

Production of BW agents

Iraq stated repeatedly that all records and documents of the BW programme were destroyed in 1991 including the production of biological agents, therefore, the information depended on recollection of technical staff, capacity of the equipment, batches and durations especially for 1988 and 1989. While the production of 1990 was documented by the annual production report of Al-Hakam factory, noting that this year is considered as the year of the most intensive production of biological agents.

The equipment used in the production were obtained locally from idle projects or plants belonging to other organizations and were adapted for use in the production with many problems due to their condition and age or the fact they were imported for other purposes and not specific for biological agent production. Moreover, the specific production equipment ordered by Iraq from Chemap had not been received and this fact is well known by UNSCOM.

The Iraqi side submitted all information about the material balance of imported and local acquisition of culture media, consumed quantities and the remaining quantity of 30.5 tons which were destroyed under the supervision of UNSCOM.

The material balance is given of BW agents produced, filled in munitions and the remaining stockpile that was destroyed in 1991. The Iraqi side also submitted documents that clarified the potential capacity for production for 1988 and 1989.

Munitions

There was no external acquisition for the munitions used in BW programme. The selected munitions used in field trial and weaponization were from available locally manufactured.

The information were reconstructed mainly from recollections with some documents with total no. of for weaponization have been provided to UNSCOM. The munitions used in the field trials were mentioned as far as could be recollected by the personnel involved in the trials.

some of the most important factors in the development of the human mind are the environment and the social interactions that the child experiences.

It is important to note that the environment and social interactions are not the only factors that influence the development of the human mind.

Other factors include:

1. The child's genetic makeup

2. The child's physical health and development

3. The child's cognitive abilities and development

4. The child's emotional and social development

5. The child's cultural and linguistic background

6. The child's individual experiences and development

Equipment

Some of the equipment used in past bio programme and related accessories were destroyed by Iraq in 1991. UNSCOM verified the remnant of destroyed parts and the site of destruction. Samples of the remnants were taken by UNSCOM.

All the equipment used in past bio-programme were destroyed by UNSCOM in 1996 in addition to unrelated equipment were also destroyed by UNSCOM.

Agents

Iraq provided all the information about the destruction of the stored biological agents in 1991, including destroyed method of equipment and materials used in there destruction in addition to the dumping area of the destroyed agents. UNSCOM verified these destruction and samples were taken from the dumping area. UNSCOM carried out the interrogation to Iraqi personnel participating in the destruction process as an alternative way of verification in the alliance of document.

Munitions

All the information about the destruction of BW munitions were provided to the UNSCOM. UNSCOM verified of these information by intrusive interview of Iraqi personnel carried out the destruction process. Samples were taken from unexploded bomb to identify the biological agents filled in these bombs. Iraq provided available important documents (document of destruction of 157 R-400 bombs).

Iraq's comments on TEM in Vienna

TEM was attended by 18 experts from 15 countries of whom only 4 or 5 were new. They have been briefly exposed in New York and Vienna to masses of documents and materials originating from Iraq's draft declarations and two formal FFCDs for which there was insufficient time to study and to formulate a conclusion about. Therefore, members of the TEM, adopted the readymade opinions and comments and the numerous questions prepared by the old group and confronted the Iraqi side with that. Thus, the Iraqi team spent considerable time responding to questions many of which were irrelevant or insignificant or already settled and verified through visits, tests, inspections and analyses, discussions and interviews over the

1. The first step in the process of identifying a problem is to define the problem clearly. This involves identifying the symptoms of the problem and determining the scope of the problem. Once the problem has been defined, the next step is to identify the causes of the problem. This involves identifying the factors that are contributing to the problem and determining the underlying causes. Once the causes have been identified, the next step is to develop a plan of action. This involves identifying the steps that need to be taken to solve the problem and determining the resources that will be needed to implement the plan. Once a plan of action has been developed, the next step is to implement the plan. This involves carrying out the steps that have been identified in the plan and monitoring the progress of the implementation. Finally, the last step in the process is to evaluate the results of the implementation. This involves determining whether the problem has been solved and whether the resources have been used effectively.

100

101

102

103

104

105

106

107

108

109

110

111

112

113

114

115

116

117

118

119

120

121

122

123

124

125

126

127

128

129

130

131

132

133

134

135

136

137

138

139

140

141

142

143

144

145

146

147

148

149

150

151

152

153

154

155

156

157

158

159

160

161

162

163

164

165

166

167

168

169

170

171

172

173

174

175

176

177

178

179

180

181

182

183

184

185

186

187

188

189

190

191

192

193

194

195

196

197

198

199

200

201

202

203

204

205

206

207

208

209

210

211

212

213

214

215

216

217

218

219

220

221

222

223

224

225

226

227

228

229

230

231

232

233

234

235

236

237

238

239

240

241

242

243

244

245

246

247

248

249

250

251

252

253

254

255

256

257

258

259

260

261

262

263

264

265

266

267

268

269

270

271

272

273

274

275

276

277

278

279

280

281

282

283

284

285

286

287

288

289

290

291

292

293

294

295

296

297

298

299

300

301

302

303

304

305

306

307

308

309

310

311

312

313

314

315

316

317

318

319

320

321

322

323

324

325

326

327

328

329

330

331

332

333

334

335

336

337

338

339

340

341

342

343

344

345

346

347

348

349

350

351

352

353

354

355

356

357

358

359

360

361

362

363

364

365

366

367

368

369

370

371

372

373

374

375

376

377

378

379

380

381

382

383

384

385

386

387

388

389

390

391

392

393

394

395

396

397

398

399

400

401

402

403

404

405

406

407

408

409

410

411

412

413

414

415

416

417

418

419

420

421

422

423

424

425

426

427

428

429

430

431

432

433

434

435

436

437

438

439

440

441

442

443

444

445

446

447

448

449

450

451

452

453

454

455

456

457

458

459

460

461

462

463

464

465

466

467

468

469

470

471

472

473

474

475

476

477

478

479

480

481

482

483

484

485

486

487

488

489

490

491

492

493

494

495

496

497

498

499

500

501

502

503

504

505

506

507

508

509

510

511

512

513

514

515

516

517

518

519

520

521

522

523

524

525

526

527

528

529

530

531

532

533

534

535

536

537

538

539

540

541

542

543

544

545

546

547

548

549

550

551

552

553

554

555

556

557

558

559

560

561

562

563

564

565

566

567

568

569

570

571

572

573

574

575

576

577

578

579

580

581

582

583

584

585

586

587

588

589

590

591

592

593

594

595

596

597

598

599

600

601

602

603

604

605

606

607

608

609

610

611

<

The munitions produced as filled were as follows :

R400 Aerial Bombs

Total number 200 manufactured (documented)
Number used for filling 157 (indirect documents)
Number of empty munitions 37 (indirect documents)
Number of rejected munitions 6 (UNSCOM verified and destroyed them)

This matter was discussed at length over the past two years and recently by UNSCOM-238 . Nothing was brought up by UNSCOM , which contradicts the account given in the FFCD . The BW special warheads account in the FFCD was contested by UNSCOM on the bases of suspicions only and no evidence was presented . Strenuous efforts by Iraq showed that Iraq's account is supported by physical evidence from the destruction site .

Material balance

Destruction

Material and Equipment

Isolates

Iraq provided all information about the destruction of imported and local isolated were used in R&D and production. UNSCOM verified the destruction site of destroyed material and samples were taken for analysis. The results confirmed the Iraqi declaration.

The material balance of isolates which were used in R&D and production destroyed in 1991 and the remaining isolated were handed to the 1st bio team in 1991 were identified and supported by available documentary evidence.

Culture media

All the remaining cultures of there culture media were destroyed by Iraq 1991, in addition to some quantity lost during riot actions.

the first of the three main parts of the book

the second part of the book is the history of the

the third part of the book is the

the fourth part of the book is the

the fifth part of the book is the

the sixth part of the book is the

the seventh part of the book is the

the eighth part of the book is the

the ninth part of the book is the

the tenth part of the book is the

the eleventh part of the book is the

the twelfth part of the book is the

the thirteenth part of the book is the

the fourteenth part of the book is the

past 30 months of work with UNSCOM. The teams evaluated report was full of generalities containing nothing specific in the way of contradictory evidence. It failed to reflect Iraq's point of view in any way and did not include Iraq's response delivered to the TEM on the final session as was the cases in the previous TEM's reports for the missile warheads and the Vx question.

The assembled experts asked the Iraqi counterparts to provide site plans and documentary evidence for events, decisions, or actions mentioned in the FFCD. Most of these were either included in the attachment to the FFCD of 1996 or handed over separately to the BW UNSCOM team over the past years, some of which were the only copy available in Iraq. That shows that not all the material provided by Iraq over the years was passed to the TEM experts.

It is curious to note that the commission in its April 1998 report states that Iraq failed to present the technical answers required by the experts and that more than half the answers provided by Iraq were political. There were about 150 questions asked by the experts, 55 questions were technical and were answered during the discussion and the remainder were answered in writing later (over 100 pages supported by some documents) 72 questions were non-technical and were answered as far as possible and 23 political questions. (quote from political)

The Commission has been challenging Iraq's FFCD on every aspect reported. So far all attempts to discredit the report were shown to have been baseless.

The Commission and some extent the TEMs evaluation criticizes Iraq's FFCD on the bases of concepts and standards and practices prevalent in developed countries and thus rejects some aspects of the programme as incredible or implausible.

The Commission presumes that all records for the past programme exist in Iraq and the non-submission of those records is part of the concealment system.

The Commission in conclusion inexplicably ignores all the evidence at hand, documents (about 200 documents), physical evidence, absence of any signs of proscribed activities over the past 7 years and continue to maintain that Iraq conceals information about a parallel or dormant biological programme!

1. Introduction to the subject

2. The importance of the subject

3. The scope of the subject

4. The objectives of the subject

5. The structure of the subject

6. The importance of the subject

7. The importance of the subject

8. The importance of the subject

9. The importance of the subject

10. The importance of the subject

11. The importance of the subject

12. The importance of the subject

13. The importance of the subject

14. The importance of the subject

15. The importance of the subject

16. The importance of the subject

17. The importance of the subject

18. The importance of the subject

19. The importance of the subject

20. The importance of the subject

The perception it created by catch phrases repeated often like "black hole" makes it all the more difficult for the Commission to come down to earth and deal with the realities evident on the ground .

bio-area.doc/10

found to be that the results of the first of the two
1997-1998 survey (see the table attached) for the Commission to come

* (1)

[illegible]

۱. $\frac{1}{x^2} = x^{-2}$ $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

[illegible]

$\vec{r}_1 = 1.5 \text{ m}$

1. 17-18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851,

গুণিতক সূত্রের সাহায্যে প্রমাণ করুন।

۱۹۸۷ء میں جاری شدہ

1992 10 25

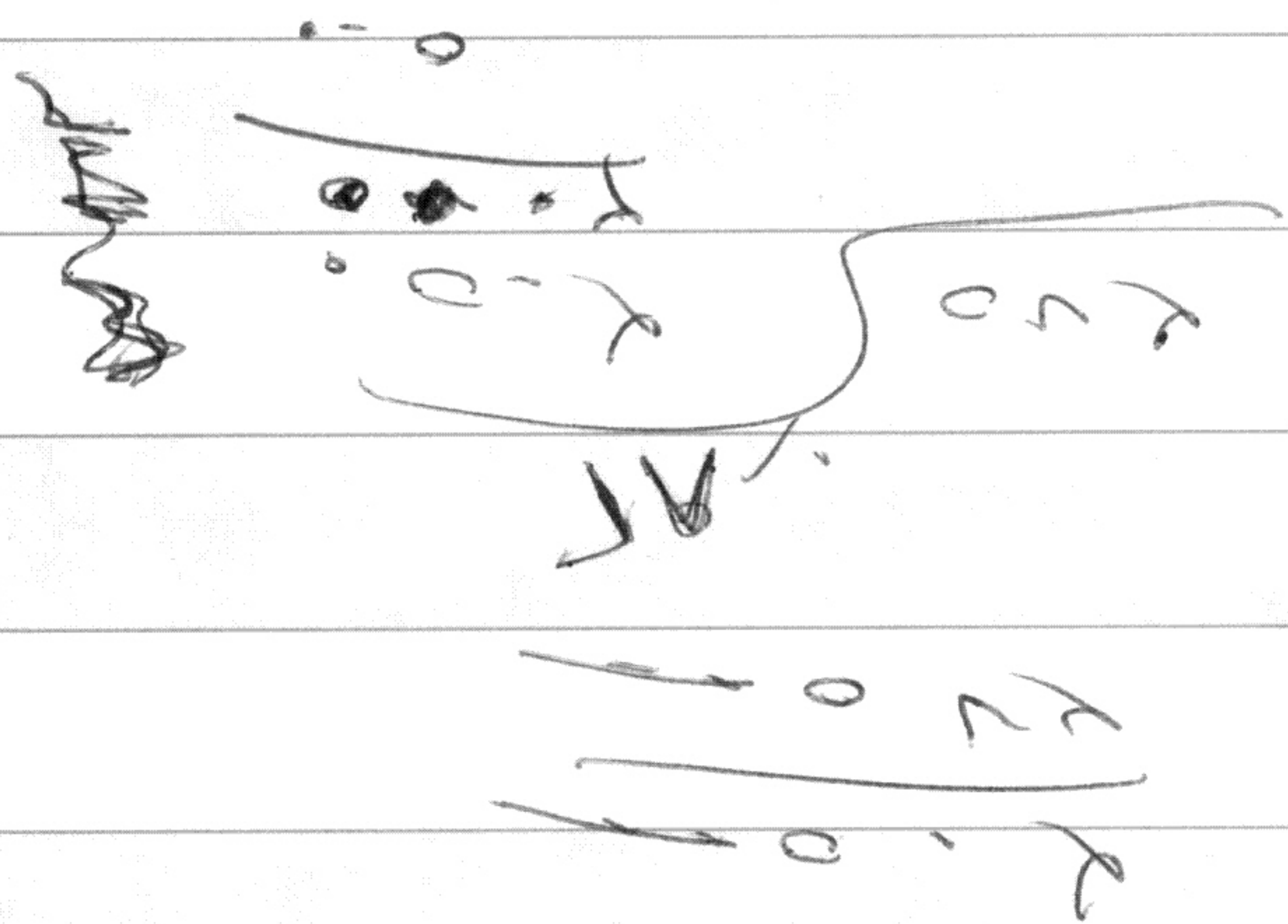
[Handwritten signature]

Chalk is - chalk (n) chalk

إلى

1x4 - 1x.43

2-5-20



طاقه تقویت کننده اندک اندک
 در اندک اندک اندک اندک
 در اندک اندک اندک اندک
 در اندک اندک اندک اندک
 در اندک اندک اندک اندک

21

castles

[illegible]

033V

Q 2 3 4

033 W 1978

8-17-B

199.



[Handwritten scribbles]

Acquisitions:

57

~~The total no of LC (57) were~~

~~Given in the AFCD of 1997~~

~~remains~~

(*) The total no of 57 LC
of 27 remittance were given
in the AFCD of 1997.

Iraq ~~has~~ provided ()

no of document related to
the ~~acq~~ acquisitions of
equipment & materials.

According to the USIS request
to provide all the procurement
of forensic depositions (T3),

Iraq provided ^{including} ~~their~~ information
from 1987 to 1990 ~~including~~

the procurement of past biological
program. Wherever

Material Balance

①

Destruction

Material & equipment

Isolates

Iraq had provided all information about

~~what~~ the destruction of imported and

local isolates were used in RPD

and production. Unscam ~~from the~~

~~was~~ verified the destruction process

~~and~~ ~~at the~~ local site of

destroyed material and samples

were taken for ~~analysis~~ analysis.

The results confirmed the Iraqi

declaration.

The material balance of ~~materials~~

isolates ~~materials~~ which were

used in RPD and production

~~destroyed~~ destroyed in 1991 and the remaining

isolates were handed to the 1st

bio team in 1991 were ~~identified~~

identified and supported by available

documentary evidences.

Amount used/disposed of on site: number

Amount stored on site: number

b) Method of production
Specify: media used:
host cell line used:
production vessels: glass:
stainless steel/titanium
other (specify)
downstream processing equipment used:

c) Method of inactivation: Specify:

d) Method of storage: Specify:
dry form or liquid
bulk
vials ready for use
size of cold rooms in m2

e) Test details: Specify:
cell lines used
animal species used :
route of infection of animals

f) Specify type of laboratory: ()
maximum containment laboratory (BL4 or equiv
containment laboratory (BL3 or equivalent)
laboratory containing biological safety cabi

8.If acquisition of the vaccine, specify:

a) Source in Iraq:
Name of source (eg site/facility, organisati
Address:

Type of acquisition within Iraq: (Circle)

Purchase Transfer Loan * Gift
Exchange Other (Specify)

Arrival date at the site/facility. month

b) Source abroad:
Country:

Name of source: UNICEF

Address:

Date of import into Iraq: month

c) Vaccine brought into the site/faci
reporting period: Specify:

Amount acquired: number of doses

9.Transfers to other sites/facilities in Ira
reporting period: NIL

③

Equipment

Some of the equipment

used in past bio-programme

has and related accessories

were destroyed by Iraq in 1991. USCOM identified the

site of remnant of

destroyed parts and the

site of destruction. Samples

of the remnant were taken by

USCOM.

All the equipment used

in past bio-programme were

destroyed by USCOM in 1996

in addition to unrelated

equipment were also destroyed

by USCOM.

Amount transferred: number of

Name of recipient site/facility/organisation
Complete address (including postal address):

Longitude: Latitude:

Purpose of transfer:

10. Exports of vaccine from Iraq: NIL Spec

Amount exported: number

Recipient country:

Recipient facility/organisation:

Complete address (including postal address):

Date of export: day month

Port of exit:

Purpose of export:

11. Details of the work with this vaccine.
For the declaring site/facility specify:

a) Amount used:

number of doses used for routine protection
number of doses used in humans for
number of doses used in animals :
number of doses used for other pur
number of doses stored:

b) Context of use: (Specify appropriate desc
types of activity listed in format I para

12. Are the vaccines being used or subject
development in collaboration with other site
organisations in Iraq/abroad?

If YES, specify, Name of other site/facility
Complete address (including postal address):

Longitude:

Country if other than Iraq

Agents

4

Iraq provided all the information about the destruction of ~~retreats~~ the stored biological agent in 1991, that including

agent in 1991, that including

des fruchtigen method &

Equipment and materials

used in their description in

addition to the clamping

area of the destroyed agents.

Upstom Verified These

Information declarations and

Samples were taken from the

~~from~~ dumping area. USCOM

Carried out the interrogation to learn

Personnel participating in the

Abstraktion process as an

Alternative way of ~~document~~
~~document~~ verification in the

~~absence of verification in the~~ absence of document.

$\Sigma 1110$

$\Sigma 110$

111

$\Sigma 110 \times 111$

$\Sigma 110$

~~111~~

$\Sigma 110$

$\Sigma 110$
90

111

which was equivalent to 62%

of the total quantity imported

for battle gear production of

which was for lab purposes.

(5)

Munitions

All the information about

the destruction of Bu

munitions were provided to

the USNSC. USNSC verified

of these information by

intrusive interview of

Iraqi personnel carried out

the destruction process,

checking of the munitions

Samples were taken from unexploded

bombs to identify the identity

the biological agents filled in these bombs

Iraq provided available important documents ~~the~~ (document of destruction of 157 Ryo bonds)

Longitude: Latitude:
Purpose of transfer:
10. Exports of vaccine from Iraq: NIL Spec Amount exported: numbe
Recipient country:
Recipient facility/organisation:
Complete address (including postal address):
Date of export: day month
Port of exit:
Purpose of export:
11. Details of the work with this vaccine.
For the declaring site/facility specify:
a) Amount used:
number of doses used for routine protection
number of doses used in humans for
number of doses used in animals :
number of doses used for other pur
number of doses stored:
b) Context of use: (Specify appropriate desc
types of activity listed in Format I para
12. Are the vaccines being used or subject
development in collaboration with other site
organisations in Iraq/abroad?
If YES, specify, Name of other site/facility
Complete address (including postal address):
Longitude: Latitude:
Country if other than Iraq

(2)

Growth media

Culture media

All the remaining culture media

were destroyed by ~~uscone~~

except ~~some~~ the damaged ~~uscone~~

containers of these culture

media were destroyed by

fire 1991 ~~uscone~~ in addition

to some quantity lost

during riot actions.

reporting period

FORMAT XIII

VACCINES ACQUIRED/PRODUCED

STORED/TRANSFERRED

USE ONE FORMAT XIII FOR EACH V

GENERAL COMMENT:

When providing information on separate sheet

made

to the specific paragraph of the format to w
pertains. Quantities should be declared in

1. Vaccine name: B.C.G VACCINE

- VIA KIMADIA

How is a dose of the vaccine defined?

- by International Units? Specify

* - by quantity of antigen? Specify

1.500.000 VIABLE ORGANISMS/0.1 ML

- by some other measures e.g. original infec

Specify

2.

Disease/intoxication which it protects

TUBERCULOSIS.

3.

* Human use Animal use Both

4.

Microorganism used for the production (

MYCOBACTERIUM .

5.

Live attenuated * Inactivated Subun

6.

Components of the vaccine:

* microorganisms:

Specify: M

BACILLUS

sub-units:

Specify

toxoid:

Specify

adjuvant:

Specify

7. If production of the vaccine at the site/
month reporting period: Specify: NIL

a) Amount produced:

number of doses