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NAS KEY WEST
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LETTER TRANSMITTING REGULATORY REVIEW COMMENTS ON SUBSURFACE
HYDROCARBON INVESTIGATION AT TRUMBO POINT ANNEX NAS KEY WEST
8/16/1985
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

987-276
August 16, 1985

*State Comments on Fuel Farm Investigation
and MACIP IAS.*

Commanding Officer
Department of the Navy
Naval Air Station
Key West, Florida 33040

Dear Sir:

I have enclosed the department's review comments for investigative studies at the Key West Naval Air Station. The memoranda include the concerns of both the South Florida District Office and our Technical Project Support Section in Tallahassee.

Since the Naval Assessment and Control of Installation Pollutants Program is designed to assure a comprehensive assessment and control of the migration of environmental contamination, inclusion of our comments should assist in this goal. If you have any further questions regarding this matter, please contact me at 904/~~488-0190~~.

487 2776

Sincerely,

Eric S. Nuzie

Eric Nuzie
Environmental Supervisor

Enclosure

cc: Wayne R. Mathis
Richard Stross
Gregory O'Connell

INTEROFFICE MEMORANDUM

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TO: Eric Nuzie
THROUGH: John Gentry *JG*
FROM: Jim Crane *JC*
DATE: August 12, 1985
SUBJECT: Subsurface Hydrocarbon Investigation, Trumbo Point Annex, NAS Key West, Florida - Review and Comments

I have reviewed the subject document and submit the following comments for your consideration. As a preliminary assessment intended to gather certain site specific hydrogeological data and to determine the presence or absence of free product, the assessment is adequate for these purposes. Geraghty & Miller also stated that another objective of the work was to determine the extent of any detected hydrocarbon plumes. This objective was not fully addressed and Geraghty & Miller has recommended "that an expanded field program consisting of additional soil borings and possibly monitor wells, be conducted to better define the horizontal extent of the free hydrocarbons near MW-4 and MW-7."

I agree with Geraghty & Miller's recommendations for additional work to better define the free product plume extent and thickness. Geraghty & Miller states that "hydrocarbon thickness measurements will be collected in the wells to determine the areal extent of the hydrocarbon plume and feasibility of recovering these hydrocarbons." We agree with this approach only with the understanding that feasibility be based on whether the product is physically recoverable, not based on economic or similar considerations.

The DER would not classify this aquifer as G-III since the classification is based on TDS concentrations. All of the TDS measurements taken thus far show TDS less than 10,000 mg/l. The DER study mentioned by Geraghty & Miller showed a thin G-II aquifer overlying the G-III aquifer. Since all of the G & M wells are shallow and their TDS values are well below 10,000 mg/l evidently the thin G-II aquifer also underlies the site. If the additional TDS analyses show this lens to be very thin, I would not recommend recovery and treatment of the dissolved constituent plume unless the concentrations could be shown to be harmful to the public health or the environment. In addition to the recovery of the free product, I recommend that a "worst case" area of the dissolved plume be sampled and analyzed by EPA Methods 624 and 625 or EPA 601-602 and 625 for the soluble constituents. Using these data, a risk assessment should be made



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to determine if these constituents would constitute a hazard to the public health, e.g. swimmers, or to the environment, e.g. marine fauna. Based on the assessment, it may be that cleanup of the dissolved plume may not be warranted.

It has come to my attention that some shallow wells used for RO (reverse osmosis) treatment of drinking water may be in the area of the site. The contractor should determine if this is the case; if RO wells may be impacted, the risk assessment would have to consider this information in its conclusions.

If you have any questions, let's talk.

JC/ke

cc: Richard Stross

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TO: Eric Nuzie

THROUGH: John Gentry *JG*

FROM: James Crane *JGC*

DATE: August 14, 1985

SUBJECT: Initial Assessment Study, NAS, Key West - Review and Comments

I have reviewed the subject document. This report presents the results of an Initial Assessment Study (IAS). According to the report, "the purpose of an IAS is to identify and assess sites posing a potential threat to human health or the environment due to contamination from past hazardous materials disposal operations." The report further states "Based on historical data, aerial photographs, field inspections, and personnel interviews, eight potentially contaminated sites were identified at NAS Key West. Each of the sites were evaluated with regard to contamination characteristics, migration pathways, and pollutant receptors." The study concluded that six of eight sites warrant further investigation through a confirmation study.

The report states that the investigators were not able to obtain detailed information on waste generation and disposal practices at the base prior to the last 5 to 10 years since it was not possible to locate and interview most of the personnel stationed at NAS prior to this time. Therefore the investigators made assumptions as to the identification, quantities and disposal locations of the hazardous wastes generated prior to the late 1970's. The words "probably" or "likely" were often used to qualify statements, as well they should, since the details are missing or spotty at least.

I have some concern, then, about the conclusion that two of the landfill sites, Site 6, Dredgers Key Refuse Disposal Area and Site 7, North Fleming Key Landfill require no confirmation study. The report acknowledges that both sites have migration pathways and pollutant receptors; the assumption that the contaminant characteristics can be termed non-hazardous is not supported by any detailed information other than the material disposed of at these two sites was "general refuse."

Site 6 was used from the early 1940's until 1952 as an open disposal and burning ground for wastes generated at the Naval Station. Annually 1000 to 2000 tons of waste were disposed of at this site. The only information the report provides about the nature of the waste is that it consisted of bulky refuse items. 1000 to 2000 tons a year?

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Site 7 was used from 1952 to 1962 as a landfill for Naval Station wastes. It received 4000 to 5000 tons annually. The report characterized the wastes as general refuse. DDT, Malathion and diesel oil were also sprayed on the site for pest control.

The report concludes that the wastes at both sites were of a non-hazardous nature. From the information submitted in this report, I cannot draw such a conclusion. Even if the waste were non-hazardous in a semantic sense, landfills composed of solely domestic wastes produce leachate and are sources of contamination to the environment. I believe these sites warrant confirmation studies to determine if the landfills are leaching any constituents that may be harming the marine environment or reaching pollutant receptors. Lack of information should call for confirmation, not speculation.

I have reviewed the confirmation study recommendations for the six sites chosen. Considering the vague and un-detailed nature of the information the investigators appear to have for most of the sites, I do not understand the choice of testing parameters. For example, Site 1, Truman Annex Refuse Disposal Area, received combustibles, waste paints, paint thinners, solvents, waste oils, and hydraulic fluids. Yet the testing parameters recommended are very specific: cadmium, chromium, lead, zinc, toluene, 1,1,1-trichloroethane, xylene, pH, oil and grease. Site 4, Boca Chica Open Disposal Area, and Site 8, South Fleming Key Landfill, have similar very restricted testing parameters.

I strongly recommend that the wells at these landfill disposal sites, Site 1, Site 4, Site 8 be analyzed for the EPA Priority Pollutants, at least initially. Later sampling can be tailored to those constituents identified by the initial sampling. The nature of the wastes disposed of at these sites is not known with any certainty; thus, a broad screening analysis is warranted rather than an analysis of a very limited set of metals and volatile organics. Most certainly, PCB's should also be analyzed for at any site where waste oils may have been dumped.

I also strongly recommend that sites 6 and 7 be included in the confirmation stage and that the initial sampling parameters also be the EPA Priority Pollutants.

If more detailed information is known about these sites that could change my recommendations I would like to see it. This report contains some information like the history of the site to 500 B.C. which is rather irrelevant while it does not contain enough information on the wastes disposed of in the landfills which is highly relevant. It mentions also that waste fuels, solvents, waste paints & thinner were disposed of at Fire Fighting Training Areas. These areas should be identified, investigated, and sampled since these areas are usually recipients of waste fuels, waste oil and solvents which are dumped into open pits and ignited.

JC/ke

cc: Richard Stross