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REACH

RESOURCES
FOR CHILD
HEALTH

**FIELD COORDINATION OF
SECOND PHASE EMERGENCY IMMUNIZATION
SUPPORT PROGRAM ACTIVITIES
IN FOUR CENTRAL ASIAN REPUBLICS**

2 September - 28 November 1992



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TABLE OF CONTENTS

I.	<u>EXECUTIVE SUMMARY</u>	1
II.	<u>BACKGROUND</u>	1
III.	<u>PURPOSE OF VISIT</u>	2
IV.	<u>TRIP ACTIVITIES</u>	3
V.	<u>RESULTS AND CONCLUSIONS</u>	6
VI.	<u>RECOMMENDATIONS</u>	11

ANNEXES

1. Report on the Medical Supply Requests Made by the Kyrgyzstan Ministry of Health -- prepared for the use of the U.S. Embassy, Bishkek and NIS Task Force/EHA: 12 September 1992.
2. Emergency Immunization Program Support (October 1992)
Tajikistan, Turkmenistan, Kyrgyzstan and Uzbekistan
3. List of Missing/Surplus Cold Chain Equipment: Three Country Total
4. REACH Network
5. Projected Immunization Equipment and Supply Needs for 1993:
Tajikistan, Turkmenistan, Kyrgyzstan and Uzbekistan
- 5A. Estimated Tool and Equipment Needs for Strengthening Regional (Oblast) Cold Chain Repair and Maintenance Systems
6. Vaccine Required by Infants in 4 Central Asian Republics to
Cover Anticipated Domestic Shortfalls Through Winter 1993/94
7. Bibliography of REACH Documents

ACRONYMS

AID	Agency for International Development
BCG	Bacillus, Calmette, and Guerin Vaccine
BCG-M	Bacillus, Calmette, and Guerin (Attenuated)
CAR	Central Asian Republics
CIS	Commonwealth of Independent States
DOD	Department of Defense
DPT	Diphtheria, Pertussis, Tetanus Vaccine
DT	Diphtheria, Tetanus Vaccine
EPI	Expanded Program on Immunization
FAP	Feldsher Obstetrician (Health) Post
FSU	Former Soviet Union
IMR	Infant Mortality Rate
MOH	Ministry of Health
NIS	Newly Independent States
OFDA	Office of Foreign Disaster Assistance
OPV	Oral Poliomyelitis Vaccine
PIS	Product Information Sheets
REACH	Resources for Child Health
SES	Sanitary and Epidemiology Station
SUB	Rural Outpatient Clinic
SVA	Rural Hospital
TA	Technical Assistance
TT	Tetanus Toxoid Vaccine
UK	United Kingdom
UNICEF	United Nations Children's Fund
USA	United States of America
USAID	United States Agency for International Development
WHO	World Health Organization

I. EXECUTIVE SUMMARY

The second phase of the United States Agency for International Development's emergency support to child immunization services in Tajikistan, Turkmenistan, Kyrgyzstan and Uzbekistan was carried out from 2 September to 18 December 1992. A rapid review of the emergency medical situation in Kyrgyzstan, resulting from a series of severe earthquakes, was also carried out in early September.

Some of the components of second phase assistance were:

- Consolidation of Kyrgyzstan's emergency medical requirements into one comprehensive request.
- Delivery and distribution of vaccine, immunization supplies, sterilizers and cold chain equipment.
- Cold chain assessments and training (including development of Russian language cold chain training materials).
- Orientation of Ministry of Health staff (three countries) on mechanisms for international vaccine procurement.
- Translation and provision of some 350 pages of immunization program technical materials.
- Preparation for and joining with Ministries of Health in two countries to hold seminars in which national and international participants reviewed and discussed applicable immunization policy and practice issues.
- Identification of further vaccine, cold chain and management support requirements.

Findings suggest the following support needs for 1993:

1. Donation of sufficient vaccines to permit the complete immunization of the new birth cohort of children with the primary series of immunization. (Annex 6)
2. Provision of selected cold chain equipment and strengthening of the cold chain repair capability to ensure protection of vaccines. (Annex 5 and 5A)
3. Assistance to ensure safe transport of vaccines from Russian producers to country level.
4. Provision of technical assistance for:
 - Completion of cold chain assessments and institutionalization of cold chain training.
 - Holding policy seminars in two countries.
 - Developing national immunization program plans.
 - Training in international vaccine procurement (one country).

II. BACKGROUND

As part of a program of humanitarian assistance to the Newly Independent States (NIS) of the former Soviet Union, the United States Agency for International Development (USAID) allocated funds in 1992 for an emergency child-immunization support effort in four Central Asian Republics - Tajikistan, Turkmenistan, Kyrgyzstan and Uzbekistan.

These states, having formerly achieved high immunization coverage levels in children, were faced in 1992 with acute shortages of vaccines and other immunization supplies as well as difficulties in repair of available equipment and procurement of needed cold chain equipment. Immunization coverage rates were falling and reports of outbreaks of vaccine-preventable diseases were on the rise.

The purpose of the USAID emergency immunization effort was to provide selected vaccines, consumable materials, equipment and technical assistance to ensure that children under the age of two years were fully immunized (with potent vaccine) against the common vaccine-preventable diseases through the end of the 1992/93 winter season. The emergency immunization effort consisted of three related activities. They were to:

1. Relieve short-term supply shortages and so permit national services to operate at full capacity.
2. Provide the minimum cold chain equipment needed to ensure immunization with potent vaccine.
3. Begin a technical exchange process that could lead to examination (and possible revision) of current immunization program policy and practice.

Together the three activities were to "buy time" so that countries could begin to develop coordinated and comprehensive approaches to policy, supply and equipment issues. The 1992 emergency effort was divided into three time periods:

- Pre-implementation assessment
- May 1992 (First Phase) assistance
- September through December 1992 (Second Phase) assistance

The "pre-implementation assessments" and the "May 1992 (First Phase) assistance" effort have been documented earlier. The present report, along with five REACH reports and one WHO report, detail the September through December 1992 (Second Phase) activities. (see Bibliography in Annex 7)

III. PURPOSE OF VISIT

During the period 2 September through 27 November 1992, the writer was assigned three discrete sets of tasks in selected republics of the former Soviet Union. These were to:

- A. Coordinate the USAID/REACH emergency immunization support effort in Tajikistan, Turkmenistan, Kyrgyzstan and Uzbekistan:
 - Arrange translation and production of immunization program primary documents and training materials.
 - Assist local government officials and USA government staff in four countries to arrange for receipt of September shipments.
 - Arrange for media and film coverage of the September phase of the emergency immunization support program.
 - Assist Ministries of Health (MOHs) in Tajikistan, Turkmenistan and Kyrgyzstan to:
 - . Ensure Ministry of Health (MOH) preparation for clearance and unloading of arriving aircraft and for transport and temporary storage of arriving commodities.
 - . Assist in preparing distribution plans for donated commodities.
 - . Ensure the readiness of the cold chain to accommodate donated vaccines arriving in late September.
 - . Monitor and document the conditions of arrival of vaccine into the central and oblast cold stores.
 - . Document amount and condition of arriving immunization supplies and equipment.

B. Coordination

To coordinate the USAID/REACH emergency immunization support program (and separate from cold chain assessment and training tasks in Kyrgyzstan), the writer undertook the following activities (non-inclusive):

Moscow 1

- Briefed USAID officials.
- Set up of a support group in Moscow to facilitate administrative and technical activities.
- Organized a translation group, a separate translation-revision group and a final editing process for the eventual translation of some 350 pages of technical materials.
- Briefed and established project-support relationship with Dr. S. Litvinov of the Central Research Institute of Epidemiology, Moscow.
- Reviewed and obtained "rights" to Russian language cold chain training material.
- Briefed incoming REACH cold chain consultant John Pott and arranged travel and MOH meetings in Uzbekistan.
- Established contacts with MOH and U.S. Embassy in four countries to advise start-up of second phase.

Kyrgyzstan 1

- Earthquake assessment and work with MOH to produce list of medical supply requirements. Organized and dispatched to the NIS Task Force an assessment report and earthquake video.
- Established a REACH activity support group.
- Prepared MOH (and support group) for receipt, distribution and use of expected immunization supply and equipment.
- Prepared MOH for the cold chain assessment and training assignment (C. Hasselblad).
- Discussed/negotiated with MOH two technical assistance options:
 - . "Vaccine Procurement Mechanism" assignment.
 - . Seminars for immunization policy review.

Note: The MOH chose to request both options. Preparation and data collection began immediately for both.
- Briefed U.S. Embassy on arriving commodities and technical assistance choices.
- Arranged for production of immunization video.
- Began development of immunization plan.

Uzbekistan 1

- Oriented REACH cold chain consultant (J. Pott) to his role in the receipt and distribution of arriving vaccine and cold chain equipment.
- Discussed/negotiated with MOH reference two technical assistance options:
 - . "Vaccine Procurement Mechanism" assessment.
 - . Seminars for immunization policy review.

Note: The MOH chose to request both options. Preparation and data collection began for both.
- Met USAID's R. Clay and arranged internal travel and MOH meetings in three countries.

Turkmenistan 1

- Established a REACH activity support group.
- Prepared MOH (and support group) for receipt, distribution and use of expected immunization supply and equipment.

- Prepared MOH for the REACH cold chain assessment and training assignment (G. Larsen).
- Discussed/negotiated with MOH two technical assistance options:
 - . "Vaccine Procurement Mechanism" assignment.
 - . Seminar for immunization policy review.
- Note: The MOH chose to request both options.
- Briefed U.S. Embassy on arriving commodities and technical assistance choices.
- Arranged for production of immunization video.
- Arranged Russian-to-English translation of cold chain training materials.

Tajikistan 1

- Established a REACH activity support group.
- Prepared MOH for receipt, distribution and use of expected vaccine and cold chain equipment.
- Prepared MOH for the REACH cold chain assessment and training assignment (A. Battersby later performed this consultancy for WHO, as the evacuation of the U.S. Embassy due to civil unrest precluded expenditure of USAID funds.)
- Discussed/negotiated with MOH two technical assistance options.
- Note: The MOH chose to request only the "Policy Seminar" option.
- Briefed U.S. Embassy on commodity arrival and technical assistance choice.
- Arranged production of immunization video.
- Conducted field assessment (Hissar Valley) of first phase commodity distribution and use.
- Began stockpile of paper and arranged printing/photocopy of translated technical material.

Kyrgyzstan 2

- Final briefing of R. Clay.
- Arranged translation of WHO cold chain training material into Russian.
- Finalized preparations with MOH and support group for receipt and distribution of commodities.
- Finalized arrangements and communications with U.S. Embassy.
- Finalized preparations/data with MOH for "Vaccine Procurement Mechanism" assignment.
- Participated in "working group" preparation for policy seminar.
- Conducted field assessment (Jalalabad Oblast) of first phase commodity distribution and use.
- Began assessment of cold chain equipment status in Kyrgyzstan.
- Arranged visit of REACH cold chain engineer (J. Pott) to develop specifications for national level cold storage upgrading.

Uzbekistan 2

- Reviewed final preparations for commodity receipt.
- Finalized preparations/data collection for "Vaccine Procurement Mechanism" assignment.
- Continued preparations for policy seminars.

Turkmenistan 2

- Finalized preparations with MOH and support group for receipt and distribution of commodities.
- Finalized preparations and communication with U.S. Embassy for receipt of commodities.

Tajikistan 2

- Finalized preparations with MOH for receipt and distribution of commodities.
 - Coordinated U.S. Embassy communication and participation with MOH in receipt of commodities.
 - Arranged helicopter for commodity distribution to Pamir.
 - Conducted field assessment (Garam Valley) of first-phase commodity distribution and use.
 - Received first shipment of Tajikistan commodities.
- Note: Only vaccine came on the flight.

Moscow 2

- Briefed G. Larsen and arranged travel to Turkmenistan.
- Briefed D. Woodle and arranged travel to Uzbekistan.
- Reviewed/organized first set of translations.
- Transferred material to Tajikistan for duplication.
- Drafted cold chain training material (for service provider level) with immunization specialist S. Deshevoi.

Kyrgyzstan 3

- Ensured smooth progress for "Vaccine Procurement Mechanism" assignment.
- Tested and revised cold chain training material.
- Arranged shifting of cold chain equipment between countries.
- Final preparations (before R. Steinglass arrival) for policy seminars.
- Finalized/reviewed cold chain assessment data.
- Identified with the MOH the 1993 immunization program needs.

Uzbekistan 3

- Final preparations (before R. Steinglass arrival) for policy seminar.
- Arranged WHO consultant (A. Battersby) to cross Tajikistan border to begin working with REACH support group.
- Picked up 170 copies of each translated material from Tajikistan activity manager.
- Debriefing by J. Pott.

Turkmenistan 3

- Team meeting (Larsen, Pott, Woodle, Hasselblad) for activity review and to plan coordinated reporting of findings.
- Debriefing by G. Larsen.

Moscow 3

- Briefing and hand-over to REACH Technical Director (R. Steinglass).

V. RESULTS AND CONCLUSIONS

A. EARTHQUAKE RESPONSE

The rapid assessment of the emergency medical situation in Kyrgyzstan (see Annex 1) resulted in the MOH consolidation of previous requests into one short list. The U.S. Government responded quickly to this and other requests providing a series of relief flights during September 1992.

B. COMMODITY RECEIPT

B.1 General

Immunization commodity procurement and transport to the countries was organized by the Office of Foreign Disaster Assistance (OFDA). The October 1992 arrival of immunization equipment and supply under the USAID-funded "Emergency Immunization Support Program" is detailed below. Actual arrival dates of equipment by U.S. Air Force C-141 aircraft were as follows:

<u>COUNTRY</u>	<u>1st FLIGHT</u>	<u>2nd FLIGHT</u>
Tajikistan	10/21	10/24 *
Turkmenistan	10/22	10/25
Kyrgyzstan	10/20	10/27
Uzbekistan	10/23	10/27

* **NOTE:** A third and fourth flight for Tajikistan were also planned due to non-arrival of immunization equipment on the first flight. The second, third and fourth flights were postponed due to civil unrest.

Mr. J. Pott assisted the Uzbekistan MOH to receive commodities. The REACH network and Mr. C. Hasselblad assisted ministries in the other three countries to receive their immunization commodities. A significant difference between these shipments and similar shipments received in May 1992 was that no UNICEF packing lists came with the flights. This meant that no item could be identified without opening the packing boxes. In order to find smaller-quantity items, which were packed with other supplies, all boxes had to be opened.

B.2 Vaccine (see Annex 2)

All vaccine arrived in each country according to the number of doses expected and at safe temperatures. All vaccine-transport cartons still had a quantity of dry ice inside, and all vaccine monitor "windows" were white -- indicating good transport temperatures. Vaccine monitors came in the Russian-language version and in adequate supply.

B.3 Immunization Supply and Equipment (see Annex 2)

Immunization equipment and non-vaccine supply arrived in the expected quantities with the following exceptions:

Tajikistan

The Ministry of Health, U.S. Embassy and this writer had been informed that the first flight (10/21/92) would be loaded with vaccines and cold chain equipment. Indeed the aircraft manifest read as one pallet of vaccines and 11 pallets of "Cold Chain Equipment." In fact, only vaccine arrived. The rest of the cargo space was taken up by disposable diapers, hospital gowns and non-sterile surgical gloves.

The U.S. Embassy was later informed that in addition to the already-planned second flight (10/24/92), a third and fourth flight would be arranged to send in the missing cold chain equipment. In the event, the second, third and fourth flights were cancelled due to civil

unrest. As a result, Tajikistan received no immunization equipment and supply (other than vaccine) during the current operation.

Turkmenistan

All equipment was received as expected in Turkmenistan with the following exceptions:

- . Four of the 44 vaccine freezers (188 lt.) under Line Item 4A (PIS ES/27) did not arrive.
- . 560 extra (a total of 1,840) Thermos vaccine carriers under Line Item 9 (PIS E4/18) were received.
- . 2,976 (31 boxes) out of 5,184 icepacks under Line Item 11 did not arrive.

Kyrgyzstan

All equipment was received as expected in Kyrgyzstan with the following exceptions:

- . 56 of the expected 56 vaccine freezers (188 lt.) under Line Item 4A (PIS E3/27) did not arrive. That is, no freezers were received.
- . 2,208 (92 boxes) out of 31,032 icepacks under Line Item 10 (PIS E5/16) did not arrive.
- . 24 out of 932 vaccine carriers under Line Item 9 (PIS E4/18) did not arrive.

Uzbekistan

All equipment was received as expected in Uzbekistan with the following exceptions:

- . One of the 12 large freezers under Line Item 1A did not arrive.
- . 59 extra vaccine freezers (188 lt.) under Line Item 4A (PIS E3/27) were received. That is, although 50 vaccine freezers were expected, a total of 109 were actually received.

B.4 Corrective Action (See Annex 3)

Turkmenistan, Kyrgyzstan, Uzbekistan

The most significant issue in these three countries had to do with the supply of freezers:

- . Turkmenistan was missing four small freezers.
- . Kyrgyzstan was missing 56 small freezers.
- . Uzbekistan was missing one large freezer and had received 59 extra small freezers.

The Emergency Immunization Support Program worked with the three countries to shift equipment as appropriate by truck and train. After the shifting is complete, one large freezer and one small freezer will still be missing. It is likely that this equipment is with the Tajikistan equipment.

The Program will also attempt to shift Thermos vaccine carriers and icepacks where the discrepancy is large -- as in Turkmenistan, which has received 560 too many vaccine carriers and 2,976 too few icepacks for the expected number of vaccine carriers. However, this corrective action will have to await the Tajikistan shipment, where it is likely the reverse discrepancy has taken place.

Tajikistan

As of the end of January 1993, the cold chain equipment designated for Tajikistan was still to be delivered by the International Committee of the Red Cross via Kiev to Dushanbe, Tajikistan.

It should be noted that the exchange between countries of incorrectly shipped equipment is as of this date not yet complete. It has proven a time-consuming and resource-expensive task.

B.5 Publicity

Journalists were on hand at airports during shipment arrival ceremonies. Special video filming was arranged in two of the four countries.

C. ESTABLISHMENT OF AN ACTIVITY SUPPORT NETWORK (See Annex 4)

Each of the four countries and Moscow have individuals who have become familiar with REACH activities. Through activity management, material development, translation work and interpreting, many have a good understanding of the technical issues involved in child immunization. At least one individual in each country is able to activate the whole network making it possible for REACH to arrange inter as well as intra-country activities.

D. COLD CHAIN ASSESSMENT/TRAINING

Cold chain assessment/training assignments took place in three countries according to schedule:

- Uzbekistan (J. Pott), 4 September - 18 December 1992.
- Turkmenistan (G. Larsen), 26 October - 29 November 1992.
- Kyrgyzstan (C. Hasselblad/J. Pott), 4 September - 18 December 1992.

Cold chain assessments were continued or initiated in the three countries to detail equipment availability and condition at each operational level. Although significant strengthening has occurred, these assessments reveal that important problems remain at national and peripheral levels in Turkmenistan and Kyrgyzstan and at all levels in Uzbekistan.

The cold chain maintenance and repair activities were also reviewed in each country. Although repair capabilities were found, they were not organized to address the problems of the cold chain systems nor were there sufficient equipment, tools and spare parts.

Training in the use of newly arrived equipment was conducted in the three countries and a basic course for cold chain operators at storage and service levels was developed and tested in Kyrgyzstan.

Report of activities carried out during the cold chain assignments are found in individual country reports. (see Documents D2, D3 and D4 in Annex 7)

The cold chain assessment/training assignment for Tajikistan was delayed due to civil disturbance and finally cancelled as a USAID/REACH activity. The World Health Organization provided a consultant (Mr. A. Battersby) for the same purpose. REACH arranged for Mr. Battersby to meet and work with its Tajikistan activity manager. They were able to do assessment in limited parts of the country during the period 20 November to 18 December 1992. A report of these activities is available through EPI, WHO/Geneva. (see D1 in Annex 7)

E. "VACCINE PROCUREMENT MECHANISM" ASSIGNMENT

The "Vaccine Procurement Mechanism" assignment was carried out by Ms. D. Woodle in Uzbekistan, Kyrgyzstan and Turkmenistan during the period 25 October to 30 November 1992.

The REACH network prepared MOHs for this assignment, collected data, arranged local travel, accommodation and interpretation. Over 100 pages of procurement materials brought by Ms. Woodle for use by the Ministries are currently under translation.

Ms. Woodle's report (see D5 in Annex 7) covers the findings and recommendations of this five week assignment. A summary report appears as D6.

F. VACCINE

Vaccine deliveries to the four Republics in 1992 from producers in the former Soviet Union (FSU) were not sufficient to meet their program requirements.

Calculations based on information collected during the individual cold chain assessment assignments, from the "Vaccine Procurement Mechanism" assignment and from the "Activity Coordination" assignment show shortfalls from FSU producers of the following magnitudes:

<u>VACCINE</u>	<u>AVERAGE SHORTFALL</u>	<u>RANGE OF SHORFALL</u>
Measles	75%	68 - 80%
BCG	26%	15 - 57%
DPT	25%	15 - 46%
Polio	21%	0 - 47%

Donations in 1992 were able to provide sufficient additional quantities of vaccine to the four countries to cover the vaccine requirement for immunizing all children with the primary series of the above antigens. However, vaccines supplied were not planned to (nor did they) immunize all age groups. Where countries would not modify their immunization schedule to provide only "primary" immunizations, vaccine shortages are already showing up (notably Turkmenistan). In all countries, however, should FSU vaccine supply in 1993 mirror supply problems in 1992, countries will face vaccine shortfalls during the first quarter of 1993.

G. PREPARATION FOR POLICY SEMINARS

All four countries requested that seminars for discussion of immunization policy issues be held. Detailed planning and organization for the seminars took place in only two countries (Uzbekistan and Kyrgyzstan) due to the limited time available to the international participants and civil disturbance in Tajikistan.

Some 350 pages of immunization program materials were translated and 170 copies of each were reproduced as the technical referenc: for the discussions.

Mr. R. Steinglass, REACH Technical Director, arrived on 23 November to oversee final preparations and lead the international team of participants. The seminars took place in Uzbekistan from 8-10 December and in Kyrgyzstan from 15-17 December 1992. The process and outcome of the proceedings are covered by Mr. Steinglass in a separate report (see D7 in Annex 7).

H. IMMUNIZATION PLAN OF OPERATIONS

With the commencement of cold chain assessment activities in all countries and implementation of cold chain training, vaccine procurement orientation and policy issue discussion in selected countries, each country is at a different stage in its readiness to conceptualize and prepare an immunization plan of operation. Staff of the Kyrgyzstan MOH have begun drafting such a document. They have requested external technical assistance to finalize their national immunization plan.

VI. RECOMMENDATIONS

The following recommendations are seen as an opportunity for effective intervention and are directed toward USAID:

- A. All four countries will require emergency humanitarian donations of vaccine early in 1993 if they are to complete primary immunization of their children. Estimated donations required (by antigen and country) are listed in Annex 6.
- B. The cold chain assessments in each of the countries should be completed as a basis for national planning, for rational cold chain procurement and as part of developing a cold chain repair and maintenance system.

In addition to training already provided for commodity use, training in cold chain system operation and vaccine handling is required. Materials developed in Kyrgyzstan for training of storage and service personnel need to be finalized and reproduced. Additional training materials for supervisory staff need to be drafted, tested and introduced.

Commodity support (for strengthening the cold chain and cold chain repair systems) continues to be required in each country -- see Annex 5 and 5A for individual country requirements.

There is still no cold chain between FSU vaccine producer and country level. This oft-reported deficiency must be addressed. It is inexplicable why no donor agency (WHO, UNICEF, USAID, etc.) has been able to assist the Russian Federation to correct this situation. In 1993, systematic neglect of the cold chain at such high levels is rare anywhere in the world. Deficiencies at this level undermine efforts to strengthen the cold chain at all lower levels. All vials shipped from the FSU are adversely affected, despite the low cost and ease of rectifying the problem.

- C. Each country should be encouraged to draft an immunization plan of action as a way of conceptually and practically integrating the assistance which USAID and other donors can provide. Technical assistance to develop this plan should be provided in Kyrgyzstan as soon as possible.
- D. Policy seminars should be conducted in Tajikistan and Turkmenistan in 1993. The organizing/holding of large-scale seminars in the NIS requires significant preparation time. If seminars will be held in Turkmenistan and/or Tajikistan in 1993, USAID/REACH staff should be in-country at least 30 days before the event.
- E. Further assistance to develop international "vaccine procurement" capability is required. Kyrgyzstan should be provided with a small quantity of foreign currency and assisted through the process of procuring measles vaccine on the international market.

- F. Should further commodity support, cold chain training, cold chain repair strengthening, vaccine procurement assistance, vaccine supply support, policy seminar organization and program planning assistance be provided, such assistance would best be implemented by longer-term technical field staff. At a minimum, two cold chain/vaccine handling specialists (with program planning skills) should be assigned with each having responsibility for two countries. Estimated minimum time required for each field specialist would be four person-months. Some additional short-term specialized technical assistance for holding policy seminars and for vaccine procurement capacity development would be required.
- G. Given the breakdown of bureaucratic systems in the NIS, the creation of new national borders, the difficulty in transportation and the scarcity of resources, every major error in commodity distribution from the donor side costs multiple person-weeks of time and use of scarce resources on the recipient side. Future commodity shipments must be more carefully executed.
- H. The REACH network in the four republics should be maintained through periodic telephone contacts and nurtured in preparation for further activity.
- I. The use of the writer for rapid assessment during the earthquake emergency in Kyrgyzstan on the one hand and the abandonment of work in Tajikistan due to civil unrest on the other, suggests the need for John Snow, Inc. to develop a thoughtful, institutional capability for working in true emergency situations.

ANNEX 1

REPORT ON THE MEDICAL SUPPLY REQUESTS MADE BY THE KYRGYZSTAN MINISTRY OF HEALTH -- PREPARED FOR THE USE OF THE U.S. EMBASSY, BISHKEK AND NIS TASK FORCE/EHA: 12 SEPTEMBER 1992.

There have been three medical supply lists under consideration for provision of assistance to the Republic of Kyrgyzstan as a result of the earthquake.

1) The first and most comprehensive list (the "long" list) is a listing of 165 items. The "long" list represents medications which are for routine use throughout the country for a maximum three month period during normal times. The list was pulled from the annual medical supply list which is based on the planning/requests of the senior heads of each medical service (specialty) in the country. As current warehouse stocks of these medications are in most cases minimal or nonexistent, stock levels were not factored in.

2) The second list of drugs (the "cable" list) was a list of priority drugs taken from the "long" list and sent by cable to the USA. This list of 46 medications used the same quantities as the "long" list and thus is also to serve the country for a maximum of three months under normal conditions.

3) The third list (the "Russia" list) is a list of 19 drugs of which 16 appear on the "cable" and thus also the "long" list. The quantities listed for these drugs are generally less than those on the other lists and they were expected to be purchased in Russia for early delivery. This list was designed to help the health system deal with the first wave of earthquake related injuries and health needs.

The context of these three lists is as follows: For the last two years it has become more and more difficult for the Republic to maintain an adequate flow of medical supplies. Not only have the costs of medical supplies increased dramatically (over 40 times in some cases) but they continue to do so. Further, supplies are often not available at any cost. Finally, the arrival of supply in the Republic is extremely erratic -- supplies of some medications may be available while others used as part of the same process are not. In short, the medical supply system is in a state of continuous shortage and stockout.

All of this comes at a time when hardships engendered by economic and social change are creating an increased demand on the health service system -- especially as regards children, the elderly and the chronically ill (in and outpatient).

Then comes the earthquake and a series of aftershocks which involves a population of over 130,000 people and which has reportedly made unusable over 10,000 living units. In addition, 26 out of 79 health facilities were damaged and some 13 schools rendered unusable (see attached data). The writer visited three communities so affected and everywhere found people living in tents. Although many houses and apartments were left standing, structural damage was such that these buildings can never be used again. Two hospitals visited had been moved completely into tents (surgery; maternity ward; inpatient; outpatient; pharmacy, etc.). It is reported that over 400 trauma cases were transferred to the major specialty hospitals in the country in the first few days after the earthquake. Cases continue to be transferred as of this writing.

Thus in a situation of already erratic and depleted supply, the Republic has had to divert its' meager supplies to this emergency situation -- not only to the affected area itself but also to the specialty referral hospitals which receive the most serious victims (traumatic and secondary) of the earthquake.

Nonetheless there is also some hope in the situation. It is reported that the Republic is negotiating with the European Economic Community for lines-of-credit which will permit the purchase of medical supplies. There is hope that these credits will permit a return to rational medical supply procurement in five to six months time. Thus, whatever appropriate, bulk-drugs/supply are received, they are received with immense pleasure and gratitude. And they seem to be put to immediate use. The writer saw this at work when three USA-provided WHO/MSF Emergency Kits arrived on 10 September in the afternoon and were taken by helicopter on the morning of the next day to three hospitals in the earthquake affected area.

It is in this context, then, that the three lists already generated need to be considered:

- 1) The "long" list remains the most comprehensive but lists both essential and non-essential medications.
- 2) The "cable" list is a priority list which is now thought "dated" given the hoped-for procurement under the "Russia" list and because of a further chance for reflection.
- 3) The "Russia" list remains in process but is a very good example of the difficulty the Republic faces in trying to extract even a few, emergency requirements from the old procurement channels.

The Deputy Minister of Health (Mr. K. A. Subanbayev) has instructed his Director of Medical Supply to create a fourth list which attempts to take into account the issues described above. This new list of 54 medications is designed to:

- a) Provide medication for treatment of both post-traumatic and chronic conditions of those affected by the earthquake.
- b) Replace medications which were stripped from hospitals and facilities to meet the demands of the earthquake victims (both traumatic and secondary).
- c) Assist with the Republic's urgent needs for somehow maintaining a functioning medical supply system through the winter (until such time as international credits permit it to make its' own way).

The "new" list takes into account the "Russia" list and other current donations. Because it addresses the three issues above, if supplied it is unlikely that these medications will be in stock longer than two to four months. The Ministry of Health recognizes that these medications may not be available in the USA in the commercial form with which they are familiar. They welcome the substitution of the generic equivalent.

It is the writer's opinion that the medical supply system in Kyrgyzstan today is in urgent need of support. That this support should assist them through the next three or four months as they recover from the earthquake and bridge a time to when they fully expect to make their own way. It seems to be a unique opportunity to assist at a critical time in health service and national development. However, time is the issue here. There is genuine need for immediate and appropriate assistance through the next few months. I urge early consideration of their "new" list and rapid dispatch of those items which make clear sense. If there are items which require further consideration, hold these back and discuss them later (or decline to provide them). I would recommend that the bulk of a shipment not be held up while a minority of drugs are further discussed. Early response will achieve much in alleviating a critical situation and demonstrating Embassy/USA Government practical concern.

DATA ON THE EARTHQUAKE AFFECTED AREA (KYRGYZSTAN): SEPTEMBER 1992

ITEM	1.	2.	3.	TOTAL
OBLAST:	Jalalabad	Narin	Talass	3
RAYON:	Toktogulsky	Susammyrsky	Talassky	3
TOTAL POPULATION (thousands)	73.3	6.5	51.8	131.6
POPULATION Under 14 Yrs (thousands)	31.9	2.6	20.2	54.7
HOUSES:				
Affected	11,459	1,780	2,817	16,056
Unusable	9,409	650	787	10,846
SCHOOLS:				
Affected	11	15	1	27
Unusable	4	8	1	13
HEALTH FACILITIES:				
Total	41	8	30	79
Damaged	22	0	4	26
a) Central Rayon				
<u>Hospitals:</u>				
Total	1	0	1	2
Damaged	1	-	1	2
b) Uchastok				
<u>Hospitals:</u>				
Total	5	1	3	9
Damaged	3	-	3	6
c) Rural				
<u>Ambulatories:</u>				
Total	5	0	5	10
Damaged	5	-	-	5
d) Feldscher Obstetrician Posts:				
Total	21	5	14	40
Damaged	9	-	-	9
e) <u>Polyclinics:</u>				
Total	2	0	0	2
Damaged	2	-	-	2
f) Sanitary Epidemiology Stations:				
Total	1	1	1	3
Damaged	1	-	-	1
g) <u>Pharmacies:</u>				
Total	6	1	6	13
Damaged	1	-	-	1
NUMBER OF HEALTH STAFF:	1,162	88	830	2,080

ANNEX 2

EMERGENCY IMMUNIZATION PROGRAM SUPPORT (OCTOBER 1992) ***TAJIKISTAN, TURKMENISTAN, KYRGYZSTAN and UZBEKISTAN**

	<u>ITEM</u>	<u>PIS NUMBER</u>	<u>TAJIKISTAN</u>	<u>TURKMENISTAN</u>	<u>KYRGYZSTAN</u>	<u>UZBEKISTAN</u>	<u>TOTAL NUMBER</u>
1a.	Large (horizontal) Vestfrost Freezer.	E3/27	--	--	--	12	12
1b.	Spare Parts for above Freezer.	E3/27	--	--	--	4 sets	4 sets
2a.	Icepack Freezer Electrolux TFW 791.	E3/26	--	--	--	11	11
2b.	Spare Parts for above Icepack Freezer.	E3/26	--	--	--	4 sets	4 sets
3a.	Ice Line Refrigerator Vestfrost MK302 (204 lt.).	E3/68	12	14	14	27	67
3b.	Spare Parts.	E3/68	4 sets	4 sets	4 sets	6 sets	18 sets
4a.	Vaccine Freezer (188 lt.) Vestfrost.	E3/27	53	44	56	50	203
4b.	Spare Parts.	E3/27	12 sets	10 sets	12 sets	10 sets	44 sets
5a.	Refrigerator, Electric Vestfrost MK/MS 4010.	E3/75	55	20	100	--	175
5b.	Spare Parts.	E3/75	14 sets	4 sets	22 sets	--	40 sets
6a.	Gas/Electric Refrigerator RCW 42 EG.	E3/21	--	20	--	--	20
6b.	Spare Parts.	E3/21	--	4 sets	--	--	4 sets
7.	Large Cold Box, 201 lt., Igloo.	E4/29	--	--	50	115	165
8.	Small Cold Box, 4.4 lt., Igloo.	E4/73	1,256	792	576	--	2,624
9.	Vaccine Carrier, Thermos, Model 3504/38.	E4/18	1,580	1,280	932	--	3,792
10.	Icepacks (May plus September - Cold Box Type).	E5/16	43,728	22,728	31,032	8,880	106,368

ANNEX 2 (continued)

EMERGENCY IMMUNIZATION PROGRAM SUPPORT (OCTOBER 1992)

TAJIKISTAN, TURKMENISTAN, KYRGYZSTAN and UZBEKISTAN

	<u>ITEM</u>	<u>PIS NUMBER</u>	<u>TAJIKISTAN</u>	<u>TURKMENISTAN</u>	<u>KYRGYZSTAN</u>	<u>UZBEKISTAN</u>	<u>TOTAL NUMBER</u>
11.	Icepacks (September Vaccine Carrier - Thermos Type).	Thermos	6,336	5,184	3,744	--	15,264
12A.	Voltage Stabilizer, Galatrek FF 500/4R, 0.5 KVA.	E7/11	--	14	--	--	14
12b.	Recording Thermometer, Hyoda AR-GT-S.	E6/28	--	6	2	--	8
13a.	Sterilizer, Single Rack, Prestige.	E9/08	--	--	194	--	194
13b.	Hardwater Pads for Sterilizer.	E10/4	--	--	194	--	194
14.	Reusable Syringes/Needles - Kit A.	E8/07	150	100	832	--	1,082
16a.	VACCINE: Measles.	In 10-Dose Vials (with Diluent)	18,200	--	14,000	28,000	60,200 v
16b.	VACCINE: BCG	In 20-Dose sets (with Diluent)	19,500	25,000	17,500	27,900	89,900 s

* See Annex 3 for delivery discrepancies.

7

ANNEX 3

LIST OF MISSING/SURPLUS COLD CHAIN EQUIPMENT: THREE COUNTRY TOTAL

ITEM	TURKMENISTAN			KYRGYZSTAN			UZBEKISTAN			TOTAL		
	EXP	REC	DISC	EXP	REC	DISC	EXP	REC	DISC	EXP	REC	DISC
1A. Large Freezer E3/27?	--	--	--	--	--	--	12	11	-1	12	11	-1
2A. Icepack Freezer E3/26	--	--	--	--	--	--	11	11	0	11	11	0
3A. Ice Line Refrigerator E3/68	14	14	0	14	14	0	27	27	0	67	67	0
4A. Small Freezer E3/27	44	40	-4	56	0	-56	50	109	+59	150	149	-1
5A. Small Electric Refrigerator E3/75	20	20	0	100	100	0	--	--	--	120	120	0
6A. Small Gas Refrigerator E3/21	20	20	0	--	--	--	--	--	--	20	20	0
ALL SPARE PARTS FOR ALL REFRIGERATOR/FREEZERS REPORTEDLY ARRIVED												
7. Large Cold Box	--	--	--	50	50	0	115	115	0	165	165	0
8. Small Cold Box	792	792	0	576	576	0	--	--	--	1,368	1,368	0
9. Vaccine Carrier E4/18	1,280	1,840	+560	932	908	-24	--	--	--	2,212	2,748	+536
10. Icepack E5/16	22,728	22,752	+24	31,032	28,824	-2,208	8,880	8,880	0	62,640	60,456	-2,184
11. Icepack for Vaccine Carrier-Thermos	5,184	2,208	-2,967	3,744	3,744	0	--	--	--	8,928	5,952	-2,976

NOTE: NO COLD CHAIN EQUIPMENT WAS RECEIVED IN TAJIKISTAN DURING SECOND PHASE OPERATIONS.
It is assumed that the location of the missing/surplus equipment will be cleared up on receipt of Tajikistan shipment.

EXP = expected
REC = received
DISC = discrepancy

18.

ANNEX 4

REACH NETWORK

The following list represents some of the persons who have worked in a non-official capacity with REACH to support MOH activities. Those with asterisks in front of their names are able to contact all others in their country who have previously worked with REACH, are able to contact officials in the MOH's on REACH's behalf and are familiar with contacting each other for inter-country activities.

MOSCOW (Telephone code: 095)

- * Vladimir Yastrezhembksi (Home tel: 288-9358)
Activity Manager and Interpreter

ST. PETERSBERG (Telephone code: 812)

Dr. Sergei Deshevoi (Office tel: 233-4470)
Immunization Specialist

TAJKISTAN (Telephone code: 3772)

- * Ibod Sharifi (Home tel: 24-34-43)
Activity Manager and Interpreter
- Saidbek Kalandarov (Neighbor's tel: 37-65-24)
Interpreter

TURKMENISTAN (Telephone code: 3632)

- * Maral Gurbannazarova (Home tel: 24-52-22)
Activity Manager and Interpreter
- Olga Kakajanova (Sister's tel: 25-25-52)
Interpreter

KYRGYZSTAN (Telephone code: 3312)

- * Nurgul Seitkazievoi (Home tel: 26-76-57)
Activity Manager and Interpreter
- * Lena Chernova (Home tel: 24-79-18)
Interpreter

UZBEKISTAN (Telephone code: 3712)

- * Bukhtior Calanov (Home tel: 45-63-78)
Activity Manager and Interpreter
- Andrew Koust (Home tel: 68-11-50)
Interpreter

ANNEX 5

**PROJECTED IMMUNIZATION EQUIPMENT AND SUPPLY NEEDS FOR 1993:
TAJIKISTAN, TURKMENISTAN, KYRGYZSTAN, AND UZBEKISTAN**

ITEM	PIS Number	Cost Per Item	TAJIK.	TURK.	KYRG.	UZBEK.	TOTAL
1. Central (+) Cold Rooms							
1A. Upgrade	--	\$20,000	1 - \$20,000	1 - \$20,000	1 - \$20,000	--	3 - \$60,000
1B. Install (30m ³)	--	\$20,000	--	--	--	1 - \$20,000	1 - \$20,000
2. Central (-20°C) Cold Room							
2A. Install (15m ³)	--	\$20,000	--	--	--	1 - \$20,000	1 - \$20,000
3. Oblast Stores							
3A. Refrigerator Ice Liner, 204 Lt.	E3/68	\$559.00	4 - \$2,236	4 - \$2,236	4 - \$2,236	33 - \$18,447	45 - \$25,155
-Spare Part Set	--	\$100.00	1 - \$100.00	1 - \$100.00	1 - \$100.00	3 - \$300.00	6- \$600.00
3B. Cold Room (+4°C) 10m ³	--	\$20,000	--	--	--	5 - \$100,000	5- \$100,000
4A. Large Horizontal Freezer, Vestfrost (400 Lt)	E3/27	\$429.27	--	--	2 - \$858.00	14 - \$6,006	16 - \$6,880
4B. Spart Part Set for E3/27	--	\$90.00	--	--	1 - \$90.00	2 - \$180.00	3 - \$270.00

26

**PROJECTED IMMUNIZATION EQUIPMENT AND SUPPLY NEEDS FOR 1993:
TAJIKISTAN, TURKMENISTAN, KYRGYZSTAN, AND UZBEKISTAN**

ITEM	PIS Number	Cost Per Item	TAJIK.	TURK.	KYRG.	UZBEK.	TOTAL
5A. Refrigerator, Electric Vestfrost MH/MC 4010 (40Lt) for facility	E3/75	\$617.00	100 - \$61,700	80 - \$49,360	225 - \$138,825	2500 - \$1,542,500	2905 - \$1,792,385
5B. Spare Part Sets for E3/75	--	\$62.70	10 - \$627.00	8 - \$501.00	23 - \$1,442	250 - \$15,675	291 - \$18,333
6A. Gas/Elec. Refrig. RCW42 EG, with Rack for ice	E3/21	\$1,064.00	--	140 - \$148,960	--	--	140 - \$148,960
6B. Spare Part Sets for E3/21	--	\$83.39	--	15 - \$1,260	--	--	15 - \$1,260
7A. Large Cold Box, 20Lt. Igloo, without Icepacks	E4/29	\$44.88	60 - \$2,693	--	--	1090 - \$48,919	1150 - \$51,750
*7B. Ice Packs for Large Cold Box	E5/16	\$0.69	3,720 - \$2,567	--	20,000 - \$13,800	67,580 - \$46,630	91,300 - \$62,997
8A. Small Cold Boxes (Igloo) 4.4 liter, without ice packs	E4/73	\$17.50	--	--	114 - \$1,995	3,646 - \$63,805	3760 - \$65,800
*8B. Icepacks for Small Cold Box	E5/16	\$0.69	--	--	2,052 - \$1,416	65,628 - \$45,283	67,680 - \$46,699

* NOTE: Item 7B and 8B are the same product and can be added. If ordered through UNIPAC, items 7A and 8A are provided with icepacks, which then necessitates a small reduction in the number of icepacks separately ordered under items 7B and 8B.

**PROJECTED IMMUNIZATION EQUIPMENT AND SUPPLY NEEDS FOR 1993:
TAJIKISTAN, TURKMENISTAN, KYRGYZSTAN, AND UZBEKISTAN**

ITEM	PIS Number	Cost Per Item	TAJIK.	TURK.	KYRG.	UZBEK.	TOTAL
9A. Vaccine Carriers, Thermos; with ice packs	E4/18	\$17.50	--	--	--	6,546 (FAPS) - \$114,555	6546 - \$114,555
9B. Icepacks, Thermos type, extra	Thermos	\$0.76	--	2,000 - \$1,520	--	26,184 - \$19,900	28,184 - \$21,420
10A. Sterilizer Set A, Single Rack	E9/08	\$77.08	--	--	930 - \$71,684	--	930 - \$71,684
10B. Hardware Pads for Sterilizer	E10/4	\$18.72	--	--	930 - \$17,503	--	930 - \$17,503
11. Reusable Syringe Kit A	E8/07	\$23.47	--	--	3,678 - \$86,323	--	3,678 - \$86,323
12. Voltage Stabilizers, Galatrek	E7/11	\$399.00	--	--	--	50 - \$19,950	50 -\$19,950
13. Thermometers	E6/08	\$1.31	1000 - \$1,310	1000 - \$1,310	1000 - \$1,310	8000 - \$10,480	11,000 - \$14,410
14. Cold Chain Repair Tools / Equipment	--	\$2,000 a set	6 - \$12,000	7 - \$14,000	7 - \$14,000	13 - \$26,000	33 - \$66,000
15. Cold Chain Spare Parts (Local Purchase)	--	\$10,000 a kit	1 - \$10,000	1 - \$10,000	1 - \$10,000	4 - \$40,000	7 - \$70,000
+TOTALS			\$113,233	\$249,247	\$381,582	\$2,158,630	\$2,902,692

+ Does not include shipping and handling charges.

22

ANNEX 5A

Estimated Tool and Equipment Needs for Strengthening Regional (Oblast) Cold Chain Repair and Maintenance Systems

<u>ITEM</u>	<u>QUANTITY</u>
1. Vacuum pump for evacuating domestic refrigeration systems. 220V 1ph 50Hz.	1
2. Set of charging hoses (a set is three hoses).	2
3. 1/4 inch refrigeration copper tube.	50 meter
4. 3/8 inch refrigeration copper tube.	50 meter
5. Tube cutter (small diameters).	2
6. Tube cutter (up to 1 inch diameter).	2
7. Lever type bending tool 1/4 to 1 inch.	1
8. Flaring tool 3/16 to 5/8 inch.	1
9. Swaging tool punch type 1/4 to 1/2 inch.	1
10. Low pressure Compound refrigeration gauge showing evaporating temperatures for R12 and R22 with adaptor nipple for connection to quick coupler.	2
11. High pressure Compound refrigeration gauge showing evaporating temperatures for R12 and R22 with adaptor nipple for connection to quick coupler.	2
12. Test manifold (2 gauges, 2 valves, 3 connections).	2
13. Set tube line adapters 1/4 to 3/8 inch.	2
14. Pinch off tool.	2
15. Digital temperature meter (range minimum -20°C to +50°C).	1
16. Multimeter Volts AC, DC, Amps, Ohms.	1
17. Clip (clamp) meter (minimum range 3 to 100 amps).	1
18. Aluminum solder for joining aluminum, brass, copper etc. (with flux if required).	10 meter
19. Copper to copper brazing rods (for small domestic copper piping).	5 Kg
20. Refrigerant gas R12.	50 Kg
21. Refrigerant gas R22.	25 Kg

NOTE: A quantity of spare parts should also be provided to enable rapid repair of equipment presently out of order. These spare parts can be purchased on the local (FSU) market.

ANNEX 6

**Vaccine Required by Infants in 4 Central Asian Republics
to Cover Anticipated Domestic Shortfalls Through Winter 1993/94**

<u>Country</u>	<u>Doses of Vaccines</u>				<u>Cost¹ if 100% procured from:</u>	
	<u>BCG</u>	<u>Polio</u>	<u>DPT</u>	<u>Measles</u>	<u>USA²</u>	<u>Offshore</u>
Kyrgyzstan	249,300	232,800	255,500	137,000	\$1,580,574	\$93,280
Turkmenistan	518,100	183,000	266,000	157,700	\$1,648,986	\$128,090
Uzbekistan	648,800	506,000	506,000	1,021,100	\$7,047,683	\$328,680
Tajikistan	493,800	456,800	358,000	187,900	\$2,447,865	\$159,936
	<u>1,910,000</u>	<u>1,378,600</u>	<u>1,385,500</u>	<u>1,503,700</u>	<u>\$12,725,108</u>	<u>\$709,986</u>

1. Cost is exclusive of shipping (costs calculated by R. Steinglass).
2. BCG is not produced in the USA. Costs include offshore BCG procurement.

26

ANNEX 7

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25

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