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NCBC GULFPORT
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MINUTES FROM TECHNICAL REVIEW COMMITTEE MEETING 10 SEPTEMBER 1992 NCBC
GULFPORT MS
11/2/1992
ABB ENVIRONMENTAL

39501 - GENERAL
13.03.00.0004



(470 + 470.2
have copies
5090/5

TO: All Attendees
FROM: Frank Cater, ABB-ES *FC*
SUBJECT: Meeting Minutes
DATE: November 2, 1992

Attached you will find the meeting minutes of September's meeting. If you have any questions feel free to call me at (615) 531-1922.

75

NOV - 6 1992

ABB Environmental Services Inc.

CTO 17 NCBC Gulfport, Mississippi
RI/FS

NCBC GULFPORT, Mississippi
TRC RI/FS MEETING MINUTES
10 SEPTEMBER 1992
1300 Hours

Attendees:

Capt. J. A. Lahman	CO, CBC	(601) 871-2201
W. A. Dos Santos	PWO	(601) 871-2241
LT J6 Steve Bafz	CBC Gulfport	(601) 871-2636
Gordon Crane	CBC Gulfport	(601) 871-2485
Nancy Brooks	CBC PAO	(601) 871-2392
Ken Barnes	SOUTHNAVFACENGCOM	(803) 743-0669
David Criswell	SOUTHNAVFACENGCOM	(803) 743-0612
Dan Owens	SOUTHNAVFACENGCOM	(803) 743-0331
Wayne R. Mathis	USEPA Reg. IV OPM-FAB-FFC	(404) 347-3776
Jerry Banks	MS DEQ - Jackson	(601) 961-5221
Phillip Weathersby	MS DEQ - Jackson	(601) 961-3502
Jim Hardage	MS DEQ - Jackson	(601) 961-5171
John Hursh	U.S. Geological Survey Jackson, MS	(601) 965-5582
Frank Cater	ABB-ES - Tennessee	(615) 531-1922
Laura Harris	ABB-ES - Tennessee	(615) 531-1922
Marland Dulaney, Jr.	ABB-ES - Tallahassee	(904) 656-1293
Willard Murray	ABB-ES - Wakefield	(617) 245-6606

Note: These minutes are not an official transcript. They are recreated to show only pertinent conversations and resulting action items.

Ken Barnes provided the introduction to the TRC meeting. He briefly described the IRP and the specifics for NCBC Gulfport. There are 7 sites in addition to Herbicide Orange site. The RI/FS Work Plan is in the Final Draft stage and is in review by the regulators. The Community Relations Plan has been submitted in the draft stage and is the process to go final. Since NCBC is not a NPL site, the activity is proceeding on its own initiative.

Frank Cater introduced the ABB-ES team member present and turned the presentation over to Laura Harris.

Laura provided a presentation with handouts (attached) and by slides of the sites.

Laura stated that during the preparation of the Work Plan, ABB-ES had visited the activity to verify water levels in the monitoring wells. At one of the monitoring wells at Site 6, it is possible that a couple of feet of free product may be present.

Wayne said this is the first he has heard of this. This needs to be verified and may require and immediate action.

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ABB Environmental Services Inc.

Gulfport TRC RI/FS Meeting Minutes
10 September 1992
Page 2

Ken Barnes and Gordon Crane stated they would investigate and confirm if free product is present.

Ken Barnes stated that due to priorities and funding it is not likely that during Fiscal Year 1993 the implementation of the Work Plan will occur.

The TRC meeting was adjourned.

**REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI**

**TECHNICAL REVIEW COMMITTEE MEETING
SEPTEMBER 10, 1992
AGENDA**

- 1300 Hours Introduction to Installation Restoration Program
- Ken Barnes, Engineer-in-Charge, Southern Division Naval Facilities
Engineering Command
- CAPT J.A. Lehman, Commanding Officer, Naval Construction Battalion
Center
- 1315 Hours Role of ABB Environmental Services, Inc.
- Frank Cater, Task Order Manager, ABB Environmental Services, Inc.
- 1325 Hours Overview of Planned Remedial Investigation Activities
- Laura Harris, Senior Scientist, ABB Environmental Services
- 1415 Hours Open Discussion/Questions
- 1500 Hours Meeting Adjourns

DEPARTMENT OF DEFENSE
INSTALLATION RESTORATION PROGRAM

REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI

POTENTIAL SOURCES OF CONTAMINATION

SITE 1, DISASTER RECOVERY DISPOSAL AREA

SITE 2, WORLD WAR II LANDFILL

SITE 3, NORTHWEST LANDFILL AND BURN PIT

SITE 4, GOLF COURSE LANDFILL

SITE 5, HEAVY EQUIPMENT TRAINING AREA LANDFILL

SITE 6, FIRE FIGHTING TRAINING AREA

SITE 7, RUBBLE DISPOSAL AREA

REMEDIAL INVESTIGATION / FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI

TECHNICAL APPROACH

Background / Base-wide Sampling

Geophysical Surveys and Aerial Photography Analysis

Sampling and Analysis of Surface Soil, Subsurface Soil, and Sediment

Sampling and Analysis of Groundwater and Surface Water

Aquifer Characterization

Baseline Risk Assessment

Feasibility Study

REMEDIAL INVESTIGATION / FEASIBILITY STUDY
 NAVAL CONSTRUCTION BATTALION CENTER
 GULFPORT, MISSISSIPPI

LABORATORY PROGRAM

PARAMETER	METHOD	REFERENCE	DQO LEVEL
TCL VOCs	purge and trap GC/MS	CLP-COP	IV
TCL SVOCs	GC/MS	CLP-COP	IV
TAL Inorganics	AA/PES	CLP-CIP	IV
TCL Pesticides/PCBs	GC/ECD	CLP-COP	IV
TPH	Infrared	EPA 418.1	III
TDS	Gravimetric	SM2540C	III
TDS TSS	Gravimetric	SM2540D	III
VOC screening	GC/ECD/PID	SW846-M	II

Notes:

TCL = Target Compound List
 VOCs = Volatile Organic Compounds
 GC = Gas Chromatography
 MS = Mass Spectroscopy
 CLP = Contract Laboratory Program
 COP = Caucus Organic Protocol
 SVOCs = Semivolatile Organic Compounds

TAL = Target Analyte List
 CIP = Caucus Inorganic Protocol
 AA = Atomic Adsorption
 PES = Plasma Emission Spectroscopy
 TPH = Total Petroleum Hydrocarbons
 TDS = Total Dissolved Solids
 TSS = Total Suspended Solids

ECD = Electron Capture Detector
 PID = Photolonization Detector

References:

Standard Methods for the Examination of Waster and Wastewater, 17th Edition, American Public Health Association, Washington D.C., 1989.
 USEPA, 1991a. *Contract Laboratory Program, Statement of Work for Organic Analysis*; USEPA Document No. OLM01.0, Revised January 1991.
 USEPA, 1991b. *Contract Laboratory Program, Statement of Work for Inorganic Analysis*; USEPA Document No. ILM01.0, 1991.
 USEPA, 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)*, 3rd Edition, OSWER, Washington D.C., 1986.
 USEPA, 1983. *Methods for Chemical Analysis of Water and Wastes*, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, Revised March 1983.

CTO 24 NCBC Gulfport, Mississippi
Herbicide Orange Site

MEETING MINUTES

NCBC GULFPORT, MS
10 SEPTEMBER 1992
0900 Hours

Attendees:

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W. A. Dos Santos	PWO	(601) 871-2241
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Gordon Crane introduced NCBC staff in attendance.

Ken Barnes a brief introduction, stating the purpose of this meeting was to move toward some type of resolution on the Herbicide Orange site.

Frank Cater then discussed the role of ABB-ES in this investigation. Specifically, ABB-ES is the consultant to SOUTHDIV. Frank then introduced the ABB-ES team and turned the discussion over to Willard Murray.

Willard Murray provided a brief overview history of the site. (See attached Agenda handout.)

Captain Lahman asked what the level of no concern would be for dioxin.

Marland stated that in fish and other edible food, the limit in tissue would be 21 parts per quadrillion. The occupational exposure limit would be 19 parts per billion. The study done on fish in the creek was done in the 1970's. Dioxin can degrade, and it may be necessary to re-look at tissue samples taken from the creek.

The question was asked if more testing would be required, and if this testing

would be more of the same or new types of testing.

Willard stated that more testing would be needed for better characterization of the ash plies. But it might be that enough soil testing was done previously, and it may not be necessary to do further testing of the soils on Sites B and C.

David Criswell stated that the issue of funding and who has the lead role in providing oversight of the investigation has not been resolved between the Navy and the Air Force.

Captain Santos asked where the site stood in the regional hierarchy.

Ken Barnes stated that Washington EPA office has the responsibility for the de-listing petition. Region IV EPA has deferred to the MDEQ for the regulatory lead for sites B and C. Two work plans have been produced to date by Versar. One is for the soil and groundwater sampling of sites B and C, the other is the Ash Sampling Plan for site A. The site A work plan proposes continuing to pursue the de-listing petition for site A.

Wayne Mathis referred to a letter from Chad Carndy of EPA dated May 1, 1992. In the letter he had a few suggestions for groundwater and ash sampling. This letter defers to state for regulatory lead with regards to sites B and C.

Jim Hardage of MDEQ stated that they have not been appraised of their involvement with the de-listing aspect of site A.

Wayne stated that Lizzie Ketchum at Region IV is reviewing the groundwater monitoring plan.

MDEQ RCRA representative stated that the de-listing would all be handled by EPA, and that the state would not be involved. The state was not involved with RD&D permit, nor were they involved in beginning of the process. The State will not take the lead on the de-listing petition. The State will comment on the plan, but EPA headquarters must make the final decision.

For the other sites the state would have role in groundwater monitoring plans.

David stated that the work plan for other sites (B and C) will need some revision work, but the site A ash and groundwater plan are OK.

The May 21, 1992 EPA response position letter stated in general that a 12 month monitoring plan would have to be developed, with input from the State and EPA Region IV. Both the State and Region IV must concur.

Wayne stated that if de-listing is pursued, then other constituents of contamination will have to be investigated. If other contaminants are found in the groundwater, then this would affect the de-listing. If the Navy can provide good technical proof that these contaminants do not come from the ash piles, it would provide a good case to proceed with the de-listing.

A discussion on the sampling of the ash for de-listing was . Sampling of the ash may need to be done prior to de-listing. It was brought up that the ash has already been sampled, but the previous sampling may not have been enough. The question about if the level for a 10^{-6} risk has already been achieved was proposed.

It was brought up that metals content in the incinerated soils could be high. The process of incineration could free up metals for mobilization or transport to other media (i.e groundwater). The allowable level of metals in the ash and or groundwater will need state input.

It was agreed that the Navy will need resolution on guidance, whether the guidance will be from the State or from EPA.

The question was asked of the state that if sites A, B, & C are done under the IRP CERCLA guidance, then can the Navy proceed?

David said that the EPA has requested more information on QA/QC procedure for the ash sampling. The Navy could press forward with the groundwater monitoring program. The Navy needs to resolve who controls the funding and the investigation oversight. Whether it is the Air Force or the Navy.

MDEQ stated that if a risk based closure is presented, then it would have to be based on a 10^{-6} based exposure. They do not feel anything less would be accepted. The state would apply RCRA standards to any investigations that would involved the ash piles.

Wayne stated that the de-listing action process must be pursued by the petitioner.

The state thought that if the ash piles are de-listed then all sites (A, B, and C) could then fall under the IRP CERCLA process.

The Navy needs to get clear resolution from the Air Force concerning the oversight and funding of the investigation.

The de-listing petition is not a dead issue and it may still be feasible to pursue this.

The meeting was adjourned.

NCBC Gulfport Herbicide Orange Site Meeting
Thursday, 10 September 1992
NCBC Gulfport, MS

AGENDA

- 0900 Introduction
- CAPT J. A. Lehman - Commanding Officer, NCBC Gulfport, MS
CDR G. N. Eustis - Executive Officer, NCBC Gulfport, MS
Ken Barnes - SOUTHNAVFACENGCOM
- 0930 Review H.O. Site History Frank Cater - ABB-ES
- previous work Willard Murray - ABB-ES
- past compliance actions
- apparent options
- 1015 Regulatory Issues and Options Willard Murray - ABB-ES
- 1045 Risk Assessment Issues and Options Marland Dulaney - ABB-ES
- 1100 Open Discussion on How to Proceed
- Navy and State objectives
- How to meet objectives
- 1145 Review Action Items
- 1200 Adjourn

In October 1991, a plan for additional ash and groundwater sampling was prepared to support a renewed delisting effort. The Air Force and Versar now think that, with certain changes made by EPA since the earlier petition, this additional sampling and analysis of ash and groundwater will be able to achieve a 10 ppt level for TCDD in the ash (from a proposed standard for paper mill sludge) and the drinking water MCL of 0.05 ppt in the groundwater. (The new MCL is now 0.03 ppt for drinking water.)

The changes are:

- a. Change groundwater model from VHS/OLM to CML or MULTIMED,
- b. Different interpretation of PQLs,
- c. Requirements for groundwater monitoring, and
- d. Change to TCLP instead of EP TOX data.

In December 1991, the EPA review of the 1990 sampling and analysis plans requested additional sampling, and questioned some of the proposed work. They also suggested postponing work on site A until a regulatory decision on the ash is made.

In April 1992, Versar prepared a response to the EPA review of their 1990 sampling and analysis plans in support of site closure. This response agrees with most of the EPA's requests for more sampling to support closure of sites B and C. It also agrees that an assessment of site A will not be conducted until a final regulatory determination about the ash is made.

Possible Options

- Close sites B and C under CERCLA through the Navy IR program.
 - Is additional sampling and analysis really needed?
 - If the new standard of 11 ppt for soil is based on a 10^{-6} risk, then a 10^{-4} risk would be a 1.1 ppb, which has already been achieved. Is this acceptable for a non-residential site usage?
- Possible options for the ash and site A.
 - Delist the ash,
 - Remove the ash to a permitted landfill,
 - Apply for a permit to dispose of the ash on site.

US AIR FORCE CENTER FOR ENVIRONMENTAL EXCELLENCE
REGIONAL COMPLIANCE OFFICE, EASTERN REGION
ATLANTA, GEORGIA

FORMER HERBICIDE ORANGE STORAGE SITE
NAVAL CONSTRUCTION BATTALION CENTER, GULFPORT, MISSISSIPPI

Project Development Meeting
5 April 1993

1. Introduction
2. Review of Site History
3. Review of Previous Investigations and Compliance Actions
4. Discussion of Proposed Compliance Actions and Issues
 - a. No Further Regulatory Action Required on Ash and Site
 - b. Pursue Decision on Ash Delisting Petition
 - c. Provide Interim Storage or Landfill Disposal of Ash
 - d. Conduct a RCRA Investigation of Site and Groundwater, and Cleanup for Area A, Area B, and Area C
5. Ajournment

REGULATORY EVALUATION

GENERAL

- Soil was a Hazardous Waste under RCRA (F027) via the "Mixture Rule."
- Soil was incinerated on-site under a RCRA RD&D permit.
- Ash is a listed Hazardous Waste under RCRA (F028).

OPTIONS

- Pursue Delisting.
- Dispose of ash at off-site TSDF.
- Obtain permit for on-site disposal.

OPTION 1 - PURSUE DELISTING

- Developments since original petition;
 - EPACML vice VHS
 - MCL for 2,3,7,8-TCDD
 - Dioxin reassessment underway
- Groundwater monitoring data
- Other exposure routes
- State requirements

DELISTING VIA EPACML

- EPACML used to generate Dilution-Attenuation Factors (DAF).
- EPACML yields higher DAF per given volume of waste than VHS model, primarily due to the addition of unsaturated zone.
- DAF is generated for a specific volume of waste
 - Health-based number times DAF (for waste volume) yields compliance point concentration.
- Leachate values (typically via TCLP) compared to compliance point concentration.
- Scaling factor (20) should not be applied to one-time exclusions.

RECENT DELISTINGS

- APTUS, Inc. - Kansas (Effective 12/27/91)
 - Kiln Residue/Baghouse Residue
F027

BRIEF HISTORY OF H.O. SITE

- From 1968 to 1977, DOD stored H.O. in 15,400 drums on sites A,B, and C; thirteen acres total for the sites. Sites B and C were used for short term storage, while Site A was used for long term storage.
- In 1977, all H.O. drums were removed and incinerated at sea.
- During the storage period, leakage occurred to cause TCDD contamination on 2 to 4 acres:
 - soil - 100 to 500 ppb
 - sediment - 0 to 5 ppb
 - tissue - 0 to 10 ppb
- Off site sediment and fish tissue samples were both found to have 0.02 ppb TCDD in Canal #1, and both were ND in Turkey Creek.
- Soil stabilization during the 1940's created a layer (6" to 12") of hardened soil, which prevented significant vertical migration. The contamination is primarily limited to the upper two feet of soil.
- In the early 1980's over 1700 soil samples defined the extent of soil contamination, and it was found that soil down to a depth of two feet would have to be excavated. To achieve a clean up level of 1 ppb at the 95% confidence level meant 30,000 cubic yards of soil would be excavated.
- The Air Force obtained a RCRA RD&D permit to incinerate the soils on site. After several verification burns, a trail burn on May 1987 demonstrated a destruction and removal efficiency of 99.9999% or better. This was followed by the incineration of 30,000 cubic yards of soil using a mobil incinerator.
- The ash from the incineration has been placed on 1/3 of Site A, and the excavations on sites B and C were to have been filled with clean sand fill.
- Regulatory requirements for closure of the H.O. site have been revised several times;
 - full RCRA compliance,
 - RCRA and CERCLA,
 - Delist the ash.
- At present, both EPA and MSDEQ appear to be agreeable to a CERCLA closure of site B and C under the Navy IR program. Site A needs separate attention.
- A delisting petition for the ash on site A was submitted to the EPA in 1988 with an addendum in 1989.
- In early 1991, EPA recommended the denial of the delisting petition in a Draft letter to Southern Division.

- Arkansas Dept. of Pollution Control & Ecology (effective 8/24/90)
 - Ash/Incineration Residues
F020, F023
- MERCK, Virginia (effective 5/12/89)
 - Incinerator Ash
WWTP Sludge
- SYNTEX Agribusiness, Missouri (effective 6/2/88)
 - Ash, Sludge, Wastewaters
F020
- Reynolds Metals, Arkansas (Proposed 7/18/92, Effective 12/30/91)
 - Incinerator Ash/Kiln Residue
 - Spent Potliners
- Use of EPACML Formally Proposed

OPTION 2 - TRANSFER TO OFF-SITE TSDF

- Only one possible site.
- "Clean Closure" may be required for Site A.

OPTION 3 - OBTAIN PERMIT TO DISPOSE ON-SITE AS HAZARDOUS WASTE

A discussion on the sampling of the ash for de-listing was . Sampling of the ash may need to be done prior to de-listing. It was brought up that the ash has already been sampled, but the previous sampling may not have been enough. The question about if the level for a 10^{-6} risk has already been achieved was proposed.

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- Possible options for the ash and site A.
 - Delist the ash,
 - Remove the ash to a permitted landfill,
 - Apply for a permit to dispose of the ash on site.

REGULATORY EVALUATION

GENERAL

- Soil was a Hazardous Waste under RCRA (F027) via the "Mixture Rule."
- Soil was incinerated on-site under a RCRA RD&D permit.
- Ash is a listed Hazardous Waste under RCRA (F028).

OPTIONS

- Pursue Delisting.
- Dispose of ash at off-site TSDF.
- Obtain permit for on-site disposal.

OPTION 1 - PURSUE DELISTING

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 - EPACML vice VHS
 - MCL for 2,3,7,8-TCDD
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- MERCK, Virginia (effective 5/12/89)
 - Incinerator Ash
WWTP Sludge
- SYNTEX Agribusiness, Missouri (effective 6/2/88)
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F020
- Reynolds Metals, Arkansas (Proposed 7/18/92, Effective 12/30/91)
 - Incinerator Ash/Kiln Residue
 - Spent Potliners
- Use of EPACML Formally Proposed

OPTION 2 - TRANSFER TO OFF-SITE TSDF

- Only one possible site.
- "Clean Closure" may be required for Site A.

OPTION 3 - OBTAIN PERMIT TO DISPOSE ON-SITE AS HAZARDOUS WASTE

CTO 17 NCBC Gulfport, Mississippi
RI/FS

NCBC GULFPORT, Mississippi
TRC RI/FS MEETING MINUTES
10 SEPTEMBER 1992
1300 Hours

Attendees:

Capt. J. A. Lahman	CO, CBC	(601) 871-2201
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LT J6 Steve Baiz	CBC Gulfport	(601) 871-2636
Gordon Crane	CBC Gulfport	(601) 871-2485
Nancy Brooks	CBC PAO	(601) 871-2392
Ken Barnes	SOUTHNAVFACENGC	(803) 743-0669
David Criswell	SOUTHNAVFACENGC	(803) 743-0612
Dan Owens	SOUTHNAVFACENGC	(803) 743-0331
Wayne R. Mathis	USEPA Reg. IV OPM-FAB-FFC	(404) 347-3776
Jerry Banks	MS DEQ - Jackson	(601) 961-5221
Phillip Weathersby	MS DEQ - Jackson	(601) 961-3502
Jim Hardage	MS DEQ - Jackson	(601) 961-5171
John Hursh	U.S. Geological Survey Jackson, MS	(601) 965-5582
Frank Cater	ABB-ES - Tennessee	(615) 531-1922
Laura Harris	ABB-ES - Tennessee	(615) 531-1922
Marland Dulaney, Jr.	ABB-ES - Tallahassee	(904) 656-1293
Willard Murray	ABB-ES - Wakefield	(617) 245-6606

Note: These minutes are not an official transcript. They are recreated to show only pertinent conversations and resulting action items.

Ken Barnes provided the introduction to the TRC meeting. He briefly described the IRP and the specifics for NCBC Gulfport. There are 7 sites in addition to Herbicide Orange site. The RI/FS Work Plan is in the Final Draft stage and is in review by the regulators. The Community Relations Plan has been submitted in the draft stage and is the process to go final. Since NCBC is not a NPL site, the activity is proceeding on its own initiative.

Frank Cater introduced the ABB-ES team member present and turned the presentation over to Laura Harris.

Laura provided a presentation with handouts (attached) and by slides of the sites.

Laura stated that during the preparation of the Work Plan, ABB-ES had visited the activity to verify water levels in the monitoring wells. At one of the monitoring wells at Site 6, it is possible that a couple of feet of free product may be present.

Wayne said this is the first he has heard of this. This needs to be verified and may require immediate action.

Gulfport TRC RI/FS Meeting Minutes
10 September 1992
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Ken Barnes and Gordon Crane stated they would investigate and confirm if free product is present.

Ken Barnes stated that due to priorities and funding it is not likely that during Fiscal Year 1993 the implementation of the Work Plan will occur.

The TRC meeting was adjourned.

**REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI**

**TECHNICAL REVIEW COMMITTEE MEETING
SEPTEMBER 10, 1992
AGENDA**

- 1300 Hours Introduction to Installation Restoration Program
- Ken Barnes, Engineer-in-Charge, Southern Division Naval Facilities
Engineering Command
- CAPT J.A. Lehman, Commanding Officer, Naval Construction Battalion
Center
- 1315 Hours Role of ABB Environmental Services, Inc.
- Frank Cater, Task Order Manager, ABB Environmental Services, Inc.
- 1325 Hours Overview of Planned Remedial Investigation Activities
- Laura Harris, Senior Scientist, ABB Environmental Services
- 1415 Hours Open Discussion/Questions
- 1500 Hours Meeting Adjourns

DEPARTMENT OF DEFENSE
INSTALLATION RESTORATION PROGRAM

REMEDIAL INVESTIGATION/FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI

POTENTIAL SOURCES OF CONTAMINATION

SITE 1, DISASTER RECOVERY DISPOSAL AREA

SITE 2, WORLD WAR II LANDFILL

SITE 3, NORTHWEST LANDFILL AND BURN PIT

SITE 4, GOLF COURSE LANDFILL

SITE 5, HEAVY EQUIPMENT TRAINING AREA LANDFILL

SITE 6, FIRE FIGHTING TRAINING AREA

SITE 7, RUBBLE DISPOSAL AREA

REMEDIAL INVESTIGATION / FEASIBILITY STUDY
NAVAL CONSTRUCTION BATTALION CENTER
GULFPORT, MISSISSIPPI

TECHNICAL APPROACH

Background / Base-wide Sampling

Geophysical Surveys and Aerial Photography Analysis

Sampling and Analysis of Surface Soil, Subsurface Soil, and Sediment

Sampling and Analysis of Groundwater and Surface Water

Aquifer Characterization

Baseline Risk Assessment

Feasibility Study

REMEDIAL INVESTIGATION / FEASIBILITY STUDY
 NAVAL CONSTRUCTION BATTALION CENTER
 GULFPORT, MISSISSIPPI

LABORATORY PROGRAM

PARAMETER	METHOD	REFERENCE	DQO LEVEL
TCL VOCs	purge and trap GC/MS	CLP-COP	IV
TCL SVOCs	GC/MS	CLP-COP	IV
TAL Inorganics	AA/PES	CLP-CIP	IV
TCL Pesticides/PCBs	GC/ECD	CLP-COP	IV
TPH	Infrared	EPA 418.1	III
TDS	Gravimetric	SM2540C	III
TDS TSS	Gravimetric	SM2540D	III
VOC screening	GC/ECD/PID	SW846-M	II

Notes:

TCL = Target Compound List
 VOCs = Volatile Organic Compounds
 GC = Gas Chromatography
 MS = Mass Spectroscopy
 CLP = Contract Laboratory Program
 COP = Caucus Organic Protocol
 SVOCs = Semivolatile Organic Compounds

TAL = Target Analyte List
 CIP = Caucus Inorganic Protocol
 AA = Atomic Adsorption
 PES = Plasma Emission Spectroscopy
 TPH = Total Petroleum Hydrocarbons
 TDS = Total Dissolved Solids
 TSS = Total Suspended Solids

ECD = Electron Capture Detector
 PID = Photolionization Detector

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 USEPA, 1983. *Methods for Chemical Analysis of Water and Wastes*, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio, Revised March 1983.