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NAS CECIL FIELD, FL
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TECHNICAL MEMORANDUM REGARDING DISPOSAL OPTIONS FOR EXCESS WATER AT OPERABLE UNIT 2 (OU 2) SITE 5 BIOCELL NAS CECIL FIELD FL

1/17/1996

ABB ENVIRONMENTAL SERVICES INC

8520-3116

TECHNICAL MEMORANDUM

Date: January 17, 1996

To: Mark Davidson - SOUTHDIV for distribution to BCT
Dave Kryzecki - NAS Cecil Field
Duke Inman - ROICC
V. Hermann Bauer, BEI

NAS Cecil Field Administrative Record
Document Index Number
32215-002
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From: Robert C. Lunardini, Jr., P.E., ABB-ES
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Timothy M. Kelly, ABB-ES

Subject: Disposal Options for Excess Water at the Site 5 Biocell.

INTRODUCTION

An environmentally sound method of disposing of excess water from the Site 5 biocell is required. The biocell was designed to handle a 25 year, 24 hour rain event. Depending on weather conditions, excess water may have to be periodically removed from the cell.

The cell is 150 feet wide by 400 feet long. Stormwater infiltrates through a 2 - 3.5 foot sand drainage layer into a sump. Water is then pumped to a 50,000 gallon holding tank on the south end of the site. The water in this tank is designed to be recycled back into the windrows to maintain the optimum moisture content for biological activity.

Currently, the biocell is holding approximately 0.5 million gallons of water that is stored in the sand drainage layer. On January 3, 1996, the water was sampled and analyzed for USEPA Methods 8010A/8020A/418.1/8080/8141/8150/8270A, total metals, dissolved oxygen and total suspended solids (See analytical results attached). The only detected concentrations of contaminants above the reporting limits are toluene at 5 micrograms per liter and 3 & 4 methylphenol at 13 micrograms per liter.

DISPOSAL OPTIONS

The following is a listing of possible disposal options that could potentially be used for the excess water that collects in the sump and/or the storage tank.

DISPOSAL OPTION 1 -DISCHARGE STORMWATER OVER BERM

Description:

This stormwater disposal option consist of pumping the water from the either the sump or the 50,000 gallon storage tank to the east side of the biological treatment cell. Currently this is a heavily wooded area with no present land use. The major waterways near the site is a drainage ditch that forms the southern border of Site 5 (approximately 1,000 feet south of the biological treatment cell), and Lake Fretwell located approximately 1500 feet east of the cell.

Regulatory Requirements:

This option has been discussed with FDEP and USEPA (see telecons attached) and it is the opinion of the regulatory agencies that since this will be an intermittent discharge to a non-surface water body that a NPDES permit would not be needed for this option.

Monitoring Requirements:

It is recommenced that the water be analyzed for EPA Methods 8010/8020/418.1 and 8080 before discharge.

Cost:

Cost associated with this option would be analytical (approximately $2,000 per event) and labor.

Schedule:

Since the labor and materials to perform this option are already available onsite, this option can be implemented immediately.

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free to top 7500

DISPOSAL OPTION 2 -TRANSPORT WATER TO WWTP FOR TREATMENT

Description:

This disposal option would consist of installing a pipeline to transport excess water generated by the biological cell or trucking the water from the cell directly to the WWTP when needed.

Regulatory Requirements:

The WWTPs NPDES permit requirements for discharge to Rowell Creek would have to be met. Also, the WWTP could impose sampling requirements prior to the acceptance of the water at their facility

Monitoring Requirements:

The Navy has already conducted extensive sampling on the water, and believes that the WWTP would impose only minimal additional sampling prior to acceptance at their facility. Although, at later date the regulatory agencies and/or the WWTP may request additional analytical information for any future discharge to the plant.

Cost:

Pipe to WWTP (intercepting the existing pipeline): $6,000 for 2,500 feet of HDPE Pipe.

Truck to WWTP $23,000 per year (1.5 million gallons annually)

Schedule:

Two weeks are required to obtain the materials and labor to construct a pipeline to Site 3 or to secure a contractor to truck the water to the WWTP.

DISPOSAL OPTION 3 -TRANSPORT WATER TO OFFSITE INDUSTRIAL WASTEWATER TREATMENT PLANT

Description:

This option would include pumping the water from the storage tank to water trucks and then hauling the water to an industrial wastewater facility. The items associated with this option include:

1. Transportation from the site to the facility.

2. Testing for any parameter that the industrial wastewater facility might require prior to acceptance at their facility.

3. Actual disposal at their facility.

Regulatory Requirements:

If this option is conducted, all applicable FDOT regulations would need to be followed. If the industrial wastewater facility accepts the water, all monitoring requirements of the plant's NPDES permit would need to be met.

Monitoring Requirements:

The industrial wastewater facility may impose additional sampling of the water prior to making a determination of whether they will accept the water.

Cost:

On an annual basis, the Navy estimates that it will need to discharge stormwater three times a year with a total annual volume of 1.5 million gallons. The cost is estimated to be approximately $0.07/gallon or $105,000 per annum.

Schedule:

Two weeks are required to secure a industrial wastewater facility and perform any sampling that the facility may require prior to accepting the water.

DISPOSAL OPTION 4 - COVERING THE CONTAMINATED SOIL IN THE BIOLOGICAL TREATMENT CELL

Description:

This option would include purchasing a tightly woven, HDPE, tear resistant, geotextile to cover the contaminated soil treatment area in the biological cell.

Regulatory Requirements:

None

Monitoring Requirements:

None

Cost:

A geotextile fabric material measuring approximately 450 x 250 feet would cos approximately $17,000 plus $500.00 for shipping.

Schedule:

Two weeks are required to secure a Canvex CB12WB geotextile from Environmental Design and Construction.

DISPOSAL OPTION RECOMMENDATION

Implement Disposal Option 1.

The analytical results indicate the water collected in the sump at Site 5 is safe 1 discharge. The concentrations of the contamination are well below regulatory lir (See Table 1) and the USEPA has stated that the base will not need to obtain a NPDES permit for the water.

Table 1
Stormwater Criteria

Site 5
NAS Cecil Field, Jacksonville, Florida

Potential Receiving Water	Groundwater			Surface Water	
Parameter	Federal MCL	Risk Based (HI = 1.0)	Florida Guidance Concentration	Florida Surface Water Standard [1]	Federal AWQC [2]
Toluene µg/l	1,000	NA	1,000	NA	17,500
4 Methylphenol µg/l	NA	180	35	NA	NA

Notes:

[1] Florida Surface Water Standard taken from Chapter 62 (Surface Water Quality Standards) of the Florida Administrative Code (FAC 62-302), January 23, 1995.

[2] Federal Ambient Water Quality Criteria taken from Office of Guidance (aquatic life, freshwater, acute effects, 40 CFR, Part 131).

Notes: AWQC = Ambient Water Quality Criteria.
FAC = Florida Administrative Code.
GW = groundwater.
ND = non-detect.
µg/l = micrograms per liter.
MCL = maximum contaminant level.
NA = not available.
NAS = naval air station.
SW = surface water.
USEPA = U.S. Environmental Protection Agency.
FDEP = Florida Department of Environmental Protection

Environmental Conservation Laboratories
4810 Executive Park Court, Suite 211
Jacksonville, Florida 32216-6069
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ENCO Laboratories
DHRS Certification No. E82277, 82417

CLIENT : Bechtel Environmental, Inc.
ADDRESS: P.O. Box 171
Qtrs E Ave G, NAS Cecil
Jacksonville, FL 32215

REPORT # : JR1429
DATE SUBMITTED: January 3, 1996
DATE REPORTED : January 5, 1996

ATTENTION: Donald Xiques

SAMPLE IDENTIFICATION

Sample submitted and
identified by client as:

Site 5 Sump

01/03/96

#1 - @ 13:30

PROJECT MANAGER Scott D. Martin

Scott D. Martin

ENCO LABORATORIES
REPORT # : JR1429
DATE REPORTED: January 5, 1996

RESULTS OF ANALYSIS

EPA METHOD 8010A - VOLATILE HALOCARBONS	SUMP	LAB BLANK	Units
Dichlorodifluoromethane	1 U	1 U	µg/L
Chloromethane	2 U	2 U	µg/L
Vinyl Chloride	1 U	1 U	µg/L
Bromomethane	1 U	1 U	µg/L
Chloroethane	2 U	2 U	µg/L
Trichlorofluoromethane	2 U	2 U	µg/L
1,1-Dichloroethene	1 U	1 U	µg/L
Methylene Chloride	2 U	2 U	µg/L
t-1,2-Dichloroethene	1 U	1 U	µg/L
1,1-Dichloroethane	1 U	1 U	µg/L
Chloroform	1 U	1 U	µg/L
1,1,1-Trichloroethane	1 U	1 U	µg/L
Carbon Tetrachloride	1 U	1 U	µg/L
1,2-Dichloroethane	1 U	1 U	µg/L
Trichloroethene	1 U	1 U	µg/L
1,2-Dichloropropane	1 U	1 U	µg/L
Bromodichloromethane	1 U	1 U	µg/L
c-1,3-Dichloropropene	1 U	1 U	µg/L
t-1,3-Dichloropropene	1 U	1 U	µg/L
1,1,2-Trichloroethane	1 U	1 U	µg/L
Tetrachloroethene	1 U	1 U	µg/L
Dibromochloromethane	1 U	1 U	µg/L
Chlorobenzene	1 U	1 U	µg/L
Bromoform	1 U	1 U	µg/L
1,1,2,2-Tetrachloroethane	1 U	1 U	µg/L
1,3-Dichlorobenzene	1 U	1 U	µg/L
1,4-Dichlorobenzene	1 U	1 U	µg/L
1,2-Dichlorobenzene	1 U	1 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene (surr)	60	64	25-150
Date Analyzed	01/03/96	01/02/96	

U = Compound was analyzed for but not detected

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RESULTS OF ANALYSIS

EPA METHOD 8020A - VOLATILE AROMATICS	SUMP*	LAB BLANK	Units
Methyl tert-butyl ether	2 U	2 U	µg/L
Benzene	1 U	1 U	µg/L
Toluene	5	1 U	µg/L
Chlorobenzene	1 U	1 U	µg/L
Ethylbenzene	1 U	1 U	µg/L
m-Xylene & p-Xylene	1 U	1 U	µg/L
o-Xylene	1 U	1 U	µg/L
1,3-Dichlorobenzene	1 U	1 U	µg/L
1,4-Dichlorobenzene	1 U	1 U	µg/L
1,2-Dichlorobenzene	1 U	1 U	µg/L
Total Xylenes	2 U	2 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Bromofluorobenzene (surr)	96	104	68-124
Date Analyzed	01/03/96	01/02/96	

EPA METHOD 418.1 - TOTAL PETR. HYDROCARBONS	SUMP	LAB BLANK	Units
Total Petr. Hydrocarbons	1 U	1 U	mg/L
Date Analyzed	01/04/96	01/04/96	

* = Sample results confirmed by secondary analysis
U = Compound was analyzed for but not detected

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RESULTS OF ANALYSIS

EPA METHOD 8080 - PESTICIDE/PCB'S	SVMP	LAB BLANK	Units
alpha-BHC	0.05 U	0.05 U	µg/L
beta-BHC	0.05 U	0.05 U	µg/L
gamma-BHC (Lindane)	0.05 U	0.05 U	µg/L
delta-BHC	0.05 U	0.05 U	µg/L
Heptachlor	0.05 U	0.05 U	µg/L
Aldrin	0.05 U	0.05 U	µg/L
Heptachlor epoxide	0.05 U	0.05 U	µg/L
Endosulfan I	0.05 U	0.05 U	µg/L
Dieldrin	0.05 U	0.05 U	µg/L
5,4'-DDE	0.05 U	0.05 U	µg/L
Endrin	0.05 U	0.05 U	µg/L
Endosulfan II	0.05 U	0.05 U	µg/L
5,4'-DDD	0.05 U	0.05 U	µg/L
Endrin aldehyde	0.05 U	0.05 U	µg/L
Endosulfan sulfate	0.05 U	0.05 U	µg/L
5,4'-DDT	0.05 U	0.05 U	µg/L
Methoxychlor	0.05 U	0.05 U	µg/L
Chlordane	1 U	1 U	µg/L
Toxaphene	2 U	2 U	µg/L
PCB-1016/1242	1 U	1 U	µg/L
PCB-1221	1 U	1 U	µg/L
PCB-1232	1 U	1 U	µg/L
PCB-1248	1 U	1 U	µg/L
PCB-1254	1 U	1 U	µg/L
PCB-1260	1 U	1 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
DBC (surr)	127	125	50-135
2,5,5,6-TCMX (Surr)	113	*161	52-122
Date Extracted	01/03/96	01/03/96	
Date Analyzed	01/04/96	01/02/96	

* = Surrogate recovery failed to meet established limits
U = Compound was analyzed for but not detected

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RESULTS OF ANALYSIS

EPA METHOD 8141 - ORGANOPHOSPHORUS PESTICIDES	SUMP	LAB BLANK	Units
Azinphos methyl	2 U	2 U	µg/L
Bolstar (Sulprofos)	2 U	2 U	µg/L
Chlorpyrifos	2 U	2 U	µg/L
Coumaphos	2 U	2 U	µg/L
Demeton	2 U	2 U	µg/L
Diazinon	2 U	2 U	µg/L
Dichlorvos	2 U	2 U	µg/L
Dimethoate	2 U	2 U	µg/L
Disulfoton	2 U	2 U	µg/L
EPN	2 U	2 U	µg/L
Ethion	2 U	2 U	µg/L
Ethoprop	2 U	2 U	µg/L
Fensulfothion	2 U	2 U	µg/L
Fenthion	2 U	2 U	µg/L
Malathion	2 U	2 U	µg/L
Merphos	2 U	2 U	µg/L
Mevinphos	2 U	2 U	µg/L
Monocrotophos	2 U	2 U	µg/L
Naled	2 U	2 U	µg/L
Parathion ethyl	2 U	2 U	µg/L
Paration methyl	2 U	2 U	µg/L
Phorate	2 U	2 U	µg/L
Ronnel	2 U	2 U	µg/L
Sulfotep	2 U	2 U	µg/L
TEPP	2 U	2 U	µg/L
Stirophos (Tetrachlorovinphos)	2 U	2 U	µg/L
Tokuthion (Protothiofos)	2 U	2 U	µg/L
Trichloronate	2 U	2 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Dichlorofenthioa (surr)	80	67	39-125
Date Extracted	01/04/96	01/04/96	
Date Analyzed	01/05/96	01/05/96	

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RESULTS OF ANALYSIS

EPA METHOD 8150 - HERBICIDES	SUMP	LAB BLANK	Units
Dalapon	1 U	1 U	µg/L
Dicamba	1 U	1 U	µg/L
MCPP	10 U	10 U	µg/L
MCPA	10 U	10 U	µg/L
Dichloroprop	1 U	1 U	µg/L
2,4-D	1 U	1 U	µg/L
2,5,5-TP (Silvex)	1 U	1 U	µg/L
2,5,5-T	1 U	1 U	µg/L
2,4-DB	1 U	1 U	µg/L
Dinoseb	1 U	1 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
2,4-DCPA (Surr)	90	73	56-145
Date Extracted	01/04/96	01/04/96	
Date Analysed	01/04/96	01/04/96	

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RESULTS OF ANALYSIS

EPA METHOD 8270A - SEMIVOLATILE ORGANICS	SUMP	LAB BLANK	Units
Acenaphthene	10 U	10 U	µg/L
Acenaphthylene	10 U	10 U	µg/L
Anthracene	10 U	10 U	µg/L
p-(dimethylamino)azobenzene	10 U	10 U	µg/L
Benzidine	10 U	10 U	µg/L
Benzo(a)anthracene	10 U	10 U	µg/L
Benzo(b)fluoranthene	10 U	10 U	µg/L
Benzo(k)fluoranthene	10 U	10 U	µg/L
Benzo(g,h,i)perylene	10 U	10 U	µg/L
Benzo(a)pyrene	10 U	10 U	µg/L
Benzylbutyl phthalate	10 U	10 U	µg/L
Bis(2-chloroethoxy)methane	10 U	10 U	µg/L
Bis(2-chloroethyl)ether	10 U	10 U	µg/L
Bis(2-chloroisopropyl)ether	10 U	10 U	µg/L
Bis(2-ethylhexyl)phthalate	10 U	10 U	µg/L
4-Bromophenylphenyl ether	10 U	10 U	µg/L
2-Chloronaphthalene	10 U	10 U	µg/L
4-Chlorophenyl phenyl ether	10 U	10 U	µg/L
Chrysene	10 U	10 U	µg/L
Dibenzo(a,h)anthracene	10 U	10 U	µg/L
1,2-Dichlorobenzene	10 U	10 U	µg/L
1,3-Dichlorobenzene	10 U	10 U	µg/L
1,4-Dichlorobenzene	10 U	10 U	µg/L
3,3'-Dichlorobenzidine	20 U	20 U	µg/L
Diethyl phthalate	10 U	10 U	µg/L
Dimethyl phthalate	10 U	10 U	µg/L
Di-n-butyl phthalate	10 U	10 U	µg/L
Di-n-octyl phthalate	10 U	10 U	µg/L
2,4-Dinitrotoluene	10 U	10 U	µg/L
2,6-Dinitrotoluene	10 U	10 U	µg/L

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RESULTS OF ANALYSIS

EPA METHOD 8270A (cont.) -

SEMIVOLATILE ORGANICS	SUMP	LAB BLANK	Units
Fluoranthene	10 U	10 U	µg/L
Fluorene	10 U	10 U	µg/L
Hexachlorobenzene	10 U	10 U	µg/L
Hexachlorobutadiene	10 U	10 U	µg/L
Hexachlorocyclopentadiene	10 U	10 U	µg/L
Hexachloroethane	10 U	10 U	µg/L
Indeno(1,2,3-cd)pyrene	10 U	10 U	µg/L
Isophorone	10 U	10 U	µg/L
1-Methylnaphthalene	10 U	10 U	µg/L
2-Methylnaphthalene	10 U	10 U	µg/L
Naphthalene	10 U	10 U	µg/L
Nitrobenzene	10 U	10 U	µg/L
N-Nitrosodimethylamine	10 U	10 U	µg/L
N-Nitrosodi-n-propylamine	10 U	10 U	µg/L
N-Nitrosodiphenylamine	10 U	10 U	µg/L
Phenanthrene	10 U	10 U	µg/L
Pyrene	10 U	10 U	µg/L
1,2,4-Trichlorobenzene	10 U	10 U	µg/L
Benzyl Alcohol	10 U	10 U	µg/L
Benzoic Acid	10 U	10 U	µg/L
4-Chloroaniline	10 U	10 U	µg/L
2-Nitroaniline	10 U	10 U	µg/L
3-Nitroaniline	10 U	10 U	µg/L
4-Nitroaniline	10 U	10 U	µg/L
Dibenzofuran	10 U	10 U	µg/L

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RESULTS OF ANALYSIS

EPA METHOD 8270A (cont.) - SEMIVOLATILE ORGANICS	SUMP	LAB BLANK	Units
Pyridine	10 U	10 U	µg/L
4-Chloro-3-methylphenol	10 U	10 U	µg/L
2-Chlorophenol	10 U	10 U	µg/L
2,4-Dichlorophenol	10 U	10 U	µg/L
2,4-Dimethylphenol	10 U	10 U	µg/L
2,4-Dinitrophenol	50 U	50 U	µg/L
2-Methyl-5,6-dinitrophenol	30 U	30 U	µg/L
2-Nitrophenol	10 U	10 U	µg/L
4-Nitrophenol	10 U	10 U	µg/L
Pentachlorophenol	10 U	10 U	µg/L
Phenol	10 U	10 U	µg/L
2,5,6-Trichlorophenol	10 U	10 U	µg/L
2-Methylphenol	10 U	10 U	µg/L
3 & 4-Methylphenol	13	10 U	µg/L
2,5,5-Trichlorophenol	10 U	10 U	µg/L
Surrogate:	**% RECOV**	**% RECOV**	**LIMITS**
Nitrobenzene -D5 (surr)	88	92	30-106
2-Fluorobiphenyl (surr)	86	83	38-107
Terphenyl -D14 (surr)	102	98	29-131
Phenol -D5 (surr)	57	54	12-87
2-Fluorophenol (surr)	66	68	19-115
2,5,6-Tribromophenol (surr)	96	93	35-126
Date Extracted	01/04/96	01/04/96	
Date Analyzed	01/04/96	01/04/96	

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DATE REPORTED: January 5, 1996

RESULTS OF ANALYSIS

TOTAL METALS	METHOD	SUMP	LAB BLANK	Units
Arsenic	200.7	0.01 U	0.01 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Barium	200.7	0.1 U	0.1 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Cadmium	200.7	0.001 U	0.001 PQL	mg/L
Date Analyzed		01/03/96	01/03/96	
Chromium	200.7	0.01 U	0.01 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Lead	200.7	0.005 U	0.005 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Mercury	245.1	0.0002 U	0.0002 U	mg/L
Date Analyzed		01/04/96	01/04/96	
Selenium	200.7	0.01 U	0.01 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Silver	200.7	0.01 U	0.01 U	mg/L
Date Analyzed		01/03/96	01/03/96	
Hex. Chromium	SM3128	0.005 U	0.005 U	mg/L
Date Analyzed		01/04/96	01/04/96	

MISCELLANEOUS	METHOD	SUMP	LAB BLANK	Units
Dissolved Oxygen	360.1	1.8	1 U	mg/L
Date Analyzed		01/03/96	01/03/96	
TSS	160.2	8.5	1 U	mg/L
Date Analyzed		01/04/96	01/04/96	

PQL = Analyte detected; value is between the Method Detection Level (MDL) and the Practical Quantitation Level (PQL)
U = Compound was analyzed for but not detected

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QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 8010A				
Methylene Chloride	100/112/116	43-163	11	30
Chloroform	106/118/104	72-137	11	15
Carbon Tetrachloride	98/114/102	71-135	15	17
Trichloroethene	98/118/102	60-135	18	23
Tetrachloroethene	94/114/108	44-164	19	20
Chlorobenzene	103/112/105	51-144	8	19
EPA Method 8020A				
Benzene	94/106/100	78-124	12	18
Toluene	94/104/ 98	67-135	10	14
Ethylbenzene	94/106/100	63-140	12	14
m-Xylene & p-Xylene	92/102/ 97	59-135	10	10
EPA Method 8080				
gamma-BHC (Lindane)	*121/141/124	41-133	15	24
Heptachlor	118/136/115	15-164	16	25
Aldrin	110/130/105	27-150	17	24
Endrin	*121/145/133	46-138	18	26
5,4'-DDT	*121/141/136	46-138	15	26

Environmental Conservation Laboratories Comprehensive QA Plan #910190G

* = MSD failed to meet established criteria for accuracy
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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ENCO LABORATORIES
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DATE REPORTED: January 5, 1996

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 8141				
Dichlorvos	60/ 61/ 55	35-125	2	40
Dimethoate	90/ 97/ 89	35-125	7	40
Ethoprop	83/ 91/ 80	35-125	9	40
Ronnel	60/ 77/ 60	35-125	25	40
EPA Method 8150				
Dalapon	47/ 48/ 40	46-67	2	23
Dicamba	74/ 87/105	10-150	16	25
2,4-D	107/119/112	62-156	11	20
2,5,5-TP (Silvex)	60/ 66/109	50-79	10	30
2,4-DB	*161/150/ 85	48-116	7	35
EPA Method 8270A				
Phenol	69/ 61/ 53	3-118	12	26
1,2-Dichlorobenzene	116/ 96/ 83	37-138	19	34
Isophorone	124/104/ 96	56-144	**18	16
2,5,6-Trichlorophenol	134/113/110	64-152	17	22
Diethyl phthalate	113/ 91/ 97	2-175	22	44
2-Methyl-5,6-dinitrophenol	128/104/105	49-138	21	34
Pentachlorophenol	134/114/108	42-144	16	30
Fluoranthene	138/121/123	66-150	13	18
Pyrene	138/113/120	46-179	20	23

Environmental Conservation Laboratories Comprehensive QA Plan #910190G

* = Associated value failed to meet established criteria for accuracy
** = Associated value failed to meet established criteria for precision
< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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ENCO LABORATORIES
REPORT # : JR1429
DATE REPORTED: January 5, 1996

QUALITY CONTROL DATA

Parameter	% RECOVERY MS/MSD/LCS	ACCEPT LIMITS	% RPD MS/MSD	ACCEPT LIMITS
EPA Method 418.1				
Total Petr. Hydrocarbons	99/ 98/ 95	61-128	1	15
Total Metals				
Arsenic, 200.7	93/ 93/ 98	72-123	<1	11
Barium, 200.7	92/ 92/100	74-118	<1	12
Cadmium, 200.7	91/ 92/ 99	69-116	1	13
Chromium, 200.7	94/ 94/ 99	75-120	<1	10
Lead, 200.7	91/ 92/ 99	69-122	1	21
Mercury, 245.1	109/112/112	75-129	3	11
Selenium, 200.7	89/ 89/ 93	59-133	<1	9
Silver, 200.7	85/ 86/ 96	71-114	1	13
Hex. Chromium, SM3128	94/ 93/100	40-145	1	5

Environmental Conservation Laboratories Comprehensive QA Plan #910190G

< = Less Than
MS = Matrix Spike
MSD = Matrix Spike Duplicate
LCS = Laboratory Control Standard
RPD = Relative Percent Difference

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NAVY RAC CHAIN OF CUSTODY RECORD

Facility Name: NAS CECIL FIELD
Site Name: SITE 5 SWMU
Delivery Order No.:
Cooler/Crate No.:
Sampling Event: Jump

SER No.:
COC Number:
Lab: ENCO
Field Logbook No.: CF-SW-001
Logbook Pg. No.: PG 29

Sampled by: DONALD YIQUES (Print) [signature] (Sign) TRENT ROGERS (Print) [signature] (Sign)

Legend

SAMPLE TYPE

PSB	Preservative Blank	BLS	Blind Spike
FDP	Field Duplicate	BLB	Blind Blank
ENV	Environmental	PTS	Point Source
FCB	Field Blank	FRP	Field Replicate
GEO	Geotechnical Sample	RSB	Rinsate Blank
MSD	Matrix Spike Duplicate	SPL	Split
MSS	Matrix Spike	TRP	Trip Blank

MATRIX

AIR	Air	SBS	Subsurface Soil	PTW	Potable Water
FLO	Flora	SED	Sediment	SEP	Seeps
FAU	Fauna	SFS	Surface Soil	SOL	Solid
GWT	Groundwater	SFW	Surface Water	WWT	Waste Water
LCH	Leachate	SLG	Sludge	SLW	Solid Waste
OIL	Oil	SLW	Solid Waste	SS	Surface Water Storm Event
DIW	Deionized Water	OFW	Organic Free Water		
DFW	Demineralized Organic Free Water				

QC LEVELS

C	Sample results and QC reported
D	Sample results, QC and raw data reported
E	Sample results, blanks, and calibration reported
S	Screening level analysis; sample results and QC as reported

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Code
SITE 5 SW	CF221650 1	ENV	SFW	1/3/96 1330	N/A	HCL	N/A	8010/8021	24 Hr	C
	CF221650 2					I		I		
	CF221650 9					H_2SO_4		TPH		
	CF221650 10					I		I		
	CF221650 5					NONE		8270		
	CF221651 1					HNO_3				

RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR TRANSFER
[signature]	[signature]	1-3-96	1430	TRANSFER TO LAB

COMMENTS/INSTRUCTIONS

TR 1429

CONTAMINATION	YES	NO
Radiological		X
Chemical	X	

Shipper:

Ship to:

Airbill No.

Traffic Report No.

This package conforms to the conditions and limitations specified in 49 CFR 173.421 for excepted radioactive material, limited quantity, n.o.s. UN2910

COC Number _____

CHAIN OF CUSTODY RECORD (Continued)

Page 2 of 2

Station ID	BEI Sample ID	Sample Type	Matrix Code	Collection Date/Time	Container ID	Preservative	Pay Item	Parameter	Priority	QC Level
Site 5 Sump	CF2216503	ENV	SFW	1/3/95 1330		None		8080	24 hr	C
	CF2216507							8141		
	CF2216508							CBOD, Cl⁻		
	CF2216506							8150		
	CF2216504							D.O., T.S.S.		

JL1429

Q:\NAVY-RACT\COCFL.NUM

ABB
ASEA BROWN BOVERI

TELEPHONE MEMORANDUM

Project No: 852025 Date: 1/11/96 Time: 2:45 pm

Outside Party: Jim Batone, FDEP Stormwater/NPDES Section ☒ Made Call ☐ Received Call

ABB-ES Party: Timothy M. Kelly

Subject: Site 5 Stormwater Infiltrating Through Biological Cell.

SUMMARY OF CONVERSATION: Greg Brown (FDEP) suggested that Jim be contacted to discuss the issue of accumulated stormwater that has collected both in the sump and the 50,000 gallon storage tank at Site 5. Jim informed me that the state is not delegated to permit NPDES non-point discharges of stormwater at Federal Facilities. He suggested I call Larry Cole of EPA water protection section.

ACTION ITEMS: Call MSEPA's Larry Cole to resolve stormwater issue.

CC:
Bob Lanzarotti
Mark Davidson

ABB
ASEA BROWN BOVERI

TELEPHONE MEMORANDUM

Project No: 852025 Date: 1/11/96 Time: 3:00

Outside Party: Larry Cole, USEPA NPDES / Water Facilities Department ☒ Made Call ☐ Received Call

ABB-ES Party: Timothy M. Kelly

Subject: Site 5 Stormwater Infiltrating Through Biological Cell

SUMMARY OF CONVERSATION: I explained the situation to Larry, and he was unsure whether we needed a permit to discharge over the berm. He relayed the relevant information to Floyd Wellborne, in his department. He (Larry) suggested I call Floyd Wellborne to discuss further

ACTION ITEMS: Call Floyd Wellborne in the same office (USEPA)

CC:
Bob Guardini
Mark Davidson

ABB
ASEA BROWN BOVERI

TELEPHONE MEMORANDUM

Project No: 852025 Date: 1/11/96 Time: 3:00

Outside Party: Larry Cole, USEPA NPDES / Water Facilities Department ☒ Made Call ☐ Received Call

ABB-ES Party: Timothy M. Kelly

Subject: Site 5 Stormwater Infiltrating Through Biological Cell

SUMMARY OF CONVERSATION: I explained the situation to Larry, and he was unsure whether we needed a permit to discharge over the berm. He relayed the relevant information to Floyd Wellborne, on his department. He (Larry) suggested I call Floyd Wellborne to discuss further.

ACTION ITEMS: Call Floyd Wellborne in the same office (USEPA)

CC:
Bob Guardino
Mark Davidson

ABB
ASEA BROWN BOVERI

TELEPHONE MEMORANDUM

Project No: 852025 Date: 1/11/96 Time: 3:20

Outside Party: Floyd Wellborne, USEPA Department of Water Facilities ☒ Made Call ☐ Received Call

ABB-ES Party: Timothy M. Kelly

Subject: S.K.S Stormwater Infiltrating Through Reclaimed Cell

SUMMARY OF CONVERSATION: I relayed the pertinent information to Mr Wellborne and he stated that since the discharge is not a direct discharge to surface water, and that the discharge is intermittent (2 or 3 times a year) he would not need a permit to discharge over the berm. Additionally the water is not being collected at a central discharge location, and since this central discharge point is not permanent we would not need a permit.

ACTION ITEMS:

CC: Bob Lungardin
Mark Davidson