257 0

File: 541.460.000n
C.G.

THE MEMPHIS DEPOT
TENNESSEE

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 257

MEETING MINUTES
Restoration Advisory Board
August 21, 1997
Defense Distribution Depot Memphis, TN
Commander's Conference Room

The Restoration Advisory Board Meeting was held on August 21, 1997, at the Defense Distribution Depot Memphis, TN (DDMT) in the Commander's Conference Room. The attendance list is attached.

Welcome and Introduction

Mr. Mondell Williams opened the meeting, welcomed the RAB members and community members, and gave an overview of the meeting's agenda.

Old Business

Meeting Minutes Review - Mondell Williams

The meeting minutes from the July meeting were mailed. Mr. Williams asked if there were any questions regarding the minutes. There were no changes. The minutes were accepted into the record.

Dr. Dann Spariosu introduced Mr. Ramon Torres as his replacement as the EPA project manager for the Depot project. Dr. Spariosu stated his intention to continue to attend the next few meetings to facilitate a smooth transition.

July Questions - Glenn Kaden

Mr. Kaden explained that he and his staff would address questions asked at the July meeting.

Q. What was the status of the warehouses? Were they completely empty or not?

Ms. Pam Gowdy, Base Closure Officer, responded using a map of the facility to illustrate the status of various buildings.

A. CL, denoted actual closure. OC, denoted occupational closure that meant all of the mission stock had been removed. FC, denoted facility closure that meant furniture and equipment had been removed. During facility closure buildings were locked and secured.

Mr. Williams asked if this meant these buildings were clean environmentally.

Ms. Gowdy explained that these buildings were not environmentally clean; however, they were now ready to be turned over for that process. Walk-throughs on these buildings were accomplished with safety, fire, and environmental people to ensure buildings met closure criteria.

Mr. Williams asked that some of the RAB members be allowed to be present when some walk-throughs were accomplished in order to get a better understanding of what was taking place.

Ms. Gowdy stated that safety, fire, and environmental personnel must all sign off on a building before it was closed.

Mr. Kevin Clay asked if the sprinkler systems were turned off when buildings were closed. Ms. Gowdy responded that they were not turned off as part of closure.

Q. Was there enough money in the budget for this year, or did we need to start writing letters?

A. Mr. Shawn Phillips responded that in 1997 over $1 million was left for investigation. DDMT also had funds set aside for the installation of the initial recovery wells at Dunn Field, and contract negotiations for the wells were underway. The Depot budgeted over $9 million for 1998, almost $11 million for 1999, and just over $5 million for 2000. Mr. Phillips stated that the budget was adequate to cover what we anticipated at this time unless funding changed in the future.

Mr. Williams asked when the remedial study began. Mr. Ulysses Truitt responded that studies began in the mid-80's. Mr. Williams requested a breakdown of the funding spent on the study by year to date.

Mr. Kaden responded that this information was provided at the February meeting and was in that meeting's minutes. From 1986 to 1995, $13,644,000 had been spent. In 1996, $1,006,000 was spent on documentation, Environmental Baseline Survey, NEPA documentation, etc. Funds budgeted for 1997 through 2003 were $85,922,000. This was for the overall budget. The numbers Mr. Phillips gave were for the restoration budget.

Mr. Williams felt like the money was being spent but the pace was slow, and he couldn't see the effects. Mr. Kaden pointed out that the agenda included presentations regarding the Site Screening process and the ground water remediation. We should be see results by the end of the year.

Q. What about the trees in Dunn Field?

A. Mr. Phillips responded that he had researched the issue and learned that there were two tree firms that had worked with the Depot in the last ten years. One was Trees by Touliatos, and then more recently in June and July the Depot used Robinson Tree Service.

The owner of Robinson Tree Service, Mr. Tipton, a certified forester and member of the National Arborist Association, had the following three observations on the death of the trees in Dunn Field. First and foremost, they died from their age. Secondly, they seemed to have a twist to them indicating they may have been hit by severe winds. Finally, in two trees, part of the interior had been eaten by termites, and this would have weakened the trees.

According to Mr. Touliatos, owner of Trees by Touliatos, when he surveyed the trees in the mid-to-late 80's, he recognized a problem and wrote a report recommending a tree-replanting project that was never implemented. The reason for the replanting was that several of the trees would die in the next five to seven years.

Mr. Kaden stated that when the RI sampling was accomplished at Dunn Field samples would be taken near the trees.

Mr. Clay stated that he knew the ground was contaminated, but the Depot did not believe that it was a contributing factor in the deaths of the trees.

Mr. Kaden stated that these gentlemen were the experts, and they did not say that the trees turned brown, withered, and died. The trees were blown down.

Dr. Spariosu added that the landfill was not located where the trees were located. The landfill was in a treeless area on the west side of Dunn Field. The roots of the trees do not reach down to the water table, and the trees were not over the contaminated plume. Although there may be some contamination in that area of Dunn Field, records indicated soil contamination in the treeless area to the south and west, whereas the trees were to the north and east.

Mr. Clay asked where the contaminated plume was. Dr. Spariosu responded it was mostly on the west half of Dunn Field. The trees that looked the worst were on the east half.

Q. Have we done any sampling regarding PCBs on Perry Road?

A. Mr. Greg Underberg responded that samples were taken as part of the Background Study in late 1995. These samples were taken under the power lines, and none of the samples showed any PCBs.

New Business

Ground Water Remediation - Kurt Braun, U.S. Army Corps of Engineers, Mobile District

The first part of the Ground Water Remediation process included a Ground Water Design that had been completed. The BRAC Cleanup Team decided to proceed with the first seven (7) wells of the system, and a contractor (OHM Remediation Services Corporation) was selected from a pre-placed remediation contract through the Omaha Division of the Corps of Engineers.

The total system design consisted of thirteen wells on site and four wells off site. There would be a total flow of 1.2 million gallons per day. The 17 pumps would equal 59 horsepower. There would be a control building for all pumps and remote monitoring. The initial construction would be seven wells on site pumping just less than a half million gallons per day. These seven pumps would equal 33 horsepower. There would be remote computer monitoring that would give data on the wells. This data would then be used to update the pumping plan. There would be operation and maintenance for six months to a year that would be run by the contractor.

A map was provided showing the locations of the wells. The squares denoted the seven initial wells, and the triangles showed the remaining recovery wells. However, they may or may not go in these locations based on the pumping data from the initial seven wells.

The schedule included a site visit on August 22, 1997, a contract award in September 1997, a Notice to Proceed in October 1997, and work starting in November 1997.

Ms. Karen Blanks McGlown asked what would be done with the water once it was pumped.

Mr. Braun stated that at this point the City would take the water untreated. The Corps sampled the water, and the only thing that was high was aluminum. This did not seem to be a problem.

Mr. Williams asked what was going to happen to the water before the City accepted it. He questioned whether or not it would run back into the City's system. Mr. Kaden responded that this was still under investigation.

An audience member asked how deep the wells would be. Mr. Braun stated that

they would be anywhere from 15 to 70 feet deep.

Mr. Williams asked how much the City would charge to "help us out." Mr. Kaden answered 58 cents per 1000 gallons when the system was running at the full 1.2 million gallons. Ms. Peters asked that there be more negotiations on the cost issue.

Mr. Kaden stated that this was a standard cost for industry, and the Depot was not going to accept 60 cents per 1000 gallons.

BRAC/Screening Site Discussion - Greg Underberg, CH2M Hill, Project Manager

Mr. Underberg reviewed the BRAC data collected as part of the BRAC process. This included 70 surface, 62 subsurface soil, and 3 sediment samples taken from 28 BRAC parcels during October 1996. Sample locations were selected to confirm that there was no environmental impact on parcels that would prevent parcel lease or transfer.

Screening Sites were locations where contaminated materials were known or suspected to have been handled, but releases to the environment had not been confirmed. The contractor collected 451 soil, 24 surface water, and 32 sediment samples at 29 Screening Site locations during December 1996 and January 1997. The sampling locations were areas where potential contaminant releases would have been detected.

The BRAC and Screening Site evaluation process included (1) Reviewing the background parameters, (2) Confirming use of most current risk-based screening criteria, (3) Comparing DDMT chemical data to both the background and evaluation criteria on a site-by-site basis, (4) Preparing comparison tables and identifying Sites/Parcels that exceeded screening criteria, (5) Reviewing data from BRAC parcels and Screening Sites to determine proper application of screening criteria, (6) BCT reviewing all Site and Parcel data and providing recommendations for either No Further Action, Early Removal Action, or Further Action.

The objectives of the BCT data evaluation process were to determine action levels based on either screening criteria or background. The BCT determined a process to streamline evaluation of BRAC and Screening Sites because of the need to lease and transfer property and the need to evaluate priority sites, buildings, and other areas.

The obstacles to this process were a large volume of data resulting in a lengthy process to arrive at a BCT consensus for each site, a need to evaluate each site individually preventing a totally automated data process, and the widespread onsite pesticide (Dieldrin) application requiring further risk assessment.

The compound specific screening criteria used the EPA Risk Based Criteria (RBC) for residential and industrial land uses, EPA remediation criteria, background levels, and Federal ambient water quality criteria for human health and, if applicable, aquatic organisms.

The criteria on which the BCT has come to concurrence for soil screening included the following:

Compound	Criteria	Basis
Aluminum	24,000 ppm	2x Mean Background
Arsenic	20 ppm	2x Mean Background
Benzopyrene	0.083 ppm	Residential RBC
Beryllium	1.1 ppm	2x Mean Background
Chlordane	0.49 ppm	Residential RBC
Chromium	39 ppm	Residential RBC
DDD	2.7 ppm	Residential RBC
DDE, DDT	1.9 ppm	Residential RBC
Dieldrin	--	Under Review
Dioxin	10 ppt	Background Upper Confidence Limit
Iron	37,000 ppm	2x Mean Background
Lead	400 ppm	CERCLA Remediation Criteria
Manganese	1,300 ppm	2x Mean Background
PAHs	Constituent Specific	Residential RBC
PCBs	0.083 ppm	Residential RBC
Zinc	230 ppm	Residential RBC

The BCT identified ten areas or buildings that needed to be evaluated based on priority for lease or transfer. The six found to be suitable for lease were Sites 34 and 35, and Buildings 629, 630, 649, and 835. The candidate sites for early removal were Sites 83 and 48. The sites requiring further assessment included Site 51 and BRAC Parcel 3.

The next step of the process would involve conducting additional surface soil sampling at the playground and ball field in BRAC Parcel 3 and performing a Preliminary Risk Evaluation.

Agency for Toxic Substance and Disease Registry (ATSDR) Public Health Assessment Update - Michael Grayson, ATSDR

ATSDR's involvement at the Depot began with a site-scoping visit in May 1992. In November 1994, ATSDR began health assessment activities. A final Public Health Assessment was published in October 1995. Before the final Public Health Assessment was published, ATSDR prepared a draft document for public comment in September 1995. This public comment period ended in October 1995. ATSDR prepared a health consultation in April 1996 as a follow up to the 1995 Public Health Assessment.

The more recent activities for ATSDR at the Depot included meetings between DDMT-CCC and ATSDR's upper management and a commitment by ATSDR to revisit the 1995 Public Health Assessment and review the cancer mortality data provided by the Tennessee Department of Health.

The update of the 1995 Public Health Assessment would involve meeting with persons who have environmental justice concerns about the Depot, gathering and addressing any environmental health concerns from the community at large, reviewing and evaluating any new data generated since the 1995 assessment including new ditch and sediment data, evaluating cancer mortality data provided by the state, ensuring that the state's data was age-adjusted, and finally to more effectively communicate to the concerned individuals ATSDR's evaluation process and findings.

As part of the updating process, ATSDR met with the DDMT-CCC to collect their concerns as well as with Depot staff and DOD representatives to explain their recent interest in the Depot. ATSDR was also planning a site visit to begin a data review and evaluation process and was trying to set up a work group to discuss health improvements and environmental monitoring.

The ATSDR Site Visit would consist of ATSDR health assessors, an environmental scientist who was active in environmental justice to serve as an observer, and a RAB member as an observer. The site visit would last for two days and would take place sometime during the last two weeks in September.

At the June 19, 1997, RAB meeting there was a concern voiced for worker health. Mr. Grayson sent a letter to the National Institute for Occupational Safety and Health (NIOSH) inviting them to participate on the work group. Mr. Grayson was working on clearly identifying specific occupational exposures. If you have information that might be helpful, contact him at (404) 639-6047.

Mr. Williams complemented DDMT-CCC for working with ATSDR to have the Public Health Assessment reviewed. He added that since the last RAB meeting the employees have had medical surveillance made available. It was questioned

whether this would set precedence for other communities or groups to come to ATSDR with their health concerns.

Mr. Grayson stated that the ATSDR was established to address public health concerns. Any group could write and request an evaluation at any time.

Ms. Peters asked how employees who worked at the Depot for thirty years would know if their allergies were related to some exposure on the Depot.

Mr. Grayson commented that to address these types of issues, ATSDR desired NIOSH involvement.

Ms. Peters asked how workers who never worked directly with the chemicals would know whether or not they were exposed at some point.

Mr. Grayson pointed out that the workers who were directly in contact would more than likely have higher exposure than those who weren't in direct contact.

Mr. Clay asked if this was the only way to voice a concern over health issues by contacting Mr. Grayson by phone.

Mr. Grayson stated he was interested in hearing only from workers who had concerns. He was going to try and make available opportunities for any others to contact ATSDR in the future.

Mr. Kaden asked for a RAB volunteer to participate in the ATSDR Site Visit.

Mr. Williams, Mr. Clay, Mr. John Garrison and Ms. Elizabeth Young all volunteered to be the RAB observer. Mr. Grayson stated that two RAB members could accompany the ATSDR representative one day and two more the second day. They would work out the schedule when more information was available on the dates.

Mr. Kaden mentioned that the Environmental Office would move to the North Hall. The RAB would continue to meet in the Commander's Conference Room. The Depot was going to try to make an arrangement with State Tech to continue using this Conference Room.

The Environmental Office would have a reading room. This would allow RAB members and members of the public to come in and review documents. The room would have at least two computers for RAB and public use.

Mr. Kaden stated that Mr. John Rosenthal with Howard University was tentatively scheduled to speak at the October RAB meeting to discuss the variety of environmental information available on the Internet.

Mr. Kaden provided regular RAB members with a ballot to vote on whether or not to fill Mr. Larry Smith's position. It was stated that if the RAB voted to replace Mr. Smith then his replacement would be a representative from an environmental group.

Public Comment Period

Ms. Bradshaw asked Mr. Underberg if this was the second soil sample.

Mr. Underberg responded that there were two sets of samples taken, one in the fall of 1996 and a second set in January of 1997. These samples were taken at BRAC and Screening Sites.

Ms. Bradshaw asked if the samples that detected chemicals were the ones that were sampled the second time only on a deeper level.

Mr. Underberg responded that purpose was to identify sites that needed more studies done.

Ms. Bradshaw asked if there was a broad-spectrum sample on each site. She asked what chemicals were tested.

Mr. Underberg stated that the site history was looked at, and the analysis was tailored to fit that particular site.

Ms. Bradshaw questioned if the analysis included all 150 chemicals.

Mr. Underberg said that the site history dictated for what the samples were tested.

Mr. Kaden stated that the cost per sample for this detailed information was approximately $1500, and it was cost prohibitive to run a full test on each sample. Mr. Kaden stated that this was why the Depot did not routinely test for everything on every sample. Fiscally, this was not allowable.

Mr. Grayson added that there was only a certain amount of money; therefore, there was a need to justify what was spent. When we have an idea of what was there, we sample only for those items, he stated.

Ms. Bradshaw asked if broad-spectrum analysis was done on the samples taken from the ditches in 1996 since we don't know what ran through them.

Mr. Underberg answered that CH2M Hill did not do that sampling. They did the background work. The ditch samples were accomplished by Earth Technology.

Dr. Spariosu asked if CH2M Hill did the sampling along the fence line.

Mr. Underberg responded that yes, they did the sampling along the fence line, and it was a broad-spectrum screening.

Ms. Bradshaw asked if there were off-site samples done on Perry Road.

Mr. Underberg stated that there were three samples taken under the power lines as part of the background analysis. They were all analyzed for PCBs, and none were detected.

Ms. Bradshaw asked where the actual samples were taken. Mr. Underberg showed on the map where the samples were taken.

An audience member asked why Mr. Underberg didn't mention that the chart was in logarithms and that actually the levels were higher than they appeared.

Mr. Underberg responded that the chart was in logarithms with a factor of 10.

An audience member stated that the Dieldrin levels were high.

Mr. Underberg explained that these charts did not take into account the synergy that occur between constituents.

Dr. Spariosu explained that the toxicologist would review this information in the risk assessment.

The next RAB meeting was scheduled for 6:00 p.m. on Thursday, September 18, 1997 in the Commander's Conference Room.

The meeting was adjourned.

Attendance List

Restoration Advisory Board Members

Mr. Glenn Kaden	DDMT, Facility Co-Chairman
Mr. Mondell Williams	Community Co-Chairman
Mr. Terry Templeton for Mr. Jordan English	TDEC
Ms. Sherrye Wheeler for Mr. Carter Gray	MSCHD
Mr. John Garrison	Citizen Representative
Ms. Johnnie Mae Peters	Citizen Representative
Mr. Kevin Clay	Citizen Representative
Mr. Dave Bond	Citizen Representative
Mr. Eugene Brayon	Citizen Representative
Ms. Terri Gray	Citizen Representative
Ms. Elizabeth Young	Citizen Representative
Ms. Willie Mae Willett	Citizen Representative
Dr. Dann Spariosu	EPA
Mr. Ulysses Truitt	Citizen Representative
Mr. Charles Truax for James Webb	MLG&W
Ms. Karen Blanks McGlown	Citizen Representative
Ms. Jacqueline Smith for Dr. Cleo Kirk	Shelby County Commission

Others in Attendance

Ms. Genna Mitchell	U.S. Army Center for Health Promotion and Preventive Medicine (USACHPPM)
Mr. Rick Bowlus	USACHPPM
Mr. Terry Flynn	USACHPPM
Mr. Greg Underberg	CH2M HILL
Mr. Julian Savage	Corps of Engineers, Huntsville
Mr. Benjamin Moore	ATSDR
Mr. Kurt Braun	Corps of Engineers, Mobile District
Mr. Ramon Torres	EPA
Mr. John Crellin	ATSDR
Mr. Michael Grayson	ATSDR
Mr. Jerry Ballard	Dynacorp
Mr. Jim Covington	Depot Redevelopment Corporation
Mr. Clarence Smith	ASCE
Mr. John DeBack	Base Transition Officer
Mr. Shawn Phillips	DDMT
Ms. Denise Cooper	DDMT
Mr. Kenneth Bradshaw	Citizen
Ms. Doris Bradshaw	Citizen
Ms. Sue Estes	ME_3, L.L.C.

Defense Logistics Agency
Defense Distribution Depot Memphis

Restoration Advisory Board

Agenda

August 21, 1997

DDMT Commander's Conference Room
2163 Airways Boulevard
Memphis, Tennessee

Welcome and Introduction		Mr. Glenn Kaden BEC, DDMT-DE Facility Co-Chairman
Old Business		
Meeeting Minutes Review		Mr. Mondell Williams Community Co-Chairman
July Questions	20 Min	Mr. Glenn Kaden
		Mr. Shawn Phillips DDMT-DE Remedial Project Mgr
		Mr. Greg Underberg CH2M Hill - Project Manager
New Business:		
Ground Water Remediation	10 Min	Mr. Kurt Braun US Army Corps of Engineers Mobile District
BRAC/Screening Site Discussion	20 Min	Mr. Greg Underberg
ATSDR - Public Health Assessment Update	25 Min	Mr. Michael Grayson ATSDR
Public Comment Period	15 Min	
Meeting Adjourned		

Groundwater Remedial Action

History

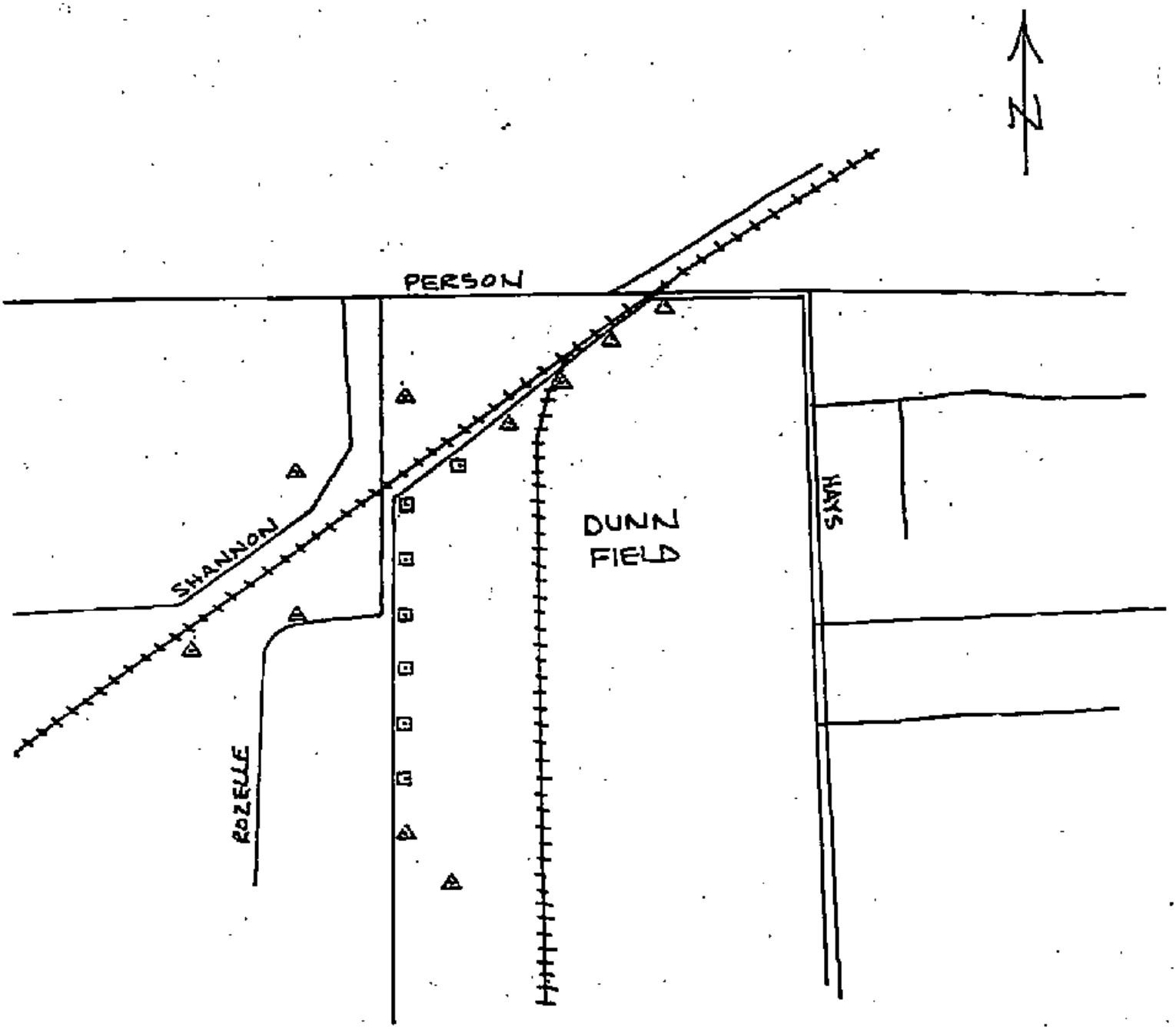
- Groundwater Design
- Construction Contract
- Dunn Field

Total System Design

- 13 wells on site
- 4 wells off site
- Total flow (17 wells)830gpm(1.2mgd)
- 17 Pumps =59hp
- Control building for all pumps

Initial construction

- 320gpm(.461mgd)
- 7 wells on site
- 7 pumps =33hp
- Remote computer monitoring
- Up-date pumping plan
- O&M for 6 mo-1 year(by contractor)



LEGEND

- ⊡ INITIAL 7 RECOVERY WELLS
- △ REMAINING RECOVERY WELLS

INTERIM REMEDIAL ACTION
GROUNDWATER RECOVERY
WELLS

Schedule

- Plans sent to contractor 15 Aug 97
- Site visit 22 Aug 97
- Award contract Sep 97
- Issue Notice To Proceed Oct 97
- Start work Nov 97

General Components of Groundwater Extraction System

Total estimated system to achieve containment of plume:

- 17 groundwater extraction wells
- 13 wells in Dunn Field
- 4 wells offsite in adjacent residential neighborhood
- Total flow from wells is expected to be 830 gallons per minute
- 17 submersible pumps with a total of 59 horsepower
- 1 control building containing a master control panel for 17 pumps as well as space for potential future addition of 8 pumps.

Initial phase of construction will consist of the following:

- 7 wells with an estimated recovery of 320 gallons per minute
- 2,300 feet of high density polyethylene pipeline (diameter varies from 3" to 8"
- 7 submersible pumps with a total of 33 horsepower
- 1 control building containing a master control panel for 17 pumps as well as space for potential future addition of 8 pumps.
- telephone connection from master control panel to remote location for new computer monitoring station.
- following testing and correlation of the 7 groundwater recovery wells with the groundwater model, additional groundwater recovery wells (10 wells currently planned) will be installed based on new modeling results.
- operation and maintenance of the groundwater recovery system for one year

Current Involvement by the Agency for Toxic Substances and Disease Registry at the Distribution Depot Memphis

August 21, 1997

257 20

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Background

- Depot proposed for listing on the U.S. Environmental Protection Agency's National Priorities List (NPL) in August, 1991
- Depot placed on the NPL in October, 1992

Background (cont.)

- ATSDR performed a site scoping-visit in May, 1992 (ranking)
- ATSDR began health assessment activities in November, 1994
- ATSDR published the final public health assessment in October, 1995
- ATSDR prepared a health consultation in April, 1996 (follow up to 1995 PHA)

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Background (Cont.)

- Before a final public health assessment is published, ATSDR prepares a draft for public comment
- ATSDR draft for public comment was made available in September, 1995
- Public comment period ended in October, 1995

Recent Activities at ATSDR

- Meetings between DDMT-CCC and ATSDR's upper management
- Commitment by ATSDR to
  - » Revisit the 1995 Public Health Assessment
  - » Review of cancer mortality data provided by the Tennessee Department of Health

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Revisit of 1995 Public Health Assessment (an update)

- To meet with those persons who have environmental justice concerns about the depot
- To gather and address any environmental health concerns from the community at large
- To review and evaluate any new data generated since the 1995 public health assessment, including new ditch and sediment data

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Revisit of 1995 Public Health Assessment (an update, cont.)

- To evaluate cancer mortality data provided by the state, ensuring that it is age-adjusted
- To more effectively communicate to the concerned individuals ATSDR's evaluation process and findings

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Updating Process

- ATSDR has met with the DDMT-CCC to collect their concerns
- ATSDR has met with depot staff and Department of Defense representatives to explain our recent interest in the depot
- ATSDR is planning a site visit to begin our data review and evaluation process
- ATSDR is trying to set up a work group to discuss health improvements and environmental monitoring

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Site Visit

- ATSDR health assessors
- An environmental health scientist who is active in environmental justice to serve as an observer
- Invitation for a RAB observer
- Tentative date: during the last 2 weeks of September for 2 days

Michael Grayson, The Agency for Toxic Substances and Disease Registry

Work Group

- At the June 19, 1997, RAB meeting, a concern for worker health was voiced
- Letter to the National Institute for Occupational Safety and Health inviting them to participate on the work group
- Need to clearly identify specific occupational exposures; Contact: Michael Grayson (404)639-6047

Michael Grayson, The Agency for Toxic Substances and Disease Registry

BRAC and Screening Sites Assessment Meeting August 4 - 6, 1997

Greg Underberg
CH2M HILL

Introduction

- Review scope of BRAC and Screening Site sampling.
- Identify objectives of the review process.
- Review evaluation process.
- Discuss results and current status of the evaluation process.
- Identify future action.

Overview of BRAC Sampling

- BRAC data collected as part of Base Relocation and Closure Process.
- 70 surface, 62 subsurface soil, and 3 sediment samples taken from 28 BRAC parcels during October, 1996.
- Sample locations were selected to confirm that there is no environmental impact on parcels that would prevent parcel lease or transfer.

Scope of Screening Site Sampling

- Screening Sites are locations where contaminated materials were known or suspected to be handled, but releases to the environment have not been confirmed.
- 451 Soil, 24 surface water, and 32 sediment samples were taken at 29 Screening Site locations during December and January.
- Sampling locations were biased towards areas where potential contaminant releases would have been detected.

Planned BRAC and Screening Site Evaluation Process

1) Review background parameters.
2) Confirm use of most current risk-based screening criteria.
3) On a site-by-site basis, compare DDMT chemical data to both the background and evaluation criteria.
4) Prepare comparison tables and identify Sites/Parcels that exceed screening criteria.

BRAC and Screening Site Evaluation Process (continued)

5) Review data from BRAC parcels and Screening Sites to determine proper application of screening criteria.

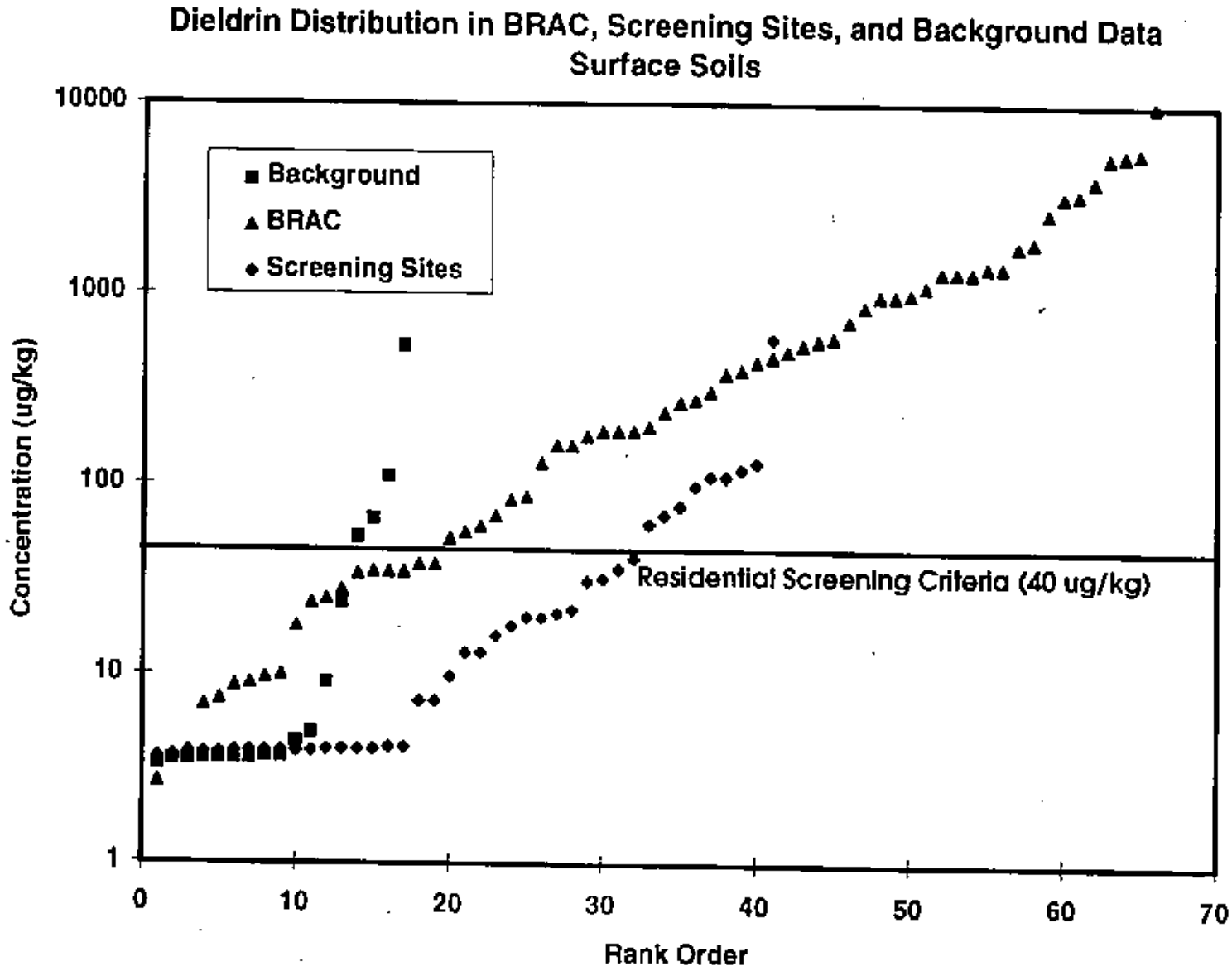
6) The BCT will review all Site and Parcel data and provide recommendations for either No Further Action, Further Action, or Early Removal Action.

Objectives of BCT Data Evaluation

- On a compound basis, determine action levels based on either screening criteria or background. All DDMT and background data were considered.
- To accommodate need for leasing and transfer; evaluate priority sites, buildings, and areas.
- Determine process to streamline BCT evaluation of BRAC and Screening Sites.

Obstacles

- Large volume of data results in lengthy process to arrive at a BCT consensus for each site.
- Need to evaluate each site individually prevents totally automated data process.
- Widespread onsite pesticide (dieldrin) application requires further risk assessment.


Dieldrin Distribution in BRAC, Screening Sites, and Background Data
Surface Soils
10000
1000
100
10
1
Concentration (ug/kg)
Background
BRAC
Screening Sites
Residential Screening Criteria (40 ug/kg)
0
10
20
30
40
50
60
70
Rank Order

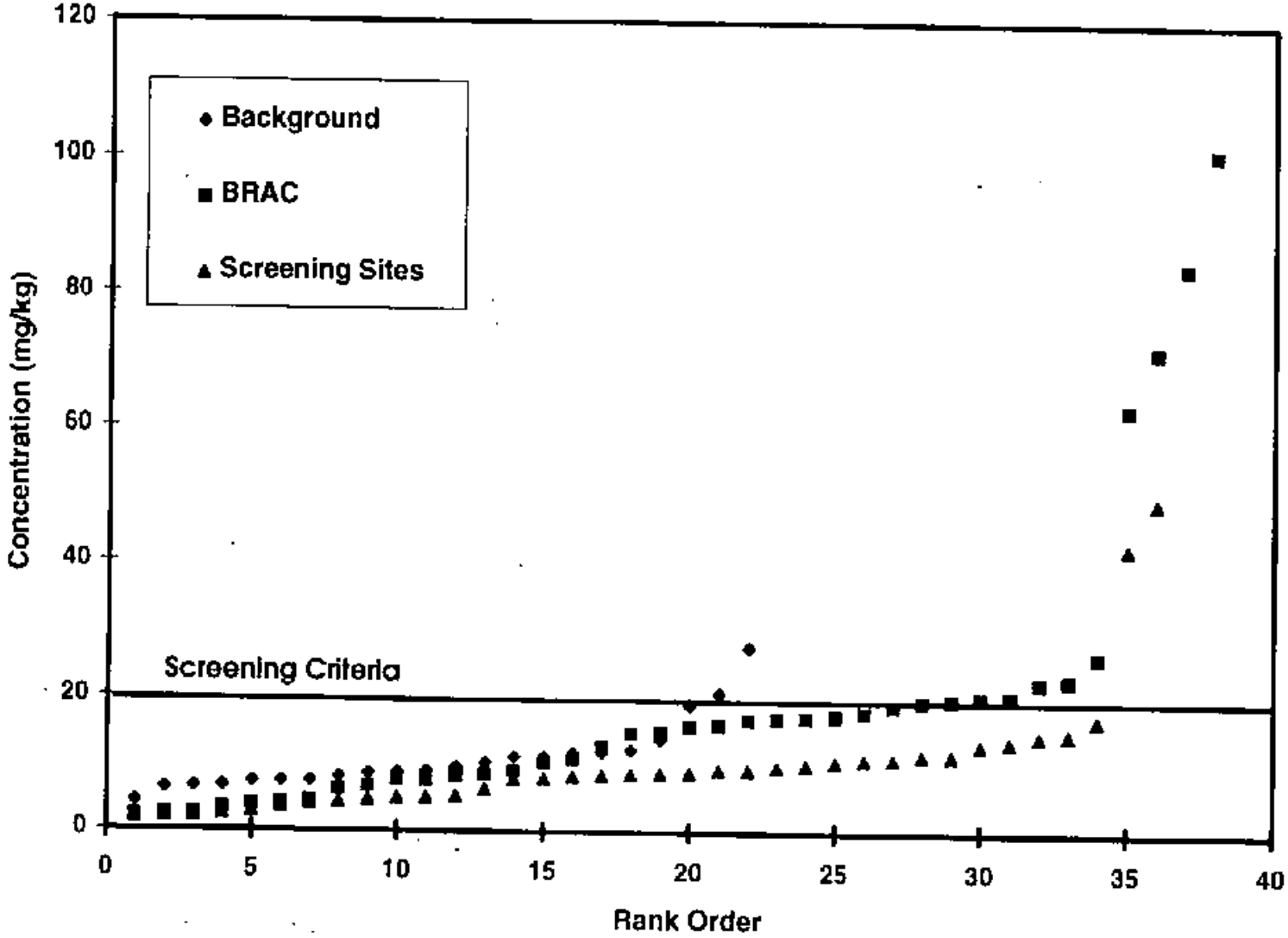
Compound Screening Criteria

- EPA Risk-Based Criteria (RBC) for residential and industrial land uses.
- EPA remediation criteria.
- Federal ambient water quality criteria for human health and, if applicable, aquatic organisms.
- Background levels.

BCT Soil Screening Criteria

Compound	Criteria	Basis
Aluminum	24,000 ppm	2 x Mean Background
Arsenic	20 ppm	2 x Mean Background
Benzopyrene	0.083 ppm	Residential RBC
Beryllium	1.1 ppm	2 x Mean Background
Chlordane	0.49 ppm	Residential RBC
Chromium	39 ppm	Residential RBC
DDD	2.7 ppm	Residential RBC
DDE, DDT	1.9 ppm	Residential RBC
Dieldrin	--	Under Review

Arsenic Distribution in BRAC, Screening Sites, and Background Data
Surface Soils



BCT Soil Screening Criteria (continued)

Compound	Criteria	Basis
Dioxin	10 ppt	Background Upper Confidence Limit
Iron	37,000 ppm	2 x Mean Background
Lead	400 ppm	CERCLA Remediation Criteria
Manganese	1,300 ppm	2 x Mean Background
PAHs	Constituent Specific	Residential RBC
PCBs	0.083 ppm	Residential RBC
Zinc	230 ppm	Residential RBC

Results of Site Evaluation

Site	Disposition*
Site 35 - DRMO Building	Suitable to Lease
Site 51 - Lake Danielson Outlet	Further Assessment (risk evaluation)
Site 83 - Dried Paint Disposal Area	Early Removal candidate (soil removal)
Site 48 - Bldg. 274 Cafeteria	Early Removal candidate (soil removal)
BRAC Parcel 3 (Golf Course Area)	Further Assessment (Sampling at playground and ball field)
Buildings 629, 630, and 649	Suitable to Lease
Building 835	Suitable to Lease
Site 34 - Bldg. 770	Suitable to Lease (industrial use)

* Dieldrin still under evaluation.

Next Steps

- Perform Preliminary Risk Evaluation
  - Use screening criteria already developed
  - Sums risk across all constituents at a site
  - Conservative assessment will identify sites requiring additional evaluation
  - Will streamline BCT review process
  - Will identify Sites and Parcels that can be leased or transferred.
- Conduct additional surface soil sampling at playground and ball field in BRAC Parcel 3

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE