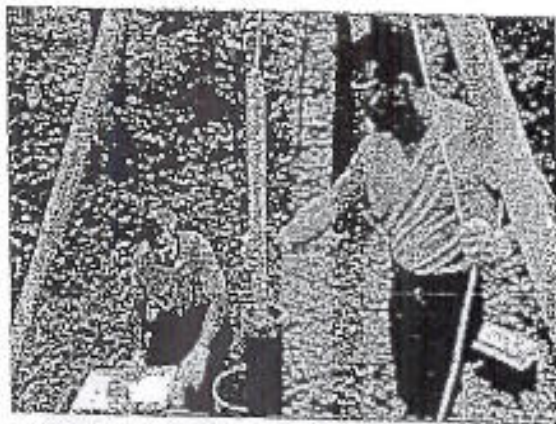
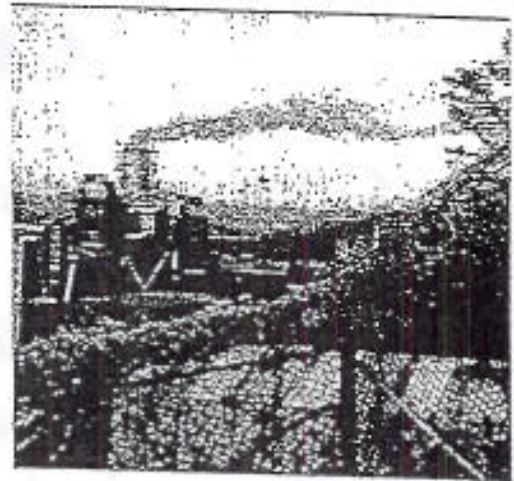
Current health studies and review of the scientific literature indicates that air pollution may cause rashes and other skin conditions.



# HEALTH RISK ASSESSMENT

## PURPOSE

To provide additional information about the potential health risks to individuals living and working on NAF Atsugi. The risk assessment will evaluate the potential for health effects to occur from exposure to the air quality at NAF Atsugi.

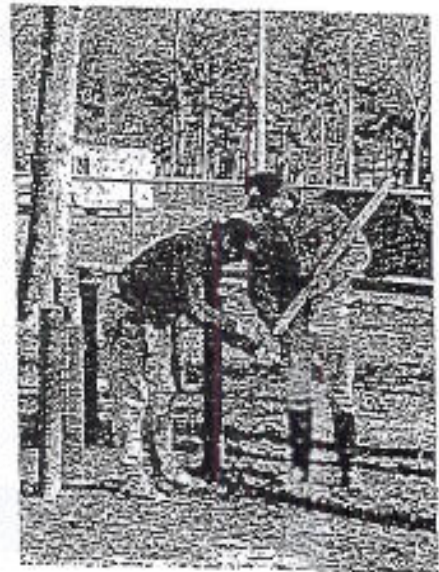


## EXPOSURE PATHWAYS TO BE EVALUATED

- Outdoor air
- Indoor air
- Soil
- Indoor dust
- Food
- Water

## SAMPLING

Samples are being collected throughout NAF Atsugi. Sampling locations include the residential towers, elementary school, child development center, ground electronics maintenance building and others. Samples will be obtained over a 12-month period. Fact sheets will be produced periodically to keep individuals updated about our progress.





# HEALTH CONSULTATION

The Navy is committed to protecting the health and well being of those living at our installations. In keeping with this commitment we have developed a health consultation program to address the specific health concerns of individuals and families related to the air quality at NAF Atsugi.

## The health consultation will consist of :



- Discussing the health risk at NAF Atsugi
- Reviewing past and current medical history
- Completing a health risk appraisal
- Conducting a physical examination, if needed
- Counseling on healthy life styles.
- Recommending ways to reduce health risk factors

## A health consultation will be provided to:

- Active duty personnel and their families prior to transfer to NAF Atsugi
- Pregnant or nursing women
- Families with children under 6 years of age
- Individuals with asthma or respiratory illnesses
- People who have been at Atsugi for extended periods
- Other Atsugi residents upon request





# HEALTH EFFECTS STUDIES

## MISCARRIAGES

**PURPOSE:** Compare the miscarriage rate between residents of Atsugi and those of other bases in Japan.

**REASON:** Atsugi residents have expressed concerns about miscarriages.



## CHILDREN'S HEALTH

**PURPOSE:** Compare respiratory symptoms and lung function between children at NAF Atsugi and children at Yokosuka. Determine if symptoms or lung function correlate to daily air quality measurements.



**REASON:** Atsugi residents have expressed concerns about the effects of the air quality on their children's health. In fact, children are thought to be more sensitive to changes in air quality. The most likely part of the body where these effects could be measured are the lungs.

## MEDICAL CONDITIONS

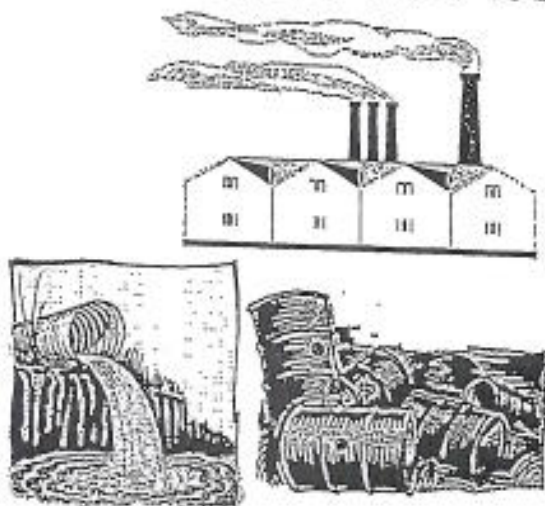
**PURPOSE:** Evaluate the occurrence of respiratory and skin conditions treated at Branch Clinic Atsugi. Compare this to the occurrence of these same conditions at other Yokosuka branch clinics. Determine if the conditions experienced at Atsugi differs from the other sites.

**REASON:** The lungs and skin are the most likely parts of the body to be affected by air quality. This study will determine if the air quality at Atsugi is related to an increase in skin and respiratory conditions that require medical evaluation and treatment.





# WHAT IS RISK ASSESSMENT



- ◆ Risk Assessment is a scientific process used to evaluate the chance that health effects could result from exposure to substances in the environment.
- ◆ Risk Assessment is one tool used to make risk management decisions.
- ◆ Risk Assessment is a four step process.

## The 4-Step Risk Assessment Process

### Risk Assessments combine

- ◆ information from environmental testing,
- ◆ results of studies on the health effects of substances found in the environment, and
- ◆ information and/or models which determine the level of exposure to substances in the environment

to estimate the increased lifetime risk of cancer and/or chance of non-cancer health effects in those exposed.

### Data Collection and Evaluation

What materials are present and how much is present?

### Exposure Assessment

How much of the material are people exposed to and how long are they exposed?  
How many people are exposed?

### Dose-Response Assessment

What are the health effects at different exposure levels?

### Risk Characterization

What is the extra risk of health effects in the exposed population?

## Risk Assessment Objectives

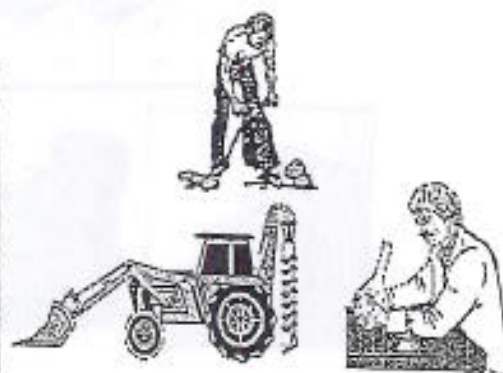
- ◆ To determine if risk management action at a site is needed.
- ◆ To determine where and how much action is needed.
- ◆ To assist in determining what kind of action should be taken.



# RISK ASSESSMENT

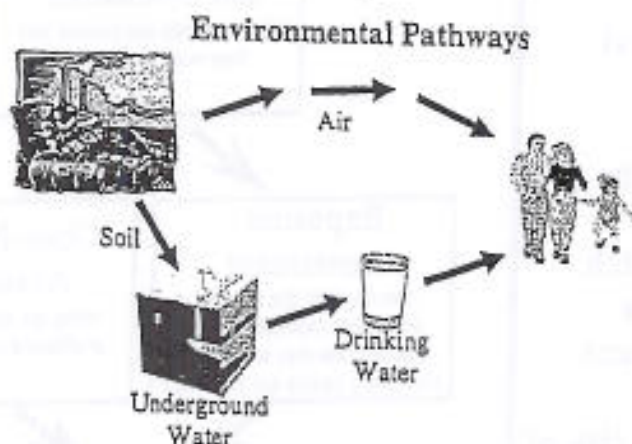
## Data Collection and Evaluation

- ◆ Identifies what materials have been released into the environment.
- ◆ Identifies how much material is being or has been released and to which environmental media (air, soil, or water).
- ◆ Defines the potential for materials released into the environment to move within the environment.



## Exposure Assessment

- ◆ Determines who is exposed and by what environmental pathways.
- ◆ Estimates the range of possible exposures.
- ◆ Determines the reasonable maximum exposure that is likely to occur at a site.



## Dose-Response Assessment

- ◆ Determines what health effects a substance may cause in people.
- ◆ Determines how much is required to cause those effects.
- ◆ Evaluates both cancer and non-cancer outcomes.

## Sources of Dose-Response Information



Laboratory Animal Studies



Industrial Accidents



Epidemiological Studies



# RISK ASSESSMENT

## Risk Characterization

Risk Characterization is the summarizing step in risk assessment. It combines information from the previous three steps to determine the likelihood that health effects could occur in people who come in contact with substances present at a site. There are two stages in characterizing risk, quantifying risks and analyzing uncertainty.

## Quantifying Risks

The calculation for Cancer Risk determines the increased likelihood of getting cancer over a lifetime. Individual calculations are made for each substance present and for all environmental pathways. These individual values are added to arrive at the overall risk for the exposed population.

Non-cancer Risk is evaluated by calculating ratios called Hazard Quotients. Hazard Quotients are calculated by comparing levels of substances found at a site to known safe levels of these substances. Individual calculations are made for each substance present and for all potential routes of exposure. These individual values are added to produce an overall Hazard Index for the exposed population. A Hazard Index greater than 1 indicates a possible increased health risk.

## Analyzing Uncertainty

Uncertainty exists in assessing health risks because scientists do not have complete information. When information is missing, scientists make assumptions that will prevent them from underestimating the health risk. When Uncertainty Analysis is performed the scientists' assumptions and key site-related variables that contribute to uncertainty are identified. This is done so that risk estimates can be placed in proper perspective for risk managers.



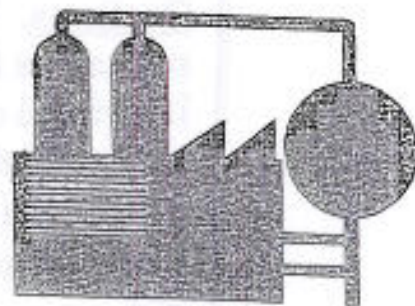
# WHAT IS DIOXIN?

*The term Dioxin is used to describe a family of compounds with a similar chemical structure. Dioxin is an unwanted by-product of other activities, including burning refuse, making paper, and producing other chemicals. Dioxin was present in very small amounts in the herbicide Agent Orange.*

## Properties and Sources of Dioxin in the Environment

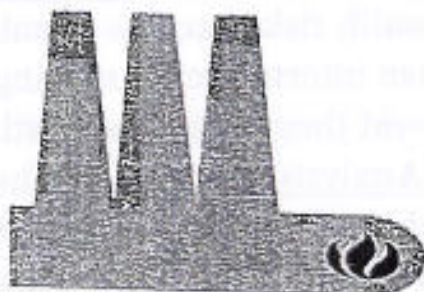
### Properties

- Colorless solid
- Evaporates very slowly, unless heated to high temperatures
- Attaches strongly to soil and other particles
- Breaks down in sunlight
- Does not dissolve easily in water
- Does not burn easily



### Sources

- Incineration of municipal and medical waste
- Burning wood in home fireplaces
- Forest fires
- Bleaching wood pulp and paper products
- Chemical manufacturing
- Cigarette smoke





# DISTRIBUTION OF DIOXIN IN THE ENVIRONMENT

## *History of Dioxin Distribution*

- *Very little dioxin present in soil and sediments before 1920*
- *Dioxin in soils and sediments were at their peak in 1980*
- *Dioxin levels in most areas of the world have decreased steadily since 1980*

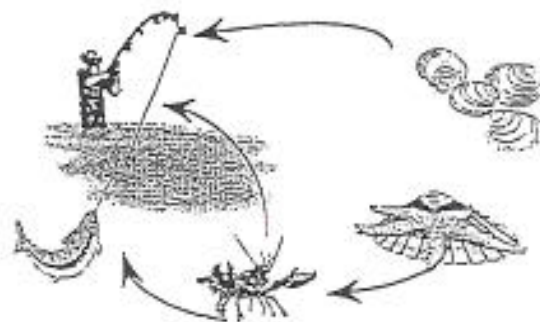
Dioxin is widely distributed in the environment. It has been found in very remote locations, even in the frozen snow at the North and South Poles. Dioxin is found in soil, water, air, and sediments (soil trapped under water).

## What Happens to Dioxin in the Environment?

- Dioxin, even in air and water, is tightly attached to soil or other particles.
- Dioxin is very stable in the environment. Once attached to soil, only very small amounts are released.
- Dioxin in air settles to the ground where it is deposited on soil, plants, or in lakes and streams.
- Dioxin stays very close to the surface of the ground or moves to lakes and streams by a process called erosion.
- Dioxin that enters lakes or streams settles to the bottom and is buried in sediments.

## Dioxin in the Food Supply

- Dioxin in soil, water and on plants is eaten by animals.
- When animals are eaten by other animals, dioxin levels increase (bioaccumulate)





# EXPOSED POPULATIONS

## How are People Exposed to Dioxin?

- The main source of exposure (as much as 90%) comes from the food supply.
- Job related exposures occur in the chemical industry and in workers exposed to fuels and hydraulic fluids.
- A very small amount of dioxin exposure comes from the air we breathe.



## Dioxin in the Body

- Dioxin is deposited mainly in fat and the liver.
- Dioxin is removed by the body very slowly.
- This slow removal by the body causes dioxin to build up in fat.



## HEALTH EFFECTS



### Known Human Effects



- Exposure to high doses of dioxin over a short time period results in irritation of the eyes, skin, and lungs.
- Exposure to high doses of dioxin over a long period results in chloracne, a skin condition like acne.
- Low dose exposures have caused no health effects.



### Effects on Laboratory Animals

- Tumors occur in some animals. Because of this, dioxin is considered a probable human cancer causing agent.
- Reproductive and developmental effects have been noted in some animals.
- Effects on the immune system have been observed in some animals.



## Environmental Fact Sheet

### Naval Air Facility, Atsugi, Japan

The Naval Air Facility (NAF), Atsugi is located in the Kanto Plain of Japan. The weather in the Kanto Plain is similar to that of Norfolk, Virginia. As the mild weather produces high pollen counts year round, people with allergies and asthma can have more frequent and/or more severe allergy and asthma symptoms when living there. In addition to having a moderate climate, the Kanto Plain is also a major industrial center in Japan. There are many sources of air pollution. Industrial pollutants can cause increased problems for people with asthma and other respiratory diseases. One of the major pollution sources in the area is an industrial waste incinerator which is located next to the facility. Air emissions from the incinerator periodically blow directly across the facility. Prevailing wind patterns cause this to occur more regularly during April through October. Incinerators are known to have an affect on health and quality of life.

The Navy has conducted an environmental study to determine the possible health effects of exposure to air pollutants at NAF Atsugi. The air quality measured in this study met Japanese Standards but exceeded United States Environmental Protection Agency (US EPA) Standards for respirable particulates and a number of chemicals. Using US EPA methods to determine health risk, the study showed that exposure to air pollutants at the facility increases both cancer and non-cancer health risks. As with all exposures to environmental pollutants, the health risk is greater for children less than six years of age.

The Navy is now conducting a more detailed environmental study at NAF Atsugi geared specifically toward evaluating pollutants associated with the adjacent incinerator. This study will more fully define the health risk posed by pollutants and provide information to assist the Navy in taking action to protect the health of NAF Atsugi residents. At the same time, Navy officials are working closely with the Government of Japan to eliminate the hazard from the incinerator.

The Navy is deeply concerned for the health and welfare of all personnel and their family members assigned to NAF Atsugi. Every effort is being made to address incinerator related problems and also provide accurate information to the public. To obtain the most current information about the status of the ongoing environmental study at NAF Atsugi, visit the Navy Environmental Health Center's (NEHC) Web Sight at <http://www-nehc.med.navy.mil> and click on Environmental Programs or contact NEHC at (757) 363-5548.

Navy Bureau of Medicine and Surgery, 26 December 1997



## Environmental Fact Sheet - Medical Script

The Navy is committed to protecting the health and well being of service members and their families. In keeping this commitment, we have prepared the environmental fact sheet to inform you of the environmental conditions at Naval Air Facility (NAF), Atsugi and the Kanto Plain area of Japan where NAF Atsugi is located. The fact sheet also discusses the possible health effects of living in this area of Japan. The purpose of this fact sheet is to provide you with the information necessary to make an informed decision about taking your family with you to NAF Atsugi.

In addition to its moderate climate, which can cause problems for asthma and allergy sufferers from pollen counts, the air quality on the Kanto Plain and at NAF Atsugi is generally poor. Overall, the air quality is worse than in most major cities in the United States (US). Three factors are involved:

1. The first is population. Japan has one half the population of the US in a land area the size of California. This means more vehicles in a smaller area and more pollution from vehicles. It also means there is little room for disposal of trash and garbage. As a result, the Japanese burn their refuse in incinerators which adds to the air pollution.
2. The second is that the Kanto Plain is a major industrial center in Japan and there are many sources of air pollution. Environmental laws related to pollution are less strict in Japan than in the US and Japanese environmental officials have less enforcement authority when violations are identified.
3. The third is the presence of a primary air pollution source, the Jinkampo incinerator, next to NAF Atsugi. This incinerator, which is located very close to several Navy family housing units, the day care center, and the elementary school, burns both residential trash and hazardous waste. The prevailing winds blow air emissions from this incinerator across the base approximately six months out of the year. This occurs primarily during the months of April through October. Many NAF Atsugi residents believe the incinerator to be a major health and quality of life issue.

The Navy has conducted an environmental study on the possible health effects of exposure to air pollutants at NAF Atsugi. The air quality at NAF Atsugi is acceptable per Japanese standards, but well above US Environmental Protection Agency (EPA)



standards for respirable particulates and a number of chemicals, including benzene, dioxins, nitrogen dioxide, sulfur dioxide, chromium, and several other metals. The results of the study indicate that there is increased risk for both cancer and non-cancer health effects with both long and short-term exposure.

The health effects from short-term exposure to air pollution depend on a variety of factors including the type of pollutants present, their concentrations, the duration of exposure, weather conditions, and the susceptibility of the exposed individual. In view of the wide variability of these parameters, the actual air quality and its effect on health can vary considerably from day to day. Therefore, only general advisory comments are possible.

Many air pollutants are mucous membrane irritants. In high concentrations these can cause irritation of the eyes, nose, throat and cause symptoms such as eye watering or dryness, sneezing, and sore throat.

Many pollutants, including ozone, nitrogen oxides, sulfur dioxide, and certain particulates, are lung irritants. They can cause bronchitis, coughing, shortness of breath, and wheezing, and can increase susceptibility to the common cold and other respiratory diseases such as influenza and pneumonia. Exposure to these pollutants can also precipitate asthma in individuals with no prior history of that disease. Children can be especially susceptible to air pollution induced asthma-like illnesses.

Clearly related to air pollution but not definable as asthma is a condition known as Tokyo-Yokohama Asthma. This condition was first observed in US military personnel living in the heavy industrialized areas of Japan in the late 1940s. The illness differs from true asthma in that most people affected have no history of allergy, and when they leave the polluted area their symptoms go away and do not return.

Exercising outdoors during periods of elevated pollutant levels results in more exposure than when not exercising because of the greater rate and depth of breathing. It is therefore not advisable to exercise outdoors when pollutant levels are high. Of particular concern are individuals who, because of existing chronic respiratory diseases such as asthma or chronic obstructive lung disease, are more susceptible to the effects of exposure to air pollutants. During periods of elevated



pollution levels, individuals with asthma are more likely to experience aggravation of their symptoms.

To put the added cancer risk into perspective, I'd like to give you some additional information. According to the American Cancer Society, in the US one in every two men and one in every three women will get cancer over the course of their lifetime (70 years). This means that in a population of 10,000 men, 5,000 would be expected to get cancer during their lifetime. Likewise, in a population of 10,000 women, 3,333 would be expected to get cancer during their lifetime. Per US EPA standards, the upper limit of acceptable lifetime excess cancer risk from environmental pollution is one additional cancer case in 10,000. The excess cancer risk from exposure to air pollution at NAF Atsugi reaches one additional case in 10,000 adults after six years of exposure and one additional case in 10,000 children under the age of six after three years of exposure at peak exposure levels. In our example above, of the 10,000 men and 10,000 women, expected cancer cases for adults would be 5001 men and 3334 women after six years at Atsugi. The lifetime excess cancer risk attributed to exposure to the air at NAF Atsugi will not go away when exposure ends, but will last the lifetime of those exposed.

The Navy considers the increase in cancer and non-cancer health risks attributed to the air quality at NAF Atsugi to be too high. That is why we are working with the government of Japan (GOJ) to reduce air emissions from the Jinkanpo incinerator. Specifically the Navy is pressing the GOJ to close the incinerator or cause the incinerator operator to significantly modify his operation. The Navy is also taking action at NAF Atsugi to reduce exposure to incinerator emissions through filtration of indoor air and adoption of other precautionary measures. At the same time we are conducting further environmental studies to better understand the nature of the health risks so that we can better protect the health of our service members and their families.

Once again, the Navy is committed to protecting the health and well being of all our service members and their families. Should you have questions or desire additional information about the health and/or environmental studies at NAF Atsugi, please contact the Navy Environmental Health Center's (NAVENVIRHLTHCEN) web-site at [www-nehc.med.navy.mil](http://www-nehc.med.navy.mil) and click on Environmental Programs or contact NAVENVIRHLTHCEN at (757) 462-5548.



Appendix N



U U N C L A S S I F I E D U

WASTE INCINERATOR, WHICH IS LOCATED NEXT TO THE FACILITY. AIR EMISSIONS FROM THE INCINERATOR PERIODICALLY BLOW DIRECTLY ACROSS THE FACILITY. PREVAILING WIND PATTERNS CAUSE THIS TO OCCUR MORE REGULARLY DURING APRIL THROUGH OCTOBER.

THE NAVY CONDUCTED AN ENVIRONMENTAL STUDY IN 1994 TO DETERMINE THE POSSIBLE HEALTH EFFECTS OF EXPOSURE TO AIR POLLUTANTS AT NAF ATSUGI. THE AIR QUALITY MEASURED IN THIS STUDY MET JAPANESE STANDARDS, BUT EXCEEDED UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) STANDARDS FOR RESPIRABLE PARTICULATES AND A NUMBER OF CHEMICALS. USING EPA METHODS TO DETERMINE RISK, THE STUDY SHOWED THAT EXPOSURE TO AIR POLLUTANTS AT THE FACILITY INCREASES BOTH CANCER AND NONCANCER HEALTH RISKS. AS WITH ALL EXPOSURES TO ENVIRONMENTAL POLLUTANTS, THE HEALTH RISK IS GREATER FOR CHILDREN LESS THAN SIX YEARS OF AGE. AN ADDITIONAL DETAILED ENVIRONMENTAL STUDY ASSOCIATED WITH THE INCINERATOR IS ONGOING AT NAF ATSUGI. THE STUDY IS FOCUSING ON EVALUATING THE POLLUTANTS DISCHARGED BY THE INCINERATOR AND MORE FULLY DEFINING THE HEALTH RISKS POSED BY THE POLLUTANTS. THIS INFORMATION WILL ASSIST THE NAVY IN TAKING ACTION TO PROTECT THE HEALTH OF NAF ATSUGI RESIDENTS. THE UNITED STATES GOVERNMENT HAS ALSO REQUESTED THE ASSISTANCE OF THE GOVERNMENT OF JAPAN IN REDUCING THE AMOUNT OF POLLUTANTS RELEASED BY THE INCINERATOR. THE NAVY IS COMMITTED TO PROTECTING YOUR HEALTH AND WELL BEING.

THE MOST CURRENT INFORMATION ABOUT THE STATUS OF THE ONGOING HEALTH RISK ASSESSMENT IS AVAILABLE FROM THE NAVENVIRHLTHCEN ENVIRONMENTAL PROGRAMS DIRECTORATE VIA PHONE (757-363-5548 OR DSN-864-5548) OR THE ENVIRONMENTAL PROGRAMS PAGE OF THE NAVENVIRHLTHCEN WEBSITE ([HTTP:SLASHSLASHWWW-NEHC.MED.NAVY.MIL](http://slashtslashwww-nehc.med.navy.mil))

BEFORE YOU SIGN THIS DOCUMENT, ASK ANY QUESTIONS YOU MAY HAVE AND OBTAIN THE APPROPRIATE POINT OF CONTACT FOR ANY FUTURE QUESTIONS. THE MEDICAL OVERSEAS SCREENER CAN HELP COORDINATE GETTING ANSWERS TO ANY MEDICALLY RELATED QUESTIONS YOU MAY HAVE.

I HAVE READ THIS FORM AND UNDERSTAND IT.

BENEFICIARY SIGNATURE

DATE \_\_\_\_\_

HEALTH CARE PROVIDER SIGNATURE

DATE

END QUOTE

3. NAVY ENVIRONMENTAL HEALTH CENTER, NORFOLK IS THE FOCAL POINT FOR THE MOST RECENT INFORMATION RELATIVE TO THE ENVIRONMENTAL CONDITIONS AT ATSUGI. DIRECT YOUR OVERSEAS SCREENING PROVIDERS TO CONTACT NAVENVIRHLTHCEN SHOULD THEY HAVE QUESTIONS ABOUT THE SUITABILITY OF AN INDIVIDUAL FOR ASSIGNMENT TO THE ATSUGI AREA. CONDITIONS WHICH MAY BE

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ONE IN EVERY THREE WOMEN WILL GET CANCER OVER THE COURSE OF THEIR LIFETIME (70 YEARS). THIS MEANS THAT IN A POPULATION OF 10,000 MEN, 5,000 WOULD BE EXPECTED TO GET CANCER DURING THEIR LIFETIME. LIKewise, IN A POPULATION OF 10,000 WOMEN, 3,333 WOULD BE EXPECTED TO GET CANCER DURING THEIR LIFETIME. PER US EPA STANDARDS, THE UPPER LIMIT OF ACCEPTABLE LIFETIME EXCESS CANCER RISK FROM ENVIRONMENTAL POLLUTION IS ONE ADDITIONAL CANCER CASE IN 10,000. THE EXCESS CANCER RISK FROM EXPOSURE TO AIR POLLUTION AT NAF ATSUGI REACHES ONE ADDITIONAL CASE IN 10,000 ADULTS AFTER SIX YEARS OF EXPOSURE AND ONE ADDITIONAL CASE IN 10,000 CHILDREN UNDER THE AGE OF SIX AFTER 36 MONTHS OF EXPOSURE AT PEAK EXPOSURE LEVELS. IN OUR EXAMPLE ABOVE, OF THE 10,000 MEN AND 10,000 WOMEN, EXPECTED CANCER CASES FOR ADULTS WOULD BE 5001 MEN AND 3334 WOMEN AFTER SIX YEARS AT ATSUGI. THE LIFETIME EXCESS CANCER RISK ATTRIBUTED TO EXPOSURE TO THE AIR AT NAF ATSUGI WILL NOT GO AWAY WHEN EXPOSURE ENDS, BUT WILL LAST THE LIFETIME OF THOSE EXPOSED.

THE NAVY CONSIDERS THE INCREASE IN CANCER AND NONCANCER HEALTH RISKS ATTRIBUTED TO THE AIR QUALITY AT NAF ATSUGI TO BE TOO HIGH. THAT IS WHY WE ARE WORKING WITH THE GOVERNMENT OF JAPAN (GOJ) TO REDUCE AIR EMISSIONS FROM THE JINKANPO INCINERATOR. SPECIFICALLY THE NAVY IS PRESSING THE GOJ TO CLOSE THE INCINERATOR OR CAUSE THE INCINERATOR OPERATOR TO SIGNIFICANTLY MODIFY HIS OPERATION. THE NAVY IS SO TAKING ACTION AT NAF ATSUGI TO REDUCE EXPOSURE TO INCINERATOR EMISSIONS THROUGH FILTRATION OF INDOOR AIR AND ADOPTION OF OTHER PRECAUTIONARY MEASURES. AT THE SAME TIME WE ARE CONDUCTING FURTHER ENVIRONMENTAL STUDIES TO BETTER UNDERSTAND THE NATURE OF THE HEALTH RISKS SO THAT WE CAN BETTER PROTECT THE HEALTH OF OUR SERVICE MEMBERS AND THEIR FAMILIES.

ONCE AGAIN, THE NAVY IS COMMITTED TO PROTECTING THE HEALTH AND WELL BEING OF ALL OUR SERVICE MEMBERS AND THEIR FAMILIES. SHOULD YOU HAVE QUESTIONS OR DESIRE ADDITIONAL INFORMATION ABOUT THE HEALTH AND/OR ENVIRONMENTAL STUDIES AT NAF ATSUGI, PLEASE CONTACT THE NAVY ENVIRONMENTAL HEALTH CENTER'S (NAVENVIRHLTHCEN) WEB SIGHT AT WWW-NEHC.MED.NAVY.MIL AND CLICK ON ENVIRONMENTAL PROGRAMS OR CONTACT NAVENVIRHLTHCEN AT (757) 363-5548.

ASSIGNMENT POLICY IS NOT A FUNCTION WITHIN THE MEDICAL DEPARTMENT'S PURVIEW. IF A FAMILY MEMBER IS OTHERWISE MEDICALLY QUALIFIED TO TRANSFER WITH THEIR SPONSOR TO ATSUGI, IT EXPRESSES THEIR DESIRE NOT TO DO SO, THEY SHOULD BE ADVISED TO DISCUSS THIS WITH THEIR SPONSOR AND TAKE THE MATTER THROUGH THE APPROPRIATE LINE CHAIN OF COMMAND.

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U U N C L A S S I F I E D U







HEALTH RECORD		CHRONOLOGICAL RECORD OF MEDICAL CARE	
DATE	SYMPTOMS, DIAGNOSIS, TREATMENT, TREATING ORGANIZATION (Sign each entry)		

### BACKGROUND INFORMATION FOR THE JINKANPO INCINERATOR STUDY

An air quality survey was conducted at Naval Air Facility, Atsugi, Japan to determine the health risks from the emissions of an off-base incinerator. The incinerator commenced operations in 1985. The survey report, dated 1 November 1995, listed 12 emissions that exceeded EPA or New York State ambient air quality standards: sulfur dioxide (3740 ug/m<sup>3</sup>), nitrogen dioxide (5240 ug/m<sup>3</sup>), hydrochloric acid (1020 ug/m<sup>3</sup>), carbon tetrachloride (7.82 ug/m<sup>3</sup>), benzene (64 ug/m<sup>3</sup>), dioxins (0.00032 ug/m<sup>3</sup>), cadmium (0.64 ug/m<sup>3</sup>), mercury (4 ug/m<sup>3</sup>), nickel (0.97 ug/m<sup>3</sup>), chromium (0.17 ug/m<sup>3</sup>), arsenic (0.21 ug/m<sup>3</sup>), and respirable particulates (565 ug/m<sup>3</sup>). Using Risk Based Concentrations, the average cancer risk for people living on base for three years was calculated, resulting in 40 additional cancer cases per million people for adults and 110 additional cases for children. The chemicals associated with the elevated cancer risk included: benzene, methylene chloride, chloroform, dioxins, and trichloroethylene. The chemicals driving the non-carcinogenic health risk were trimethylbenzenes and chromium (III). This form was distributed starting 1 March 1996 and is intended to document the ambient air levels for persons who lived and worked on base. This form was reviewed by the Bureau of Medicine and Surgery and CANNOT BE REMOVED FROM THE HEALTH RECORD. If there are any questions regarding this form, please contact the U.S. Naval Hospital Branch Medical Clinic, Atsugi, Japan, at DSN: 264-3610.

PLEASE COMPLETE THE FOLLOWING BY FILLING IN THE BLANKS OR CIRCLING THE CORRECT RESPONSE.

Name: \_\_\_\_\_ Age: \_\_\_\_\_ Today's Date: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ APO/FPO AP Zip \_\_\_\_\_

**A. Information concerning your arrival in Japan and Atsugi.**

When did you arrive in Japan? (MO/YR): \_\_\_\_\_ In Atsugi? (MO/YR): \_\_\_\_\_

**B. Information concerning your residence.**

Residence location: On-base <Yes><No>? If yes, please indicate the grid number from the map: \_\_\_\_\_  
(Grid numbers correspond with the map on the back of this form and represent the distance in meters from the incinerator: 1- 500M; 2-750M; 3-1000M; 4->1000M, O-off-base)

When did you move on-base?(MO/YR): \_\_\_\_\_ The average number of hours per workday at home: \_\_\_\_\_

**C. Information concerning your job/ school.** If you work or go to school outside the home, please fill in the blanks: Command/School: \_\_\_\_\_ Present occupation/Job Title: \_\_\_\_\_

Grid Number for your work site or school: \_\_\_\_\_ Number of hours per day at this location: \_\_\_\_\_

PATIENT'S IDENTIFICATION (Use this space for Mechanical Index)

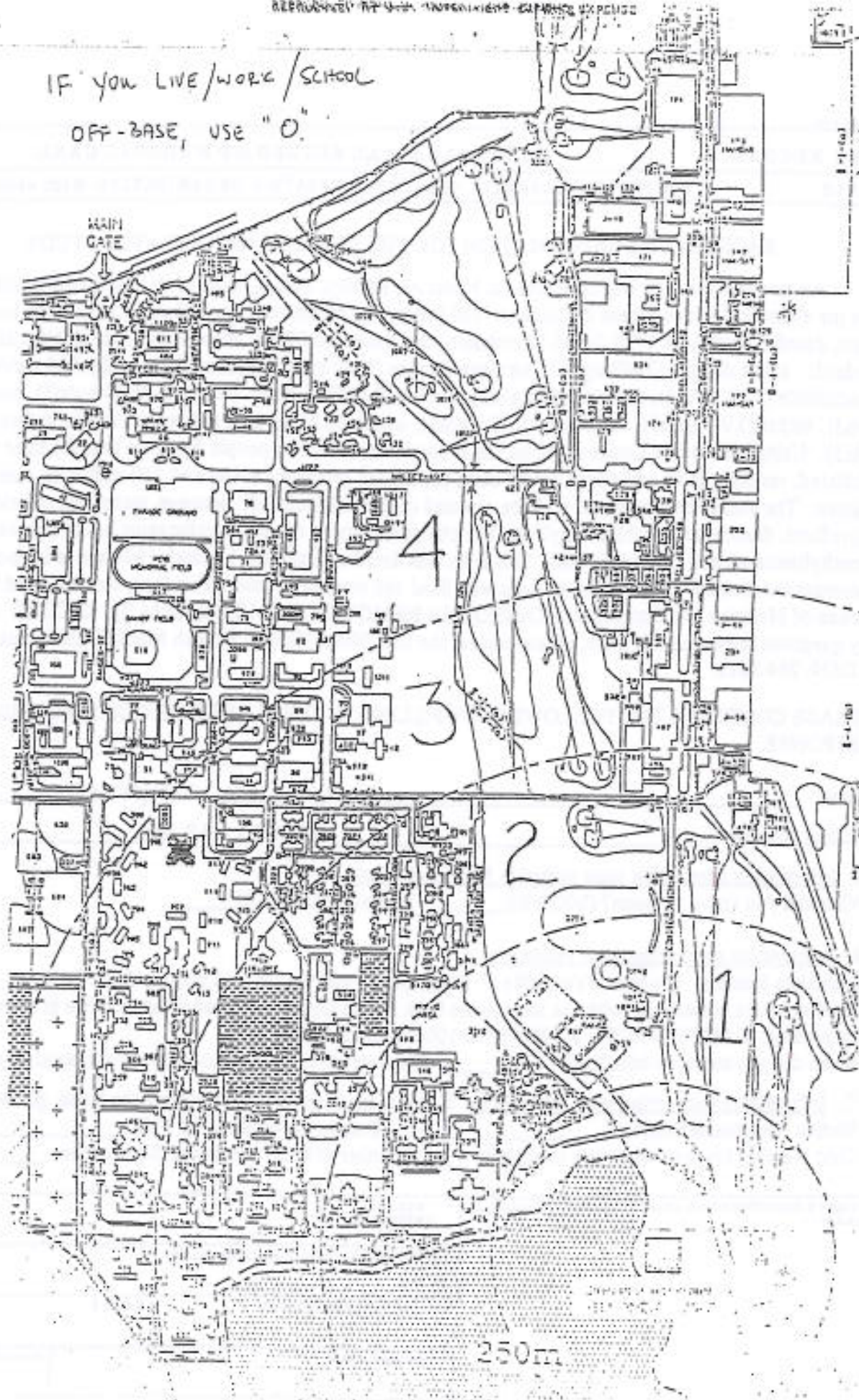
RECORDS MAINTAINED AT:			
PATIENT'S NAME (Last, First, Middle Initial)			SEX
RELATIONSHIP TO SPONSOR	STATUS	RANK GRADE	
SPONSOR'S NAME		ORGANIZATION	
DEPART LEAVE	SSN IDENTIFICATION NO.	DATE OF BIRTH	

CHRONOLOGICAL RECORD OF MEDICAL CARE

STANDARD FORM 400 REV. 5-84  
Prescribed by GSA and DHA  
FORM M1CPR1281-45 505



IF YOU LIVE/WORK/SCHOOL  
OFF-BASE, USE "O"





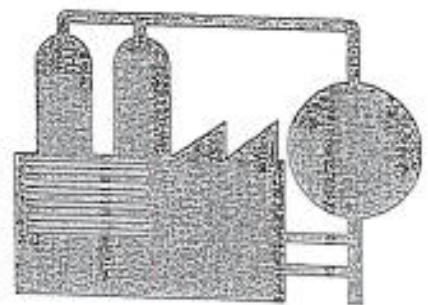
# WHAT IS DIOXIN?

*The term Dioxin is used to describe a family of compounds with a similar chemical structure. Dioxin is an unwanted by-product of other activities, including burning refuse, making paper, and producing other chemicals. Dioxin was present in very small amounts in the herbicide Agent Orange.*

## Properties and Sources of Dioxin in the Environment

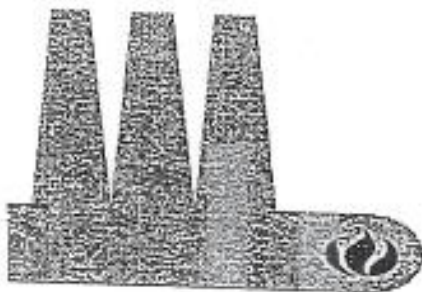
### Properties

- Colorless solid
- Evaporates very slowly, unless heated to high temperatures
- Attaches strongly to soil and other particles
- Breaks down in sunlight
- Does not dissolve easily in water
- Does not burn easily



### Sources

- Incineration of municipal and medical waste
- Burning wood in home fireplaces
- Forest fires
- Bleaching wood pulp and paper products
- Chemical manufacturing
- Cigarette smoke





# DISTRIBUTION OF DIOXIN IN THE ENVIRONMENT

## History of Dioxin Distribution

- Very little dioxin present in soil and sediments before 1920
- Dioxin in soils and sediments were at their peak in 1980
- Dioxin levels in the environment have decreased steadily since 1980

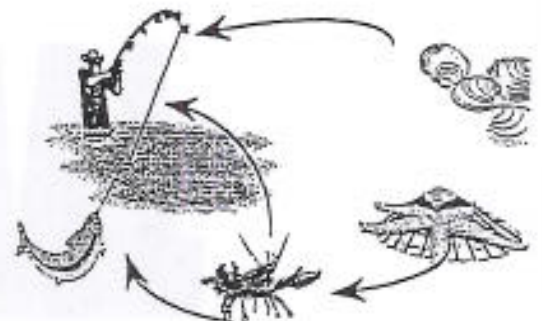
Dioxin is widely distributed in the environment. It has been found in very remote locations, even in the frozen snow at the North and South Poles. Dioxin is found in soil, water, air, and sediments (soil trapped under water).

## What Happens to Dioxin in the Environment?

- Dioxin, even in air and water, is tightly attached to soil or other particles.
- Dioxin is very stable in the environment. Once attached to soil, only very small amounts are released.
- Dioxin in air settles to the ground where it is deposited on soil, plants or in lakes and streams.
- Dioxin stays very close to the surface of the ground or moves to lakes and streams by a process called erosion.
- Dioxin that enters lakes or streams settles to the bottom and is buried in sediments.

## Dioxin in the Food Supply

- Dioxin in soil, water and on plants is eaten by animals.
- When animals are eaten by other animals, dioxin levels increase (bioaccumulate)





# EXPOSED POPULATIONS

## How are People Exposed to Dioxin?

- The main source of exposure (as much as 90%) comes from the food supply.
- Job related exposures occur in the chemical industry and in workers exposed to fuels and hydraulic fluids.
- A very small amount of dioxin exposure comes from the air we breathe.



## Dioxin in the Body

- Dioxin is deposited mainly in fat and the liver.
- Dioxin is removed by the body very slowly.
- This slow removal by the body causes dioxin to build up in fat.



## HEALTH EFFECTS



### Known Human Effects



- Exposure to high doses of dioxin over a short time period results in irritation of the eyes, skin, and lungs.
- Exposure to high doses of dioxin over a long period results in chloracne, a skin condition like acne.
- Low dose exposures have caused no health effects.

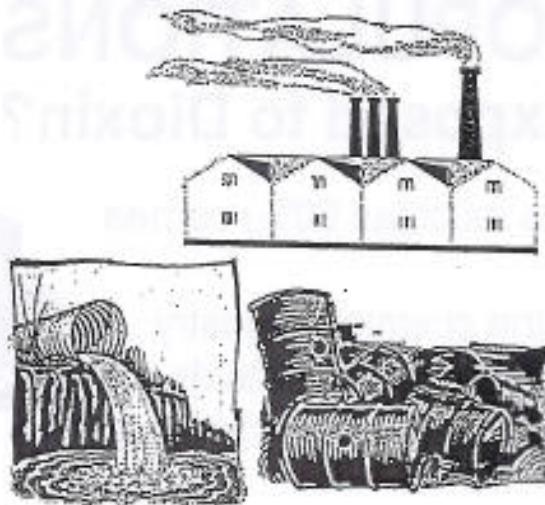


### Effects on Laboratory Animals

- Tumors occur in some animals. Because of this, dioxin is considered a probable human cancer causing agent.
- Reproductive and developmental effects have been noted in some animals.
- Effects on the immune system have been observed in some animals.



# WHAT IS RISK ASSESSMENT



- ◆ Risk Assessment is a scientific process used to evaluate the chance that health effects could result from exposure to substances in the environment.
- ◆ Risk Assessment is one tool used to make risk management decisions.
- ◆ Risk Assessment is a four step process.

## The 4-Step Risk Assessment Process

### Risk Assessments combine

- ◆ information from environmental testing,
- ◆ results of studies on the health effects of substances found in the environment, and
- ◆ information and/or models which determine the level of exposure to substances in the environment

to estimate the increased lifetime risk of cancer and/or chance of non-cancer health effects in those exposed.

### Data Collection and Evaluation

What materials are present and how much is present?

### Exposure Assessment

How much of the material are people exposed to and how long are they exposed?  
How many people are exposed?

### Dose-Response Assessment

What are the health effects at different exposure levels?

### Risk Characterization

What is the extra risk of health effects in the exposed population?

## Risk Assessment Objectives

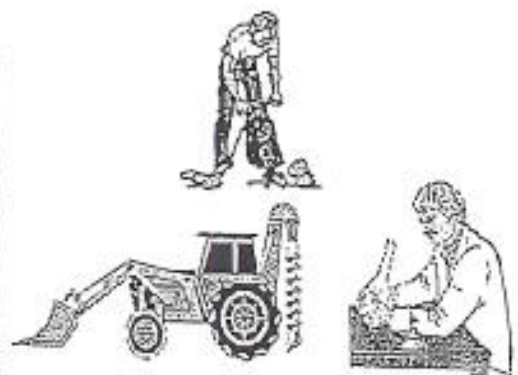
- ◆ To determine if risk management action at a site is needed.
- ◆ To determine where and how much action is needed.
- ◆ To assist in determining what kind of action should be taken.



# RISK ASSESSMENT

## Data Collection and Evaluation

- ◆ Identifies what materials have been released into the environment.
- ◆ Identifies how much material is being or has been released and to which environmental media (air, soil, or water).
- ◆ Defines the potential for materials released into the environment to move within the environment.



## Exposure Assessment



- ◆ Determines who is exposed and by what environmental pathways.
- ◆ Estimates the range of possible exposures.
- ◆ Determines the reasonable maximum exposure that is likely to occur at a site

## Dose-Response Assessment

- ◆ Determines what health effects a substance may cause in people.
- ◆ Determines how much is required to cause those effects.
- ◆ Evaluates both cancer and non-cancer outcomes.

## Sources of Dose-Response Information



Laboratory Animal Studies



Industrial Accidents



Epidemiological Studies



# RISK ASSESSMENT

## Risk Characterization

Risk Characterization is the summarizing step in risk assessment. It combines information from the previous three steps to determine the likelihood that health effects could occur in people who come in contact with substances present at a site. There are two stages in characterizing risk, quantifying risks and analyzing uncertainty.

### Quantifying Risks

The calculation for Cancer Risk determines the increased likelihood of getting cancer over a lifetime. Individual calculations are made for each substance present and for all environmental pathways. These individual values are added to arrive at the overall risk for the exposed population.

Non-cancer Risk is evaluated by calculating ratios called Hazard Quotients. Hazard Quotients are calculated by comparing levels of substances found at a site to known safe levels of these substances. Individual calculations are made for each substance present and for all potential routes of exposure. These individual values are added to produce an overall Hazard Index for the exposed population. A Hazard Index greater than 1 indicates a possible increased health risk.

### Analyzing Uncertainty

Uncertainty exists in assessing health risks because scientists do not have complete information. When information is missing, scientists make assumptions that will prevent them from underestimating the health risk. When Uncertainty Analysis is performed the scientists' assumptions and key site-related variables that contribute to uncertainty are identified. This is done so that risk estimates can be placed in proper perspective for risk managers.



Schedule for Risk Communication Training

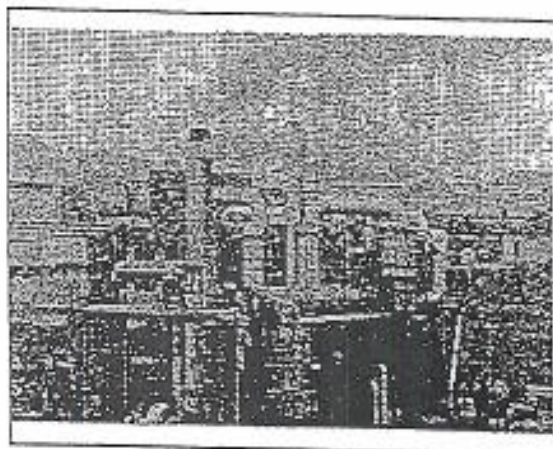
<u>Dates</u>	<u>Type</u>	<u>Location</u>	<u>Instructor</u>	<u>Cost</u>
11 May 98	Film Risk Comm Video For MTF/ BRMEDCLINIC Training	Washington DC	Dr. Covello	\$8K
12/13 May 98	2 HR Executive Power Brief	Washington DC	Dr. Covello	\$8K
26-28 May 98	Detailers/ DODD School Reps. Brief	Washington DC	NEHC Staff	\$6K
3-5 Jun 98	2 1/2 day workshop	Japan	Dr. Covello	\$30K
3/4 Jun 98	2 HR Executive Power Brief	Japan	Dr. Covello	Included Above
15 Jun-17 Jul 98	Conduct Training For MTFs/ BRMEDCLINICS	Varies	NEHC Staff	\$15K
Total Cost for Risk Communication Training				\$67K



NAF ATSUGI HEALTH RISK  
COMMUNICATION BRIEFING  
JUNE-AUGUST 1998

BRIEFING TEAM: NAF ATSUGI  
BUMED/NEHC  
BMC ATSUGI





## NAF ATSUGI HEALTH RISK COMMUNICATION BRIEF AGENDA

- Introduction
- Health Issues Related to Air Quality at NAF Atsugi
  - Health Studies
  - Medical Studies
  - Health Effects
  - Health Consultation
- Actions Taken to Date
- Administrative Activities
- Poster Presentations

## INTRODUCTION

- Purpose of Brief
  - Issue is important enough that we should inform everyone of health risks related to air quality at NAF Atsugi which is affected by the operation of off-base incinerators
- Mandatory
  - All active duty personnel and adult family members
  - Civilians and adult family members

## INTRODUCTION

- How long
  - Throughout the summer
  - Until everyone is briefed
- Reason for Concern
  - Four air quality studies indicated that the amount of several chemicals in the air were at unacceptable levels that can cause health concerns.

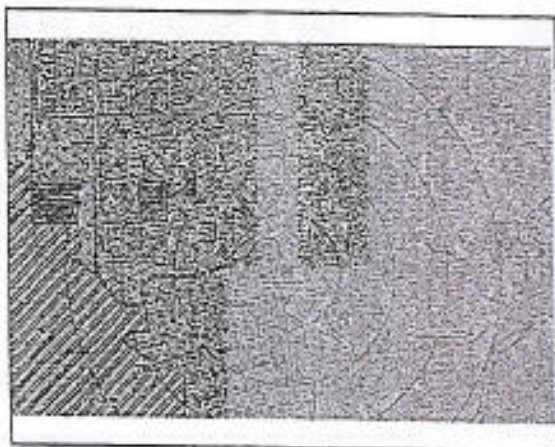
## FOUR AIR QUALITY STUDIES

- 1989 - AESO, NAS North Island, CA
- 1991 - Naval Energy and Environmental Support Activity, Port Hueneme, CA
- 1995 - Naval Facilities Engineering Service Center Port Hueneme, CA
- 1997 - Earth Tech, San Diego, CA

## JINKANPO'S INCINERATION WASTE STREAMS

- Industrial Waste
  - Industrial Solvents
  - Construction debris, plastics, rubber
  - Petroleum Products
- Medical Wastes
- Municipal Garbage





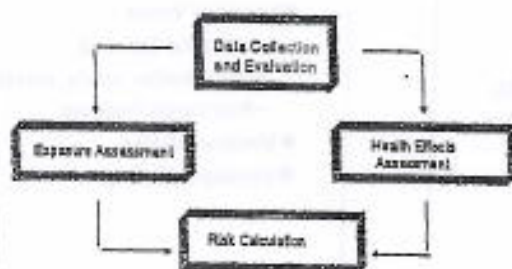
## HEALTH ISSUES RELATED TO AIR QUALITY AT NAF ATSUGI

## HEALTH STUDIES

## HEALTH STUDIES

- Health Risk Assessment
- Medical Studies

## HEALTH RISK ASSESSMENT



## HEALTH RISK ASSESSMENT

- Data Collection and Evaluation  
→ What materials are present and how much is present?
- Exposure Assessment  
→ How much of the material are people exposed to and how long are they exposed?
- Health Effects Assessment  
→ What are the health effects for different amounts of materials?
- Risk Calculation  
→ What is the likelihood of short- and long-term health effects?



## HEALTH RISK ASSESSMENT

- What are the different ways air pollutants can get into my body?
  - Outdoor Air
  - Indoor Air
  - Soil
  - Indoor Dust
  - Food
  - Water

## CALCULATING RISKS

- Cancer Risk
  - Determines the expected increase in cancer risk above the normal rate of getting cancer.
- Non-Cancer Risk
  - Determines the likelihood of non-cancer health effects such as respiratory illnesses.

## SCREENING HEALTH RISK ASSESSMENTS

- Two screening health risk assessments performed (1995 and 1998)
- Used only air quality data
- Data collected over short period of time
- Results were similar
  - Unacceptable cancer and non-cancer risk according to USEPA standards
  - Full health risk assessment needed
- Reviewed by USEPA, National Academy of Sciences and Centers for Disease Control and Prevention

## FULL HEALTH RISK ASSESSMENT

- Initiated in March 1998
- Will evaluate all possible ways that air pollutants can enter the body
- Will be conducted over 12 months to evaluate risk during all seasons, wind and incinerator conditions
- Periodic updates to inform everyone of our progress and interim findings will be provided

## HEALTH RISK ASSESSMENT

- Environmental samples will be collected at the:
  - Newer Residential Tower
  - Elementary School
  - Golf Course
  - Steel Range
  - Ground Electronics Maintenance Building
  - Additional locations for indoor air quality
    - Child Development Center
    - Other Residential Tower
    - Townhouse

## MEDICAL STUDIES

- Review past medical records and/or collect data at NAF Atsugi and other clinics in Japan to evaluate your concerns on
  - Pregnancy
  - Children's Health
  - Other Medical Conditions
    - Skin
    - Respiratory diseases



### PREGNANCY STUDY

- Will compare the miscarriage rate between Atsugi residents and residents of other bases in Japan
- Will start this summer
- Expected to be completed by this fall

### CHILDREN'S HEALTH STUDY

- Will compare effects on respiratory systems between children of NAF Atsugi and children of Yokosuka
- Data collection completed
- Expected to be completed by the end of this summer

### OTHER MEDICAL STUDIES

- Will compare the rates of skin conditions and respiratory symptoms seen at NAF Atsugi medical clinic and other Naval Hospital Yokosuka medical clinics
- Record review will start this summer
- Expected to be completed by the end of winter

### HEALTH EFFECTS

### WHAT'S IN THE AIR

- |               |                        |  |
|---------------|------------------------|--|
| <b>Metals</b> | <b>Solvents</b>        | <b>Particulates</b>  |
| ● Arsenic     | ● Acetaldehyde         | ● PM <sub>10</sub> - Particulate Matter less than 10 microns in size |
| ● Beryllium   | ● Benzene              |  |
| ● Cadmium     | ● Carbon Tetrachloride | <b>By-Products</b>   |
| ● Chromium    | ● Chloroform           | ● Dioxins/Furans   |
|               | ● Chloromethane        |  |
|               | ● 1,2-Dichloroethane   | <b>Allergens</b>   |
|               | ● 1,2-Dichloropropane  | ● Pollen   |
|               | ● Formaldehyde         |  |
|               | ● Vinyl Chloride       |  |

### POTENTIAL HEALTH RISKS RELATED TO POOR AIR QUALITY

- Short term health effects
- Long term health effects



### Short Term Health Effects

- Symptoms
  - Irritation of the eyes and upper respiratory system
  - headaches
  - skin rashes
- For most people, these conditions will be short-lived and directly related to exposure

### Short Term Health Effects

- Appearance and severity of symptoms depends on many factors:
  - types of pollutants present
  - concentration of pollutants
  - length of time exposed
  - weather conditions
  - individual susceptibility
- As these factors can vary from day to day and even during the course of a day the effects on an individual's health can vary considerably

### Short Term Health Effects

- Who is at greatest risk?
  - People with existing respiratory diseases such as asthma, chronic bronchitis, or sinus problems
  - Young children may also be particularly susceptible to the irritating effects of air pollution

### LONG TERM HEALTH EFFECTS

Based upon information from the two previous screening health risk assessments, the poor air quality at NAF Atsugi could result in as much as 1 additional cancer in a population of 10,000.

- For adults - after approximately 6 years of exposure
- For children under the age of 6 - after approximately 3 years of exposure

### ESTIMATED CANCER RATES

- Expected lifetime cancer rate estimated by the American Cancer Society in US
  - 5,000 cases of cancer for 10,000 men
  - 3,333 cases of cancer for 10,000 women
- Based on screening risk assessments, expected lifetime cancer for a child living at NAF Atsugi for 3 years or an adult living at NAF Atsugi for 6 years
- 5,001 cases for 10,000 men
  - 3334 cases per 10,000 women

### SPECIFIC HEALTH CONCERNS EXPRESSED BY ATSUGI RESIDENTS

1. Should I become pregnant while at NAF Atsugi?
2. Should I breast feed my baby?
3. Can the air quality affect my breathing?
4. My family seems to get more colds since we've been here, is this related to the incinerator?



## HEALTH CONSULTATIONS

- Individual health consultations will be provided to Atsugi residents at potential increased risk from exposure to air pollutants, including:
- Families with children under 6 years of age
  - People with respiratory disease (asthma, chronic bronchitis, etc.)
  - People who have remained at NAF Atsugi for extended periods
- In addition, we will provide health consultations to pregnant and nursing women and other concerned individuals

## PRIMARY GOAL OF HEALTH CONSULTATIONS

Provide an opportunity for everyone to ask questions concerning their individual health and environmental exposure

## NAF ACTIONS TO DATE

## DIPLOMATIC ACTIONS

- US Officials are working closely with the Government of Japan to reach a solution acceptable to Navy and the Jinkango Company
- Resolution rests primarily with the Government of Japan
- Highest levels of U.S. Government are aware of this issue

## NAF ATSUGI'S CURRENT EFFORTS INCLUDE

- Diplomatic efforts
- Medical assistance from Branch Clinic, BUMED and NEHC
- Provision of portable air cleaners
- Air Quality Advisory/Warning System
  - Advisory - Winds blowing toward the base
  - Warning - Visible smoke over housing
- Training for child care providers and school teachers in protective measures

## HOW DO WE KEEP EVERYONE INFORMED?

- Risk Communication Program
  - Captain's Call
  - Base newspaper articles
  - Base indoctrination
  - Safety standowns
  - Open house (Town meeting NOV 97)
  - Fact sheets
  - Web site
  - Library information section
  - Health Risk Communication Briefs



### WHAT YOU CAN DO

- Increase awareness
- Pay attention to Air Quality Advisories/Warnings
- Lessen strenuous outdoor activities, limit exercises to indoors when emissions are high
- Properly operate and maintain portable air cleaners
- Increase frequency of basic personal hygiene

### SUMMARY

- NAF Atsugi, the highest levels of the Navy and U.S. Government officials are committed to protecting our health and well being
- We will continue diplomatic efforts
- We will continue to take actions to protect our health
- We will use additional health and environmental studies to better understand the nature of the health risk involved
- We will continue to keep everyone informed



## NAF ATSUGI HEALTH RISK ASSESSMENT PROGRESS REPORT

Project Title:	Health Risk Assessment for NAF Atsugi
Start Date:	05 March 1998
Finish Date:	10 October 1999
Reporting Period:	06 May - 19 June 1998
NEHC Project Managers:	Ms. Yvonne Walker (757) 363-5555, Fax (757) 444-7261 Ms. Vera Wang (757) 363-5560, Fax (757) 444-7261
LANTDIV Project Manager:	Mr. Steve Martin (757) 322-4763, Fax (757) 322-4178
NAF Atsugi Project Manager:	Mr. Bryan Murphy 011-81-3117-64-3552, Fax 011-81-3117-64-3146
CPF Project Manager:	CDR Jerry Manley (808) 474-6391, Fax (808) 474-5494
Radian Project Manager:	Ms. Kathleen Alsup (512) 419-5902, Fax (512) 345-9684

### Project Objective and Scope:

The Navy Environmental Health Center is conducting a comprehensive health risk assessment at NAF Atsugi Japan, to assess the health risk related to degraded air quality. Extensive ambient and indoor air sampling will be conducted for a period of 12 months. Soil sampling will also be conducted to determine health risk related to deposition of incinerator emissions on surface soil. A multimedia pathway analysis will be conducted to determine the potential for other pathways of exposure to exist. The comprehensive health risk assessment report will assess the total health risk and provide recommendations to ensure protection of NAF Atsugi residents.

### Deliverables:

- Monthly status reports
- Risk assessment for soil pathways
- Quarterly reviews of air pathway data
- Draft comprehensive health risk assessment
- Final comprehensive health risk assessment

### Progress During the Reporting Period:

- Phase I soil analytical data has been validated and is currently being reloaded into an electronic database.
- Ambient air sample runs completed during this period follow. Partial sample sets include Volatile Organic Compounds (VOCs), dioxins, acid gases and mercury. Full sample sets include dioxins, VOCs, acid gases, Semi-Volatile Organic Compounds (SVOCs), heavy metals/Particulate Matter less than 10 microns (PM-10), pesticides/polychlorinated biphenyls (PCBs), aldehydes and ketones.

May 6	partial
May 10	full (incinerator off)
May 14	full



May 22	partial
May 26	full
June 3	full
June 7	full (incinerator off)
June 11	partial
June 16	full
June 19	partial

- Ambient air sampling at the elementary school was conducted from 5 May – 5 June 1998. Data is currently being downloaded in order to calculate concentrations. Concentration data will be provided to NEHC for evaluation.
- A preliminary look at the first round of ambient air data (excluding FTIR results) indicates that dioxins and heavy metals appear to be the constituents at higher concentrations. Particulate matter less than 2.5 microns in size (PM<sub>2.5</sub>) concentrations at the criteria-monitoring site (typically upwind) have been detected most of the time throughout this reporting period at concentrations higher than the 24-hour U.S. standard of 65 ug/m<sup>3</sup>. Ozone levels and other criteria monitoring data seem to be in an acceptable range when compared to the EPA National Ambient Air Quality Standards. A subcontract has been set in place for Eco Chem to validate the first set of ambient air analytical data. Eco Chem will receive the first round of data soon for review.
- Information for the conceptual exposure pathways report was collected by Radian during a site visit from 29 May – 6 June 1998. This information will be used to determine the existence of other pathways of exposure in addition to those related to soil and air, such as food and potable water. Interviews were conducted with base personnel to investigate these pathways.
- The dual cell FTIR was shipped to Yokota by AMC flight on June 2 and arrived at NAF Atsugi on 5 June. Installation of the FTIR was conducted by Radian between 6 June – 18 June 1998.
- A video camera has been installed at one of the residential towers by subcontractor, Earl Richmond.
- A tour of monitoring sites was given by Radian to a team of international scientists attending the Optical Monitoring Committee meeting held at NAF Atsugi 18-19 May. They seemed most interested in the CO measurements as a possible fingerprint for the incinerator emissions.
- The malfunctioning CO monitor was replaced with another system delivered by the vendor. This system is now operating correctly. Sample collection began on 29 May 1998 at 11:10.

#### Problems Encountered and Resolutions

- Some samples have been voided because they did not collect for the proper time allotted due to faulty equipment (i.e., timers, transformers, etc.) in the ambient air monitoring systems as well as electrical problems with base electricity. To continue sampling on a routine basis several parts had to be replaced with parts from the indoor air equipment. Replacement parts for the indoor air equipment will be shipped to NAF Atsugi before indoor air samples are collected.



- A cellular phone that had not been scoped during cost negotiations had to be purchased to facilitate communications between Base Environmental Office and Radian personnel. Problems arose because of frequent Fed-Ex arrivals of sampling materials which required base personnel to contact Radian to meet Fed-Ex at the front gate for delivery. As Radian personnel are frequently out in the field working with the ambient monitoring equipment this became a problem. If no one was available to meet Fed-Ex at the front gate to sign for the materials, Fed-Ex would leave with the materials and come back the next day to start the process all over again.
- The dual cell FTIR equipment arrived at Atsugi without the meteorological tower and the liquid nitrogen containers, due to an oversight at Travis AFB where the flight to Yokota was originated. After tracking the missing equipment back to Travis AFB it was sent over to Yokota immediately.
- Some of the materials sent commercially to NAF Atsugi by Radian were stalled in customs. The soda lime needed for scrubbing one cell to obtain BTEX data has not arrived. The commercial shipper has been notified and is in the process of getting the shipment to Atsugi.
- Electrical supply to power the dual cell FTIR system has not yet been installed at any of the sites scheduled for sampling. Currently it is being powered by a diesel generator as a temporary source of power to keep the FTIR system active. Since generator emissions may be picked up by the sampling collection system and interfere with true ambient data, no samples can be collected yet at the elementary school where it is presently sited. Because the FTIR will be used in conjunction with indoor air, electrical power supply and a phone line must be in place before the indoor air sampling begins in mid-July. According to Environmental Office personnel a power line will be installed around 22 June 1998 and a phone installed by 26 June 1998, but indicated the charges would be billed to Radian. This was not scoped in the cost negotiations.
- Liquid nitrogen supply for use in the dual cell FTIR has been obtained on base using the same account established by the Environmental Office for the supply of liquid nitrogen for the open path FTIR. Liquid nitrogen supply was not scoped during negotiations, because Radian was told that the Navy would supply the liquid nitrogen. Although CPF has also purchased the dual cell FTIR in addition to the open-path FTIR, the use of this account for the liquid nitrogen supply for the dual cell is being questioned by Base personnel. NEHC will investigate how separate CPF funds for liquid nitrogen for the dual cell FTIR can be directed to the Environmental Office account to keep the dual cell FTIR running.
- Problems with sending data via email from NAF Atsugi to Radian in Austin, TX are being worked out. Radian expects that the data will be sent via "ftp", however, this connection has not been successfully hooked up at this time.
- Low or below detection limit concentrations of elemental mercury have been noted. In general this is a very difficult compound to detect in the ambient environment. Other methodologies to monitor this compound will be evaluated.
- Significant interference with the analytical method currently being used for analyzing the PCBs/Pesticides samples is being experienced. The current analysis uses gas chromatography with electron capture detection (ECD) for quantifying and qualifying the samples. Generally, this technique is very appropriate for environmental samples because, normally, there are no significant quantities of compounds that have an affinity to electron capture. Chemicals that respond well to electron capture are halogenated and oxygenated compounds. The SVOC



analysis is showing high concentrations of oxygenated semi-volatile compounds that likely are interfering. It appears that light weight PCBs, generally referred to as dioxin-like PCBs, are being formed during the combustion process. NEHC recommends that an analysis of a subset of these samples using GC/MS be evaluated. This method, however, is not currently scoped and is much more expensive. It will require additional extractions and clean-up beyond the current method used. NEHC will further pursue this issue.

- Delays in preparing the electronic database for the soil analytical data have been experienced due to problems with loading the electronic data received from the analytical lab, GP. GP had to prepare several iterations of their electronic submittal until it was acceptable. The last submittal was received on 19 June 1998. Because of these delays, the time for Radian to evaluate the data and prepare the soil report has been reduced considerably. At this time Radian anticipates meeting the delivery date of 3 August 1998 as noted in the contract.
- Some soil analytical data have been flagged but none was rejected by the data validators. Flags were associated with rinsate samples which were analyzed outside of 5 day holding times due to shipping problems. One sample set was received by the laboratory 8 days after sampling and not all of the samples were extracted for SVOCs within the recommended 14-day holding time. Four samples for the first work order had to be re-extracted for SVOCs due to surrogate recovery outliers and the re-extraction occurred outside the 14-day hold time as well. Associated results for these 16 samples were flagged as estimated and may be potentially biased low. Some soil trend samples were also extracted outside the holding times for pesticides and PCBs; these will be flagged as estimated and may be potentially biased-low as well.

#### Deliverables Due the Next Reporting Period

- The progress report for the next reporting June-July period may include some information regarding site observations. Data summaries will be initiated when data becomes available.



# JINKANPO INCINERATOR COMPLEX

## Frequently Asked Questions (FAQ)

Clearing the 'smoke' with  
answers to commonly asked  
questions

May 1998

### PREFACE

This booklet provides intelligent answers to common questions regarding the Jinkanpo Company's (a.k.a., Shinkampo) incinerator complex located in the city of Ayase.

This information will help you understand the situation as it stands today. It is accurate to the best of our knowledge at the time of publication.

For additional information, or to be added to our mailing list, you can contact us via:

Internet: <http://www.atsugi.navy.mil>

Mail: Incinerator Program Manager

U.S. NAF Atsugi

PSC 477, Box

FPO AP 96306

For technical info, refer to: Navy Environmental Health Center



**Q: What is the issue?**

**A:** Emissions from the Jinkanpo incinerator complex, located next to NAF Atsugi's family housing area, degrade the base's air quality as a result of burning hazardous industrial wastes. In 1985, Kanagawa Prefecture issued the Jinkanpo Company an industrial waste disposal permit that authorized it to incinerate a wide variety of industrial wastes. Base personnel exposed to



incinerator emissions complained of headaches, nausea, skin rash, irritation of the nose, throat and eyes, allergy-like symptoms, and an increase in the frequency and duration of existing asthma problems and upper respiratory disease. Also, a recent health risk evaluation found that pollutants, when measured against U.S. standards, elevated the risk of cancer. The U.S. and Japanese governments have been working to find a mutually acceptable solution since 1989.

Q: What are the health risks associated with the Jinkanpo incinerator complex?

A: We know:

- What air pollutants Jinkanpo typically emits, and how they disperse over the installation.
- From laboratory studies that these pollutants may affect the health of certain individuals. For example, dioxin can cause skin problems and soft-tissue carcinoma.
- That we can estimate, using generally accepted EPA techniques, the cancer risk from breathing the base's air for various tour lengths.

We have initiated studies to determine which acute health effects – problems that we can have today – may be attributable to the incinerator's emissions. We are currently conducting a study to determine if there are any specific health problems which occur more frequently or are made worse as a result of exposure to incinerator emissions.

- We need to determine if NAF Atsugi personnel have more health problems than similar populations.
- If NAF Atsugi personnel do suffer higher illness rates, we need to determine if this increase is related to incinerator emissions.
- What we will not be able to determine are the long-term effects because those effects occur beyond the time frame of our analysis.

We have initiated scientific studies to determine if, in fact, a link exists between the current ailments of base personnel and their associated exposure to the Jinkanpo incinerator emissions. Armed with quality information, the Navy can refine its personnel policies and political and legal options with the Government of Japan. In the meantime, the U.S. leadership will continue its insistence that the Government of Japan resolve the problem. The base will continue to take all prudent actions necessary to minimize the exposure of personnel to these emissions.

Q: How many studies have been completed on Jinkanpo and who did the studies?

A: The Navy and its contractors have completed four air quality studies:

- 1989: Aircraft Environmental Support Office, NAS North Island, CA
- 1991: Naval Energy and Environmental Support Activity, Port Hueneme, CA
- 1995: Naval Facilities Engineering Service Center, Port Hueneme, CA
- 1997: Earth Tech, San Diego, CA

All four air quality studies detected chemicals in the incinerator complex's smoke and ash known or suspected by the U.S. Environmental Protection Agency (USEPA) to cause cancer and/or upper respiratory injury and disease. The 1995 report, completed by the Navy Environmental



Health Center, was the first study which collected data for a preliminary health risk assessment. It cautioned that the 1995 assessment only considered the health risks associated with one form of exposure: inhalation. Other potential exposure routes that have not yet been adequately assessed include direct contact with the contaminants that fallout from the emissions, and the ingestion of contaminated dust and/or soil.

**Q:** With all the sampling that has been conducted in the past few years, why don't we have a more complete health risk assessment?

**A:** The Navy focused previous air quality studies on regulatory compliance. The researchers gathered data needed to estimate pollutant concentrations emitted from Jinkanpo's smokestacks. This data allowed a comparison of Jinkanpo's emissions with existing U.S. and Japanese air pollution standards. The U.S. hoped to build a compelling case so that the Government of Japan would agree to fix the problem. This strategy improved the situation somewhat, but it has not yet resolved it.

On the other hand, a health risk assessment focuses on pollution, in all of its forms, wherever people live and work. While earlier studies yielded a fairly good picture of pollution emitted by Jinkanpo, they were never intended to address all the areas needed in order to complete a scientifically defensible health risk assessment. To fill these gaps, the Navy Environmental Health Center designed a health risk assessment study which evaluates all potential pathways in which Jinkanpo's pollution can effect base residents' health, including inhaling the air and ingesting contaminated soil, food and drinking water. Armed with a complete picture, the Navy can make prudent, database decisions on how best to protect the health of all base personnel. Radian International LLC, contracted to gather the necessary data, began its work in January 1998 and will continue through May 1999. We expect the final report in September 1999.

**Q:** What were the findings of the 1995 health risk assessment?

**A:** The 1995 Preliminary Health Risk Assessment concluded that breathing air within the boundaries of NAF Atsugi increases cancer and other health risks for adults and children. The report also concluded that the risk increases proportionally with the length of stay.

**Q:** If a person is assigned to NAF Atsugi for three years, how much higher is the risk of cancer? What about the health risk for children?

**A:** The 1995 Preliminary Health Risk Assessment estimated that a standard three-year exposure to the base's air elevates the cancer risk by 110 additional cases in a million children, and 40 additional cases per million adults. (NOTE: You may also see these figures in the mathematically identical expression of 1.1 additional cases per 10,000 children and 0.4 cases per 10,000 adults). The estimate increases to 575 additional cases per million adults with a 30-year exposure. To give these numbers a little perspective, over a 70-year lifetime, an American male stands a one in two (or 5000 in 10,000) chance of contracting cancer, the American female one in three (or 3333 in 10,000). These estimates assumed a constant 24 hour exposure 6 months per year, at the fence line.

**Q:** If the 1995 report concludes that the incinerator poses an unacceptable health risk, why has the Navy not removed everyone from danger?



A: Before taking such drastic steps as evacuating family housing, the Navy will implement short term measures to minimize everyone's exposure to incinerator emissions while the U.S. and Japanese governments work to resolve the problem. Specific actions already in place include:

- Portable air cleaners for all on-base family housing residents;
- An air quality advisory system which triggers prescribed protective procedures at Shirley Lanham Elementary School, Child Development Center and Youth Center on toxic air days;
- Specific incinerator-related training for child care and health care providers;
- Improved standardized incinerator information packages.

In addition, the Navy's continuous incinerator monitoring and application of political pressure on the Government of Japan since Spring 1997 seems to have encouraged Jinkanpo to maintain and operate its equipment more carefully than it did in 1994 when the health risk evaluation data was originally gathered.

Q: Is it true the miscarriage rates for women who live on base are higher than the rate for women living off base? And is it safe to get pregnant while living on NAF Atsugi?

A: The overall miscarriage rate at NAF Atsugi is about 14%, or one-in-seven, which is about the normal occurrence in the U.S. Tracking miscarriages is a very difficult matter. Miscarriages seem to have occurred throughout the year with no particular bias toward any particular time of year including when Jinkanpo's emissions are at their worst. The medical community is conducting a more specific study of this issue. In the meantime, pregnant women and those with such aspirations, should practice the same prudent precautions provided to all residents, to minimize their exposure to incinerator pollution:

- Minimize time spent outdoors in the family housing area during Air Quality Warning Conditions.
- Properly operate and maintain the portable air cleaners in on-base units.

Q: Is it true the 1997 environmental testing found dioxin levels 3,000 times the USEPA maximum contaminant level?

A: This dioxin level reflects the maximum detected concentration found in an ambient air sample that was taken during only one six-hour sample period this past summer. The concentration was 3,000 times the average of ambient air samples taken from large U.S. cities.

Q: What are the health effects of dioxin, which is a highly toxic, carcinogenic chemical. Is it true they can also cause birth defects and affect both the immune and reproductive systems?

A: The U.S. classifies dioxins as human carcinogens. It causes a form of cancer known as soft tissue carcinoma. Dioxin also causes a skin condition called chloracne in people exposed to high doses over a long period of time, and irritates the eyes, nose and throat.

Dioxin affected the immune and reproductive systems of some laboratory animals, though these effects have not been observed in people exposed to dioxin from industrial accidents. To date, all studies have focused on individuals who have ingested dioxin. Information on effects from inhaling dioxin is still very limited.



Q: Does dioxin accumulate in the body?

A: Yes, as with most bioaccumulatable contaminants, dioxin accumulates in human fatty tissue (i.e., lipids).

Q: How long can I safely stay at NAF Atsugi?

A: The Navy has determined that a normal 36 month tour length is safe for families with children under the age of 6 and 72 months for families with children over 6 years old and adults. We are currently collecting data from an on-going health risk assessment to determine the long term effects of Jinkanpo on the health of our Sailors and their family members. Those with children under 6 years old desiring to extend beyond a 36 month tour will receive a one on one health risk consultation before that request will be granted. Also personnel and families with children older than 6 will be allowed a 72 month tour provided they meet all requirements for that extension.

Q: What if Navy families do not want to live at NAF Atsugi because of the health risk? Will the Navy move them? Who will pay for the moves?

A: Navy members who do not wish to live on base have several options. They can choose to remain in off-base quarters. They can also request, via the chain of command, a government funded move from on-base to off-base quarters, or an early return of family members to the United States.

Q: If I contract a potentially incinerator-related illness 20 years from now, will the Navy be responsible?

A: If you become ill and think the illness is related to the incinerator, you can file a claim. As a precaution, make sure that you document your residence at NAF Atsugi in all your family members' health records. NAF Atsugi Branch Medical Clinic has a form, which takes about two minutes to fill out and it becomes a permanent entry in your health record.

Q: After the 1995 study cited the health risks, especially for children, why wasn't something tangible done to protect the children in Shirley Lanham Elementary School, the Child Development Center, and the Youth Center, all of which are within 750 meters of the incinerator?

A: The base has taken several positive steps to protect our children:

- The NAF Atsugi Branch Medical Clinic developed an incinerator-training package geared specifically for those responsible for the care of young children. The training directly addresses the pollution's effects on children and lists prudent safeguards caregivers should use. The clinic presented the training in February 1998 to faculty at Shirley Lanham Elementary School and the caregivers at the Child Development Center, Youth Center, and the Family Home Care Program. The clinic will provide refresher training at regular intervals and make the program available to the community at large.
- During Air Quality Warning Conditions, when the incinerator plume blows directly at the facilities, the administrators activate "rainy day" procedures to minimize the children's exposure to the pollution.



- The Child Development Center, Youth Center and the Elementary School use the same portable air cleaners in their classrooms available to housing residents.

**Q: Why did the Navy open two new housing towers so close to the smokestacks?**

**A:** The Government of Japan programs all major building projects on U.S. military bases five to seven years in advance. The two towers closest to the incinerator, Buildings 3101 and 3102, opened for occupancy in May 1996 and May 1997, respectively. Both towers were sited and constructed before the 1995 report documented the level of health risks.

Since 1995, the U.S. has formally requested that the Government of Japan deal with NAF Atsugi's air quality problem vis-à-vis Jinkanpo Company quickly and firmly. We shall vigorously continue to apply political pressure until the problem is resolved. In the meantime, the Navy is investigating the feasibility of installing special filtration systems in all residential towers to clean the incoming air as much as possible. The Housing Division has also issued portable air cleaners to all on-base residents.

**Q: The new child care facility is being built even closer to Jinkanpo. Why?**

**A:** The new child care facility will be located across the street from the current facility and is 500 meters from the Jinkanpo Company. The base has few available siting options inside or outside the family housing area. To cancel or significantly change the current proposal would most likely set the project back five to seven years. We fully expect our current round of discussions with the Government of Japan to result in a satisfactory resolution to the air quality problem prior to completion of the new Child Development Center.

**Q: Pollution in the air eventually contaminates the soil. Why hasn't protective padding been placed in the Child Development Center's play area?**

**A:** Earth Tech Inc. gathered soil samples at the Child Development Center and Shirley Lanham Elementary School during its summer 1997 study. Contamination levels remained within safe U.S. standards. Radian International has already collected additional samples to confirm the 1997 results for the health risk assessment. If this study uncovers a problem, we will respond immediately to ensure the safety of our children. In the meantime, you should ensure that your children wash their hands often (especially before eating) and bathe daily.

**Q: How will people warned about the pollution problem at NAF Atsugi in advance?**

**A:** The Bureau of Naval Personnel and Naval Medicine will provide prospective NAF Atsugi personnel with information about the base's air quality situation prior to their arrival in Japan. Jinkanpo updates will also be available via our NAF Atsugi website at [www.Atsugi.Navy.Mil](http://www.Atsugi.Navy.Mil).

**Q: What is the Jinkanpo Action Team?**

**A:** In 1997, the base formed an interdepartmental committee to ensure that we have taken all reasonable short term measures to minimize the health risk to base personnel while the U.S. and Japanese governments work to resolve the problem at the source. The Jinkanpo Action Team considers a number of issues at its bimonthly meetings, including the acquisition of portable air cleaners, development of Air Quality Warning Conditions and procedures, training for child care



and health care providers, support from the Branch Medical Clinic, and internal and external information. The results of the meetings are published in the base newspaper.

**Q:** In the two years since the study, Jinkanpo has been granted a permit to increase operations from eight hours a day to 24 hours per day. Why did the Navy allow this to happen?

**A:** Since the Jinkanpo Company is a privately owned Japanese company, the Navy has no direct control over its operations and therefore must depend on the Government of Japan to take appropriate action. The Commanding Officer of NAF Atsugi sent the Governor of Kanagawa Prefecture and the Minister of Health and Welfare a letter strongly objecting to any increase in Jinkanpo's licensed incineration hours. Unfortunately, the Governor approved the continuous operating hours in April 1997. The U.S. remains aggressively engaged in all licensing matters concerning the Jinkanpo Company.

**Q:** I heard Jinkanpo is trying to get a license to increase its burn volume from 30 tons to 90 tons per day. Is this true and can it be stopped?

**A:** The Government of Japan has not yet approved Jinkanpo's amendment to their permit request for increased incineration volume based in part on the strong objections they have received from the U.S. Navy. Jinkanpo resubmitted this request in conjunction with its request to renew its operating permit in August 1997. In preparation for fighting both requests, the Navy conducted an extensive air and soil contamination study. Based on this data, the Commander, U.S. Naval Forces, Japan sent the Governor of Kanagawa Prefecture and the Minister of Health and Welfare a letter strongly objecting to Jinkanpo's permit renewal and amendment. The governor approved the permit renewal, but again, positive developments resulted:

- The Government of Japan again deferred a decision on authorizing Jinkanpo to triple its incineration volume from 30 tons to 90 tons per day.
- The obvious extensive monitoring seems to have elicited some improvement in Jinkanpo's operations and housekeeping. When the wind blew on base, the incinerator emissions did not contain many of the pollutants detected in the 1995 study.
- U.S. pressure seems to have convinced the Government of Japan to seriously consider implementing engineering fixes to the incinerator plant.

**Q:** Does the Japanese government just not care?

**A:** The Government of Japan's Environmental Regulations are different than our own country's. For example, in terms of air quality standards:

- The U.S. regulates 195 hazardous air pollutants versus 18 in Kanagawa Prefecture.
- The U.S. set its ambient air standards low enough to protect the most susceptible populations – infants, the elderly, and the infirm – from long term exposure. Japan still uses considerably higher industrial standards designed to protect a healthy adult working 40 hours per week from getting sick as a result of a single exposure.
- In the U.S., regulators have the ability to conduct unannounced inspections and use any data collected to bring full legal action against any and all violations of environmental law that are discovered. In contrast, here in Japan, companies are given up to 2 weeks advanced warning that an inspection is scheduled, thereby giving the company sufficient time to prepare.



- U.S. environmental regulators have broad enforcement powers, including the ability to shut down and/or heavily fine a company for gross violations of the law. Japan depends primarily on companies to voluntarily comply with its environmental laws.

Whereas public health and environmental concerns drive U.S. environmental law, economic factors still receive primary consideration in Japan. Unlike the USEPA, the Japan Environment Agency has very little authority to promulgate environmental policy or to aggressively enforce the environmental laws that have been passed. Differences between Japanese and U.S. waste disposal and air pollution standards also reflect Japan's much greater dependence on incinerators for waste disposal. Incineration reduces waste volume by 80% to 90%, an attractive option for a relatively small country (roughly the size of Montana) with limited landfill capacity, yet with a population nearly half as large as the U.S. As a result, Japan incinerates 73% of its wastes, compared to 16% in the U.S.

**Q: The Jinkanpo Incinerator must be affecting the people outside the gates of NAF Atsugi too. Can we enroll the Japanese community to help us fight Jinkanpo?**

**A:** We maintain contact with the local community and, in fact, several Japanese groups have submitted petitions to Kanagawa Prefecture and Ayase City objecting to Jinkanpo's requests to amend its operating permit. We do share current and relevant legal and environmental information that we collect or discover with concerned Japanese citizens and/or associations and build awareness of the problem with the Kanto Plain Anti-Dioxin League.

**Q: Can the Navy buy the incinerator and close it down?**

**A:** This is not a viable solution.

**Q: Can the Navy sue the Jinkanpo Company?**

**A:** The U.S. Government is investigating this option.

**Q: So what can the Navy do to solve the problem?**

**A:** As we are guest's in Japan, the Navy cannot solve this problem by itself. As one of the world's leaders in the development of environmental technology that enhances our stewardship of the environment, we are attempting to educate and inform the Government of Japan through the transfer of this technology. These efforts might encourage them to enact stricter environmental laws that are more protective of the health of their own citizens. Since most U.S. service men and women are short-term guests in this country, if our health is threatened from just a 3-year exposure to these emissions, then local Japanese residents and Japanese base employees are surely threatened from not only these same short-term exposures, but even more so from long-term chronic exposures.

We have become increasingly sophisticated in our ability to:



- extract information regarding Jinkanpo's license and plant operations;
  - interpret and effectively apply the Government of Japan's environmental laws and procedures;
  - collect appropriate data regarding human health risks, and
  - work more effectively with the Japanese government to keep this issue on the forefront.
- Although progress in this matter may sometimes appear to be slow at times, we remain confident that the environmental concerns of both U.S. and Japanese citizens will be adequately addressed.

Q: What does the Navy consider to be an acceptable solution?

A: In the near term, the Navy seeks to quickly and dramatically reduce the stack and fugitive emissions that now fumigate the base daily for six months out of every year. To this end, the Jinkanpo Company must incorporate several engineering fixes (also known as best available control technologies) to its incinerator complex, including:

- a taller smokestack to ensure better dispersion of emissions and perform continuous stack monitoring
- install baghouse filters to reduce total emissions
- construct an enclosed facility around the incinerator

Also, the Government of Japan must diligently ensure that Jinkanpo abides by the law and the terms and conditions of its license. Until these objectives are met, the U.S. Navy will continue to actively monitor Jinkanpo's air emissions and aggressively negotiate an acceptable resolution with the Government of Japan.



SF-600 PCS Departure From NAF Atsugi: "To Be Retained Permanently in Health Record and at BMC/NAF Atsugi"

PLEASE COMPLETE THE FOLLOWING BY FILLING IN THE BLANKS OR CIRCLING THE CORRECT RESPONSE.

Name: \_\_\_\_\_ SSN: \_\_\_\_\_ Age: \_\_\_\_\_  
Today's Date: \_\_\_\_\_  
Mailing Address: \_\_\_\_\_ APO/FPO AP  
Zip \_\_\_\_\_

A. Information concerning your arrival and departure in/from Japan and Atsugi.

1. Tour 1
  - a. When did you arrive in Japan? (MO/YR): \_\_\_\_\_ In Atsugi? (MO/YR) \_\_\_\_\_
  - b. When did you depart from Japan? (MO/YR) \_\_\_\_\_ From Atsugi? (MO/YR) \_\_\_\_\_
2. Tour 2
  - a. When did you arrive in Japan? (MO/YR) \_\_\_\_\_ From Atsugi? (MO/YR) \_\_\_\_\_
  - b. When did you depart from Japan? (MO/YR) \_\_\_\_\_ From Atsugi? (MO/YR) \_\_\_\_\_
3. Tour 3
  - a. When did you arrive in Japan? (MO/YR) \_\_\_\_\_ In Atsugi? (MO/YR) \_\_\_\_\_
  - b. When did you depart from Japan? (MO/YR) \_\_\_\_\_ From Atsugi? (MO/YR) \_\_\_\_\_
4. Tour 4
  - a. When did you arrive in Japan? (MO/YR) \_\_\_\_\_ In Atsugi? (MO/YR) \_\_\_\_\_
  - b. When did you depart from Japan? (MO/YR) \_\_\_\_\_ From Atsugi? (MO/YR) \_\_\_\_\_

B. Information concerning your residence. Grid numbers correspond with the map on the back of this form and represent the distance in meters from the incinerator: 1-500M; 2-750M; 3-1000M; 4->1000M, O- Off-base)

1. Tour 1
  - a. Residence location: On base <Yes> <No>? If yes, please indicate the grid number of the residence \_\_\_\_\_.
  - b. When did you move on base? (MO/YR) \_\_\_\_\_.
  - c. How long did you reside on base? \_\_\_\_\_ (months).
  - d. Average number of hours spent at home per workday? \_\_\_\_\_.
2. Tour 2
  - a. Residence location: On base <Yes> <No>? If yes, please indicate the grid number of the residence \_\_\_\_\_.
  - b. When did you move on base? (MO/YR) \_\_\_\_\_.
  - c. How long did you reside on base? \_\_\_\_\_ (months).
  - d. Average number of hours spent at home per workday? \_\_\_\_\_.
3. Tour 3
  - a. Residence location: On base <Yes> <No>? If yes, please indicate the grid number of the residence \_\_\_\_\_.
  - b. When did you move on base? (MO/YR) \_\_\_\_\_.
  - c. How long did you reside on base? \_\_\_\_\_ (months).
  - d. Average number of hours spent at home per workday? \_\_\_\_\_.



SF 600 PCS DEPARTURE FROM NAF ATSUGI (con)

4. Tour 4

- a. Residence location: On base <Yes> <No>? If yes, please indicate the grid number of the residence \_\_\_\_\_.
- b. When did you move on base? (MO/YR) \_\_\_\_\_.
- c. How long did you reside on base? \_\_\_\_\_ (months).
- d. Average number of hours spent at home per workday? \_\_\_\_\_.

C. Information concerning location of school or employment. Grid numbers correspond with the map on the back of this form and represent the distance in meters from the incinerator: 1-500M; 2-750M; 3-1000M; 4->1000M; and 0-Off Base.

1. Tour 1

- a. Work site/School: \_\_\_\_\_
- b. Occupation/Job Title: \_\_\_\_\_
- c. Grid Number of work site or school \_\_\_\_\_
- d. Number of hours per day at this site \_\_\_\_\_

2. Tour 2

- a. Work site/School: \_\_\_\_\_
- b. Occupation/Job Title: \_\_\_\_\_
- c. Grid Number of work site or school \_\_\_\_\_
- d. Number of hours per day at this site \_\_\_\_\_

3. Tour 3

- a. Work site/School: \_\_\_\_\_
- b. Occupation/Job Title: \_\_\_\_\_
- c. Grid Number of work site or school \_\_\_\_\_
- d. Number of hours per day at this site \_\_\_\_\_

4. Tour 4

- a. Work site/School: \_\_\_\_\_
- b. Occupation/Job Title: \_\_\_\_\_
- c. Grid Number of work site or school \_\_\_\_\_
- d. Number of hours per day at this site \_\_\_\_\_



PCS DEPARTURE FROM NAF ATSUGI: PATIENT ACKNOWLEDGMENT OF ENVIRONMENTAL  
RISK COMMUNICATION AND HEALTH CONSULTATION

BRANCH MEDICAL CLINIC, ATSUGI, JAPAN  
PSC 477 BOX 2  
FPO AP 96306-1600

"TO BE RETAINED PERMANENTLY IN THE HEALTH RECORD AND AT BRANCH MEDICAL  
CLINIC ATSUGI"

This SF600 is to document full disclosure of potential environmental  
exposures and possible health effects for all personnel and their  
families who are assigned to Naval Air Facility (NAF) Atsugi, Japan.

You have previously been advised of the environmental conditions at NAF  
Atsugi as well as possible health effects associated with those  
exposures. During your evaluation today, your health care provider  
will advise you of the most current information concerning  
environmental conditions at NAF Atsugi as well as possible health  
effects associated with exposure to the environment at NAF Atsugi. You  
will be provided the most recent edition of the Health and  
Environmental Fact Sheet. The findings of the Health Risk Appraisal  
that you recently completed will be compared with those noted in the  
Health Risk Appraisal you completed at the time of your PCS arrival to  
NAF Atsugi. Your health care provider will discuss with you any  
medical conditions, current or past, that may have occurred or worsened  
with exposure to the environmental conditions at NAF Atsugi.

The most current information about the status of the environmental  
conditions will continue to be available from NAVENVIRHLTHCEN (NEHC)  
Environmental Programs Directorate via phone (757-462-5448 or  
DSN 253-5548) or the NEHC Environmental Programs Web Page  
([HTTP://WWW.NEHC.MED.NAVY.MIL](http://www.nehc.med.navy.mil)).

Your signature on this document indicates that you have been informed  
of the environmental conditions and possible health effects of living  
at NAF Atsugi. You have received the Health and Environmental Fact  
Sheet and have been advised of the medical findings from today's health  
consultation. Before you sign this document, ask any questions you may  
have.

Patient Acknowledgement of Receipt of Environmental Counseling and  
Health Consultation

Must be completed by all individuals who are 18 years of age and older.

I have received information regarding the environmental conditions at  
NAF Atsugi and possible health effects of living at NAF Atsugi. I have  
read and understand the Health and Environmental Fact Sheet. I  
understand the medical findings of today's health consultation. I have  
had an opportunity to ask questions and know where to obtain additional  
information.

Patient Signature: \_\_\_\_\_ Date: \_\_\_\_\_



PCS DEPARTURE FROM NAF ATSUGI: HEALTH CARE PROVIDER ACKNOWLEDGMENT OF  
COMPLETION OF ENVIRONMENTAL COUNSELING AND HEALTH CONSULTATION

Health care providers must complete the following:

1. I have provided and reviewed with the patient the Health and  
Environmental Fact Sheet # \_\_\_\_\_ dated \_\_\_\_\_.

Health care provider statement acknowledging completion of  
environmental counseling and health consultation:

I have discussed with the individual the environmental conditions at  
NAF Atsugi and possible health effects of living in that area of Japan.  
I have reviewed the findings of the PCS departure Health Risk Appraisal  
with the patient and discussed changes in comparison to the Health Risk  
Appraisal completed at PCS arrival to NAF Atsugi. I have completed a  
health consultation including a medical record review, completion of an  
updated SF 93, and identification of any existing medical conditions  
that may have been worsened by the environmental conditions at NAF  
Atsugi. I have discussed these findings with my patient and make the  
following notation: (Circle and initial appropriate response.)

1. The patient has incurred no medical condition potentially  
exacerbated by the environmental conditions at NAF Atsugi.

OR

2. The patient has the following medical conditions potentially  
associated or exacerbated by the environmental conditions at  
NAF Atsugi: (List medical conditions)

<u>Initial Onset Current Tour</u>	<u>Exacerbated Current Tour</u>
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

Health care provider signature \_\_\_\_\_  
Date \_\_\_\_\_



SECTION B - SUPPLIES OR SERVICE AND PRICES/COSTS

B.1. This Contract represents the Navy's firm requirement to provide Occupational Health Team services at the Naval Air Facility (NAF) Atsugi, Japan. The unit price is stated as hours for CLIN 0001 and 0002 and "lot" for CLIN 0003. CLINs 0001 and 0002 contain one Subline item (SLIN) (that is indicated by the alpha character "AA", e.g., 0001AA) for each position required by the Occupational Health Team. Optional CLINs 0004, 0005 and 0006 will allow the Government to extend the period of performance if necessary and may be exercised by the Government in accordance with FAR Clause 52.217-9, Option to Extend the Term of the Contract.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
	The contractor agrees to provide, on behalf of the Government, an Occupational Health Team for performance at the Naval Air Facility Atsugi, Japan in accordance with Section C for the period 15 May 98 through 1 Aug 99. Personnel breakout is as follows:				
0001	CLINICAL HOURS:				
0001AA	Physician	348	Hours	\$ 125.74	\$ 43,757.52
0001AB	Family Nurse Practitioner	348	Hours	50.30	17,504.40
0001AC	Family Nurse Practitioner	348	Hours	50.30	17,504.40
0001AD	Pediatric Nurse Practitioner	348	Hours	50.30	17,504.40
0001AE	Registered Nurse	348	Hours	37.06	12,895.88
0001AF	Registered Nurse	348	Hours	37.06	12,895.88
	TOTAL FOR CONTRACT LINE ITEM 0001				\$122,064.48
0002	NON-CLINICAL HOURS:				
0002AA	Physician	72	Hours	89.65	6,454.56
0002AB	Family Nurse Practitioner	72	Hours	35.87	2,582.32
0002AC	Family Nurse Practitioner	72	Hours	35.87	2,582.32
0002AD	Pediatric Nurse Practitioner	72	Hours	35.87	2,582.32
0002AE	Registered Nurse	72	Hours	26.42	1,902.48
0002AF	Registered Nurse	72	Hours	26.42	1,902.48
	TOTAL FOR CONTRACT LINE ITEM 0002				\$ 18,006.48
0003	ADMINISTRATIVE/OTHER DIRECT COSTS Lump sum incorporates the following items: Project Manager - 75 Hrs @ \$71.45 - \$5,358.75 Subject matter Expert - 5 Hrs @ \$91.58 - \$457.90 Project Admin - 30 Hrs @ \$51.84 - \$2,592.00	1	Lot	\$11,670.92	\$ 11,670.92



ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
0003	ADMINISTRATIVE/OTHER DIRECT COSTS - CONT'D				
	Project Admin - 40 Hrs @ \$20.35 - \$814.00				
	Admin Computer Expenses - 155 Hrs - \$454.99				
	Telephone - 82 Calls - \$1,058.82				
	Postage/Freight/Courier - 34 Pkgs - \$217.51				
	Clinical Consultant Expenses - 10 Hrs - \$716.95				
	TOTAL BASE PERIOD				\$151,741.88

OPTION FOR ADDITIONAL QUANTITIES

NOTE: The Government may exercise any and/or all optional CLINs 0004 through 0006.

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
	Optional period 6 Aug 98 through 31 Aug 98 is a continuation of services as indicated in CLINs 0001 through 0003. The following is a breakout of additional NOT TO EXCEED hours:				
0004	CLINICAL:				
0004AA	Physician	NTE 180	Hours	125.74	\$ 22,633.20
0004AB	Family Nurse Practitioner	NTE 180	Hours	50.30	9,054.00
0004AC	Family Nurse Practitioner	NTE 180	Hours	50.30	9,054.00
0004AD	Pediatric Nurse Practitioner	NTE 180	Hours	50.30	9,054.00
0004AE	Registered Nurse	NTE 180	Hours	37.06	6,670.80
0004AF	Registered Nurse	NTE 180	Hours	37.06	6,670.80
	TOTAL CONTRACT LINE ITEM 0004				\$ 63,136.80
0005	NON-CLINICAL:				
0005AA	Physician	NTE 12	Hours	89.65	1,075.80
0005AB	Family Nurse Practitioner	NTE 12	Hours	35.87	430.44
0005AC	Family Nurse Practitioner	NTE 12	Hours	35.87	430.44
0005AD	Pediatric Nurse Practitioner	NTE 12	Hours	35.87	430.44
0005AE	Registered Nurse	NTE 12	Hours	26.42	317.04
0005AF	Registered Nurse	NTE 12	Hours	26.42	317.04
	TOTAL CONTRACT LINE ITEM 0005				3,001.20
0006	ADMINISTRATIVE/OTHER DIRECT COSTS	NTE 1	Lot	4,895.96	4,895.96
	Lump sum incorporates the following items:				
	Project Manager - 20 Hrs @ \$71.45 - \$1,429.00				
	Subject Matter Expert - 5 Hrs @ \$91.58 - \$457.90				
	Project Admin - 15 Hrs @ \$51.84 - \$777.60				



[illegible]

NOTE: Optional hours shall be paid on actual hours used.