CASE STUDY

on

Community Based Water Quality Surveillance and Monitoring
under the CDD-WATSAN Project

District: Allahabad, Uttar Pradesh

Conducted by

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Consultant, Lucknow

on behalf of

UNICEF Field Office, Lucknow

November 1996
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Unsafe drinking water and unhygienic living conditions are a primary cause of diarrhoeal diseases especially among children below five years of age. Provision of safe water and proper sanitation is very essential for the control of diarrhoeal diseases. UNICEF launched the CDD-WATSAN (Control of Diarrhoeal Diseases Water and Sanitation) Project in rural areas of Allahabad District to bring down the infant mortality rate. This Project was implemented in two Blocks (Holagarh and Soraon) of Allahabad District by the Voluntary Institute for Community Applied Science (VICAS) with the support of UNICEF-Lucknow, Jal Nigam-Allahabad, Public Health Department and the District Administration.

Under the Project the following activities were taken up in the villages of the two Blocks:

- Village contact drives were organized to create awareness among the villagers about the importance of safe drinking water, personal hygiene and environmental sanitation. VICAS organized these village contact drives with the help of Jathas (groups) who spread out into different villages. These Jathas comprised of VICAS volunteers and some youth from a few villages. Each Jatha was led by a Jatha Nayak (Group Leader). There were 9 Jathas for Soraon Block and 11 Jathas for Holagarh Block. Each Jatha was given the responsibility to cover all the villages of one Nyay Panchavat. The village contact drives were conducted in Holagarh Block from February 1 to 20, 1995 and in Soraon Block from May 1 to 30, 1995. (Pages 21 and 22 provide information on the number of villages covered by each Jatha, names of the Jatha Nayaks and activities taken up during the Village Contact Drives held in Soraon and Holagarh Blocks respectively).

- Personal contacts were made with influential people of the villages, for example, Gram Pradhans, school teachers, village level government functionaries, health workers, members of youth organizations, anganwadi workers, etc. to inform them about the Project and about different aspects of CDD-WATSAN.

- During these drives, IEC material including posters, pamphlets, etc. with information about diarrhoeal diseases, water contamination, personal hygiene, environmental sanitation and many other aspects was distributed among the villagers.

- A village coordinator was selected by general consensus during the course of the village contact drives.

- Handwashing campaigns were also organized in the villages. These campaigns focused on the importance of washing hands. Information was also provided about diseases transmitted through unclean hands.

- Demonstration programmes on how to use ORS packets were also conducted. The Public Health Department provided ORS packets to the villagers. VICAS also established ORS Wala Ghars (See Photograph No. 1).

- Water Quality testing was done by the Jathas in the villages of both Blocks. Samples of water from different sources like handpumps, wells, pipes, storage tanks, lakes, etc. were collected in bottles with the H2S strip and left for 24-48 hours. The H2S paper strip test is a simple, inexpensive microbial water quality testing procedure in which 20 ml water sample is directly collected from the...
water source in a 20 ml glass vial with a screw-cap and rubber liner containing pre-sterilized H2S paper strip impregnated with specified culture media and left at room temperature for 24-48 hours. If the colour of water remains pale yellow, water is potable and if it changes to black it is non-potable. The test is presumptive in nature and is an indication of microbial (faecal) contamination of water based on H2S producing bacteria (See Pages 17 and 18 for details of the H2S Paper Strip Test).

Forms were developed by VICAS for filling in details of water samples collected during the Water Quality Surveillance and Monitoring Programme (See Page 19). Identification Slips were also developed by VICAS and stuck on each water sample bottle (See Page 20).

The Water Quality Surveillance results showed that India Mark II handpumps were the safest and most reliable source of drinking water. Villagers were encouraged to use this water for drinking and cooking purposes.

Wide cemented platforms with drains were constructed around handpumps in villages of both the Blocks. Community members provided voluntary labour for this work. In some cases building material like sand, bricks, etc were also contributed by the community (See Photograph Nos. 2 and 3).

The results also showed that water from most of the wells was contaminated. The primary reasons for this were that water level in the wells is very high, wells are not disinfected regularly, they have no overhead protection and unhygienic conditions exist around the wells.

Wells were covered with tin shades that were coloured brightly with synthetic paints. Water of these wells was chlorinated through public demonstrations. The level of the wells was raised (See Photograph No. 8).

DETAILS REGARDING THE WATER QUALITY SURVEILLANCE AND MONITORING INITIATIVE:

1 Holagarh Block

- 910 water samples from 92 villages were tested between February 1 and March 3, 1995.
- 10 water sources from each village including handpumps, wells and other sources were selected for the testing procedure.
- Out of the total of 910 sources, there were 272 samples of water from handpumps, 577 samples from wells and 61 samples from other sources.
- A total of 336 samples (36.9%) were found safe.
- Water from handpumps was found to be the safest. Out of 272 samples tested, 230 (84.6%) were found to be safe.
- Well water was found to be highly contaminated. Out of the 577 samples tested, 480 (83.2%) were found to be contaminated.
- Out of a total of 61 samples tested from other sources, 52 (85.3%) were found to be contaminated.

2 Sargam Block

- 1090 water samples from 113 villages were tested between May 1 and June 15, 1995.
- 10 water sources from each village including handpumps, wells and other sources were selected for the testing procedure.
- Out of the total of 1090 sources, there were 212 samples of water from India Mark II handpumps, 310 samples from shallow boring handpumps, 483 samples from wells and 85 samples from other sources which included pipes, storage tanks and lakes.
A total of 630 samples (57.9%) were found safe.

Water from India Mark II handpumps was found to be the safest. Out of 212 samples tested, 91.5% samples were found to be safe.

Water from shallow boring handpumps was also found to be safe. Out of 310 samples tested, 259 (83.55%) were found to be safe.

Well water was found to be most contaminated. Out of the 483 samples tested, 384 (79.5%) were found to be contaminated.

Detailed information regarding the water samples collected during the Water Quality Surveillance and Monitoring Programme has been maintained by VICAS. The water samples collected can still be found with the village coordinators in many villages. Villagewise separate files have been maintained where details of the surveillance are still available (See last Page for sample file cover). The forms for the Microbial Water Quality Testing were filled in duplicate and copies can be found with the village coordinators as well as at the VICAS headquarters.

SALIENT FEATURES OF THE PROJECT:

The Project was initially implemented for a period of six months after which activities were suspended. After a gap of nearly six months, the Project was restarted in January 1996 in a cluster of 30 villages in both the Blocks where WATSAN committees have been formed and members have been trained, caretakers and mechanics have been selected and trained.

There is a great difference in the level of awareness, participation, and enthusiasm among the people of the villages where further activities have been undertaken and where no further activities have been initiated.

In the villages where further activities have been taken up, for example, Masni, Sangspur, Khutahana, Samaspur and Lakhanpur Karan, more people are aware about the Water Quality Surveillance process.

WATSAN committees are active and have held meetings.

WATSAN committees have played an active role and motivated the Gram Pradhans (who are also the Chairpersons of the WATSAN committees) to sanction covered pipes for the discharge of excess water instead of open drains (See Photograph No. 4).

Caretakers are active and make all attempts to keep the area around the handpump clean but very few are confident of carrying out small repairs (See Photograph No. 5). People are generally not aware that caretakers and mechanics have been selected and trained.

Most platforms that were built during the initial phase of the Project are kept clean by the users.

Handpump water is used not only for drinking and cooking purposes but also for bathing, washing clothes and vessels. Separate bathing platforms are urgently needed to prevent water logging at handpump sites (See Photograph No. 6).

In some cases, drainage/disposal of excess water is a problem which is causing water logging in the surrounding area. The causes for this are insufficient length of the drain or broken ones. Careless use of water outside the platform area, the main drain of the village passing close to the handpump site, etc.

A lot of IEC material was developed by VICAS and has been widely distributed in the villages. Posters can still be seen at some places and villagers still possess some of this material, for example, booklets, pamphlets, etc. But very few know what is mentioned in them. Slogans written on walls can still be seen (See Photograph No. 7).

In the villages where no further activities were taken up, for example, villages like Pashchum.
Nara, Poorab Nara, Baladih, Oonchdih, Lehara and Padila

Very few villagers are aware about the Water Quality Surveillance programme.

Many handpumps have stopped functioning and people have gone back to using water from unimproved sources.

There is water logging around the handpumps.

People get handpumps repaired on their own initiative. At some places, it was mentioned that the handpump was government property and should be maintained by it.

There is a vast difference in the hamlets of some villages. While some people are very affluent and live in pucca houses, others live in thatched huts. The affluent families have their own private source of water and do not care about handpumps installed by the government, especially those at public places, for example, government schools.

A vast difference in the hamlets of some villages. While some people are very affluent and live in pucca houses, others live in thatched huts. The affluent families have their own private source of water and do not care about handpumps installed by the government, especially those at public places, for example, government schools.

PROBLEMS INVOLVED IN THE WATER QUALITY SURVEILLANCE INITIATIVE:

Very few people in the community could remember the Water Quality Testing process. While some mentioned that water was collected in a bottle, others had no idea about the initiative.

Only the village coordinators (involved in the process of water quality surveillance) and the Jatha Nayaks who could be contacted knew how water had to be collected in the bottle with the H₂S strip, how long it should be left and what the result signified (See Pages 17 and 18 for details regarding the H₂S Paper Strip Test).

It was mentioned by the Jatha Nayaks that when the bottle was given to community members for testing, they filled all the bottles with water from one source itself. That is why water testing was done by the Jatha members.

* All the Jatha Nayaks who were chosen for leading the Jathas belonged to one village only. Consequently, this aspect has been a major cause for the low level of awareness among the people of other villages.

* Another reason stated for not involving the community in this process was the lack of time.

* No feedback has been given to the community about the results of the tests that were conducted. At a few places where people recalled the testing procedure, some villagers eagerly came forward to inquire about the results of the testing done in their villages.

TESTING OF WATER SAMPLES DURING THE CASE STUDY:

22 samples of water from sources including India Mark II and III handpumps, shallow boring handpumps and wells were collected from 11 villages of Soraon and Holagarh Blocks during the study. The villages visited in the two Blocks were as follows.

A. SORAON BLOCK

<table>
<thead>
<tr>
<th>Name of Village</th>
<th>Census Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Samaspur</td>
<td>337</td>
</tr>
<tr>
<td>Lakhpanpur Karan</td>
<td>340</td>
</tr>
<tr>
<td>Lehara</td>
<td>405</td>
</tr>
<tr>
<td>Padila</td>
<td>420</td>
</tr>
</tbody>
</table>

B. HOLAGARH BLOCK

<table>
<thead>
<tr>
<th>Name of Village</th>
<th>Census Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jagdishpur Masni</td>
<td>213</td>
</tr>
<tr>
<td>Khutahana</td>
<td>242</td>
</tr>
<tr>
<td>Sangipur</td>
<td>222</td>
</tr>
<tr>
<td>Pashchim Nara</td>
<td>152</td>
</tr>
<tr>
<td>Poorab Nara</td>
<td>154</td>
</tr>
<tr>
<td>Baladih</td>
<td>176</td>
</tr>
<tr>
<td>Oonchdih</td>
<td>175</td>
</tr>
</tbody>
</table>

(See Pages 15 and 16 for Maps of Soraon and Holagarh Blocks respectively showing a graphic representation of the villages visited during the case study).
20 ml of each of the 22 water samples was collected directly from the water source into the 20 ml glass vial containing pre-sterilized H₂S paper strip, impregnated with specified culture media and left at room temperature for 24-48 hours. The colour of water remained pale yellow in 14 samples and turned black in 8 samples.

Of the 22 samples, 14 (where colour of water remained pale yellow in the glass vial with the H₂S strip) were found to be safe while 8 (where colour of water turned black in the glass vial with the H₂S strip) were found to be contaminated.

16 water samples (15 of India Mark II and 1 of India Mark III) were collected. 7 samples were from Soraon Block of which 4 were found to be safe and 3 samples of India Mark II were found to be contaminated. All these three contaminated samples were from sites in villages (2 from Lehara and 1 from Padila) where areas surrounding the platform were found to be extremely dirty and where no further activities have been undertaken. 9 samples were from Holagarh Block and all of them were found to be safe.

2 samples of handpumps with shallow boring (both from Lakanpur Karan village of Soraon Block) were collected of which 1 was found to be safe while the other was found to be contaminated.

4 samples from wells (1 from Soraon Block and 3 from Holagarh Block) were collected and all of them were found to be contaminated. These samples included wells covered by tin shades where platforms have been raised.

This highlights the fact that handpump water is the safest source of drinking water. It is very necessary to maintain cleanliness around the handpump to ensure the safety of drinking water.

(See Pages 6 to 10 for details of the water samples collected during the Case Study).

SUSTAINABILITY:

To achieve this:

- It is necessary that the results of the Water Quality Surveillance process are disseminated among the members of the community as soon as possible.

- This should be done at a public place where all villagers are brought together and proper prior intimation is given to everyone.

- Reasons/causes for contamination should also be discussed and efforts should be made to take remedial action as soon as possible.

- WATSAN committee members should be trained to undertake Water Quality Surveillance by themselves at regular intervals. Bottles containing H₂S strips should be provided to these committees so that they are well-equipped to conduct the test.

- The person/s being trained to conduct this test should be provided complete information about the test, the correct method of conducting it and the significance of the result.

- It is very important that activities are also taken up in areas where the first phase was initiated. This will help in regaining the momentum that was generated earlier.

- Participation of women and influential people of the village should be encouraged further and strengthened.
**VILLAGES VISITED**

A SORAON BLOCK

1 Samaspur (337)

<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| Users              | 1          | handpump                         | safe                        | * platform clean  
* handpump site used for bathing and washing clothes  
* only the village coordinator and some women knew about the water testing  
* WATSAN committee has been constituted including 5 women and 4 men  
* meetings have been held 2 - 3 times during which discussions have been held on safe water, diarrhoea, ORS, etc  
* Pradhan has provided pipes for some handpumps for the discharge of excess water  
* conflicts regarding water have lessened | No problem |
| Users              | 2          | well                             | contaminated                | * members of 6 households use the water of this well | No problem |
| Caretaker and users| 3          | handpump                         | safe                        | * members of 10 - 15 households use water from this handpump  
* labour input for the raising and construction of the platform was provided by the community  
* another handpump has recently been installed nearby through the Ministerial Quota Boring of this handpump has been done upto 80 feet only. Muddy water available from this handpump is not used for drinking purposes  
* slogans written during the village contact drive were still present | * there were complaints that people dirty the platform and do not take any responsibility for cleaning it |
### 2 Lakhanpur Karan (340)

<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| Village coordinator | 6          | handpump                          | safe                          | • 2 months ago a 50 feet long drain was constructed (see photograph No. 3)  
• platform well-maintained |          |
| Users               | 7          | handpump (shallow boring)         | contaminated                  | • surrounding area very dirty |          |
| Caretaker and family members | 8 | handpump (shallow boring) | safe | • women keen to participate in activities but need husband’s permission to do so  
• very faint recollection about the water testing activity | • surrounding areas of the handpump not maintained properly |

### 3 Lehara (405)

<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| Caretaker and users | 19         | handpump                          | contaminated                  | • surrounding area not kept clean  
• some people remembered about the water testing and wanted to know about the results | caretaker complained that people take no initiative to clean the platform of the handpump or its surrounding area |
| Some residents living nearby | 20 | handpump (installed at the Primary School) | contaminated | • the handpump has no platform  
• surrounding area very dirty  
• waste water collecting in deep ditch nearby  
• residents of this area are affluent and live in big, pucca houses | the school master is rarely present at the school  
no one is prepared to take on the responsibility for this handpump |
<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| No one could be contacted | 21 | handpump | contaminated | * surrounding area very dirty  
* there is water logging all around the handpump platform | No problem |
| Caretaker and users | 22 | handpump | safe | * platform kept clean  
* about 200 people and 100 animals use the water from this handpump  
* the handpump has been converted to India Mark III and has been repaired twice  
* money for the repairs was provided by few households | * the edge of the platform is very narrow and is uncomfortable |

B HOLAGARH BLOCK

1 Jagdishpur Masni (213)

<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caretaker of handpump and users</td>
<td>4</td>
<td>well</td>
<td>contaminated</td>
<td>* handpump not functioning as boring has failed</td>
<td>* people use well water for drinking, bathing, washing clothes and vessels</td>
</tr>
</tbody>
</table>
| Caretaker | 5 | handpump | safe | * platform well-maintained  
* handpump cleaned by the caretaker one month ago | * very little water flows out of the handpump |

2 Khutahana (242)

<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| Users | 9 | handpump | safe | * the marking to show the date when water was tested still exists  
* platform clean | No problem |
| Caretakers and users | 10 | handpump | safe | * labour and bricks for the construction of the platform was provided by the people  
* the Pradhan has committed that he would get the drain constructed for disposal of waste water | No problem |
| Users | 11 | handpump | safe | * platform well-maintained  
* drain constructed very well | * it takes a lot of time for the water to come out of the handpump |
<table>
<thead>
<tr>
<th>No.</th>
<th>Village</th>
<th>Persons Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| 3   | Sangipur (222) | Caretaker | 12 | handpump | safe | * platform clean  
* caretaker has developed a kitchen garden near the handpump site  
* waste water of the handpump flows into this garden | No problem |
|     |         | Users and caretaker | 13 | handpump | safe | * platform clean | No problem |
| 4   | Pashchim Nara (152) | Users | 14 | handpump | safe | * members of about 10 households use water from this handpump  
* platform around the handpump has been constructed  
* WATSAN committee has been formed  
* caretaker has been selected | * caretaker has not been trained |
| 5   | Poorab Nara (154) | Users | 15 | well | contaminated | * the well had no proper platform when water was tested earlier  
* the earlier test showed the water to be safe  
* people contributed labour for the transportation of construction material to raise the level of the platform | No problem |
| 6   | Baladih (176) | Users | 16 | handpump | safe | * platform not kept very clean  
* waste water does not flow out easily | * incline of the drain is not proper |
<table>
<thead>
<tr>
<th>Person/s Contacted</th>
<th>Sample No.</th>
<th>Source of Water Sample collected</th>
<th>Result of Water Quality Test</th>
<th>Salient Features</th>
<th>Problems</th>
</tr>
</thead>
</table>
| Owner of well and users   | 17         | well                             | contaminated                | * the well has been protected with a tin shed  
* 1 mason and 3 labourers worked for 14 days to raise the platform of the well and construct the tin shed  
* bricks and sand were provided by the local people  
* community members contributed labour - 7 people worked for 14 days  
* about 35 people from 4 - 5 households use the water of this well  
* the well has been disinfected at least 3 - 4 times | No problem                |
| Caretaker and users       | 18         | handpump                          | safe                         | * platform not well-maintained  
* surrounding area very dirty  
* water logging all around the drain  
* some fruit trees have been grown in the vicinity of the handpump  
* people have collected money from all the households that use water from this handpump for carrying out repairs | * the main drain of the village flows near this handpump and this causes a lot of water logging  
* the closed pipe to be used as the drain for discharge of waste water is lying unutilized nearby |
Photograph No 1
ORS Wala Ghar established by VICAS at the house of a caretaker in Village Sangipur of Holagarh Block

Photograph No 2
Wide cemented platform with a drain for disposal of excess water in Village Baladip of Holagarh Block
Motivated by the WATSAN committee, a 50 feet long drain was constructed 2 months ago in Village Lakhanpur Karan of Soraon Block.

Closed pipe sanctioned by the Pradhan for the disposal of excess water from handpumps in Village Samaspur of Soraon Block.
Photograph No 5
Caretaker in Village Samaspur of Soraon Block
demonstrating how she cleans the handpump

Photograph No 6
Separate bathing platform constructed near a well in Holagarh Block
Photograph No 7
Caretaker Ms. Pramila Devi. Slogan about diarrhoea written on the wall of her house can be seen.

Photograph No 8
Well with a raised platform in Village Oonchdih of Holagarh Block covered with a brightly painted tin shade. Labour, bricks and sand for construction was provided by the local people.
**Villages visited:**

337 - Samaspur
340 - Lakhanpur Karan
405 - Lehara
420 - Padila
Villages visited:

152 - Pashchum Nara
154 - Poorab Nara
175 - Oonchdih
176 - Baladih
213 - Jagdishpur Masni
222 - Sangipur
242 - Khutahana
H₂S PAPER STRIP TEST KIT

A field oriented bacterial test to monitor the quality of drinking water

APHA-AWWA-AWPCF Specified bacteriological water quality tests are expensive, non-potable and require the services of trained technicians and sophisticated laboratory facilities. To overcome these limitations, a simple P/A test method was developed. In this context APIC's new ready-to-use BACTERIAL TEST KIT enables you to monitor potable water sources and recreational water in tropical climates and to conduct emergency testing. The kit detects faecal contamination of drinking, surface and recreational water within 24-48 hours.

The method is based on the detection of H₂S producing bacteria whose presence is consistently associated with the presence of the members of the coliform group in nature. Further, enteric bacteria such as Salmonella, Proteus, Citrobacter and some strains of Klebsiella sp., Eschericta coli also produce H₂S.

The method has been tested worldwide and has proved to be an effective tool in detecting faecal contamination of drinking water.

The H₂S Paper Strip Test was one of the four simple, inexpensive microbial water quality testing procedures evaluated by the International Development Research Centre (IDRC), Canada. The research project was one of the principal objectives of the "UN International Drinking Water Supply and Sanitation Decade" to provide "Safe Water For All" by the year 1990. The results from the "three-continent, eight-country (Brazil, Chile, Egypt, Malaysia, Morocco, Peru, Singapore and Thailand) research project" have concluded that

"In summation, the H₂S Paper Strip Test is probably the best and simplest method to test remote water supplies, as well as for use in city and town laboratories. It is believed that the P/A and H₂S Paper Strip techniques combined with the coliphage test, would provide an excellent assessment of the safety of potable water from bacterial and viral contamination."

SPECIFICATIONS:

| Culture Tube | 20 ml glass vial with screw-cap and rubber liner |
| Composition | Pre-sterilized paper strip, impregnated with specified culture media |
| Inoculum | 20 ml water sample |
| Inoculation Procedure | As per directions for use, direct from source of water, no additional glassware required. |
| Incubation | At room temperature preferably between 30-37°C |
| Incubation Period | 24-48 hours, depending upon the room temperature |
| Observation | Whether colour changes from pale yellow to black |
| Conclusion | Potable or Non-potable |
| Manufactured by | A P Industrial Components Limited, Bhimtal |
PROCEDURE TO CONDUCT THE TEST:

- Fill the vial with water upto “Water Level Mark” (Figure 1)
- Cap it tightly and gently shake the vial
- Keep it at room temperature preferably at 30-37°C for 24 to 48 hours (Figure 2)
- Observe for blackening of contents after specified period. If colour turns black, water is not fit for drinking (Figure 3)
- Add few drops of disinfectant (that is, dettol, phenyl, etc.) and discard the vial

![Figure 1](image1) → ![Figure 2](image2) → ![Figure 3](image3)

**INCUBATION PERIOD:**

<table>
<thead>
<tr>
<th>Average Room Temperature</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>20°C</td>
<td>48 hours</td>
</tr>
<tr>
<td>25°C</td>
<td>42 hours</td>
</tr>
<tr>
<td>30°C</td>
<td>36 hours</td>
</tr>
<tr>
<td>35°C</td>
<td>30 hours</td>
</tr>
<tr>
<td>40°C</td>
<td>24 hours</td>
</tr>
</tbody>
</table>

**NOTE:**

- The test is presumptive in nature
- At temperatures lower than 20°C, the test may take more than 48 hours (about 96 hours) to answer. In such conditions, one should wait for 96 hours to draw any conclusion about the quality of water
- The test is an indication of faecal contamination of water based on H₂S producing bacteria

**CAUTION:**

- Keep beyond the reach of children
- No liability accepted for accidents arising from mishandling or misuse
- Read instructions carefully before use
- Do not drink water from the vial in any case

*************
**MICROBIOAL WATER QUALITY TEST**

<table>
<thead>
<tr>
<th>Sample No</th>
<th>Date of Sampling</th>
<th>Handpump (India Mark II-III)</th>
<th>Shallow boring Handpump</th>
<th>Wells</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>OK (✓)</td>
<td>Not OK (✗)</td>
<td>OK (✓)</td>
<td>Not OK (✗)</td>
</tr>
</tbody>
</table>

1—No. of Total Samples ........................ 2—Total No of Handpumps (India Mark II-III) ....

No. of OK (✓) ..................  No. of OK (✓) ..................  No. of not OK (✗) ..................

No. of not OK (✗) ..................  No. of not OK (✗) ..................  No. of not OK (✗) ..................

3—No. of Shallow boring HPs....

No. of OK (✓) .................  No. of OK (✓) .................  No. of not OK (✗) .................

No. of not OK (✗) .................  No. of not OK (✗) .................  No. of not OK (✗) .................

4—No. of wells .....  5—No. of others .....  

No. of OK (✓)  

No. of not OK (✗)  

No. of OK (✓)  

No. of not OK (✗)  

Implemented by-'VICAS'  

Programme-CDD-WATSAN  

Sig of Examiner (Name ....... ... ...)

Sponsored by-UNICEF  

Cooperation-U P Jal Nigam  

Mass Action for National Regeneration -- MANAR
Identification Slips developed by VICAS
and stuck on each water sample bottle

पेय जल परीक्षण कार्यक्रम

प्राम: विकास लण्ड

तारीख: समय

जलस्रोत—हुष्णप्रप्य/कुजानित/ब्या/अत्य

(√)

कोड नं:

संचालक—'विकास'

सहयोग—पूर्वसेक
### Village Contact Drive for Control of Diarrhoeal Diseases Water And Sanitation

#### Table: Village Contact Drive

<table>
<thead>
<tr>
<th>Village</th>
<th>Contact Person</th>
<th>Phone No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Village 1</td>
<td>John Doe</td>
<td>123-4567</td>
</tr>
<tr>
<td>Village 2</td>
<td>Jane Smith</td>
<td>789-0123</td>
</tr>
<tr>
<td>Village 3</td>
<td>Mike Johnson</td>
<td>345-6789</td>
</tr>
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</table>

#### Notes:
- The table above outlines the contact persons and phone numbers for villages involved in the Village Contact Drive for control of diarrhoeal diseases and water sanitation.
- Each village has a designated contact person responsible for coordinating efforts to improve water and sanitation practices.
<table>
<thead>
<tr>
<th>विनायक स्वरकाश</th>
<th>राजा सम्राट</th>
<th>कृति-प्रसाद</th>
<th>मनोज खड़ा</th>
<th>ज्ञान क्रिकेट</th>
<th>धर्मशाला सेल्फोडिया</th>
<th>ज्ञान क्रिकेट</th>
<th>प्रजासत्ताता</th>
<th>विनायक स्वरकाश</th>
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Voluntary Institute for Community Applied Science—VICAS

Micro Bical Water Quality Test Report

Name of the Nyaya Panchayat  
Code No

Descriptions

1. No. of total Samples  
   No. of ok (√)  
   No. of not ok (×)  

2. No. of hand Pumps (India Mark II & III)  
   No. of ok (√)  
   No. of not ok (×)  

3. No. of hand pumps (shallow boring)  
   No. of ok (√)  
   No. of not ok (×)  

4. No. of wells  
   No. of ok (√)  
   No. of not ok (×)  

5. No. of others  
   No. of ok (√)  
   No. of not ok (×)  

* VICAS*  
* CDD-WATSAN PROGRAMME  
* Unicef  

Sign. of Examiner (Name: ____________________________ )
स्मरणीय और अनुकरणीय सन्देश

<table>
<thead>
<tr>
<th>सी० डी० डी० वाटसन प्रोग्राम</th>
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<tbody>
<tr>
<td>दस्त और हैजा के खिलाफ,</td>
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<td>ग्राम सम्पर्क अभियान।</td>
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<tr>
<td>सबसे जल परीक्षण प्रयोगालय</td>
</tr>
</tbody>
</table>

### हाथ धोने अभियान

**HAND WASHING CAMPAIGN**

| दस्त होये, बच्चा पस्त, |
| पिलाओ अर्कोरो अर्को होये मस्त। |

| घर और गाँव साफ बनायें, |
| दस्त और हैजा दुर भगायें। |

| आओ हम, सब हाथ बटायें, |
| मिलकर अपना गाँव सजायें। |

| आओ आत्म निर्भर बनें, |
| अपना काम सुद करे। |