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NSWC CRANE
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DEPARTMENT OF THE NAVY

CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
300 HIGHWAY 361
CRANE, INDIANA 47522-5000

IN REPLY REFER TO:

5090
Ser 095/7210

24 NOV 1997

MEMORANDUM

From: Installation Co-Chair
To: Restoration Advisory Board Members
Subj: **RESTORATION ADVISORY BOARD (RAB) MEETING**
Encl: (1) October 28, 1997 RAB Meeting Minutes

Crane Division, Naval Surface Warfare Center (NAVSURFWARCENDIV Crane) conducted, on center, a RAB meeting on October 28, 1997. Enclosure (1) is a copy of the minutes from that meeting.

The next NAVSURFWARCENDIV Crane RAB meeting is scheduled for Tuesday, January 27, 1997. The meeting will take place on Center at Building 3241 in conference room B-C from 1200 to 1600. A reminder and an agenda will be sent out approximately two weeks prior to the meeting. Your ideas and input for additional topics to, or presentations for, the agenda would be especially welcome. Currently, the proposed agenda for the January meeting includes:

- Presentations concerning results of the pilot scale contaminated soil operations and progress of full scale plans for the Bioremediation Facility
- Status of treatability study being performed for dye contaminated water generated at the Dye Burial Ground (SWMU 02/11) during interim measures cleanup
- Continued comment and revision of the NAVSURFWARCENDIV Installation Restoration Community Relations Plan
- An update on the NAVSURFWARCENDIV Crane Risk Assessments, including the progress of the Indiana Bat surveys
- Update on the progress of NAVSURFWARCENDIV Subpart X Permit Renewal

For questions, comments, or information, please contact NAVSURFWARCENDIV Crane POC, Ms. Christine D. Freeman, Code 09511, telephone 812-854-4423.

James M. Hunsicker, Director,
Environmental Protection Department

Subj: RESTORATION ADVISORY BOARD (RAB) MEETING

Distribution:

ADMINISTRATIVE RECORD

COMMUNITY MEMBERS

T. Ellis

J. Myers

S. Nally

IDEM (S. Riddle)

IDEM (M. Timmermann)

MK (D. Beall)

MK (S. Cory)

MK (T. Dogal)

MK (D. Miller)

MK (M. Wilson)

NAVSEASYSKOM (SEA 00T)

NAVSURFWARCENDIV Crane (00)

NAVSURFWARCENDIV Crane (09)

NAVSURFWARCENDIV Crane (095)

NAVSURFWARCENDIV Crane (0910)

NAVSURFWARCENDIV Crane (0911)

NAVSURFWARCENDIV Crane (0914)

NAVSURFWARCENDIV Crane (OC)

NAVSURFWARCENDIV Crane (OICC)

NAVSURFWARCENDIV Crane (PA)

NAVSURFWARCENDIV Crane (PPO)

SIOCN-SF (D. Johnson)

SOUTHNAVFACENGCOM (CODE 18011)

SOUTHNAVFACENGCOM (CODE 186)

SOUTHNAVFACENGCOM (CODE 1864)

USEPA Region V (DRP-8J)

USCEWES (GG)

USCEWES (GG-YH)

Restoration Advisory Board Meeting Minutes October 28, 1997

Crane Division, Naval Surface Warfare Center (NAVSURFWARCENDIV Crane) conducted a Restoration Advisory Board (RAB) Meeting, Tuesday, October 28, 1997, on Center in Crane, IN, at Building 3241 in conference room B-C. From 1210 to 1440 hours an informal meeting was called to order. See Attachment (1) for the list of attendees. Attendees were given the opportunity to ask questions during and after each presentation. Mr. Jim Hunsicker, RAB Installation Co-chair and Environmental Protection Department Manager opened the meeting. Mr. Hunsicker addressed the fact that the agenda had changed due to unforeseen circumstances. Mr. Hunsicker welcomed CAPT William Shotts and all in attendance introduced himself or herself. Mr. Hunsicker gave CAPT Shotts the floor. CAPT Shotts introduced himself and welcomed everyone attending.

The first item on the agenda was to be presented by Mr. Tim Callahan from the Public Affairs Office. He was to address the changes to the Installation (IR) Program Community Relations Plan (CRP) for NAVSURFWARCENDIV Crane. Mr. Callahan was unable to attend; therefore, this discussion will take place at the next RAB meeting.

Mr. Hunsicker then introduced Mr. Paul Freed, of the NAVSURFWARCENDIV Crane Environmental Department, who presented information concerning the Risk Assessment (RA) being prepared. The Human Health portion of the RA was received October 27, 1997. Mr. Freed said the Ground water compliance monitoring Quality Assurance Project Plan (QAPP) is still being written to include the lab standard operating procedures (SOP) and should be finished within two weeks. The risk numbers are required to develop methods. A lot of time has been spent reviewing past assumptions made on SOPs. This includes the removal of metal packaging prior to disposal. This action could lower the risk number because the extra metals are not reaching the environment. Metals emissions are a big issue - trying to get the most accurate levels of metals to be used in initiation compounds. Mr. Freed also touched on portions of the Ecological RA - endangered species. The Crane Army Ammunition Activity is looking at alternative technologies such as incinerators, which would remove some metal issues concerning the Ammunition Burning Grounds.

Mr. Hunsicker spoke about the \$2.5 million invested in the permit application for the Open Burning/Open Detonation Permit, which does not include analytical costs. So far it has taken seven years to get to this point. Now due to improved methods and new requirements for the QA/QC, \$400K of sampling and analysis has been redone. NAVSURFWARCENDIV Crane is hosting an OB/OD conference November 4 & 5 to present requirements to reduce future incurred costs by other facilities. Mrs. Witt-Smith relayed the fact that there is only one other OD permit in U.S.EPA Region V. She is on advisory boards for munitions and range rules. Mrs. Witt-Smith said that these rules would add to the permitting process. One point that was brought up by Mrs. Witt-Smith was that NAVSURFWARCENDIV Crane RA is more expensive than other RA because the RA is for both Corrective Action and operations.

Mr. Hunsicker opened a short discussion period before introducing Mr. Tom Brent who presented an update on the Indiana Bat food chain surveys for the NAVSURFWARCENDIV Crane Risk Assessment. Mr. Brent indicated that NAVSURFWARCENDIV Crane along with U.S. Army Corps of Engineers, Waterways Experiment Station (WES) collected insects in the area where the Indiana Bat was found in July of 1996. The study involves using both light traps and a malaise trap and was conducted three nights each in June, July, and August of 1997. The insects were sent to an offsite laboratory where they will be sorted into aquatic and terrestrial categories, ground up, and analyzed for explosive and metals content. A cricket surrogate study will be done by WES in order to determine sample size, detection limits, and interferences. Mr. Brent indicated that, if there is a presence of contaminants in the insects, a surrogate bat will then be collected and a tissue sample from that bat studied. Mrs. Witt-Smith added that a second round of insect sampling might be done before the tissue sample is taken from the surrogate bat.

Mr. Hunsicker introduced Mrs. Carol Witt-Smith, who gave a short presentation concerning the OB/OD Draft Permit. The OB/OD Draft Permit includes Ammunition Burning Grounds (SWMU 03/10), Old Rifle Range (SWMU 07/09), and the Demolition Range (SWMU 06/09). Mrs. Witt-Smith went on to discuss the base program requirements and HSWA permit provisions. See Attachment (2) for slides shown during the presentation by Mrs. Witt-Smith.

Mr. Hunsicker then introduced Mr. Dave Beall, Project Manager for Morrison Knudsen Corporation (MK). Mr. Beall presented a status report for the Dye Burial Grounds Remediation (SWMU 02/11). Mr. Beall discussed background information concerning the site. Some dye was excavated to consolidate the dye and make the cap as small as possible to lower cost. The site has been covered with at least one foot of cover soil (some areas have six feet of cover soil), smooth drum rolled, and erosion matting laid down. The frac tanks and mud boxes containing the dye contaminated water were moved to two new bermed areas. The containment areas were split due to the presence of a snag tree (possible Indiana bat roosting tree) and natural drainage. Work has stopped for the winter, but daily and a more detailed weekly monitoring is being conducted to ensure that no leaks have developed in the tanks and the cover soil is not eroding. Mr. Beall also discussed the development of a weep due to the pressure of the soil and heavy machinery. The weep consisted of four gallons a day and has tapered down to less than one gallon every other day. Mr. Beall stated that MK plans to remobilize to cap the site in April to June time frame (weather dependent). Mr. Beall reported that MK is currently working with the U.S. Navy and the U.S. EPA dye experts to characterize the dye found in the water and the soil. The U.S. EPA has completed the review of the main text of the Quality Assurance Project Plan (QAPP). The U.S. EPA needs to see a sampling proposal and clarifications on some of the SOPs included in the QAPP.

After a brief break, Mr. Steve Cory, Site Quality Control Officer for MK, presented an update and overview on the status of pilot scale operations and the schedule for Full Scale operations of the Bioremediation Facility. He stated that the contaminated soil pilot study is at day 50 (of 60) for the first two piles constructed. The last pile constructed is at day 20. Mr. Cory

explained charts showing temperature, oxygen, and degradation levels for six mixes being used. These charts can be found as Attachment (3). He rationalized that mixes 1, 4, 5, and 8 would have lower temperatures than the other mixes because they contained more moisture at the start of the pile. Mr. Cory went on to explain that degradation time and cost of the amendments will decide which mix is chosen for full scale since all the mixes really could be considered successful. A question arose regarding the toxicity tests. Mrs. Witt-Smith mentioned that there were some QA extrapolation issues that needed to be agreed upon.

A general business discussion followed Mr. Cory's presentation.

- The RAB resignation of Mr. David R. Cox was announced.
- Due to the closing of the NAVSURFWARCENDIV Crane Library, the Administrative Record will be moved to B-3260 (Environmental Protection Department Building) until a more suitable location can be found.
- In a pre-RAB discussion, NAVSURFWARCENDIV Crane Office of Council made a determination that any Crane employee who wishes to represent his/her community on the RAB may do so only after clocking out. Failure to clock out would be considered a conflict of interest.
- Mrs. Teresa Ellis, RAB community co-chair, will check to see if the Bloomfield Public Library will house the OB/OD permit application temporarily during the proposed December public comment period.
- The question of changing the RAB meeting time was raised. It was felt that there could possibly be more community participation if the RAB meetings were held at a different time. Late afternoon or early evening hours were suggested as possibilities. RAB members will be polled for their opinions on this matter.

The RAB meeting was adjourned at 1440 hours.

**RESTORATION ADVISORY BOARD
MEETING ATTENDEES LIST
FOR OCTOBER 28, 1997**

NAME	TELEPHONE & FAX	ORGANIZATION REPRESENTED AND MAILING ADDRESS
Christine D. Freeman	(812) 854-4423 -4177	NSWC Crane Environmental
Carol Witt-Smith	312 886 6146 312 353 4788 Fax	U.S. EPA 77 W Jackson DRP-8J Chicago, IL 60604 WH-Smith, Car. O. EPA MAIL. EX . GOV
Jim May	mayj@ex1.wva.mil 601-634-3395	Army - mil U.S. Army Waterways Exp. Station
JAMES HUNTSICKER	854-5233 Fax 854-4177	NSWC Crane Environmental
Michelle Timmerman	571/232-3264 371/232-3403	IDEM / AWP 100 N SENATE P.O. BOX 6015 INDIANAPOLIS IN 46206-6015
Stephanie Riddle	317-308-3367 317-308-3063	IDEM / OER 100 N Senate Indpls, IN 46206
Teresa Ellis	812-324-3087 No Fax	Greene Co. Community Rep. Rt. 1 Box 353 Bloomfield, IN 47424
Steven Cory	812-854-6941 812-854-6944	Morrison Knudsen
Thomas D. Dogal	812-854-6941	MORRISON KNUDSEN
Dave Beall	812-854-6941	MORRISON KNUDSEN
CAPT Bill Stotts	812-854-1210	Crane
THOMAS J. BRENT	(812) 854-6160	CRANE ENVIRONMENTAL
Don J. Miller	(812) 854-6941 6944	Morrison Knudsen,
Jim Ferro	Fax 7563 (803) 820-7483	SOUTH NAVFACENGLCOM P.O. BOX 190010 N. Charleston, SC 29419-9010
Teresa Ellis	803 820 5582 Fax 746 5 atkinson@delco.navy.mil	SOUTH NAVFAC ENGLCOM PO Box 190010 North Charleston, SC 29419 atkinson@delco.navy.mil

BASE PROGRAM REQUIREMENTS

FACILITY DESCRIPTION

WASTE ANALYSIS (WASTE IDENTIFICATION)

SECURITY

INSPECTIONS

CONTINGENCY PLAN

PROCEDURES TO PREVENT HAZARDS

DESIGN AND OPERATION (CAPACITY)

IGNITABILITY/REACTIVITY/INCOMPATIBILITY

TRAFFIC PATTERN

LOCATION STANDARDS

TRAINING

CLOSURE PLAN

POST-CLOSURE NOTICES

CLOSURE AND POST-CLOSURE COST ESTIMATES

FINANCIAL ASSURANCE

TOPOGRAPHIC MAP

OTHER STATE AND FEDEARL LAW INFORMATION

WHAT ARE MISCELLANEOUS UNITS?

Any unit that does not meet the definition of a container, tank, surface impoundment, landfill, waste pile, land treatment unit, and incinerator.

These units include, but are not limited to:

- * Open Burning
- * Open Detonation
- * Sludge Dryers
- * Carbon Regeneration Units
- * Filter Presses
- * Can Crushers
- * Shredders
- * Conveyors

PERMITTING PROCESS

SUBMIT HAZARDOUS WASTE NOTIFICATION

**PART A APPLICATION (describes units, waste codes, capacity)
(SUBMITTED AND APPROVED)**

**PART B APPLICATION
(SUBMITTED AND REVIEWED)**

**IF PART B IS ACCEPTABLE, A DRAFT OPERATING PERMIT WILL BE
ISSUED**

**IF PART B NOT ACCEPTABLE, A DRAFT DENIAL DECISION WILL BE
ISSUED**

**DRAFT DECISION PUBLIC NOTICED (30 DAY PERIOD, 45 DAY
PERIOD WITH HEARING)**

FACT SHEET ISSUED WITH DRAFT DECISION

COMMENTS TAKEN ONLY DURING PUBLIC COMMENT PERIOD

FINAL PERMIT DECISION ISSUED

RESPONSE TO COMMENTS ISSUED WITH FINAL DECISION

**NO COMMENTS RECEIVED OR CHANGES MADE BETWEEN DRAFT
AND FINAL, EFFECTIVELY IMMEDIATELY**

COMMENTS RECEIVED, EFFECTIVE 33 DAYS AFTER ISSUANCE

33 DAY APPEAL PERIOD APPLIES ONLY TO COMMENTORS

DURATION OF PERMITS

- **ALL RGRA PERMITS HAVE A FIXED TERM NOT TO EXCEED 10 YEARS.**
- **EPA/STATES MUST REVIEW LAND DISPOSAL PERMITS EVERY 5 YEARS.**
 - **REVIEW AND NECESSARY MODIFICATION MUST CONSIDER IMPROVEMENTS IN CONTROL TECHNOLOGY AND NEW REGULATORY REQUIREMENTS.**
- **EPA/STATES CAN MODIFY ANY PERMIT AT ANY TIME WITHOUT THE APPLICANT'S CONSENT**
 - **THIS IS A DISCRETIONARY PROVISION THAT MUST GO THROUGH A FORMAL RULEMAKING BEFORE IMPLEMENTATION.**
- **PERMITS SHALL CONTAIN TERMS AND CONDITIONS DETERMINED NECESSARY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT.**

HSWA PERMIT PROVISIONS

MINIMUM TECHNOLOGY REQUIREMENTS
(new leachate monitoring regs.)

WASTE MINIMIZATION

LAND DISPOSAL RESTRICTIONS

AIR EMISSIONS

CORRECTIVE ACTION

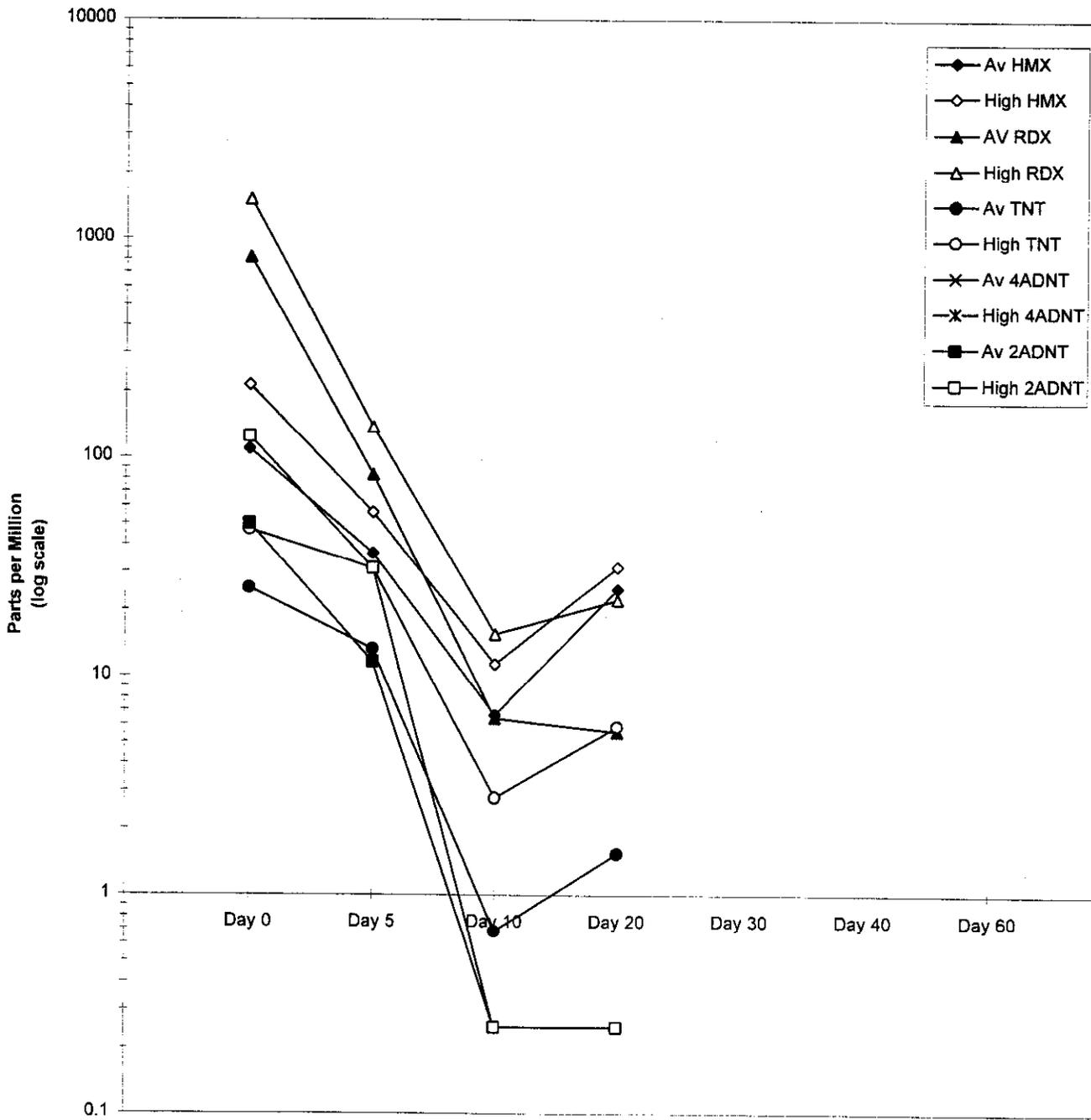
BOILER AND INDUSTRIAL FURNACE (BIF)
REQUIREMENTS

SUBPART X

TC REQUIREMENTS

Subpart W Drip Pads

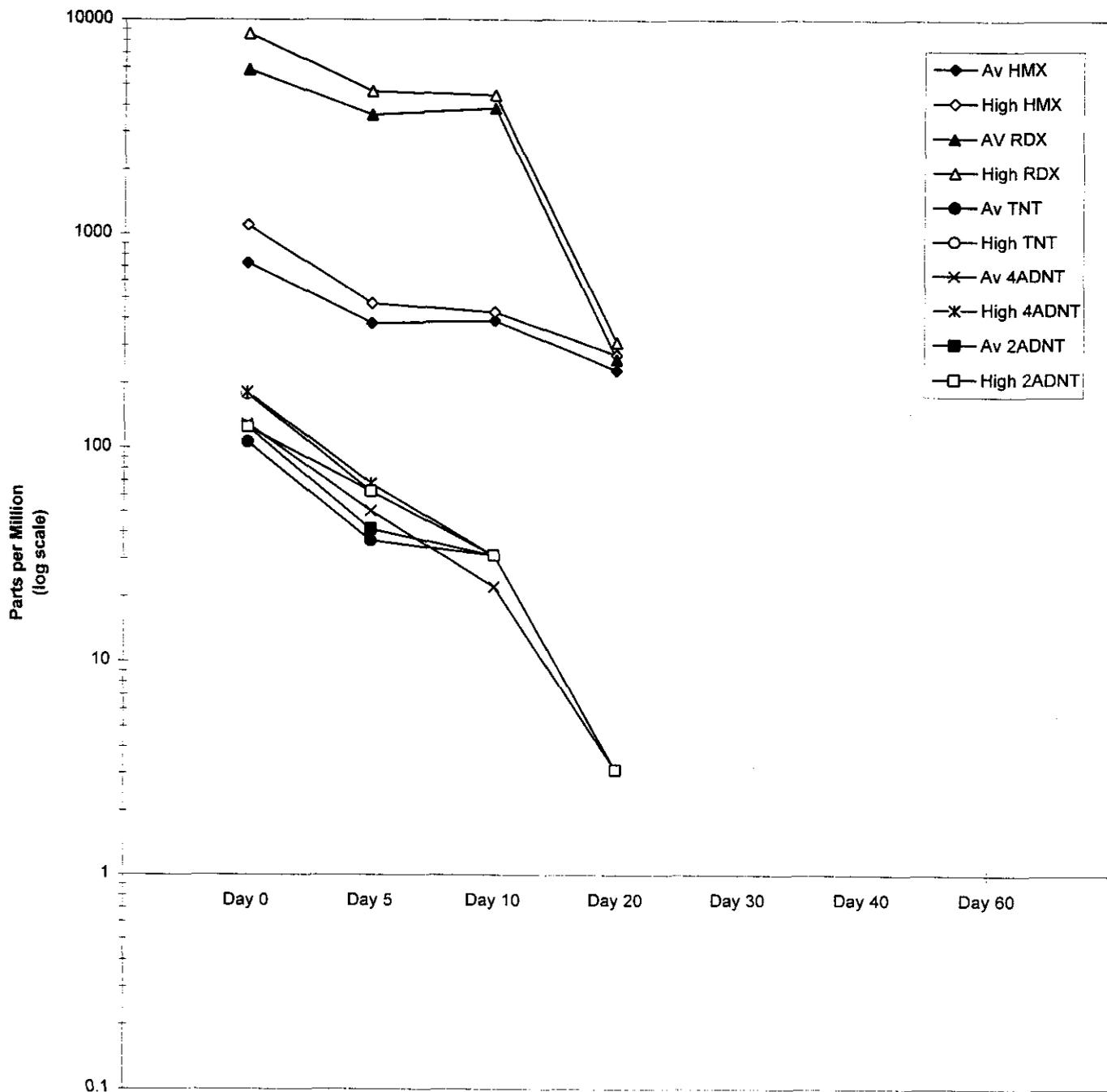
Windrow 3 Explosives Analysis



25% Alfalfa; 25% Turkey Manure; 25% Wood Chips; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	109	37	7	25			
High HMX	215	56	11	32			
AV RDX	821	84	6	6			
High RDX	1,510	138	16	22			
Av TNT	25	13	1	2			
High TNT	47	31	3	6			
Av 4ADNT	50	12	0	0			
High 4ADNT	125	31	0	0			
Av 2ADNT	50	12	0	0			
High 2ADNT	125	31	0	0			

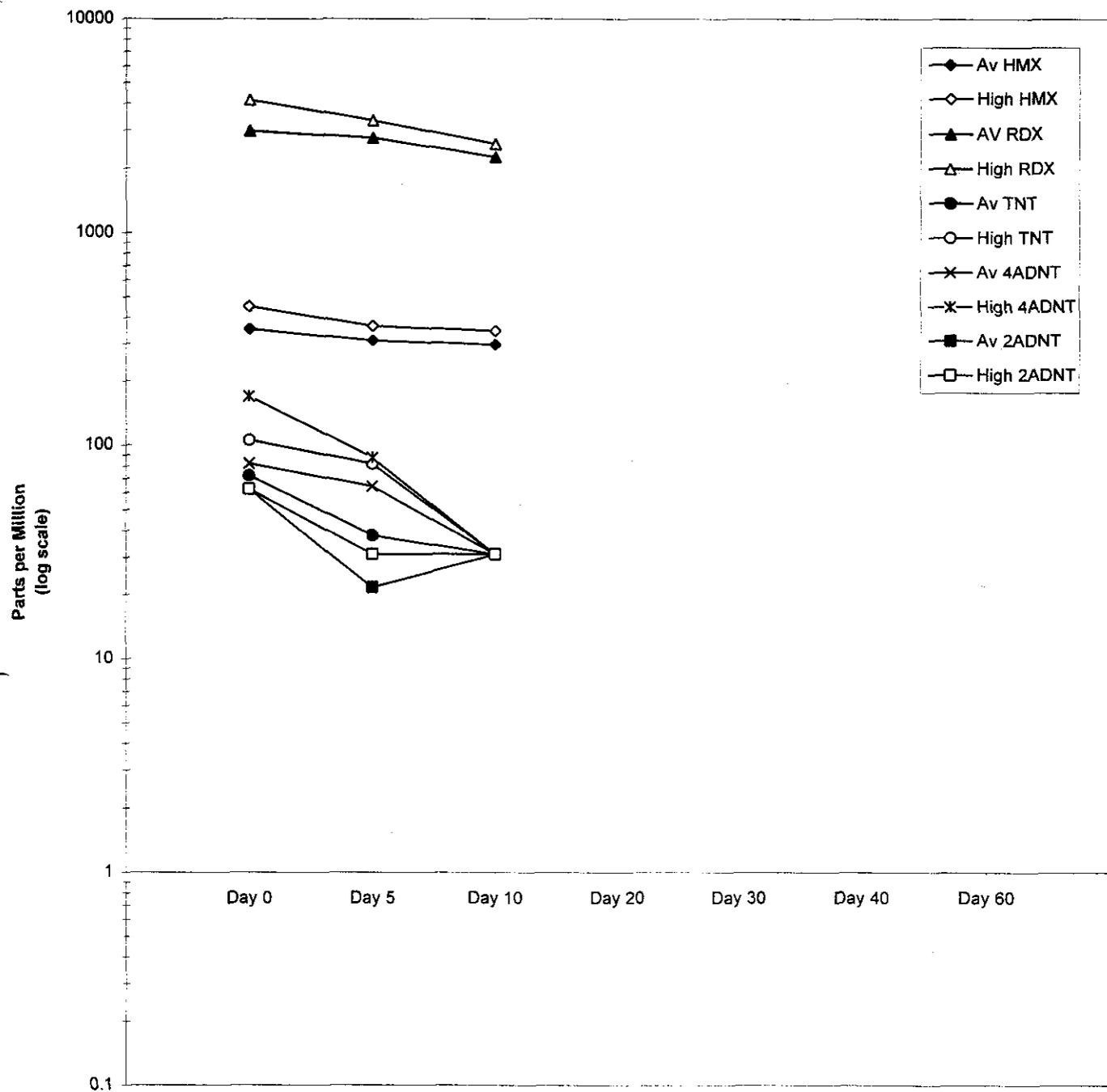
Windrow 4 Explosives Analysis



3% Chicken Manure; 19% Alfalfa; 23% Cow Manure; 11% Vegetable Waste; 19% Saw Dust; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	730	381	392	230			
High HMX	1,100	471	430	271			
AV RDX	5,870	3,615	3,880	260			
High RDX	8,620	4,660	4,460	310			
Av TNT	106	37	31	3			
High TNT	179	63	31	3			
Av 4ADNT	129	51	22	3			
High 4ADNT	182	68	31	3			
Av 2ADNT	125	42	31	3			
High 2ADNT	125	63	31	3			

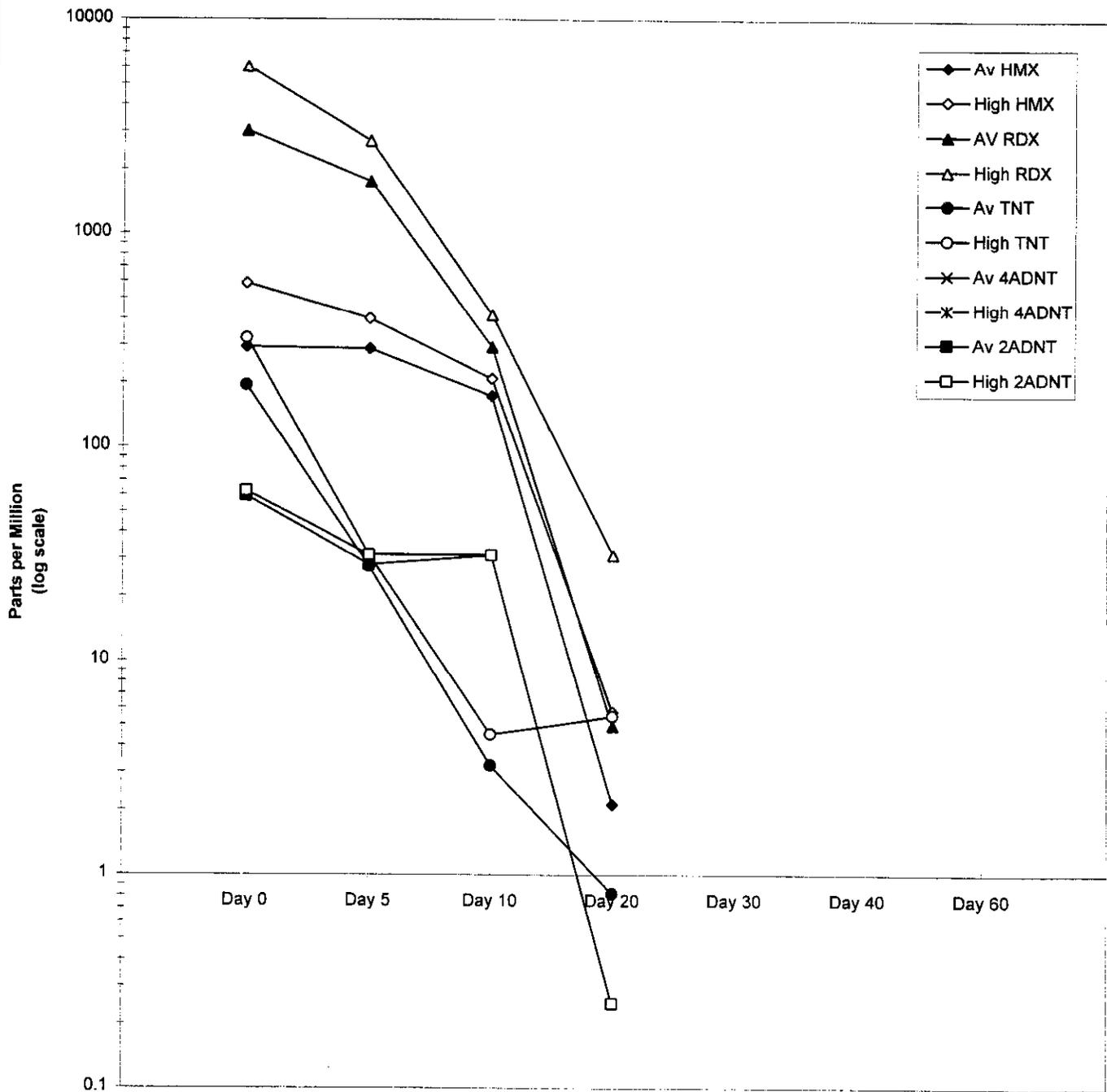
Windrow 5 Explosives Analysis



19% Alfalfa; 26% Turkey Manure; 11% Vegetable Waste; 19% Saw Dust; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	353	312	297				
High HMX	453	365	346				
AV RDX	2,978	2,773	2,263				
High RDX	4,160	3,330	2,600				
Av TNT	72	38	31				
High TNT	106	82	31				
Av 4ADNT	82	65	31				
High 4ADNT	170	88	31				
Av 2ADNT	63	22	31				
High 2ADNT	63	31	31				

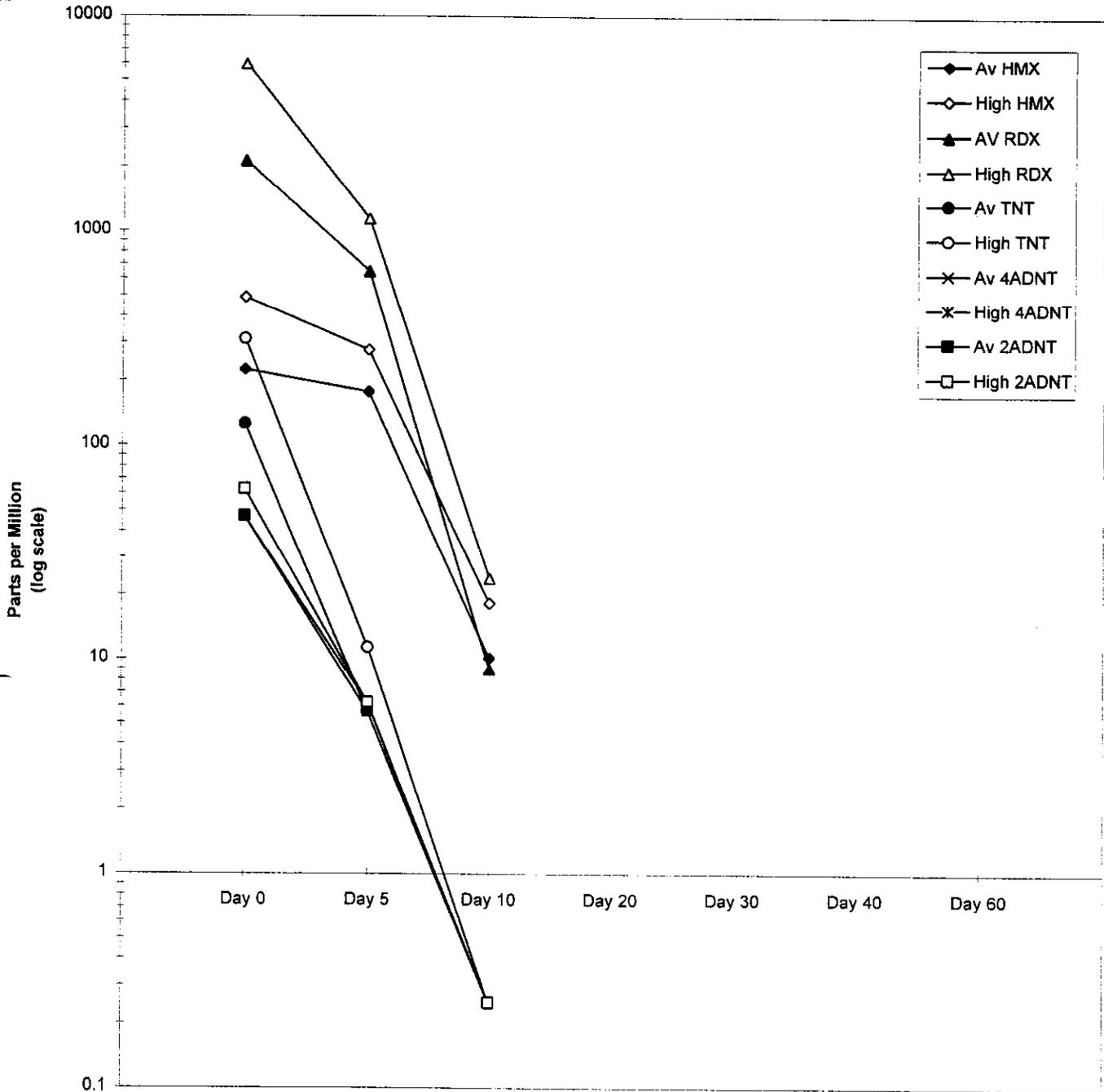
Windrow 7a Explosives Analysis



71.5% Straw; 3.5% Chicken Manure; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	295	289	174	2			
High HMX	585	402	210	6			
AV RDX	3,027	1,753	295	5			
High RDX	6,020	2,710	418	31			
Av TNT	196	28	3	1			
High TNT	325	31	5	6			
Av 4ADNT	59	28	31	0			
High 4ADNT	63	31	31	0			
Av 2ADNT	59	28	31	0			
High 2ADNT	63	31	31	0			

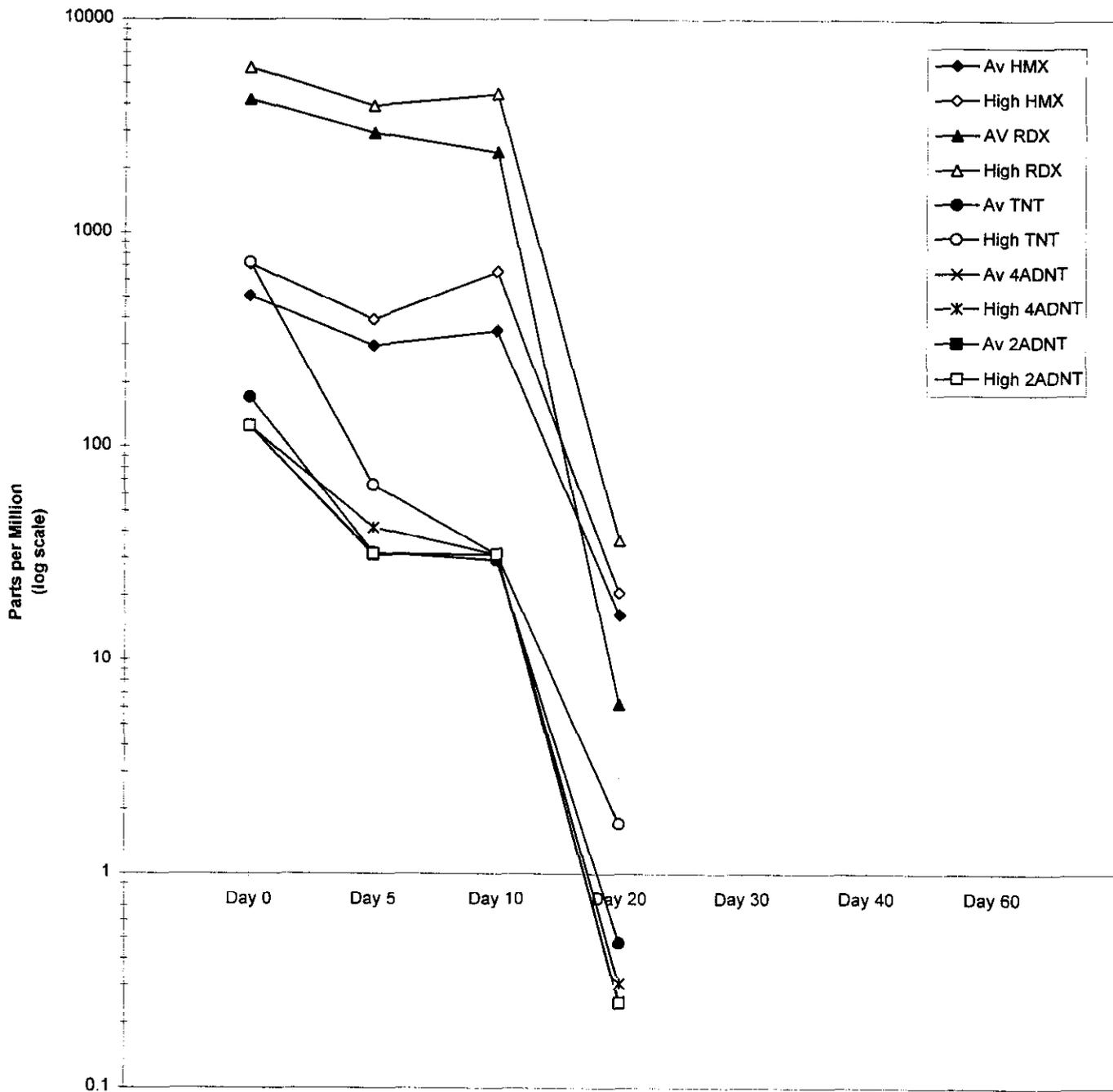
Windrow 7b Explosives Analysis



60% Straw; 15% Chicken Manure; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	225	177	10				
High HMX	490	277	18				
AV RDX	2,125	649	9				
High RDX	5,930	1,140	24				
Av TNT	126	6	0				
High TNT	312	11	0				
Av 4ADNT	47	6	0				
High 4ADNT	63	6	0				
Av 2ADNT	47	6	0				
High 2ADNT	63	6	0				

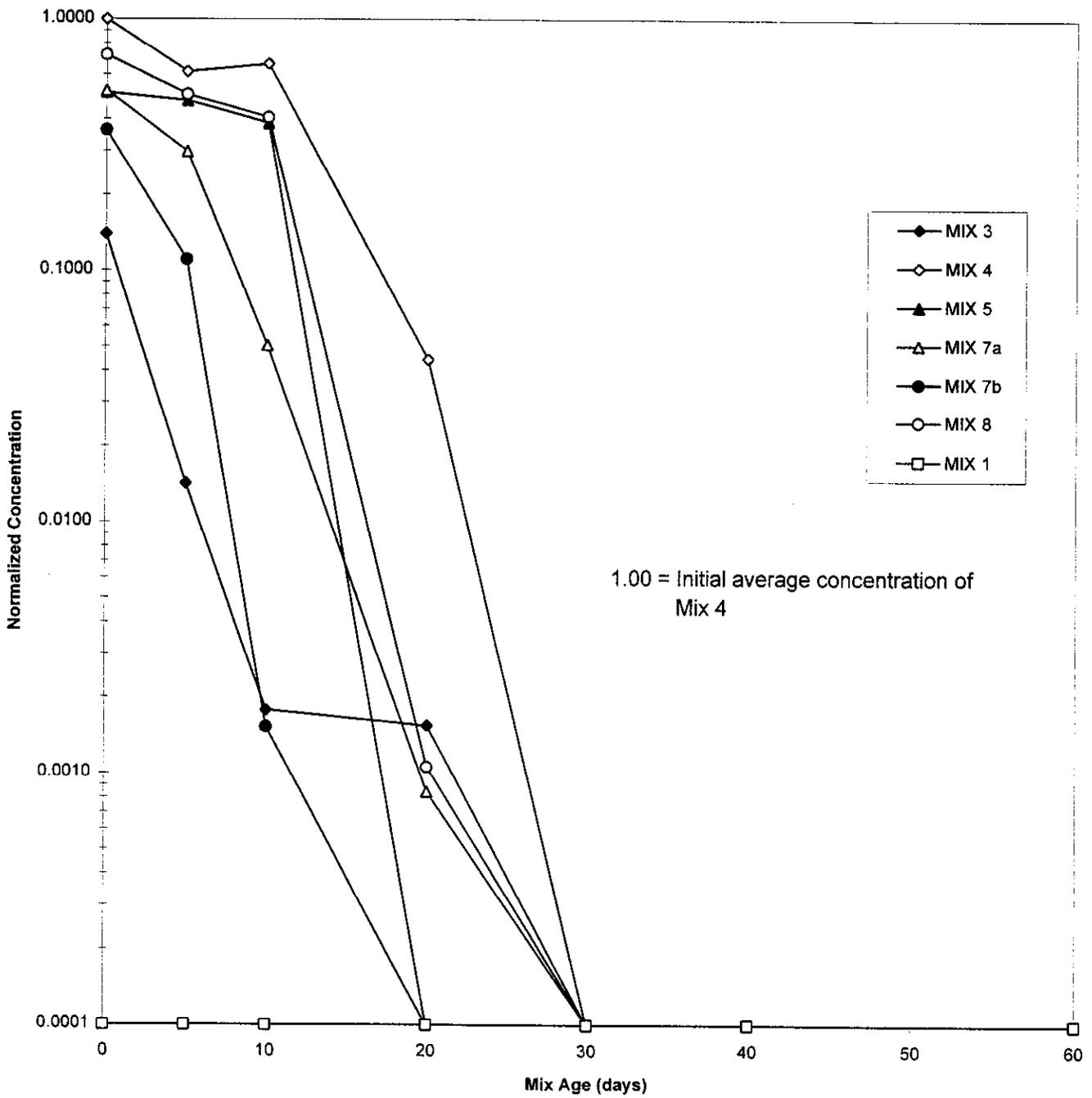
Windrow 8 Explosives Analysis



48% Straw; 7% Chicken Manure; 10% Cow Manure; 10% Vegetable Waste; 25% Soil

Day	Day 0	Day 5	Day 10	Day 20	Day 30	Day 40	Day 60
Av HMX	506	297	348	16			
High HMX	713	393	655	21			
AV RDX	4,207	2,928	2,382	6			
High RDX	5,930	3,920	4,460	36			
Av TNT	172	32	29	0			
High TNT	727	66	31	2			
Av 4ADNT	125	31	31	0			
High 4ADNT	125	42	31	0			
Av 2ADNT	125	31	31	0			
High 2ADNT	125	32	31	0			

RDX Analysis



Day	0	5	10	20	30	40	60
MIX 3	0.1398	0.0142	0.0018	0.0015	0.0001	0.0001	0.0001
MIX 4	1.0000	0.6158	0.6610	0.0443	0.0001	0.0001	0.0001
MIX 5	0.5074	0.4723	0.3856	0.0001	0.0001	0.0001	0.0001
MIX 7a	0.5157	0.2987	0.0503	0.0008	0.0001	0.0001	0.0001
MIX 7b	0.3620	0.1106	0.0015	0.0001	0.0001	0.0001	0.0001
MIX 8	0.7166	0.4989	0.4058	0.0011	0.0001	0.0001	0.0001
MIX 1	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

Note: All 0.0001 have been substituted for zeros to allow logarithmic charting.

NSWC CRANF ILOFACILITY
PILOT SCALE - CONTAMINATED RUN

PRE-TURN CORE TEMPERATURES

