

**Status of Heavy Metal Concentrations in Ground Water at Dera Bassi in the matter of OA
No. 30/2013 and 33/2013**

In the matter of Karnail Singh Vs CPCB & Ors. and Jai Singh & Ors. Vs U.O.I. & Ors. Hon'ble National Green Tribunal passed an order dated August 28, 2018 to conduct inspections of industries in Derabassi, Punjab. In pursuant to the above order, CPCB conducted inspections in 87 industries located in Focal Point, Dera bassi and additional 14 industries of Dera bassi located outside of the Focal Point, which are mentioned in original application also included in the purview of inspections. The inspection reports and compliance status was submitted to the Hon'ble NGT by September 28, 2018. At the time of report submission, analysis reports for heavy metals in ground water was awaited from CPCB laboratory. Now the results for heavy metals in ground water samples have been received and status is as following:

A ground water sample was taken from the village Haripur Hinduan at Radha Soami Satsang Beas premises and analysis results shows the ground water sample from village Haripur Hinduan is within the drinking water acceptable limits of BIS except for Total dissolved solids TDS (746 mg/l against limit of 500 mg/l). The analysis results of ground water from village are given in Table-1.

The ground water samples were collected from the borewells located within the premises of 29 industrial units. The average depth of bore wells is around 200-300 feet. The analysis results are compared with acceptable limits for drinking water, BIS 10500:2012 standards for drinking water and compliance status is given at Table-2. The analysis results of ground water samples taken from 19 out of 87 industries at Focal point, Derabassi is given at table-3 and analysis result of ground water samples taken from 10 out of additional 14 industries located at Derabassi is given at Table-4.

The analysis result of ground water from the 29 industries shows exceedance in 9 samples viz. 5 numbers of exceedance w.r.t. Manganese (Mn), 3 number of exceedance w.r.t. Iron (Fe) and 1 exceedance w.r.t Total chromium. As such the industrial process of these industrial Units does not include any use of the Mn in the process and its generation. Hence, therefore the possible reason may be geogenic.

Table -1 : Analysis results of Ground Water w.r.t. Samples collected from Village Haripur Hinduan

| Location | General Parameters in ground water (mg/l except for pH) | | | | | | | | | |
|---|---|-------|------|-----------------|-----------------|-----------------|------|------|------|-------|
| | pH | TDS | COD | Cl ⁻ | Fl ⁻ | NO ₃ | | | | |
| Tube well located at Radha Soami Satsang Beas, Village Haripur Hinduan, Derabassi | 8.1 | 746 | BDL | 27 | 0.4 | 5.7 | | | | |
| BIS acceptable limit for drinking water | 6.5-8.5 | 500 | - | 250 | 1.0 | 45 | | | | |
| | Concentration of Heavy metals in ground water (mg/l) | | | | | | | | | |
| | As | Cd | Cr | Cu | Fe | Mn | Ni | Pb | Zn | Hg |
| | BDL | BDL | 0.02 | 0.02 | 0.10 | 0.03 | BDL | BDL | 0.04 | -- |
| BIS acceptable limit for drinking water | 0.01 | 0.003 | 0.05 | 0.05 | 0.3 | 0.1 | 0.02 | 0.01 | 5 | 0.001 |

BDL= Below detection limit

Table -2 :

Status w.r.t. Ground water results from 29 industries

| S. No. | Name of Industry | Status w.r.t Ground water results |
|--------|--|---|
| 1. | M/s AAR PEE Enterprise, E-24, Focal Point, DerraBassi, Punjab | Within BIS 10500:2012 standards |
| 2. | M/s Integra Insulations, E-10, Focal Point, DeraBassi, Punjab | Within BIS 10500:2012 standards |
| 3. | M/s Axis Industries, D-41, Focal Point DerraBassi, Punjab | Within BIS 10500:2012 standards |
| 4. | M/s Abrostat Overseas E-62 Focal Point Industrial Area Derabassi Punjab | Within BIS 10500:2012 standards |
| 5. | M/s Mohindroo Ice Factory D-36A Focal Point Industrial Area Derabassi Punjab | Exceeding BIS 10500:2012 standards for Mn (0.47 against standard of 0.1 mg/l) |
| 6. | M/s Goindi Machines Private Limited (C-12 Focal Point Industrial Area Derabassi Punjab | Exceeding BIS 10500:2012 standards for Fe (0.52 against standard of 0.3 mg/l) |
| 7. | M/s Onkar Concrete Blocks (in place of M/s Harsor Engineering Works), C-11, Focal Point, DeraBassi | Exceeding BIS 10500:2012 standards for Mn (0.11 against standard of 0.1 mg/l) |
| 8. | M/s. Taksa Life Science, (in place of Katyani Plastic Industries), F-47, Industrial Focal Point, DerabassiSas Nagar, Punjab-140507 | Exceeding BIS 10500:2012 standards for Mn (0.13 against standard of 0.1 mg/l) |
| 9. | M/s. Jayen Electrolinks (P) Ltd., F-2, Focal Point, DeraBassi, Punjab | Within BIS 10500:2012 standards |
| 10. | M/s Poonam Drums Containers, (P) Ltd., Focal Point Industrial Area Derabassi Punjab | Within BIS 10500:2012 standards |
| 11. | M/s Ticoma Pharmacia, Focal Point Industrial Area Derabassi Punjab | Within BIS 10500:2012 standards |
| 12. | M/s Ally Chem Laboratories, (P) Ltd., Focal Point Industrial Area Derabassi Punjab | Within BIS 10500:2012 standards |
| 13. | M/s Essix biosciences Ltd., B-4-5, Focal Point, DeraBassi | Exceeding BIS 10500:2012 standards for Fe (0.91 mg/l > 0.3 mg/l) |
| 14. | M/s Power ChemPlast Pvt. Ltd., C-25, Industrial Focal Point, DeraBassi | Within BIS 10500:2012 standards |
| 15. | M/s Kamal Hitech Engineers Ltd., B-11, Industrial Focal Point, DeraBassi | Within BIS 10500:2012 standards |
| 16. | M/s A.R. Fasteners, E-71, Industrial Focal Point, DeraBassi | Within BIS 10500:2012 standards |

| S. No. | Name of Industry | Status w.r.t Ground water results |
|--------|---|--|
| 17. | M/s Nibber Castings, Village SaidoMajra, P.O. Mubarikpur, Derabassi, Dist. Mohali, Punjab-140507 | Within BIS 10500:2012 standards |
| 18. | M/s World wide Herb Pvt. Ltd., (Now M/s Chereso Life Science Pvt. Ltd.), B-9, Industrial Focal Point, Derabassi, Dist. Mohali, Punjab- 140507 | Within BIS 10500:2012 standards |
| 19. | M/s Bindlish Industries, D-46, Industrial Focal Point, Derabassi, Dist. Mohali, Punjab- 140507 | Within BIS 10500:2012 standards |
| 20. | M/s Punjab chemical & Crop Protection Ltd., Vill. Bhankarpur, Derabassi, Punjab | Within BIS 10500:2012 standards |
| 21. | M/s Budiraja Polymers (P) Ltd., Barwala Road, Sidapur Opp Power Grid Station, Derabassi, Punjab | Exceeding BIS 10500:2012 standards for Fe (0.63 mg/l > 0.3 mg/l) and Mn (0.17 mg/l > 0.1 mg/l) |
| 22. | M/s Ashoka Chemicals, Village Saidapur, Derabassi, Punjab | Within BIS 10500:2012 standards |
| 23. | M/s Cephram Milk Specialities, 6th KM Dera Bassi Barwala road, Bhagwas, Dera Bassi | Exceeding BIS 10500:2012 standards for Cr (0.11 mg/l > 0.05 mg/l) |
| 24. | M/s Federal Agro Industries P Ltd (Previously known as M/s PML Industries Ltd.) Village Behra, Barwala Road, Derabassi, Dist: SAS Nagar, punjab | Within BIS 10500:2012 standards |
| 25. | M/s. Nectar Lifescience Ltd. (unit-2) vill- Saidpura, Derabassi, Dist. Mohali, Punjab | Exceeding BIS 10500:2012 standards for Mn (0.12 mg/l > 0.1 mg/l) |
| 26. | M/s. Molson Coors India (P) Ltd. (formerly mount shivalik breweries Ltd.), Vill-Bhankarpur, Derabassi, Dist. Mohali, Punjab | Within BIS 10500:2012 standards |
| 27. | M/s ASTER Drug and Pharmaceutical Ltd, Saidapur, Barwal Road, Derabassi, Punjab | Within BIS 10500:2012 standards |
| 28. | M/s Kudos Chemie Ltd Kuranwala, Barwala Road, Derabassi-140507 | Within BIS 10500:2012 standards |
| 29. | M/s. Rajasthan Liquor Ltd. vill- Haripur hinduan, Disst- Mohali Punjab | Within BIS 10500:2012 standards |

Table-3 :

Heavy Metal Analysis results of Ground Water w.r.t. Samples collected from 19 industries out of 87 Industries located at Focal point Derabassi

| S. No. | Name of Industry | Concentration of Heavy metals in ground water (mg/l) | | | | | | | | | |
|--------|--|--|--------------|-------------|-------------|------------|------------|-------------|-------------|----------|--------------|
| | | As | Cd | Cr | Cu | Fe | Mn | Ni | Pb | Zn | Hg |
| | BIS acceptable limit for drinking water | 0.01 | 0.003 | 0.05 | 0.05 | 0.3 | 0.1 | 0.02 | 0.01 | 5 | 0.001 |
| 1. | M/s AAR PEE Enterprise, E-24, Focal Point, DerraBassi, Punjab | BDL | BDL | BDL | BDL | 0.10 | 0.06 | BDL | BDL | 0.01 | -- |
| 2. | M/s Integra Insulations, E-10, Focal Point, DeraBassi | BDL | BDL | BDL | BDL | 0.04 | 0.03 | BDL | BDL | 0.03 | -- |
| 3. | M/s Axis Industries, D-41, Focal Point DerraBassi | BDL | BDL | BDL | BDL | 0.05 | 0.03 | BDL | BDL | BDL | -- |
| 4. | M/s Abrostat Overseas E-62 Focal Point Industrial Area Derabassi | BDL | BDL | BDL | BDL | 0.13 | BDL | BDL | BDL | 0.06 | BDL |
| 5. | M/s Mohindroo Ice Factory D-36A Focal Point Industrial Area Derabassi | BDL | BDL | BDL | BDL | 0.18 | 0.47 | BDL | BDL | 0.04 | BDL |
| 6. | M/s Goindi Machines Private Limited (C-12 Focal Point Industrial Area Derabassi | BDL | BDL | 0.02 | BDL | 0.52 | 0.08 | BDL | BDL | 0.15 | BDL |
| 7. | M/s Onkar Concrete Blocks (in place of M/s Harsor Engineering Works), C-11, Focal Point, DeraBassi | BDL | BDL | BDL | BDL | 0.05 | 0.11 | BDL | BDL | 0.02 | BDL |
| 8. | M/s. Taksa Life Science, (in place of Katyani Plastic Industries), F-47, Industrial Focal Point, Derabassi | BDL | BDL | 0.01 | BDL | 0.10 | 0.13 | BDL | BDL | BDL | BDL |

| S. No. | Name of Industry | Concentration of Heavy metals in ground water (mg/l) | | | | | | | | | |
|--------|--|--|-----|-----|-----|------|------|-----|-----|------|-----|
| | | As | Cd | Cr | Cu | Fe | Mn | Ni | Pb | Zn | Hg |
| 9. | M/s. Jayen Electrolinks (P) Ltd., F-2, Focal Point, DeraBassi, | BDL | BDL | BDL | BDL | 0.05 | 0.05 | BDL | BDL | 0.04 | BDL |
| 10. | M/s Poonam Drums Containers, (P) Ltd., Focal Point Industrial Area Derabassi | BDL | BDL | BDL | BDL | 0.07 | 0.04 | BDL | BDL | BDL | BDL |
| 11. | M/s Ticoma Pharmacia, Focal Point Industrial Area Derabassi | BDL | BDL | BDL | BDL | 0.07 | 0.04 | BDL | BDL | 0.02 | BDL |
| 12. | M/s Ally Chem Laboratories, (P) Ltd., Focal Point Industrial Area Derabassi | BDL | BDL | BDL | BDL | 0.02 | 0.09 | BDL | BDL | BDL | BDL |
| 13. | M/s Essix biosciences Ltd., B-4-5, Focal Point, DeraBassi | BDL | BDL | BDL | -- | 0.91 | -- | BDL | BDL | 0.11 | -- |
| 14. | M/s Power ChemPlast Pvt. Ltd., C-25, Industrial Focal Point, DeraBassi | BDL | BDL | BDL | BDL | 0.20 | -- | BDL | BDL | 0.08 | -- |
| 15. | M/s Kamal Hitech Engineers Ltd., B-11, Industrial Focal Point, DeraBassi | BDL | BDL | BDL | BDL | BDL | -- | BDL | BDL | BDL | BDL |
| 16. | M/s A.R. Fasteners, E-71, Industrial Focal Point, DeraBassi | BDL | BDL | BDL | BDL | BDL | -- | BDL | BDL | 0.04 | -- |
| 17. | M/s Nibber Castings, Village SaidoMajra, P.O. Mubarikpur, Derabassi, | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| 18. | M/s World wide Herb Pvt. Ltd., (Now M/s Chereso Life Science Pvt. Ltd.), B-9, Industrial Focal Point, Derabassi, | BDL | BDL | BDL | BDL | BDL | 0.09 | BDL | BDL | BDL | BDL |
| 19. | M/s Bindlish Industries, D-46, Industrial Focal Point, Derabassi, | BDL | BDL | BDL | BDL | BDL | 0.02 | BDL | BDL | 0.05 | BDL |

Table -4 :

Heavy Metal Analysis results of Ground Water w.r.t. Samples collected from 10 industries out of additional 14 Industries of Derabassi

| S. No. | Name of Industry | Concentration of Heavy metals in ground water (mg/l) | | | | | | | | | |
|--------|---|--|--------------|-------------|-------------|------------|------------|-------------|-------------|----------|--------------|
| | | As | Cd | Cr | Cu | Fe | Mn | Ni | Pb | Zn | Hg |
| | BIS acceptable limit for drinking water | 0.01 | 0.003 | 0.05 | 0.05 | 0.3 | 0.1 | 0.02 | 0.01 | 5 | 0.001 |
| 1. | M/s Punjab chemical & Crop Protection Ltd., Vill. Bhankarpur, Derabassi, Punjab | BDL | BDL | BDL | BDL | BDL | -- | BDL | BDL | BDL | -- |
| 2. | M/s Budiraja Polymers (P) Ltd., Barwala Road, Sidapur Opp Power Grid Station, Derabassi, Punjab | BDL | BDL | 0.06 | BDL | 0.63 | 0.17 | BDL | BDL | 0.09 | BDL |
| 3. | M/s Ashoka Chemicals, Village Saidapur, Derabassi, | BDL | BDL | BDL | BDL | 0.14 | 0.06 | BDL | BDL | BDL | BDL |
| 4. | M/s Cepham Milk Specialities, 6th KM Dera Bassi Barwala road, Bhagwas, Dera Bassi | BDL | BDL | 0.11 | BDL | 0.13 | 0.02 | BDL | BDL | 0.21 | BDL |
| 5. | M/s Federal Agro Industries P Ltd (Previously known as M/s PML Industries Ltd.) Vill. Behra, Derabassi, | BDL | BDL | BDL | BDL | BDL | 0.02 | BDL | BDL | BDL | -- |
| 6. | M/s. Nectar Life science Ltd. (unit-2) vill- Saidpura, Derabassi | BDL | BDL | 0.01 | 0.02 | 0.03 | 0.12 | BDL | BDL | 0.01 | -- |
| 7. | M/s. Molson Coors India (P) Ltd. (formerly mount shivalik breweries Ltd.), Vill-Bhankarpur, Derabassi. | BDL | BDL | 0.02 | BDL | 0.01 | 0.06 | BDL | BDL | BDL | -- |
| 8. | M/s ASTER Drug and Pharmaceutical Ltd, Saidapur, Barwal Road, Derabassi, | BDL | BDL | BDL | BDL | 0.05 | BDL | BDL | BDL | 0.04 | BDL |
| 9. | M/s Kudos Chemie Ltd Kuranwala, Barwala Road, Derabassi | BDL | BDL | BDL | BDL | 0.14 | 0.05 | BDL | BDL | BDL | BDL |
| 10. | M/s. Rajasthan Liquor Ltd. vill-Haripur hinduan, Derabassi | BDL | BDL | 0.01 | 0.02 | 0.05 | 0.03 | BDL | BDL | 0.01 | -- |