

16-000271
05920.2

OFFICE MEMORANDUM

TO H. E. Ballance

DATE December 16, 1976

FROM J. F. Baytos

SUBJECT ANALYSIS OF SOIL SAMPLES FOR RESIDUAL EXPLOSIVES FROM
DRAINAGE DITCHES AT SUMP EFFLUENT OUTLETS

SYMBOL WX-3

MS : 938

Reference: Memorandum to H. E. Ballance from J. F. Baytos, dated December 30, 1975,
same subject (15-16-272)

The soil samples taken from the drainage ditches at the sump effluent outlets of Group WX-3 operating buildings by the Sump Inspection Subcommittee during the inspection of November 19, 1976, were analyzed for residual explosives content. The results are presented in the attached table.

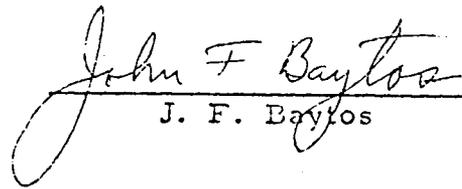
The culvert and ponds back of Building TA-16-260 still show a consistent amount of explosives.

The culvert at Building TA-16-307 (the teardown building) shows a higher explosive content than reported previously. This probably indicates increased activity in the building during the past year. Since the soil samples are not necessarily taken at the same places, there would be more variation in the analyses from set to set.

JFB/rep

Attachment: As cited above

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WX-3 Reading File
File ←



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TABLE

ANALYSES OF SOIL SAMPLES FOR RESIDUAL EXPLOSIVES
FROM SUMP EFFLUENT OUTLET DRAINAGE DITCHES AT GROUP WX-3 OPERATING BUILDINGS

Building & location of sample	Acetone ^a Solubles (wt%)	CCl ₄ ^b Insolubles (wt%)	CCl ₄ ^c Solubles (wt%)	HMX/ ^d RDX (wt%)	TNT ^d (wt%)	Total Explosives (wt%)
TA-16-307, at outfall	14.1	11.0	2.1	11.2	1.8	13.0
TA-16-342, inside outfall pipe	1.0	.1	.0	.0	.1	.1
TA-16-380, 2 m from outfall	.1	.1	.0	.0	.0	.0
TA-16-400, 3 m from outfall	.2	.1	.1	.0	.0	.0
TA-16-260, 3 m from outfall	.4	.3	.1	.2	.0	.2
TA-16-260, 15 m from outfall	3.6	3.0	.5	3.0	.1	3.1
TA-16-260, 20 m from outfall	28.8	26.7	1.6	26.7	.3	27.0
TA-16-260, 80 m from outfall	18.5	17.3	1.1	17.3	.3	17.6
TA-16-460, control	.1	.0	.0	.0	.0	.0

12.0
27.0

^aThe filtrate comes from the acetone Soxhlet extract on a dried, crushed, 14-mesh sieved, rolled, and quartered sample. This filtrate includes explosives, decomposition products, plastic, lubrication oils, and other natural acetone soluble materials.

^bThe residue from the carbon tetrachloride wash includes the RDX and HMX fractions and other decomposition products from the acetone extract.

^cThe filtrate from the carbon tetrachloride wash includes the TNT fraction and other soluble products.

^dThese values were determined on the PE350 ultraviolet spectrophotometer.