SFUND RECORDS CTR
2140350

BCT Meeting Agenda
February 22, 2005, 1000 - 1600
Tetra Tech Office, 135 Main Street, Suite 1800
San Francisco, CA

1000 **New Navy Business** (Patrick Brooks)
- New business
- Next BCT meeting and review of upcoming meetings

1010 **Action Item List Review** (Patrick Brooks)

1015 **Landfill Gas Update** (Andrew Baughman)
- Review January LFG monitoring
- Discuss field PID results vs. laboratory results
- Review EPA split sample results (if available)

1045 **2005 Parcel E Shoreline Removal Actions** (Jose Payne, et. al.)
- Metal Reef
- Radium Dial Disposal Area

1145 **Lunch**

1245 **2005 Parcel E Shoreline Removal Actions-continued** (Jose Payne, et. al.)
- PCB Hot Spot
- Metal Slag

1345 **IR-07/18 Soil Gas Work Plan Update** (Ryan Ahlersmeyer)

1415 **Document Review Matrix** (Patrick Brooks)

1430 **Review Action Items** (Patrick Brooks)

1445 **Adjourn**

Hunters Point Shipyard
Meeting Attendance Sheet

Topic: BCT Meeting
Location: 135 Main Street Suite 1800 San Francisco, CA 94105
Date/Time: February 22, 2005 / 10:00 a.m.

Organization	Name	Phone Number	E-Mail Address	Present
Navy	Keith Forman	619.532.0913	keith.s.forman@navy.mil	
	Patrick Brooks	619.532.0930	george.brooks@navy.mil	PB
	Ryan Ahlersmeyer	619.532.0960	ryan.ahlersmeyer@navy.mil	RA
	Glenn Christensen	619.532.0924	glenn.christensen@navy.mil	GC
	Mark Walden	619.532.0931	mark.walden@navy.mil	MW
	Jose Payne	619.532.0962	jose.payne@navy.mil	JP
	Ralph Pearce	619.532.0912	ralph.pearce@navy.mil	
	Andrew Baughman	619.532.0902	Andrew.baughman@navy.mil	AB
U.S. EPA	Michael Work	415.972.3024	Work.Michael@epa.gov	MW
	James Ricks	415.972.3023	Ricks.james@epa.gov	
DTSC	Tom Lanphar	510.540.3776	tlanphar@dtsc.ca.gov	
	Eileen Hughes	510.540.3760	ehughes@dtsc.ca.gov	EH
RWQCB	Jim Ponton	510-622-2492	jdp@rb2.swrcb.ca.gov	JDP
City of SF/Lennar BUHP	Amy Brownell	415.252.3967	amy.brownell@sfdph.org	ADB
	Sigrida Reinis	415.955.9040	sreinis@treadwellrollo.com	
	Dorinda Shipman	415.955.9040	dcshipman@treadwellrollo.com	DCS
	Diane Sarmiento	510.251.2888	dsarmie1@ch2m.com	
	Anne Estabrook	510.587.7646	Anne.estabrook@ch2m.com	AE
Tech Law Inc. *EPA contractor*	Karla Brasaemle	415.281.8130	kbrasaemle@techlawinc.com	KB
Tetra Tech EM Inc. *Navy contractor*	Julia Vetromile	415.222.8225	Julia.Vetromile@ttemi.com	JV
	Leslie Lundgren	415.222.8205	Leslie.lundgren@ttemi.com	LL
	James Medley	415.222.8201	James.medley@ttemi.com	JHM
	Jean Michaels	415.222.8346	Jean.michaels@ttemi.com	JM
Tetra Tech EC *Navy contractor*	Gerry Slattery	415-671-1990	gslattery@TtEC.com	
	Luis Rivero	619.471.3502	lrivero@TtEC.com	
	Bill Williams			✓
ITSI *Navy contractor*	Arvind Acharya	925. 946.3100	aacharya@itsi.com	✓
	Jim Schollard	925.946.3107	jschollard@itsi.com	
	Steve Eide			
Shaw Group/ EMCON *Navy Contractor*	Dan Leigh	925.288.2193	Daniel.leigh@shawgrp.com	
Restoration Advisory Board	Barbara Bushnell	415.285.1313	bbush58@yahoo.com	BB
CFC	Clifton Smith	510.769.2080	Clifton.smith@sbcglobal.net	
	Steve Bradley	619-525-7188	steve.bradley@ttemi.com	SB
TtEMI	Glynis Feulle	916-853-4561	glynis.feulle@ttemi.com	GF
TtEMI	Chris Johnson			
TtEMI	Adam Klein	415-777-8279	adam.klein@ttemi.com	AK

ırea Air Quality Management District
Realignment and Closure Cleanup Team
f San Francisco
rtment of Toxic Substances Control
onmental baseline study
Environmental Protection Agency
ıg of suitability to transfer
bility study
pplicable
Department of the Navy
ıethane organic compound
hlorinated biphenyl
ıration advisory board
edial action monitoring plan
edial investigation and feasibility study
rd of decision
ening-level ecological risk assessment
apor extraction
determined
nical memorandum in support of a ROD amendment
Tech EM Inc.
petroleum hydrocarbons
ersity of California, San Francisco
Francisco Regional Water Quality Control Board

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Hunters Point Shipyard Meeting Calendar

MARCH 2005

SUN	MON	TUE	WED	THU	FRI	SAT
Notes: BCT: Base Realignment and Closure Cleanup Team MBCO: Membership Bylaws and Community Outreach RAB: Restoration Advisory Board SVE: Soil Vapor Extraction TtEMI: Tetra Tech EM Inc.		1 Basewide Groundwater Quarterly Sampling Begins Economic Subcommittee Meeting 2:30-4:30 Anna Waden Library, 5075 Third Street, San Francisco 94124	2 Data Presentation Meeting 9:30-12:00 TtEMI 135 Main Street, Suite 1800 San Francisco 94105	3 Ongoing Basewide and Landfill Stormwater Inspection	4	5
6	7 Continued Aerobic Bioremediation Pilot Study at IR25	8 Parcel F Meeting 9:30-2:30 TtEMI 135 Main Street, Suite 1800 San Francisco 94105	9 MCBO Subcommittee Meeting 6:30-8:00 p.m. Anna Waden Library, 5075 Third Street, San Francisco 94124	10 Drydock 4 Water Sampling (Tentative Date)	11	12
13	14 Building 123 SVE Well Installation	15 Landfill Gas Monitoring	16	17	18	19
20	21	22 BCT Meeting 10–3 TtEMI 135 Main Street, Suite 1800 San Francisco 94105 Lowman RAD/Risk Review Subcommittee 3–5 Anna Waden Library, 5075 Third Street, San Francisco 94124	23 RAB Meeting 6-8:00 Dago Mary's Building 916 San Francisco 94125	24	25	26
27	28	29 Basewide Groundwater Quarterly Sampling Ends IR02 and Metal Reef Removal Actions Begin	30	31	**Notes:**	

Hunters Point Shipyard Meeting Calendar

FEBRUARY 2005

SUN	MON	TUE	WED	THU	FRI	SAT
Notes: BCT: Base Realignment and Closure Cleanup Team BEC: BRAC Environmental Coordinator MBCO: Membership Bylaws and Community Outreach RAB: Restoration Advisory Board ROSES: Residents of the Southeast Sector TtEMI: Tetra Tech EM Inc.		1 Economic Subcommittee Meeting 2:30-4:30 Anna Waden Library, 5075 Third Street, San Francisco 94124	2	3 BEC Presentation to the ROSES group Southeast Community College 1100 Oakdale Ave, San Francisco, 94124	4	5
6	7 Continued Aerobic Bioremediation Pilot Study at IR25	8 BCT Landfill Site Walk	9 MCBO Subcommittee Meeting 6:30-8:00 p.m. Anna Waden Library, 5075 Third Street, San Francisco 94124	10	11	12
13	14 Landfill Stormwater Samples Collected	15 Landfill Gas Monitoring	16	17	18	19
20	21	22 BCT Meeting 10–3 TtEMI 135 Main Street, Suite 1800 San Francisco 94105 Lowman RAD/Risk Review Subcommittee 3--5 Anna Waden Library, 5075 Third Street, San Francisco 94124	23 RAB Meeting 6-8:00 Dago Mary's Building 916 San Francisco 94125	24	25	26
27	28	**Notes:**				

Recent Completed Review Periods
Document Review Matrix
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes	Agency Submittal of Comments			
						EPA	DTSC	RWQCB	City of SF
1	B	RTCs for Draft Construction Summary Report	1/15/2004	TBD	Agency comments on draft RTCs linked with HHRA proposal; final CSR with RTCs planned following completion of draft TMSRA				
2	B	Draft CAP Addendum	4/15/2004	6/30/2004	Final report with RTCs pending receipt/resolution of agency comments	n/a	n/a	pending discussion with Navy	n/a
3	B	Draft Soil Gas Survey Workplan	12/23/2004	2/8/2005	Final report scheduled for 3/15/2005	1/25/2005	2/2/2005		
4	E-2	PCB Removal Action Memorandum	1/12/2005	2/17/2005	Final report scheduled for 3/21/2005	2/15/2005	2/3/2005	2/7/2005	

Notes:
* - comments deferred to other agency
n/a - not applicable
TBD - to be determined

Ongoing Review Periods
Document Review Matrix
Hunters Point Shipyard

Item	Parcel	Document Name	Submittal Date	Expected Date for Comments	Notes	Agency Submittal of Comments			
						EPA	DTSC	RWQCB	City of SF
1	F	Draft Final Validation Study Report	8/18/2004	12/1/2004	Final report with RTCs planned following resolution meeting (April 2005)	10/8/2004		received	
2	B	Draft April to June 2004 Quarterly Groundwater Monitoring Report	1/7/2005	2/7/2005	Final planned for 3/4/05 submittal				
3	C,D,E	Draft April to June 2004 Basewide Groundwater Monitoring Report	1/7/2005	2/7/2005	Final planned for 3/7/05 submittal				
4	E-2	Final December 2004 Monthly Gas Monitoring Report	2/3/2005	n/a	For information purposes only.				
5	D	Draft Removal Action Closeout Report	2/3/2005	3/22/2005	Final planned for 4/21/05 submittal				
6	E-2	Final November 2004 Monthly Gas Monitoring Report	2/10/2005	n/a	For information purposes only.				

Notes:
* - comments deferred to other agency
n/a - not applicable
TBD - to be determined

Upcoming Review Periods
Document Review Matrix
Hunters Point Shipyard

Item	Parcel	Document Name	Approximate Submittal Date	Expected Date for Comments	Notes	Agency Submittal of Comments			
						EPA	DTSC	RWQCB	City of SF
1	E-2	PCB Removal Action Work Plan	2/25/2005	45 days from submittal date					
2	C	Draft Dry Dock 4 Water Sampling Summary Report	2/28/2005	45 days from submittal date	Tentative submittal date				
3	E	Metal Reef/Slag Removal Action Implementation Work Plan	2/28/2005	45 days from submittal date	Tentative submittal date				
4	B	July to September 2004 Basewide Groundwater Monitoring Report	2/28/2005	30 days from submittal date	Final report with RTCs planned for 30 days after the comment period				
5	C, D, E	July to September 2004 Basewide Groundwater Monitoring Report	2/28/2005	30 days from submittal date	Final report with RTCs planned for 30 days after the comment period				
6	E-2	Final January 2005 Monthly Gas Monitoring Report	3/3/2005	n/a	For information purposes only.				
7	E	Workplan for Parcel E IR-02 Removal Action	3/7/2005	45 days from submittal date	Tentative submittal date				
8	B	Final Soil Gas Survey Workplan	3/15/2005	n/a	For information purposes only.				
9	B	RTCs Groundwater Evaluation Technical Memorandum	3/16/2005	n/a	For information purposes only.				
10	E-2	Final Landfill Gas (LFG) Removal Action Close-out Report with RTCs	3/17/2005	n/a	For information purposes only.				
11	B	RTCs Construction Summary Report (CSR) Addendum (sites not included in CSR I)	3/18/2005	n/a	For information purposes only.				
12	E-2	RTCs PCB Removal Action Memorandum	3/21/2005	n/a					
13	E-2	Final February 2005 Monthly Gas Monitoring Report	3/31/2005	n/a	For information purposes only.				
14	C	RTCs Dry Dock 4 Caisson Removal Water Sampling Field Work/Report	4/14/2005	n/a	For information purposes only.				
15	E	Draft Shoreline Characterization Technical Memorandum	4/15/2005	45 days from submittal date	For information purposes only.				
16	D	Draft Parcel D HPS CAP (non-FFA Task)	5/3/2005	45 days from submittal date	Tentative submittal date				
17	B	October to December 2004 Basewide Groundwater Monitoring Report (Annual Report)	5/20/2005	30 days from submittal date	Tentative submittal date				
18	C,D,E	October to December 2004 Basewide Groundwater Monitoring Report	5/20/2005	30 days from submittal date	Tentative submittal date				

2005 Parcel B Soil Gas Survey

Hunters Point Shipyard

BCT Meeting

February 22, 2005

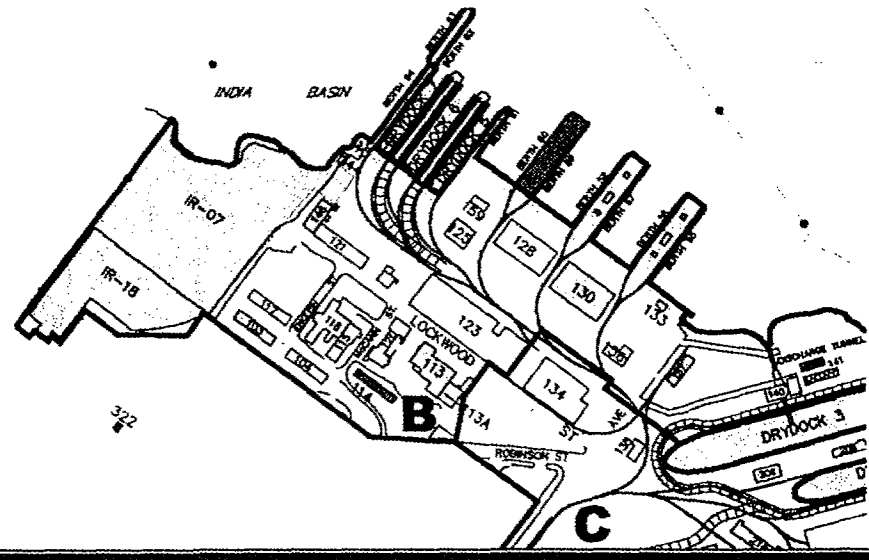
Overview

- Purpose – Investigation objectives
- Methods – Proposed changes in response to comments
- Schedule

Purpose

- Collect soil gas data to support the design of remedial alternatives in TMSRA
  - —Determine if characterization of landfill gas generation / migration is required
- *Not* to characterize a landfill or gas generation / migration from a landfill

Parcel B - Location



Phase 1 - Pre-Field Modify/Bias Sampling Grid

- Modify/bias grid based on
  - Historic structures
  - Utility corridors
  - Site excavations
  - Proposed end use
- Adjust grid based on results

Phase 1 - In-Field Modify/Bias Sampling Grid

- Walk-Over Survey
  - Methane monitoring
    - ✓ GEM 2000
  - VOC monitoring
    - ✓ Photoionization Detector (PID)
- Adjust grid based on results

Install Phase 1 Temporary Gas Probes

- Installed to a depth of 5 ft or less (above high water table)
  - 4 to 6 inch probes
  - Filter sand
  - Tubing to surface with stopcock
  - Bentonite seal in annular space to surface
  - 110 ft. centers
- No gas probes installed at locations where water table < depth of 2 ft

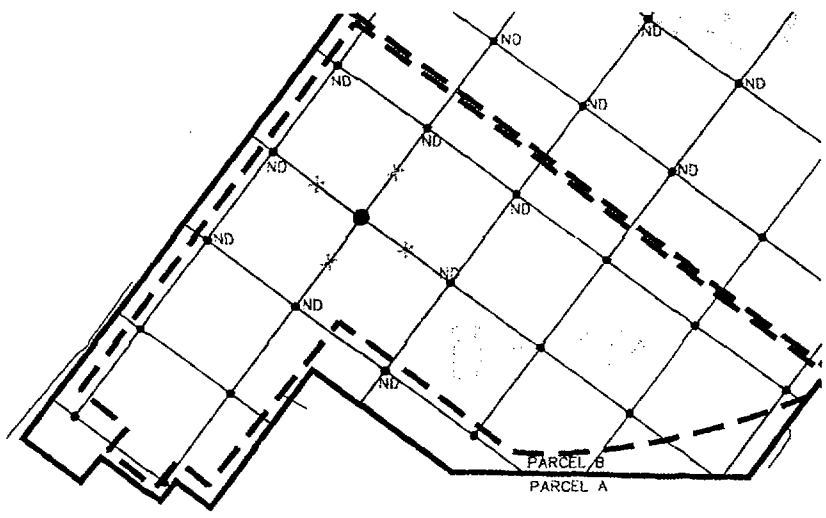
Sampling of Phase 1 Temporary Gas Probes

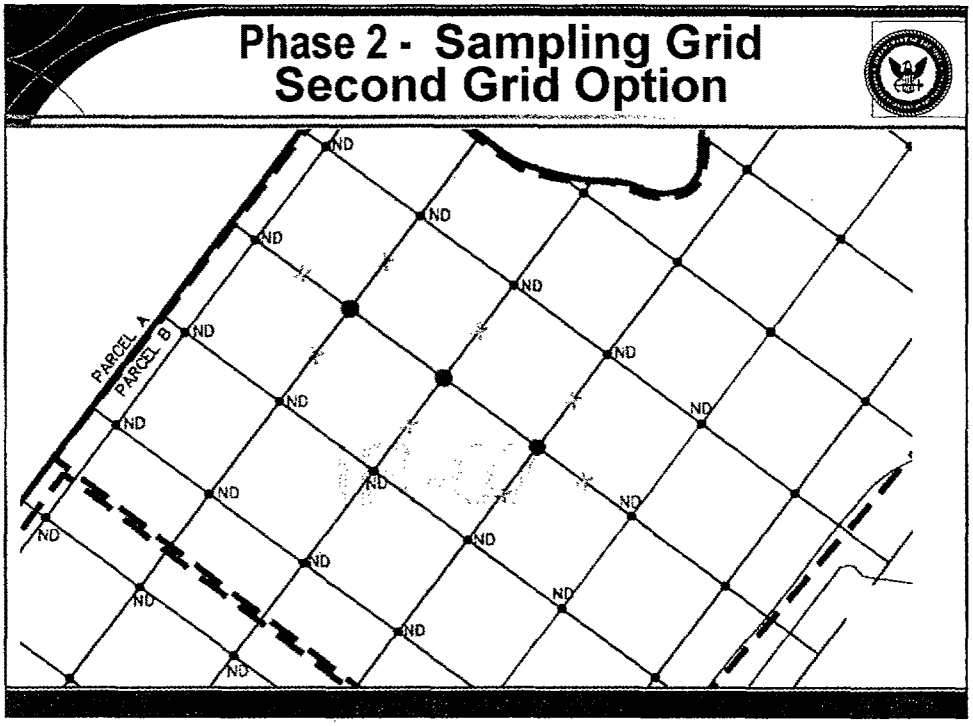
- Monitor for methane and VOCs
  - GEM 2000
  - Photoionization Detector (PID)
- Confirmation sampling
  - 20% of gas probes, select highest detections and some non-detects
  - Field laboratory
- Leak test
  - Same probes as confirmation samples

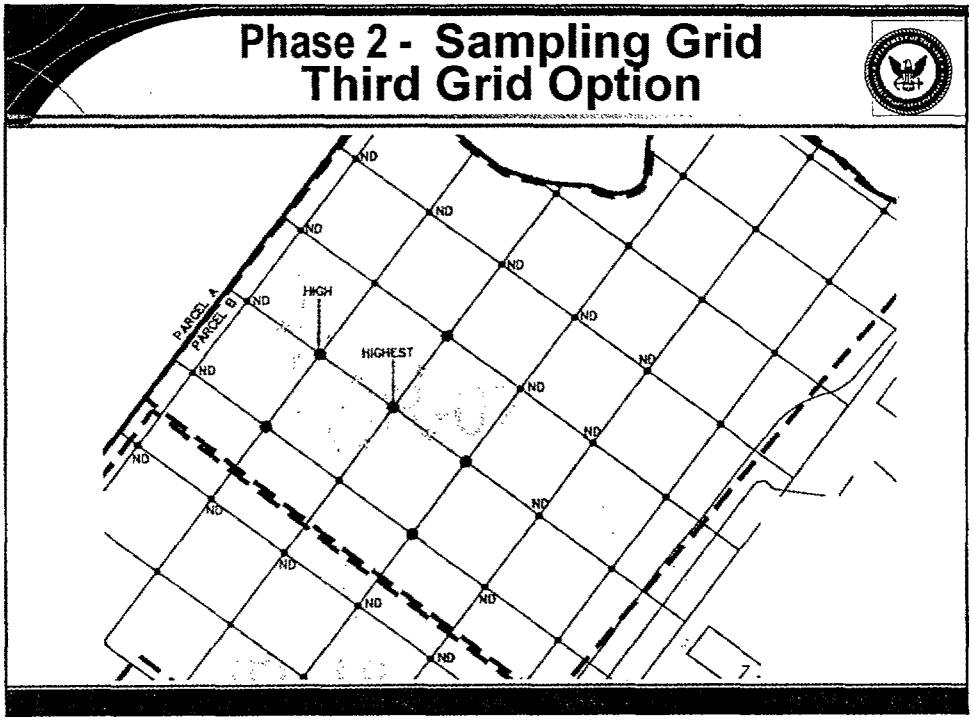
Phase 2
Sampling Grid

- Identify extent of methane detections
- Implemented immediately following Phase 1
- Three possible sampling grid options

Phase 2 - Sampling Grid
First Grid Option




Phase 2 - Sampling Grid
Second Grid Option
PARCEL A
PARCEL B
ND


Phase 2 - Sampling Grid
Third Grid Option
PARCEL A
PARCEL B
HIGH
HIGHEST
ND

Schedule Modification

- Site mobilization changed to end of April
  - Changed to miss rainy season
  - Further delay start date for significant rain

Summary of Proposed Changes

- Sample grid placement
  - Modify/bias for site history, end use, and walk-over survey
- Walk-over survey
- Add VOC monitoring
- Soil gas probe method
  - Temporary soil gas probes
  - Include leak testing
- Schedule
  - Start changed to late April to miss rainy season

Questions ?

2005 Parcel E Shoreline Removal Actions

Hunters Point Shipyard

BCT Meeting

February 22, 2005

Presentation Objective

Objective:

- Familiarize BCT members with the field approaches for the upcoming shoreline removal actions
- Solicit timely comments because field work must be completed by early autumn 2005

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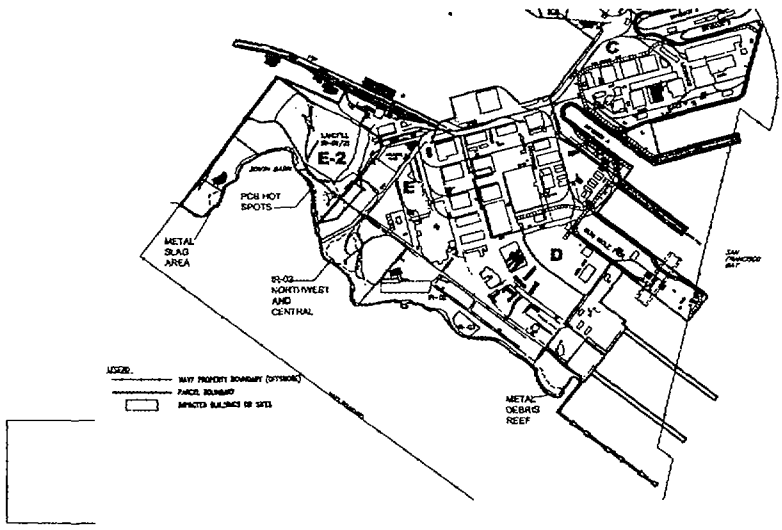
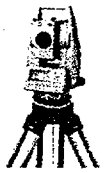
Presentation Topics

- Common and site-specific TCRA field approaches for:
  - Metal Debris Reef/Metal Slag Areas (MDR/MSAs)
  - PCB Hot Spots
  - IR-02 Northwest and Central
- Timelines

MDR/MSA, PCB Hot Spots, IR-02 NW and Central Site Layout



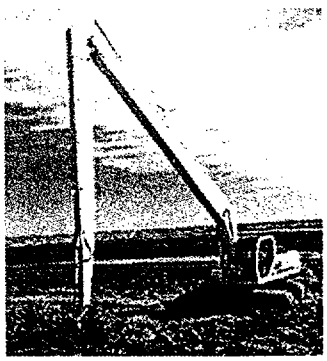
Common Approaches



- Preparatory activities and meetings
- Environmental resource surveys
- Clearing of vegetation
- Geophysical surveys
- Land surveys

Common Approaches (continued)

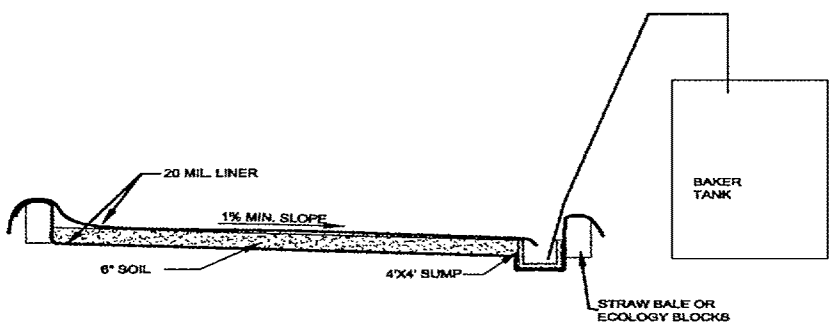
- Radiological surveys
- Identification and removal of radioactive material
- Road construction
- Mobilization of heavy equipment
- Pad construction



Pad Construction Details

- Examples of pads
  - Dewatering/radiological screening pad
  - Large debris pad
  - Decontamination pad
- Construction details
  - Clear area of rocks, debris
  - Layer 1: 20-mil HDPE or PVC liner
  - Layer 2: 6-inches of soil
  - Layer 3: 20-mil HDPE or PVC liner
  - Berm, sump and Baker tank

Pad Construction Details Schematic

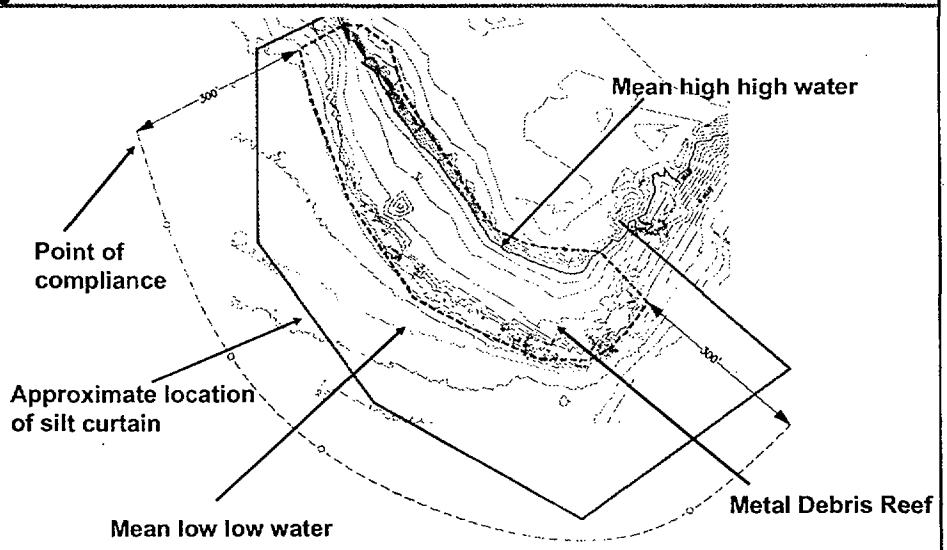


Site-Specific Approach MDR/MSA

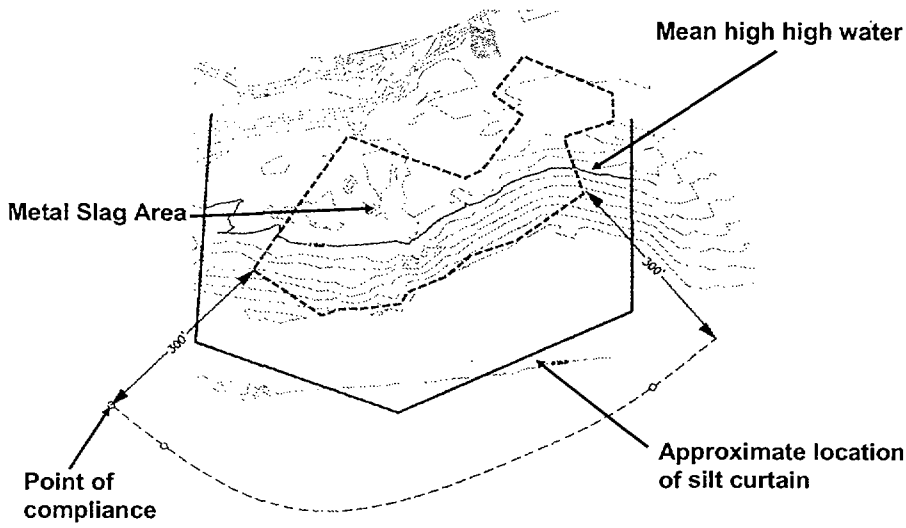
Objective: Remove metal slag and debris associated with radiological contamination, address incidental non-radiological contamination, and restore site.

- Protective environmental measures:
  - Silt curtain
  - BMPs to prevent water run-off
  - Water quality monitoring
  - Air monitoring
- Excavation activities
- Site restoration
- Timeline

Protective Measures – MDR Silt Curtain

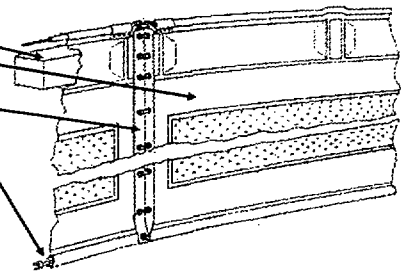


Protective Measures – MSA Silt Curtain

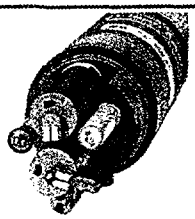


Silt Curtain / BMPs

- PVC coated floats
- Geotextile fabric screens
- Double sewn seems
- Chain ballast with connectors
- BMPs – silt fence on land



Water Quality Monitoring

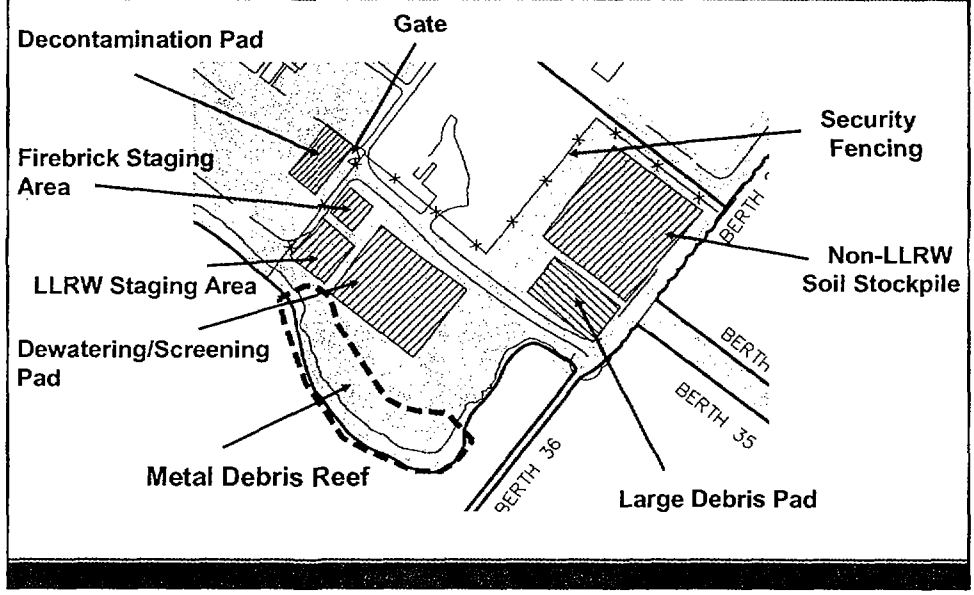


- Baseline 5-day prior to excavation
- Daily during excavation
- Point of compliance about 300 feet from shoreline (bayside of silt curtain)
- Point of compliance moves with excavation
- Parameters
  - Dissolved oxygen (5 mg/L)
  - pH (6.5 – 8.5)
  - Turbidity
  - Gamma radiation

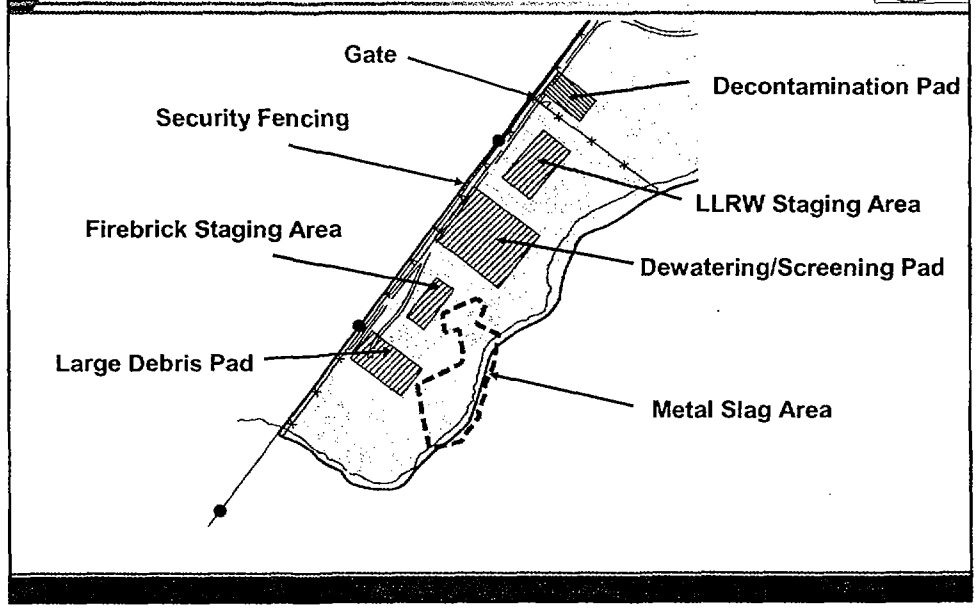
Air Monitoring

- Purpose
  - Ensure effectiveness of dust control measures
  - Measure occupational exposure
  - Personal protective equipment
  - Evaluate need for respiratory protection
  - Ensure zero off-site impacts
- *Will include windsock*

Excavation Activities - MDR Site Layout



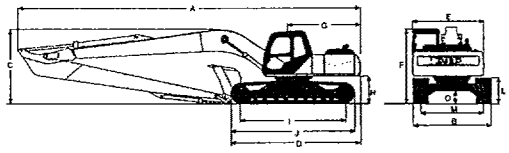
Excavation Activities - MSA Site Layout



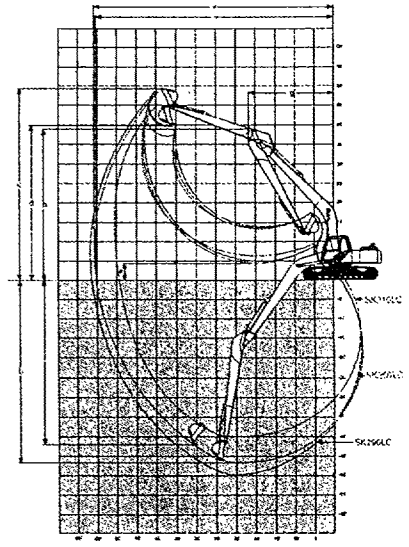
Excavation Activities

- Approximate excavation volume 8,500 cy at MDR
- Approximately 5,500 cy at MSA
- Excavation method
  - Use long reach excavator
  - Excavate unsaturated soil in 12-inch lifts
  - Radiological survey/removal of radioactive material
  - Excavate another 12-inch lift
  - Once soil becomes saturated, excavate to total planned depth

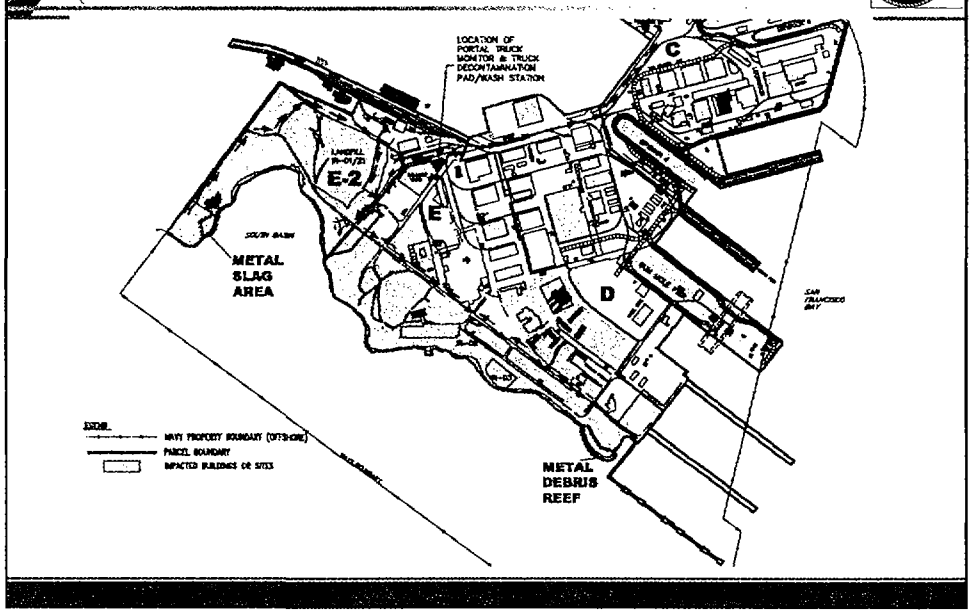
Excavation Activities - Excavator



- Long reach excavator
- 60 foot reach
- 50 foot depth
- Other equipment available with similar capabilities

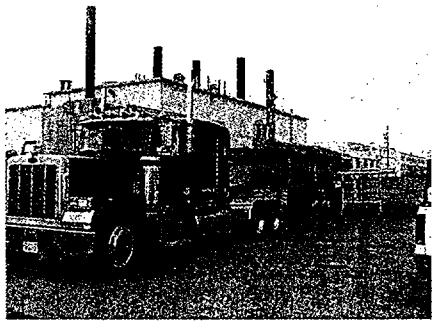


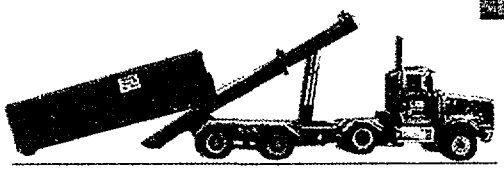
Traffic Routes - Non-Radiological Debris & Waste



Excavation Activities - Trucks

- Non-radiological material from MSA transported to stockpile at MDR
- Transported in covered trucks
- Roll-off bins for other material



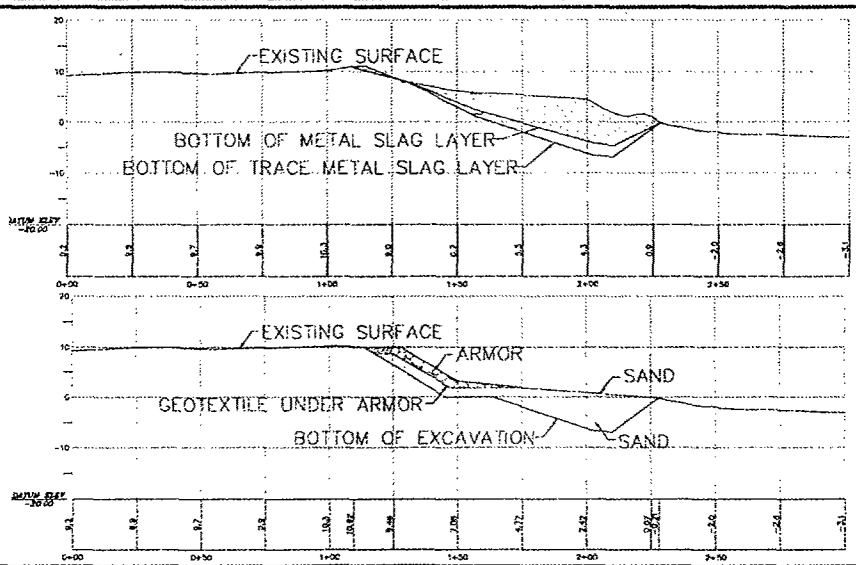


Site Restoration

Salicornia Virginica

- **Objectives**
  - **No net loss of wetlands/floodplains**
  - **Support/protect habitats**
  - **Control vectors that pose risk**
- **Wetlands area at MDR – ~ 0.5 acre**
- **Wetlands area at MSA – ~ 1.0 acre**

Site Restoration - MDR



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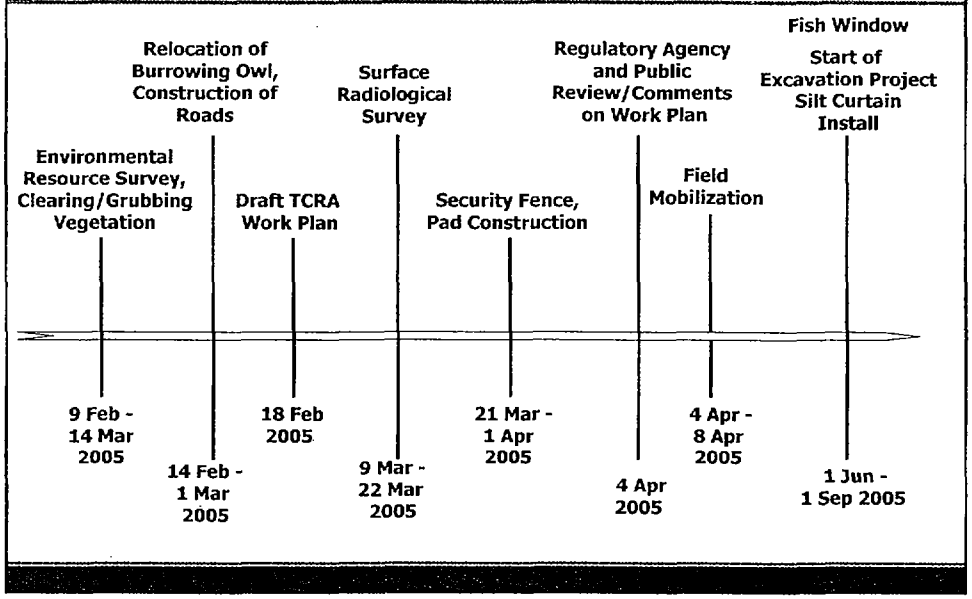
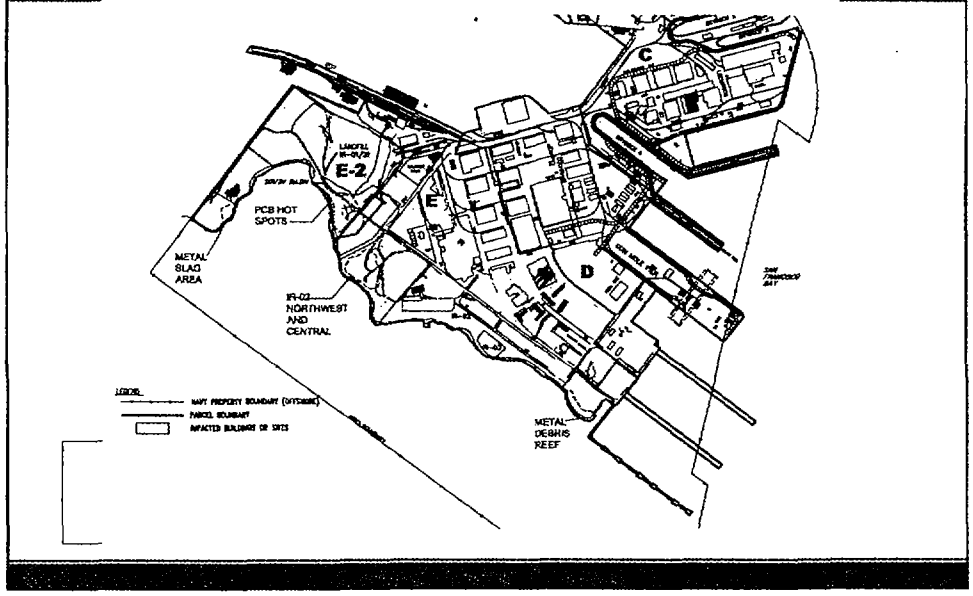
Timeline MDR/MSA Pre-Excavation Activities



PCB Hot Spot



Site-specific Field Approach PCB Hot Spots

Objective : Removing PCB, TPH, incidental radioactive material and debris

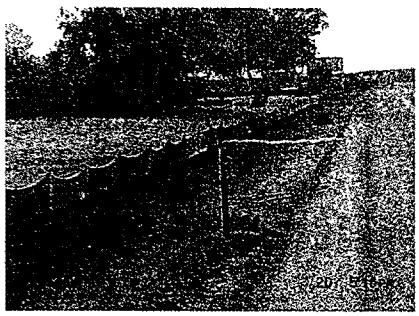
- Pre-excavation PCB characterization sampling to further delineate the excavation boundary
- Protective environmental measures:
  - BMPs using sandbag berms and/or silt fences
  - Air monitoring
  - Dust control measures
- Well destruction
- Excavation activities
- Site restoration
- Well replacement

Pre-Excavation Characterization

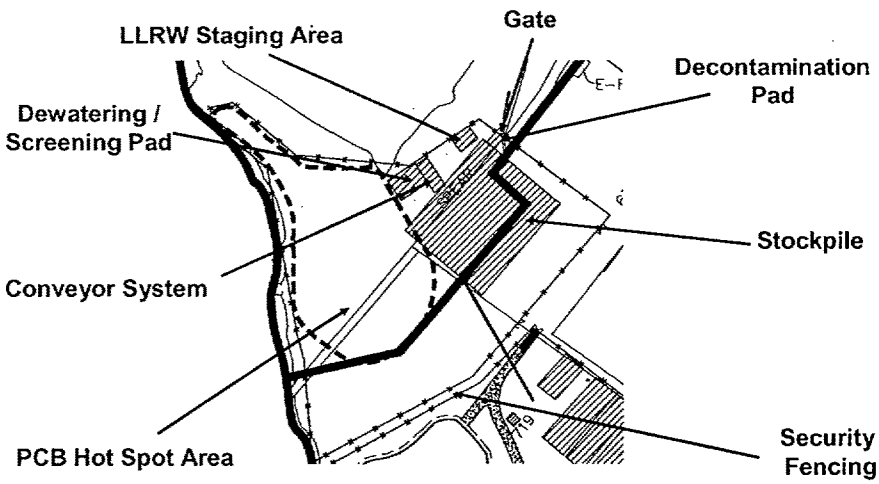
- The proposed pre-excavation site boundary encompasses approximately 3.5 acres
- Further delineate the lateral extent of PCB contamination
- Set 25 foot x 25 foot grid
- Samples for PCBs collected from 0 to 6 inches and 30 to 36 inches
- Screen for radiological contamination
- Analyze samples (10% to analytical lab)
- Identify final footprint of excavation

Protective Environmental Measures

- Sandbag berm or silt fence covering all four sides
- Air monitoring
  - Dust
  - Landfill gas
  - High volume air sampling
  - Industrial hygiene
- Windsock
- Mitigate potential off-site impacts



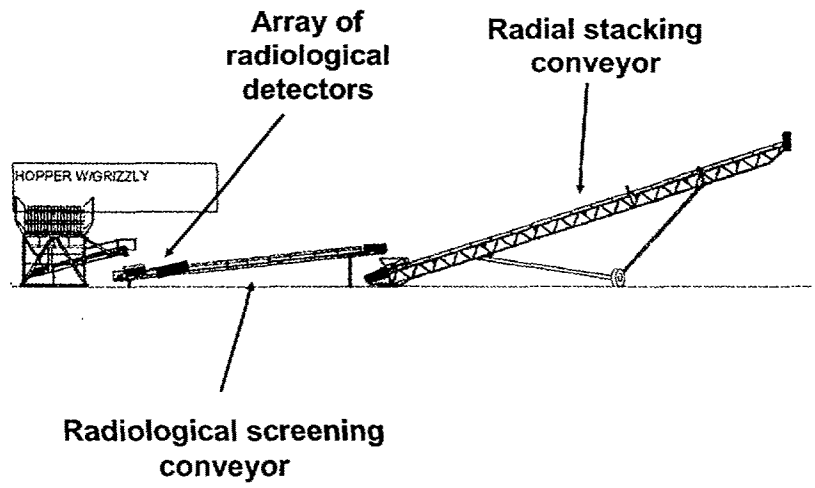
Excavation Activities - Site Layout



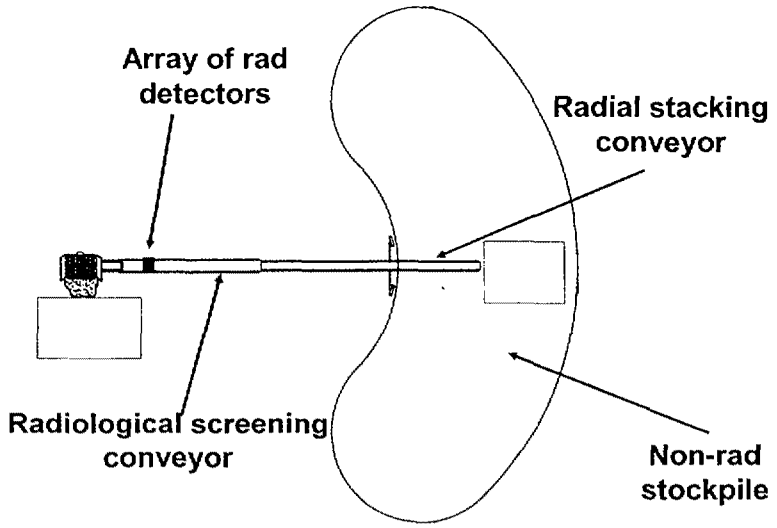
Excavation Activities

- Approximate excavation volume 20,000 cubic yards
- Excavation method
  - Excavate unsaturated soil in 12-inch lifts
  - Radiological survey/removal of radioactive material
  - Excavate another 12-inch lift
  - Repeat to a depth of 3 feet
  - Excavate PCB, TPH and radiological material to 10 feet or Bay Mud
- Secondary radiological screening of soil using conveyor system

Excavation Activities – Conveyor System



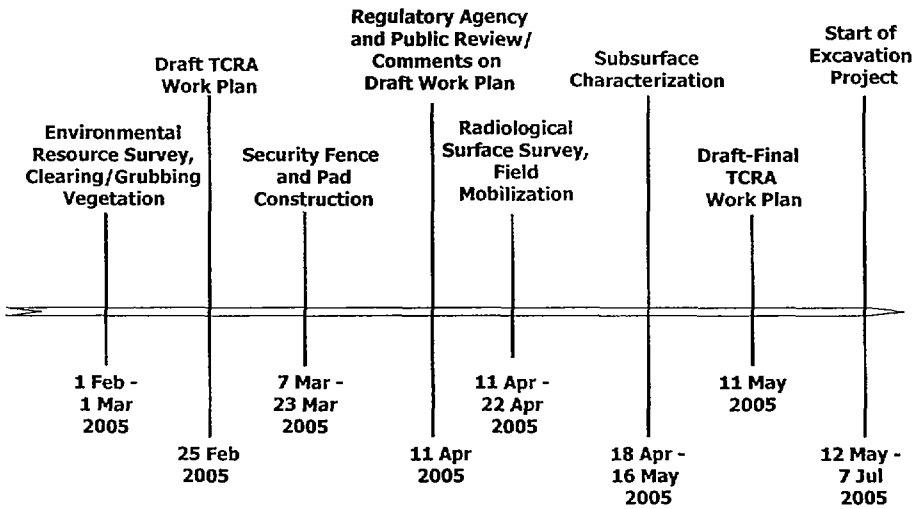
Excavation Activities – Conveyor System



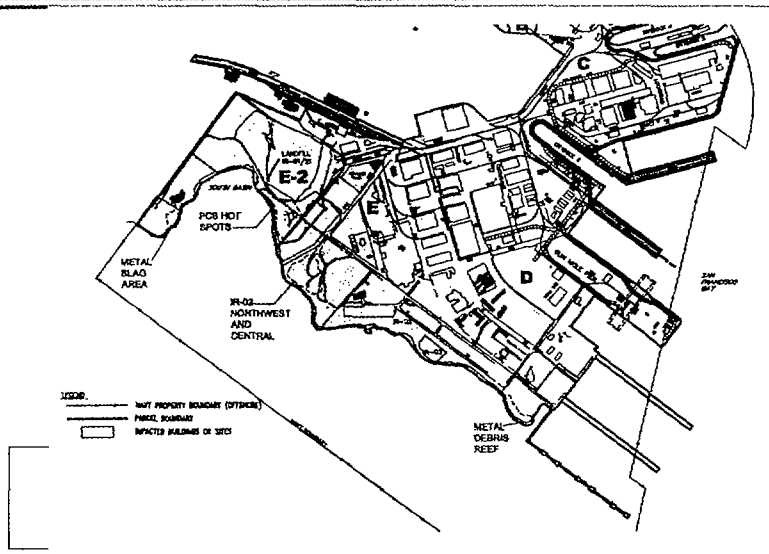
Site Restoration

- Backfill placement to grade
  - Geotextile
  - Fill material from BART pile, or clean import material
  - 12-inch lifts, compacted (except final 6-inches)
  - Topographic survey
- Reseeded with native vegetation
- Well replacement

Timeline PCB Hot Spot Pre-Excavation Activities



IR-02 Northwest & Central

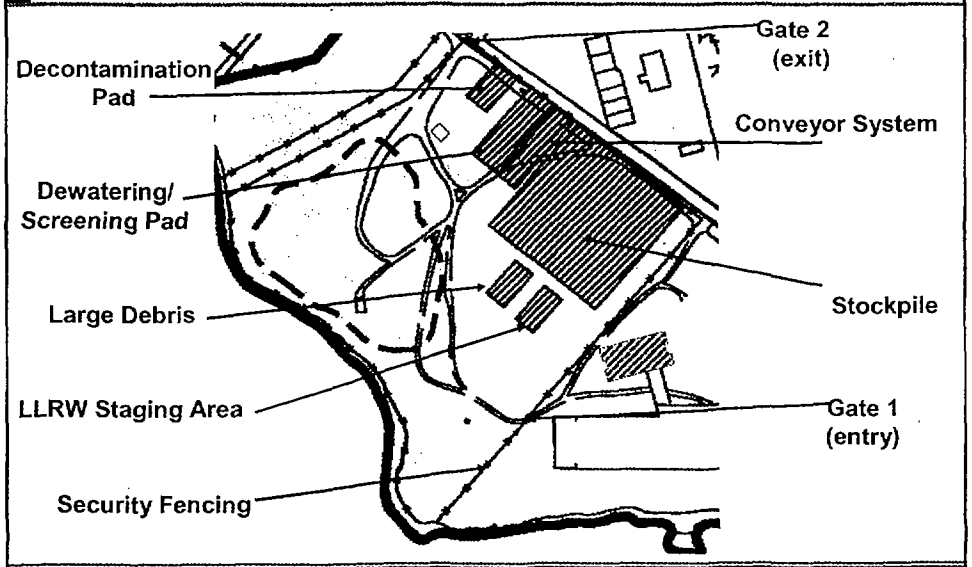


Site-Specific Approach IR-02 Northwest & Central

Objective: Remove radioactive material and debris

- Protective environmental measures:
  - Sandbag berm and/or silt fence covering all four sides
  - Air monitoring
  - Dust control measures
- Well destruction
- Excavating activities
- Site restoration
- Well replacement

Excavation Activities – Site Layout



Excavation Activities

- Approximate excavation volume 44,000 cubic yards
- Excavation method
  - Excavate unsaturated soil in 12-inch lifts
  - Radiological survey/removal of radioactive material
  - Segregate soil with petroleum/PCB staining
  - Excavate another 12-inch lift
  - Repeat to a depth of 10 feet or Bay Mud is reached
  - Excavate radiological material
- Secondary radiological screening of soil using conveyor system

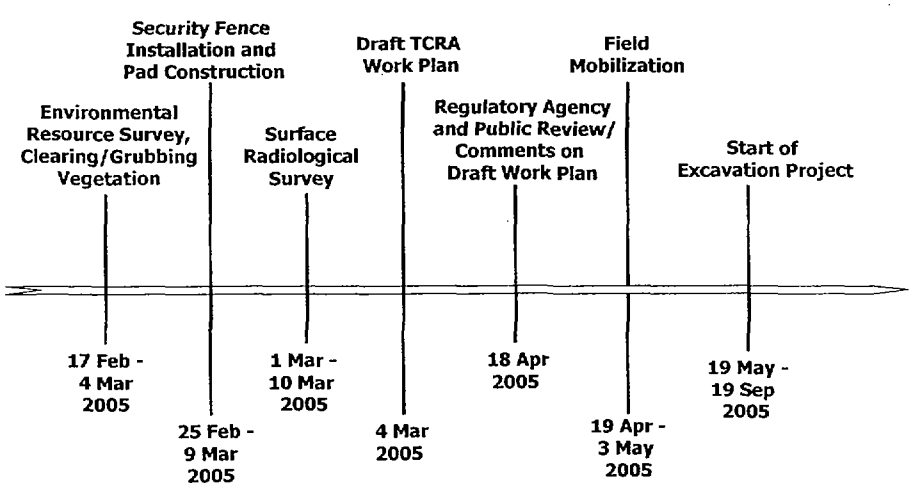
Stockpile Management

- Stockpile containment pad similar to screening/debris pads
- Excavated soil from each of the 12-inch lifts to be segregated into separate stockpiles
- Stockpiled soil to be covered with liner at end of each work day

Site Restoration

- Backfill placement and compaction
  - Geotextile
  - Backfill with non-radiological excavated soil
  - Fill material from BART pile or clean import material as needed (estimated top 3 feet)
  - 12-inch lifts, compacted (except final 6-inches)
  - Topographic survey
- Reseeded with native vegetation
- Well replacement

Timeline IR-02 Pre-Excavation Activities



Next Step

Review and Comment on:

- Draft Work Plan, Revision 1 Metal Debris Reef and Metal Slag Areas (Comments by 4 April 05)
- Draft Work Plan, Revision 1 PCB Hot Spots (11 April 05)
- Draft Work Plan, Revision 1 IR-02 Northwest and Central (18 April 05)

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Parcel E-2 Landfill Gas Update for February 2005

Hunters Point Shipyard
BCT Meeting
February 22, 2005

Topics

- Monitoring locations and parameters
- Summary of January 2005 Results
- Trends over previous 12 months
- PID Readings vs. Laboratory Results
- Active Extraction Schedule
- EPA Discuss Split Sampling Results

Monitoring Locations

- 32 GMPs
  - 14 Barrier Wall and Landfill Boundary (five passive vents are also monitored)
  - 5 UCSF Compound
  - 13 Crisp Avenue
- On-site Structures
  - Groundwater Extraction Well Vaults (24 total: 18 extraction well vaults, 6 electrical vaults)
  - 2 Catch Basins
- UCSF Compound
  - Building 830 Crawl Space
  - Surface scans at 3 locations

Parameters Monitored

Parameter	Units	GMPs	Structures	Surface
Methane	percent, percent LEL	X	X	X
Background NMOCs	parts per million	X	X	X
NMOCs	parts per million	X	X	X
CO_2	percent	X	X	X
O_2	percent	X	X	X
Soil Gas Pressure	inches water	X		

In addition, temperature and barometric pressure are recorded at the meteorological station.

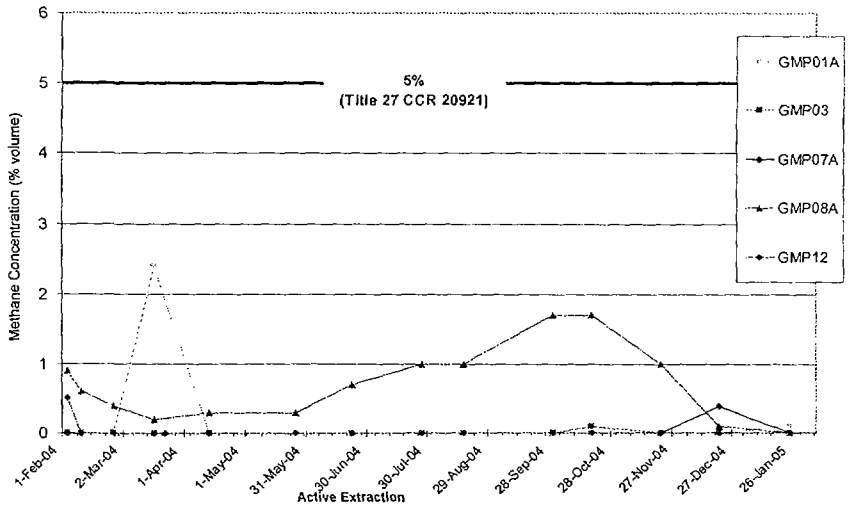
Summary of Monitoring Results

- January 25, 2005 monitoring results indicate methane levels are below regulatory requirements:
  - below 5% in all GMPs and ambient air locations
  - below 1.25% in all on-site structures
- Methane was not detected at any Crisp Avenue GMPs.
- Methane was detected at one fence-line GMP (GMP01A) at 0.1% and at one UCSF GMP (GMP24) at 0.2%.
- NMOCs were well below action levels (5 ppm at on-site structures and utilities, 500 ppm at GMPs).
- Temporary power (via generator) continues to be provided for the control system, pending installation of a new power pole.

Monitoring Results – January 2005

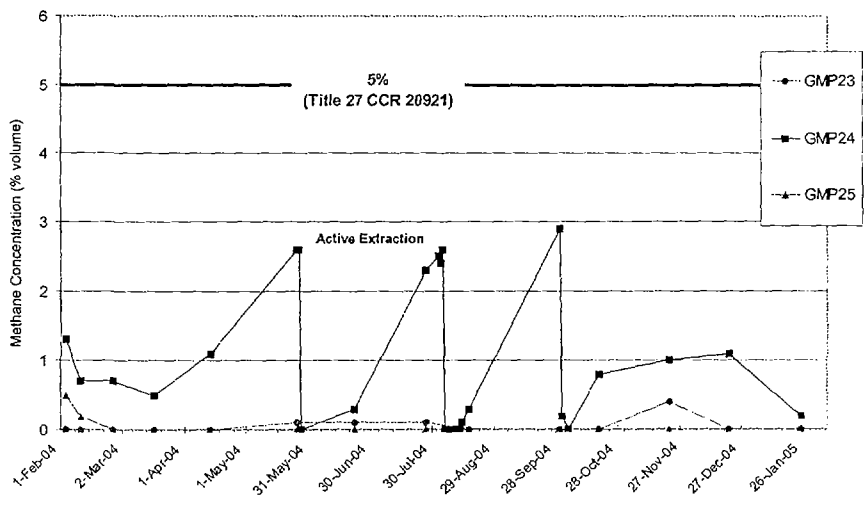
System	Methane	NMOCs	Action
Crisp Ave. GMPs	ND	**< 1 ppm**	No action
On-site Structures	**< 1.25** (Range 0–0.7%)	**< 1 ppm**	No action
UCSF Compound	**< 2.5% all GMPs** (GMP24 = 0.2%)	**< 500 ppm** (GMP22 = 7.7) (GMP23 = 14.5) (GMP24 = 25.2)	No action
Building 830	ND	**< 1 ppm**	No action
Fence Line GMPs	**< 2.5% all GMPs** (GMP01A = 0.1%)	**< 1 ppm**	No action
Control System	Range 0–30.9%	**< 1 ppm at effluent**	Active extraction at PV-02. Passive at PV-01 & PV-03 thru PV-05

Methane Concentrations at Fence Line GMPs

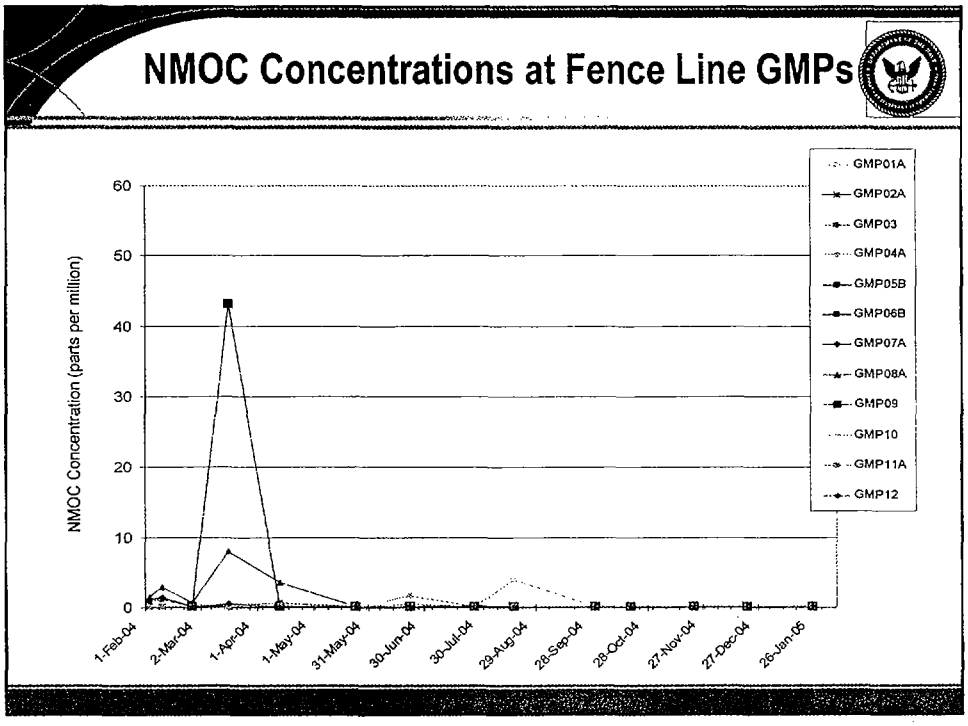


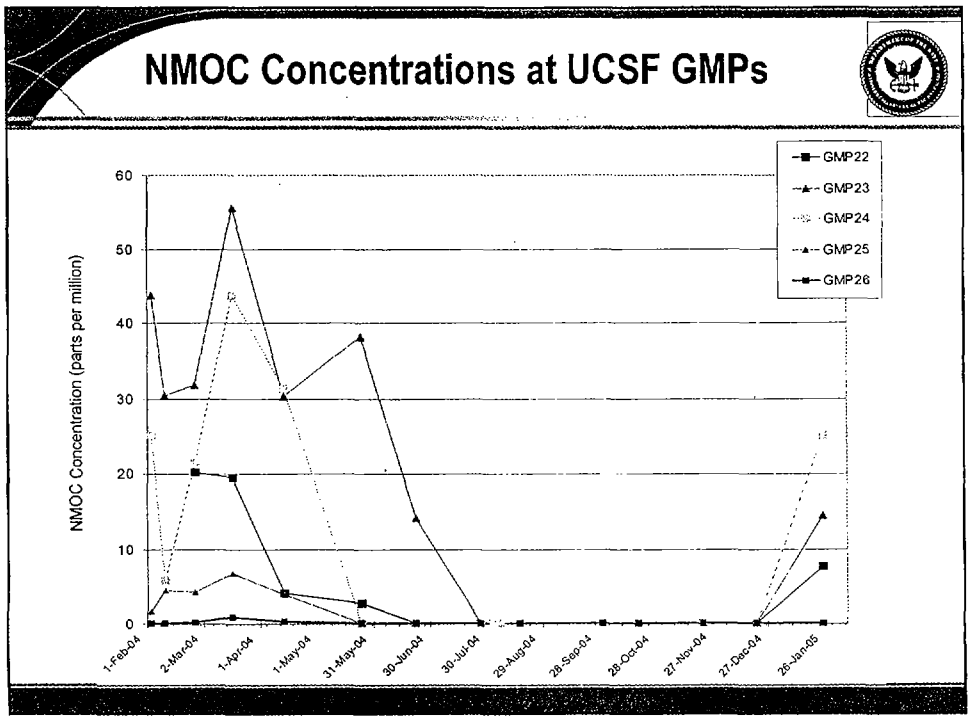
Methane was not detected at GMPs 02A, 4A, 5B, 6B, 09A, 10A, and 11A. These GMPs are not plotted for the sake of clarity.

Methane Concentrations at UCSF GMPs

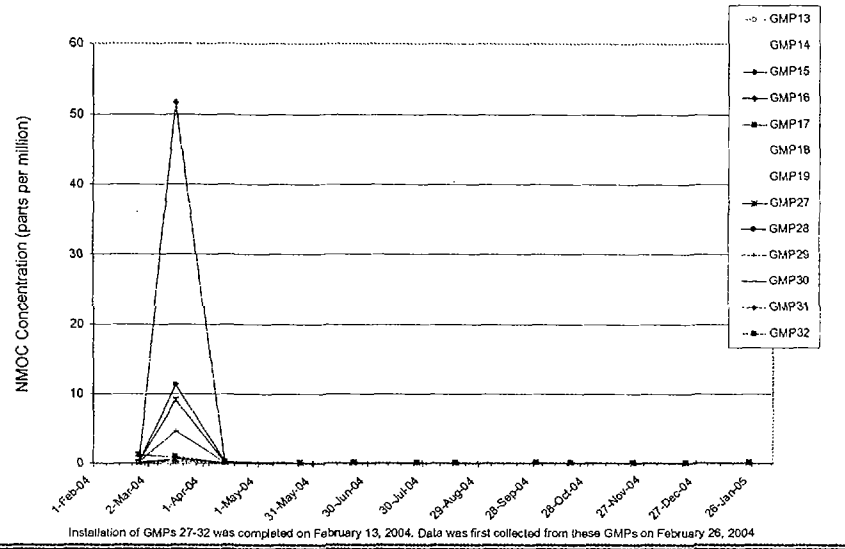


Methane was not detected at GMPs 22 and 26. These GMPs are not plotted for the sake of clarity.


NMOC Concentrations at Fence Line GMPs
NMOC Concentration (parts per million)
60
50
40
30
20
10
0
1-Feb-04
2-Mar-04
1-Apr-04
1-May-04
31-May-04
30-Jun-04
30-Jul-04
29-Aug-04
28-Sep-04
28-Oct-04
27-Nov-04
27-Dec-04
26-Jan-05
GMP01A
GMP02A
GMP03
GMP04A
GMP05B
GMP06B
GMP07A
GMP08A
GMP09
GMP10
GMP11A
GMP12

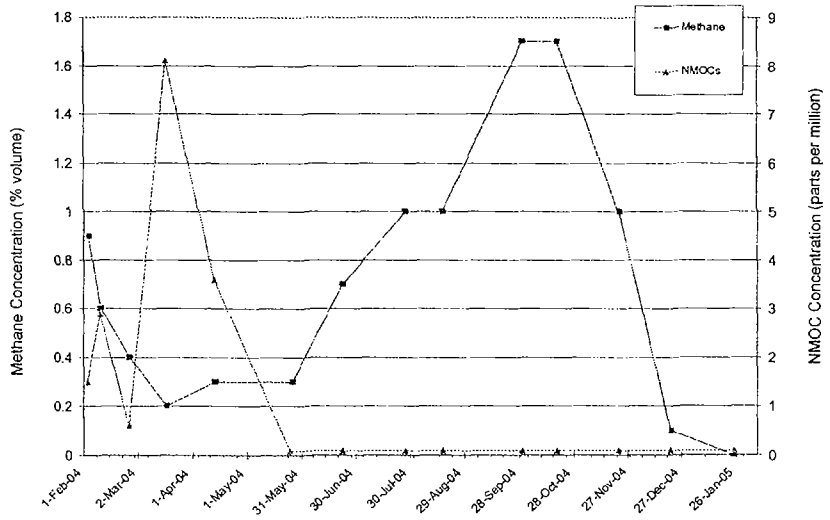

NMOC Concentrations at UCSF GMPs
NMOC Concentration (parts per million)
60
50
40
30
20
10
0
1-Feb-04
2-Mar-04
1-Apr-04
1-May-04
31-May-04
30-Jun-04
30-Jul-04
29-Aug-04
28-Sep-04
28-Oct-04
27-Nov-04
27-Dec-04
26-Jan-05
GMP22
GMP23
GMP24
GMP25
GMP26

NMOC Concentrations at Crisp Ave GMPs



Installation of GMPs 27-32 was completed on February 13, 2004. Data was first collected from these GMPs on February 26, 2004

Methane and NMOCs vs. Time for GMP08A



Active Extraction Schedule

- Currently
  - 1 Week Prior to Sampling
- Alternatives
  - 2 continuous days each week (approx. 40 hours)
  - 2 times weekly – Monday & Friday (20 hours each)
  - One week at the beginning or middle of month

PID vs. Laboratory Results

- Accuracy
- Calibration
- New PID (10e-6 V)
- Laboratory Results were in ppbV
  - Sum of Lab-detected compounds = 6 ppmV
- Action level for NMOCs is 500 ppm in all GMPs