



DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, HONOLULU
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

CEPOH

1 October 2001

Memorandum for Record

Subject: Responses to Ms. Ruth Tighe's comments on the Interim Draft Treatment Plan, Tanapag Village, Saipan, CNMI.

The following are provisional responses to comments. These responses assume that the USEPA and the Department of the Army (DA) will, under their authorities, approve the remedy selection of Indirect Thermal Desorption (ITD) followed by shipment of the residual filter cake (400 tons) to the US mainland. If this remedy is not approved, these answers will require revision.

Comments on Health Risks.

Unfortunately, some of the discussion in the Proposed Plan regarding risk levels is speculative or in error, as pointed out in these comments. USACE did not complete a full site specific risk assessment for this site. This is in part because the EPA order mandates the cleanup level of 1 ppm. The EPA order is based on an EPA Region 9 preliminary remediation goal (PRG) for determining the need to proceed with site investigation, and is consistent with the Toxic Substances Control Act (TSCA) which governs the management and disposal of PCBs and PCB contaminated material. 1 ppm is consistent with or lower than the cleanup level for PCBs used by EPA and other federal agencies at many National Priorities List sites throughout the United States. Data indicates that the ITD process will achieve less than 1 ppm to non-detect. Soils that fail to reach this goal will be reprocessed until they meet the remediation goal or they will be shipped off island. This level of remediation will be protective of human health and the environment for any use of the treated soils. USACE believes that the EPA-ordered cleanup level complies with CERCLA and the NCP and is protective.

Section 1.2 The third paragraph says that vapors consist of contaminants and particulate matter. What is this? The same paragraph mentions a HEPA particulate filter. What is this?

HEPA stands for High Efficiency Particulate Adsorber. HEPA filters are used in clean rooms and are 99.98% efficient to remove dust below 1 micron.

The same paragraph mentions that "water is polished prior to use to re-hydrate treated soil." What does this mean?

Water polish defines the use of activated carbon to remove impurities of the water treatment system. Water that has been treated is sprayed on the hot soil exiting the ITD to add moisture to

the soil as well as cool the soil. The soil is re-hydrated to the same moisture content it had before treatment.

Mention is made of minimizing excess hazardous materials storage by shipping only limited quantities over the length of the project. What protective measures will be provided for the storage of the hazardous materials on-site?

Department of Transportation (DOT)-approved containers will be used to store the waste for shipment, and placed in sea vans for offsite transportation. Industry standard hazardous materials management protocols will be followed during packaging, storage and shipment, including but not limited to, securing storage areas to prevent unauthorized entry by the public, maintaining the DOT limits on transport vessels and others, and maintaining "cradle-to-grave" management of the controlled waste.

Where will the clean soil that is to be used in the initial test come from? How much will be needed? What happens to it upon completion of the test? If it is then sterile, will it be "amended" so that it is again fertile?

Clean soil will be purchased or clean cover surrounding the cells will be used to conduct the initial test. Approximately 100 tons will be used and upon completion of the test the soil will be commingled with the treated and verified clean soil. The sterile soil will be amended at the upper layers to restore it for use in cultivation.

This section states that ECC will operate the system at 75% of the design conditions while awaiting results of the regulatory agency reviews of the demonstration test. I was told that this will not occur, but have seen no confirmation in writing. While mention is made of a mini-test to validate the performance of air pollution controls systems, no mention is made of certifying that the PCB content of the soil has been reduced to 1 ppm or less. In fact, this section talks only of validating the meeting the "emission expectations." Shouldn't the test also validate the degree to which the soil has been cleaned?

No operations will occur upon completion of the demonstration testing. The mini test has been eliminated, only the full-scale performance test will be performed. Soil analytical results are continuously performed. Only soil that meet a standard of less than one ppm PCB will be backfilled. Soil exceeding 1 ppm will be retreated in the ITD.

Section 2.1.1 states that fuel will be stored in two existing fuel oil storage tanks near the site. Yet Section 3 states that two 6 thousand-gallon oil tanks will be installed to store fuel oil. Which is it?

Two 4000-gallon tanks for diesel storage will be made available. Shell Oil Company will supply.

This section also states that ECC may boost water pressure to meet its needs. How will this be done? How will ECC avoid this having an adverse on the water supply for the village?

ECC is exploring the possibility of using other sources of water, such as drilling a well, or a tank for storing rainwater. For example, pursuant to consultation among ECC, the CNMI Commonwealth Utilities Commission (CUC), and the DEQ, it appears it will be necessary to install a well to draw brackish water from the tidal aquifer in order to operate the ITD unit. Use of this non-potable water will avoid an adverse impact on the community's drinking water supply.

This section states that "Materials used in the process...are planned to meet production." What does this mean?

Materials will be purchased and stored on-site to meet production needs. This refers to the supplies and tools necessary for the treatment operations.

This section states that ECC has identified an adequate work force from an "on-island labor pool." What is this? Will foreign labor be used? Will the normal process for obtaining/hiring these workers be followed?

ECC will use subcontracted labor sources as well as citizens, and will follow federal and CNMI labor laws.

Section 2.1.3 states that there will be scheduled outages every 10 days for 1-2 days. It also notes that at 60% availability, the system can be offline 4 out of every 10 days. Under such a schedule, is there really any point in trying to maintain operations 24 hours a day?

The 60% number for availability is an average over the life of the project. In some cases the outages may be longer than 1-2 days. Operation 24 hours per day will yield the cleanest soil exiting the ITD. Frequent start and stops increase the project duration and quantity of soil to be treated since high retreat of soil is typical.

Section 3 states that soil treatment rate will be at 14 TPH. What is this?

TPH is an acronym for tons per hour. The average treatment rate including availability is $14 \times 60 / 100\%$ or 8.4 tons per hour of calendar time.

The section says the ITD is a zero process water discharge operation. But it also states that 20,000 gallons of water will be required for start up. What will happen to this water?

20,000 gallons of start up water will be used to fill the tanks needed for the ITD. The water collected in the ITD process will be treated and used to hydrate the soil exiting the unit.

This section also states that no process water exits the ITD. Yet the next sentence states that a discharge drain will be established to accept this non-contact water discharge, and goes on to note that water disposal will follow requirements of Federal and CNMI regulations. Please explain the inconsistencies!

Contact or process water is defined as water that has been in contact with PCB wastes. This water is sent back into the system and cleaned before it is used to re-hydrate the soil.

Non contact or non-process water is used to cool the process water through a metal heat exchanger in a way to prevent the two water types from touching each other. The non-contact water is re-circulated through a cooler. The water is clean except the level of dissolved salt is higher. This water may be discharged through the discharge drain periodically, and will meet the federal and CNMI discharge specifications.

Sec 3.1 discusses installation of the container components. Who will do the installation? What kind of training will they have/receive? What kind of supervision will be provided?

ECC will do the installation of the equipment. Experienced ECC superintendents will supervise subcontractors and local hired labor to assist in the process. Training will be conducted on HAZWOPER and on-site operations.

Section 4.1 states that "the indirect process creates a potentially explosive gas" therefore making stoppage of the system "undesirable." How will ECC assure that the system doesn't stop inadvertently - especially given the unreliability of local power? Can ECC issue such an assurance? What protection will be provided against possible explosion of the gas?

ITD system has been equipped with safety features that eliminate the possibility of explosion. The system is continually purged with an inert gas during operation to eliminate the oxygen needed to ignite or cause an explosion of a vaporized organic material. A backup generator is used to permit a safe and orderly shutdown of the ITD equipment in the event of a power failure.

Section 4.4 states that treated soil will be sampled for clean-up level every 50 tons, which will be a composite of 250 tons. Is this a standard rate of sampling? Is it enough?

The section talks of regulatory testing, performance testing and operational testing. Please define the components of each.

This section ends with the statement: "Information will be developed that will allow ECC to maximize the PCB removal and still meet soil discharge criteria." What does this mean?

Soil sampling of every 50 tons /250 ton composite is a standard treatment rate for continuous treatment processes. The process parameters are continuously monitored and parameters that fall out of specification stop the introduction of soil, and therefore eliminate the possibility for soil failing the treatment criteria. The information that will be developed to meet soil discharge criteria are the parameters mentioned. These include soil discharge temperature before cooling, retention time (or time the soil is in the ITD system). The purpose of developing the criteria is to reduce the frequency of treated soil not meeting the treatment criteria.

Regulatory testing is the validation of discharge of a stream such as water and air. This testing is ongoing throughout operations. Performance testing is an initial set of tests to assure the equipment meets the standards of performance that were planned during the regulatory review process. The standards that must be met are PCB, dust, metals and dioxin furans, carbon monoxide, oxygen and hydrocarbon emissions from the process in the air system.

Section 6.2.2 talks of data taking "throughout the shift on a timely basis but not overly time-consuming"; and of the frequency of inspection "at least as often as specified in ...regulations," but then says they will be carried out often enough to identify problems in time to correct them.... These are rather vague indicators, and unsatisfactory.

ECC will take data on a routine basis throughout the project to monitor system parameters and to check if the project objectives are being met. This will be used to document the results, or to change procedures or system components if warranted.

Detailed inspection and report forms will be attached to the ITD plan. Vague reference will be removed.

Section 3.1 lists "definable features" of the scope of work for Phase IV. Not included is any mention of restoration of the site of the stockpile after treatment and removal of all equipment, nor does it discuss restoration of the cleaned, but sterile, soil to its previous organic condition, both of which should be included in the plan.

Soil will be amended with compost and/or fertilizer to restore it to organic state. ECC will add this requirement to the revised document.

Section 3.2 notes that "corrective action" will be taken to bring data that does not meet QA objectives to an acceptable level. Does this corrective action include regenerating the data, should that become

necessary?

Data that does not meet QA objectives will not be modified, but documented and excluded from site data evaluation. Corrective actions are measures taken to amend field or other procedures to prevent erroneous data from recurring.

Section 4 lists as a sampling strategy "sampling requirements for Incineration Waste Disposal." At what point is incineration going to be used as a waste disposal strategy?

Incineration is no longer mandated. Wastes will be disposed at a TSCA landfill, after confirming that it meets the TSCA landfill acceptance criteria.

4.2 indicates that only one representative sample of each type of debris and of filter cake will be taken per disposal facility requirements. What is the purpose of this sampling? What happens to debris that does not meet the criteria for TSCA / RCRA disposal? Is one sample adequate for this purpose?

One composite sample per load of filter cake will be collected and analyzed. This will be representative of the specific waste stream.

Sec 4.3 indicates that only one representative sample of waste in "roll-off containers" will be taken. What is the purpose of this sampling? Is one sample adequate for this purpose?

The "roll-off containers" will contain pre-classified non-hazardous waste. The sample will be a composite sample of the entire contents of the container and therefore representative of the contents within.

Where do these sampling "ratios" come from?
Will sampling results be made available to the public?

The sampling "ratios" are based on the requirements of the receiving facility. All results will be made available by the EPA after ECC submits the final report.

Section 3 states that metal debris will be decontaminated and sent to a local re-cycling center located at Lower Base. How will this decontamination be done? How will it be determined that the debris is free of contamination?

General decontamination will include a high-pressure wash followed by a metal wipe sample to determine residual concentrations. Once shown to be clean, the metals will be recycled.

Section 5.3.2 mentions verification sampling. Will EPA also be taking verification samples? If not, why not? Will sampling results be made available to the public?

Yes, EPA will collect and analyze samples concurrently with the site activities, and will make the results available to the community.

Section 7 notes that green waste will be separated and treated to create a mulch-type product. What happens to the mulch? Will it also be treated in the thermal treatment unit?

Composite samples of the mulch will be analyzed. Depending on the characteristics, the mulch will either be added to the soil to restore organic content, or be treated by the ITD unit.

Section 9.4 states that there will be a permanent stockpile of treated soil. Where will this be located? Whose responsibility will the soil become? Why should the stockpile remain permanently? Aren't there abundant uses for clean soil?

This section also mentions a Construction Work Plan. When will this become available for public comment?

Soil will no longer be stockpiled, but will be spread around the site after treatment at a location to be determined by USACE.

Any pertinent plans drafted by ECC will be made available to the public at a future date.