



DEPARTMENT OF THE NAVY  
NAVAL ORDNANCE STATION  
INDIAN HEAD, MARYLAND 20640-5000

N00174.AR.000030  
NSWC INDIAN HEAD  
5090.3a

IN REPLY REFER TO

5090  
Ser SCE2/22

MAR 18 1985

Mr. Ronald Nelson, Director  
Waste Management Administration  
Department of Health and Mental Hygiene  
201 West Preston Street  
Baltimore, Maryland 21201

Dear Mr. Nelson:

We have received Mr. John Koontz's letter of 31 January 1985 concerning the mercury spill cleanup. Following the criteria stipulated on that letter, we did an extensive lateral excavation at the previously-broken pavement and the unpaved portions of the perimeter of the spill site. No further vertical excavation was done so as to preserve the surficial aquifer. More than 30 additional 55-gallon drums of soil were removed. Immediately after each excavation, 6 soil samples were collected, and the whole excavated area was covered with plywood and polyethylene sheets to keep away the elements as shown by enclosure (1). The analytical results are listed in enclosure (2).

The submitted data indicates that we have cleaned up the spill site as close as possible to the background level. We are satisfied with the results and would like to conclude this spill cleanup by following the backfilling plan outlined in enclosure (3).

We are asking your permission to backfill the excavated area so that our sewage centralization construction can proceed.

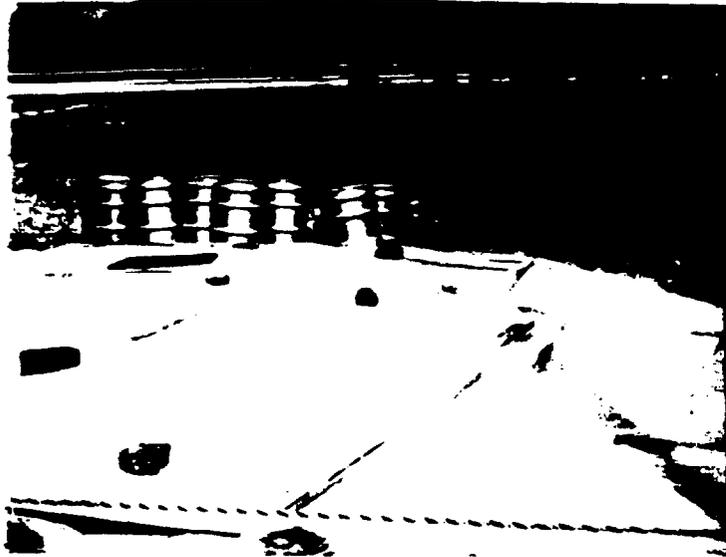
If you have questions, please contact Mr. Thomas Woo of this Command at (301)743-4316.

Sincerely,

HUGO R. LOPEZ  
Head, Station Control and Security Office  
By direction of the Commanding Officer

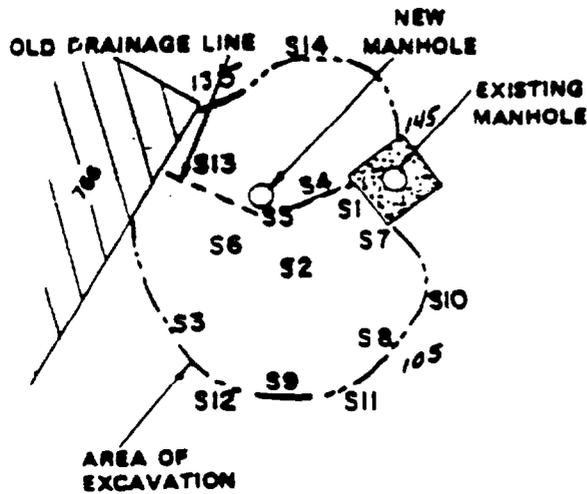
Encl:

- (1) Picture of the excavated area
- (2) Mercury spill site & excavation area
- (3) Plan for refilling the excavated area



This picture shows the excavated area covered with plywood and polyethylene sheets.

# MERCURY SPILL SITE & EXCAVATION AREA



TOTAL MERCURY CONCENTRATIONS mg/kg				EXTRACTION PROCEDURE (EPI) TOXICITY mg/l		
SITE	12-10-84	1-8-85	1-15-85	SITE	1-8-85	1-15-85
S1	5.25	14.00	11.80	1	0.10100	0.01040
S2	1.07	2.80		2	0.00078	
S3	1.82	1.50		3	0.00032	
S4	1.30	6.80	5.70	4	0.00020	0.01810
S5	5.80	6.30	6.20	5	0.00032	0.00031
S6	18.00	1.40		6	0.00020	
S7	0.21	0.23		7	0.00400	
S8	0.10	0.18		8	0.00020	
S9	0.10	0.18		9	0.00020	
S10	8.20	2.90		10	0.00020	
S11	82.20	0.48		11	0.00020	
S12	2480.00	0.98		12	0.00020	
S13	0.41	17.00	0.43	13	0.00020	0.00020
S14	8.80	18.00	15.90	14	0.07000	0.00820
AVERAGE 187.08 5.03 7.97				0.01272 0.00884		
BACKGROUND 0.1				MAXIMUM ALLOWABLE CONCENTRATION: 0.2 mg/l		

<u>SITE NO.</u>	<u>2-22-85 CONCENTRATIONS (mg/kg)</u>	<u>2-28-85 CONCENTRATIONS (mg/kg)</u>	<u>3-5-85 CONCENTRATIONS (mg/kg)</u>
10	178.00	5.80	< 0.075
105	0.19	28.20	< 0.075
11	0.55	0.12	< 0.075
135	21.40	21.00	< 0.075
14	9.30	0.45	< 0.075
145	12.70	0.20	3.1

## Plan for Refilling the Excavated Area

As soon as the Station receives the State permission we will implement the following plan to ecologically secure the excavated area:

- a. Remove the polyethylene sheet and plywood cover that is being used to keep out the elements.
- b. Liberally coat all the excavated area with "HGX", a sulfur-based powder, to form a barrier to immobilize any residual mercury.
- c. Fill the excavated area with the good clean dirt excavated from our sewage treatment plant expansion area, approximately 1.5 miles away from the mercury spill site (Bldg. 766).
- d. Compact the filled dirt for paving.
- e. Pave the compacted "excavated" area with 7-inch-thick bituminous concrete (asphalt) for vehicular access to the building and parking for laboratory personnel.