

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II

Caroline

DATE: August 22, 1988

SUBJECT: Request for a Twelve Month Exemption for the TUTU Well Site,
Saint Thomas, US Virgin Islands - ACTION MEMORANDUM

FROM: Carlos E. O'Neill *Bruce Spagnoli (for)*
On Scene Coordinator, CFO

TO: William Muszynski
Acting Regional Administrator

RU: *P. Salibi* Stephen D. Luftig, Director
Emergency and Remedial Response Division

I. ISSUE

Continued response actions which exceed a twelve-month time period cannot be undertaken unless an exemption from Section 104(c)(1) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986, is granted. Removal activities were initiated at the TUTU Well Site in Saint Thomas, U.S. Virgin Islands on September 1, 1987, and the twelve month time limitation for removal actions under CERCLA/SARA will expire on the same day in 1988. Circumstances, discussed on the following pages, have arisen which will prevent the removal action from being completed within the authorized time period. These same circumstances prevent an accurate estimation of the amount of time required to complete this removal action. As a result, an exemption from the twelve month time limit is hereby requested to continue to provide an alternate supply of potable water to the affected residents.

II. BACKGROUND

A. Incident/Response History

On July 15, 1987, Mr. Alan Smith, Commissioner of the Department of Planning and Natural Resources (DPNR), U.S. Virgin Islands, verbally requested from the U.S. Environmental Protection Agency (EPA) to provide analytical support in the sampling of one well

which was reported to exhibit a strong unpleasant odor. This well was a major source of commercially provided potable water for the eastern portion of Saint Thomas. The well is located on the eastern part of the island in the Tutu Section of Anna's Retreat. This verbal request was followed by an additional request for EPA to assume the role of Lead Agency after sampling results indicated that several commercial wells were found to be contaminated with hazardous substances. This verbal request was followed by a formal request in writing from DPNR on August 10, 1987.

EPA's preliminary investigation commenced on July 21, 1987, with a field reconnaissance and sampling of this one well and six additional wells identified in the immediate area. Several of these wells were also major water suppliers of public drinking water for the eastern part of the island.

Laboratory results from this survey indicated that the initial well was highly contaminated with gasoline and chlorinated organics, and the additional six wells contained elevated levels of chlorinated volatile organic compounds. Based on these results, DPNR declared that an imminent health threat existed, which could affect approximately 20,000 people living in St. Thomas.

In addition, an indefinite number of tourists vacationing in St. Thomas were at risk, since these commercial wells supplied water to major hotels and restaurants. DPNR issued orders to close these seven commercial wells in order to protect public health.

Subsequent to this action, EPA expanded their sampling plan due to the threat of greater contamination to drinking water wells in the area. EPA along with DPNR, identified other wells within the Tutu Water/Turpentine Run Aquifer which may have been impacted by the hazardous substances identified to be present in the groundwater. A second round of groundwater well sampling took place on August 10 and 11, 1987, which included a total of twenty-four (24) wells identified in the Tutu Section of Anna's Retreat. All twenty-four wells were sampled and analyzed for volatile organic compounds. Following these results, DPNR closed five private wells which serviced two three-family homes and one apartment building housing of twelve studio units.

A third round of groundwater well sampling took place on October 5 and 6, 1987, which included twenty-four (24) wells previously identified in the Turpentine Run Aquifer. All twenty-four wells were sampled and analyzed for full Hazardous Substance List (HSL) compounds. From these results, EPA once again confirmed the gross contamination of the groundwater wells with volatile organic compounds (VOC). Major contaminants in groundwater are tetrachloroethylene (PCE), trans 1-2 dichloroethylene (DCE) and benzene. The EPA's Removal Action Level (RAL) of 66 ppb for PCE was exceeded in seven (7) wells, the RAL of 175 ppb for DCE was exceeded in three (3) wells, and the RAL of 120 ppb for benzene was exceeded in one (1) well. There was one (1) additional well found below the EPA Removal Action Level, but above the U.S. Virgin Island's interim maximum permissible concentration levels set on September 1, 1987, by DPNR for volatile organics in drinking water in the Turpentine Run Aquifer (50 ppb for a single compound or 100 ppb for total volatile organic compounds). Five of the seven previously mentioned wells were residential wells.

EPA and DPNR commenced an investigation of the Tutu Water/Turpentine Run Aquifer by issuing Enforcement Orders to PRP's to define Potential Responsible Parties and determine the extent of contamination. EPA initiated a monthly/quarterly well monitoring program. DPNR issued a total of ten (10) orders to well owners to close sixteen (16) wells and issued two (2) advisory letters to owners not to use well water for drinking, bathing and washing.

EPA initiated a removal action on September 1, 1987. The action involved cleaning the homeowner's cisterns that had been contaminated by hazardous substances from the groundwater, modifying the existing home plumbing to terminate well connections, and delivering clean water to 3 well owners via tank trucks on a regular basis, and establishing a surveillance program for all wells in the area by a monthly/quarterly groundwater monitoring program. This Phase I, short-term removal action has mitigated the threat to public health by providing a temporary alternate source of water for affected consumers.

This site is not on the National Priorities List (NPL), nor is it currently proposed.

B. Site Conditions

The long term solution to this problem appears to be the extension of a public water main to the affected residences. Implementation of this plan has been delayed due to the budgetary constraints facing the Removal Program. As a result, trucking water deliveries are continuing until the funds necessary to extend the water main are obtained. Awaiting this funding has prevented this site from being completed within the twelve month statutory limit.

III. EXEMPTION FROM STATUTORY LIMITS

Section 104(c)(1) of CERCLA limits Federal removal actions to twelve months in duration unless certain criteria are met. These criteria, along with a discussion of how this site conforms to them, are discussed in the following paragraphs.

A. There is an Immediate Risk to Public Health, Welfare or the Environment

This is a case of actual well water contamination in excess of the EPA's 66 ppb removal action levels (RAL) for PCE, 175 ppb RAL for DCE, 120 ppb RAL for benzene and 48 ppb RAL for methylene chloride affecting two multi-family dwellings and an apartment complex housing twelve studio units. In addition to the exposure via consumption of water, or eating food prepared with this water, showering with water contaminated with volatile organics contaminate the air. This causes an elevation in household air contaminant concentrations and exposes residents through inhalation and adsorption through the skin. Contaminated water supplies, therefore, pose a serious threat not only through drinking and cooking, but also through showering, bathing, and dishwashing. A complete history of sample results taken to date has been included in Attachment "A". Since our initiation of this removal action, the concentrations of contaminants has not diminished at the residential wells. For example: Smith, Steele and Harvey wells have consistently shown high levels of PCE above the EPA's Removal Action Levels (RAL).

B. Continued Response Actions are Immediately Required to Prevent, Limit or Mitigate an Emergency

The contamination existing at this site is an emergency in that residential potable water supplies are contaminated with hazardous materials. Provision of trucking water by EPA to

the residents has reduced the risk of exposure by ingestion, and contact through bathing and showering. If this twelve month exemption request is not approved, trucking water deliveries will have to be terminated. This would leave residents with only their own contaminated wells as a potable source of water and would result in a direct exposure problem.

C. Assistance Will Not Otherwise be Provided on a Timely Basis

No other level of government has agreed to take any action on a timely basis which could provide an adequate solution to this problem. EPA enforcement has investigated this area, and some Responsible Parties have been identified. However, at this time, a PRP removal action appears unlikely.

IV. RECOMMENDATION

Conditions at this site continues to meet the criteria for a removal action under CERCLA 104(c)(1). Therefore, I recommend the approval of an exemption from the twelve month limit and allow the continuation of removal activities at the TUTU Well Site in Saint Thomas, U.S. Virgin Island.

Your authority to approve this time exemption is pursuant to Administrator's September 21, 1987 Memorandum Delegation 14-3.

APPROVED J. Marshall for WJW DATE 9/14/88
DISAPPROVED _____ DATE _____

cc: (after approval is obtained)

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