SUPREME COURT OF PAKISTAN
(Appellate Jurisdiction)

Bench - II:
Mr. Justice Syed Mansoor Ali Shah
Mr. Justice Muhammad Ali Mazhar
Mr. Justice Shahid Bilal Hassan

Constitution Petitions No.4 and 14 of 2021
(Regarding declaration of Rule 2 (c) and Schedule-IV of the Khyber Pakhtunkhwa Power Crushers (Installation, Operation and Regulation) Rules, 2020 as ultra vires the Constitution)
and
Crl.M.Appeal No.8 of 2021 in Crl.O.P No.NIL of 2021.
and
C.M.A No.4707/2020 in C.A No.844/2020.
(Report of Hagler Bailly Pakistan)

Amer Ishaq & others *(in Const.P-4/2021)*
Muhammad Nawaz & others *(in Const.P-14/2021)*
Chief Abdul Rehman *(in Crl.M.Appeal. 8/2021)*
Govt. of KPK *(in C.M.A-4707/2021)*

... Petitioners

Versus

Province of KPK, etc. *(in CPs 4 & 14/2021)*
Muhammad Javed Marwat *(in C.M.A.8/2021)*
Chief Abdul Rehman *(in C.M.A.4707/2021)*

... Respondents

In attendance: Dr. Pervez Hassan, Chairman,
Power Crusher Commission (PCC)
Mr. Waqar Zakariya, Member PCC.
Mr. Asad A. Ghani, Advocate.

Ch. Aitzaz Ahsan, Sr. ASC
assisted by Barrister Zunaira Fayyaz, Advocate.
Khawaja Haris Ahmed, Sr. ASC.
Ch. Imran Hassan Ali, ASC.
Mr. Haider Mehmood Mirza, ASC.
Syed M. Iqbal Hashmi, ASC.
Syed Qamar Hussain Sabzwari, ASC.

Chief Abdul Rehman, in person.

Mr. Qasim Jamal, Director Mineral, Hazara.
Mr. Mohsin Ali Khan, Director Mineral.
Mr. Riaz, Dy. Director Mineral, Abbottabad.
Mr. Zulfiqar Ahmed, Asst. Director (Mineral).
Mr. Mumtaz Ali, DD(L), EPA.

Date of hearing: 11.07.2024

ORDER

Syed Mansoor Ali Shah, J.- The instant Constitution Petition No.4/2021 was filed under Article 184(3) of the Constitution of the Islamic Republic of Pakistan, 1973 ("**Constitution**"), challenging the vires of Rule 2(c) and Schedule-IV of the Khyber Pakhtunkhwa Power

Crushers (Installation, Operation and Regulations) Rules, 2020 ("**Rules**") to the extent they are ultra vires Sections 7 and 19 of the Khyber Pakhtunkhwa Power Crushers (Installation, Operation and Regulations) Act, 2020 ("**Act**") as well as the fundamental rights i.e., Articles 9, 23, 24, and 25 of the Constitution. During the course of hearing of this case in 2021, it was discovered that the core issue behind the challenge to the vires of the Rules is the *air pollution* in the area due to the unlawful operations of stone power crushers[1] in the village Suraj Galli, Tehsil Khanpur, District Haripur. Therefore, the environmental degradation through air pollution is at the heart of this case and forms the context for challenging the vires of the said Rules. It is for this reason that vide Order dated 15.06.2021, the Report prepared by Hagler Baily Pakistan ("**HBP**") as a local commission (in CA. 844-846/2020, a connected matter) was directed to be put up in this case which is before us today as C.M.A. 4707/2020. It is pointed out that the power crushers installed in the said village are causing air pollution in the area which raises serious threat to human life and health. The Report of the HBP after inspecting the area formulated the following conclusions: "*Regulatory Compliance:* High PM concentrations resulting from mining and crushing activities were measured at all the monitoring locations. The measured PM concentrations were not in compliance with the NEQS (24-hour) limits. Long term exposure to such high concentrations of PM_{10} can cause several health effects ranging from coughing, asthma to high blood pressure, cardiac diseases among the residents as well as the staff of the stone crushing plants. PM_{10} is also known to affect animals by causing various respiratory problems and creating additional stress." (See **Schedule A** to this Order for details).

2. Vide Order dated 15.12.2021, the Court again called for a fresh Report on the compliance of the National Environmental Quality Standards ("**NEQS**") by the power crushers from HBP as technical counsel with the mandate to carry out site inspection of the stone crushing plants set up in village Suraj Galli and prepare a fresh Report specifically on the presence of particulate matter (PM_{10}) in the air. HBP submitted the Draft Report on 04.4.2022 (C.M.A No.2323/2022). The conclusions drawn by in the Draft Report read as follows:- "The measured PM concentrations were above the 24-hours limit prescribed in the NEQS at all six monitoring locations. Long-term exposure to such high concentrations of PM can cause several health effects ranging from mild coughing to asthma to high blood pressure to cardiac diseases

[1] The terms 'power crushers' and 'stone crushing plants' have been used interchangeably.

among the residents and the workers of the stone-crushing plants." (See **Schedule B** of the Order for details).

3. Thereafter, not satisfied with the performance of the power crushers and in order to delve deeper into the issue of environmental degradation in the area, this Court vide Order dated 25.4.2022, was pleased to form a Power Crushers Commission ("**Commission**") under the chairmanship of Dr. Pervez Hassan. (See **Schedule C** of this Order for details). The Commission submitted its Final Report (C.M.A 6741/2024) on 06.07.2024, when the Chair of the Commission highlighted its final recommendations and conclusions as follows: "The Plants have not met, among others, the NEQS set out in Section 14. The Plants do not comply with the "existing" 300 metre safe distance applicable in the KPK which is borne out in the Report dated 10 August 2020 of Hagler Bailly Pakistan (Annexure A-1) and recorded in the Supreme Court Order dated 15 December 2021. The Plants do not comply with the "existing" NEQS, however unsatisfactory they may be. For the interim, as the Crush Plants at Suraj Gali are non-compliant with the legal and regulatory framework as on 28 May 2024 (the cut-off date of the Commission), the Supreme Court may consider closing them in the public interest and, subject to the other recommendations of the Commission such as the establishment of Crushing Zones, allow their opening on any of them establishing compliance with a neutral third party appointed by the Supreme Court."(See **Schedule D** of this Order for details).

4. The Final Report concludes that the three power crushers operating in the area in question are alarmingly violating the NEQS, as well as, the requirement of distance from the local community under the Rules. According to the Report, the $PM_{2.5}$ and PM_{10} levels are much higher than the standards given in the NEQS which result in serious chronic and lifelong diseases for the local inhabitants. The air pollution generated by the power crushers carries calcium carbonate which has adverse effects for human health such as damaging the respiratory tract.[2] It is now well accepted and acknowledged that air pollution affects not just humans but a wide array of environmental and ecological components; (i) *Wildlife*: Air pollutants can directly harm animals by causing health problems such as respiratory issues, heart disease, and even cancer. Animals can also be affected indirectly through changes in

[2] Technical Bulletin: Health Effects Information, Oregon Department of Human Services < https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/MONITORING/Documents/health/caco3.pdf> last accessed 18 July, 2024.

their habitat and the availability of food and water. (ii) *Plants and Forests*: Toxic pollutants in the air can damage the leaves of plants and trees, hinder their growth, and reduce their ability to photosynthesize, which is vital for their survival and growth. This not only affects the plants themselves but also the entire ecosystem that depends on them. (iii) *Water Bodies*: Air pollution contributes to acid rain, which forms when pollutants from the air are deposited in water bodies, and on vegetation and soils. This can lead to drastic changes in the pH level of waterways, adversely affecting aquatic life and water quality. (iv) *Soil Quality*: Deposits of pollutants like heavy metals in the soil can alter its composition and health, affecting plant growth and the organisms that depend on the soil, potentially disrupting entire terrestrial ecosystems. (v) *Climate Change*: Some air pollutants, particularly greenhouse gases like carbon dioxide and methane, contribute to global warming. Others, like sulfur dioxide, can create aerosols that reflect sunlight, affecting atmospheric temperatures and weather patterns. (vi) *Visibility and Aesthetic Damage*: Pollution can cause smog and haze, which reduce visibility. This not only affects the aesthetic enjoyment of natural landscapes but can also have economic implications for industries like tourism and real estate. (vii) *Biodiversity:* The cumulative impact of these effects can lead to reduced biodiversity as species that cannot adapt to the altered conditions die out or move to other areas. The interplay between air pollution and the environment is complex, influencing various natural cycles and life forms, and can lead to long-term ecological imbalances.[3]

5. Air pollution causes an estimated one in every nine deaths worldwide, making it the greatest environmental threat to human health. According to the World Health Organization ("**WHO**"), air pollution is responsible for an estimated seven million premature deaths worldwide every year.[4] Almost all air breathed by humans exceeds the WHO Guidelines limits. It is pertinent to mention here that no other location on the planet illustrates the stubborn nature of air pollution challenge more than South Asia, where pollution continued its upward trend in 2021. Bangladesh, India, Nepal and Pakistan – where 22.9 percent of the global population lives – are the top four most polluted countries in the

[3] *Daniel B. Botkin and Edward A. Keller*, Environmental Science: Earth as a Living Planet. John Wiley & Sons, 10th edition, 2020.
[4] Air Pollution, World Health Organization https://www.who.int/health-topics/air-pollution#tab=tab_1; Pollution action note, United Nations Environment Programme https://www.unep.org/interactives/air-pollution-note/

world.[5] As per the World Air Quality Report (2023), Pakistan is the second most polluted country in the world with an annual average $PM_{2.5}$ concentration 14 times above the WHO guidelines, leading to a loss in life expectancy of 4.4 years.[6] The most serious issue of air quality in Pakistan is the presence of excessive suspended PM present in the air. The PM is not a single pollutant, but rather is a complex mixture of solids and aerosols composed of small droplets of liquid, dry solid fragments, and solid cores with liquid coatings.[7] These particles vary widely in size, shape and chemical composition and are defined by their diameter for air quality regulatory purposes. Those with a diameter of 10 microns or less PM_{10} are inhalable into the lungs and can induce adverse health effects.[8] Fine PM is defined as particles that are 2.5 microns or less in diameter $PM_{2.5.}$ A number of adverse health effects have been associated with both $PM_{2.5}$ and PM_{10} including the worsening of respiratory diseases such as asthma, lung cancer and premature deaths in extreme circumstances. It is noted that the triple-planetary crisis, which comprises of interrelated urgent crisis of climate change, biodiversity loss, and widespread pollution must entrench environmental concerns as supreme constitutional norms.[9] This strand of demand often coined as "environmental constitutionalism" is a relatively recent phenomenon at the confluence of constitutional law, international law, human rights and environmental law and embodies the recognition that the environment is a proper subject for protection in constitutional texts and for vindication by constitutional courts worldwide.[10] By acting as a method of constitutionally entrenching environmental law and protection at a more enduring or "higher" constitutional level, environmental constitutionalism entails a transformative approach that relies on constitutions to provide for the architecture of environmental governance, whereupon it then acts to improve environmental protection

---

[5] *Michael Greenstone and Christa Hasenkopf*, Annual Update (2023), Air Quality Life Index https://aqli.epic.uchicago.edu/wp-content/uploads/2023/08/AQLI_2023_Report-Global_v03.5_China_view_spreads.pdf last accessed 19 July, 2024.

[6] World Quality Air Report (2023): Region and City PM 2.5 Ranking, IQ Air < https://www.iqair.com/dl/2023_World_Air_Quality_Report.pdf> last accessed 19 July, 2024.

[7] Inhalable Particulate Matter and Health (PM 2.5 and PM 10), California Air Resources Board < https://ww2.arb.ca.gov/resources/inhalable-particulate-matter-and-health#:~:text=Short%2Dterm%20exposures%20to%20PM10,hospitalization%20and%20emergency%20department%20visits.> last accessed 19 July, 2024.

[8] ibid.

[9] *Sam Bookman*, 'Demystifying Environmental Constitutionalism' Environmental Law Review, Lewis & Clark Law School (Volume 54, Issue 1) < https://law.lclark.edu/live/files/36175-54-1bookmancorrectionspdf>

[10] *James R. May and Erin Daly*, Judicial Handbook on Environmental Constitutionalism, United Nations Environment Programme (2017).

through various constitutional features such as fundamental rights, recognized principles of environmental governance and the rule of law.[11]

6. Over the years, Pakistan's superior courts have expanded the scope of fundamental rights and judicially interpreted the text of the constitutional fundamental right to life (Article 9) which has been popularly dubbed as right to a clean and healthy environment.[12] Subsequently, the courts have also recognized the right to dignity (Article 14) in *Imrana Tiwana*[13] and *Asghar Leghari*[14] that the protection of environment also emerges from the right to dignity which is inviolable and such protection is an inalienable right and perhaps more fundamental than the other rights. It is in this context that right to life and dignity when read with constitutional principles of democracy, equality, social, economic and political justice include within their ambit and commitment, the international environmental principles of sustainable development, precautionary principle, environmental impact assessment, inter and intra-generational equity and public trust doctrine. This protection to environment is also accorded in other international legal instruments[15], which Pakistan has ratified, including the most recent United Nations General Assembly Resolution[16] which recognized that everyone, everywhere, has the right to a clean and healthy environment.

7. Environmental constitutionalism as a concept also finds its ideological roots within Islamic environmentalism as environment and climate change have a strong linkage with our religion.[17] Approaching environmental constitutionalism through the lens of religion and spirituality can indeed be a powerful tool. Seyyed Hossein Nasr[18] criticizes the modern secular worldview for what he perceives as a harmful attitude towards nature. He believes that the current ecological crisis is a spiritual problem rooted in the forgetfulness of the sacred

---

[11] *Louis J. Kotze*, 'The Conceptual Contours of Environmental Constitutionalism' Widener Law Review (Volume 21:187) https://www.researchgate.net/profile/Louis-Kotze/publication/296319718_The_conceptual_contours_of_environmental_constitutionalism/links/5707858f08aed73c854ba99b/The-conceptual-contours-of-environmental-constitutionalism.pdf last accessed 18 July, 2024.
[12] Shehla Zia v. WAPDA, PLD 1994 SC 693.
[13] Imrana Tiwana v. Province of Punjab, PLD 2015 Lahore 522.
[14] Asghar Leghari v. Federation of Pakistan, PLD 2018 Lahore 364.
[15] Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights, United Nations Framework Convention on Climate Change, Paris Agreement.
[16] United Nations General Assembly Resolution 76/300, The human right to a clean, healthy and sustainable environment, A/RES/76/300 (28 July 2022) < https://documents.un.org/doc/undoc/gen/n22/442/77/pdf/n2244277.pdf?token=iKOQIAh6TEBfDK7yvB&fe=true>
[17] *Tarik M. Quadir*, Traditional Islamic Environmentalism: The Vision of Sayyed Hussain Nasr' (United Press of America, 2013).
[18] Professor of Islamic Studies at George Washington University.

nature of the world. He argues that modernity has led to an exploitative and instrumentalist view of nature, contributing to environmental degradation.[19] Islam can provide a comprehensive and integrated approach to environmental issues, encompassing ethical, social, economic and political dimensions. This foundation, *inter alia*, includes; (i) *Tawhid (Unity of God)*: The Quranic concept of Tawhid underscores the idea that all things come from one creator. This perspective encourages a holistic approach to the environment, viewing the Earth and all its inhabitants as interconnected and interdependent, (ii) *Stewardship (Khalifa)*: The Holy Quran emphasizes that humans are stewards (khalifas) of the Earth. This concept promotes responsible management of the Earth's resources, (iii) *Balance (Meezan)*: The Holy Quran speaks about balance (Meezan) in creation and warns against upsetting this balance. Climate change, which is driven by human activities, is disrupting the Earth's natural balance, (iv) *Avoiding Waste (Israaf)*: Islam discourages wastefulness (Israaf). The current patterns of consumption and waste, especially in more developed countries, are contributing significantly to greenhouse gas emissions and climate change, (v) *Justice (Adl)*; climate change is also a matter of justice, as it disproportionately affects the poor and vulnerable – people who often have contributed least to the problem and (vi) *Hima (Protected Areas):* The Islamic principle of Hima refers to a system of community-based management of resources, where certain areas are set aside for the conservation of natural resources, wildlife, and biodiversity.

8. At this juncture, it is important to underscore that environmental crisis pervades our lives. An overwhelming scientific consensus warns us that human-induced climate change is leading to rising sea levels, extreme weather events, and public health disasters.[20] Despite over thirty years of international agreements, global carbon dioxide emissions rose 70% between 1990 and 2020.[21] Biodiversity is collapsing at an unprecedented rate; one million animal and plant species face complete destruction within decades, because of human activities. Notwithstanding extensive domestic regulation, global standards of air, land and water pollution remain stubbornly high. It is in this perspective of environmental constitutionalism and Islamic environmentalism that we approach the current issue.

---

[19] *Seyyed Hossein Nasr*, Man and Nature: The Spiritual Crisis in Modern Man (George Allen & Unwin, 1968).
[20] *Richard P. Allan*, Summary for Policymakers, in Intergovernmental Panel on Climate Change, Climate Change 2021.
[21] United Nations Environment Programme, Emissions Gap Report 2022: The Closing Window – Climate Crisis Calls for Rapid Transformation of Societies.

9. After hearing the chair of the Commission, the case was fixed today to provide an opportunity of hearing to the power crushers to explain whether they raise any objection on the said Report of the Commission or actual compliance as far as the environmental threats are concerned. We have heard Ch. Aitzaz Ahsan, learned Sr. ASC and Ms. Zunaira Fayyaz, Advocate. At the very outset, they do not allege any malafide to the Commission. However, they submitted that the respondents are fully complying with the NEQS, yet they could not refer to even a single document showing their compliance with the same. Learned counsel submits that one of the respondents has invested Rs.150 Million and purchased equipment that curtail environmental pollution, however, no evidence has been placed on the record to substantiate this submission. He stated that the local villagers are adding to the pollution by burning various substances, to which Waqar Zakariya (HBP), member of the Commission pointed out that the readings of PM_{10} and $PM_{2.5}$ were taken round the clock, therefore, this intermittent burning does not affect the overall reading.

10. The submissions of the learned counsel for the respondent power crushers are not satisfactory and the findings of the Report have gone unrebutted, in particular, the violation of the NEQS. Learned Advocate General, KPK supported the Report of the Commission and also urged the Court to shut down these plants unless they comply with the NEQS. In order to protect the human life and health of the residents of the area, who have been subjected to these plants for a number of years, we direct the Environmental Protection Agency, KPK ("**EPA**") to shut down and seal the operations of these stone crushing plants immediately. The respondent owners of the said plants can be allowed to re-operationalize their plants provided they make an appropriate application to this Court satisfying the Court that they now comply with the requirements of the NEQS, which the Court, after verifying this fact through a technical expert may allow. The local Police shall render full assistance to EPA to carry out the Order of this Court in shutting down the stone crushing plants immediately. A copy of this Order shall also be dispatched to the Inspector General Police, KPK for immediate compliance. The Advocate General, KPK shall submit a compliance report to this Court within a week thereof.

11. We also note that the NEQS were passed in 1993 and last updated in the year 2010 and the Federal and Provincial Governments have made no efforts to update the said standards. It is crucial to

highlight that by limiting both the quality and quantity of anthropogenic pollutants in the environment, the NEQS serve as crucial frameworks which facilitate the transition towards a sustainable future. These standards do not only ensure the preservation of ecosystems and protection of public health through preventive measures but also play a significant role in fostering climate resilient development mechanisms by encouraging sustainable production processes in industries. Therefore, the Federal Government as well as the Provincial Governments are directed to update the NEQS within a period of three months from today and submit their updated/revised NEQS before this Court.

12. It is also pointed out that there are 900 other stone crushing plants operating in the province of Khyber Pakhtunkhwa. Let the Provincial EPA carry out detailed report regarding their environmental compliance and safe distance and submit their detailed report in this regard to this Court before the next date of hearing. In case the EPA finds that the said plants do not meet the NEQS or the safe distance requirement under the Rules, the EPA is free to take action against the said plants in accordance with the law.

13. Let these matters be relisted in the first week of November for the report of the Provincial Governments regarding the updating/revision of the NEQS as well as the report on the environmental status of the 900 stone crushing plants. Copy of this Order be dispatched to all the Chief Secretaries of the four provinces and the Chief Commissioner, ICT for compliance regarding updating/revision of the NEQS.

Judge

Judge

Judge

Islamabad,
11th July, 2024.
Approved for reporting
Sadaqat/Umer A. Ranjha, LC

Schedule-A

Excerpts from the Study on Environmental and Social Assessment of Mining and Crushing Activities in District Haripur, KP

6.1 **Regulatory Compliance**

- ► HKG and Niazi Crush Plants are operating without an Environmental Approval for operations from the KP EPA.
- ► Extensive deposition of dust was observed on trees, crops, the floor and furniture in houses in the Study Area. This indicates that the mitigation measures adopted by Plant owners until the time when monitoring was carried out as a part of this study are insufficient to control the dust emissions in the area and are therefore, non-compliant to conditions of the Environmental Approval for construction from KP EPA.
- ► **High PM concentrations resulting from mining and crushing activities were measured at all the monitoring locations. The measured PM concentrations were not in compliance with the NEQS (24-hour) limits. Long term exposure to such high concentrations of PM_{10} can cause several health effects ranging from coughing, asthma to high blood pressure, cardiac diseases among the residents as well as the staff of the stone crushing plants. PM_{10} is also known to affect animals by causing various respiratory problems and creating additional stress**. The settling of limestone dust over a long period results in changes to soil composition and pH, which may affect agricultural output.
- ► High noise levels exceeding the NEQS especially the nighttime limits were measured. Although most of the measured noise levels were under 60 dBA, however, long term exposures to such noise levels may cause headaches, sleeplessness, high blood pressure, and multiple other health issues among the nearby residents and especially among the staff of the stone crushing plants. High noise levels are also associated with hearing loss and increased stress in animals which results in altered mating behaviors.

6.2 **Distance to Safeguard Health, Safety and Life of Residents**

- ► Blasting vibrations are not expected to result in long-term damage to structures at 300 m or beyond (see Section 5.1 for detailed assessment).
- ► **A safe distance of 378 m should be considered (keeping in mind the potential impact of flyrocks) to ensure the safety of the local community residents and residential structures** (see Section 5.2 for the assessment and Section 5.3 for the justification used to obtain this number).

► Increasing the safe distance should not be considered the only solution to ensure safety of the nearby residents and appropriate mitigation measures to reduce flyrock distance and mitigate flyrock generation should be undertaken (see Section

5.2 for possible mitigation measures.

Schedule B

Excerpts from the Draft Report on Particulate Matter Sampling: Stone Crushing Plants, Khanpur

The key conclusions that have been made under this Study include the following:

- **PM_{10} concentrations at all the sampling locations substantially exceeded the limits prescribed in the NEQS**.

- Extensive deposition of dust was observed on trees, and crops in the Study Area (Exhibit 2.8). This indicates that the mitigation measures adopted by Plant owners until the time when sampling was carried out as a part of this Study are insufficient to control the dust emissions in the area.

- **The measured PM concentrations were above the 24-hours limit prescribed in the NEQS at all six monitoring locations. Long-term exposure to such high concentrations of PM can cause several health effects ranging from mild coughing to asthma to high blood pressure to cardiac diseases among the residents and the workers of the stone-crushing plants**. PM_{10} is also known to affect animals by causing various respiratory problems and creating additional stress.

- The implementation of appropriate dust control measures is essential to keep the emissions of particulate matter within the limit.

Schedule C

CONSTITUTION OF POWER CRUSHERS COMMISSION

1.	Dr. Pervez Hassan	Chairman
2.	Representative of Hagler Bailly Pakistan	Member
3.	Representative of WWF	Member
4.	Director, Mineral and Mines, Government of KP	Member
5.	Director, EPA, Government of KPK	Member
6.	Representatives of Stone Crushers	Member
7.	Ahmad Rafay Alam, Environmental Lawyer, Lahore	Member
8.	Zofeen T Ibrahim, Freelance Journalist.	Member

Terms of Reference:

a) What is the safe distance for installation and operation of power crushers from human dwellings?

b) What safety measures must be taken/installed by power crushers for

blasting and stone crushing at site at all times?

c) What National Environmental Quality Standards (NEQS) must be maintained by stone crushers to safeguard public health?

d) What short term and long-term measures to be adopted by crushers in order to be EPA compliant?

e) What measures or steps ought to be taken to continuously or regularly monitor the crushing and mining activities of power crushers to be EPA compliant?

f) What measures to be taken by power crushers so as to convert from conventional quarrying to safe and smart quarrying which avoids flying rock and dust?

g) What time frame to be fixed for to make their units EPA complaint?

h) Recommend specification for cost-effective monitoring equipment with real-time monitoring of wind speed, wind direction, and dust emissions (specifically PM_{10}) generated from operations of stone crushers and blasting activities.

i) Draft guidelines to assist the power crushers to achieve effective management and operation of monitoring equipment with due consideration to existing technical capacity and costs.

j) Develop a framework that can be used by the regulators to assess the environmental and social performance of stone crushers throughout the province and to share the information with the communities that may be at risk.

k) Assess performance of stone crushing plants that have installed and operated equipment to control dust emissions and where applicable provide recommendations that the owners of crush plants may consider to further improve their environmental performance.

l) Develop an action plan that considers a phased approach including appropriate safe distance (buffer zone) that will allow stone crushers to transition towards compliance with applicable legal laws in an appropriate time frame and eventually achieve internationally established benchmarks through continual improvement.

m) Has the Government of KPK recently established a dedicated crushing zone in Khanpur, a few kilometers away from Suraj Gali; whether it is viable solution to shift/transfer the stone crushers to that zone.

n) Any other issue as may be deemed appropriate or relevant to the above TORs or subject matter of crushing & environment.

Schedule D

Excerpts from the Report of the Power Crushers Commission

Conclusions of the Commission

The Commission concludes that, as at 28 May 2024, the cut-off date determined by the Commission, the Suraj Gali Plants were not fully compliant with the existing applicable legal and regulatory regimes. This conclusion emerges from the following considerations:

(1) The TOR of the Supreme Court required an assessment of the EPA compliance of the Plants; this meant the entire regulatory framework including "safe distance" and the "NEQS" (applicable to KPK)

(2) importantly, the reference to compliance is to the "existing" regulatory framework, irrespective of its inadequacies. **The Plants have not met, among others, the NEQS set out in Section 14.**

(3) **it is acknowledged and recorded that the Plants do not comply with the "existing" 300 metre safe distance applicable in the KPK. That the Plants do not meet the applicable safe distance of 300 metres is borne out in the Report dated 10 August 2020 of Hagler Bailly Pakistan (Annexure A-1) and recorded in the Supreme Court Order dated 15 December 2021**.

(4) **the Plants do not comply with the "existing" NEQS, however**

unsatisfactory they may be. There is a good case for a rationalization of the NEQS; the Commission can include that in its recommendations, which it has done, but it cannot base its recommendations on the NEQS as "they should be".

The Commission commends the efforts and investments by the Plant Owners toward compliance with the support and guidance of the Commission but they could not accomplish satisfactory and full compliance leaving the villagers defenseless against pollution, noise, health hazards, environmental and eco-system degradation and with a continuing risk to the qualities of their lives protected particularly by Articles 9 and 14 of the Constitution.

Recommendations of the Commission

(1) **Adopt, at the national level, a safe distance of 500 metres (Discussion in Section 13(2)(a)).**

(2) **KPK to develop a plan for Crushing Zones and to shift all crushing plants including the Suraj Gali Plants to such zones within a maximum transition period of 3 years. The Commission recommends that the KP Government develop a holistic policy and plan for establishing zone(s) for mining and stone crushing plants.** To support the development of policy and plan, the stone crushing plants should develop and submit a comprehensive report to the Industries Department that details:

- Project information including maps that identify nearby communities, quantity of equipment in place, operating capacity and schedules, and transportation routes.
- The daily production volumes and output, revenue numbers and operating costs.
- In the event of relocation, a minimum cost of relocation, number of closure days and the number of employees that will be retained.
- The mitigation and monitoring measures in place by the crush plant in-line with the requirements of their respective IEEs/EIAs and conditions included in the NOC issued by the KP EPA.

The report will be submitted by the industries to the KP Industries Department and the KP EPA. The information will allow the KP Industries Department to make an informed decision on which crush plants can be relocated to dedicated crushing zones based on their environmental performance and opportunity costs involved in relocation to ensure that a sustainable approach that considers both the environment and industrial needs of the province is adopted.

In the Balochistan Environmental Protection Act, there is space for District Environmental Protection Agency, there is no such provision in KP Environmental Protection Agency. It is suggested that the KP Environmental Protection Agency may be enabled legally to work closely with the Mining Authority under KP Mines and Mineral Act. The Local Government is empowered to notify land zoning where it would be important that land zoning for purposes of mining and crushing of stones should be in consultation with the Mining Authority and Environmental Protection Agency.

(3) **to amend and rationalize NEQS to incorporate recent technology and best practices.**

(4) **KPK to resource and develop the capacity of its regulatory agencies to better enforce and implement the laws and regulations.**

(5) **KPK to require crush plants to install effective monitoring equipment for ensuring compliance.**

(6) **KPK to enforce a closure period for all crush plants during winter months notwithstanding compliance to NEQS and safe distance.**

(7) KPK to establish grievance redressal mechanisms including local governments to assist the affected workers, villagers and the adjoining areas, as per Annexure F-2.

(8) **KPK to ban the use of old and obsolete equipment for crush plants and**

require equipment and processes that are environment and people-friendly.

(9) A Phased-Out Action Plan that sets out phased approach for compliance with law.

(10) Short and long-term Measures for Legal Compliance:

The Industries Department have defined the criteria and classified integrated mining and crushing operations respectively as Large, Medium, or Small. In some cases, the mining activity is separate from the crushing. These classifications and guidelines apply to both independent mining and integrated mining and crushing operations. The Commission recommends a phased approach segregated in three phases as provided below:

Period	Time Span	Measures to be Followed by Crush Plants
Short	Within 1 year	All crush plants designated as 'Large' will: **Observe safe distances.** **Report daily production quantities to the KP Industries Department monthly.** **Carry out air quality monitoring against NEQS parameters as recommended and report to KP EPA on monthly basis.** Adopt all mitigation measures adopted or planned to be adopted by the HKG facility inclusive of mining and crushing. Develop a Grievance Redress Mechanism (GRM) and implement it with involvement of all stakeholders. A framework is provided in Annexure F-2. Upgrade the EMP as included in the approved IEE or EIA of the facility in view of the recommendations of the Commission and submit it to the KP-EPA for review and approval. Where an EMP is not available, conduct an audit of the facility by engaging an independent consultant and prepare an EMP as advised by KP EPA. Cease operations between November and mid-February unless based on monitoring data the KP EPA determines that the facility has sufficient mitigations in place to safeguard the health and safety of communities.
Medium	Within 2 years	All recommendations of the Commission for units designated as Large will also be applied on crush plants designated as Medium.
Long	Within 3 years	All recommendations of the Commission for crush plants designated as Large will also be applied on crush plants designated as Small.

In the meantime, no new licenses will be issued to any category of mining and crushing operations that do not obtain an environmental approval from KP EPA and do not comply with the recommendations of the Commission.

(11) Specific Measures for Prevention of fly rock, noise, wastewater, and air emissions.

Noise and wastewater are included in these mitigations in consideration of the grievances reported by the local community on these aspects.

(a) Air Emissions

- **Dust collection systems: Use of dust collection systems such as baghouse filters as implemented by HKG.**
  - Water Sprays: Use of water sprays to moisten materials and roadways to settle dust particles.
  - Enclosures and Sealing: Enclosure of conveyor systems and other equipment prevent dust from escaping.
  - Dust Suppressants: Addition of chemicals such as magnesium chloride or calcium chloride during the crushing can bind dust

particles and reduce their airborne movement.

- Vegetative Barriers: Strategic planting of trees and shrubs can act as natural barriers to dust.

Measures employed by the HKG crush plant such as dust collection systems, closures around jaw crushers and water sprinkling systems can significantly reduce PM and dust related emissions. Section **Error! Reference source not found.** identifies the measures implemented by HKG.

(b) Flyrock

- **Blasting Techniques: Precise drilling, accurate timing, and sequencing of blasts can reduce flyrock travel distance. Techniques such as pre-splitting can also help control the direction and limit the extent of flyrock.**
    - Blast Mats or Covering Material: Use of blast mats or other durable covering materials over the blast area can significantly reduce the risk of flyrock by absorbing and containing the energy of the blast.
    - Protective Barriers: Constructing earthen berms or other types of barriers around the blasting site can physically block and contain flyrock, directing it back to the ground.
    - Charge and Firing Pattern Adjustment: Modifying the amount of explosive charge and changing the firing pattern can help control the force and direction of the blast, thereby reducing the risk of flyrock.

(c) Noise

- **Acoustic Barriers: Erecting barriers or walls to block sound waves from machinery can mitigate noise impacts.**
    - Equipment Modification: Using quieter machinery or retrofitting existing equipment with noise-dampening materials.
    - Operational Timing: Limiting the hours of operation, especially during early morning or late evening, to minimize noise impact on surrounding communities.
    - Distance: Placing noisy equipment as far as possible from community areas.

(d) Wastewater

- **Primary treatment: Suspended solids can be removed from effluent via simple gravity settling before discharge into drainage systems. The addition of inexpensive flocculants such as lime and alum facilitate effective settling and removal of suspended solids in addition to also allowing for the settling and removal of dissolved solids.**
    - Reuse and recycling: The silt-containing runoff can be collected in stormwater collection system and reused for vehicle washing and in sanitary facilities.

The KP EPA as part of its review and prior issuance of a No-Objection-Certification will ensure that the crush plant owners submitting an EIA or IEE have included the above-mentioned mitigation measures in the documents and have included the relevant mechanisms to ensure implementation within the environmental monitoring and mitigation plans.

Recommendations for Interim Orders of the Supreme Court

The Court in its order of 25 April 2022 directs that:

> **It is also underlined that only three power crushers are before us, and we have been informed that there are 950 power crushers operating in KPK. Any sustainable solution proposed by the Commission and eventually approved by this Court can go a long way in resolving this issue for the entire Province (paragraph 5).**

(1) The Commission recommends that the concerned government departments that have a mandate to regulate the power crusher industry should be directed to formulate policies, plans, and procedures to extend the implementation to the entire

Province. Both the actions should be time bound as suggested by the Commission in this Report.

(2) **For the interim, as the Crush Plants at Suraj Gali are non-compliant with the legal and regulatory framework as at 28 May 2024 (the cut-off date of the Commission), the Supreme Court may consider closing them in the public interest and, subject to the other recommendations of the Commission such as the establishment of Crushing Zones, allow their opening on any of them establishing compliance with a neutral third party appointed by the Supreme Court.**

(3) It is added that the Plant Owners particularly the Niazi Plant kept sending the Commission its progress reports after the cut-off date of 28 May 2024 which the Commission could not assess and leaves for the evaluation of the neutral third party requested to be appointed by the Supreme Court in case the Niazi Plant or any other Plant petitions the Supreme Court for the opening of the Plant.

(Emphasis supplied)