

IPS 2024
13-15th Feb 2024
RAIPUR



DIGITALIZATION OF PERIODIC ASH DYKE INSPECTION BY CROSS FUNCTIONAL TEAM THROUGH MOBILE APP

TOPIC: SMART MAINTENANCE THROUGH DIGITALIZATION

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Need for Periodic Ash Dyke Inspection



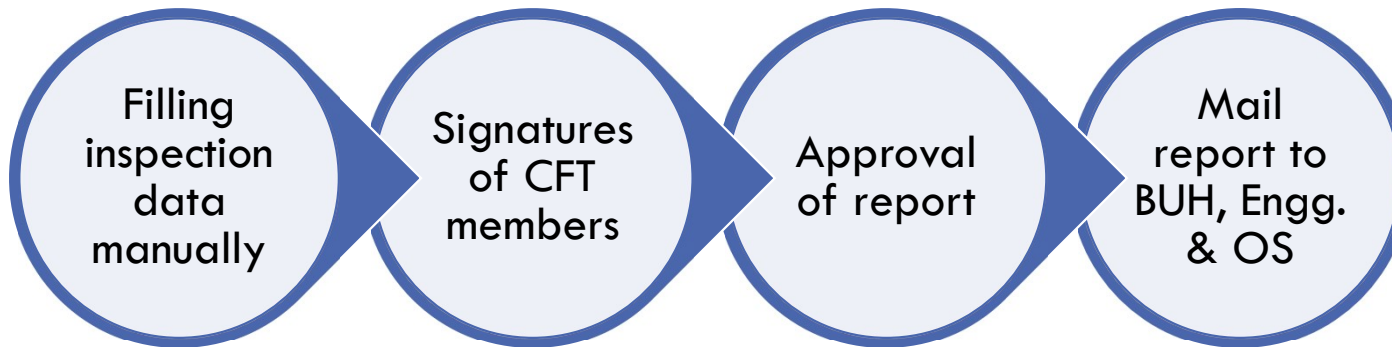
To identify issues at early stages

To avoid breaches

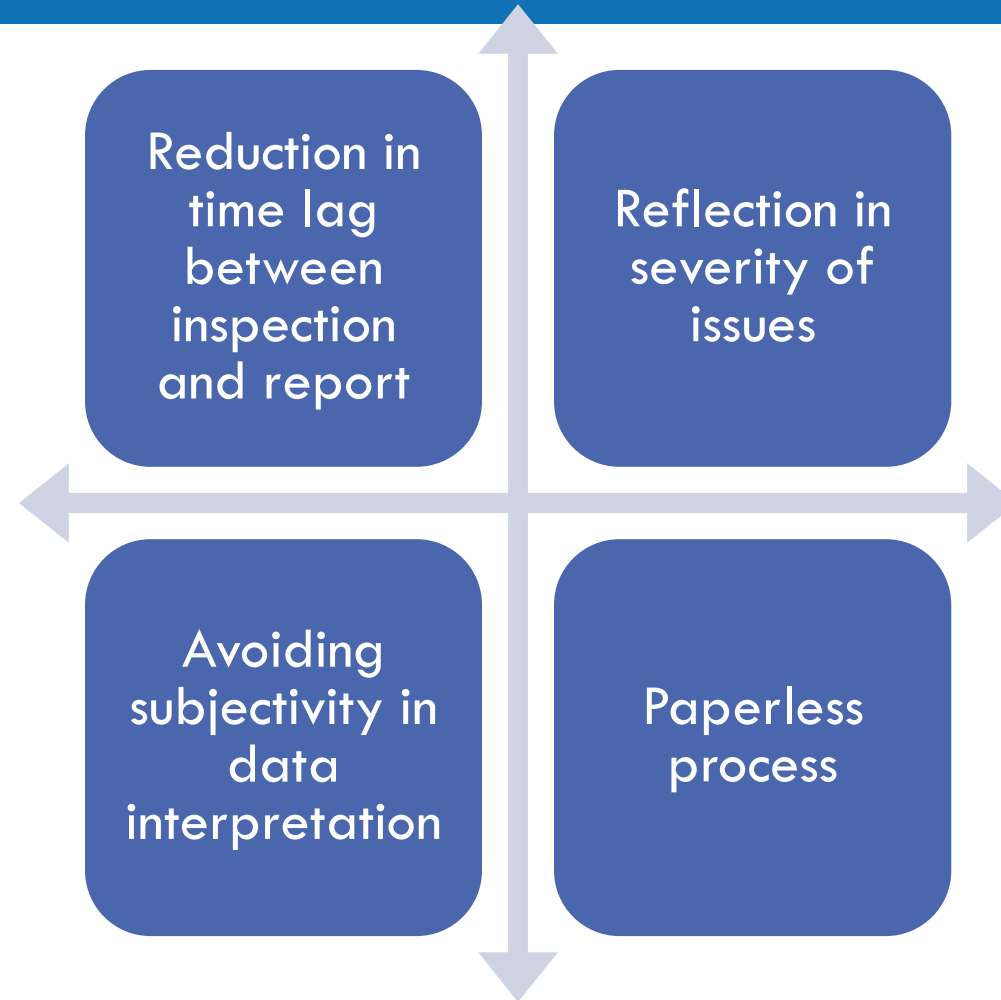
Enable support of other depts



Ash Dyke Inspection Practice



Improvements



Solution



“NTPC Ash Dyke Inspection” Mobile App



Ash Dykes Inspection App (v 1.10)

Enter User ID

SUBMIT

An initiative by
NTPC Station Engineering Department and
NTPC IT Department

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IOS

General Apps

- NTPC Manpower Planning (DELPHI)
- NTPC AshDyke Inspection
- O&M Conference (IPS)
- NTPC PM Tools (PROMPT)
- NTPC Safety 2.6 (SURAKSHA)
- NTPC QA
- NTPC CC&M
- NVVN MIS
- NTPC Plant Data
- NTPC Directory 4.0 (SAMPARK)



Android

General Apps

- NTPC Manpower Planning (DELPHI)
- NTPC AshDyke Inspection
- O&M Conference (IPS)
- NTPC PM Tools (PROMPT)
- NTPC Safety 2.6 (SURAKSHA)
- NTPC QA

Parameters incorporated in mobile app



Sl. No.	Parameter	Reference
1	Checklist for ash dyke inspection	Approved ash dyke OGN
2	Rolling plan	Indicates life of the lagoon*
3	Under Charging?/ SD Construction?/ Ash utilization?/ Raising?/ Buttrressing?/ Ash Mound?	Additional input*
4	Space available in LCM	Additional input*
5	Whether Stability study is conducted	Additional input*
6	Whether Mock drill is conducted	Additional input*
7	Whether instrument readings are being recorded?	Additional input*
8	Whether free board (i.e. 1.5m) is maintained?	Additional input (auto generated)*

*Additional inputs incorporated in consultation with OS



Advantages of mobile app



No need to print and make signatures

Instant report generation

Option of inserting pictures

Paperless

OTP based login

No need to prepare report

Highlight serious issues

Minimizing the questions through logical relations



Inspection reports



4. SEASON OF INSPECTION: PRE MONSOON/MONSOON/POST MONSOON.

	S1 POND	S1 POND	S2 POND	N2 POND
A. ASH LAGOON DETAILS:				
a) Water level in the operating lagoon	190.000	--	--	195.50
b) Whether any ash surface is exposed above water.	50%	100%	80%	20%
c) If ash surface is exposed above water level whether ash is flying anywhere.	NO	NO	NO	NO
d) Whether water is flowing through all the openings of the water escape structure.	YES	NO	NO	NO
e) Approximate head of water flow over the well slabs.	25 MM	0 MM	00 MM	50 MM
f) Approximate depth of water over ash Surface around/near the operating water escape structure.	0.75 M	0.00 M	0.00 M	1.00 M
g) Whether any inter slab leakage of ash present in the water escape walls.	NO	NO	NO	NO
h) Whether water flow is obstructed by floating plants or any other floating bodies near the vents in the water escape structure.	NO	NO	NO	NO
i) Difference in the level of ash/water				

Initial Manual Inspection Report

Inspection Report of Ramagundam(N2) Dated:16-11-2023

AshDyke@ntpc.co.in <AshDyke@ntpc.co.in>
Thu 11/16/2023 11:38 AM

To:ANAND KUMAR KARN <ANKARAN@NTPC.CO.IN>; Brijesh Singh <BRIESHINGH@NTPC.CO.IN>; Manjeet Kumar Sinha <MANJITSINHA@NTPC.CO.IN>; Koppoji Nagajuna <KNAGARUNA@NTPC.CO.IN>; Shilprithina Dhabu <SGDHABU@NTPC.CO.IN>; R Sarangapani <RSARANGAPANI@NTPC.CO.IN>; SK NOGRAIVA <SKNOGRAIVA@NTPC.CO.IN>; Rajesh Vemula <VEMULARAJESH@NTPC.CO.IN>; Roshan M. Kumar <RMKUMAR@NTPC.CO.IN>; Ashutosh Kumar <ASHUTOSHKUMAR@NTPC.CO.IN>; Ramesh Padya <RAMESHPADYA@NTPC.CO.IN>; HOPRAMAGUNDAM <hopramagundam@ntpc.co.in>

1 attachments (134 KB)
Ramagundam_N2_16-11-2023.pdf

Please Find Attached Report containing Inspection data of Lagoon mentioned in subject G20

Auto Generated mail

S.No.	Ash lagoon Details	Result	Remarks	Image
1	Existing raising	4		
2	Lagoon water charging?	Yes		
3	Lagoon water Charter dyke construction?	No		
4	Lagoon water ash vibration?	Yes		
5	Lagoon water raising?	No		
6	Lagoon water bolting?	No		
7	Lagoon as ash sound?	No		
8	Available space in LCLL	1.4		
9	Whether stability study is conducted?			
10	If stability study is conducted, whether conducted?	SEE BYTERABAD		View Image
11	Whether the sack drill is conducted?	No		
12	Whether the instrument readings are being conducted?	Yes		View Image
13	Water level in operating lagoon (RL)	194.1		
14	Design free board level (RL)	195.5		
15	Whether the free board of 1.5m is maintained?	No		

Current Auto Generated Inspection Report



Summary



- Reduce the time lag between the inspection and report generation through instant report generation
- Highlights the issues in orange (alarming issues) and red colors (distress issues) for better focus and fast reaction.
- Indicates the issues through capturing real time pictures.
- Executives who are non-familiar with ash dykes can also understand the criticality of issue based on the colour codes.
- Inspection report is a computer-generated document. No need to take print for signatures.
- Auto email generation of instant inspection report to Station BUH, Cross functional group, Station Engg and OS-AMG.
- Availability of all the previous inspection reports in the mobile app for reference.





THANK YOU

