Hagler Bailly Pakistan

DIGBY WELLS ENVIRONMENTAL

Appendix Y: Draft Management Plans and Procedures

1. Stakeholder Engagement Plan
2. Noise and Vibration Management Plan
3. Air Quality Management Plan
4. Waste Management Plan
5. Environmental Inspection Procedure
6. Ground Disturbance Approval Procedure
7. Hydrocarbon Management Procedure
8. Hazardous Substances and Dangerous Goods Management

RDMC Authorized Supplier/Contractor's document.
The document is NOT approved until an RDMC Approval stamp has been affixed.

Document No.:	6105A0000-0000-JA12-0001	Rev:	0
Document Title:	Reko Diq Stakeholder Engagement Plan		
Issue Date:	2025-01-01		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		Rev:	0

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2025-01-29				
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1. Introduction

Reko Diq Mining Company (RDMC), a subsidiary of Barrick Gold Corporation (Barrick), is seeking to develop the Reko Diq Project (the Project), located in Balochistan province of Pakistan. The Project is one of the largest undeveloped copper-gold projects in the world and is owned 50% by RDMC, 25% by three federal state-owned enterprises, 15% by the Province of Balochistan on a fully funded basis and 10% by the Province of Balochistan on a free carried basis.

The Project is expected to have a life of 38 years as a truck-and-shovel open pit operation with processing facilities producing a high-quality copper-gold concentrate.

This Stakeholder Engagement Plan (SEP, or the Plan) describes the RDMC approach to stakeholder engagement and the steps it intends to take during the development and operation of the Project, including its grievance mechanism. The Plan also includes a dedicated monitoring program to assess both anticipated and unanticipated impacts on local communities. These impacts will be identified through stakeholder engagement activities defined within this Plan, allowing for timely response to emerging community concerns.

This Plan has been developed, and will be implemented, in accordance with Barrick policy and, the International Finance Corporation (IFC) Performance Standards and will form a component of the Reko Diq Environmental and Social Management System.

2. Principal

The key principles adopted by this Plan, and as outlined in the IFC Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets, are to:

- Provide meaningful information in a format and language that is readily understandable and tailored to the needs of the target stakeholder group(s);
- Provide information early in decision-making processes;
- Disseminate information in ways and locations that make it easy for stakeholders to access it;
- Respect local traditions, languages, timeframes, and decision-making processes;
- Establish two-way dialogue that gives both sides the opportunity to exchange views and information, to listen, and to have their issues heard and addressed;
- Seek inclusiveness in representation of views, including women, vulnerable and/or minority groups;
- Adopt processes free of intimidation or coercion;
- Develop clear mechanisms for responding to people's concerns, suggestions and grievances;
- Incorporate feedback into program design, and report back to stakeholders.

3. Objectives

Based on the principles and the Barrick Community Relations Policy, the overall objectives of this stakeholder engagement activities are to:

- Identify key stakeholders that may have an interest or will be affected by the proposed Project, including communities, government departments, regulatory authorities, non-governmental organizations and any nearby industries;
- Keep all stakeholders informed with respect to their specific interests;
- Engage people in decisions that directly affect them; and
- Monitor both anticipated and unanticipated impacts on local communities by identifying these through ongoing engagement activities and updating the plan as necessary to address new concerns;
- Maintain stakeholder confidence and trust in the company and its activities through open, informative, inclusive and timely communications.

The expectation is that these objectives will be achieved by building on the relationships established over time and making appropriate adjustments as the project evolves, including changes in activities, affected communities, stakeholder perceptions and interests, and reporting needs.

4. Legal and Other Requirements

4.1 Pakistan requirements

The Balochistan Environmental Protection Agency Review of the Initial Environmental Examination and Environmental Impact Assessment Regulations 2020 (IEE-EIA Regulations) provide the necessary details on the preparation, submission and review of the IEE and EIA in Balochistan Province of Pakistan. Under Regulation 11 of the IEE-EIA Regulations, a set of guidelines have been issued indicating specific assessment requirements. This includes the Guidelines for Public Consultation, 1997 (the 'Guidelines') which are summarised as follows:

- Objectives of Public Involvement: To inform stakeholders about the proposed Project, to provide an opportunity for those otherwise unrepresented to present their views and values, providing better transparency and accountability in decision making, creating a sense of ownership by the stakeholders.
- Stakeholders: 'people who may be directly or indirectly affected by a proposal will be the focus of public involvement. Those who are directly affected may be Project beneficiaries, those likely to be adversely affected, or other stakeholders. The identification of those indirectly affected is more difficult, and to some extent, it will be a subjective judgement. For this reason, it is good practice to have a very wide definition of who should be involved and to include any person or group who believes that they have an interest. Sometimes it may be necessary to consult with a representative from a particular interest group. In such cases, the choice of representative should be left to the group itself. Consultation should include not only those likely to be affected, positively or negatively, by the outcome of a proposal, but should also include those who can affect the outcome of a proposal. The range of stakeholders typically includes local people, other affected communities, proponents, government agencies and local councils, NGOs and other influential people.
- Mechanism: provide sufficient relevant information in a form that is easily understood by non-experts (without being simplistic or insulting); allow sufficient time for stakeholders to read, discuss and consider the information and its implications and to present their views. Responses should be provided to issues and problems raised or comments made by stakeholders. Selection of venues and timings of events should encourage maximum attendance.
- Timing and Frequency: planning for the public consultation program needs to begin at a very early stage; ideally, it should commence at the screening stage of the proposal and continue throughout the ESIA Process.
- Consultation Tools: some specific consultation tools that can be used for conducting consultations include focus group meetings, needs assessment, semi- structured interviews, village meetings and workshops.
- Important Considerations: The development of a public involvement program would typically involve consideration of the following issues:
    - Objectives of the proposal and the study;

- Identification of stakeholders;
- Identification of appropriate techniques to consult with the stakeholders;
- Identification of approaches to ensure feedback to involved stakeholders; and
- Mechanisms to ensure stakeholders' consideration are taken into account.

Pakistan's national environmental laws require only one round of consultation to be conducted during ESIA phase of the Project.

4.2 International Standards

4.2.1 IFC Performance Standards

The IFC Performance Standards, along with the IFC sustainability and information access policies form the IFC Sustainability Framework. The Performance Standards outline the IFC client responsibilities for assessing and managing their environmental and social risks and applies to all projects which go through the IFC review process. The Performance Standards are also considered applicable to private finance organisations which adopt the Equator Principles risk management framework. Key principles of stakeholder engagement outlined in the Performance Standards include:

- Community engagement and timely disclosure of information should be an ongoing process across all project stages, particularly for local communities who may be affected by the project. The nature and frequency of community engagement will reflect the project risks to, and adverse impacts on, the affected communities;
- Community engagement will be free of external manipulation, interference, or coercion, and intimidation, and conducted on the basis of timely, relevant, understandable and accessible information;
- Consultation should be conducted in a manner that provides the affected communities with opportunities to express their views on project risks, impacts and mitigation measures, and allows the company to consider and respond to them;
- Community engagement should ensure the free, prior and informed consent of impacted communities and facilitate informed participation. Informed participation involves organised and iterative consultation to ensure that the decision-making processes of the company incorporate the views of affected parties, particularly in relation to proposed mitigation measures, the sharing of development benefits and opportunities, and implementation issues. The company will document the process, in particular the measures taken to avoid or minimise risks to and adverse impacts on the affected communities;
- The company will respond to stakeholder concerns. Where ongoing risks to or adverse impacts on affected parties are likely, the company will establish a grievance mechanism to receive and facilitate resolution of concerns in relation to the project. The grievance mechanism should be scaled appropriately and should address concerns promptly, using an understandable and transparent process that is culturally appropriate and readily accessible to all segments of affected communities, and at no cost and without retribution. The mechanism should not impede access to judicial or administrative remedies. The

company will inform the affected communities about the mechanism in the course of its community engagement process.

4.2.2 Equator Principles

The Equator Principles is a “risk management framework, adopted by financial institutions, for determining, assessing and managing environmental and social risk in projects.” Financial Institutions (referred to as Equator Principles Financial Institutions, or EFPIs) who adopt the Equator Principles commit to financing projects which meet the requirements of all 10 principles to ensure that projects are developed in a socially and environmentally responsible manner. The principles state that impacts to project affected communities and environments are avoided where possible, and where impacts are unavoidable, that they should be “minimised, mitigated and/or offset”. The latest version of the principles (EP4 - 2020) lists out 10 principles which are described in the following sub-sections with comment as to how they apply to the project.

Principle 5 states:

“For all Category A and Category B Projects, the EPFI will require the client to demonstrate effective Stakeholder Engagement as an ongoing process in a structured and culturally appropriate manner with Affected Communities and, where relevant, Other Stakeholders. For Projects with potentially significant adverse impacts on Affected Communities, the client will conduct an Informed Consultation and Participation process. The client will tailor its consultation process to: the risks and impacts of the Project; the Project’s phase of development; the language preferences of the Affected Communities; their decision-making processes; and the needs of disadvantaged and vulnerable groups. This process should be free from external manipulation, interference, coercion and intimidation.”

Principle 5 requires the project proponent to ensure that:

- The level of engagement is commensurate to the risks and potential impacts of the project;
- Appropriate information and documentation is readily available to affected parties and other relevant stakeholders;
- That engagement is conducted in a culturally appropriate manner and in the local language;
- The stakeholder engagement process is documented, including any agreed actions which result;
- Disclosure of environmental and social risks associated with the project, both prior to construction and on an ongoing basis;
- Projects with adverse impacts on indigenous people demonstrate free, prior and informed consent (FPIC).

Principle 7 requires the implementation of an appropriately scaled grievance mechanism that:

- Seeks to resolve concerns in a timely manner;
- Is easily understandable, transparent and culturally appropriate;
- Is readily accessible at no cost;

- Ensures there is no retribution to the concerned party;
- Is adequately socialised to affected communities and other relevant stakeholders.

4.3 Good Practice Principles

Stakeholder consultations will be undertaken in good faith while remaining impartial. The following practice principles will be observed during the consultations:

- Cultural sensitivity – this requires respect, understanding and appreciation for the customs, institutions, values and norms of the communities being consulted, and use of local languages for communication and materials
- Interactive approach – stakeholder engagement should not be limited to the one- way dissemination of information by the Project proponent but should include stakeholder input into decision-making processes for the proposed Project;
- Open, transparent and informative – Project stakeholders should have access to relevant information, in a simple and understandable format;
- Inclusive and equitable – ensure all stakeholder groups are represented, including less represented groups such as women, children, elderly, and vulnerable groups;
- Appropriateness and flexibility – stakeholder engagement techniques (surveys, interviews, workshops, etc.) must be appropriate to the specific phase of the ESIA study (scoping consultations, feedback consultations) and the stakeholder groups identified; and
- Capacity building – capacity should be built as part of the interaction with stakeholders, wherever appropriate and practicable.

5. Good Practice Relationship Management: Fostering Collaborative Stakeholder Relationships at the RDMC

Effective relationship management is key to fostering trust, minimizing conflicts, and ensuring mutual benefits between the RDMC and its stakeholders. By adopting a proactive, transparent, and inclusive approach, the project aims to build collaborative relationships that address the needs and concerns of diverse groups, including local communities, employees, government entities, and NGOs. This ensures positive contributions to the region's socio-economic development while maintaining fairness and inclusivity. This section outlines the good practice relationship management principles that will shape the project's stakeholder engagement.

5.1 Establishing Clear Communication Channels

Objective: Ensuring consistent, transparent, and two-way communication between management and all stakeholders.

Mechanism:

- Open Dialogue Forums: Organize regular community meetings, consultations, and workshops to update stakeholders on the project's progress and provide a platform for feedback and concerns.
- Community Relations Officers: Designate male and female CROs from the local community to act as mediators between the project and local residents. CROs should speak the local language, understand cultural norms, be approachable.
- Grievance Redressal Mechanism: Continuously strengthen the existing grievance mechanism by ensuring it is accessible, anonymous, and responsive to concerns raised by different stakeholder groups, including vulnerable communities. Ensure documentation of all received grievances.
- Stakeholder Newsletter and Digital Platforms: Disseminate regular project updates via a newsletter, social media, and the project website, ensuring the information is accessible to both tech-savvy and traditional audiences. The newsletter should cover community investments, milestones, and opportunities for engagement.

5.2 Building Trust Through Transparency and Accountability

Objective: Cultivating trust by being transparent about decision-making processes and accountability on promises made.

Mechanism:

- Disclosure of Environmental and Social Impact Assessments (ESIAs): Make the ESIA reports public and accessible to all stakeholders, offering plain-language summaries to ensure all community members can understand the potential risks and benefits of the project.
- Annual Performance Reports: Publish annual reports that detail the project's performance on economic, social, and environmental commitments. These should include metrics on employment, local hiring, CSR initiatives, and environmental protection measures.

- Third-Party Audits: Periodically engage independent third-party auditors to evaluate the project's compliance with environmental, social, and human rights standards. The results should be shared publicly to reinforce accountability.

5.3 Inclusive Stakeholder Engagement

Objective: Ensuring that the needs and voices of all stakeholder groups, especially vulnerable populations, are heard and addressed.

Mechanism:

- Stakeholder Mapping and Prioritization: Maintain a comprehensive stakeholder map to identify all relevant groups, such as local communities, women, youth, religious minorities, the elderly, and the disabled. Prioritize engagement with groups that are typically vulnerable to ensure their perspectives are considered.
- Culturally Appropriate Engagement: Tailor engagement activities to respect local customs, traditions, and values. This includes scheduling meetings at appropriate times, ensuring gender-segregated discussions where required, and allowing for religious observances during community consultations.
- Women's Forums: Establish gender-specific platforms, such as women's forums, to address gender-specific concerns. These forums should allow women to participate freely in discussions about employment, health, education, and safety related to the project.
- Capacity building and accountability: Provide comprehensive training to the community engagement team on professional communication, data collection, and the importance of written documentation. Additionally, implement regular internal audits of community engagement activities to monitor compliance and improve processes.

5.4 Collaborative Decision-Making and Benefit-Sharing

Objective: Engage stakeholders in decision-making processes and ensure equitable sharing of benefits derived from the project.

Mechanism:

- Community Development Committees (CDCs): Continue to utilise the CDC approach to ensure community participation in and ownership of planning and decision-making regarding project activities that affect local communities.

5.5 Addressing Conflicts and Providing Fair Grievance Mechanisms

Objective: Create a system to resolve disputes fairly, efficiently, and transparently.

Mechanism:

- Early Conflict Identification: Establish mechanisms for early identification of potential conflicts, such as listening sessions with community members or staff. Monitor social tensions, particularly around land use, resource allocation, and employment practices.
- Grievance Monitoring and Response Timelines: Ensure that grievances are addressed within a clearly defined timeline, with follow-up communication to the complainant on the

resolution process. Track the number, type, and resolution rate of grievances and include this in public reporting.

5.6 Capacity Building for Long-Term Community Resilience

Objective: Strengthen local capacities so communities can sustainably benefit from the project over time.

Mechanism:

- Skills Training and Employment Programs: Provide vocational and skills opportunities to local populations, ensuring access for women, youth, and vulnerable groups, so they can take advantage of direct and indirect employment opportunities created by the Project. Collaborate with local and national education institutions to build long-term capacity.
- Local Business Development Support: Encourage local entrepreneurship and partner with local suppliers where possible to ensure local businesses are able to participate in the Project.

5.7 Monitoring, Evaluation, and Continuous Improvement

Objective: Establish a robust system for tracking relationship management and making continuous improvements.

Mechanism:

- Regular Stakeholder Satisfaction or Community Perception Surveys: Conduct periodic surveys to measure stakeholder satisfaction with the project's engagement practices, responsiveness to grievances, and overall relationship quality. This will help identify areas that require improvement.
- Learning from Feedback: Use feedback from stakeholders, audits, and surveys to refine engagement strategies. Make adjustments to communication channels, benefit-sharing programs, or conflict resolution mechanisms based on real-world experiences.
- Long-Term Impact Assessments: Conduct long-term monitoring of the project's social, economic, and environmental impacts, with particular attention to vulnerable populations. Share these findings transparently to demonstrate the mine's commitment to sustainable development.

6. Project Stakeholders

Project stakeholders are defined as groups or individuals that 'are directly or indirectly affected, positively or negatively, by the Project and can contribute to or hinder the Project's successes. The identification of stakeholders is an ongoing and iterative process and additional stakeholders are continuously identified as the Project develops.

6.1 Stakeholder Identification

Stakeholders include individuals and groups that are potentially impacted by and can exert an impact on a proposed Project. In this instance, these include but are not limited to:

- Directly or indirectly affected communities with a special focus on vulnerable groups such as women, young people, landless people, the sick and disabled, internally displaced people, ethnic minorities, and in-migrants[1].
- Government and regulatory authorities directly or indirectly connected to or overseeing the Project activities
- NGOs, other community-based organizations working in areas in proximity or in relation to the Project and civil society
- Commercial organizations including entrepreneurs, businesses, and other mining companies working in the local area and elsewhere in Pakistan.

Table 6-1 presents a list of identified key stakeholders and their relevance to the Project in addition to actions for their inclusion in the SEP. A detailed ***Stakeholder List*** (6105A0000-0000-JA11-0001) of individuals and groups is maintained separately. The community stakeholders and key government institutions relevant to the project have been identified through the following measures:

- Review of legislation and institutional mandates;
- Baseline surveys and stakeholder discussions; and
- Analysis of available land use maps and satellite imagery of the wider Project area.

The stakeholders have been categorized as follows:

- High Interest – High Influence: These stakeholders represent the most significant stakeholders and include directly impacted communities and regulatory authorities.
- Low Interest – High Influence: These stakeholders include groups that have a high degree of influence but require prior engagement for their involvement.
- High Interest – Low Influence: These stakeholders have a high interest in the Project but are not influential in decision making that affects the Project.

[1] In-migrants may be defined broadly as people who originate from outside the Project area and who are motivated to move to the Project area by perceived economic opportunities or benefits associated with the development of the Project. Within this category specific attention will be paid only to those who may be considered vulnerable.

- Low Interest – Low Influence: These stakeholders are neither impacted by the Project nor have high interest in the Project. Their inclusion in the stakeholder engagement process is undertaken as a Good International Industrial Practice.

Table 6-1: Identified Stakeholders

Stakeholder / Groups	Stakeholder Details	Categorization	Relevance to the Project
Regulatory Authorities (also includes the governing and monitoring authorities)	Balochistan Environmental Protection Agency	High Interest - High Influence	Regulatory authority for environmental issues, approvals, and monitoring.
	Balochistan Revenue Authority	High Interest - High Influence	Responsible for managing the revenues generated by the Project, optimizing therevenues by providing quality service to the locals and promoting the compliance with taxes and related laws.
	Sindh Environmental Protection Agency	High Interest - High Influence	Regulatory authority for environmental issues, approvals, and monitoring.
	National Highway Authority (NHA)	High Interest - High Influence	Responsible for monitoring how traffic (i.e., trucks) is regulated on highways.
	Karachi Port Authority	High Interest - High Influence	Responsible for managing the port activities and operations.
Government Departments	District Administration, Dalbandin	High Interest - High Influence	Responsible for district management and security issues within the district.
	District Vice Chairman Local Government and Rural Development Chagai	High Interest - Low Influence	Responsible for facilitating local governance and rural development initiatives in the district, including infrastructure and community welfare programs
	Local Government & Rural Development Department (LG & RD)	High Interest - Low Influence	Responsible for overseeing rural development and infrastructure projects in Balochistan, with a focus on supporting local governance and public service delivery
	Home Department, Quetta	High Interest - High Influence	Responsible for maintaining law and order, managing security issues, and ensuring coordination between security forces and other departments at the provincial level.
	Forest and Wildlife Department, Quetta	High Interest – Low Influence	Responsible for the protection of forests and wildlife. Interested in the impact of Project impacts on the forest resources and wildlife of the area.
	Education Department	Low-Interest - High Influence	Responsible to provide educationalfacilities to the children of the area.

Stakeholder / Groups	Stakeholder Details	Categorization	Relevance to the Project
	Health Department	Low-Interest - High Influence	Responsible for the treatment of health-related issues at the district level including any health issues caused by the Project.
	Mines and Minerals Department	High Interest - High Influence	Responsible for the development ofBalochistan resources in a way to support the economy and public.
	Ministry of Railways	High Interest - High Influence	Responsible for developing and maintaining railway infrastructure, including any potential coordination for rail transport facilities required for the movement of raw materials or products to and from the project site.
	National Transmission & Despatch Company (NTDC)	Low Interest – Low Influence	Responsible for handling the transmission and distribution of electricity across Pakistan
	Public Health Engineering (PHE) and Water and Sanitation Agency (WASA)	High-Interest - High Influence	Responsible for the supply of water and provision of water permits.
	Irrigation Department	Low Interest - Low influence	Relevant in providing input, and suggestions on how the Project may affect or benefit the livestock, irrigation and agricultural activities.
	Irrigation Department & Integrated Water Resources Management System (IWRMS), GoB	Low Interest - Low Influence	
	Livestock & Dairy Development Department, Dalbandin	Low interest- Low influence	
	Agriculture Department	Low influence - Low Influence	
Non-Governmental Organisations/ Non-Profit Organizations	Worldwide Fund for Nature (WWF)	High Interest - Low Influence	Working on the protection of wildlife inthe Chagai District.
	International Union for the Conservation of Nature (IUCN)	High Interest - Low Influence	Working on environmental conservationand ecosystem development in the Chagai District.
	Islamic Relief	High Interest - Low Influence	Working on water supply in the Chagai District.
	Balochistan Rural Support Programme (BRSP)	High Interest - Low Influence	Working on improving the quality of life of the rural poor by harnessing the potential of the community.

Stakeholder / Groups	Stakeholder Details	Categorization	Relevance to the Project
	Nok Kundi Development Foundation	High Interest - Low Influence	Working in Nok Kundi on education and social infrastructure development in the area.
	Balochistan Livelihoods and Entrepreneurship Project	High Interest - Low Influence	Supporting income generation, skill development, and entrepreneurship initiatives to improve livelihoods.
	Muslim Aid	High Interest - Low Influence	Providing emergency relief, healthcare, and educational support, focusing on vulnerable communities.
	People's Primary Health Initiative	High Interest - Low Influence	Managing and improving access to primary healthcare services through rural health centers and community outreach programs.
	Benazir Nashonima Program	High Interest - Low Influence	Offering conditional cash transfers, nutrition support, and health education to address stunting and malnutrition among children and mothers.
	World Health Organization	High Interest - Low Influence	Supporting healthcare systems, maternal and child health, disease prevention, and emergency medical services.
	World Food Program	High Interest - Low Influence	Delivering food assistance, improving nutrition, and supporting community resilience to address food insecurity.
	United Nations High Commission for Refugees	High Interest - Low Influence	Assisting Afghan refugees and host communities through shelter, healthcare, education, and livelihoods support.
	NCHC	High Interest - Low Influence	Enhancing literacy, education, and skill development through community-based programs.
	Tameer-e-Khalq Foundation	High Interest - Low Influence	Running education, health, and social development programs, with a focus on women and marginalized communities.
	Saindak Wildlife Conservation Foundation	High Interest - Low Influence	Managing the Community Game Reserve in Taftan Tehsil, focusing on wildlife conservation, habitat protection, and community engagement for sustainable development.
Civil Society/Academica	Balochistan University of Information Technology, Engineering and management Sciences (BUITEMS)	Low Interest - Low Influence	Serves as a key institution for capacity-building and research, providing technical expertise and skilled graduates in engineering and technology fields.
Communities near to the mine area.	Humai, Nok Chah, Mashki Chah, Darband Chah, Amalaf, Saindak, Kachau, Taftan	High Interest - High Influence	Communities residing in proximity to the mine site, along the transport corridor, and at the marine terminal at Port Qasim may influence the

Stakeholder / Groups	Stakeholder Details	Categorization	Relevance to the Project
Communities neae to the Northern Groundwater System (including Fan Sediments and Sor Baroot)	Kachau, Kirtaka	High Interest - High Influence	Project activities and be affected (positively and/ or negatively) by the Project operations.
Communities near to other water NOCs	Tahlab, Washab, Rajai, Wadian, Gwalishtap, Essa Tahir/Brahuk	High Interest - Low Influence	
Regional Towns	Nok Kundi, Dalbandin	High Interest - High Influence	
Port Qasim	Pipri, Dhabeji	Low Interest - Low Influence	
Security and Military Authorities	Frontier Corps	High Interest - High Influence	Security agencies working with the Client; its staff, consultants and contractors and any locals hired for the implementation of the Project activities.
	Levies	High Interest - High Influence	

The list of stakeholders will continue to be updated following any updates to the Project design and activities as well as identification of additional stakeholders

Location	Settlement	Year Consulted
Reko Diq Mine Site	Humai, Nok Chah, Mashki Chah, Darband Chah	2022, 2024
Northern Groundwater System (including Fan Sediments and Sor Baroot), and other Water NOCs	Kachau, Saindak, Amalaf, Taftan, Tahlab, Washab, Rajai, Wadian, Gwalishtap, Essa Tahir/Brahuk	2022, 2024
Rail Transport Corridor	Nok Kundi, Dalbandin	2022, 2023, 2024
Port Qasim	Pipri, Dhabeji	2023, 2024

6.1.1 Vulnerable Groups

Vulnerable groups are defined as those who may face greater risks or challenges due to their socio-economic, cultural, or physical circumstances. Both the International Finance Corporation (IFC) and the Asian Development Bank (ADB) provide frameworks to identify and address the needs of these groups, ensuring their inclusion in development projects.

6.1.1.1 Definitions

6.1.1.1.1 International Finance Corporation (IFC)

IFC defines vulnerable groups in Performance Standard 1[2] as those individuals or groups who, due to their characteristics or circumstances, may be more adversely affected by a project's impacts or who may be excluded from the potential benefits. Such groups often include:

- Women, particularly those of reproductive age (18–49 years), who may face health and livelihood challenges.
- Girls (under 18 years) particularly those from vulnerable households or single-parent families who may have limited access to education, healthcare, and face risks of early marriage or exploitation
- Children (under 18) particularly those under 5 years who are at risk of malnutrition and inadequate healthcare, and school-aged children (5–17 years) who may lack access to education or be forced into child labour to supplement family incomes.
- Youth at Risk, who are unemployed or underemployed, with limited opportunities for education or vocational training, increasing their vulnerability to exploitation, social alienation, or substance abuse.
- Elderly (60+), who often lack economic independence, may rely on limited resources and face health and mobility challenges.
- Indigenous peoples, who may have unique cultural ties to the land affected by the project.
- Persons with physical, sensory, intellectual, or mental health disabilities who face barriers to participation and access.
- Economically vulnerable households, particularly those below the poverty line.
- Ethnic or religious minorities, who may face systemic discrimination or social exclusion.
- Migrants or Displaced Populations who have relocated to the area due to economic necessity or displacement at risk of unequal access, lacking formal rights, social networks, or access to local services.

[2] International Finance Corporation. (2012). IFC performance standards on environmental and social sustainability: Performance standard 1—Social and environmental assessment and management systems. International Finance Corporation. https://www.ifc.org/content/dam/ifc/doc/2010/2012-ifc-performance-standard-1-en.pdf

6.1.1.1.2 Asian Development Bank (ADB)

ADB categorizes vulnerable groups[3] as those at risk of being disproportionately affected by a project or excluded from its benefits due to:

- Social and economic disadvantages, such as limited income or land ownership.
- Geographic isolation, restricting access to resources, opportunities, or services.
- Cultural barriers, limiting their participation in decision-making processes.

These groups may include:

- Female-headed households, often with fewer resources and greater caregiving burdens.
- Resource-dependent communities, particularly those relying on land or water resources affected by the project.

6.1.2 Vulnerability Assessment

A vulnerability assessment was carried out as part of the Project ESIA. The baseline socio-economic data from the surveyed settlements near the Reko Diq Mine Site highlighted key vulnerabilities. These include:

- **Poverty:** Approximately 40% of households fall below Pakistan's poverty line[4], with limited employment opportunities and high expenditure on basic necessities perpetuating economic hardships.
- **Women:** Women face restricted mobility, lower education levels, and limited participation in income-generating activities, with most engaged in housekeeping or livestock rearing.
- **Persons with Disabilities (PwDs):** PwDs account for 0.1% of the population, primarily with physical disabilities caused by accidents or congenital conditions. Mental disabilities remain underreported due to stigma.
- **Widows and Elderly-Headed Households:** Widows (0.5% of the population) and elderly-headed households (5%) largely rely on familial support systems, often lacking formal assistance.
- **Indigenous Communities:** No indigenous persons were identified in the surveyed settlements.[5]

This data serves as a foundation for vulnerability assessment and targeted engagement strategies. For more detailed insights, refer to the Environmental and Social Impact Assessment (ESIA) report.[6]

6.1.2.1 Future Assessment of Vulnerable Groups

Vulnerability assessment has been integrated into the data collection for the Impacts Monitoring Program (**Section 10**) to ensure a consistent and systematic approach across all communities.

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3 Asian Development Bank. (2009). Safeguard policy statement. Asian Development Bank. https://www.adb.org/sites/default/files/institutional-document/32056/safeguard-policy-statement-june2009.pdf

4 Document no. BAR721 – Rek Diq ESIA FINAL

5 Ibid.

6 Ibid.

The survey locations and data collection methodologies for the Vulnerability Assessment Survey will align with those of the Impacts Monitoring Program. (See **Section 10** for further details). A standardized survey form (See Appendix D), designed to capture both project impacts and key vulnerability indicators, will be used across all communities. This will ensure comparability and enable the identification of at-risk groups. A vulnerability assessment has been incorporated in the standardized questionnaire which will be utilized to gather household data for other stakeholder engagement activities as well.

Additionally, as groups or individuals are identified through routine engagements and assessment will be undertaken to assess and confirm vulnerability and they will be added to the stakeholder register.

6.1.2.2 Vulnerable Groups Register

Based on the data, a Vulnerable Groups Register will be maintained as part of the live Stakeholder List. This will serve as a reference for the project to ensure the inclusion of vulnerable groups in stakeholder engagement activities and any project interventions. The register will include the following details:

- Unique identifiers for households or groups, ensuring confidentiality where needed.
- Classification of households and groups into vulnerability categories (e.g., economic, social, or environmental). Vulnerability indicators such as lack of income, social exclusion, or exposure to environmental hazards will guide the classification process.
- Periodic updates on changes in vulnerability status, recorded during follow-up surveys or assessments.

7. Overview of Previous Stakeholder Engagement

This section provides an overview of the stakeholder engagement activities conducted by the Project prior to the development of the Stakeholder Engagement Plan (SEP). These earlier engagement efforts serve as a foundation for shaping the SEP by providing insights into stakeholder concerns, expectations, and priorities. The feedback gathered from previous consultations will be instrumental in refining the SEP's approach, ensuring it addresses key issues, aligns with stakeholder needs, and fosters ongoing dialogue throughout the Project's lifecycle.

Stakeholder engagement for the Project has been carried out in accordance with applicable national legislation and the International Finance Corporation (IFC) Guidelines[7] on Stakeholder Engagement.

Stakeholders for engagement were identified based on their potential to be affected by the Project, as well as their interest in the Project from legal, administrative, or other relevant perspectives, such as the involvement of non-governmental organizations (NGOs) advocating for social, environmental, or development-related issues. The stakeholders involved in the stakeholder engagement activities can be broadly categorized into two groups: community stakeholders and institutional stakeholders.

An ESIA consultation process was conducted over several rounds as part of the Environmental and Social Impact Assessment (ESIA) for the Project. These consultations were carried out periodically over the course of three years, in 2022, 2023, and 2024. During this period, four rounds of consultations were held with community stakeholders, while three rounds were conducted with institutional stakeholders.

The stakeholder engagement activities were conducted with the following objectives:

- Information disclosure to stakeholders about the project and its planned activities.
- Explaining the potential impacts of the project to stakeholders.
- Gathering stakeholder concerns and suggestions regarding the project, its activities, and impacts, to ensure their incorporation into the Environmental and Social Impact Assessment (ESIA).
- Establishing a communication channel to build rapport with stakeholders, ensuring an open and transparent dialogue throughout the Project's lifecycle.
- Informing stakeholders about opportunities to participate in the ESIA process and contribute to the project.
- Sharing the Grievance Redress Mechanism (GRM) with communities to ensure they have a platform for raising concerns and seeking resolution.
- Strengthening trust and collaboration with local communities to promote long-term support for the project's initiatives.
- Ensuring compliance with regulatory requirements by engaging relevant government bodies and regulatory authorities.

[7] International Finance Corporation (IFC), 2007, Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets

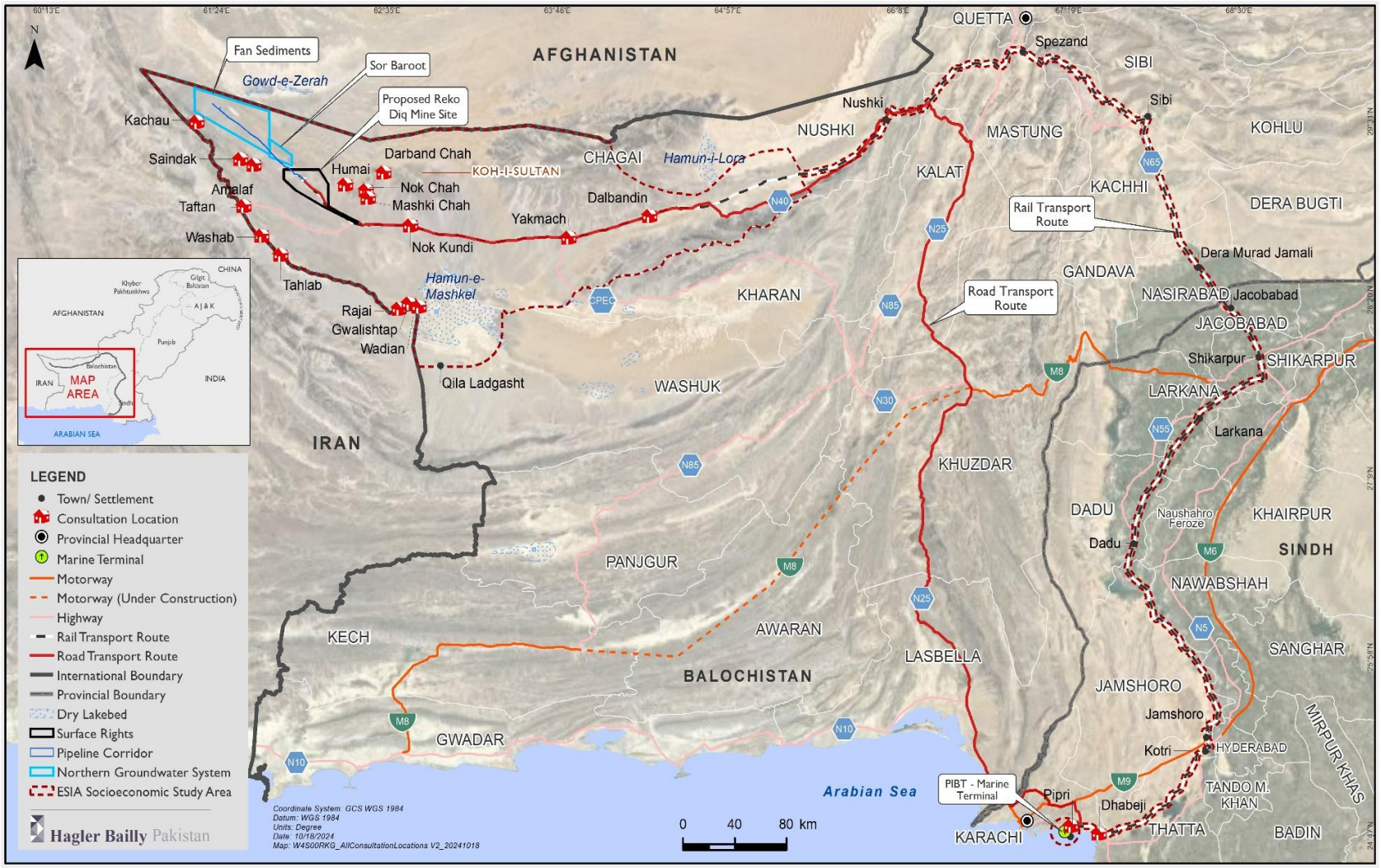
- Collaborating with NGOs and civil society organizations to gain insights on social and environmental concerns that can enhance the project's sustainability efforts.
- Facilitating coordination with institutional stakeholders to align project activities with broader regional and national development goals.
- Seeking feedback from governmental agencies on policy, administrative, and technical matters related to the project's implementation.

Table 7-1 provides a list of settlements identified as community stakeholders, with whom engagement activities were conducted as part of the stakeholder consultation process. The exhibit also outlines the specific years in which the stakeholder engagement activities took place. Figure 7-1 provides a map of the settlements. Table 7-1 provides a list of the institutional stakeholders which were a part of the stakeholder engagement process. Full details of the ESIA engagements and outcomes are detailed in Appendix V of the Project ESIA.

Table 7-1: Community Consultations in 2022, 2023, and 2024

Location	Settlement	Year Consulted
Reko Diq Mine Site	Humai, Nok Chah, Mashki Chah, Darband Chah	2022, 2024
Northern Groundwater System (including Fan Sediments and Sor Baroot), and other Water NOCs	Kachau, Saindak, Amalaf, Taftan, Tahlab, Washab, Rajai, Wadian, Gwalishtap, Essa Tahir/Brahuk	2022, 2024
Rail Transport Corridor	Nok Kundi, Dalbandin	2022, 2023, 2024
Port Qasim	Pipri, Dhabeji	2023, 2024

Figure 7-1: Locations of Community Stakeholder Engagement



8. Stakeholder Engagement Program

8.1 Forms of engagement

Stakeholder engagement will be tailored to meet the specific needs and characteristics of different stakeholder groups, ensuring effective, culturally appropriate, and responsive interaction. The engagement approach will evolve as the project progresses, adapting to changes in stakeholder needs, issues, and project impacts. This context-specific approach includes using diverse techniques, ranging from large community meetings to targeted outreach for vulnerable groups. Engagement methods will be selected based on factors such as:

- Proximity of stakeholder group to the project location and sensitivity
- Stakeholder interest and group size, ensuring all voices are represented.
- Vulnerability status of households or groups
- Complexity and sensitivity of issues being discussed.
- Potential impact significance on each stakeholder group (see 1).
- Desired outcomes of engagement, such as information sharing or consensus-building.

Each engagement will have specific objectives, including defined topics for communication and key messages to be delivered. A ***Consultation Register*** (6105A0000-0000-JA11-0002) will be maintained.

The following forms of engagement will be used as part of the engagement program:

Community Consultations with Men

These will facilitate discussions with local community members and provide them regular updates on project progress, impacts, and management strategies. Meetings with community stakeholders will also be held to provide updates on project activities and discuss relevant matters.

Community Consultations with Women

These will create a platform for women to actively engage in discussions about project progress, impacts, and strategies. Separate consultations and meetings will be organized for women to ensure their voices are heard, alongside the general sessions for the broader community. For further details, please refer to the Gender Action Plan (***6105A0000-0000-JA12-0002***)

Focus Group Discussions with Vulnerable Groups

Sessions with vulnerable groups will be held which will enable in-depth exploration of specific issues for the identified groups. A sample FGD guide is attached in Appendix D. Since the poverty rate in the communities near the Reko Diq Mine Site is considerably high, FGDs for economically vulnerable groups will not be conducted separately. However, as the Project progresses and if a community's poverty ratio falls below 40%, FGDs with economically vulnerable groups in those communities will also be held to gather their insights.

Information Distribution

Newsletters along with a project-specific WhatsApp channel, both managed by the RDMC Communications team will be used to share project updates and developments with a broader audience. By leveraging digital channels and printed materials, the project can reach a wider group more efficiently than solely relying on in-person sessions. Information disclosure sessions will also be held with institutional stakeholders to provide updates on project activities.

Perception Monitoring Surveys

Regular perception surveys will capture evolving stakeholder perceptions and provide insights into community views about the project.

Impacts Monitoring and Vulnerability Assessment Surveys

Impact monitoring surveys will gather data regarding impacts identified in the ESIA and allow the project to track the impacts as the project progresses (see Section 10)

The same surveys will also include components for assessing vulnerabilities and the identification of vulnerable groups.

Grievance Mechanism (see Section 9)

This will allow stakeholders to submit complaints, concerns, or suggestions. RDMC will ensure that all grievances are addressed in a timely and transparent manner, fostering accountability and responsiveness (see Grievance Redress). Any grievances received during other stakeholder engagement activities will be directed to the GRM and documented for appropriate handling.

8.2 Stakeholder Engagement Frequency

Table 8-1: provides the stakeholder engagement frequency for relevant stakeholders as part of the stakeholder engagement program. A detailed ***Engagement Calendar*** (6105A0000-0000-JA26-0002) is maintained as a separate document. This calendar includes is a lookahead plan of project activities to define the purpose and scope of stakeholder consultations to be conducted on an ongoing basis. CLO resources can then be allocated accordingly, and their activities monitored. Additionally, the register of grievances and other stakeholder concerns will be reviewed on a weekly basis to further refine the engagement frequency and type.

Records of every consultation will be maintained.

Table 8-1: Stakeholder engagement method and frequency

Stakeholder	Engagement Method	Frequency
Community stakeholders		
Local communities.	▪ Community consultations	Ongoing
	▪ Information Distribution	Ongoing
	▪ Focus Group Discussions	As required
	▪ Impacts Monitoring Survey	Annual
	▪ Perception Monitoring Survey	Quarterly
	▪ Grievance Redress Mechanism	Ongoing
	▪ Focus Group Discussions ▪ One on one consultations	As required

Stakeholder	Engagement Method	Frequency
Identified vulnerable groups in communities near to the mine and the water supply area.	▪ Specialised information sharing sessions and mechanisms	
	▪ Vulnerability Assessment Survey (as part of Impacts Monitoring Survey)	Annual
Community Development Committees	▪ Meetings	Monthly
Institutional Stakeholders		
Political organizations	▪ Meetings	At least bi-annual – more frequently if required
Local youth groups	▪ Meetings	At least bi-annual – more frequently if required
Key religious leaders	▪ Meetings	At least bi-annual – more frequently if required
District administration	▪ Meetings	At least bi-annual – more frequently if required
Key government agencies	▪ Meetings	At least annual – more frequently if required
Key divisional level stakeholders	▪ Meetings	At least annual – more frequently if required

8.3 Consultation Register

A consultation register will be maintained which will record:

- Date of engagement;
- Nature/type of engagement method;
- Stakeholder(s) involved;
- Names of Reko Diq representatives involved;
- Location of engagement;
- Link to detailed engagement record.

An Engagement Record Template is provided in Engagement Record Form (6105A0000-0000-JA01-0004) to track all interactions, ensuring accountability and systematic documentation.

8.4 Stakeholder Engagement Program Monitoring

The purpose of monitoring the stakeholder engagement program is to ensure that engagement activities remain transparent, responsive, and effective in fostering trust with local communities and other key stakeholders.

8.4.1 Objectives of Monitoring

The monitoring of stakeholder engagement activities is aimed at:

- Ensuring all planned engagement activities are conducted effectively and on schedule.
- Confirming that diverse stakeholder perspectives, including those from vulnerable groups, are accurately represented.
- Continuously improving the engagement process by identifying and responding to emerging issues.

8.4.2 Monitoring Indicators

Table 8-2 provides the indicators which will be monitored to track engagement activities.

Table 8-2: Monitoring Indicators

Indicator	Description	Frequency
Frequency and Type of Engagement	Track the number, type, and diversity of engagement activities conducted, such as consultations, focus groups, and public meetings.	Annual
Stakeholder Participation	Monitor attendance and representation, with special attention to the inclusion of vulnerable groups and women.	Annual
Topics and Concerns Raised	Record key topics, questions, and concerns raised by stakeholders, including recurring themes and critical feedback areas.	Annual
Perception and Sentiment	Analyse findings from periodic perception surveys, noting any changes in community attitudes and sentiment toward the project.	Bi-annual

8.4.3 Feedback Analysis

All feedback, concerns, and suggestions gathered during stakeholder engagement activities will be systematically recorded, analysed, and categorized to ensure a thorough understanding of stakeholder priorities and emerging issues. This analysis will be conducted as follows:

8.4.3.1 Recording and Categorizing Feedback

Feedback collected from various engagement activities, including consultations, focus group discussions, and surveys, will be documented in the Consultation Register.

Each entry will be categorized into:

- themes, such as project impacts, benefits, concerns, or suggestions for improvement.
- urgency level Indicating priority, based on the impact of the issue raised and any potential risks to the project or community relations.

8.4.3.2 *Qualitative Analysis*

The feedback will undergo qualitative analysis to identify common themes, patterns, and priorities. This analysis will be aimed at:

- Identifying recurring that arise frequently across different stakeholder groups.

- Determining stakeholder sentiment toward specific project activities, policies, or impacts by analysing tone and context in responses.
- Assessing feedback to distinguish high-priority issues (e.g., urgent grievances, unresolved concerns) from general suggestions or lower-priority comments.

8.4.3.3 Quantitative Analysis of Feedback Trends

A quantitative analysis will complement the qualitative review by tracking:

- Frequency of Feedback: Number of concerns or issues raised within specific categories or from certain stakeholder groups.
- Response Rate and Resolution Timeliness: Monitoring the speed and effectiveness of project responses to stakeholder concerns, in alignment with the GRM.

8.4.4 Feedback Response and Adjustment to Engagement Activities

Findings from the analysis will be used to adjust project activities and communication as follows:

- Developing targeted action plans for frequently raised concerns or negative feedback, such as increasing community updates for areas of high interest.
- Tailoring future engagement activities to address the specific concerns and priorities of different stakeholder groups.
- Providing feedback to stakeholders on how their concerns are being addressed, fostering accountability and trust in the engagement process.

8.4.5 Effectiveness Assessment

Effectiveness of the stakeholder engagement program will be evaluated through qualitative feedback gathered through direct interactions, such as focus groups, consultations, and meetings.

8.4.6 Adjustments to Engagement Strategies

Findings from ongoing monitoring will inform necessary adjustments to engagement strategies. This may include modifying engagement methods, increasing the frequency of consultations, or tailoring information formats to better meet the needs of different stakeholder groups.

8.4.7 Reporting

Monitoring results will be documented in annual internal reports to ensure transparency and continuous improvement of engagement practices. Reports will include:

- A summary of engagement activities conducted.
- Key insights from stakeholder feedback and concerns.
- Any changes made to the engagement strategy based on monitoring findings.

8.4.8 Roles and Responsibilities

RDMC's Community Relations Department will oversee the stakeholder engagement monitoring activities, with specific team members assigned to data collection, analysis, and reporting. RDMC will ensure that sufficient resources are allocated to maintain the effectiveness and continuity of monitoring efforts throughout the project lifecycle.

8.4.8.1 Project Director/General Manager

The Project Director/General Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this Management Plan.

8.4.8.2 RDMC Head of Sustainability

The RDMC Head of Sustainability is responsible for:

- Ensuring the currency, relevancy and accuracy of content contained within this Management Plan.
- Overseeing the implementation of this Management Plan.
- Reviewing community sentiment information from ongoing engagements and sentiment surveys to ensure the effectiveness of the engagement programs and the grievance process.
- Ensuring adequate team resources are available to implement this Management Plan.
- Ensuring forward engagement plans are reflective of project activities, community expectations and community concerns.

8.4.8.3 Community Relations Manager

The Community Relations Manager is responsible for:

- Implementation of this Management Plan.
- Directing community relations team members to ensure that planned engagements are completed.
- Ensuring forward engagement plans are reflective of project activities, community expectations and community concerns.
- Ensuring that the grievance process is followed for any grievance received.
- Tracking community sentiment and issues and developing proactive actions.
- Ensuring that the impacts monitoring program is delivered.

9. Grievance Redress

9.1 Protocols for grievance and Conflict Resolution

To effectively manage and address community concerns, this section outlines protocols for handling grievances, conflicts, and potential risks that may arise throughout project activities. These structured approaches aim to build trust, ensure timely resolutions, and maintain open communication channels between the project team and community stakeholders.

9.1.1 Risk Management Protocol

This section establishes a framework for addressing grievances related to operations while ensuring the safety and confidentiality of submitters. Its goal is to create a secure environment for individuals raising concerns, demonstrating our commitment to transparency, accountability, and ongoing improvement in the grievance redressal process.

9.1.1.1 Safe and Confidential Reporting System

Multiple Reporting Channels: Grievances can be submitted through various channels, including in-person, telephone, email, and anonymous drop boxes.

Anonymity Assurance: Submitters have the option to remain anonymous, ensuring protection against retaliation.

9.1.1.2 Risk Assessment

Risk Identification: Regular assessments will be conducted to identify potential risks and threats to submitters.

9.1.1.3 Training and Awareness

Staff Training: Employees responsible for handling grievances will receive training to ensure confidentiality, sensitivity, and the protection of submitters' identities. Additionally, they will participate in ongoing capacity-building sessions to enhance their skills in documenting grievances effectively.

Community Awareness: Awareness programs will be conducted to inform the community, ensuring context specific outreach for vulnerable groups, about the grievance redressal mechanism and safety measures in place.

9.1.1.4 Protection Measures

Confidential Handling: All grievances will be handled confidentially to safeguard submitter identities.

Legal Support Access: Submitters facing threats or retaliation will be provided access to legal assistance.

9.1.2 Conflict Management Protocol

This protocol provides a structured approach to identifying, addressing, and resolving conflicts that may emerge between the Project team and community stakeholders.

9.1.2.1 Establish Clear Communication Channels

Ensure members of the Community Relations team are accessible as primary points of contact for communities.

Hold regular meetings with community representatives to discuss ongoing activities, address concerns, and provide regular project updates.

9.1.2.2 Determine Grievance Validity

Eligibility is determined on the basis of four broad criteria:

1. Does the complaint indicate that the Project has caused a negative economic, social, or environmental impact on the complainant, or has the potential to cause such an impact?
2. Does the complaint specify what kind of impact has occurred or may occur, and how the Project has caused or may cause that impact?
3. Does the complaint indicate that those filing the complaint are the ones who have been impacted, or are at risk of being impacted; or that those filing the complaint are representing the impacted or potentially impacted stakeholders at their request?
4. Does the complaint provide enough information for GRM staff to make a determination on the first three questions?

Complaints such as those relating to not being successful in a job application process, will receive a standardized response through email. These complaints will continue to be recorded on the grievance register and will be communicated to the HR Department for their awareness. To address job-related concerns constructively, RDMC will establish a dedicated jobs or careers advisory service. This initiative will provide community members with support in writing resumes, identifying suitable job opportunities, and navigating application processes, thereby enhancing their employability and ensuring grievances are redirected to appropriate channels for resolution.

9.1.2.3 Adhoc Conflict Resolution Committees

Adhoc conflict resolution committees may be established for cases of ongoing dispute and will include members from both the company and community, ensuring diverse representation (gender, age, socioeconomic background).

On establishing such a Committee, roles and decision-making authorities will be clearly defined and agreed upon. Committees will operate on good faith with consideration of cultural sensitivity, and active listening.

9.1.2.4 Implement Conflict Resolution Methods

Third party mediation to facilitate open and respectful dialogues may be utilised in some situation. This can involve a neutral third-party mediator if both parties agree.

Conduct joint field assessments to gather evidence and understand the impact of the grievance firsthand.

9.1.2.5 Provide Feedback and Timely Resolution

RDMC will ensure standard timelines for addressing grievances at each tier and maintained. RDMC will ensure these timelines are communicated to the community to manage expectations.

Communicate the outcome and actions taken regarding grievances to the complainant and the community at large, respecting confidentiality where appropriate.

Follow up on resolved issues to ensure that agreed-upon solutions are implemented effectively.

9.1.2.6 Documentation and Reporting

Maintain thorough documentation of each case, including grievance details, investigation steps, resolution, and any agreements made. Provide ongoing capacity building to Community Engagement teams to follow protocol on documentation.

Regularly review cases and outcomes to improve the conflict resolution process, identifying recurring issues that may require policy or operational changes.

9.1.2.7 Community Feedback and Review

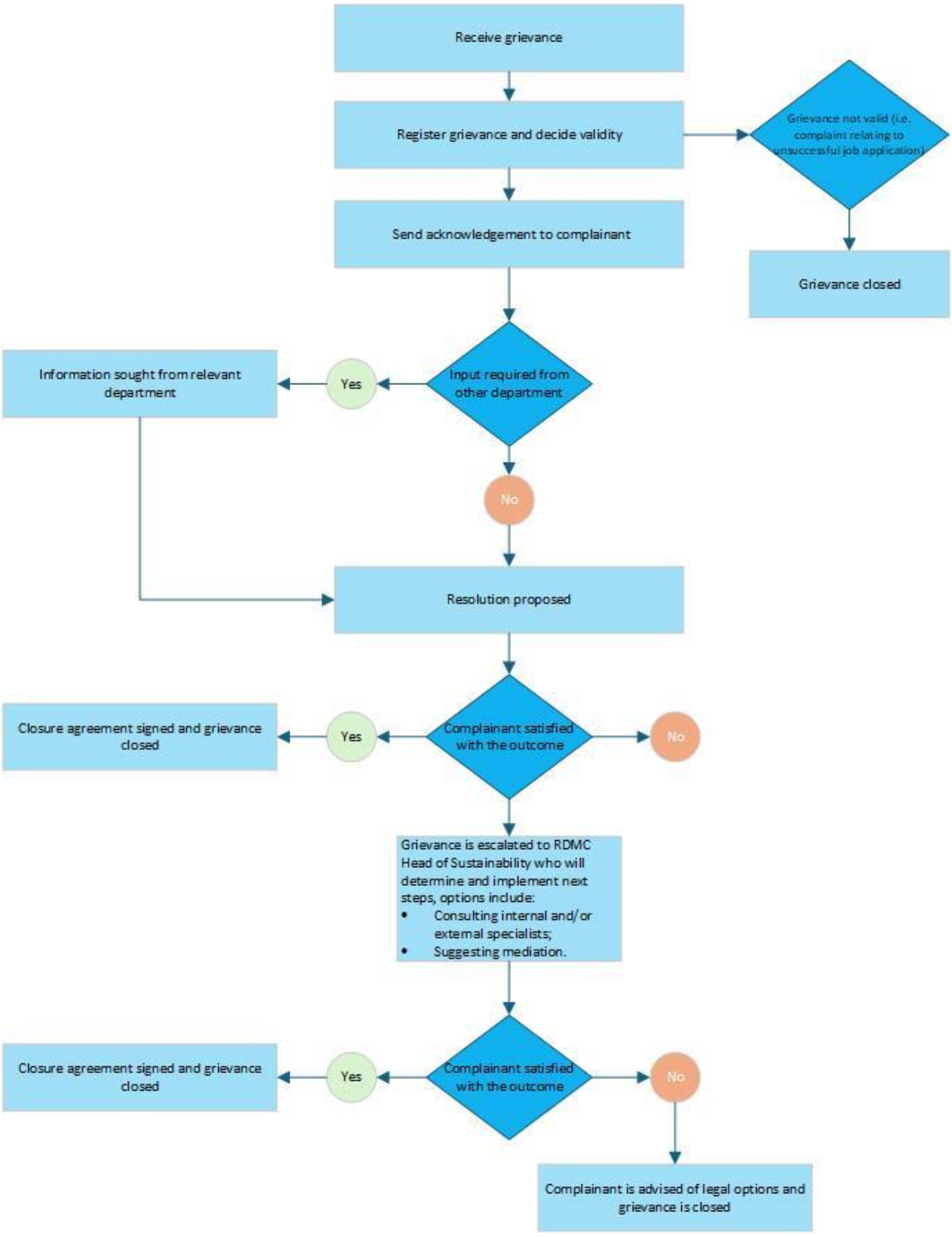
Conduct an annual review of the protocol with community input to ensure it remains relevant and effective.

Allow communities to provide anonymous feedback on the conflict resolution process in during engagement, addressing any concerns or recommendations for improvement.

9.2 Grievance Redress Mechanism

RDMC is committed to establishing an accessible, transparent, and well-structured grievance mechanism for affected parties. This mechanism will be communicated through the various stakeholder engagement activities. Figure 9-1 presents the grievance mechanism flowchart.

Figure 9-1: Grievance Mechanism Flowchart



9.3 Responsibilities

Table 9-1 provides the roles and responsibilities for the grievance redress mechanism.

Table 9-1: Responsibilities

Position	Key Responsibilities
Community Relations Manager	Approval of the Grievance Process, overseeing community engagement and grievance documentation, and ensuring adequate resources for implementation.
Project Director/Site Manager	Responsible for ensuring compliance with the Grievance Process.
Community Relations Lead	Management and administration of the grievance process.
All departments	Providing adequate and timely responses where grievances are referred.
Legal Officer/External Lawyer	Provide timely legal advice and assistance in all legal cases.
Community Relations Officers and Community Liaison Officers	Collection of in-person grievances of community members and from grievance boxes placed in communities, ensuring accessibility and inclusivity. Collection of in-person grievances of community members must not be done verbally, the grievances must only be excepted using a standardized grievance form as outlined. Where necessary the Community Relations team member will assist the community member to complete the Grievance Form.

9.4 Grievance Process Awareness

Generating awareness of the grievance process is critical for effectiveness. Methods for ensuring awareness will include:

- Ensuring all community relations staff have a full understanding of the grievance process.
- Continual discussion of the process during regular engagements in local language and in both male and female engagements.
- Should sentiment surveys or other feedback determine a lack of awareness, a direct campaign will be initiated.
- Easy to understand posters and other material will be distributed in communities in Urdu.
- Posting of grievance process information in local social media channels where appropriate.
- Awareness sessions on site with local employees through toolbox meetings.
- Grievance forms are made available in Urdu.

These methods will be continually reviewed for effectiveness.

9.5 Grievance Register

A grievance register will be maintained for the purpose of documentation, which will include:

- Grievance Forms: The initial complaint or concern raised by stakeholders will be recorded using a standardized grievance form.
- Investigation Records: Any investigation undertaken to resolve the grievance, including findings, investigation reports, and any supporting evidence.

- Correspondence and Responses: Written responses to the complainant and any communication with stakeholders related to the grievance process.
- Feedback and Follow-up: Any feedback received post-resolution, as well as records of follow-up visits or checks to ensure the resolution has been successfully implemented.

9.6 Receiving Grievances

Community members will have multiple options to submit grievances, including:

- At an RDMC office (e.g. at Nok Kundi);
- Through members of the Community Relations team or through other senior staff members (i.e. through the site manager).
- Other channels including anonymous grievance boxes placed at all RDMC offices and communities, telephone helpline, and email.

Grievances may only be submitted in written form. If the submitter requires assistance, the relevant RDMC staff member will help record the grievance on the standardised ***Grievance Form*** (6105A0000-0000-JA01-0005) (see Appendix B). Upon receipt, the grievance will be re-read and explained to the submitter to ensure agreement on the facts.

9.7 Recording, Acknowledgement and Registration

All grievances will be recorded using the Grievance Form and logged in the ***Grievance Register (6105A0000-0000-JA11-0005)***. A copy of the completed form will be provided to the person raising the grievance at the time, or within 7 days of the grievance being raised. Both copies of the form will include a unique registration number.

9.8 Assessment

Grievances will be initially assessed by the Community Relations team using all available information to enable the grievance to be directed to the most appropriate staff member/department. It may be possible for the RDMC staff member to address the grievance immediately if it is in relation to simply providing or clarifying information. If the grievance is considered particularly urgent, it will be raised immediately to the Community Relations Manager or Site Manager, as appropriate.

9.9 Management and Response

Depending on the nature of the grievance, the Community Relations team will assign the grievance to the appropriate staff member/department for action and resolution. The assigned staff member/department will review and investigate the grievance and provide a response (with a resolution and if necessary, a schedule of corrective actions) to the Community Relations Manager. The Community Relations Manager will ensure that a written and verbal response is provided as soon as possible and not more than 30 days after receiving the grievance. If, however, more time is required for resolution, the Community Relations team will keep the person who raised the grievance informed.

In addition, complainants will be updated where possible during routine engagement activities (i.e. community visits).

If a grievance cannot be resolved by the relevant department or the Community Relations team the following will occur:

1. The grievance will be escalated to the RDMC Head of Sustainability for consideration of options including consultation with internal or external specialists, or recommending third party mediation. If the grievance is associated with human rights, it will be escalated within 24 hours to the Sustainability Executive and Risk and Assurance Executive.
2. As a last resort, grievances may be referred to an appropriate Court of Justice by either the complainant or RDMC.
    i) The complainant has the right of appeal to any recognized institution open to any citizen as stipulated by the laws of Pakistan if still not satisfied with the outcome and explanation of the third-party mediation.
    ii) RDMC has the right to appeal to any recognized institution if not satisfied with a ruling given in any case or can act in accordance with the dispute resolution clause as stipulated in the investment agreement.
    iii) In the event that a case is presented by the aggrieved person's legal counsel, or in case an unresolved complaint is forwarded to RDMC's Legal Advisor for further action, all correspondence with regard to the case is forwarded to the Legal Advisor for further action.
    iv) Upon request of the Legal Advisor, the Grievance officer or someone with delegated authority will attend court anytime a legal issue is to be heard.
    v) In the event the investigation confirms the grievance is legitimate, the Grievance Officer ensures that the administrative process for redressing the grievance is immediately initiated.

All activities undertaken till resolution will be logged into the Grievance Register.

9.10 Monitoring and Evaluation

The Community Relations team will monitor the progress of each grievance and provide regular status updates to the complainant, with no more than 30 days between updates until the grievance is resolved. All grievances will be endeavoured to be closed out within 30 days; however, this must not come at the expense of following process and adequate investigation. The Community Affairs Manager will monitor implementation of the response and corrective actions taken. Within a month of the response being provided to the person raising the grievance, a Community Relations team member will make a visit to verify that the situation has been resolved to the satisfaction of all involved.

Feedback will also be collected from affected parties to assess the overall effectiveness of the grievance process. This analysis will aid in improving future grievance handling and ensure continuous improvement in the process. After resolution, the Community Relations team will solicit feedback from complainants and other relevant stakeholders to gauge their satisfaction with the process and outcome. This feedback will be collected through a pre-designed survey form (6105A0000-0000-JA01-0006) (see Appendix C).

Table 9-2 outlines the monitoring indicators to assess the effectiveness of the grievance process.

Table 9-2: Grievance Process Monitoring Indicators

Indicator	Description	Frequency
Number of Grievances	Number of grievances registered within a given period	Bi-annual
Response Time Compliance	Percentage of grievances addressed within 30 days	Bi-annual
Resolution Rate	Proportion of grievances resolved successfully within the set timeframe.	Bi-annual
Follow-up Visits Completion Rate	Percentage of cases with follow-up visits conducted within one-month post-resolution.	Bi-annual
Stakeholder Satisfaction with Resolution	Measure of satisfaction with the grievance resolution, gathered through post-resolution feedback.	Bi-annual
Training Sessions Conducted	Number of training sessions on grievance redress conducted for staff and community members.	Annual
Awareness Program Reach	Number of community members reached through grievance redress awareness programs.	Annual
Escalation Rate	Proportion of grievances escalated to higher authorities or third-party mediation	Bi-annual
Confidentiality Assurance Compliance	Percentage of grievances where confidentiality was upheld throughout the process.	Bi-annual

Feedback from the survey will be analysed regularly and monitoring indicators will be tracked to detect any recurring issues in the grievance process or trends in the types of grievances raised. This will be used to update the grievance mechanism periodically, if required.

9.11 Reporting

To keep management informed and support decision-making, the Community Relations team will prepare regular grievance summary reports. These reports will include:

- Nature of Grievances: A brief description of the grievance, categorizing the issue (e.g., environmental, social, employment-related).
- Status of Grievances: The current status of each grievance, such as "open, " "under investigation, " "resolved, " or "closed. "
- Resolution Outcomes: A summary of how each grievance was addressed, including whether the resolution met the complainant's expectations.
- Time Taken for Resolution: The average time taken to resolve grievances, highlighting any delays or issues causing extended resolution times.
- Grievance Trends: An analysis of recurring issues or trends identified in the grievances, helping management identify any systemic problems.
- Improvements or Changes: Updates or improvements made to the grievance process based on feedback or trends identified in previous cases.

These reports will be compiled on a quarterly basis and submitted to senior management for internal review. This ensures management is informed about grievance trends and can take action to address systemic issues or process improvements.

10. Impacts Monitoring Program

The impacts monitoring program will assess the Project's impacts as identified in the ESIA, focusing specifically on impacts on community stakeholders.

The main impact pathways on the communities are through:

- Direct, indirect, and induced employment resulting in increased prosperity and wellbeing of beneficiaries and their households due to higher and more stable incomes
- Increase in the stock of skilled human capital due to the transfer of knowledge and skills under the Project resulting in enhanced productivity of local labour
- Social development projects resulting in improved infrastructure, health, and education outcomes.
- Disputes over distribution of Project employment within and between the local community near the Project facilities and the in-migrants resulting in social unrest
- Increase in population due to the in-migration of job seekers (in-migrants) near the Reko Diq Mine Site.
- Potential use and abuse of illicit drugs and harmful substances among workers, particularly the drivers employed or contracted by RDMC, increasing the risk of substance abuse permeating into the communities.
- Negative sentiments within the communities towards the Project stemming from the perceived rise in inequalities due to the RDMC benefitting from mining operations in Balochistan while making insufficient contributions for the social and economic uplift of the communities.
- Increased cost of living due to the economic activity generated by the Project and an associated potential increase in the prices of basic commodities.
- Impacts on air quality due to construction and mining operations at Reko Diq Mine Site

The primary objectives of this monitoring program are:

- To evaluate the extent of the positive impacts on community stakeholders and the efficacy of enhancement measures identified in the ESIA.
- To determine whether mitigation strategies identified for negative impacts have been effective
- To provide actionable insights for RDMC to adapt its strategies and interventions based on the findings, ensuring the Project's contributions to community welfare are maximized while mitigating adverse effects.
- To promote transparency and foster collaborative relationships with local stakeholders by actively involving them in the monitoring process and disseminating findings.

10.1 Methodology

This section provides an overview of the methodology to be followed for the monitoring program, including the survey plan, data collection techniques, stakeholder engagement methods, frequency of monitoring, and data analysis procedures. The monitoring program will adopt a mixed-methods approach for data collection and analysis.

10.1.1 Survey Locations

Data will be collected in the communities near the Reko Diq Mine Site as defined in **Section 6.1.**

10.1.2 Data Collection

10.1.2.1 Socioeconomic Surveys

Primary data will be collected through socioeconomic surveys at the household level, utilizing pre-designed survey forms (Error! Reference source not found.**)** specifically tailored to assess various s ocioeconomic impacts related to the project. The surveys will cover the following areas:

- Demographic Information: Age, gender, occupation, household size, and income level
- Questions related to employment (e.g., changes in household income due to project employment, skills learned, employment status)
- Infrastructure improvements (e.g., community-level improvements in roads, schools, or healthcare)
- Access to education and health services (literacy and health indicators)
- Employment-related grievances (e.g., fairness in job distribution, migrant worker tensions).
- Economic pressures (e.g., cost of living increases)
- Social issues (e.g., substance abuse, community disputes)

To facilitate accuracy and efficiency, the survey forms will be programmed using the Open Data Kit (Ona.io) application in Urdu, English, and Balochi languages. Before full rollout, the survey will be pre-tested in two smaller communities to refine questions for clarity and effectiveness. Feedback from the pre-test will be carefully analysed and incorporated into the final survey design, ensuring that any unclear or problematic questions are revised or eliminated. Additionally, insights gained from the pre-test will inform the training of enumerators, ensuring they are well-equipped to address potential challenges in data collection.

10.1.2.2 Sampling Strategy

At the time of the preparation of this Plan, 15 community stakeholders were identified. To ensure that all communities are adequately represented based on their population sizes.[8] two sampling techniques will be employed:

- Census Sampling to be used in communities where the household number is small such as Nok Chah, Mashki Chah, and Wadian.

[8] HH size for each community from the ESIA have been utilized.

- Simple Random Sampling will be utilized in all other communities to gather data from a specified percentage of households based on calculated coverage requirements. Household selection within these communities will be systematic, with every nth household chosen, starting from a randomly selected point.

10.1.2.2.1 Household Selection Process

Within each community, a systematic approach will be used to select households for surveying. Starting from a randomly determined point, every nth household will be chosen until the sample size requirement is met, maintaining the randomness and representativeness of the sample.

10.1.2.3 Sample Size Calculation

The sample size for each community will be calculated using the following formula, ensuring a 95% confidence level with a 5% margin of error.

$$n = \frac{N.Z^2.p.(1-p)}{E^2.(N-1)+Z^2.p.(1-p)}$$

Where:

- ***n*** = sample size
- ***N*** = population size
- **Z** = Z-value, which corresponds to the confidence level
- **p** = estimated proportion of the population
- **e** = margin of error

10.1.2.4 Data Collection

Enumerators will receive training on ethical data collection, survey tools, and community engagement strategies. Training will focus on culturally sensitive approaches to ensure trust and comfort during interactions. Data will be collected using mobile devices (tablets or smartphones) with digital survey tools (ODK) to minimize errors and facilitate real-time data storage.

10.1.3 Stakeholder Engagement Methods

The stakeholder engagement process will involve surveys as detailed in Section 10.1.2.

10.1.3.1 Initial Stakeholder Notification

Prior to the commencement of the monitoring activities, community stakeholders will be informed about the purpose and scope of the project impacts monitoring program. This initial notification will ensure that stakeholders understand the importance of their potential participation in surveys and consultations.

10.1.3.2 Feedback Mechanism

A feedback mechanism will be established to ensure that the community's input is acknowledged and considered in RDMC's future strategies. The insights gathered will directly inform RDMC's decision-making processes and adaptations to project interventions.

10.1.4 Analysis

This section details the approach to analysing both quantitative and qualitative data, with key performance indicators (KPIs) established to assess the project's impacts effectively. A mixed-

methods analysis strategy will be employed to integrate statistical trends with community narratives, providing a comprehensive view of the project's influence.

10.1.4.1 Expected Data Outputs from Surveys

The surveys conducted as part of the monitoring program will yield a variety of qualitative and quantitative data outputs. Table 10-1 outlines each expected data output, its significance, and how it will contribute to measuring impacts over time.

Table 10-1: Expected Data Output

Area of information	Expected Data Output	Significance	Impact Measurement
Demographics	▪ Age ▪ Gender ▪ Household composition ▪ Occupation ▪ Education level of respondents ▪ Asset ownership ▪ Facilities available	Provides a demographic profile to help stratify analyses and evaluate impact by group	Collection of this data will establish baseline conditions for comparison over time, allowing analysis of how different demographic groups are affected by the project.
Employment Status	▪ Current employment status (employed, unemployed, underemployed), ▪ Job types ▪ Length of employment ▪ Household income	Employment status is a direct indicator of economic activity and stability within the community. It reflects the project's effectiveness in generating job opportunities	Changes in employment rates and income levels will be monitored annually, allowing for an assessment of the economic benefits of the project and identify any disparities among different demographic groups.
Skills Development	▪ Participation in training programs ▪ Skills acquired ▪ Perceived applicability of these skills in the job market	Evaluating skill development helps assess the capacity-building aspect of the project, providing insights into how well the community is prepared to take advantage of new job opportunities.	The number of individuals reporting skill acquisition will be monitored annually, allowing for an evaluation of the long-term productivity and employability of community members
Community Welfare Indicators	▪ Access to healthcare services (frequency of visits, types of services used) ▪ Educational access ▪ Quality of social infrastructure (satisfaction ratings for roads, schools, and healthcare facilities)	These indicators are essential for assessing the broader impacts of the project on community well-being in terms of access to social infrastructure, beyond just economic metrics	Tracking these welfare indicators annually will provide a comprehensive view of improvements or declines in living conditions and access to essential services
Community Sentiment	▪ Community perceptions of the project including: ♍ trust in RDMC ♍ perceived fairness in job distribution ♍ overall satisfaction with the project's contributions	Understanding community sentiment is vital for gauging the social license to operate and identifying potential areas of discontent that could lead to grievances	Sentiment analysis will be conducted annually to monitor shifts in community perspectives

Area of information	Expected Data Output	Significance	Impact Measurement
Environmental Awareness and Concerns	▪ awareness of environmental issues (e.g., air quality, water quality) ▪ concerns related to the mining activities, including health impacts perceived by the community	Awareness of environmental concerns reflects the effectiveness of RDMC's communication and engagement efforts, as well as the project's environmental management strategies	Tracking reported concerns and awareness levels annually will help evaluate the success of the project's environmental programs and make necessary adjustments

10.1.4.2 Quantitative Data Analysis

Analysis of quantitative data will focus on evaluating impacts identified in the ESIA, specifically measuring changes across employment, income, skill development, and community welfare indicators. The following methods will provide insights to gauge the project's impacts:

- Descriptive analysis to summarize the demographic and socioeconomic characteristics of community members, showing overall trends in areas such as employment and income stability.
- Comparative metrics to assess differences in impacts between communities (e.g., smaller vs. larger communities or communities closer to vs. further from the project site) to identify the variance in impacts between communities
- Trend analysis to track key indicators year-over-year to detect shifts over time, particularly in core areas like employment and cost of living, highlighting whether impacts are intensifying, stabilizing, or improving.

10.1.4.3 Qualitative Data Analysis

Qualitative data will provide a more nuanced understanding of community perspectives and satisfaction levels. Analysis will focus on:

- Thematic categorization to codes community feedback into key themes, such as employment-related grievances, perceptions of fairness, and attitudes toward RDMC's engagement efforts.
- Sentiment tracking to categorize responses as positive, neutral, or negative to monitor sentiment over time, to understand whether community support or concerns are shifting over time.

10.1.4.4 Integrated Analysis

Combining quantitative and qualitative findings will allow cross-validation of trends observed in statistical metrics with community feedback, enhancing the depth of analysis. For example, quantitative employment data can be paired with qualitative sentiments about job distribution fairness to provide a fuller picture of impacts related to employment. To assess the project's impacts, data from the control group (communities unaffected or indirectly affected by the project) will be compared with data from the treatment group (communities directly affected by the project). The comparison will help isolate the project's effects from other external factors that may influence the community.

10.1.4.5 Key Performance Indicators

The KPIs will serve as a key tool for tracking and assessing the project's socioeconomic impacts, allowing RDMC to measure progress across critical areas, including employment, income stability, skill development, and community cohesion. Each KPI corresponds to specific anticipated impacts, facilitating targeted analysis of both positive and negative changes. Continuous monitoring of these indicators will support trend analysis, enabling timely adjustments to address emerging issues and enhance project outcomes. While surveys will be the primary data source for impact monitoring, additional data from other existing sources will be required for certain indicators, as specified in Table 10-2 for each relevant impact area.

Table 10-2: Key Performance Indicators

Impact Area	KPI	Measurement Method
Direct, Indirect, and Induced Employment	▪ Community level employment rate ▪ Number of community members employed in project-related jobs ▪ Perceived well-being due to project employment ▪ Average household income ▪ Monthly income level fluctuation	▪ Survey
Skilled Human Capital and Knowledge Transfer	▪ Number of community members trained in project-related training ▪ Satisfaction with skill applicability in other jobs	▪ Survey ▪ Training participation records
Infrastructure, Health, and Education Improvements	▪ Satisfaction with social infrastructure (healthcare, education, CSR infrastructure initiatives) ▪ Literacy rate ▪ Enrolment in project-supported schools ▪ School attendance rate in project-supported schools ▪ Project-supported healthcare facility usage ▪ Average distance to nearest healthcare facility	▪ Survey ▪ School attendance records ▪ Healthcare facility usage data
Community Disputes and Social Unrest Related to Employment Distribution	▪ Community sentiment regarding project's handling of concerns over employment ▪ Perceived fairness in employment distribution ▪ Perceived difficulty in securing a job with the project	▪ Survey
Increased Population and In-migration Effects	▪ Increase in community population ▪ Perceived impact on community resources due to population influx	▪ Survey ▪ Grievance records
Substance Abuse and Social Risks	▪ Perceived increase in substance abuse within the community ▪ Reported incidents of substance abuse	▪ Survey ▪ Grievance records
Negative Sentiments Over Inequalities	▪ Perceived fairness in distribution of project benefits ▪ Perceived accessibility of project benefits	▪ Survey
Increased Cost of Living	▪ Change in household expenditure due to change in prices of staple goods	▪ Survey
Air Quality and Environmental Health	▪ Reported health concerns related to air quality	▪ Grievance records

10.1.5 Monitoring Frequency

Initially, a biennial monitoring schedule commencing in 2027 will be followed for the first 10 years, given the extensive duration of the project. Biennial assessments will allow for timely adjustments, will also reduce respondent fatigue and will provide flexibility in adapting strategies and interventions based on the evolving socio-economic landscape. This approach will allow for the identification of emerging issues or successes, which can be addressed or built upon in subsequent years. After the initial 10-year period, the frequency of the monitoring program could be adjusted to every 3 years to track project impact indicators.

10.1.6 Reporting

At the end of each monitoring cycle, a report will present a comprehensive analysis of socioeconomic and environmental data. This report will compare findings with baseline data and evaluate the effectiveness of impact mitigation and enhancement measures. Key insights, trends, and recommendations will be included to inform RDMC's strategy for the following year.

10.2 Monitoring of Unanticipated Impacts

In addition to monitoring pre-identified impacts, this program includes a framework to identify, track, and address unanticipated impacts that may arise as the project progresses. Such impacts will be recognized through grievance analysis, supplementary surveys, and regular stakeholder engagement activities.

10.2.1 Mechanism for Identification of Unanticipated Impacts

To identify new or emerging impacts effectively, the following mechanisms will be implemented:

10.2.1.1 Quarterly Grievance Review

Every quarter, a detailed review of the project's Grievance Redress Mechanism (GRM) will be conducted to identify patterns in submitted grievances. The monitoring team will categorize grievances by type, frequency, and severity, flagging any recurring or persistent issues as potential unanticipated impacts. If certain concerns consistently arise across different communities or demographic groups, they will be prioritized for further investigation and potentially added to the monitoring program.

10.2.1.2 Biannual Sentiment Surveys

In addition to structured surveys, biannual sentiment surveys will be conducted in the first and third quarters will be conducted with community to capture evolving community sentiments and provide qualitative insights into emerging impacts, which will then be cross-referenced with grievance data to identify any patterns or themes.

10.2.1.3 Annual Supplementary Survey for Unanticipated Impacts

If analysis of grievance review and community consultations identifies potential unanticipated impacts, a supplementary survey will be administered to gather additional supporting data for the existence of the impact. The form will be structured to distinguish between project-induced impacts and those arising from external factors beyond the project's control. This supplementary survey's findings will then be cross-referenced with grievance data and insights from ongoing consultations to confirm and validate the emergence of any unanticipated impacts.

10.2.2 Categorization of identified impacts

A numerical assessment of the significance of the identified impacts will be undertaken in line with the methodology outlined in the ESIA.[9] Based on the significance ratings, appropriate mitigation and/or management strategies will be developed to address each impact.

10.2.3 Incorporating Identified Impacts into the Monitoring Program

Following the categorization of newly identified impacts, the survey form (ERROR! REFERENCE SOURCE NOT FOUND. will be updated to include specific questions related to these impacts. Data will be collected as outlined in Methodology, and subsequent steps will be followed. The KPI list will also be expanded to include new KPIs, which will be tracked over multiple years to assess the impact trends for the additional identified impacts.

11. Human Rights Risks Monitoring

An internal human rights audit will be undertaken on an annual basis before the end of each calendar year, with an external review undertaken every three years from the commencement of Project construction. The internal audit will comprise:

- Interviews with RDMC employees (see Appendix E [6105A0000-0000-JA01-0007]);
- Interviews contractor employees (see Appendix F [6105A0000-0000-JA01-0008]);
- Interviews with community members (see Appendix G [6105A0000-0000-JA01-0009]).

Results will be collated in the Reko Diq HRA Self-Assessment Tool (6105A0000-0000-JA01-0010) and a report prepared for sharing with senior management.

[9] Document no. BAR721 – Rek Diq ESIA FINAL

12. Reviews and Updates

The Plan will undergo periodic reviews and updates to ensure it remains aligned with applicable international standards, national legislation, and evolving project requirements. Updates to the SEP will be made under the following circumstances:

- If there are updates to relevant international standards or national legislation, the SEP will be reviewed and revised accordingly to maintain compliance.
- At each transition to a new project phase, the SEP will be assessed and updated to reflect the changing nature of stakeholder engagement needs and objectives.
- If internal or external audits reveal areas for improvement or necessary adjustments, the SEP will be revised to address these findings and improve engagement effectiveness.
- Regular consultation activities and their monitoring will provide valuable insights into the SEP's effectiveness. If these activities indicate that the engagement approach or objectives need adjustments, the SEP will be reviewed and modified as needed.

Appendix A
Engagement Record Form

Reference ID		
Stakeholder/s orSettlement		
Consultation		
Date:		
Time:		
Meeting Venue/Means of Contact:		
Attended by and contact details:	**Name**	**Phone Number**
Conducted by:		
Recorded by:		
Language:		
Issues, Concerns, and Suggestions:		

Appendix B
Grievance Form

Grievances can be submitted in person or via grievances@rekodiqmc.com .

Note that personal details and signatures are not mandatory if the person wishes to remain anonymous.

Reference Number (taken from Grievance Register):

Name of Person Raising Concern:

Date: _____

Name: _____

First Name: _____

Surname: _____

Contact Information (house location or other contact method)

_____

_____

_____

_____

_____

_____

Description of Concern (include dates and locations if applicable)

_____

_____

_____

_____

_____

What would you like to see happen?

_____

_____

_____

_____

_____

Signature

_____

Resolution Notes (to be completed in conjunction with complainant following investigation)

Grievance Process Checklist (to be completed by complainant – please circle Yes or No)

Have you received a copy of your Concern Form? (Yes / No)

Does your Form have a Reference Number? (Yes / No)

Were you happy with the process to address your concern? (Yes / No)

Was your concern adequately addressed? (Yes / No)

Comments (do you have any other concerns/ideas?)

Signature (to be signed by complainant to indicate closure of the concern)

Appendix C
Grievance Resolution Feedback Form

Date of Resolution: _____

Grievant's Name (Optional): _____

Grievant's Contact Information (Optional): _____

Reference Number (Taken from Grievance Register): _____

Type of Grievance (Optional): _____

Satisfaction with the Grievance Process

1. **How satisfied are you with the overall grievance redress process?**

☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

2. **Did you feel the grievance submission process was accessible and easy to use?**

☐ Yes ☐ No

If no, please explain why: _____

3. **Was your grievance acknowledged and recorded promptly?**

☐ Yes ☐ No

If no, please explain: _____

4. **How would you rate the communication and responsiveness during the grievance handling process?**

☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

Please explain: _____

5. **Were you kept informed about the progress of your grievance resolution?**

☐ Yes ☐ No

If no, how could communication be improved? _____

Satisfaction with the Outcome

6. **How satisfied are you with the resolution of your grievance?**

☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

Please explain: _____

7. **Do you feel that the resolution was fair and addressed the issue raised in your grievance?**

☐ Yes ☐ No

If no, please explain: _____

8. **Was the timeframe for resolving your grievance acceptable?**

☐ Yes ☐ No

If no, please explain: _____

Suggestions for Improvement

9. **What aspects of the grievance process do you think can be improved?**

_____

_____

_____

_____

_____

_____

10. **Do you have any other suggestions or comments regarding the grievance redressal process?**

_____

_____

_____

_____

_____

_____

Follow-up

11. **Would you be willing to participate in further discussions or provide additional feedback in the future?**

☐ Yes ☐ No

If yes, please provide your contact information: _____

Appendix D
Survey Forms

D.1. Questionnaire for Household Profile

Investigator Information

Name of Investigator(s): _____

Date: _____ Start Time: _____ End Time: _____

Note any pause in interview shall be noted in the Comments section on Page 10

Location Information

Form No.: _____ Settlement: _____ Mauza: _____

UC: _____ Tehsil: _____ District: _____

GPS Coordinate: _____º _____' _____" N, _____º _____ '_____" E

1. Structure ID should be the same as that on the area map. If the family has more than one structures, list the remaining IDs in the second row with explanation in brackets.
2. GPS coordinate to be provided only where GPS is available
3. Settlement is the name by which the village is identified by the residents
4. Mauza is the revenue village

Respondent and Head of Household (HHH) Information

	Respondent	*Head of Household*
Name		
Father/Husband Name		
Mobile Number		
Gender	☐ Male ☐ Female	☐ Male ☐ Female
Age (Response)		
Relation to HHH	☐ Self ☐ Father ☐ Brother ☐ Son ☐ Other _____	
Education	☐ Illiterate ☐ Madrassah ☐ No or less than Primary ☐ Primary (Class 5 to Class 9) ☐ Matric (Class 10) ☐ Intermediate (FA/ FSc) ☐ Graduate (BA/BSc) ☐ Other _____	☐ Illiterate ☐ Madrassah ☐ No or less than Primary ☐ Primary (Class 5 to Class 9) ☐ Matric (Class 10) ☐ Intermediate (FA/ FSc) ☐ Graduate (BA/BSc) ☐ Other _____

If respondent is the head of household, the third column should be left blank

Demographic Profile

Total Number of Persons in the Family (including HHH)

Age Limits	Male	Female	Male literate/ school going	Female literate/ school going
Under 2 years				
2 to 5 years				
6 to 18 years				
19 to 60				
Above 60				

Housing

Ownership Status? ☐ Owned ☐ Rented ☐ Free ☐ Others _____

Construction ☐ Pucca (Bricks/blocks/stones) ☐ Semi Pucca ☐ Katcha ☐ Others _____

Approximate plot size of the house (State units) _____

Approximate covered area (State units) _____

When was the house constructed? _____

Covered area is the area of all floors in the house. Plot size is the size of land on which the house is built and includes the court yard, out houses, driveway etc.

Available Facilities in the House

Do you have Telephone Connection (landline)? ☐ Yes ☐ No If "Yes", when connected (Year)? _____

Do you have electricity connection? ☐ Yes ☐ No If "Yes", when connected (Year)? _____

Do you have Sewerage System? ☐ Yes ☐ No

Sewerage system includes constructed septic tanks and soak pit

Drinking Water Source

☐ Spring ☐ Groundwater ☐ Water Supply ☐ Open Pond

Water Supply System from the source

☐ Pipe ☐ Electric Pump ☐ Hand pump ☐ Carried on Animals

☐ Carried by Family ☐ Tankers ☐ Open channel ☐ Other _____

Fuel Sources and Consumption

Type	Y/N	Uses			
		L	SH	WH	C
Electricity					
Fuel wood (Gathered)					
Fuel wood (Market)					
LPG					
Kerosene					
Other					

L: Lighting SH: Space Heating WH: Water Heating C: Cooking

Social Profile

Religion _____ Caste _____ Mother Tongue _____

Do you marry children outside your tribe/clan? ☐ Yes ☐ No

How many of the married members of the HH are married to their first cousins? _____

Decision Making

Who takes decision in the family on the following issues, and how?

Issue	How the decision is taken	If unilateral who takes the decision? (Indicate member no) If consultative, list the members consulted
Household budget management	☐ Unilateral ☐ Consultative	
Family conflicts	☐ Unilateral ☐ Consultative	
Matrimonial decisions	☐ Unilateral ☐ Consultative	
Property and asset management and inheritance	☐ Unilateral ☐ Consultative	

Migration Patterns

Years since settled in settlement: _____

If less than 10 years, then previous location: _____

Purpose of relocation from previous place: _____

Family Health

Births and Deaths

Number of births in the family in last 2 years Live_____ Stillbirth_____
Deaths in the family in the last 2 years

No	Age	Cause
1		
2		
3		
4		

Serious illnesses

Did any of your family members suffered from any serious illnesses during the past 2 years?

Person (Relation with HH	Age	Illness	Outcome	Treatment Location

Illness:	Tuberculosis, Hepatitis, Asthma, Jaundice, Tetanus, Paralysis, Diabetes, Cancer, Heart disease, Others (specify)
Outcome:	Treated, Persisting, Disability, Lost job or occupation, Death
Treatment type:	Hospitalization, OPD/Clinic, Herbal/Hakeem, Faith healer, Homeopath, Other (specify)

Accidents

Did any of your family members suffered met an accident during the past 2 years?

Person (Relation with HH	Age	Accident	Outcome	Treatment Location

Accidents:	Fall from height, Snake bite, Road accident, Burns, Electrocution, Accident at work, Other (specify)
Outcome:	Treated, Persisting, Disability, Lost job or occupation, Death
Treatment type:	Hospitalization, OPD/Clinic, Herbal/Hakeem, Faith healer, Homeopath, Other (specify)

Common illnesses

Are the following illnesses common in your family in the specified category (Yes/ No)

Common Diseases (عام بیماریاں)		Men (مرد)	Women (خواتین)	Adult-Children (6 to 14) (بالغ بچے)	Children (0 to 5) (بچے)
Tuberculosis	تپ دق				
Diarrhea	اسہال				
Breathing Problems	دمہ				
Jaundice	پیلیا				
Skin Diseases	جلد کے امراض				
Cold and Flu	بخار اورفلو				
Stomach Diseases	پیٹ کے امراض				
Joint Aches	جوڑوں کا درد				
Tetanus	تشنج				
Paralysis	فالج				
Diabetes	ذیابیطس				
Cancer	کینسر				
Heart Problems	دل کے مسائل				
Other (specify)	دیگر				

Family Assets

Appliances

If you own any of the following in your house, please give the quantity.
(Write quantity in figures in front of each item)

Television _____ Radio _____ Elec Room Heater _____ Elec water heater_____

Refrigerator _____ Freezer _____ Washing Machine _____ Elec Iron _____

Electric Fan _____ Sewing Machine _____ Generator _____ Computer _____

Vehicles

If you own any vehicles, please provide the details:

Car _____ Jeep _____ Truck _____ Pick-Up_____

Motorcycle _____ Other _____ Discription _____

Livestock

Number of Livestock heads of each type owned by you.

Type	Camel	Cow	Buffalo	Goat/ Sheep	Oxen	Donkey	Horse	Chicken	Others (specify)
Number									
Use									

Number:	If the family does not own any animal, enter "Nil". Do not leave blank.
Use:	**S**: Self **C**: Commercial **B**: Both

Are the animals sent for grazing? ☐ Yes ☐ No. If yes, where _____

Land holding

Serial	Land Use	Overall Land (mention units)
1	Cultivated area	
2	Uncultivated area	

Family Economics

Household Income (Average over last year)

Source	Number of persons	Average (Rs.)	Monthly/Annual
Salaried Jobs including remittances and pensions			
1.			
2.			
3.			
Family Sources			
Farming			
Livestock			
Business			
Rent			
Arts and craft making			
Labour			
Other (please specify)			

Expenditures (Average over last year)

Heads of Expenditure	Average (Rs.)	Monthly/Annual
Food		
Clothing		
Combustion fuel (gas, kerosene, firewood, etc.)		
Rent or expenditure on dwelling		
Electricity charges		

Heads of Expenditure	Average (Rs.)	Monthly/Annual
Medical		
Education		
Communication		
Transportation		
Livestock		
Other expenditures (Please specify heads below)		

Indebtedness

Do you owe any money to others or institutions? ☐ Yes ☐ No

A. If "Yes", from whom

Bank_____ Friend _____ Relative _____ Other_____

Comments and Notes

D.2. Rural Settlement Questionnaire

Background Information

Settlement	A settlement is a cluster of houses where residents share a geographic area, and commute with the resources through a cultured pattern that they have developed in due course of time for the purpose.
Village	A village is a small administrative region with defined borders locally called “Moza”. One village may contain many settlements.
Union Council	Comparatively bigger administrative area comprising 3 to 4 villages.

Name of Investigator(s) _____

Settlement Name _____ Village Name _____

Union Council _____ Tehsil Name _____

Coordinates _____ N _____ E

Respondent Information

Name(s)	Role/Title/Responsibility	Phone Number

Note: This will be focused group and the group should involve village elders, farmers, school teachers, community representatives etc.

Demography, Ethnicity and Language

Household:	A household may be either a single person or a multi-person household. Household members may be related or unrelated and essentially include people who make common provisions for food and other essentials of living and have no usual place of residence elsewhere.
Masonry:	Houses with brick walls and concrete or tin roof.
Adobe:	Houses made of mud or unbaked bricks of clay and straw.

Total Households _____ Estimated Population _____

Male population % _____ Female Population % _____

Proportion of Houses Adobe (%) _____ Proportion of Houses Masonry (%) _____

No.	Ethnic Groups	% Share in population
1		
2		
3		
4		

List of languages spoken in the communities

Language	Persentage
Pashto	%
Balochi	%
Urdu	%
Other (specify)_____	%
Other (specify)_____	%

Marginalized Groups

Number of mentally/physically challenged people in the settlement/colony _____

Number of widows in the settlement/colony: _____

Occupational and Income Profile

Approximate number of persons involved in income earning activities? Male_____ Female_____

Occupation	Share in employed population		Average Income (PKR) /Person/ Month	
	Male	Female	Male	Female
Govt. Jobs				
Private Jobs				
Agriculture				
Livestock				
Own Business				
Labor				
Others _____				
Others _____				

Average Household Income

Average monthly income (PKR) of the Household	Proportion of Households (%)
Less than 20,000*	
20,000 – 30,000	
30,000 – 50,000	
50,000 – 75,000	
More than 75,000	

*Approximate Poverty Line PKR 20,000 per month per HH with average HH size 6.6 (Per capita national poverty line per month is 3,030)

Livestock

Provide information on livestock rearing

Items	Total no. in settlement	No sold, bartered or consumed in last 12 months	Value per unit (PKR)
Bullock/Buffalo			
Cow			
Goat			
Sheep			
Donkey			
Horse			
Camel			
Poultry			
Other, specify below			

Educational Facilities

Access and Enrolment

Facility Level	Enrolment		Provider (Government, Private, NGO)	Distance if outside settlement	Location if outside settlement
	Male	Female			

Health Facilities

Facility	Provider (Government, Private, NGO, Other)	Distance if outside settlement	Location if outside settlement
Dispensary			
BHU			
Health Center			
Rural Health Center (RHC)			
Hospital			
Immunization (e.g. Polio drops)			
LHV/LHW			

Facility	Provider (Government, Private, NGO, Other)	Distance if outside settlement	Location if outside settlement
Trained Midwife (dai)			
Untrained Midwife (dai)			
Pharmacy			
Other			

Water Supply and Sanitation

Water Supply (tick all that apply)

☐ Public water supply (government/municipal) ☐ Well/s

☐ Spring/s ☐ Ground Water

☐ Other

Typical Sanitation (tick all that apply)

Pit Latrine ☐ Pit Latrine with Slabs ☐ Septic Tanks ☐ Open Latrine ☐

Municipal Sewage System ☐ Open Drains ☐

Others (please mention): _____

Fuel Sources and Consumption

Electricity _____ Fuel wood _____ Shurbs _____ LPG_____

Kerosene _____ Diesel_____ Other_____ Other _____

Infrastructure

Infrastructure	Access (Y/N)	Location if out of settlement
Electricity		
Telephone		
Mobile Phone Service		
Post Office		
Police Station		
Police Check post		
Blacktop Road		
Unsealed Road		
Regular Public Transport Service (Bus, Pick-up, Jeep, Car)		
Bank		
Market		

Migration Patterns

Out-migration:

Has any household migrated from the settlement in the last 7 years? Yes ☐ No ☐

If yes, how many: _____ Migrated to:_____

What is the purpose of out-migration?

_____

_____

_____

In-migration:

Has any household settled in the settlement during the last 7 years? Yes ☐ No ☐

If yes, how many:_____ Migrated from:_

What are the reasons for in-migration?

_____

_____

_____

Tangible Cultural Heritage

Are there any archaeological sites, shrines, graveyards, or other areas of cultural significance in the zone? If so, please specify location and significance:

1. _____
2. _____
3. _____
4. _____
5. _____

Needs Assessment

(In order of importance)

1. _____
2. _____
3. _____
4. _____
5. _____

D.3. Questionnaire for Impacts Monitoring

Direct, Indirect, and Induced Employment

How has your household income changed since the start of the project?

Increased ☐ Decreased ☐ Stayed the same ☐

How many members of your household are currently working in jobs connected to the project?

1 ☐ 2 ☐ 3 ☐ More ☐ None ☐

No	Name	Designation	Employed Since
1			
2			
3			
4			

By what percentage has your household income changed due to jobs connected to the project?

0% ☐ 0-25% ☐ 25-50% ☐ 50-75% ☐ 75-100% ☐

Are the employment opportunities from the project full-time, part-time, or seasonal?

Full-time ☐ Part-time ☐ Seasonal ☐

Have job opportunities increased due to the Project?

Yes ☐ No ☐

Can you describe your experience with job opportunities created by the project? How have these opportunities influenced your family's financial situation?

_____

_____

_____

_____

Skilled Human Capital and Knowledge Transfer

How many members of your household have attended a project-related training?

1 ☐ 2 ☐ 3 ☐ More ☐ None ☐

No	Name	Training Name	Date/Month
1			
2			
3			
4			

If you or any of your household members have attended a project-related training, how has the training provided by the project impacted your skills or those of your family members? Can you share a specific instance where this training led to a job or improved work performance?

_____

_____

_____

_____

Since attending the training, has there been a noticeable improvement in job opportunities for trained household members?

Yes ☐ No ☐ Not Applicable ☐

How confident do you feel that the skills learned can be used outside the project in other job opportunities?

Very Confident ☐ Somewhat Confident ☐ Not Confident ☐

Have any household members improved their skills in the following areas due to the project? (Select all that apply)

Technical Skills ☐ Management Skills ☐ Health Safety Skills ☐ Others ☐

_____

_____

_____

_____

Do you believe that the training provided is relevant to the job market outside the project?

Yes ☐ No ☐

Infrastructure, Health, and Education Improvements

How often does your household rely on project-supported health or education facilities?

Frequently ☐ Occasionally ☐ Never ☐

Are any children in the household enrolled in a project-supported school?

Yes ☐ No ☐

No	Name	Age	Grade
1			
2			
3			
4			

Do you feel the quality of education being provided in project-supported schools is adequate?

Yes ☐ Somewhat ☐ No ☐

How has access to education services changed for your household since the project began?

Improved ☐ Worsened ☐ No Change ☐

Have you or any of your household members visited a project-supported health facility in the past year?

Yes ☐ No ☐

Do you feel the quality of education being provided in project-supported schools is adequate?

Yes ☐ Somewhat ☐ No ☐

Have you noticed an improvement in road quality, healthcare, or schools since the project started?

Yes, noticeable improvements ☐

Yes, minor improvements ☐

No Improvements ☐

How has access to healthcare services changed for your household since the project began?

Improved ☐ Worsened ☐ No Change ☐

What is the most valuable improvement in community infrastructure for your household?

Roads ☐ Healthcare ☐ Schools ☐ Water Supply ☐ Other☐

_____

_____

_____

_____

In what specific ways have infrastructure improvements (like roads, schools, or healthcare facilities) from the project changed your daily routines or community life?

_____

_____

_____

_____

How have these changes influenced access to healthcare and education for you and your family? Can you share any personal stories or examples?

_____

_____

_____

Community Disputes and Social Unrest Related to Employment Distribution

Have you or your family members experienced any tension or disputes due to job allocation?

Yes ☐ No ☐

If yes, who was involved in the dispute?

Local community members ☐ Migrant Workers ☐ Project representatives ☐

How well do you think community concerns over employment are addressed by project representatives?

Very well ☐ Somewhat well ☐ Not well at all ☐

Do you believe that job opportunities are fairly distributed among community members?

Yes ☐ No ☐

Have you heard complaints from other community members about job distribution?

Yes ☐ No ☐

What do you believe are the root causes of these disputes?

_____

_____

_____

What specific challenges did you encounter while trying to secure a job with the project? Were there any particular barriers that made it difficult for you or others in your community?

_____

_____

_____

_____

Increased Population and In-migration Effects

Has there been any increase in the population of your community in the past year due to the project?

Yes ☐ No ☐

If yes, how has the influx of new residents affected social dynamics within your community? Have there been any positive or negative changes in community relationships?

_____

_____

_____

_____

If yes, why do you think the population has increased?

_____

_____

_____

Have you noticed a change in community resources (water, healthcare) availability since people started moving in?

Yes☐ No ☐

What specific impacts have you noticed in terms of resources (like housing, water, and services) due to in-migration? How has this affected daily life for long-term residents?

_____

_____

_____

Do you think the community has enough resources to accommodate the new residents?

Yes ☐ No ☐

How often do you interact with new residents who have moved here for project work?

Often ☐ Occasionally ☐ Rarely ☐ Never ☐

Substance Abuse and Social Risks

Have you observed any changes in public behavior in the community related to substance use since the project began?

Yes ☐ No ☐

Can you describe any specific incidents or trends you've noticed?

_____

_____

_____

How serious do you think the issue of substance abuse is for the community now?

Very Serious ☐ Somewhat Serious ☐ Not Serious ☐

Has anyone in your household or community received information or training on dealing with substance abuse risks?

Yes ☐ No ☐

Have you noticed an increase in discussions about substance abuse in community meetings or gatherings?

Yes ☐ No ☐

In your opinion, what factors contribute to substance abuse in your community? How do community members respond to these challenges?

_____

_____

_____

Negative Sentiments Over Inequalities

Do you feel that families directly involved in the project are doing better financially than others in the community?

Yes, much better ☐ Yes, slightly better ☐ No difference ☐

Do you feel that benefits from the project are distributed fairly among community members?

Yes ☐ No ☐

Can you provide examples that illustrate your perspective?

_____

_____

_____

How frequently do you hear about issues or complaints regarding project benefits?

Often ☐ Occasionally ☐ Rarely ☐ Never ☐

Do you believe that project benefits are accessible to everyone in the community?

Yes ☐ No ☐

Have you felt any personal impacts due to inequalities related to the project?

Yes ☐ No ☐

Have feelings of inequality impacted relationships within the community? Are there specific groups or individuals that feel more disadvantaged than others?

_____

_____

_____

_____

Increased Cost of Living

Has there been an increase in the cost of basic goods and food?

Yes ☐ No ☐

Do you think the change in prices is in line with inflation trends in other parts of Balochistan/Pakistan?

Yes ☐ No ☐

Have you had to change where you buy basic goods or food due to increased costs?

Yes, often ☐ Yes, sometimes ☐ No ☐

What type of expenses have increased the most for your household?

Food ☐ Healthcare ☐ Rent ☐ Other ☐

_____

_____

_____

Have you reduced spending on any essential goods due to increased costs?

Yes ☐ No ☐

How would you describe the overall financial impact of these increased costs on your family?

Very challenging ☐ Slightly challenging ☐ Not challenging ☐

How have rising costs (for food, housing, etc.) affected your household and the community as a whole? Can you share any strategies you or your neighbours have adopted to cope with these challenges?

_____

_____

_____

Air Quality and Environmental Health

How has air quality affected your family's health, if at all?

Improved ☐ Worsened ☐ No impact ☐

What specific concerns do you have regarding air quality in your area? Have you experienced or witnessed any health issues related to poor air quality?

_____

_____

_____

_____

Have you or your family members changed any daily habits due to concerns over air quality? (e.g., staying indoors more, wearing face masks)

Yes ☐ No ☐

Have you observed any impact on crops or animals in the community since the project began?

Yes, a noticeable impact ☐ Yes, minor impact ☐ No impact ☐

If air quality issues are present, what is the most noticeable cause?

Dust from roads ☐ Mining activity ☐ Machinery ☐ Other ☐

_____

_____

Appendix E
Human Rights Audit RDMC Employee Interview Form

Employee interviews

HIRING PROCESS

1. Were you hired directly by Reko Diq or by a recruitment agency/labour broker?

Response	Frequency	Comments
DIRECTLY BY REKO DIQ		
LABOUR BROKER/AGENCY		

2. If by a labour broker, did you have to pay any fees or did you receive any salary advances (Peshgis) from the recruiter?

Response	Frequency	Comments (If yes, indicate how much)
YES		
NO		

3. During job interviews did your employer ask age and marital status, religion, pregnancy status, health questions unrelated to the job?

Response	Frequency	Comments
AGE		
MARITAL STATUS		
RELIGION		
NON JOB RELATED HEALTH QUESTIONS		

4. Were all of your pre-employment medical exams related to fitness for work and were they taken with your consent? (e.g. no pregnancy exams unless requested by employee)

Response	Frequency	Comments (If No, explain).
YES		
NO		

5. Do you have a written employment contract?

Response	Frequency	Comments
YES		
NO		

6. Does the company retain any of your personal identity documents (e.g. national ID, passport)?

Response	Frequency	Comments (if Yes, indicate which and why)
YES		
NO		

GOVERNMENT MANDATED BENEFITS

7. Do you receive all your government mandated benefits (life insurance, medical, pension)?

Response	Frequency	Comments
LIFE INSURANCE		
MEDICAL BENEFITS		
PENSION		

FREEDOM OF MOVEMENT

8. Does the Company restrict your access to exits or lock doors preventing you from leaving buildings or the site?

Response	Frequency	Comments (If Yes or Sometimes, provide details)
YES		
NO		
SOMETIMES		

WORKING HOURS

9. What is the maximum number of hours you work in one week? (Should not exceed 48 hours, unless justified exceedance).

Response	Frequency	Comments

10. What are the maximum number of overtime hours you work in one week? (should not exceed 12 hours)

Response	Frequency	Comments

11. What rate are you paid for OT hours (regular and public holidays)? Should be 200% regular and 300% public olidays.

Response	Frequency	Comments

REST PERIODS

12. How many minutes/hours rest do you get during your workday? (Should be at least 1 hour after 6 hours of work).

Response	Frequency	Comments

13. How many days rest do you receive per week? (Should be at least one day of rest per week).

Response	Frequency	Comments

ANNUAL LEAVE

14. How many days annual leave are you entitled to receive per year? (Should be 14 days)

Response	Frequency	Comments

PARENTAL LEAVE

15. How many days maternity leave are you provided (for female employees)? (Should be up to 14 weeks)

Response	Frequency	Comments

16. How many days paternity leave are you provided (for male employees)? (Should be up to 7 days).

Response	Frequency	Comments

FREEEDOM OF ASSOCIATION AND COLLECTIVE BARGANING

17. Are employees free to form or join a union of their choice?

Response	Frequency	Comments
YES		
NO		

18. Do you know of an instance where the company prohibited, discriminated against, or intimidated union members, or representatives?

Response	Frequency	Comments (If YES, provide details)
YES		
NO		

HARASSMENT

19. Have you experienced or witnessed harassment in the workplace?

Response	Frequency	Comments (If YES, provide details if the person feels comfortable sharing)
YES		
NO		

DISCRIMINATION

20. Have you ever felt that someone in the company has discriminated against you for certain views, religion or other reason (gender, HIV/AIDS, age, sexual orientation, disability, nationality, ethnicity, race,)?

Response	Frequency	Comments (If YES, provide details if the person feels comfortable sharing)
YES		
NO		

ACCESS TO REMEDY

21. Do you know where you can raise complaints within the company about working conditions, harassment and discrimation?

Response	Frequency	Comments
YES		
NO		

22. Do you feel comfortable raising complaints within the company about working conditions, harassment and discrimation?

Response	Frequency	Comments
YES		
NO		

SAFETY

23. Does the company provide you with adequate PPE and train you how to use it?

Response	Frequency	Comments
YES		
NO		

SECURITY

24. Do private security personnel on site treat people fairly and with respect and dignity?

N

Response	Frequency	Comments (if No, provide details)
YES		
NO		

25. Do public security personnel contracted to the site treat people fairly and with respect and dignity?

Response	Frequency	Comments (if No, provide details)
YES		
NO		

Other comments?

Appendix F
Human Rights Audit Contractor Employee Interview Form

Employee interviews

HIRING PROCESS

1. Were you hired directly by Reko Diq or by a recruitment agency/labour broker?

Response	Frequency	Comments
DIRECTLY BY REKO DIQ		
LABOUR BROKER/AGENCY		

2. If by a labour broker, did you have to pay any fees or did you receive any salary advances (Peshgis) from the recruiter?

Response	Frequency	Comments (If yes, indicate how much)
YES		
NO		

3. During job interviews did your employer ask age and marital status, religion, pregnancy status, health questions unrelated to the job?

Response	Frequency	Comments
AGE		
MARITAL STATUS		
RELIGION		
NON JOB RELATED HEALTH QUESTIONS		

4. Were all of your pre-employment medical exams related to fitness for work and were they taken with your consent? (e.g. no pregnancy exams unless requested by employee)

Response	Frequency	Comments (If No, explain).
YES		
NO		

5. Do you have a written employment contract?

Response	Frequency	Comments
YES		
NO		

6. Does the company retain any of your personal identity documents (e.g. national ID, passport)?

Response	Frequency	Comments (if Yes, indicate which and why)
YES		
NO		

GOVERNMENT MANDATED BENEFITS

7. Do you receive all your government mandated benefits (life insurance, medical, pension)?

Response	Frequency	Comments
LIFE INSURANCE		
MEDICAL BENEFITS		
PENSION		

FREEDOM OF MOVEMENT

8. Does the Company restrict your access to exits or lock doors preventing you from leaving buildings or the site?

Response	Frequency	Comments (If Yes or Sometimes, provide details)
YES		
NO		
SOMETIMES		

WORKING HOURS

9. What is the maximum number of hours you work in one week? (Should not exceed 48 hours, unless justified exceedance).

Response	Frequency	Comments

10. What are the maximum number of overtime hours you work in one week? (should not exceed 12 hours)

Response	Frequency	Comments

11. What rate are you paid for OT hours (regular and public holidays)? Should be 200% regular and 300% public olidays.

Response	Frequency	Comments

REST PERIODS

12. How many minutes/hours rest do you get during your workday? (Should be at least 1 hour after 6 hours of work).

Response	Frequency	Comments

13. How many days rest do you receive per week? (Should be at least one day of rest per week).

Response	Frequency	Comments

ANNUAL LEAVE

14. How many days annual leave are you entitled to receive per year? (Should be 14 days)

Response	Frequency	Comments

PARENTAL LEAVE

15. How many days maternity leave are you provided (for female employees)? (Should be up to 14 weeks)

Response	Frequency	Comments

16. How many days paternity leave are you provided (for male employees)? (Should be up to 7 days).

Response	Frequency	Comments

FREEEDOM OF ASSOCIATION AND COLLECTIVE BARGANING

17. Are employees free to form or join a union of their choice?

Response	Frequency	Comments
YES		
NO		

18. Do you know of an instance where the company prohibited, discriminated against, or intimidated union members, or representatives?

Response	Frequency	Comments (If YES, provide details)
YES		
NO		

HARASSMENT

19. Have you experienced or witnessed harassment in the workplace?

Response	Frequency	Comments (If YES, provide details if the person feels comfortable sharing)
YES		
NO		

DISCRIMINATION

20. Have you ever felt that someone in the company has discriminated against you for certain views, religion or other reason (gender, HIV/AIDS, age, sexual orientation, disability, nationality, ethnicity, race,)?

Response	Frequency	Comments (If YES, provide details if the person feels comfortable sharing)
YES		
NO		

ACCESS TO REMEDY

21. Do you know where you can raise complaints within the company about working conditions, harassment and discrimation?

Response	Frequency	Comments
YES		
NO		

22. Do you feel comfortable raising complaints within the company about working conditions, harassment and discrimation?

Response	Frequency	Comments
YES		
NO		

SAFETY

23. Does the company provide you with adequate PPE and train you how to use it?

Response	Frequency	Comments
YES		
NO		

SECURITY

24. Do private security personnel on site treat people fairly and with respect and dignity?

N

Response	Frequency	Comments (if No, provide details)
YES		
NO		

25. Do public security personnel contracted to the site treat people fairly and with respect and dignity?

Response	Frequency	Comments (if No, provide details)
YES		
NO		

Other comments?

Appendix G
Human Rights Audit Community Member Interview Form

COMMUNITY INTERVIEW GUIDE

SOCIO-ECONOMIC AND CUTURAL RIGHTS

1. Does the site communicate with you in the local language in person and in writing (e.g. meetings, emails, communication materials)?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

2. Does the site engage/communicate with vulnerable people in your community (e.g. women, children, elderly, disabled, etc.) about the project's potential impacts on them?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

3. Have the following improved, worsened or remained the same since the project began?
    a. Housing

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

    b. Access to food

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

    c. Access to medical care

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

d. Access to education

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

e. Access to sacred sites or sites of cultural importance?

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

f. Access to employment?

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

4. Do you feel comfortable freely expressing your opinion about the Company/site without fear of retribution?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

RIGHT TO A CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

5. Does the site effectively communicate to the community its potential environmental impacts and how it is mitigating them?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

6. Have the following improved, worsened or remained the same since the project began?

a. Water quantity (for drinking, bathing, agriculture, etc.)

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

b. Water quality

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

c. Air quality

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

d. Noise and vibrations

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

e. Access to natural resources (waterways, forests, grazing land, minerals and fisheries)

Answer	Frequency (indicate number of responses)	Notes
IMPROVED		
WORSENED		
REMAINED THE SAME		

LAND RIGHTS

7. Does the Company/site obtain all necessary permissions before entering private lands?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

Resettlement (if applicable)

8. Do you believe you were adequately consulted during the resettlement process and that the process was fair and transparent?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

9. Is your standard of living better, worse or equal following resettlement?

Answer	Frequency (indicate number of responses)	Notes
BETTER		
WORSE		
EQUAL		

SECURITY

10. Do you believe private security personnel contracted to the site treat community members with respect and dignity?

Answer	Frequency (indicate number of responses)	Notes (explain if No or Sometimes)
YES		
NO		
SOMETIMES		

11. Do you believe public security personnel contracted to the site treat community members with respect and dignity?

Answer	Frequency (indicate number of responses)	Notes (explain if No or Sometimes)
YES		
NO		
SOMETIMES		

12. Have public security ever used excessive force when managing protests or security incidents related to the mine site?

Answer	Frequency (indicate number of responses)	Notes (explain if Yes or Sometimes)
YES		
NO		
SOMETIMES		

13. Are community members free to peacefully protest against the site without fear of retribution or punishment?

Answer	Frequency (indicate number of responses)	Notes (explain if No or Sometimes)
YES		
NO		
SOMETIMES		

14. Has the level of conflict in the community or between communities increased, decreased or remained the same since the project began (can specify date)?

Answer	Frequency (indicate number of responses)	Notes (If increased, note the cause of the conflict)
INCREASED		
DECREASED		
REMAINED THE SAME		

ETHICS

15. Are you aware of any unethical or corrupt practice by company employees or its contractors? (

Answer	Frequency (indicate number of responses)	Notes (if yes, provide examples)
YES		
NO		

ACCESS TO REMEDY

16. Are you aware of the Company's grievance mechanism/process, and if so, do you have access to it? (e.g. if you had a complaint about the Company/site do you know where to go?)

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		

17. Do you feel comfortable using the grievance mechanism/process and trust it will effectively address your complaints?

Answer	Frequency (indicate number of responses)	Notes
YES		
NO		
SOMETIMES		

Document No.:	6105A0000-0000-JA12-0003	Rev:	0
Document Title:	Noise and Vibrations Monitoring Program		
Issue Date:	2025-01-21		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		Rev:	0

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2025-01-29		Vaqar Zakaria	Tanzeel khan	Ashley Price
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1. PURPOSE

This plan establishes the management and monitoring requirements to ensure that the impact of Project activities on noise levels and vibrations do not adversely affect the onsite workers and/or nearby sensitive receptors.

RDMC is responsible for monitoring to ensure that the management measures of this plan are implemented by the contractor/s and their sub-contractor/s.

1.1 Applicability and Objectives

This plan is applicable to construction and operations phases of the Project. Key objectives of this plan include the following:

1. To reduce the impacts of elevated noise levels on workers and community health;
2. To avoid damages to public and Project infrastructure due to vibrations generated from blasting activities;
3. To ensure Project compliance with the applicable reference framework listed in Section 2.3.

1.2 Relevant Legal and Regulatory Requirements, Standards and Good International Industry Practice

Key applicable laws and regulations, including regulatory standards, as well as Good International Industry Practices (GIIP) that the RDMC and its contractor/s and sub-contractor/s will follow are discussed in this section. The relevant legislations, standards, and GIIP are considered as baseline reference frameworks. Any changes in the regulatory requirements are subject to revision in the Noise and Vibrations Monitoring and Management Plan according to the reviews and updates frequency provided in Section 3.1.

The Project components are located within Sindh and Balochistan provinces of Pakistan. Therefore, each component shall ensure compliance with their respective provincial Environmental and Social (E&S) legislations and standards. If the provincial legislations are in draft phase, or their formal notification is awaited at any time during implementation, or the respective provincial E&S legislations do not provide coverage of an area/aspect/risk, the corresponding national E&S legislation shall be considered applicable to the relevant component of the Project.

The RDMC, its contractor/s, and sub-contractor/s shall follow international standards and/or guidelines for risk areas which lack coverage in both provincial and national legislations. Additionally, compliance with the Performance Standards published by International Finance Corporation on top of national/provincial legislations shall be ensured.

1.2.1 International Finance Corporation

In addition to the national and provincial legislations and standards, RDMC shall also ensure compliance with the IFC Performance Standards (PS), as well as general and sectoral guidelines. Key applicable IFC PS and Guidelines:

1.2.2 IFC Environmental, Health, and Safety Guidelines for Mining, 2007

IFC Environmental, Health, and Safety Guidelines for Mining, 2007 (the 'EHS Guidelines for Mining, 2007') are sector specific guidelines applicable to construction, operations, and decommissioning of Projects in the mining sector. These guidelines prescribe a management approach along with key mitigation measures to avoid/reduce impact of mining activities on the workers and sensitive receptors.

1.2.3 United States Federal Railroad Administration – 49 CFR 201.12 (b)

The provincial or national E&S legislative framework of Pakistan does not provide standards and guidelines for assessing compliance of noise levels generated during a train pass-by event. Therefore, US FRA's regulations shall be taken as reference for assessing compliance of train noise levels. Other management measures provided in this CFR shall be taken as reference, as deemed necessary, in the absence of mitigations provided in applicable provincial and national E&S legislation.

The relevant standards are listed in Table 1.

The NEQs will be applicable to the Project components in Balochistan:

1. Reko Diq Mine Site;
2. Rail Transport Route from Reko Diq Mine Site till Dera Murad Jamali.

The SEQs will be applicable to the rail transport route from Jacobabad to Port Qasim.

Table 1: Applicable Noise Standards

Category	SEQS 2016 (dBA)		BEQS 2020 (dBA)		NEQS 2010 (dBA)		IFC Guideline Value 2007 (dBA)	
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime
Residential Area	55	45	55	45	55	45	55	45
Commercial Area	65	55	65	55	65	55	70	70
Industrial Area	75	65	75	65	75	65	70	70
Silence Zone	50	45	50	45	50	45	-	-

2. RESPONSIBILITIES

2.1 Project Director

Project Director is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.
- Ensuring adequate resources are provided for the implementation of this procedure.

2.2 RDMC Head of Sustainability

The RDMC Head of Sustainability is responsible for:

- Ensuring the currency, relevancy and accuracy of content contained within this procedure

- To oversee the implementation of this Noise and Vibrations Monitoring Program
- Review and ensure submission of the environmental monitoring reports to Balochistan and Sindh EPAs.
- Review the updates of Noise and Vibrations Monitoring Program and provide technical guidance to the Environment Department to fill gaps and unaddressed areas.

2.3 Environment Department

The Environment Department is responsible at applicable levels for:

- Ensures the implementation of this Noise and Vibrations Monitoring Program
- Review and submit the environmental monitoring reports to Balochistan and Sindh EPAs
- Coordinate with the associated departments to close any non-compliances or concerns raised by the EPAs
- Present the findings of monitoring to the management committee during management review meetings
- Review the updates of Noise and Vibrations Monitoring Program and provide technical guidance to the associated departments to fill gaps and unaddressed areas.
- Conduct frequent site inspections and ensure that the ongoing activities are aligned with the management and mitigation measures provided in Section 5.
- Conduct noise levels and vibrations monitoring to assess compliance of project emissions with applicable limits.
- Compile the findings of monitoring activities in the form of monthly/quarterly reports and submit these reports to management
- Coordinate with the Community Relation department and address concerns raised by the community members related to noise levels and vibrations.
- Train the onsite staff in management measures including RDMC's employees and workers, and contractors and their sub-contractors.
- Review and update the Noise and Vibrations Monitoring Program in line with local E&S legislations, following the findings of audits and non-compliances recorded.

2.4 Site / Construction Manager

The Site / Construction Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.
- Ensuring training is provided to improve awareness of environmental issues and responsibilities.
- Incorporating the requirements of this procedure in project planning.
- Ensuring project operations are performed in accordance with legal and other requirements; and

- Reviewing the effectiveness of the system for continual improvement.

2.5 Line Functions

Departmental Managers / Leads / Supervisors are responsible for:

- Ensuring implementation of this procedure in their respective areas.
- Implementation of actions generated from the audits.
- Informing environment department in case any non-compliance is observed

2.6 All Employees, Contractors, and Visitors

All employees and contractors are responsible for adhering to the requirements contained within this procedure and reporting incidents, and non-conformances

3. DEFINITIONS AND ABBREVIATIONS

The followings are definitions and abbreviations used in the Associated Documents:

Abbreviations	Definitions
Noise	A sound especially one that is loud or unpleasant or that causes disturbance
Nuisance	A person or thing causing inconvenience or annoyance
dBA	dB stands for decibel and is a unit of sound measurement. This unit measures the loudness of a sound or the strength of a signal, computed as the signal to noise ratio.
SEPA	Sindh Environmental Protection Agency
BEPA	Balochistan Environmental Protection Agency
Pakistan Environmental Protection Act, 1997	The Pakistan Environmental Protection Act (PEPA) of 1997 is a comprehensive legal framework designed to address environmental protection and management in Pakistan

4. Baseline Overview

4.1 Reko Diq Mine Site

The construction and operations phase of the Reko Diq Mine Site will involve operations of different types of equipment. Noise generated from this equipment depend on the equipment condition, their acoustic usage number, and the distance of equipment from the receptors. The subsequent subsections provide the anticipated noise levels during construction and operations phase of the Reko Diq Mine Site and associated mitigation and control measures to avoid and/or reduce resultant noise levels at the sensitive receptors.

Acoustic usage refers to the duration for which an equipment remains operational throughout the day. 50% acoustic usage factor refers to equipment usage for 12 hours in a day

4.2 Construction Phase

The noise generated from the construction phase equipment is estimated to be ~ 122.7 dBA at 15 m from the construction site. Following the reverse attenuation approach, the noise levels at the nearby sensitive receptors are provided in ***Table 1.***

Table 2: Resultant Daytime and Noise Levels (dBA) at Nearest Receptor Without Mitigation

Location	Baseline Noise (dBA)	Resultant Ambient Noise (dBA)	NEQS	Increase (dBA)	Interpretation
Onsite Accommodation Camp – Day	82	82.14	55	0.14	Not perceptible
Onsite Accommodation Camp – Night	81	81.18	45	0.18	Not perceptible
Humai – Day	82	82.02	55	0.02	Not perceptible
Humai – Night	81	81.02	45	0.02	Not perceptible

The noise levels depicted in ***Table 2*** indicate a maximum increase of 0.18 dBA over the baseline at onsite accommodation camp. Considering that the change in daytime or nighttime noise levels is relatively low due to elevated baseline noise levels, RDMC shall ensure implementation of the following good practice measures in support from the contractors and sub-contractors engaged at Reko Diq Mine Site:

Ensure regular maintenance of noise producing units to reduce noise levels to the extent possible.

- Installation of noise abatement devices such as mufflers and silencers shall be considered to reduce noise at the source.
- Prioritize use of new equipment and vehicles over older equipment to ensure that the noise levels do not exceed the prescribed limits at reference distances.

4.3 Operations Phase

The noise generated from mining equipment and vehicles is ~136 dBA at 15 m distance from the equipment. The elevated noise levels due to Project operations will be barely perceptible at the onsite accommodation camp and are not anticipated to be perceptible at the Humai settlement. RDMC shall ensure implementation of the following good practice measures in support from the contractor/s and sub-contractor/s engaged at Reko Diq Mine Site:

- Visual alarms shall be used in preference to audible alarms where appropriate.
- Acoustical enclosures shall be provided around noise producing equipment where appropriate.

  The Environment Department of the RDMC shall be responsible for implementing an adequate monitoring program to ensure the efficacy of the mitigation measures.

4.4 Blasting and Drilling

The impulse noise is estimated to be 140 dBA at a distance of ~4,490 m from the blasting site. This distance is estimated as a worst-case scenario for the blasting during mine stripping when the blasting will be carried out close to the ground surface. After completion of the mine stripping through removal of overburden, the mining estimated depth of blasting will be ~100 m during start of operations phase. The corresponding noise levels during blasting at such depth will be 170 dBA, leading to the impulse noise of 140 dBA (blasting limit) at a distance of ~3,000 m. These noise levels will get exponentially lower as the depth of the open-pit increases.

4.5 Movement of Additional Railway Traffic

The railway movement will be intermittent throughout the day, with the addition of 20 trains to the baseline train traffic. Although noise levels during Project train pass-by events will remain within applicable limits of 93 dBA, the RDMC shall conduct continuous noise monitoring for a weekday and weekend during peak operations to assess on-ground noise levels and their impact on receptors.

This noise monitoring will be conducted in areas where an increment of more than 3 dBA over the baseline noise levels is anticipated. Additional noise monitoring shall be conducted in case of grievances from the receptors.

In case of any exceedance of more than 3 dBA over the baseline daytime or night-time noise levels or in the event of a grievance, RDMC shall collaborate with Pakistan Railways to implement adequate mitigation or control measures, as deemed appropriate, in areas where the impacts on receptors due to increase in noise levels is attributed to the RDMC's railway traffic.

4.6 Movement of Additional Road Traffic

Increased vehicular movement on roads can cause elevated noise levels due to noise from engines and use of horns. The Project's contribution to the existing traffic levels is less than 1%. Therefore, the Project's contribution to elevated noise levels due to vehicular movement will be very low. As a good practice, RDMC shall ensure implementation of the following mitigation measures:

- The Project vehicles shall be regularly maintained according to the manufacturer's specifications.
- Policies to prohibit use of horns (except in emergency situations) shall be implemented in areas where human dwellings or receptors are close to the Road Transport Route.
- Vehicular movement shall be minimized during peak congestion hours to reduce contribution in elevated noise levels.

Compliance with the regional speed limits shall be ensured at all times.

5. NOISE AND VIBRATIONS MONITORING PROGRAM

This section provides detailed mitigation measures for management of elevated noise levels and vibrations due to Project construction, operations, and decommissioning activities. The aspects for management have been taken through the impact assessment carried out as part of the Environmental and Social Impact Assessment (ESIA) of the Reko Diq Mining Project**.**

This plan is relevant only to noise and vibration as it pertains to risks of impact to social receptors, primarily communities. Occupational health and safety aspects relating to noise and vibration are addressed through separate plans and procedures maintained as part of the Health and Safety Management System.

5.1 Noise Levels Management

Project related activities can cause elevated noise levels. Depending on the equipment used and its distance from receptors, the receptors may be exposed to intermittent and variable noise levels. A change in sound level of 3 dB is a just noticeable difference, a change of 5 dB is clearly noticeable, and a change of 10 dB is perceived as a doubling or halving of sound level. According to the Environmental and Social Impact Assessment of Reko Diq Mining Project, the following impacts are anticipated throughout the Project lifecycle:

- Noise generated from construction and operation of the Reko Diq Mine Site
- Nuisance to receptors due to impulse noise generated from blasting
- Adverse impacts on the workers' health due to continuous exposure to loud noise (see note above)
- Elevated noise levels due to movement of additional rail traffic
- Elevated noise levels due to road transportation.

The subsequent subsections provide detailed management and mitigation measures for managing impacts of elevated noise levels. RDMC in support from their contractors and sub-contractors shall ensure that these management and mitigation measures have been implemented to avoid Project-related impacts on the ambient noise levels.

5.1.1 Noise Monitoring Methods to be Employed

5.1.2 Equipment set up

- Select and calibrate a compliant sound level meter (SLM).
- Position the SLM at 1.2-1.5m above ground, away from obstructions and 7.5 meters away from the source.

5.1.3 Measurements

- Continuous Monitoring Method: This involves using a sound level meter to record noise levels over an extended period (e.g., 24 hours). The meter captures real-time data, providing average (Leq), maximum (Lmax), and minimum (Lmin) sound

levels. This method is ideal for assessing noise exposure trends and identifying peak noise periods.

- Instantaneous Measurement Method: This entails taking spot measurements at specific times and locations using the sound level meter.

5.1.4 Record Data

Date, time, location, weather, source type, SLM settings for each measurement will be recorded. Data will be compiled and compared against the baseline and earlier monitoring data.

Figure 1: Sound level meter (testo 816-1)

5.2 Vibrations Management

The nearest human dwelling is at ~20 km from the pit area blasting will be carried out. An initial assessment as part of the Environmental and Social Impact Assessment of Reko Diq Mining Project revealed that the likelihood of vibration waves impacting the Humai settlement is very low, since most of the pressure waves will be attenuated well before reaching any settlement. Therefore, implementation of mitigation measures is not needed.

RDMC shall ensure that the community members are familiar with the Grievance Redress Mechanism. In case of any vibrations-related grievances, the Environment Department of the RDMC shall review and assess the vibrations due to Project activities.

5.3 Environmental Noise Monitoring Plan

Environment Department shall conduct monitoring compliance of noise levels at identified locations at different times of the day.

- The monitoring reports shall be the part of Environment Monitoring report submitted to BEPA and SEPA as per requirement of Environmental Permit/ NOC
- Compliance shall be monitored against values defined in the Environment Quality Standards (BEQS and SEQS).

The Environment Department of the RDMC shall be responsible for implementing an adequate monitoring program to ensure the efficacy of the mitigation measures.

Table 3: Environmental Monitoring Plan – Noise

Aspect	Type of Monitoring	Monitoring Location	Monitoring Frequency
Construction			
Elevated daytime and night-time noise levels	Continuous 24-hours noise levels monitoring	▪ Onsite Accommodation Camp ▪ Humai settlement	▪ Monthly. ▪ Additional monitoring in case of any grievance.
Vehicular noise	Instantaneous noise monitoring of construction phase vehicles	Construction areas	▪ Quarterly ▪ Additional monitoring in case of any grievances.
Operations			
Noise levels during blasting	Short-term noise monitoring to capture impulse noise during blasting.	▪ Onsite Accommodation Camp ▪ Humai settlement	During blasting events
Elevated daytime and night-time noise levels	Continuous 24-hours noise levels monitoring	▪ Onsite Accommodation Camp ▪ Humai settlement	▪ Monthly ▪ Additional monitoring in case of any grievance
Elevated noise levels in operational areas	Continuous 8-hour monitoring in operational areas including mineral processing plant, open-pit, and HFO power plant.	Operational areas	Monthly
Noise levels during train pass-by	Noise monitoring during train pass-by at 30 m distance from the centre of the railway track. This monitoring will be conducted in sections where sensitive receptors are located close to the railway track.	Rail Transport Route between Sibi and the Reko Diq Mine site	Quarterly, at receptors situated within 100 m of the Rail Transport Route during pass-by events
Elevated daytime and night-time noise levels	Continuous 24-hours monitoring at the nearest receptor from the railway track.	Rail Transport Route between Sibi and the Reko Diq Mine site	▪ Quarterly, can only be done on days where train pass-by occurs ▪ Additional monitoring in case of any grievance

6. Review

An annual review of this plan shall be carried out by the Environment Department. This plan shall also be reviewed and updated upon completion of the construction and operations phase, or in the event of changes in the E&S legislation, or Lender requirements. This plan shall also be reviewed based on the findings of internal or external monitoring audits.

7. GRIEVANCE REDRESS

Community grievances will be managed according to the RDMC Grievance Process detailed in the Stakeholder Engagement Plan and associated Procedures

8. TRAINING & AWARENESS

Environment department along with OHS Training department shall conduct trainings and awareness sessions for all RDMC employee contractor personnel as and when required.

9. ASSOCIATED DOCUMENTS AND REFRENCES

This Noise and Vibrations Monitoring and Management Plan shall be reviewed in conjunction with the following documentation:

- Reko Diq Mining Project: Environmental and Social Impact Assessment
- Environmental Approval from Balochistan Environmental Protection Agency
- E&S Policy and Management System of Reko Diq Mining Company
- National Environmental Quality Standards for Ambient Air, Drinking Water and Noise
- National Environmental Quality Standards for Motor Vehicle Exhaust and Noise

Document No.:	6105A0000-0000-JA12-0004	Rev:	0
Document Title:	Air Quality Monitoring Program		
Issue Date:	2025-01-21		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		Rev:	0

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2025-01-29		Vaqar Zakaria	Tanzeel khan	Ashley Price
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1. PURPOSE

The Air Quality Monitoring Program is established for Reko Diq Mining Company (RDMC). This plan establishes the management and monitoring requirements to ensure that the impact of Project activities on air quality do not adversely affect the onsite workers and/or nearby sensitive receptors.

Air quality monitoring refers to the monitoring of ambient air quality. The purpose of this purpose to provide guidance, so that an effective Air Quality Monitoring Program can be implemented.

RDMC shall be responsible for monitoring to ensure that the management measures of this Procedure are implemented by the contractor/s and their sub-contractor/s.

1.1 Applicability and Objectives

This plan is applicable to construction, operations, and decommissioning phases of Reko Diq Mine Site and its supporting infrastructure including Road Transport Route, Rail Transport Route, and Port Qasim.

Key objectives of this plan include the following:

- To avoid/reduce the exposure of workers and sensitive receptors to elevated pollutant concentrations due to Project activities
- The Air Quality Monitoring and Management Plan also aims to ensure Project compliance with the applicable reference framework listed in ***Section 1.3.***

1.2 Relevant Legal and Regulatory Requirements, Standards and Good International Industry Practice

Key applicable laws and regulations, including regulatory standards, as well as Good International Industry Practices (GIIP) that the RDMC and its contractor/s and sub-contractor/s will follow are discussed in this section. The relevant legislations, standards, and GIIP are considered as baseline reference frameworks. Any changes in the regulatory requirements are subject to revision in the Air Quality Monitoring Program according to the reviews and updates frequency provided in ***Section 3.1.***

The Project components are located within Sindh and Balochistan provinces of Pakistan. Therefore, each component shall measure against their respective provincial Environmental and Social (E&S) legislations and standards. If the provincial legislations are in draft phase, or their formal notification is awaited at any time during implementation, or the respective provincial E&S legislations do not provide coverage of an area/aspect/risk, the corresponding national E&S legislation shall be considered applicable to the relevant component of the Project.

The RDMC, its contractor/s, and sub-contractor/s shall follow international standards and/or guidelines for risk areas which lack coverage in both provincial and national legislations. Additionally, the Project will assess monitoring data against the IFC Performance Standards.

1.2.1 Balochistan Environmental Protection Act, 2012

The Balochistan Environmental Protection Act, 2012 (the ‘BEPA Act, 2012’) is the overarching environmental legislation in the Balochistan province with prohibits emissions and discharges exceeding the limits prescribed in National Environmental Quality Standards, 2000 (or ‘NEQS’). Any project located within the provincial jurisdiction of Balochistan is legally mandated to ensure compliance with the NEQS.

Any additional facility or component other than those listed in the aforementioned list which are located within the Balochistan province shall also ensure compliance with the requirements set forth in BEPA Act, 2012.

1.2.2 International Finance Corporation

In addition to the national and provincial legislations and standards, RDMC shall also ensure compliance with the IFC Performance Standards (PS), as well as general and sectoral guidelines. Key applicable IFC PS and Guidelines are discussed in subsequent sub-sections.

Table 1 present the Ambient Air Quality Limits Prescribed in the SEQS, BEQS, NEQS, and IFC General EHS Guidelines.

1.2.2.1 IFC Performance Standard 3 – Resource Efficiency and Pollution Prevention

IFC PS 3 aims to avoid/reduce the release of pollutants to the extent feasible, as well as minimize and/or control the intensity and mass flow of their release. IFC PS 3 is applicable to the release of pollutants to air, water, and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts.

1.2.2.2 IFC General Environmental, Health, and Safety Guidelines, 2007

The IFC General Environmental, Health, and Safety (EHS) Guidelines, 2007 (the 'EHS Guidelines, 2007') provide the guidelines for management of release of pollutants to the environment. The EHS Guidelines, 2007 also prescribe ambient limits for air quality, water quality, and soil quality.

1.2.2.3 IFC Environmental, Health, and Safety Guidelines for Mining, 2007

IFC Environmental, Health, and Safety Guidelines for Mining, 2007 (the 'EHS Guidelines for Mining, 2007') are sector specific guidelines applicable to construction, operations, and decommissioning of Projects in the mining sector. These guidelines prescribe a management approach along with key mitigation measures to avoid/reduce impact of mining activities on the workers and sensitive receptors.

1.2.2.4 Applicable Limits

Table 1 present the Ambient Air Quality Limits Prescribed in the SEQS, BEQS, NEQS, and IFC General EHS Guidelines. Table 2 presents the limits Industrial Gaseous Emissions Prescribed in the SEQS, BEQS, and NEQS.

Table 1: Ambient Air Quality Limits Prescribed in the SEQS, BEQS, NEQS, and IFC General EHS Guidelines

Pollutants	Units	Time-weighted Average	SEQS 2016	IFC Interim Target-1 2007	IFC Guideline Value 2007	BEQS 2020	NEQS 2010
Sulphur Dioxide (SO_2)	µg/m^3	Annual Average	80	–	–	80	80
		24 hours	120	125	20	120	120
		10 minutes			500		
Oxide of Nitrogen as Nitric Oxide (NO)	µg/m^3	Annual Average	40	–	–	40	40
		24 hours	40	–	–	40	40
Oxide of Nitrogen as Nitrogen Dioxide (NO_2)	µg/m^3	Annual Average	40	–	40	40	40
		24 hours	80	–	–	80	80
		1 hours			200		
Ozone (O_3)	µg/m^3	8 hours		160	100		
		1 hour	130	–	–	130	180
Suspended Particulate Matter (SPM)	µg/m^3	Annual Average	360	–	–	360	400
		24 hours	500	–	–	500	550
Respirable particulate Matter PM_{10}	µg/m^3	Annual Average	120	70	20	120	200
		24 hours	150	150	50	150	250
Respirable Particulate Matter $PM_{2.5}$	µg/m^3	Annual Average	40	35	10	15	25
		24 hours	75	75	25	35	40

Pollutants	Units	Time-weighted Average	SEQS 2016	IFC Interim Target-1 2007	IFC Guideline Value 2007	BEQS 2020	NEQS 2010
Lead (Pb)	µg/m^3	Annual Average	1	–	–	1	1.5
		24 hours	1.5	–	–	1.5	2
Carbon Monoxide (CO)	mg/m^3	8 hours	5	–	–	5	5
		1 hour	10	–	–	10	10

Table 2: Limits Industrial Gaseous Emissions Prescribed in the SEQS, BEQS, and NEQS (mg/Nm3, unless otherwise defined)

No.	Parameter	Source of Emission	SEQS 2016	BEQS 2020	NEQS 2010
1.	Smoke	Smoke opacity not to exceed	40% or 2 on Ringelmann Scale or equivalent smoke number	40% or 2 on Ringelmann Scale or equivalent smoke number	40% or 2 on Ringelmann Scale or equivalent smoke number
2.	Particulate Matter[1]	a) Boilers and furnaces			
		i) Oil-fired	300	300	300
		ii) Coal-fired	500	500	500
		iii) Cement kilns	300	300	300
		(b) Grinding, crushing, clinker coolers and related processes, metallurgical processes, converters, blast furnaces and cupolas	500	500	500
3.	Hydrogen chloride	Any	400	400	400
4.	Chlorine	Any	150	150	150
5.	Hydrogen fluoride	Any	150	150	150

No.	Parameter	Source of Emission	SEQS 2016	BEQS 2020	NEQS 2010
6.	Hydrogen sulphide	Any	10	10	10
7.	Sulphur oxides[2, 3]	(a) Sulfuric acid/sulfonic acid plants	-	5,000	-
		(b) Other plants except power plants operating on oil and coal	1,700	1,700	1,700
8.	Carbon monoxide	Any	800	800	800
9.	Lead	Any	50	50	50
10.	Mercury	Any	10	10	10
11.	Cadmium	Any	20	20	20
12.	Arsenic	Any	20	20	20
13.	Copper	Any	50	50	50
14.	Antimony	Any	20	20	20
15.	Zinc	Any	200	200	200
16.	Oxides of nitrogen[3]	(a) Nitric acid manufacturing unit	3,000	3,000	3,000
		(b) Other plants except power plants operating on oil or coal:		-	-
		Gas-fired	400	400	400
		Oil-fired	600	600	600
		Coal-fired	1,200	1,200	1,200

Notes:

1. Based on the assumption that the size of the particulate is 10 microns or more.
2. Based on 1 percent sulphur content in fuel oil. Higher content of sulphur will cause standards to be pro-rated.

2. RESPONSIBILITIES

2.1 Project Director/General Manager

Project Director is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.

2.2 RDMC Head of Sustainability

The RDMC Head of Sustainability is responsible for:

- Ensuring the currency, relevancy and accuracy of content contained within this procedure.
- Overseeing the implementation of this Air Quality Monitoring Program;
- Review and ensure submission of the environmental monitoring reports to the Balochistan EPAs;
- Review the updates of Air Quality Monitoring Program and provide technical guidance to the Environment Department to fill gaps and unaddressed areas.

2.3 Environment Department

The Environment Department is responsible at applicable levels for:

- Ensures the implementation of this Air Quality Monitoring Program;
- Review and submit the environmental monitoring reports to Balochistan and Sindh EPAs;
- Coordinate with the associated departments to close any non-compliances or concerns raised by the Balochistan EPA;
- Review updates to the Air Quality Monitoring Program and provide technical guidance to the associated departments to fill gaps and unaddressed areas;
- Conduct frequent site inspections and ensure that the ongoing activities are aligned with the management and mitigation measures provided in ***Section 4;***
- Conduct air quality monitoring to assess compliance of project emissions with applicable limits;
- Compile the findings of monitoring activities in the form of monthly/quarterly reports and submit these reports to management;
- Coordinate with the Community Relation department and address concerns raised by the community members related to air quality;
- Train the onsite staff on management measures including RDMC's employees and workers, and contractors and their sub-contractors;
- Review and update the Air Quality Monitoring Program in line with local E&S legislations, following the findings of audits and non-compliances recorded.

2.4 Site / Construction Manager

The Site / Construction Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure;
- Ensuring training is provided to improve awareness of environmental issues and responsibilities;
- Incorporating the requirements of this procedure in project planning.
- Ensuring project operations are performed in accordance with legal and other requirements; and
- Reviewing the effectiveness of the system for continual improvement.

2.5 Line Functions

Departmental Managers / Leads / Supervisors are responsible for:

- Ensuring implementation of this procedure in their respective areas.
- Implementation of actions generated from the audits.
- Informing environment department in case any non-compliance is observed

2.6 All Employees, Contractors and Visitors

All employees and contractors are responsible for adhering to the requirements contained within this procedure and reporting incidents, and non-conformances.

3. DEFINITIONS AND ABBREVIATIONS

The followings are definitions and abbreviations used in the procedure.

Abbreviations	Definitions
Ambient Air	Ambient air means that portion of the atmosphere outside buildings or other enclosed structures, stacks, or ducts; and that surrounds human, animal or plant life, or property.
Particulate Matter	This term is used for a mixture of solid particles and liquid droplets found in the air. Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye. Others are so small they can only be detected using an electron microscope.
SPM	Suspended particulate matter (SPM) are finely divided solids or liquids that are dispersed through the air via a combustion process, industrial activities or natural processes.
PM10	These are inhalable particles, with diameters that are generally 10 micrometers and smaller.
PM2.5	These fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller
SEPA	Sindh Environmental Protection Agency
BEPA	Balochistan Environmental Protection Agency
Pakistan Environmental Protection Act, 1997,	The Pakistan Environmental Protection Act (PEPA) of 1997 is a comprehensive legal framework designed to address environmental protection and management in Pakistan

4. AIR QUALITY MONITORING PROGRAM

This section provides detailed mitigation measures for management of air emissions due to Project construction, operations, and decommissioning activities. The aspects for management have been taken through the impact assessment carried out as part of the Environmental and Social Impact Assessment (ESIA) of the Reko Diq Mining Project.

4.1 Air Quality Management

Project construction, operations and decommissioning activities can potentially increase the ambient concentrations of pollutant concentrations due to several activities and emission sources. Prolonged exposures to elevated pollutant concentrations have the potential to adversely affect the health of workers engaged onsite and the nearby community residents.

The subsequent subsections provide detailed management and mitigation measures. RDMC, in support from their contractors and subcontractors shall ensure that management and mitigation measures identified in the ESIA have been implemented to minimise Project-related impacts on the air quality of the region.

The construction and operations phase of the Project can cause elevated concentration of particulate matter (SPM, PM10 and PM2.5), Sulphur dioxide (SO2), oxides of nitrogen (NO, NOx) Ozone (O3) Lead (Pb) and Carbon Monoxide (CO) at the nearby sensitive receptors including the onsite accommodation camp and Humai settlement.

The following impact mitigation measures will be implemented:

- Progressive closure of the cleaner cells of the TSF to prevent dust generation and release of other pollutants from the impoundment;
- Installation of windrows along haul and other roads, and at other traffic locations such as laydown yards to minimise wind erosion;
- Enforcement of speed limits along all site roads as per the Traffic Management Plan (DA12-0001);
- Regular maintenance of vehicles as per manufacturers specifications to ensure that the exhaust emissions do not exceed the prescribed limits;
- Use of respiratory masks and other appropriate PPE – and ensure PPE is readily available as per the Personal Protective Equipment Procedure (HA05-0030);
- Continual monitoring of air quality as per the monitoring program outlined below;
- Install and regularly clean/maintain filtration on air-conditioning units at accommodation and other buildings;
- Maintain window and door seals in accommodation rooms.

5. MONITORING, REPORTING AUDITING AND REVIEW

5.1 Monitoring

The monitoring program is detailed in the following sections and summarised in Table 3.

5.1.1 Fugitive dust emissions (Particulate matter monitoring)

Particulate matter (PM1, PM2.5, and PM10) is monitored continuously utilising Airlink Air Quality sensors installed in the existing RDMC and new accommodation camps and Humai village.

5.1.2 Gaseous Emission (NOx, SOx, CO, and H2S)

Gaseous Emissions (NO_x, SO_x, CO, and H2S) will be monitored at the existing and new RDMC accommodation camps and at Humai village.

5.1.3 Exhaust Emissions from Small Generators and Vehicles

The testing of exhaust emissions from small generators and vehicles will be conducted on a quarterly basis by the equipment maintenance teams to ensure adherence to the NEQS using a specialized flue gas analyzer.

5.1.4 Power Station Exhaust Emissions

Power station emissions will be recorded using US EPA test methods.

5.1.5 Dust Fallout Monitoring

In general, selected locations where monitoring is to be conducted, such should be devoid of any obstacles i.e. not at pollution sources or sources, away from trees and not too close to the roof of houses. The sampling is conducted at a location with minimal anthropogenic interference.

The American Standard Test Method ASTM 1739-98 making use of a single bucket container to capture dust fallout by gravitational settling is applicable. The sampling apparatus comprises a passive dust collector, a vertical pole supporting a 5-litre customized bucket, and a surface area of 176.7 cm^2, positioned with the top 2 m above ground. The exposure period of 30±2 days is specified. Dust fallout monitoring will be conducted at the locations presented in Figure 1.

5.1.5.1 Site Installation

- Take the GPS coordinates of each point where the monitoring unit is located.
- Give a detailed description of the surroundings i.e. activities in the area etc. Site the unit away from buildings and trees to avoid interference with the amount of dust that reaches the bucket.
- Fasten the unit to the ground, with the top 2 m above the ground level.
- Open the closed bucket and place it on top of the unit.
- Buckets are exposed for 30±2 days at a time.
- Exposed buckets are collected and replaced with a new bucket at the end of each sampling window, while the exposed bucket is first filtered onsite – at a designated sample handling cubicle before being couriered to the laboratory for gravimetric analyses (see Section 4.2 for details).

5.1.5.2 Exposure and Collection of Buckets

- Clean and close the empty bucket;
- Label each bucket according to the site ID No (e.g. Reko_DM_01);
- Seal the lid on each dust bucket and transport it to the field. Unseal the lid before placement on the stand;
- Prepare your sample log sheet. Fill out the following:
    - Site ID
    - Name of field officers
    - Contact details of field officers
    - Date of exposure
    - Time of exposure
    - Field observations – if any (e.g. construction activities nearby, fires, sweeping etc.)
- Dust buckets are exposed for a period of 30±2 days (28 -32 days)
- On collection, fill out the following:
    - Name and contact details of field officers doing the collection
    - Date of collection
    - Time of collection
    - Field observations
- On arrival at the onsite cubicle, the following should be conducted:
    - Sprinkle water in the container to wash the contents down. Allow the contents of the exposed buckets to settle for a day and open the lids.
    - Decant some of the excess water above the settled material. This must be done judiciously so as not to lose particulates in the buckets.
    - Ensure the particulates that are settled at the bottom of each dust bucket are stirred into the remaining water and removed completely into the sample bottle.
    - Label the 1 litre bottle according to sample ID (attend to 1 sample at a time, to avoid swapping samples and contamination)
    - Empty the contents into a 1-litre sample bottle and close the bottle before attending to the next dust bucket.
    - Clean dust buckets when finished and ready for the next sampling run. Seal tightly and store in cool to prevent algae growth, fungi or micro-organisms;

5.1.5.3 Analytical Procedure for Gravimetric Analysis of Exposed Dust Samples Onsite

The analytical approach for exposed dust fall samples follows the steps below:

- Label each petri dish i.e. Reko_DM_01, Reko_DM_02 etc
- Then pre-weigh each filter (W1, W2, W3 and take the average) and place each on the petri dish. Do the same for all seven sites;
- Then place each filter in between the manifold and the Buchner funnel;
- If the bucket is dry, wash down the bottom and sides with a sprinkler and spatula to release the attached particulates;
- Decant the suspension into the Buchner funnel – on each manifold;
- Each manifold will only take one sample at a time;
- Once all the manifolds are occupied, the vacuum pump can be turned on;
- The pump will only be turned off when the water in the funnel is drained;
- Each filter is then removed with a tweezer and placed on the labelled petri dish;
- Then proceed to have each petri dish placed in the oven until dry at 60 degrees;
- After drying, the same process is followed - weigh each sample filter (W1, W2, W3 and take the average). Then the net weight is calculated.
- Calculate the cross-sectional area of the bucket, record the exposure date and proceed with the formulae below to calculate the dust deposition rates:

$D = W/A\ g/(m^2/30)$

Where:

A = collection area, the cross-sectional area of the inside diameter of the top of the container, m2, and

W = net mass determined, normalized if necessary to a 30 day period, g.

5.1.5.4 Chemical Analysis of Dust fall Samples

Dust fall samples on filters will be taken for chemical analysis for metal on an annual basis to determine the ambient exposure concentrations. A full metal scan metal scan is recommended for the initial stages, which will cover almost 30 metals: i.e. ICP -MS Scan, covering the following - Al; As; B; Ba; Be; Ca; Cd; Co; Cr; Cu; Fe; K; Mg; Mn; Mo; Na; Ni; P; Pb; Sb; Se; Sr; Te; Ti; Tl; Th; U; V; Zn; Zr; Hg.

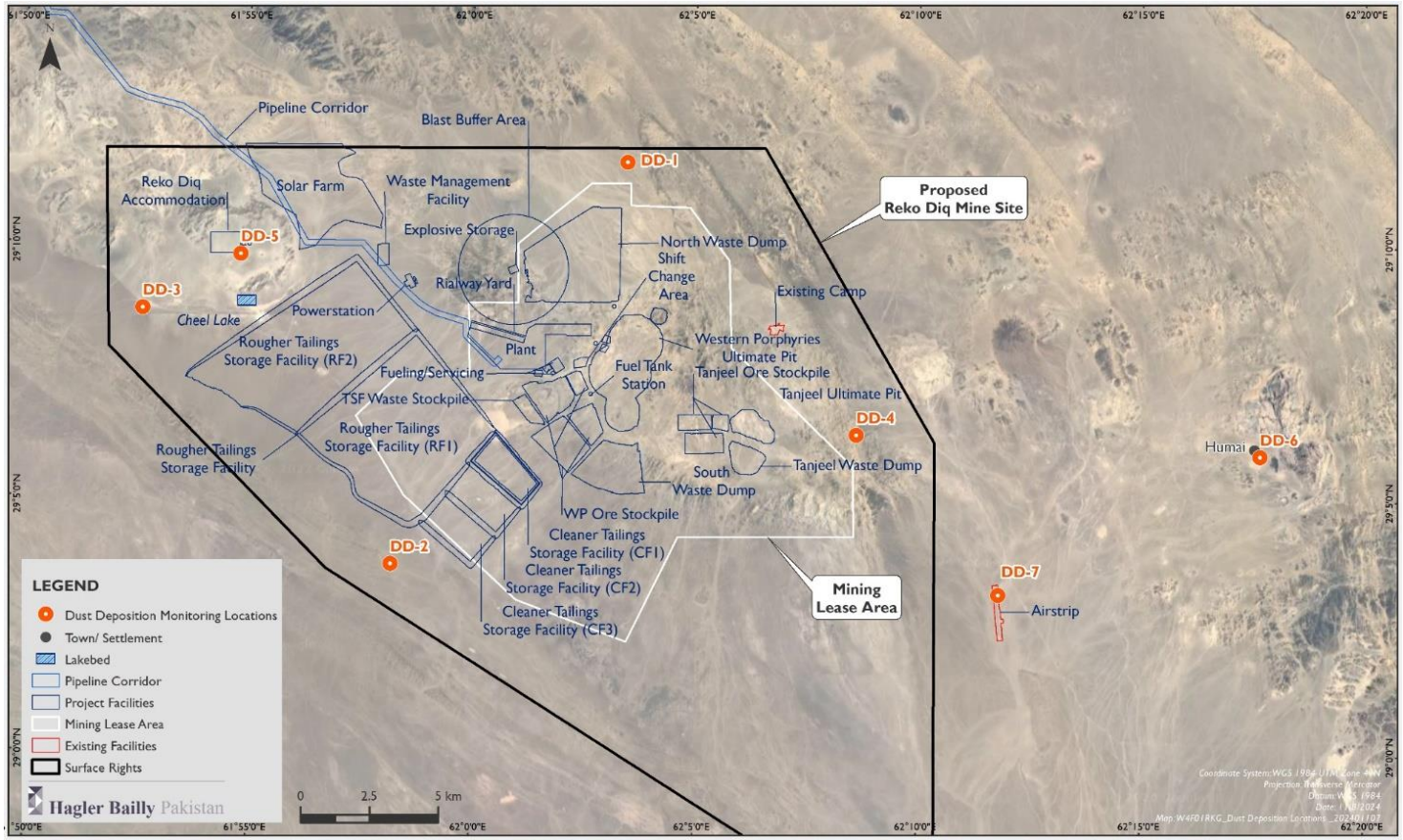

Figure 1: Dust Deposition Sampling points

Table 3: Environmental Monitoring Plan – Air Quality

Aspect	Type of Monitoring	Monitoring Location	Monitoring Frequency
Construction Phase			
Fugitive dust emissions	▪ SPM PM_{10} and $PM_{2.5}$ continuous monitoring ▪ Continuous weather monitoring	▪ Onsite Accommodation Camps ▪ Humai settlement	Continuous
Gaseous emissions	Criteria gaseous pollutants including NO_x, SO_x, CO, and Smoke	▪ Onsite Accommodation Camps ▪ Humai settlement	Continuous
Exhaust emissions	Testing of the exhaust emissions of power generators, and vehicles.	▪ Onsite Accommodation Camps	Quarterly
Dust deposition	Dust deposition monitoring	Continuous monitoring at each location presented in Figure 5.	Monthly rotation of dust buckets and corresponding weight measurements
Dust composition	Chemical composition analysis of dust for detection of contaminants due to mining operations	Continuous monitoring at each location presented in Figure 5.	Annually
Operations Phase			
Fugitive dust emissions	▪ SPM PM_{10} and $PM_{2.5}$ continuous monitoring ▪ Continuous weather monitoring	▪ Onsite Accommodation Camps ▪ Humai settlement	Continuous throughout the operations phase
Fugitive dust emissions	▪ 24-hours SPM PM_{10} and $PM_{2.5}$ monitoring ▪ Weather monitoring	▪ Onsite Accommodation Camps ▪ Humai settlement	▪ Monthly ▪ Additional monitoring in case of any grievance
Gaseous emissions	Criteria gaseous pollutants including NO_x, SO_x, CO	▪ Onsite Accommodation Camp ▪ Humai settlement	Continuous
Exhaust emissions	Testing of the exhaust emissions of power generators, and vehicles.	Operational Areas	Quarterly

Aspect	Type of Monitoring	Monitoring Location	Monitoring Frequency
Dust deposition	Dust deposition monitoring	Continuous monitoring at each location presented in Figure 5.	Monthly rotation of dust buckets and corresponding weight measurements
Dust composition	Chemical composition analysis of dust for detection of contaminants due to mining operations	Continuous monitoring at each location presented in Figure 5.	Bi-annual

5.2 Review

An annual review of this plan shall be carried out by the Environment Department. This plan shall also be reviewed and updated upon completion of the construction and operations phase, or in the event of changes in the E&S legislation, or Lender requirements. This plan shall also be reviewed based on the findings of internal or external monitoring audits.

6. GRIEVANCE REDRESS

Community grievances will be managed according to the RDMC Grievance Process detailed in the Stakeholder Engagement Plan and associated Procedures.

7. TRAINING & AWARENESS

The Environment Department along with OHS Training department shall conduct training and awareness sessions for all RDMC employee contractor personnel as and when required.

8. ASSOCIATED DOCUMENTS AND REFRENCES

This Air Quality Monitoring Program shall be reviewed in conjunction with the following documentation:

- Reko Diq Mining Project: Environmental and Social Impact Assessment
- Environmental Approval from Balochistan Environmental Protection Agency
- E&S Policy and Management System of Reko Diq Mining Company
- National Environmental Quality Standards For Ambient Air, Drinking Water and Noise
- National Environmental Quality Standards for Motor Vehicle Exhaust and Noise
- Reko Diq Mining Project :(6105A0000-0000-HA05-0030 Personal Protective Equipment Procedure)
- Reko Diq Mining Project: (6105A0000-0000-DA12-0001, Traffic Management Plan)

Document No.:	**[insert document number here]**	**Rev:**	**[X]**
Document Title:	**Waste Management Plan**		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		**Rev:**	

	Click or tap to enter a date.		**[insert signature here]**	**[insert signature here]**	**[insert signature here]**
			[insert name here]	**[insert name here]**	**[insert name here]**
REV	**Date**	**Reason For Issue**	**Prepared By**	**Checked By (Discipline Lead)**	**Approved By (Functional Manager)**
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1. Introduction

Waste is a critical aspect to the environment that can have economic value if it is properly managed, or it can have adverse impacts on the environment if not properly managed.

In line with international commitments, national legislation requirements and good practice, RDMC has developed this Waste Management Plan (WMP) with the assistance of Digby Wells Environmental (hereinafter Digby Wells) to ensure efficient waste management practices at Reko Diq mine. This WMP outlines the management of non-mineral waste that is generated on the mine for the life of mine. The management of mineral waste, including the Tailings Storage Facility (TSF) and waste rock dumps (WRDs) will be detailed in separate management plans together with the technical operating requirements.

The Water Treatment Plant (WTP) providing potable water to the accommodation facility and work areas will also be management separately with dedicated procedures and technical operating requirements.

2. Aim

This WMP applies to the life of mine, but the focus is on the construction and operational phases with a commitment that the decommission and closure phases will be detailed 5 years prior to planned closure. This plan considers the generation, collection, storage, transportation, treatment (where applicable) and final disposal of hazardous and non-hazardous waste.

An effective WMP system considers how to prevent, recycle, and dispose of waste in a way that most effectively protects human health and the environment. The objective of this plan is to:

- Ensure sustained compliance with waste and environmental legislation, waste standards and guideline (both locally and internationally) as well as compliance with environmental policies;
- Ensure waste management practices are in line with the waste management hierarchy which may include prevention, reduction, re-use, recovery, recycling, removal and finally disposal of waste;
- Identify types and quantities of waste that will be generated during operations, and the areas in which waste will be stored prior to removal from site;
- Maximise waste reuse and recycling, where possible;
- Create a monitoring, auditing and reporting system to measure performance against the waste management objectives.

3. Definitions

Table 3-1 provides a list of terms used in this WMP.

Table 3-1: Definitions related to Waste

Term	Description
Baling	The process of binding or wrapping of compressed or non-compressed material into a form suitable for easy handling, storage and transport.
Chemical waste	Waste including chemicals from diagnostic and experimental work, cleaning - processes, housekeeping and disinfecting procedures. May also include mercury waste such as from broken clinical equipment and spillage, and cadmium waste such as from discarded batteries.
Clinical waste	Any waste produced by the clinic(s) and related medical facilities on site, which is infectious or potentially infectious.
Compacting	Compacting is a process to reduce the volume of solid waste.
Construction and Demolition Waste	Waste which arises from construction, renovation or demolition activities.
Disposal	Putting waste in an appropriate facility without the intention of recovery.
Effluent	Any material in solid, liquid or gaseous form or combination thereof being discharged from industrial Activity or any other source and includes a slurry, suspension or vapor.
Electronic Waste	“Electronic waste” includes discarded computers, office electronic equipment, entertainment device electronics, mobile phones, television sets, refrigerators, stereos and copiers. It also includes used electronics which are destined for reuse, resale, salvage, recycling, or disposal and electronic products nearing the end of their "useful life".
Handling	"Handling", in relation to any substance, means the manufacture, processing, treatment, package, storage, transportation, collection, destruction, conversion, offering for sale, transfer or the like of such substance.
Hazardous Waste	"Hazardous waste" means waste which is, or contains, a hazardous substance or which may be prescribed as hazardous waste and includes hospital waste and nuclear waste.
Hospital Waste	"Hospital waste" includes waste medical supplies and materials of all kinds, and waste blood, tissue, organs and other parts of the human bodies, from hospitals, clinics and laboratories.
Incinerable Waste	Waste that can be destroyed, rendered inert or reduced to ash through a process of controlled, high-temperature combustion.
Incineration Bottom Ash	Residue of combustion from a furnace or incinerator which comprises mainly silica, ceramic and glass, while containing some ferrous and non-ferrous metals and residual unburnt carbon.
Incineration Fly Ash	Fine ash generated from an incineration process, carried out by the combustion of gases and collected by a flue gas cleaning system.
Industrial Activity	Any operation or process for manufacturing, making, formulating, synthesizing, altering, repairing, ornamenting, finishing, packing or otherwise treating any article or substance with a view to its use, sale, transport, delivery or disposal, or for mining, for oil and gas exploration and development, or for pumping water or sewage, or for generating, transforming or transmitting power or for any other industrial or commercial purpose.
Industrial Waste	Waste resulting from an industrial activity.
Inspection	"enquiry or inspection" means enquiry or inspection as provided under clause (a) of sub-section (2) 'of section 6 of the Balochistan Environmental Protection Act.
Landfill	An area set aside for the deposition of waste, whether it be by filling in of excavations or the creation of a landfill above ground.
Municipal Waste	"Municipal waste" includes sewage, refuse, garbage, sludge and human excreta and the like.
Non-risk Waste	"non-risk waste" includes paper and cardboard, packaging, food waste, aerosols and others.
pharmaceutical waste	"pharmaceutical waste" includes expired or unused pharmaceutical products; spilled contaminated pharmaceutical products, surplus drugs, vaccines and

Term	Description
	discarded items used in handling pharmaceutical such as bottles, boxes, gloves, masks, tubes, or vails.
Recycle	The process of collecting, storing and reconstituting materials that would otherwise become solid waste and returning them to the economic mainstream in the form of raw material for new, reused or reconstituted products.
Reduce	Source reduction which means consuming and throwing away less. Minimise the amount of waste produced at source so as to minimise the quantity of waste that needs to be treated or disposed of.
Refurbished part (refurbish-able)	part that is disassembled from waste products or equipment and can be recycled or prepared for reuse after inspection, detection and simple treatment.
Reuse	The recovery or reapplication of a package or product for uses similar or identical to its original application. Reuse an object or material again, either for its original or similar purpose, without significantly altering the physical form of the object or material.
Risk Waste	"risk waste" means infectious waste, pathological waste, sharps, pharmaceutical waste, genotoxic waste, chemical waste, and radioactive waste.
Sewage	"Sewage" means liquid or semi-solid wastes and sludge from sanitary conveniences, kitchens, laundries, washing and similar activities and from any sewerage system or sewage disposal works.
Sharp	“Sharp" means, whether infected or not, needles, syringes, scalpels, infusion sets, saws and knives, blades, broken glass and any other item that could cut or puncture.
Site	"Site" means any location where hazardous chemicals are manufactured or processed, stored, handled, used, disposed of and includes the whole of an area under the control of an occupier and includes pier, jetty or similar structure whether floating or not.
Waste	Any substance or object which has been, is being or is intended to be, discarded or disposed of, and includes liquid waste, solid waste, waste gases, suspended waste, industrial waste, municipal waste, hospital waste and residues from the incineration of all types of waste.
Waste Management	Management of waste from generation to collection, storage, transport, recycling, recovery and disposal of waste.
Waste stream	The total flow of waste falling under a particular waste category from activity areas.
Waste Tyres	Tyres that are no longer fit for their original purpose.
Incineration Bottom Ash	Waste from discarded products and materials made of wood, including pallets, crates, boxes, furniture and planks.

Source: Adapted from Balochistan Environmental Protection Act 2012, Balochistan Hazardous Substances Rules 2020 and ISO24161:2022 Waste Collection and Transportation Management - Vocabulary

4. Waste Management Principles

Waste management is important for environment and human community's protection. With a change in the local community and an increase in population comes an increase in waste products that must be managed. Traditional disposal methods no longer adequately and properly handle the increasing load hence, the need to find innovative ways to minimise waste generation as well as to find and implement effective and efficient ways of reusing, recycling waste and then only disposal as a last resort.

4.1 Waste Hierarchy

The key principles for sustainable waste management require that the generation of waste be avoided as far as possible. The waste management hierarchy offers a systematic and holistic approach to waste management during the waste life cycle and in turn addresses prevention (reduction), avoidance/minimisation, reuse, recovery, treatment, recycling and safe disposal as presented in Figure 4-1.

Source: EarthReminder.com

Figure 4-1: Waste Management Hierarchy

The purpose of the waste hierarchy is to generate the minimum amount of waste and extract maximum practical benefits from waste products. The correct application of the waste hierarchy can help reduce pollution, decrease greenhouse gas emissions, conserve energy, preserve resources, create job opportunities and stimulate the growth of green technology.

4.1.1 Prevention (Reduction)

Waste prevention focuses on reducing the amount of waste that is generated at source. It involves looking at the manufacturing, processing, packaging, storage, recycling and disposal processes to identify opportunities to manage waste and minimise its impact on the environment. Materials and products must be designed in such a way that reduces the natural materials used, their waste components and the waste generated during production as well as after the consumption of the material or product.

4.1.2 Waste Minimisation

Waste minimisation is a process of reducing the amount and activity of waste materials to a level as low as reasonably achievable. It involves practices intended to reduce the

amount of waste produced. By reducing or eliminating the generation of harmful and persistent wastes, waste minimisation supports efforts to promote a more sustainable society. Waste minimisation involves redesigning products and processes and/or changing societal patterns of consumption and production.

4.1.3 *Reuse*

The process of reusing starts with the assumption that the used materials that flow through our lives can be a resource rather than refuse. Reuse involves using some of the waste generated over again either for the same purpose it was created for or use for a different purpose altogether.

4.1.4 *Recycle*

Recycling is the process of converting waste materials into new materials and objects. Success of recycling involves sorting the waste at the source before collection. The recyclability of a material depends on its ability to reacquire the properties it had in its original state. Typical materials that are recycled include iron and steel scrap, aluminium cans, glass bottles, paper, wood and plastics.

4.1.5 *Energy Recovery*

Energy recovery from waste is the conversion of non-recyclable waste materials into heat, electricity, or fuel through a variety of processes, including combustion, gasification, pyrolysis, anaerobic digestion, and landfill gas recovery.

4.1.6 *Disposal*

This is the final step in the waste management hierarchy, and it involves disposing of the waste in a dedicated disposal facility e.g. landfill, dumpsite, or incinerator.

4.2 Waste Segregation

A key approach to effective waste management is ensuring proper waste segregation of all waste streams by type and/or category. This will assist in avoiding potentially undesirable combined effects and will facilitate the reuse, recycling, recovery and/or disposal of the various wastes.

To the extent practicable, sorting will take place at the source and the sorted waste will be stored at the site's waste transit station.

4.3 Protocols to Minimise Waste Generation

RDMC will include the education of all personnel on sustainable waste practices and waste minimisation, including reasonable measures to reduce, reuse, recycle and recover waste to ensure the least amount of waste is disposed of at landfill.

All waste categories will be considered, and the principle of the following four R's applied:

- Reduction Initiatives: reducing raw material consumption is the first step in reducing waste generation. All processes and materials used will be evaluated with the intent of reducing raw material usage, where possible;
- Reuse Initiatives: reuse of the material in other applications and/or by other parties will be routinely examined by using the waste materials exchange;

- Recycling Initiatives: recycling is the next option considered for the successful management of waste streams;
- Recovery Initiatives: recovery of usable material or energy as a by-product is a part of the four R's of the waste minimisation process. For example, redistributing waste heat from generators to heat buildings is a process of recovery of energy from waste; and
- Final Disposal: disposal is the final/last resort option when the four R's are no longer applicable or practical.

4.4 Polluter Pays Principle (PPP)

The Polluter Pays Principle (PPP), also mentioned in the Balochistan laws, is the commonly accepted practice that those who produce pollution should bear the costs of managing it to prevent damage to human health or the environment i.e. a waste generator to pay for appropriate disposal of unrecoverable material.

5. National and Provincial Legislative Requirements

5.1 Balochistan Environmental Protection Act, 2012

The Balochistan Environmental Protection Act, 2012 (referred to as 'Balochistan Act, 2012' hereafter) serves as the primary legislation governing environmental protection and conservation efforts in the province of Balochistan, Pakistan. The Balochistan Act, 2012 applies to a broad range of issues and extends to ambient air, gaseous emissions, drinking water, and noise pollution, as well as to the handling of hazardous wastes.

The sections of the Balochistan Act, 2012 that have a direct bearing on the Project are:

- **Section 14** which prohibits certain discharges or emissions and potentially harmful items or materials.
- **Section 16** which prohibits the import of hazardous substances.
- **Section 17** which deals with the handling of hazardous substances and the licensing requirements in respect thereof.
- **Section 18** which deals with disposal of electronic wastes.
- **Section 19** which provides a general prohibition concerning solid and hospital waste management and provisions relating to waste management licenses.

5.2 Balochistan Hazardous Substance Rules, 2020

The Balochistan Hazardous Substances Rules 2020 provide comprehensive guidelines for the management of hazardous substances. The key requirements and guidelines are as follows:

- Provides regulations and licensing requirements for transporting, handling, and disposing of hazardous substances.
- Applicable as the Project will involve the transportation, management, and storage of hazardous and flammable substances including fuels and

explosives. The Project will also have to obtain a license for hazardous materials transportation, management, and storage.

- Licensing and Registration: Entities handling hazardous substances must obtain licenses and register with the Balochistan Environmental Protection Agency (BEPA).
- Environmental Impact Assessment (EIA): An EIA must be conducted to evaluate the potential environmental impacts of hazardous substances.
- Handling and Storage: Specific protocols must be followed for the safe handling and storage of hazardous substances to prevent accidents and environmental contamination.
- Packaging and Labelling: Hazardous substances must be properly packaged and labelled according to the guidelines to ensure safety during transportation and handling.
- Transportation: Hazardous substances must be transported in a manner that prevents spillage and exposure. Vehicles used for transportation should be dedicated to this purpose and properly maintained.
- Waste Management: Proper disposal methods for hazardous waste must be followed to minimise environmental harm.
- Training and Supervision: Staff involved in the management of hazardous substances must receive proper training on handling, storage, and disposal procedures. Regular supervision and monitoring are required to ensure compliance.
- Documentation and Reporting: Detailed records of hazardous substances, including their handling, storage, and disposal, must be maintained. Regular reports should be submitted to the relevant authorities.

These rules aim to ensure the safe management of hazardous substances, protecting both public health and the environment.

5.3 Balochistan Hospital Waste Management Rules 2020

The Hospital Waste Management Rules 2020 in Balochistan outline comprehensive requirements and guidelines for the safe management of hospital waste. Here are the key points:

- Segregation: Waste must be segregated at the point of generation into categories such as infectious, non-infectious, and hazardous waste.
- Collection and Storage: Proper containers must be used for the collection and storage of different types of waste. These containers should be clearly labelled and color-coded.
- Transportation: Waste must be transported in a manner that prevents spillage and exposure. Vehicles used for transportation should be dedicated to waste transport and properly maintained.

- Treatment and Disposal: Specific methods such as incineration, autoclaving, or chemical treatment must be used to treat hazardous and infectious waste before disposal.
- Training and Supervision: Staff involved in waste management must receive proper training on handling, segregation, and disposal procedures. Regular supervision and monitoring are required to ensure compliance.
- Documentation and Reporting: Detailed records of waste generation, treatment, and disposal must be maintained. Regular reports should be submitted to the relevant authorities.
- Hospital Waste Management Committees: Committees must be established at various levels (provincial, divisional, district, tehsil, and Rural Health Centre) to monitor, support, and guide the implementation of these rules.

These guidelines aim to ensure the safe and effective management of hospital waste, protecting both public health and the environment.

5.4 National Hazardous Waste Management Policy, 2022

The National Hazardous Waste Management Policy, 2022 outlines a comprehensive framework for hazardous waste management in Pakistan, aiming to align with international standards and ensure environmentally sound practices. Below are the key areas highlighted for your client:

- Purpose and Objectives:

- The policy is designed to control hazardous waste in Pakistan, improving public health and environmental safety. It supports Pakistan's commitments under international conventions such as the Basel, Stockholm, and Minamata Conventions.
- The primary objectives are to prevent, reduce, and control hazardous waste generation, manage hazardous waste lifecycle, and implement a regulatory framework for safe disposal practices.

- Guiding Principles: Key principles include:

- Polluter Pays: Waste generators are accountable for the costs of waste management.
- Precautionary Approach: Preventative actions should mitigate potential hazards.
- Proximity Principle: Waste should be managed as close to its source as possible to reduce environmental risks.
- Public Participation: Involving communities in decision-making processes around hazardous waste management.

- Scope and Regulatory Framework

- Covers hazardous waste from all sectors (industrial, medical, agricultural, etc.) across Pakistan.
- Prohibits hazardous waste imports for disposal but allows imports for recycling or co-processing under stringent conditions.

- Emphasizes a need for provincial and federal coordination in line with the 18th Constitutional Amendment, with provincial governments legislating and enforcing standards locally.

    - Transboundary Movement Controls

- Outlines stringent controls on the import, export, and transit of hazardous waste to comply with the Basel Convention.
- Requires comprehensive tracking, labelling, and packaging protocols to ensure transparency and traceability.

    - Waste Prevention, Treatment, and Disposal

- Advocates for waste minimisation through the adoption of cleaner production techniques and circular economy models (e.g., reduce, reuse, recycle).
- Provides for developing treatment, storage, and disposal facilities close to industrial centres, encouraging public-private partnerships for sustainable infrastructure.

    - Monitoring, Licensing, and Compliance

- Sets up a licensing and permitting frameworks for all hazardous waste facilities, with a system for monitoring and compliance checks.
- Introduces penalties for violations and requires regular self-reporting and inspections to ensure adherence to environmental safety standards.

    - Human Resource Development and Public Awareness

- Promotes training and capacity building within government agencies, industries, and the public sector on best practices for hazardous waste management.
- Encourages public awareness programmes to educate citizens on the impacts of hazardous waste and safe disposal methods.

    - Sustainable Financing Mechanisms

- Outlines financial incentives to promote environmentally sound management of hazardous waste, including low-interest loans, green credits, and tax rebates for compliant businesses.
- Encourages the private sector to engage in joint ventures and PPPs, with government support, to establish necessary infrastructure for waste management.

    - Implementation and Oversight

- Establishes a National Implementation Committee and a Technical Committee on Hazardous Waste for overseeing policy implementation, coordinating between federal and provincial authorities, and monitoring compliance with national standards.
- Calls for the creation of a Central Directorate for “Chemical & Waste” within the Ministry of Climate Change to manage national reporting obligations and maintain hazardous waste records.

5.5 Draft Guidelines for Solid Waste Management 2005

The Draft Hazardous Management Guidelines 2005 in Pakistan outline several key requirements and guidelines for managing hazardous substances. Here are some of the main points:

- Licensing and Registration: Entities handling hazardous substances must obtain proper licenses and register with the relevant authorities.
- Environmental Impact Assessment (EIA): An EIA report must be submitted to assess the potential environmental impacts of hazardous substances.
- Handling and Storage: Specific precautions must be taken for the safe handling and storage of hazardous substances to prevent accidents and environmental contamination.
- Packaging and Labelling: Hazardous substances must be properly packaged and labelled according to the guidelines to ensure safety during transportation and handling.
- Waste Management: Proper disposal methods for hazardous waste must be followed to minimise environmental harm.

These guidelines aim to ensure the safe management of hazardous substances and protect both public health and the environment.

6. International Best Practices

6.1 International Conventions

The international conventions to which Pakistan are committed to are discussed below.

6.1.1 Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (1992)

The Basel Convention regulates the transboundary movements of hazardous wastes and other wastes and obliges its Parties to ensure that such wastes are managed and disposed of in an environmentally sound manner. The Convention covers toxic, poisonous, explosive, corrosive, flammable, ecotoxic and infectious wastes. The overall goal of the Basel Convention is to protect human health and the environment against adverse effects from the generation, transboundary movements and management of hazardous wastes and other wastes.

According to Article 4(2) of the Basel Convention (General Obligations), each Party shall take the appropriate measures to:

- Ensure that the generation of hazardous wastes and other wastes is reduced to a minimum, taking into account social, technological and economic aspects;
- Ensure the availability of adequate disposal facilities, for the environmentally sound management of hazardous wastes and other wastes, that shall be located, to the extent possible, within it, whatever the place of their disposal;

- Ensure that persons involved in the management of hazardous wastes or other wastes within it take such steps as are necessary to prevent pollution due to hazardous wastes and other wastes arising from such management and, if such pollution occurs, to minimise the consequences thereof for human health and the environment;
- Ensure that the transboundary movement of hazardous wastes and other wastes is reduced to the minimum consistent with the environmentally sound and efficient management of such wastes, and is conducted in a manner which will protect human health and the environment against the adverse effects which may result from such movement;
- Not allow the export of hazardous wastes or other wastes to a State or group of States belonging to an economic and/or political integration organisation that are Parties, particularly developing countries, which have prohibited by their legislation all imports, or if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner, according to criteria to be decided on by the Parties at their first meeting;
- Require that information about a proposed transboundary movement of hazardous wastes and other wastes be provided to the States concerned, according to Annex V A, to state clearly the effects of the proposed movement on human health and the environment;
- Prevent the import of hazardous wastes and other wastes if it has reason to believe that the wastes in question will not be managed in an environmentally sound manner; and
- Co-operate in activities with other Parties and interested organisations, directly and through the Secretariat, including the dissemination of information on the transboundary movement of hazardous wastes and other wastes, in order to improve the environmentally sound management of such wastes and to achieve the prevention of illegal traffic.

6.1.2 Stockholm Convention on Persistent Organic Pollutants (POPs) (2001)

The Stockholm Convention on Persistent Organic Pollutants (POPs) is a global treaty to protect human health and the environment from chemicals that: remain intact in the environment for long periods, become widely distributed geographically, accumulate in the fatty tissue of humans and wildlife, and have adverse effects to human health or to the environment.

The most commonly encountered POPs are organochlorine pesticides, such as DDT, industrial chemicals, polychlorinated biphenyls (PCB) as well as unintentional by-products of many industrial processes, especially polychlorinated dibenzo-p-dioxins (PCDD) and dibenzofurans (PCDF), commonly known as dioxins.

Signatories to the Conference of the Parties are obliged to do away with equipment and oils containing polychlorinated biphenyls (PCBs) by 2025 and reach environmentally sound management of PCB-containing wastes by 2028. According to the Stockholm

Convention, the threshold limit for the allowable concentration of PCBs in oil is set at 50 ppm.

6.2 International Standards Organisation

6.2.1 ISO14001:2015 Environmental Management Systems

Environmental stewardship is a fundamental responsibility and expectation of all businesses today. Companies who responsibly manage their environmental impacts can both reduce their risks and identify opportunities. ISO14001 2015 is an internationally agreed standard that sets out the requirements for an Environmental Management System (EMS) which is designed to help organizations improve their environmental performance, thereby increasing resource use efficiency and reducing waste. Companies implementing an EMS aligned with or certified to ISO 14001 can gain a strong competitive advantage and improve stakeholder trust through:

- Legal compliance - ISO 14001 2015 provides a systematic framework for identifying, monitoring and complying with the environmental legal requirements relevant to their business;
- Continual improvement - Promotion of environmental objectives and risk based thinking;
- Improved cost controls - A robust EMS can help to identify, control and reduce the number of environmental incidents that can occur, thereby reducing liability, clean up and reparation costs; and
- Improved image and credibility - Demonstrate your commitment to the Sustainable Development Goals.

RDMC will have to adhere to the legal framework identified in this report to be ISO 14001:2015 certified and developed a policy that stipulates the organizations commitments to pollution prevention and resource conservation with more emphasis on natural resources and also developed a waste management procedure to ensure that waste is managed responsibly.

6.3 IFC Performance Standards

The section below outlines the International Finance Corporation's (IFC) legislation including the IFC Performance Standards (PS), and IFC General Environmental, Health and Safety (EHS) Guidelines that deal with waste management and pollution.

6.3.1 IFC PS on Environmental and Social Sustainability (2012)

In 2005 the IFC, which is the private sector arm of the World Bank Group, embarked on an extensive review of its environmental assessment procedures and PS. A revised and slightly more rigorous and more clearly defined PS as well as its associated Guidance Notes were published on January 1, 2012. These PS (Table 6-1) form the basis of an Environmental Social Impact Assessment (ESIA) and can be used to identify and manage risk in proposed developments.

Table 6-1: IFC PS (2012)

IFC PS	Description
Performance Standard 1	Management of Environmental and Social Risks and Impacts
Performance Standard 2	Labour and Working Conditions
Performance Standard 3	Resource Efficiency and Pollution Prevention
Performance Standard 4	Community Health, Safety, and Security
Performance Standard 5	Land Acquisition and Involuntary Resettlement
Performance Standard 6	Biodiversity Conservation
Performance Standard 7	Indigenous Peoples
Performance Standard 8	Cultural Heritage

Of specific relevance to this Report is Performance Standard 3 (PS3) which deals with Resource Efficiency and Pollution Prevention. The primary objectives of PS3 are:

- To avoid or minimise adverse impacts on human health and the environment by avoiding or minimising pollution from project activities;
- To promote more sustainable use of resources, including energy and water; and
- To reduce project-related Greenhouse Gas emissions.

The primary requirement of PS3 is that technologies and practices to avoid or minimise detrimental impacts of pollution are applied throughout the lifecycle of the project.

The IFC General EHS Guidelines (2007) are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP) as defined in the IFC's PS3 on Resource Efficiency and Pollution Prevention.

According to the General EHS Guidelines, facilities that generate and store wastes should practice the following:

- Establishing waste management priorities at the outset of activities based on an understanding of potential EHS risks and impacts and considering waste generation and its consequences;
- Establishing a waste management IFC General Environmental, Health and Safety Guidelines (2007)
- Hierarchy that considers prevention, reduction, re-use, recovery, recycling, removal and finally disposal of waste;
- Avoiding or minimising the generation of waste materials, as far as practicable;
- Where waste generation cannot be avoided but has been minimised, recovering and reusing waste; and
- Where waste cannot be recovered or reused, treating, destroying and disposing of it in an environmentally sound manner.

Section 1.3 of the IFC General EHS Guidelines (2007) provides specific recommendations related to the management of wastewater and includes indicative values for treated sanitary sewage discharges, while those for mining effluent are provided in IFC EHS Guidelines for Mining (2007).

6.3.2 *IFC EHS Guidelines for Mining (2007)*

Whilst the IFC PS, of which some parts relate to all phases of a project's lifecycle - planning, design, construction, operation and decommissioning / closure – the IFC Industry Sector EHS Guidelines relate specifically to the construction and operational phases of projects. The purpose of these guidelines is to be complimented by the Performance Standards by providing more detailed guidance on the environmental and social impacts likely to be associated with specific industry sectors, as well as specific limits.

The Guidelines are therefore technical reference documents that recommend general industry-specific examples of GIIP, and they provide performance levels and measurable objectives for new and existing facilities, including specific targets by which GIIP may be achieved. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines (2007) document (described above), which provides guidance on common EHS issues. The IFC Industry Sector EHS Guidelines relevant to Reko Diq is the IFC EHS Guidelines for Mining (2007).

The EHS Guidelines for Mining is organised according to the following sections:

- Section 1.0 — Industry-Specific Impacts and Management
- Section 2.0 — Performance Indicators and Monitoring
- Section 3.0 — References and Additional Sources
- Annex A — General Description of Industry Activities

The management of waste from mining operations is included in these guidelines.

6.3.3 *IFC EHS Guidelines General for Waste Management (2007)*

These guidelines apply to projects that generate, store, or handle any quantity of waste across a range of industry sectors and apply to the management of non-hazardous and hazardous waste. Waste management should be addressed through a Waste Management System that should include:

- Waste Management Planning - Facilities that generate waste should characterise their waste according to composition, source, type of wastes produced, generation rates, or according to local regulatory requirements;
- Waste Prevention - Processes should be designed and operated to prevent, or minimise, the quantities of wastes generated, and hazards associated with the wastes generated;
- Recycling and Reuse - In addition to the implementation of waste prevention strategies, the total amount of waste may be significantly reduced through the implementation of recycling plans;

- Treatment and Disposal - If waste is still generated after the implementation of feasible waste prevention, reduction, reuse, recovery and recycling measures, the materials should be treated and disposed of. All measures should be taken to avoid potential impacts to human health and the environment. Selected management approaches should be consistent with the characteristics of the waste and local regulations;
- Hazardous Waste Management - Hazardous wastes should always be segregated from non-hazardous wastes. If generation of hazardous waste cannot be prevented, a process for storage, transportation, treatment & disposal should be adopted; and
- Monitoring - Monitoring activities associated with the management of hazardous and non-hazardous waste should include regular inspections, audits, waste tracking, waste quantities and keeping of monitoring records.

6.4 Company Policies and Standards

Barrick has empowered each operation to develop a Waste Management Strategy and/or WMP which must consider the fundamental principles of waste management hierarchy, International Best Practice and adhere to all legislative requirements within the jurisdiction that their mine(s) operate.

All Barrick owned and managed operations are required to measure and report the key indicators summarised in Table 6-2, which are recorded and tracked at the group level.

Table 6-2: Indicators recorded and tracked at Barrick Group Level

Waste Indicator	Unit of Measure
Hazardous Waste Produced	Tonnes
Non- hazardous Waste Produced	Tonnes
Hazardous Waste Recycled	Tonnes
Non- hazardous Waste Recycled	Tonnes
Total Reused	Tonnes
Total Waste to Landfill including hazardous waste to TSDF (Treatment, Storage, Disposal Facility)	Tonnes
Total Waste Incinerated	Tonnes
Total Waste Produced	Tonnes
Total Waste Recycled	Tonnes
% of waste recycled and reused	Percentage

RDMC will introduce a circular economy drive at Reko Diq to further drive reuse, repurposing, and recycling of tools, equipment and materials, and reduce flows into landfill and incineration. For the portion of waste that can't be reused onsite or in the community, local companies will be identified to collect, recycle and dispose of waste on our behalf. These companies will be vetted to ensure that they meet the necessary standards for safe handling and disposal of the waste generated on site.

7. Evaluation of Waste Streams

The Project is to be executed in a phased approach and there will be varying waste streams and volumes with each phase. We foresee five distinct phases where waste streams will change and therefore some level of adaptation of this plan will be required, these are:

- Early works and continued exploration activities;
- Phase 1 construction activities;
- Phase 1 Operational and Phase 2 continued construction activities; and
- Full Operational phase
- Decommissioning (not included in the current plan).

7.1 Key Project Phases

7.1.1 Early Works and Continued Exploration Activities

Current activities are focussed within the existing exploration camp where staff and contractors are accommodated during their stay on site. The camp consists of containerised and fixed building living and working quarters together with a fully catered mess for all residents. There is a small clinic for basic medical requirements and a store area where all goods are received to meet the camp's requirements.

The activities outside of the camp include exploration and drilling and early construction works including the construction of the a pipeline from the Northern Groundwater Borefield to new mine site and accommodation facility and the upgrading of the existing access road to the N40 highway.

7.1.2 Phase 1 Construction Activities

The next phase will be the ramping up of construction works to include pit development, construction of the processing plant, Heavy Fuel Oil (HFO) plant, offices, vehicle and mine maintenance areas and all other infrastructure.

Construction will be completed in 2 Phases; Phase 1 is intended to be completed by early 2028 with processing of 45 Million tonnes per annum (Mtpa) and Phase 2 construction will continue until 2031-2032.

The waste predicted during Phase 1 construction will mostly be generated from packaging from good delivered to site and waste materials from the construction activities and servicing the large number of people on site (9,800 to 10,300).

7.1.3 Phase 1 Operational and Phase 2 Continued Construction Activities

During this phase, construction activities will continue to allow for the doubling of production to 90 Mtpa by 2032.

Similar activities to Phase 1 construction will continue on site including the servicing of people working and living on site with an increase in the number of people to around 8,000. Packaging associated goods delivered to site will still be generated but volumes

are likely to reduce as the expansion activities will require less materials than the initial construction activities in Phase 1.

However, there will be additional waste streams associated with the new operational activities that will be commissioned from early 2028. These will include waste generated from vehicle and plant maintenance activities, HFO waste oil and sludge, office waste, scrap metal waste.

7.1.4 Full Operational Phase

Once Phase 2 construction is complete, production will increase, and so too will the waste generated from operational activities as more haul vehicles are commissioned and the plant and HFO plant capacity increase.

However, there will also be a significant reduction in waste associated with servicing the workforce as construction contractors will depart the site reducing the number of people on site to around 6,000 on average for the remaining Life of Mine. The waste associated with construction activities will also cease and the waste streams and associated volumes will stabilise to a more predictable level, allowing for more consistency in the management of waste on site.

8. Waste Inventory

In order to effectively manage the various waste streams that will be generated during the life of the operation, a waste inventory will be developed to include:

- A description of the waste;
- The source(s) of the waste on site;
- The hazard rating of the waste;
- Estimated volume of waste produced per annum;
- Reporting requirements (regulatory and internal);
- Waste Hierarchy Level (e.g. recycled); and
- Special management requirements (e.g. treatment before disposal).

The waste inventory will be updated at the start of each new phase of the project to ensure any new waste streams and volumes are captured e.g. Phase 1 construction. Table 8-1 provides an example of a Waste Inventory.

Table 8-1: Example Waste Inventory

Description (Type, composition, etc.)	Source	Hazard Rating (Hazardous / Non-Hazardous)	Estimated Volume / Annum (tpa)	Regulatory Reporting Quantity?	Not Compatible With	Bin / Container Colour	Waste Hierarchy Level	Opportunity for Improvement / Alternative	Management Requirements (treatment / disposal, etc.)
Aluminium Cans	Canteen, Offices, Accommodation	Non-Hazardous	1 tonne	N/A	N/A	Green	Recyclable		Options for recycling should be investigated.
Batteries	Offices, Production Areas, Accommodation	Hazardous	1,000 kg	N/A	N/A	Red	Treatment and disposal		Not to be disposed of as hazardous waste should recycling be possible. Options for recycling should be investigated. Should recycling not be possible, disposal will take place in a red container.
Etc.									

8.1 Waste Types

While the precise types and volumes of waste to be generated during future phases of the Project are not certain at this time, however it is possible to predict these by way of analysing the waste streams from similar operations and apply logical assumptions. Using the available information from the feasibility study and visiting other Barrick operated mines, the types of waste were evaluated together with their predicted volumes likely to be generated over the Life of the Mine. The forecasted waste streams (excluding wastewater effluent) and annual predicted volumes for the Life of Mine have been tabulated in Appendix A.

This forms the basis of this management plan however the site team will continuously review the actual waste streams and volumes generated on site against this, and management actions will be adapted to meet the changing environment accordingly.

The waste streams identified have been divided into four (4) main categories and are detailed below:

- General / Non-Hazardous (inert wastes such as plastic, glass, and construction materials);
- Hazardous (waste oil solvents, chemicals, laboratory wastes, and medical wastes);
- Biodegradable (food and plant material); and
- Wastewater / effluent (waste streams related to sewage treatment).

8.1.1 General Waste

General and domestic waste such as food waste, cardboard and paper, glass bottles and other day-to-day waste will be generated on site. Further to this will be industrial waste streams such as concrete, metals, building rubble, foam and other miscellaneous wastes generated due to the construction of the project. Non-compactable waste such as non-hazardous ash and wood as well as refurbish-able waste (including pumps, valves and pipes) are included in this category. The proposed waste types are summarised in Table 8-2.

The anticipated average annual volume of general and domestic solid waste to be generated during the construction phase is around 890 tonnes per annum (tpa), increasing to 940 tpa when Phase 1 production and Phase 2 construction are running concurrently. Once the construction phase is complete, these volumes will reduce to approximately 490 tpa.

Disposal methods will include onsite landfill emplacement, transport to an appropriate, licensed offsite landfill and recycling (i.e. metals, plastics and paper products are expected to be sent off-site for third party recycling where possible). Where possible, packaging waste from goods delivered to site will be returned with the supplier to reduce the waste that is accumulated on site.

Waste management options are continually being explored; current planning assumes the following:

- Plastics, cardboard and paper will be bailed and transported offsite for recycling by a registered waste management provider. These items will be temporarily stored on site until there is adequate volume for transportation.
- Food and other non-hazardous organic waste (i.e. wood) will initially be disposed of in a landfill facility, with the future option of composing being explored.
- Metallic waste will be transported offsite for recycling.
- Contaminated soils will initially be stored in leak proof containers and sent offsite for incineration by a registered waste management company.
- Rubber tyres will initially be stored onsite. Options are being explored for offsite recycling or reuse alternatives.
- Ash generated from incineration will be analysed for heavy metal content and safely landfilled or stabilised.
- Building rubble (waste concrete etc.) will be emplaced within the footprint of the waste rock dumps and will be buried.

Table 8-2: Summary of the Type of Non Hazardous Waste Streams Expected on Site

Type	Description of Waste Stream
General Domestic Waste (non-hazardous)	• Waste paper and cardboard; • Metal; • Plastic containers (varying from small water bottles to larger chemical containers); • Glass; • Tin cans; • Food waste; and • Grey water from human use.
General Industrial Waste (non-hazardous)	• Ferrous and non-ferrous scrap metal; • Rubber and cable material; • Cement; • Non-compactable waste (including ash and wood waste); and • Refurbish-able waste (including pumps, valves and pipes).

8.1.2 Hazardous Waste

Hazardous waste includes batteries, fuels and oils, other hydrocarbons, chemical wastes, contaminated materials from vehicle servicing and other mine related activities etc. A more detailed list has been included in Table 8-3.

Waste management options are continually being explored; current planning assumes the following:

- Oily wastes and grease (not including waste oils) will be incinerated on site at >850°C as per Pakistan EPA requirements.

- Used oil will be transported offsite for recycling at certified recycling facilities. Transport of waste oil will be by a certified contractor.
- Batteries will be stored in acid resistant containers and send offsite to certified recyclers or disposal services.
- Medical/clinical waste will be incinerated onsite.
- Contaminated soils will initially be stored in leak proof containers and sent offsite for incineration by a registered waste management company. Future options for an onsite bioremediation area for soils contaminated with hydrocarbons are being assessed.
- Fluorescent tubes will be sent offsite to a licenced hazardous landfill for safe handling of mercury.
- Other hazardous waste deemed to be unsuitable for onsite incineration (i.e. those which could release toxic emissions when burned) will be transported offsite for disposal by a registered waste management company. Storage will utilise specialised containers such as leak-proof steel drums, Intermediate Bulk Containers (IBCs), and over pack drums to prevent leakage and cross-contamination. Storage sites will feature secondary containment systems, such as berms or lined areas, to prevent accidental spillage into the environment.

Table 8-3: Summary of the Type of Hazardous Waste Streams Expected on Site

Type	Description of Waste Stream
Waste oil and greases	• Waste oil and sludge from HFO plant during Operational phase • Waste oil and grease from vehicle and plant maintenance during construction and operation phases
Oily rags and other materials	• Oily rags and grease from serving and maintenance activities • Filters and other disposal items related to vehicle and plant maintenance
Contaminated soils	• Soils removed from a site where a hydrocarbon or chemical spill has taken place
Batteries	• Old batteries from vehicles (LDVs to large mine vehicles)
Fluorescent tubes	• Hazardous metals such as mercury found within the sealed units
Medical Waste	• Various medical waste streams generated by the onsite clinic

8.1.3 Electronic waste

Electronic waste (e-waste) includes all electrical and electronic devices that contain toxic components that can impact the environment and human health. This includes all computers and associated equipment, handheld devices, screens or specialised electronic equipment as part of the processing plant etc.

All equipment that is no longer used must be transported to the CWSF to be stored in a designated container placed on a concrete slab. The container should be leak-proof to prevent water from entering the unit and any possible leakage of pollutants. The container must remain locked to prevent unauthorised removal of equipment from the container while stored on site. Once the container is full, the designated waste contractor will transport the container to a licensed e-waste recycling facility for disposal/recycling.

8.1.4 Tyre Waste

Waste tyres have been classified separately as this waste stream will be managed separately to the general and hazardous waste streams. This waste stream can be divided into three categories where each will require different methods of reuse or disposal:

- Light vehicle tyres (pick up, minibus, car etc.)
- Heavy vehicle tyres (large road-going trucks)
- Large Mine vehicle tyres (very large, specialised haul vehicles)

8.1.5 Wastewater and Effluent

Sewage will be generated on site and the volumes will vary with the number of staff and contractors living in the accommodation camps and working on site. The existing exploration camp can accommodate a maximum of 500 people and the new permanent accommodation facility will host up to a planned 8,000 people at the height of the construction phase in 2031 and 2032 and decreasing to an average of just under 6,000 people during the operational phase of the Life of Mine.

The sewage will be treated, and the management of the resulting waste streams is discussed in Section 1. provides an estimated solid waste and wastewater generation from various phases of the Project.

8.2 Summary of Project Waste Streams and their Management

 is a summary of the waste streams expected to be generated on site. These are estimated volumes and where this is uncertain, the volume has not been recorded. As activities are introduced on site, it is the responsibility of the site waste management team to ensure this table is regularly updated.

Items 6 to15 in the table will be temporarily stored on site and later transported to Certified recycling facilities in Quetta.

As there are no local guidelines for waste reporting requirements, we will develop a waste reporting system applying international best practices to that will as a minimum record the volume and type of waste generated and how the waste is managed / disposed of.

Table 8-4: Solid Domestic Waste and Wastewater Generation during Project Lifecycle

Aspect	Units	Early Works, FS and Detailed Engineering	Phase 1 Construction Commence Jan 2025			Phase 1 Operations and construction ramp up	Phase 2 construction and Phase 1 operations			Phase 2 operations and construction ramp up	Completion of construction and demobilisation	Phase 2 Operations						
Year	-	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Total Workforce	-	3,099	9,766	10,441	10,802	10,297	10,206	11,369	11,445	11,445	5,518	5,327	5,748	5,966	5,980	5,969	5,924	5,918
Solid domestic waste generation rate	Kg/ capita/ day	0.4475																
Solid Waste generation in Accommodation Facility	Kg/day	1,387	4,370	4,672	4,834	4,608	4,567	5,088	5,122	5,122	2,469	2,384	2,572	2,670	2,676	2,671	2,651	2,648
Wastewater generation rate	L/ capita/ day	67																
Wastewater generation in Accommodation Facility	KL/day	208	654	700	724	690	684	762	767	767	370	357	385	400	401	400	397	397

Table 8-5: Summary of Project Waste Streams; Type, Nature, Estimated Volume and Management Requirements

	Description (Type, composition, etc.)	Source	Hazard Rating (Hazardous / Non-Hazardous)	Estimated Average Volume / Annum (tpa)				Not Compatible With	Bin / Container Colour	Waste Hierarchy Level	Management Requirements (treatment / disposal, etc.)
				Early Works (2024)	Phase 1 (2025-2027)	Phase 1 Operations and Phase 2 Construction Completion (2028-2033)	Full Operational Phase (2034-2040)				
1	Paper and Cardboard Box	Office and packaging waste	Non-Hazardous	Paper: 2 Carboard: 32	Paper: 8 Cardboard: 105	Paper: 8 Cardboard: 112	Paper: 4 Cardboard: 60	Not compatible with food waste, oil, grease, and other contaminants that can make recycling difficult.	Blue	Recycling	Treatment: Temporarily Stored on site through baling and send for Recycling to Quetta Periodically.
2	Food & Vegetation Waste	Accommodation camps, kitchen/canteen, offices, landscaping	Non-Hazardous	161	535	520	302	Not compatible with non-organic materials like plastics, metals, and glass, which can hinder composting processes. Compatible with other organic waste such as wood.	Green	Composting	Treatment: Composting onsite
3	Wood (Timber, Pallets, etc.)	Construction materials	Non-Hazardous					Generally compatible with other non-hazardous recyclables.	Yellow	Reuse or recycling	Treatment: Used as fuel onsite
4	Used Oil	Machinery maintenance, vehicle refuelling points?	Hazardous					Not compatible with water, solvents, and other chemicals that can complicate recycling and disposal.	Black	Recycling and incineration	Treatment: Recycled and remaining will be incinerated in an environment-friendly manner.
5	Oil & Grease Rags	Maintenance activities, construction/ production sites, storage areas	Hazardous	0	58	166	228	Not compatible with regular trash due to the risk of fire and contamination; will be disposed of as hazardous waste.	Red	Hazardous waste treatment/ Incineration	Treatment: Used as fuel and the balance will be incinerated in an environment-friendly manner.
6	Used Batteries	Equipment and vehicles, Offices, Production Areas and Accommodation Camp	Hazardous	0	167	480	656	Not compatible with regular waste streams due to the presence of heavy metals and chemicals; should be recycled separately.	Red	Hazardous waste treatment/ Recycling	Treatment: Temporarily Stored on site through baling and send for Recycling to Quetta Periodically.
7	Fluorescent Tubes (Long & Short)	Lighting in Offices, Accommodation Camp, Construction/ Production Areas, Storage and Maintenance Areas	Hazardous					Not compatible with regular trash due to mercury content; require special handling and recycling.	Red	Hazardous waste treatment/ recycling facility due to mercury content	Treatment: Send to certified recycling facility for Mercury and glass handling.
8	Leather - Conveyors (reconditioned parts)	Conveyor belts	Hazardous					Not compatible with organic waste streams; will be disposed of or recycled separately.	Yellow	Recycling	Treatment: Send to certified recycling facility periodically.
9	Leather - Textiles	Protective gear and equipment, offices, accommodation camp, production areas	Hazardous					Not compatible with regular textile recycling due to potential chemical treatments; requires specialised recycling through certified facility.	Yellow	Recycling	Treatment: Send to certified recycling facility periodically.
10	Rubber Tires (Truck & Car)	Vehicles	Non-Hazardous	0	556	1,600	2,550	Not compatible with regular waste streams due to size and material composition; will be recycled separately.	Yellow	Reuse/Recycling	Treatment: Could be reused or send for recycling.
11	Rubber - Liners (Mills)	Mill equipment	Non-Hazardous					Not compatible with regular waste streams; requires specialised recycling through certified facility due to material composition.	Yellow	Recycling	Treatment: Send to certified recycling facility periodically.
12	Glass—Bottles & Other	Office, canteen, production areas	Non-Hazardous	30	100	97	57	Not compatible with ceramics, Pyrex, and other non-recyclable glass types; will be sorted properly.	Blue	Recycling	Treatment: Send to certified recycling facility periodically.

	Description (Type, composition, etc.)	Source	Hazard Rating (Hazardous / Non-Hazardous)	Estimated Average Volume / Annum (tpa)				Not Compatible With	Bin / Container Colour	Waste Hierarchy Level	Management Requirements (treatment / disposal, etc.)
				Early Works (2024)	Phase 1 (2025-2027)	Phase 1 Operations and Phase 2 Construction Completion (2028-2033)	Full Operational Phase (2034-2040)				
13	Plastic - Lime Bags	Packaging	Non-Hazardous					Not compatible with regular plastic recycling if contaminated with lime; requires cleaning before recycling.	Blue	Recycling	Treatment: Send to certified recycling facility periodically.
14	Plastic Drums (1000L, 200L, 20L)	Chemical Storage	Non-Hazardous					Not compatible with regular waste streams if they contained hazardous materials; requires proper cleaning and recycling.	Blue	Recycling	Treatment: Send to certified recycling facility periodically.
15	Metal – Nonferrous, Cans, Cables etc.	Construction and maintenance	Non-Hazardous	11	38	37	22	Not compatible with ferrous metals in recycling processes; will be sorted separately.	Blue	Recycling	Treatment: Send to certified recycling facility periodically.

Notes:

Tpa = tonnes per annum

Pyrex is commonly used for laboratory glassware and kitchenware because it can withstand high temperatures without breaking.

9. Waste Management

9.1 Prevention / Reduction

As a first measure, RDMC will consider how waste generation can be reduced on site.

RDMC will evaluate its supply chain and, where possible, negotiate and contract with suppliers to reduce the packaging associated with goods purchased and buy in bulk to reduce the associated packaging e.g. cement delivered in 1 tonne bulk bags rather than smaller volumes packaged in paper bags.

If packaging is required to protect goods during transport, RDMC will, where possible, contract suppliers to remove the packaging waste off site after goods are delivered and secured in the stores on-site. This will reduce the volume of waste that will need to be stored on site and later be disposed of.

Materials used to bring good in e.g. wood pallets can be substituted for other materials such as plastic pallets which could be reused by the supplier.

9.2 Reuse / repurpose

Often waste can be repurposed into new, functional products that can be used on the mine site or by local communities and possibly sold to create an income for themselves.

Waste streams that are being successfully repurposed on other mine sites include

- plastic chemical containers (e.g. 25 L drums) used for the storage of water in the community. On the mine these can be used to store any material from ball mills, product, or used as the waste containers,
- wood (pallets and other offcuts) are made available to the community and this is used to make chicken coops/ hen houses or furniture (beds, cupboards);
- scrap metal including 210 L oil drums can be used to make other products – cooking utensils, farming utensils. The old drums can also be used to make ball mills that can be used in the milling section. The use of scrap metal is endless. On the mine the drums can be used as waste containers; and
- Old oil filters – oil can be removed from these filters by placing them upside down on a drip tray and used as waste containers (dust bins in the offices) or this could be pressed and sold as metal.

The mine site may recover some items for reuse at the mine site, however RDMC will invite entrepreneurs from the local communities to propose which waste streams would be fit for repurposing and reuse, where these products can be used and/or sold into the local and regional markets.

RDMC will support and assist any local business opportunities where these activities can contribute to the economic well-being of local community members and ensure all waste selected for this activity is safe and fit for purpose before releasing it offsite.

9.3 Waste Collection, Separation and Storage

During all phases of the project, the waste will be separated at source into containers or designated areas, then will be collected and transferred to a central waste area where each waste stream will be stored in demarcated areas awaiting final handling i.e. repurpose, recycle or final disposal.

Figure 8-1 indicates the flow of waste through collection, storage and final disposal.

depicts the Project's flow of waste on site from source to final handling/ disposal.

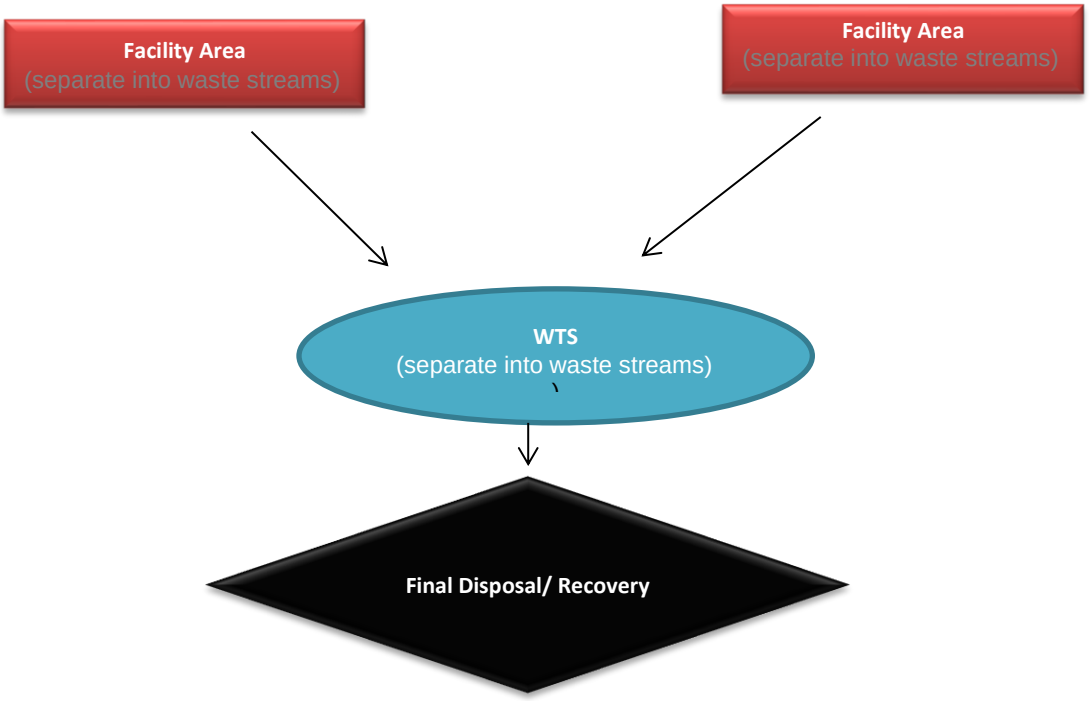

Figure 9-1: Waste Collection and Storage Flow Diagram

9.3.1 Collection and Separation at source

Each Department will be responsible to identify an area which will be demarcated for the collection, separation and temporary storage of various waste streams generated in their areas of operation. This area will be constructed such that both hazardous and non-hazardous waste can be safely stored in appropriate and clearly marked bins / containers until the waste can be removed to the central waste storage facility (CWSF).

- Hazardous waste containers must be placed on a concrete slab (and bunded as required) to prevent any spills into the nearby environment. Where possible, waste should be separated in recyclable and non-recyclable waste for ease of handling when transported to the CWSF.
- All non-hazardous waste must also be further separated into recyclable (e.g. steel, paper, plastics, aluminium cans and tins) and non-recyclable (e.g. general waste for disposal) waste streams. Colour coded bins/ containers will

be provided for each area (as described below) and the waste to be placed in each is to be clearly demarcated to ensure effective waste separation.

A comprehensive list of waste streams, allocated colour containers for collection, safe storage and handling will be posted on all notice boards in the department.

Should there be a new materials or waste stream that is not recorded in the waste inventory, the department must contact the Waste Manager on site to find out how the waste should be handled at source until collection. It is the Waste Manager's responsibility to update the waste inventory as required.

The Departmental storage areas will, as a minimum, have:

- Be within close proximity of the associated activities, until it can be removed to the central waste area;
- Clearly marked fit-for-purpose containers with signage indicating the waste stream to be stored in each container/bin. Separate waste streams will be disposed of into different colour bins.
- A concrete / impermeable bunded area for storage of hazardous waste containers, to prevent seepage of contaminants into the receiving environment;
- A system for the replacement of damaged containers, bins and skips.

Where hazardous waste requires special storage requirements (e.g., fluorescent tubes) and these are not available at source, the waste will be transported immediately to the central waste area for separation and safe storage.

A **standard colour coding system** for all storage containers has been developed and documented as part of the Environmental Management System (EMS).

The IFC EHS Guidelines require clear labelling and segregation of waste but do not prescribe specific colour codes universally. However, there are general industry practices which commonly used colour codes for waste segregation. These are listed in Table 9-1and will be adopted on site.

Table 9-1: Waste management colour coding system

Hazardous Waste	
RED	Hazardous waste such as chemicals, batteries, and contaminated materials
YELLOW	Clinical or infectious waste
Non-hazardous Waste	
BLUE	Recyclable materials like paper, cardboard and certain plastics.
GREEN	Organic waste, including food and vegetation waste.
BLACK	General non-recyclable waste.

Posters / signage displaying the colours and associated waste streams are to be displayed in all waste collection areas. Familiarisation with this Standard will be included in onsite induction and other training programmes where waste separation training is required.

All key areas where waste is generated on site will be recorded in the waste inventory, together with the type and calculated volumes of waste being generated.

All locations for the collection and storage of waste will be documented and displayed on a map indicating who is the responsible person for the area. These maps shall be displayed on notice boards and central information areas.

Storage of waste at source will be temporary and so when bins / containers are near full, the department will inform the waste collector on site to collect and transfer the waste to the CWSF to prevent build up and overflow of waste in any area of the mine site.

A tractor trailer system will be used for the internal collection and transportation of the waste from the source storage areas to the CWSF. The removal of the waste will be scheduled on a weekly basis and can be increased if more regular removal of waste is required.

The schedule will be developed and communicated to all department managers and the manager of the CWSF to ensure access to all waste storage areas for vehicles and staff for removal activities to the central storage area on site.

The waste collector will have the right to refuse collection of the waste containers/bins if the waste has not been separated at source. Should this occur, the Departmental Manager will ensure that the waste is separated correctly and then inform the waste collector when it is ready for collection.

9.3.2 Central Waste Storage Area and Transfer Facility

A Centralised Waste Storage Facility (CWSF) will be developed to collect and temporarily store the cumulative waste from all designated collection areas.

The purpose of the CWSF is to accommodate and appropriately handle both general and hazardous wastes. Waste will be fully contained to prevent pollution of the environment and risk to human health. Here the waste will be further separated (if required), prepared for further handling and then stored until transferred to the next stage of waste management.

The CWSF will have its own:

- Receiving area / bay;
- Waste Separation Area (where further separation of waste is required);
- Waste processing area where waste is compacted, shredded and further prepared for either transport to Quetta or incineration on site.
- Holding area with separate bay / containers for the storage of recyclable materials; and

- Holding area for non-recyclable waste to be responsibly disposed of.

The following measures will be implemented at the CWSF:

- The area shall be demarcated into various bays/sections where the different waste streams will be accommodated;
- Suitable containers for hazardous and non-hazardous waste collection and removal will be provided where necessary;
- Each demarcated area and waste container will be marked/labelled or colour coded, and a sign will be erected to show what waste can be disposed of in that specific container or area;
- The waste sites/containers will be animal-proof, e.g. covers or fencing around the footprint of the CWSF. This will be to prevent the unnecessary dispersal of waste through wind or animals;
- The waste sites will have a concrete impermeable base that will be strong enough to accommodate the weight of the vehicles to collect the bins and prevent any seepage and contamination;
- All lay down and waste areas shall be kept neat, tidy and well maintained; clear of any litter to prevent any fires; and
- The CWSF shall be assessed on a regular basis and materials that are redundant shall be removed through the asset disposal process.

9.3.3 General – Non-hazardous waste

General waste will arrive at the designated receiving bay where the waste that requires further separation into individual waste streams will be transferred to the central sorting area and waste that is adequately separated will be directed immediately to the designated storage area.

- Waste that is reusable or can be repurposed will be separated and stored temporarily before being distributed to the areas of the mine where it can be reused or repurposed for further use. Where this waste cannot be utilised on site, but there are opportunities for reuse and repurpose within the local communities or Quetta, the waste contractor will arrange transport of this waste to designated offsite destination.
- Waste will be separated into their waste type and final handling requirements. For example, paper will be stored in an area to be transported to a licensed offsite recycling facility whereas food waste will be stored in an area where it can be easily transferred to the composting facility on site.
- Waste that is compactible such as cardboard, tins, and plastics will be compacted and bailed to reduce the space required for the storage of these waste streams at the facility and to make the transport easier to offsite contractors.

- The storage and management of food waste and a general non-hazardous waste management process are detailed in separate sections below.

9.3.4 Hazardous Waste

Hazardous waste will be stored within a demarcated area at the CWSF. This area must have a concrete impermeable surface, and bunded where liquid waste will be handled and stored, to prevent seepage or spillage into the environment. All spillages/runoff from this area will be contained to a sump.

The area must also be well ventilated, and all health and safety protocols always implemented and adhered to. The Manager of the CWSF will be responsible to ensure implementation and that staff are appropriately trained to operate this section of the facility.

Containers/ bins meeting international and national standards will be used to store the waste streams until the waste is reused/ repurposed, recycled or disposed of. Flammables, oils, empty aerosol tins and other materials that can ignite spontaneously will be deposited in the hazardous containers with lids marked for this purpose.

Appropriate international safety signage and equipment will be made available in this area and all staff trained on fire prevention and safety.

Refer also to the Hazardous Substances and Dangerous Goods Management Procedure (6105A0000-0000-JA05-0002)

9.4 Summary of final handling/ disposal by waste stream

The onsite processing and final handling of main waste streams identified for the mine site are summarised below. Should there be additional waste materials that do not fall within the below categories, please inform the onsite Waste Manager immediately.

The Waste Manager will undertake the necessary research and either classify the waste into one of the below waste streams or initiate a new waste stream with the necessary management protocols for the handling of this waste stream. This Waste management Plan will be updated accordingly.

Much of the Project waste will be transported for disposal at a third party facility. RDMC will ensure that the facility holds all of the necessary approvals and licences. RDMC will also develop and implement an appropriate audit procedure to ensure the facility complies with the relevant standards and conditions of any licence or permit.

9.4.1 Paper and Cardboard

All forms of paper and cardboard (including packaging, office paper, shredded documents etc.) will be collected in a closed blue container at source. The container should be closed to prevent paper from escaping in the high wind conditions on site.

The full containers will be transferred to the CWSF and bailed on arrival then stored in a designated area. Once there is sufficient waste to complete a full load, the bails will be transported to a recycling facility in Quetta by the appointed waste contractor.

While stored on site, the necessary fire safety equipment must be installed and staff trained to handle any emergency as the storage of this waste type is a serious fire safety risk.

9.4.2 *Food and Vegetation Waste*

All food waste generated by kitchens/ canteens and other areas where food is prepared on site will be temporarily stored in suitable animal proof green coded containers in a designated fenced off area near the source where the food waste is generated.

Once bins are near full, the bins will be transferred to the CWSF. The food waste will then be transported to and stored in a designated location at the CWSF for further handling and disposal.

An onsite composting facility will be designed and operated where food waste and vegetation from clearing during construction will be composted and the resulting compost will be used on site, where possible.

This facility will be managed by the appointed waste contractor for the mine site.

9.4.3 *Wood (timer, pallets)*

Where possible, pallets will be returned with the respective suppliers during delivery before they depart from site for reuse.

Where this is not possible, any pallets remaining on site must be neatly stacked in a designated area at source and then transferred to the CWSF for storage where they will be repurposed for mine activities or used as fuel on site.

Waste timber from construction activities and old waste wood and timber replaced during operation must be neatly stacked in a designated area and smaller offcuts and sections will be placed in a blue bin in the demarcated area, clearly indicate the waste to be placed in this container. All wood waste will be transferred to the CWSF and repurposed where possible otherwise used for fuel on site.

Management and site personnel are committee to explore opportunities to partner with local communities to create businesses opportunities where products can be fabricated from old pallets and timber e.g. furniture. Please contact your department manager or the Site Waste Manager should you wish to be actively involved in this project.

9.4.4 *Plastics*

All plastic bottles and waste bags must be collected in a designated blue bin with clear signage indicating the waste type to be placed in the bin.

Plastic drums (1000L, 200L, 20L) must be stacked neatly in a separate designated area as some will not fit in the bins and others will quickly take up vital space. The designated area must have secure sides to prevent the drums / plastic containers from blowing away in high wind conditions.

All plastic waste will be transferred to the CWSF and will be further sorted into plastic bags (including lime bags), bottles, and plastic drums. This waste will be compacted and bailed for storage until final transport to a licensed recycling facility in Quetta.

9.4.5 Glass

All glass material, including bottles and broken glass from construction and maintenance activities must be disposed of in a blue bin clearly demarcated for glass waste. The container will be designed to ensure safe disposal of glass, with clear health and safety signage displayed in the disposal area.

Once full, the containers will be transferred to the CWSF for storage. Once there are sufficient volumes, the glass waste will be transported to a licensed recycling facility in Quetta.

9.4.6 General Waste

General waste will be generated in all areas of the mine site and is considered non-hazardous waste that cannot be recycled, composted or reused but must be disposed of at landfill in a responsible manner.

Such waste must be disposed of black bins at source and when nearly full, will be transported to the CWSF for storage before transport to either the onsite landfill (if the waste is deemed safe for disposal) or will be transported to a certified landfill facility in Quetta.

9.4.7 Fluorescent Tubes (Long & Short)

Old fluorescent tubes resulting from regular maintenance of building lighting will be collected and transported to the CWSF by the maintenance team and safely stored in designated bins.

Once there is sufficient volume, this waste will be transported to a licensed facility in Quetta for mercury and glass handling where materials for recycling re recovered and the remaining waste is disposed of in a licensed landfill site for safe mercury handling.

9.4.8 Conveyor belts

Worn and damaged conveyor belt material will be transported directly to the CWSF after maintenance or repair activities. The material will be stored in a demarcated area designated for old conveyor waste. This must be a cool, dry area to reduce the risk of fire.

Where possible, conveyor material should be repurposed on site and the remaining waste will be transported to a licensed recycling facility in Quetta. That which cannot be recycled will be disposed of in a licensed waste facility.

9.4.9 Metal Waste

Aluminium cans and cabling generated during construction and operational maintenance activities must be disposed of and temporarily stored in the demarcated waste area. This waste must be stored in a blue bin with clear signage indicating what waste material can be disposed of in this receptacle.

Ferrous waste will be collected in a separate skip bins.

Once the bin is almost full, it will be transported to the CWSF for cumulative storage of this waste type in a designated area. When there are sufficient volumes, the waste contractor will transport the waste metal to a licensed recycling facility in Quetta.

9.4.10 *Tyres*

Used or damaged tyres must be disposed of correctly to prevent long-term pollution and comply with best practice principles. Waste tyres generated in the vehicle maintenance area will be regularly transported to the CWSF for storage where a large, designated area will be required.

Some of the management measures for the storage of tyres include:

- Compile and document a tyre reduction and management plan;
- Create a centralised tyre stockpile and keep an updated inventory of the number of tyres at the store;
- Tyres should be stored in a closed environment with adequate ventilation to prevent the accumulation of bacteria and other health hazards.
- The necessary fire risk mitigation measures will be implemented to ensure that there is no risk to the adjacent infrastructure or people. Storing tyres in a closed, controlled environment will also reduce fire hazards by limiting exposure to external elements such as heat or sparks.
- This method also ensures that tyres remain in good condition, preventing degradation from environmental factors as storage in an open environment can deteriorate their condition due to prolonged exposure to the elements, such as UV radiation, rain, and temperature fluctuations. Over time, UV radiation can cause rubber to degrade, leading to cracking and loss of elasticity.

When there is a sufficient volume of HDV and LDV tyres, the waste contractor will transport these tyres to Quetta where tyres will be re-treaded where possible.

Other possible uses may include:

- Crumb Rubber Production: Shred tires to produce rubber for roads and sports surfaces.
- Use shredded tyres as an alternative fuel in Cement Kilns during cement production.
- Repurpose tyres for construction materials like retaining walls.
- Community Recycling and Artisanal Projects where tyres are transformed into crafts and furniture to promote recycling.

Management will explore opportunities to return old tyres to contracted suppliers for reuse or disposal, when new tyres are delivered to site.

The repurposing of **large tyres** from mine vehicles on the mine site is often limited and the transporting off site is not economic or recycling of these tyres is not feasible. Some uses for old and damaged tyres on site include:

- Barriers in the mining process;
- Demarcation purposes in making haul roads; and

- Creation of a barrier maze where training on the large trucks can take place.

9.4.11 *HFO waste oil*

Waste oil generated from the HFO plant will be immediately transferred from the processing plant to fire safe containers, certified to international standards. The drums should be coloured coded as red for hazardous waste and temporarily stored within a concrete and bunded area immediately after removal from the plant process (which should also be demarcated with the colour coding red).

The oil and sludge will be transported daily to a more safe and secure area at the CWSF. This storage area will be designed to be of sufficient capacity to capture any accidental spills from the storage containers in this area. The bunded area will be able to contain at least 110% of the volume of the largest container and will comply with International best practice for environmental and fire safety related to storing waste oils. The necessary safety signs will be posted and spill kits made available in case of a spillage.

All staff will be appropriately trained in the handling of such hazardous waste as well as all fire and health and safety related measures to manage the risks associated with this activity.

The sludge and oil contaminated waste from the HFO plant will be incinerated in a dedicated incinerator and will include a post-scrubber. Its capacity will be approximately 15,000 kilograms (kg) a day.

The location of the storage area will be within a reasonable distance of this dedicated incinerator to reduce the risk of spills to the environment and other related risks associated with the transport of the waste oil.

The fly and bottom ash obtained from the incineration process will be managed as per their own Standard Operating Procedures (SOPs) to adhere to the national legislation and international best practice.

Ash (Fly ash or Bottom ash) from the incinerator will also be analysed and classified to determine where final disposal can take place. If inert, the waste will be disposed to the onsite landfill or if found unsuitable for disposal as is, management will research alternatives with which the ash can be co-disposed in order to neutralise the negative impacts of the ash waste, thereby allowing safe disposal in the onsite landfill site.

While this evaluation is underway, the ash will be temporarily stored on site and regularly transported to an appropriate licenced disposal site in Quetta.

A further possibility which the team will explore is the use the ash in process of brick making. The success of this will depend on the availability of community partnerships and whether the necessary knowledge required is available within the community. Should this prove viable, the implementation of this project will be included in future updated of this Waste Management Plan.

9.4.12 *Used oils and greases*

Various waste oils and greases will be generated through servicing and maintenance of vehicles and equipment (e.g. pumps, hydraulic systems) on the mine site during both construction and operational phases.

The waste oil generated from these activities must be immediately transferred to fire safe containers, certified to international standards. The drums should be colour-coded red for hazardous waste and temporarily stored at source within a concrete and bunded area with covering to keep the area cool given the high temperatures on site. The area must also be clearly demarcated with red colour coding and signage).

The oil containers will be regularly transported to a storage area at the CWSF. This storage area will be designed to be of sufficient capacity to capture any accidental spills from the storage containers in this area. The bunded area will be able to contain at least 110% of the volume of the largest container and will comply with International best practice for environmental and fire safety related to storing waste oils. The necessary safety signs will be posted and spill kits made available.

All staff will be appropriately trained in the handling of such hazardous waste as well as all fire and health and safety related measures to manage the risks associated with this activity.

Used oils will be sealed and transported to a certified recycling facility in Quetta where oils will be re-refined into lubricant or used as fuel in industrial processed.

Waste oil that cannot be recycled, will be incinerated on site. The incinerator's capacity will be determined using the estimated volumes of wastes stream identified in the waste inventory and will include post-scrubber emission control.

Old and used grease waste will be incinerated on site at temperatures >850^{o}C asper Pak-EPA standards.

The incinerator will be located within the vicinity of the HFO incinerator and storage area to reduce the risk of spills to the environment and other related risks associated with the transport of the waste oil.

Similarly, with the HFO incinerator ash, ash will be analysed to determine the appropriate disposal method. Please refer to 9.4.11 for details.

9.4.13 Oil and grease rags

Oil & grease rags should be collected and stored in seamed drums in a concrete and bunded area which is clearly demarcated with red colour-coding for hazardous waste. The storage at source must be a cool and well-ventilated area to prevent the risk of fire and build of volatiles in the area.

Once full, these containers will be transported to the CWSF for safe storage prior to final disposal. The storage area at the CWSF will be concreted and bunded to prevent spills to the environment as well as remain cool and well-ventilated to maintain health and safety protocols.

Oily rags will be responsibly incinerated in the onsite incinerator installed for the disposal of oils and greases.

9.4.14 Batteries

Regular replacement of batteries through maintenance and servicing of mine vehicles from LDVs to large haul trucks as well as on site equipment and power supplies will

produce a variety of waste batteries including (lead-acid, lead carbon, lithium gel, deep cycle, uninterruptable power supply (UPS) and solar batteries).

All batteries must be disposed of in acid-resistant containers at source and stored on a concrete and bunded area which will be demarcated with red colour-coding and signage.

Damage or leaking batteries to be stored in a container to avoid leaking onto other batteries and potential leaks to the environment.

When the containers are considered nearly full, they will be transported to the CWSF for safe storage in a covered, concrete and bunded area.

The batteries will later be transported to a licensed recycling facility where parts of the batteries can be reused and valuable minerals recovered during the recycling process, which reduces the need to manufacture new parts or batteries.

9.4.15 Medical waste

All medical waste generated at the onsite clinic will be disposed of medical waste bins meeting international standards. This waste will be safely stored at the clinic in a safe area only accessible by trained medical staff and waste removal handlers that are properly trained.

Where possible, medical waste will be incinerated in the onsite incinerator and remaining waste will be safely packaged for transport to be incinerated at a licensed facility in Quetta.

10. Onsite Facilities

10.1 Incineration

The current Waste Management Plan has allowed for 2 onsite incinerators:

- Solid and Liquid Waste Incinerator: The incinerator's capacity will be determined by the estimated volumes for the various waste streams and will include post-scrubber emission control.
- HFO Waste Incinerator: A second incinerator will be dedicated to the disposal of HFO sludge and oil contaminated waste from the processing plant and will include a post-scrubber. Its capacity will be approximately 15,000 kilograms (kg) a day.

Final design of these facilities is underway and will give due consideration to appropriate emission control measures.

Where these facilities do not meet the required local and international standards for disposal of a waste stream, the waste will be transported to a licensed incinerator capable of sale disposal in Quetta. This will include waste that will release toxic emissions when burned, such as certain heavy metals (e.g., mercury, cadmium), and materials containing polychlorinated biphenyls (PCBs) or dioxins.

10.2 Bioremediation Area

Due to the nature of mining, while measures are in place to reduce the risk of hydrocarbon spillages there may be accidental spills over the life of the operation.

Due to the remote location of RDMS a bioremediation area will be designed and operated in close proximity to the CWSF to treat hydrocarbon-contaminated soils and will include the following:

- Demarcated footprint of the area together with necessary stormwater management measures implemented;
- The contaminated material will be actively managed to ensure that the contaminated material is rehabilitated;
- Once the material is rehabilitated it will be made available for reuse; and
- The area will be graded with a perimeter embankment.

10.3 Onsite landfill

The Project will design and operate an onsite Landfill during operations to manage and dispose of the significant quantities of the waste that cannot be reused or recycled.

The onsite non-hazardous landfill design in not yet complete but will consider the waste to be disposed of and ensure that all international standards are adhered to.

The following measures will be implemented as a minimum:

- An operating plan will be compiled to operate the landfill site to ensure sufficient space is available for waste disposal;
- Cells will be opened in a predetermined manner and waste disposed of to the furthest section (back) of the cell. The cell will be backfilled from the back to the front. All waste shall be covered on a daily basis to prevent windblown littering and nuisance animals entering the site. The placement of the cells will be optimised to ensure the maximum use of the area for the landfill site;
- No hazardous waste will be disposed of in the landfill site; and
- The necessary access control shall be implemented to prevent unauthorised access to the landfill site.

10.4 Wastewater Treatment Plant (WWTP)

An onsite Wastewater Treatment Plant (WWTP) to treat generated wastewater.

A STP will be installed at the accommodation facility and at the processing plant. The sewage treatment process will include Rotational Biological Contactor (RBC) technology.

Relatively small amounts of sewage will also be treated from the guard houses (along the perimeter fence), airstrip and explosive storage area using septic tank and infiltration systems. The STPs will be designed to handle four times the average daily intake and accommodate shift changes.

The effluent from the RBC plants will be treated using ultraviolet light to decrease the bacterial concentration and will then be recycled into the processing plant circuit.

Sludge will be removed and transported to a licenced facility (most likely in Quetta) for composting. It is estimated that during the construction phase, 2.9 m^3 of sludge will be produced daily reducing to approximately 1.5 m^3 during the final full operational phase.

11. Transport Offsite

All waste identified for recycling will be transported to licensed facilities located in Quetta. This will be undertaken by a licensed water contractor employed by RDMC.

All materials will be bailed or stored in containers designed for transport depending in the waste material being transported. The materials will be secured to the vehicles and safety protocols developed and adhered to for the journey.

All waste removed from site must be weighed and recorded for reporting purposes.

The service provider will provide RDMC with the permit to transport the waste, and the permits/licence of the waste facilities where the waste will be delivered.

A copy of the safe disposal certificate or proof of delivery must be sent to the Waste Manager within 5-7 working days of disposal.

11.1.1 Hazardous waste

Hazardous waste will be securely packaged in UN-certified, leak-proof containers, labelled per Hazmat and Pak-EPA standards, and transported to licensed facilities in Quetta. Specialised vehicles with secondary containment and safety measures will handle the waste.

Materials such as oils, chemicals, and non-recyclable hazardous items will undergo treatment, neutralisation, or incineration at EPA-compliant sites. All transport will follow approved routes, and disposal will be verified with completion certificates and compliance reports to ensure safe disposal and adherence to legal requirements and international standards.

12. Emergency Response Planning

To ensure workplace safety, RDMC has developed a comprehensive Emergency Response Plan (ERP) that addresses potential scenarios such as chemical spills, fires, or toxic emissions. This plan will outline specific procedures and responsibilities for each type of emergency. This will include, but not limited to,

- Strategically installation of firefighting equipment, spill kits and eyewash stations throughout the facility to provide immediate access to essential safety tools.
- Conducting regular safety drills to practice these emergency procedures, ensuring that all personnel are prepared and that the effectiveness of the response plan is continually assessed and improved. This proactive approach helps mitigate risks and enhances overall safety readiness.
- Ensuring availability of appropriate Personal Protective Equipment (PPE) based on risk assessment (e.g., gloves, goggles for routine tasks).

- Maintaining PPE inventory and conducting regular inspections for damage or wear.
- Training to staff on proper PPE usage, including donning (putting on PPE) and doffing (removing PPE) procedures.

13. Roles and Responsibilities

The key roles and responsibilities for waste management at Reko Diq Mine are presented in Table 13-1.

Table 13-1: Roles and Responsibilities

Role	Key Accountabilities
All Staff	• Awareness and adherence to all applicable and approved site waste management procedures; and • Identify and report any incidents or potential hazards to the environment to their superiors.
Clinic Manager	• Ensure that medical wastes are manged in accordance with health and safety requirements. Medical wastes are managed in accordance with the health and safety requirements.
Main Contractor (collection and transportation of waste)	• Ensure the correct Standard Operating Procedures for collection and transportation of wastes and especially hazardous wastes are adhered to; • Ensure the driver and the transport vehicles are correctly licensed; • Ensure the training and awareness of the driver in the management of the various waste streams as well as how to proceed in the event of an incident.
Department Managers	• Ensure that resources are available to facilitate the handing, temporary storage and dispose of waste responsibly; • Ensure that funds are available for waste management in their area; • Ensure that waste streams produced are identifiable and the correct disposal method/ equipment is provided; • Consider the environmental impacts of waste generation and disposal where waste is generated and disposed in their areas of accountability; • Implement strategies to minimise waste generation, re-use and recycling in their areas of responsibility; • Maintain good housekeeping in their areas of responsibility in alignment with requirements of the WMP and related Standard Operating Procedures; and • Conduct monthly inspections of areas where waste is generated and or stored to ensure compliance to waste separation at source.
Environment Department	• Compile, communicate and review of all applicable regulatory and other requirements pertaining to waste management; • Implement and maintain this WMP; • Responsible for monitoring and mitigating any potential environmental impacts;

Role	Key Accountabilities
	• Develop, document and implement strategies to minimise waste generation and maximise recycling; and • Develop and implement of waste management monitoring programs.
Process Manager	• Ensure that the wastewater treatment plant is maintained so that the treated effluent complies with appropriate requirements; • Maintain the wash-down facilities in accordance with specified operating criteria as per construction and licencing documentation; and • Ensure that the process plant wash-down water is contained within the designated bunding and recirculated to the process plant. Zero discharge off site.
Site Manager	• Ensure adequate staff, expertise and financial resources are available to effectively manage waste in compliance with applicable regulatory and other requirements; • Ensure that the waste management requirements are implemented into contracts; and • Review the performance of managers in implementing their waste management accountabilities.
Waste contractor	• Operate and maintain all waste management facilities, e.g. landfill site and CWSF; • Oversee and coordinate the removal and disposal of hazardous waste; • Keep records of monitoring the various waste streams; • Monthly inspections of the waste management facilities and keep records of the inspections in accordance with RDMC's Policy; • Ensure that the CWSF are legally registered with the appropriate authorities and compliance thereof; and • Implement a schedule for the removal of bins and other waste containers to the central CWSF and the disposal of to an appropriate licenced landfill site.
Supply Manager	• Investigate the use of recycled materials when supplies are brought onto the mine, e.g. the use of plastic pallets etc. • Storage, packing and transportation of wastes and recyclables offsite in accordance with this management plan and in accordance with the relevant legislative requirements; and • Record keeping for off-site disposal of controlled wastes.

14. Monitoring

14.1 Monitoring Programme

A monitoring programme will be implemented to ensure that the mitigation measures compiled in this WMP is effective and achieved the objectives of waste management.

Weekly inspections will be undertaken around the mining area, processing plant, workshops and administrative buildings to:

- monitor the temporary storage of levels of waste in the containers at each facility to prevent overflowing of the containers and for littering or contamination;
- inspect whether adequate waste separation is being undertaken and whether the appropriate equipment and facilities are available or in good working condition;
- identify any signs of contamination of soil which could result in the contamination of surface and/or groundwater; and
- evaluate the effectiveness of the waste management measures.

The potential impacts associated with the waste management shall be monitored as outlined in Table 14-1.

Table 14-1: Waste Monitoring Programme

Impact/ Parameter Monitored	Monitoring Method	Frequency	Performance Indicator
Composting facilities if established	Testing for harmful pathogens	Six monthly or when composting is ready to be used	Testing for the presence of potentially harmful pathogens
Composting facilities if established	Visual inspection	Monthly	Rodents – traces of rodents at the composting facility
Housekeeping at waste areas at each department	Visual inspections	Monthly	Waste separated into the various streams dedicated waste containers. No overfilling of waste containers
Health risks from Health Care Risk Wastes (HCRW)	Visual inspection	Ongoing	Risk of infection spreading through HCRW.
Landfill	Visual inspection and Inspection log	Weekly	All of the various waste streams are in the correct area, no litter, no vectors or rodents, no visual contamination.
Housekeeping and waste storage at onsite Landfill	Visual inspections	Monthly	Housekeeping and responsible operation of landfill; daily covering of disposed waste in active cell
Methane at the landfill	Methane level tests at the landfill site	Biannually	Methane tests demonstrates high levels of methane.
Odours	Human detection	Ongoing	Nuisance odours are obnoxious to people in the vicinity.
Rodents	Visual observation for traces of rodent presence	Ongoing	Traces of rodents in waste storage, management, or disposal areas.
Vectors	Visual observation for the excessive presence of vectors	Ongoing	Excessive presence of vectors in waste storage,

Impact/ Parameter Monitored	Monitoring Method	Frequency	Performance Indicator
			management, or disposal areas.
Soil pollution	Sample and test potentially contaminated soil	When chemical spillage or leachate release occurred.	Release of contaminants into soil.
Transport Vehicles/ Trailer	Visual inspection and mechanical	Monthly	Poor conditions or failure to operate.
Waste oil and grease	Visual inspection and inspection log	Weekly	Incorrect storage of waste oil and grease, visually not following the correct procedures

14.2 Photographic Record

A photographic record will be maintained throughout the life of the mine and submit it with progress reports to the Authorities when required. This will include:

- Photographs of the development of the various waste areas including the salvage yards at the Departments;
- Photographs of the development of the landfill site; and
- Photographs of the maintenance and operations of the landfill site.

15. Record Keeping

We will record and store the following records at site according to the EMSs requirements and made available on request:

- Electronic reporting system – all waste generated on the mine, recycled or disposed of shall be populated in an electronic system. This data will be used to determine the effectiveness of the waste management actions that are in place, generating reports relating to the waste management;
- Waste registers for tracking – the departments will be responsible for their own waste registers and this will be updated when there is any changes to the process, activities on the mine. The waste registers will be used to report on types and quantities of waste generated and disposal options and volumes,
- Update to waste management plan after 3 years as per Balochistan laws – during the update of the waste management plan all the changes that were made will be included; any new waste streams identified; any changes to the potential impacts to the receiving environment. The waste streams could potentially be updated or reviewed on an annual basis. Or should something changes the procurement department will inform the waste department in advance to cater for the potential disposal options available.

16. Auditing

RDMC will review the WMP through annual monitoring activities set out in Section 11 that will assist in ensuring continuous improvement in the management and mitigation of waste impacts.

Monitoring on an operational level will be instituted for waste generation trends, waste inventory, waste tracking, environmental monitoring programmes and audits, environmental incidents, medical assessments and implementation of the WMP.

16.1 Internal Monitoring

Internal monitoring and visual inspections to be undertaken by the waste management team on at least a monthly basis. Internal auditing will be undertaken and result in:

- the continuous improvement of the waste management practices; and
- the annual update of the WMP or more regularly in the case of a significant operational change. Internal auditing of performance against the WMP will be quarterly as well as audits of the waste service providers six monthly.

16.2 External Compliance Audits

Audits of external facilities such as recycling companies and the hazardous waste disposal facility in Balochistan will be conducted on six monthly basis by a specialist waste management consultant and RDMC representatives. This is important and will be implemented to ensure that the waste is disposed of in an environmentally safe manner and in accordance with the legislative requirements.

As part of the audit, typical aspects that would need to be considered include:

- Issues that relate to their concerns, waste types/needs;
- Disposal methodology;
- Environmental Management systems;
- Permit/licences;
- Waste acceptance criteria;
- Site engineering;
- Onsite equipment; and
- Monitoring records.

17. Training

All staff will undergo training on the importance of waste management and be aware the different waste streams, waste minimisation. An awareness programme will be compiled and be presented during the annual induction of all new employees or visitors to the mine. Waste specific training will be undertaken at the sites where these activities will be undertaken with the focus on what actions need to be implemented to prevent the impacts associated with waste management. Safety instructions will be displayed prominently in

all work areas. Safety training programs will be conducted for employees, focusing on hazard recognition, safe practices, and emergency protocols.

Document No.:	6105A0000-0000-JA12-0005	Rev:	0
Document Title:	Environmental Inspection Procedure		
Issue Date:	2025-01-21		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		Rev:	0

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2025-01-29		Vaqar Zakaria	Tanzeel khan	Ashley Price
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Table of Contents

1 PURPOSE

The purpose of this procedure is to describe the process for conducting environmental inspections at the Reko Diq Mining Project and associated facilities. The aim is to ensure that the Project is delivered in alignment with internal and external environmental standards and expectations, and to ensure compliance with conditions of environmental approvals and regulations.

2 RESPONSIBILITIES

2.1 Project Director

Project Director is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.

2.2 RDMC Head of Sustainability

The RDMC Head of Sustainability is responsible for:

- Ensuring the currency, relevancy and accuracy of content contained within this procedure;
- Overseeing the implementation of this Procedure;

2.3 Environment Department

The Environment Department is responsible for:

- Completing the environmental inspections as per this procedure and the specified inspection schedule.
- Ensuring inspection data is entered into the INX InControl® system and that any identified actions are appropriately assigned.
- Closing out any corrective actions identified during the inspections.
- Assisting with the resolution of queries relating to this procedure.
- Ensuring the requirements of this procedure are well understood.

2.4 Site / Construction Manager

The Site / Construction Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure;
- Incorporating the requirements of this procedure in project planning.
- Ensuring project operations are performed in accordance with legal and other requirements; and
- Reviewing the effectiveness of the system for continual improvement.

2.5 Line Functions

Departmental Managers / Leads / Supervisors are responsible for:

- Ensuring adequate access to Project areas and providing support necessary for environmental inspections.
- Completing any corrective actions that are assigned.
- Informing environment department in case any non-compliance is observed.

2.6 All Employees, Contractors and Visitors

All employees and contractors are responsible for adhering to the requirements contained within this procedure and reporting incidents, and non-conformances.

3 DEFINITIONS AND ABBREVIATIONS

The followings are definitions and abbreviations used in the procedure.

Abbreviations	Definitions
Inspection	A formal and organised examination or evaluation
Inspection Form	A formal inspection where a written checklist document is used to record tasks completed or conditions verified, to note any non- compliances and corrective actions to be taken.
Corrective Action	Action to remedy a non-conformance, hazard or address a deficiency.

4 PROCEDURE

4.1 Plan and Schedule Inspections

The Environment will develop and maintain an Environmental Inspection schedule to ensure all Project areas are regularly inspected. Certain areas may require more frequent inspections, such as waste management areas, areas where hazardous materials and hydrocarbons are used and stored etc.

The Environment Department will ensure that line managers and/or supervisors responsible for particular work areas are aware in advance of scheduled inspections to ensure inspections are facilitated and that any access restrictions or safety issues can be discussed and resolved.

Environmental inspections must include subcontractor work areas.

4.2 Conduct Inspections

4.2.1 Stage One - Prepare

- Identify the area to be inspected. This is generally determined by: scheduled inspection timeframe, post-incident follow up or new item/task.
- Print the Environmental Inspection Form (***6105A0000-0000-JA01-0012***, see Appendix A).
- Nominate person to conduct the inspection.
- Review any relevant documents prior to conducting inspection (e.g. legislation, permits).
- Notify the relevant line manager supervisor at least 24 hours in advance of conducting the inspection.

4.2.2 5.1.2.2 Stage Two – Conduct the Inspection

- Upon arrival at the work area to be inspected, introduce yourself and identify who from the work area will be in attendance of and/or participate in the inspection, e.g. Supervisor, worker (i.e. subcontractor / labour hire personnel).
- The person conducting the inspection must remain alert and look for the little details that may make a big difference. When some aspect of the work process doesn't fit with the standards expected, note this for further action.
- Document all findings, conformances and non-conformances on the inspection. Write a note detailing exactly how/why the inspected item conforms /non-conforms. This will assist for later review of the inspection, especially by other people.
- Do not let the note taking distract you from the inspection process. Use key words instead of details. The relevant information can be fully completed later on.
- If a hazard is identified during the course of the inspection, either eliminate or minimise the risk associated with the hazard where possible. Note the hazard and steps taken to address it on the inspection checklist.
- At the completion of the inspection, review in consultation with the work area Supervisor the findings of the inspection. Discuss and agree to corrective actions to be taken to address any identified deficiencies,

4.2.3 5.1.2.3 Stage Three - Complete the Documentation

- Complete all sections of the Environmental Inspection Form with as much detail as necessary.
- Document proposed corrective actions and timeframes for these actions to be completed, on the inspection.
- Ensure that the person conducting the inspection and the work area representative have signed the inspection form.

4.3 Completing the Inspection

Once inspections are complete, the inspections are created as an event within INX InControl®, and the agreed corrective actions must be raised and assigned to person responsible for closing out these actions.

The Corrective actions shall be closed as soon as possible in accordance to the level of risk determined for the hazard.

5 SAFETY AND ENVIRONMENT

- Inspections shall be carried out by a minimum of two people– the person conducting the inspection and a representative from the work area being inspected (e.g. Supervisor, worker).
- All hazards identified shall be recorded on the Environmental Inspection Form. The inspection is then created as an event within InControl®, and corrective actions as applicable allocated for completion

6 Review

An annual review of this procedure shall be carried out by the Environment Department. This plan shall also be reviewed based on the findings of internal or external monitoring audits.

Appendix A

Environmental Inspection Form

IMPORTANT NOTE:

Inspections must be carried out by a minimum of two people from different work groups (e.g., Lead with Supervisor, Operator, Worker, Safety or Trainer). Contractors and other providers must be involved in inspections which involve their activities or work areas. Inspections should be carried out periodically, i.e., monthly. Any proposed actions should be recorded entering InControl® and closed out in accordance with the Corrective and Preventive Action Procedure.

Date of Inspection		Inspection Team/Inspection Conducted by			
Tick the applicable focus area for the inspection being conducted		1		2	
		3		4	
s#	Areas Inspected				
1	Water Management				
2	Storage and handling of hazardous material				
3	Waste management				
4	Housekeeping				
5	Documented Information				
6	Permitting and Compliance				
7					

Item	Inspections to be completed	Acceptable (*tick one box)*			Remarks/Action Required	Responsible Person	Due Date
		N/A	Yes	No			
1.0	WATER MANAGEMENT						
1.1	Are employees aware of the Barrick environmental policy	☐	☐	☐			
1.2	Systematic collection of hydrological data (Water supply, storage, usage)	☐	☐	☐			

Item	Inspections to be completed	Acceptable (*tick one box*)			Remarks/Action Required	Responsible Person	Due Date
		N/A	Yes	No			
1.3	RO plant working properly and is continuously maintained	☐	☐	☐			
1.4	Signs of chemical/oil/diesel stains on ground and in drains	☐	☐	☐			
1.5	Adequate number of spill response kits available	☐	☐	☐			
1.6	No Odours	☐	☐	☐			
1.7	Specify any other issues	☐	☐	☐			
2.0	**STORAGE AND HANDLING OF HAZARDOUS MATERIAL**						
2.1	Waste bins in place with liners and lids	☐	☐	☐			
2.2	Containers are appropriately labelled of the content	☐	☐	☐			
2.3	Hazardous (210L drums, 20L containers) materials stored where there is secondary impervious bunded containment	☐	☐	☐			
2.4	Impervious secondary containment provided at the fuel and oil dispersing facility	☐	☐	☐			
2.5	Hazardous materials storage area secured (locked) and restricted	☐	☐	☐			
2.6	Employees aware of what to do in the event of an emergency	☐	☐	☐			
2.7	Emergency equipment (spill kit, extinguisher) available	☐	☐	☐			
2.8	SDS in place and up to date (where hazardous/chemical substance is stored and used)	☐	☐	☐			
2.9	Are any solvents being used as cleaning agents for hydrocarbon - List the solvents under remarks	☐	☐	☐			
2.10	Incompatible materials stored separately	☐	☐	☐			
2.11	Are equipment being serviced outside the workshops	☐	☐	☐			
2.12	Evidence of spills/leaks/stains within the work area	☐	☐	☐			
2.13	Are adequate acceptable drip trays in place to avoid contamination from spillage	☐	☐	☐			

Item	Inspections to be completed	Acceptable (*tick one box*)			Remarks/Action Required	Responsible Person	Due Date
		N/A	Yes	No			
2.14	Does a checklist exist for the spill kit to ensure clean-up material are available	☐	☐	☐			
2.15	Containers/tanks in good condition (no taints, rust, leaks)	☐	☐	☐			
2.16	Drums/containers effectively closed	☐	☐	☐			
2.17	Are the relevant licenses for the handling and storage of hydrocarbon/hazardous substances available	☐	☐	☐			
2.18	Schedule in place for cleaning of the facility and adhered to	☐	☐	☐			
2.19	Relevant employees are aware of the license conditions for the handling and storage of hydrocarbon/hazardous substances	☐	☐	☐			
2.20	Warning signage in place	☐	☐	☐			
2.21	Are drains available to capture contaminated rainwater and wash water from workshop floors	☐	☐	☐			
2.22	Contaminated soil kept/stored within the work area	☐	☐	☐			
2.23	Bunding volume 110% of largest container	☐	☐	☐			
2.24	Quantities of Hazardous materials generated are documented and records kept appropriately	☐	☐	☐			
2.25	Hazardous material stored on concrete slab	☐	☐	☐			
2.26	Bunding discharge valve closed and operated as required	☐	☐	☐			
3.0	**WASTE MANAGEMENT**						
3.1	Are adequate receptacles (skip bins etc) provided and appropriately labelled	☐	☐	☐			
3.2	Waste segregation practiced to source of generation	☐	☐	☐			
3.3	Waste disposal appropriate within the area	☐	☐	☐			
3.4	Bins in good condition and not leaking or damaged	☐	☐	☐			
3.5	Bins in appropriate location for handling and accessing	☐	☐	☐			

Item	Inspections to be completed	Acceptable (*tick one box*)			Remarks/Action Required	Responsible Person	Due Date
		N/A	Yes	No			
3.6	Bins are regularly emptied	☐	☐	☐			
3.7	Domestic and hydrocarbon bin covered	☐	☐	☐			
3.8	Are bin liners being used to contain waste to avoid littering	☐	☐	☐			
3.9	Are employees aware of waste management within the work area	☐	☐	☐			
3.10	Are appropriate receptacles used for waste collection? Check that spill kits are not used as waste bins	☐	☐	☐			
3.11	Signage in place	☐	☐	☐			
3.12	Signs of litter	☐	☐	☐			
3.13	Specify any other issues	☐	☐	☐			
4.0	**HOUSEKEEPING**						
4.1	Use and disposal of rubbish acceptable	☐	☐	☐			
4.2	Are storage areas clearly marked	☐	☐	☐			
4.3	Stored materials are readily accessible	☐	☐	☐			
4.4	Walkways are clearly marked and clear of obstacles	☐	☐	☐			
4.5	Evidence of accumulative waste within the area	☐	☐	☐			
4.6	Work areas kept clean and clear of cables and clutter?	☐	☐	☐			
4.7	Area clear of spilt product and other residues that can create hazard conditions	☐	☐	☐			
4.8	Are surroundings kept clean, grass cut, ground swept, clean etc.	☐	☐	☐			
4.9	Proper stacking of drums/materials/scrap	☐	☐	☐			
4.10	Drains covered with grate and clear of debris?	☐	☐	☐			
4.11	Miscellaneous items are stored properly	☐	☐	☐			

Item	Inspections to be completed	Acceptable (*tick one box*)			Remarks/Action Required	Responsible Person	Due Date
		N/A	Yes	No			
4.12	Are employees aware of the house keeping requirements of the area	☐	☐	☐			
4.13	Stagnant Water observed in the work area	☐	☐	☐			
4.14	Specify any other issues	☐	☐	☐			
5.0	**Documented Information**						
5.1	Are inspections conducted documented and filed in a folder	☐	☐	☐			
5.2	Are inspections being done on the latest version of the inspection template with all document control features	☐	☐	☐			
5.3	Are findings from inspections put on a tracker for racking corrective actions	☐	☐	☐			
5.4	Is the required SOP or Standard for the task current and the user know where it is located						
5.5	Are checklists signed off by users and supervisors						
6.0	**Office and other buildings**						
6.2	Furniture, curtains, towels etc. clear of cooking and heating appliances	☐	☐	☐			
6.3	Exhaust fans clean and operating correctly	☐	☐	☐			
6.5	Cleaning materials properly labelled and stored	☐	☐	☐			
6.6	Floor coverings in good condition no trip hazards	☐	☐	☐			
6.12	Crib room free of accumulated waste foodstuff	☐	☐	☐			
8.0	**Hazardous Materials**						
8.1	Are SDS files located at the point of use, and are SDS's indexed within the files, current (within 5 years of issue), in alphabetical order	☐	☐	☐			
8.2	All chemicals stored correctly, and incompatibles properly segregated	☐	☐	☐			
8.3	Decanted containers are labelled with name, risk, and safety instructions	☐	☐	☐			

Findings	Corrective Actions	Responsible Person

General Comments / Observations (including faults not corrected from previous Inspection:

Review and Signoff:

Completed by (Name):		Company:		Signature:		Date:	
Completed by (Name):		Company:		Signature:		Date:	
Dept. Lead (Name):		Company:		Signature:		Date:	
Dept. Manager (Name):		Company:		Signature:		Date:	

Document No.:	6105A0000-0000-JA05-0005	Rev:	0
Document Title:	Ground Disturbance Approval and Chance Find Procedure		
Issue Date:	2025-01-21		

Supplier/Contractor Details

Package/Contract No:			
Package/Contract Name:			
Supplier/Contractor Doc. No:		Rev:	0

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2025-01-29		Vaqar Zakaria	Tanzeel khan	Ashley Price
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1 PURPOSE

The purpose of this procedure is to ensure that ground disturbance activities give due consideration to environmental and social aspects to ensure site disturbance activities are compliant and consistent with statutory approvals and regulations, and impacts on the environment are minimised. This procedure outlines the ground disturbance approval process and ensures that requirements applying to ground disturbance are met.

1.1 Applicability and Objectives

This Ground Disturbance Procedure applies to all personnel and contractors working on the Reko Diq Mining Project.

Activities requiring Ground Disturbance Approval (GDA) include:

- Earthworks;
- Drilling;
- Excavating, and digging of holes/trenches;
- Clearing of vegetation;
- Disturbance to existing cleared areas of which RDMC did not undertake the initial disturbance (e.g. maintenance/repair of existing access or exploration tracks);
- Disturbance of rehabilitated areas.

Generally, works such as minor road maintenance or shallow hand dug holes would not require a ground disturbance approval. If there is any doubt regarding the need for an GDA, the Environmental Department shall be consulted prior to commencing disturbance activities to enable a determination to be made.

2 RESPONSIBILITIES

2.1 Project Director

Project Director is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.

2.2 RDMC Head of Sustainability

The RDMC Head of Sustainability is responsible for:

- Ensuring the currency, relevancy and accuracy of content contained within this procedure;
- Overseeing the implementation of this Procedure;

2.3 Environment Department

The Environment Department is responsible for:

- Undertaking the required checks to ensure the accurate completion of the GDA Form.

- Ensuring the proposed disturbance is assessed against all relevant approvals, agreements and legal obligations.
- Communicating with the Applicant about any inconsistencies or matters to be addressed.
- Applying suitable standard conditions and special conditions to the permit that meet all approvals and other legal obligations.
- Assisting with the resolution of queries through the approval process.
- Assessing and approving the environmental aspects of the application.
- Conducting audits and keeping records of all activities.
- Ensuring the requirements of this procedure are well understood.

2.4 Community Department

The Community Department are responsible for:

- Ensuring the proposed disturbance is assessed against all relevant approvals, agreements and legal obligations.
- Communicating with the Applicant about any inconsistencies or matters to be addressed.
- Applying suitable standard conditions and special conditions to the permit that meet all approvals and other legal obligations.
- Assisting with the resolution of queries through the approval process.
- Assessing and approving the social aspects of the application.
- Providing support in terms of community engagement if required.

2.5 Site / Construction Manager

The Site / Construction Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure;
- Incorporating the requirements of this procedure in project planning.
- Ensuring project operations are performed in accordance with legal and other requirements; and
- Reviewing the effectiveness of the system for continual improvement.

2.6 Line Functions

Departmental Managers / Leads / Supervisors are responsible for:

- Ensuring implementation of this procedure in their respective areas.
- Informing environment department in case any non-compliance is observed.
- Maintaining a complete copy of the GDA at the work area, including any associated maps and documents.

- Disseminating the information to the relevant work group members.
- Ensuring the work group members are aware of exclusion/avoidance zones, GDA boundary and the conditions of the GDA.
- Ensuring all work group members understand the GDA requirements.

2.7 All Employees, Contractors and Visitors

All employees and contractors are responsible for adhering to the requirements contained within this procedure and reporting incidents, and non-conformances.

3 DEFINITIONS AND ABBREVIATIONS

The followings are definitions and abbreviations used in the procedure.

Abbreviations	Definitions
GDA	Ground Disturbance Approval

4 PROCEDURE

4.1 Ground Disturbance Approval Application (GDA Form (6105A0000-0000-JA01-0011))

1. The Applicant should consult with Environment Department prior to completing the form to ensure there is no obvious impediment to site disturbance proceeding.
2. The person responsible for the disturbance is responsible for completing the form (either themselves or delegated) and obtaining the necessary approvals - where a disturbance is to be undertaken by a contractor it is the responsibility of the RDMC person in charge of that contractor's work.
3. Note that multiple areas of disturbance can be included in the one approval (i.e., you can provide details of all drill pads of a drilling program rather than a separate form for each pad).
4. Complete basic proposal information including Project / site, applicant name, company name, relevant tenements.
5. Provide a comprehensive description of the proposed activity including land clearing, earthworks and / or landuse changes.
6. Include drawings / maps showing the location of all proposed disturbance. All associated GIS files must accompany the GDA to enable assessment the Environment and Communities Departments.
7. Add the total area to be disturbed (hectares).
8. Note that this application does not cover the potential to disturb underground services (i.e. it is not an 'Excavation Permit').
9. Submit to the Environment Department via email. Allow at least five (5) business day for assessment.

4.2 Site Disturbance Permit application (Section 2) – Environment and Communities Departments Assessment

1. Environment Department to add GDA number and revision number and record on the ***Ground Disturbance Register*** (6105A0000-0000-JA11-0003).
2. Check that the proposed activity is covered by the required approvals (i.e. Environment Permit).
3. Environment Department to forward the GDA application and associated information to the Communities Department to enable assessment of communities related requirements, including whether any community engagement is required.
4. Identify any other environmental, heritage/archaeology or land access constraints which need to be considered.
5. Check that sufficient buffer has been allowed between the proposed activity and site boundaries.
6. Apply standard and activity specific conditions appropriate to the proposed activity.

4.3 Complying with approved SDPs (Sections 5)

1. The Permit Applicant provides a copy of the completed GDA to the Work Area Supervisor responsible for executing the works.
2. Work Area Supervisor implementing ground disturbance must read, understand and retain a copy of the approved GDA, associated conditions and maps at the work area.
3. It is the Work Area Supervisors responsibility to ensure all new work group members review, understand the GDA.

4.4 Inspection, Auditing and Close-out

1. The Environment Department shall conduct inspections of site disturbance operations to confirm the requirements of this procedure are being met and that the appropriate documentation is available at the work front.
2. The Environment Department will conduct an inspection upon completion of the disturbance activity to determine if all agreed close-out and rehabilitation actions have been completed, and to determine if additional rehabilitation actions are required.
3. The Environment Department will complete the close-out section of the GDA Form.

5 Rehabilitation

Rehabilitation requirements of disturbed areas will be directed by the environment department and will be specific for each area of disturbance. Rehabilitation actions may include:

- Removal and proper disposal of all rubbish and construction material.
- Ensuring final clean-up of any spills of hydrocarbons or other liquids (refer to ***Spills Response Procedure*** (JA05-0001_0).
- Levelling and contouring of ground to ensure drainage conditions are as close to pre-disturbance conditions as possible.
- Where ground contours have been changed it may be required to emplace rock armouring to minimise excessive erosion in the case of heavy rainfall events.
- Smoothing of the ground surface to mimic natural surroundings.
- Backfilling of excavations with clean material (ideally the material originally excavated if still available.
- Where excavations cannot be backfilled (i.e. quarry locations), emplacement of perimeter bunding or similar to ensure the site is made safe.
- Plugging/closure of drill holes as per the relevant procedures.
- Given site conditions, it is not likely that revegetation works will take place, however this will be assessed on a case by case basis.

6 Chance Find Procedure

6.1 Objective

Based on the surveys carried out previously, there are no unique or natural features of high cultural values, such as sacred graves, groves, rocks, lakes and/or waterfalls in the vicinity of the Project that need to be protected. Four archaeological sites and eleven unidentified rock features have been identified in or near the Project footprint. The likelihood of buried remains near the four archaeological sites is considered “low” in view of the site characteristics. Nonetheless, artefacts of archaeological concern may be found during construction including earthworks.

This Procedure provides the approach to site clearance and resumption of works should chance finds occur and shall be referred to and followed on occurrence of chance find or occurrence of severe non-conformance.

6.2 Definition(s)

Relevant to this ‘Chance Find Procedure’ and the project the potential ‘chance finds’ include, as defined by IFC Performance Standard 8:

‘tangible moveable or immovable objects, property, sites, structures or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic and religious values’

The definition above broadly covers the definition in the Balochistan Antiquities Act, 2014 (as enacted in the province of Balochistan), with the exception that tangible heritage of scientific value is also included.

Under the Balochistan Antiquities Act, 2014 “antiquity” means

> (i) any ancient product of human activity, movable or immovable, illustrative of art, architecture, craft, custom, literature, morals, politics, religion, warfare or science or of any aspect of civilization or culture;
>
> (ii) any ancient object or site of historical, ethnographical anthropological, military or scientific interest;
>
> (iii) any national monument; and
>
> (iv) any other object or class of such objects declared by the Provincial Government, by the Notification in the Official Gazette, to be an antiquity for the purposes of this Act;

Within this document ‘chance finds’ and ‘antiquities’ are used interchangeably.

6.3 Applicable Laws and Standards

The following relevant legal laws are applicable:

- The Balochistan Antiquities Act, 2014 (as enacted in the province of Balochistan)
- Director of Archaeology and Museums, Government of Balochistan to be contacted within a timeframe of 7 days upon accidental discovery of antiquity for custody and preservation. (Section 6(1)(2))

- No development plan or scheme or new construction on, or within a distance of two hundred feet, of a Special Premises shall be undertaken or executed except with the approval of the Government or a Committee (see Section 22).
- IFC Performance Standard 8 (Cultural Heritage)
- The client will not disturb any chance find further until an assessment by competent professionals is made and actions consistent with the requirements of this Performance Standard are identified.

6.4 Procedures

6.4.1 Initial Identification and/or Exposure and Cease of Activity

1. The person or group (identifier) who identified or exposed ‘find’ must cease all activity in the immediate vicinity of the site (that may harm the ‘find’ or ‘potential find’).
2. The find location will be recorded, and the ‘find’ will be left in place.
3. The identifier must immediately inform his/her supervisor of the discovery.
4. The supervisor will temporarily cease construction around the find(s) until further notice and inform the Environment Department.
5. If the find(s) include human remains, then Procedure A below will be followed.
6. If the find(s) does not include human remains, it will be mutually determined if there is a chance of additional find(s) in case of movable finds.

6.4.2 Procedure A - Follow-up Actions Following Discovery of Human Remains

1. In the case of finding human remains, the Environment and Communities shall determine within 72 hours whether these represent a recent burial or not.
2. In the case of recent burials, enquiries will be made in the community concerning the affiliation of the deceased for the relocation and reinterment of the remains and will be logged in the Chance Finds Register.
3. If the remains are determined to be of historic significance, the Director of Archaeology and Museums will be consulted to determine if it is an archaeological site and will be added to the Register of Chance Finds.

6.4.3 Procedure B - Follow-up Actions Following Movable Find(s)

A movable find is any item considered small enough to be safely moveable without risk of damage. This can include coins, jewellery, or small handicrafts and items commonly classified as artifacts within IFC PS 8. If the RDMC Head of Sustainability determines the find is movable, they shall:

1. Estimate whether additional find(s) can occur.
2. If it is unlikely that more find(s) will occur, the object will be transferred to custody of the Environment Department in a container secured by lock and key. The construction activity will resume after 1 hour. If another find occurs during the construction phase, then it shall be assumed that there are likely to be more.
3. If it is likely that more find(s) will occur, an archaeologist will be engaged to complete additional surveys.

4. The archaeologist will assess the potential significance of the find. Based on the archaeologist's advice, the duration for which the area will be sealed to allow for follow up investigations, will be determined.
5. If the significance of the find(s) is judged to be sufficient to warrant further action, then the Director of the Archaeology and Museums Department, Government of Balochistan will be informed within 7 working days.
6. The archaeologist in consultation with the Archaeology and Museums Department, Government of Balochistan will determine the appropriate course of action.

6.4.4 Procedure C - Follow-up Actions Following Immovable Find(s)

Immovable find(s) include ruins of archaeological value or items such as historical ruins and statues, which are difficult to move without damaging or it cannot be determined whether they are safe to move. In the event of an immovable find:

1. An archaeologist will be engaged to complete required surveys.
2. The archaeologist will assess the potential significance of the 'find'.
3. Based on the archaeologist's advice, the duration for which the site will be sealed to allow for follow up investigations, as well as safe transport of the find(s) will be determined.
4. If the significance of the find(s) is judged to be sufficient to warrant further action, then the Director of the Archaeology and Museums Department, Government of Balochistan will be informed within 7 working days.
5. The archaeologist in consultation with the Balochistan Archaeology and Museums Department will determine the appropriate course of action.

6.4.5 Contacts

Contact details of the members of the Directorate of Archaeology & Museum are provided below:

Name: Jameel Hussain
Designation: Director
Phone: +92 33356725947

Name: Shakir Naseer
Designation: Associate
Phone: +92 3333002829
Email: shakirnaseer91@gmail.com

7 RECORDS

The Environment Department shall maintain records of all site disturbance and related information, such as, on the ***Ground Disturbance Register*** (Ground Disturbance Register) and within the GIS system.

Chance finds will be recorded in the ***Archaeology/Heritage Sites Register*** (6105A0000-0000-JA11-0004).

REKO DIQ
MINING COMPANY

Document No.:	**6105A0000-0000-JA05-0003**	**Rev:**	**0**
Document Title:	**Hydrocarbon Management Procedure**		

Supplier/Contractor Details

Package/Contract No:	**N/A**		
Package/Contract Name:	**N/A**		
Supplier/Contractor Doc. No:	**N/A**	**Rev:**	**N/A**

REV	Date	Reason For Issue	Prepared By	Checked By (Discipline Lead)	Approved By (Functional Manager)
0	2024-11-18	Issued for Use	Mukhtar Ahmed	Moiz Ahmmed	Mani D
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ACKNOWLEDGEMENT OF PROCEDURE

Acknowledgement of this Procedure – Hydrocarbon Management Procedure		
Employee Name	**Employee Signature**	**Date**
Trainer/Supervisor Name	**Trainer/Supervisor Signature**	**Date**

1. PURPOSE

The purpose of the Hydrocarbon Management Procedure is to ensure the effective management of hydrocarbons to avoid or minimize potential harm and risks associated with the purchasing, handling, storage, use and disposal of these substances.

2. SCOPE

This procedure applies to the handling, bulk storage and dispensing of hydrocarbons and flammable liquids at all RDMC work areas including site, warehouse, and workshop. The procedure also applies to contractors working with hydrocarbons on Reko Diq site.

Where legislative or license requirements differ from the content in this procedure, these legislative requirements must take precedence. Where the contractual requirements exceed the requirements of this guideline, they must be met.

3. RESPONSIBILITIES

3.1 Project Director

Project Director is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.

3.2 OHS Manager

The OHS Manager is responsible for ensuring the currency, relevancy and accuracy of content contained within this procedure.

3.3 Health & Safety Lead

Health and Safety Lead is responsible at applicable levels for:

- Developing subsidiary Hydrocarbon Management Procedures where necessary to specifically address applicable State legal and other requirements.
- Providing advice for site training and awareness programs.
- Informing Site / Construction and Department Managers of any changes to legal and other requirements pertaining to the management of hydrocarbons.

3.4 Site / Construction Manager

The Site / Construction Manager is responsible for:

- Ensuring adequate resources are provided for the implementation of this procedure.
- Ensuring training is provided to improve awareness of environmental issues and responsibilities.
- Incorporating the requirements of this procedure in project planning.
- Ensuring project operations are performed in accordance with legal and other requirements; and
- Reviewing the effectiveness of the system for continual improvement.

3.5 Maintenance Manager / Lead

Manager / Lead are responsible for:

- Arranging for collection of waste oil for recycling.
- Preparation and submission where necessary of required paperwork for obtaining Fuel Storage License.
- Arranging the construction of bunded compound.
- Completion of the 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Storage Form.

3.6 All Employees and Contractors

All employees and contractors are responsible for adhering to the requirements contained within this procedure and reporting accidents, incidents, and non-conformances.

4. DEFINITIONS AND ABBREVIATIONS

The following definitions and abbreviations are used in this procedure.

AS/NZS	Australian Standard/ New Zealand Standard
Baluchistan Hazardous Substances Rules 2020	The Baluchistan Hazardous Substances Rules 2020 is regulations specific to the province of Baluchistan, Pakistan, aimed at controlling the use, storage, handling, and disposal of hazardous substances. These rules were formulated under the Baluchistan Environmental Protection Act, 2012, to mitigate the risks associated with hazardous substances to human health and the environment.
Baluchistan Environmental Protection Act, 2012	The Baluchistan Environmental Protection Act, 2012, is a provincial legislation aimed at addressing environmental protection and management within the province of Baluchistan. It complements the federal Pakistan Environmental Protection Act (PEPA) of 1997 by providing specific provisions relevant to the region
Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022	The Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022 are a set of regulations established in Pakistan to manage the safe handling, manufacturing, storage, and import of hazardous waste and substances across the country. These rules were developed under the Pakistan Environmental Protection Act, 1997, and aim to prevent and minimize the environmental and public health risks associated with hazardous materials.
HAZMAT License	HAZMAT licenses a formal approval granted to entities involved in the handling, storage, manufacturing, transport, or disposal of hazardous materials. This license or NOC ensures that such activities comply with national and provincial environmental laws and regulations, thereby safeguarding public health and the environment.
Pakistan Hazardous Substance Rules 2024	The Pakistan Hazardous Substances Rules are a set of regulations designed to control and manage the use, handling, storage, transportation, and disposal of hazardous substances across the country. These rules aim to protect public health, worker safety, and the environment from the risks posed by hazardous substances.
Pakistan Environmental Protection Act, 1997	The Pakistan Environmental Protection Act (PEPA) of 1997 is a comprehensive legal framework designed to address environmental protection and management in Pakistan

Reference to International Standards	For this procedure all references will be made to Australian Standards. If there are other International Standards (i.e., BS, ANSI) being referenced to by contractors, a gap analysis against the procedure needs to be completed and approval from RDMC OHS department prior to use is required.
Safety Data Sheet (SDS)	A document provided by the supplier or manufacturer of a chemical, and by specialist service providers, that specifies the hazardous substance, how it must be stored, handled, used and disposed of, precautions that should be taken, and the method of first aid treatment.

5. PROCEDURE

5.1 Hydrocarbon Storage Compound

Site design will address the requirements for designated hydrocarbon storage and refueling areas, materials, and equipment to comply with contract and legislative requirements. Storage, handling, and disposal of hydrocarbons will be in accordance with the requirements AS 1940 - 2017: Storage and Handling of Flammable and Combustible Liquids'.

For RDMC operations, hydrocarbons (i.e., diesel, oils, and lubricants) must be stored within impervious or lined bunded enclosures. Fueling aprons must also be made impervious and designed to contain potential spills and prevent them from flowing off-site. An SDS must be obtained and be readily available on site for all hydrocarbons brought onto the site.

Where bulk fuel facilities are required to be established for site, the Maintenance Lead / Site Works Manager is to organize for the construction of a bunded compound.

Note: the material the compound is to be constructed of will be dependent on a number of factors such as contractual requirements, duration of the project and the quantity of fuel to be stored. Bunded compounds must be able to contain as a minimum 110% of the potential loss of the contents of the largest tank in the bund, or 25% of the total capacity of all tanks within the bund. Note: AS 1940 requires that diesel storage tanks greater than 5,000 liters must be bunded.

Self-bunded Above-Ground Storage Tanks (wrap tanks): where self-bunded tanks are planned to be utilized in place of static storage tanks, contact the H&S Department to obtain a list of approved manufacturers of these installations.

Temporary fuel storage facilities should be designed and managed to store the lowest practical level of hydrocarbons to reduce the level of risk associated with hydrocarbon incidents/accidents such as hydrocarbon leaks.

Bulk fuel storage compounds are usually constructed of either earthen material with a polyethylene liner (400 microns in thickness) or concrete.

If the fuel storage compound is for a period not exceeding 12 months, then it is acceptable for the impervious liner covering the bund floor and wall to be covered by a minimum of 200 - 300 mm of earth or sand. The bund walls of fuel storage facilities of greater than or equal to 12 months in period must be further stabilized / protected by coating them with bitumen, cement, stabilized cement, shotcrete or equivalent.

Waste tanks for hydrocarbons, coolants and the like must be located in separate impervious or lined bunded compartments to diesel storage tanks to prevent cross contamination of materials. New and in-use products in drums must be stored separate from waste drums. All drums containing waste materials must be labelled with contents and dates and be properly stored.

The premises where hazardous substances are stored or handled must comply with the conditions specified in SCHEDULE IV [See Rule 10] of the Pakistan Hazardous Substances Rules 2024

5.2 Licensing / Commissioning of the Fuel Facility

When the construction of the fuel compound(s) is nearing completion the Maintenance Manager / Site Works Manager is to contact in the fuel supplier in advance to organize for the fuel facility, which includes tanks and associated pipework, to be fitted so as to comply with Australian Standards Best Practices. The 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Storage Form is to be completed by the Maintenance Manager / Site Works Manager to ensure all of the general requirements of AS 1940 best practices have been satisfactorily addressed. Refer directly to the standard for further details.

The 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Storage Form is to be completed as part of the site start-up requirements and needs to be reviewed and revised if there are changes to the scope and/or amendments to the Legislation. The inspection needs to be entered into InControl as an inspection and completed forms to be uploaded.

The Maintenance Lead or delegate (designated by the Site Works Manager) is to organize the completion and submission of the required paperwork to the relevant State Department on behalf of RDMC to obtain the required License(s). The fuel supplier (or independent consultant) may be engaged to organize the license on behalf of RDMC.

Where a license is required, the license must be obtained from the relevant State Department(s) prior to the commissioning of the facility.

The Construction Manager is responsible for organizing the completion and submission of the required information and paperwork to the Baluchistan Environmental Protection Agency (EPA) on behalf of RDMC, in accordance with the Baluchistan Hazardous Substances Rules 2020. This license is a legal requirement for the use, storage, handling, and disposal of hazardous substances. The application must be submitted and approved before any construction or operational activities commence. Assistance may be sought from the OHS Manager. A copy of the license must be maintained in the site filing system. The license must be renewed in accordance with the procedures and timelines specified in legal regulation

5.3 Generators, Lighting Towers, Mobile Pumps, and other Similar Mobile Plant

All generators, lighting towers and mobile pumps etc. with fuel tank capacity of 20 liters or greater (whether purchased outright, or on hire) must be equipped with a spill catchment tray, either as an accessory or built-in (or otherwise suitably bunded) to ensure any leaks

are captured and contained. The capacity of the spill tray / bund must be 110% of the fuel tank capacity.

5.4 Spill Response Equipment / Kits

Spill response equipment / kits must be maintained near hydrocarbon storage and dispensing areas. Further, in the event of a spill/leak the spill response process is to be followed as shown in Appendix A.

Spill kits should be inspected and maintained in accordance with the 6105A0000-0000-JA01-0003 Spill Kit Inspection Checklist.

5.5 Plant Wash-Down

Plant and equipment must be washed down as follows:

- Where the wash down is to remove dirt and silt build up, this may only be conducted in an approved wash-down bay/pad, unless site specific rules state otherwise.
- Where the wash down is to remove greases, oils or fuel build up the wash down is to be conducted on a wash-down pad that drains to an interceptor pit.

NOTE

Although a fire-retardant degreaser is utilized, care must be taken to ensure degreaser is not directed at the exhaust system or any other hot surface until a suitable cool down period has expired.

5.6 Refueling

As far as practicable, refueling should take place when the plant or equipment being refueled is stationed in or above an approved bunded facility. Refueling will occur as far as possible and practicable from watercourses, drainage lines (temporary or otherwise), sediment basins or areas with slopes greater than 2:1.

Fuel tanks or tankers must be fitted with retractable hoses and auto shut-off nozzles to Australian Standards. Fuel bowser outlet holders and fuel pumps must be installed to ensure all spilt or leaked fuel is returned to a bunded area or holding tank. All refueling facilities including mobile facilities are to be equipped with appropriately sized and equipped spill kits.

Mobile refueling operators must use a drip tray to prevent contamination during refueling operations.

5.7 Storage of Wastes

The storage of waste oil onsite must be in accordance with the relevant State legal requirements.

The waste oil tank is to be checked regularly to ensure it has adequate spare capacity and there is no danger of the tank overflowing.

The Maintenance Lead must arrange for a waste oil to be collected as necessary by an appropriately licensed waste oil contractor for recycling in an approved manner.

Clean up and disposal of waste oil and contaminated material resulting from a spill onsite must be arranged by the Workshop Representative and removed from site by an appropriately licensed contractor to an appropriately licensed waste facility.

All amounts of waste oil removed from site must be recorded and receipted by the waste removal contractor to provide evidence that oil has been collected for recycling.

Any fuel facility established by RDMC must have provision for storage of wastes and contaminated items. These facilities must comply with requirements applicable to storage for flammable/combustible liquids.

All hazardous waste management activities must be ensured to be compliant with the Baluchistan Hazardous Substances Rules 2020, particularly Section 21. This includes the submission, review, and implementation of a Waste Management Plan that ensures the generation, collection, transportation, and disposal of hazardous waste is carried out using state-of-the-art technologies to prevent adverse environmental effects

An assessment must be made of the waste types/streams being generated and their appropriate disposal, including:

- Liquids that are old or have deteriorated (substance and/or its packaging).
- Waste materials generated from spills/leaks.
- Unidentifiable liquids.
- Contaminated clothing, equipment, rags.

5.8 Waste Management Procedure

Refer to the 6105A0000-0000-JA05-0004 Waste Management Procedure for guidance on waste disposal including hydrocarbon waste and hydrocarbon contaminated waste.

Hydrocarbon waste must:

- Be handled as per requirements for flammable/combustible liquids.
- Be removed by a licensed or approved waste contractor.
- Be stored in appropriately labelled containers (e.g., Class 3 Dangerous Goods 'diamond').
- Kept in a well-ventilated area at least 3m from any ignition sources.

Wastes containing flammable/combustible substances must not be poured down drains or included with general rubbish.

Waste flammable liquids such as solvents should be collected in clean metal drums (only for short periods of time) with the lid tightly fastened. Liquid must be poured in slowly using a metal funnel to reduce static electricity.

Solid combustible waste (e.g. rags soaked with flammable liquid) should be kept in a clean water- filled metal drum with lid tightly fastened.

In addition, refer to the Project OHS Management Plan and the 6105A0000-0000-JA05-0004 Waste Management Procedure.

5.9 Pre-Disposal Treatment of Empty Containers

Empty, non-reusable containers must be thoroughly cleaned, then punctured/crushed to render them safe. Empty drums and reusable containers must not be allowed to accumulate on site. They must be disposed off-site at the earliest convenient time.

Appendix A
Hydrocarbon / Chemical Spill Response Flowchart

A.1. Hydrocarbon / Chemical Spill Response Flowchart

#	Step	Activities	Responsibility
	SPILL		
1	**SECURE THE AREA**	▪ **Secure the Area** – Close off spill area if there is any risk to health or safety. ▪ **Assess the Risk** - Undertake a Reko 5 or other risk assessment as appropriate. If it is an emergency, activate the emergency response procedure.	Individual who caused the spill or personnel first at the scene
2	**ADDRESS SITUATION**	▪ **Address the situation** - Stop the spill/ leak if it is safe to do so e.g. pick up leaking drum or isolate leak.	RDMC and/or Contractor personnel
3	**CONTAIN THE SPILL**	▪ **Contain the spill** – Use spill response equipment. Earth bunds may need to be formed to contain the spill using plant in some situations e.g. spills near waterways. ▪ **Call for assistance** - Nearby personnel / Environmental Representative and further spill containment material (e.g. absorbent rolls) if required.	RDMC and/or Contractor personnel
4	**CLEAN-UP SPILL**	▪ **Clean up the spill** - Using the appropriate response equipment – e.g. pads, pillows, mats. Ensure appropriate PPE is worn e.g. gloves. ▪ **Remove contaminated material** - as soon as possible to an approved facility (on-site or a licensed facility off- site).	RDMC and/or Contractor personnel
5	**REPORT INCIDENT**	▪ **Notify relevant persons** - Supervisor/Environmental Representative as soon as possible if the spill is of a reportable volume. ▪ **Report the incident** - the event as an environmental incident during the shift in which the spill occurred.	RDMC and/or Contractor personnel
6	**NOTIFY AUTHORITIES**	▪ Where required, notify the authorities verbally as soon as possible if the spill is of a reportable volume; submit to the Authority a completed incident report within 24 hours.	Environmental Representative
7	**REPLACE SPILL KIT MATERIALS**	▪ **Restock the spill kits** – The Person who first identified the spill to organize for replacement of spill response equipment from spill kits or notify relevant person to re-stock the spill kits.	RDMC and/or Contractor personnel

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MINING COMPANY

Document No.:	**6105A0000-0000-JA05-0002**	**Rev:**	**0**
Document Title:	**Hazardous Substances and Dangerous Goods Management Procedure**		

Supplier/Contractor Details

Package/Contract No:	**N/A**		
Package/Contract Name:	**N/A**		
Supplier/Contractor Doc. No:	**N/A**	**Rev:**	**N/A**

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Employee Name	**Employee Signature**	**Date**
Trainer/Supervisor Name	**Trainer/Supervisor Signature**	**Date**

1. PURPOSE

The purpose of this procedure is to safely receive, handle, store and dispose of hazardous chemicals and dangerous goods. This procedure outlines the basic principles for managing the storage and use of hazardous chemicals and dangerous goods.

2. SCOPE

This procedure applies to all RDMC workplaces. The procedure applies where hazardous chemicals are purchased, used, stored, handled and where disposal is required.

Where legislative or license requirements differ from the content in this procedure, these legislative requirements must take precedence. Where the contractual requirements exceed the requirements of this procedure, they must be met.

Radioactive materials, infectious substances, Asbestos Containing Materials (ACM) and explosives are governed by dedicated legislative requirements and are not covered by this procedure.

Substances, where their use is not related to workplace activity, are exempted under 'Approved Criteria for Classifying Hazardous Substances' (NOHSC:1008) are not considered, these are: food and beverage within the meaning of the food standards; therapeutic agents; cosmetics; tobacco or products made from tobacco; and toiletries.

RDMC utilizes Velocity EHS database for the safe management of hazardous substances.

3. RESPONSIBILITIES

3.1 Project Director (or Delegate)

- Provide the resources necessary to implement this procedure.

3.2 OHS Manager

The Occupational Health & Safety Manager is responsible for ensuring the currency, relevancy and accuracy of content contained within this procedure.

3.3 Department Managers

The Department Managers are accountable for:

- Ensuring the Velocity EHS or 6105A0000-0000-JA02-0001 Hazardous Substances and DG Register Template, manifests and emergency plans are kept current and are readily accessible to workers.
- Review each SDS and identify and assess risks involved in using a chemical.
- Monitor any implemented control measures to ensure their continued effectiveness.
- Consult with relevant Health and Safety team on the storage and handling of all hazardous substances and dangerous goods in the workplace.
- Ensure a JSA or Work Instruction (or equivalent) is developed for workers using the product.
- Monitor the on-going safe use of the product and compliance with controls (as detailed in the SDS and JSA or Work Instruction).

- Ensure that sufficient information about the safe use, handling and storage of hazardous chemicals is provided to relevant workers and emergency services.
- Providing suitable facilities, equipment, and other resources (including training) for the appropriate management of dangerous goods and hazardous chemicals.

3.4 Health & Safety Department

The Health & Safety Department is accountable for:

- Ensuring the integrity of the chemical database (e.g., Velocity EHS) or site hazardous substances register is maintained and all records regarding the system are kept up to date.
- Incorporating requirements into site management plans.
- Appropriate checks or audits are conducted for compliance with this procedure and appropriate storage and handling techniques.
- Providing advice to Supervisors and workers on the use and storage of hazardous substances.
- Provide health surveillance for all workers exposed to hazardous substances if there is a risk to the health of a worker as a result of that exposure.
- Provide advice and response assistance whenever a hazardous substance spill or accidental release occurs that is considered to be potentially environmentally damaging.
- Develop emergency procedures to prevent/contain fire or explosion and control risks due to escape or spillage of hazardous substances and dangerous goods.
- Provide advice prior to the approval of hazardous materials.
- Review all products every five years and implement lower risk products where a substitute is practical.

3.5 Persons Using Hazardous Materials

Persons using hazardous materials must take reasonable care to ensure the health and safety of themselves and avoid adversely affecting the health and safety of other persons at work. All persons must:

- Ensure all recommendations applying to the use of a hazardous material once approved are complied with.
- Utilize the least hazardous/dangerous substance that is suitable for the task.
- Abide by the instructions relating to the use, storage, handling and disposal of chemicals directed by the product label, SDS, license conditions or other relevant documents.
- Use appropriate engineering controls provided e.g., mechanical ventilation.
- Not deface or destroy labelling or signs relating to hazardous materials.
- Assist the H&S department with the administration of this procedure by participating in audits and inspections; and

- Immediately report all incidents such as health effects, spills and chemical fires as per the relevant management plans and 6105A0000-0000-HA05-0005 Incident Reporting and Investigation Procedure.

3.6 Leads / Supervisors

Leads / Supervisors must ensure that:

- Measures are implemented to control and/or minimize the health and safety risks associated with the handling and storage of hazardous materials in the workplace.
- No new hazardous material is brought to site without approval.
- All necessary information required for approval of the hazardous material are collected and submitted to health & safety department.
- Persons under their control are not as far as practicable at risk of being exposed to hazardous materials.
- Persons under their control are supervised and have been instructed in the correct use of hazardous materials.
- Persons under their control are trained to wear the correct personal protective equipment while using the hazardous materials.
- All recommendations applying to the use of a hazardous material once approved are complied with by persons under their control.
- Engineering and ventilation controls are being used appropriately.
- Hazardous materials are correctly labelled and stored appropriately.
- Hazardous materials are disposed of appropriately.
- Users of the hazardous materials are aware of the associated environmental issues.
- All hazardous materials in their area are appropriately labelled. If the content of a container is unknown, the container must be marked with the following text ‘Caution Do Not Use – Unknown Substance’.

3.7 Site Works / Maintenance Manager

The Site Works / Maintenance Manager must be appropriately competent in carrying out their duties in administering the system to ensure that this procedure is complied with and that the risk to persons and property is maintained at an acceptable level. The Site Works / Maintenance Manager must ensure:

- All materials introduced and used are assessed under the requirements of this procedure.
- No product is issued for use on site unless it has been through the approval process and on the current stock register of the chemical database.
- All warehouse workers have been trained in the skills to handle an accidental release or spill of chemicals whilst loading, unloading, and storing chemicals.
- Maintaining the appropriate level of liaison with the chemical database owner in maintaining the up-to-date currency of the database.

- Storage of all dangerous goods in accordance with best practices requirements observing all storage, separation, bunding, signage, placarding and ventilation requirements.
- Where appropriate, a risk assessment is conducted for hazardous materials entering, or used on site.
- Auditing of hazardous materials on site is conducted against the Velocity EHS Manifest or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template at least annually.
- Hazardous materials used are on the approved Velocity EHS Manifest or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template and non-approved materials are not brought onto site.
- All persons under their control are provided with appropriate personal protective equipment (PPE) and familiarized with health and safety precautions when using the materials.
- Workers using hazardous materials which require specialized safety equipment, are trained and competent in the use of such safety equipment.
- All hazardous materials in their area are appropriately labelled.
- Storage limits are adhered to as per AS1940 (see Table 2.1).

3.8 Visitors

- Visitors are not permitted to handle or use any hazardous materials on site.
- All spills or leaks observed must be reported to the site escort.

3.9 All Workers

All workers must:

- Comply with this procedure for minimizing their exposure to injury or illness.
- Report any potentially hazardous situation.
- Bring to the attention of the respective Lead / Manager any defects / omissions within the JSA and or any uncontrolled hazards that are identified during the execution of works.
- Review information on the SDS before commencing work with a hazardous material and use it accordingly.

4. DEFINITIONS AND ABBREVIATIONS

The following definitions and abbreviations are used in this procedure.

Balochistan Hazardous Substances Rules 2020	The Balochistan Hazardous Substances Rules 2020 is regulations specific to the province of Balochistan, Pakistan, aimed at controlling the use, storage, handling, and disposal of hazardous substances. These rules were formulated under the Balochistan Environmental Protection Act, 2012, to mitigate the risks associated with hazardous substances to human health and the environment.
Balochistan Environmental Protection Act, 2012	The Balochistan Environmental Protection Act, 2012, is a provincial legislation aimed at addressing environmental protection and management within the province of Balochistan. It complements the federal Pakistan Environmental

	Protection Act (PEPA) of 1997 by providing specific provisions relevant to the region
Chemical Database	Computerized database which provides information on the safe handling and use of hazardous substances e.g. Gold FFX (Chem watch), Velocity EHS.
Combustible Liquid	Any liquid, other than a flammable liquid, that has a flash point, and has a fire point that is less than its boiling point. Combustible liquids are divided into two classes, C1 and C2: • Class C1 - A combustible liquid with a flashpoint of 150ºC or less e.g. diesel. • Class C2 - Liquids with a flash point > 150°C e.g. lubricating oil, waste oil and hydraulic oil, brake fluid.
Compound	An area bounded by ground contours or by a bund and intended to retain spillage or leakage. This includes the floor of the compound.
Container	Means anything in or by which dangerous substances are or have been wholly (or partly) cased, covered, enclosed, contained or packed, whether such a container is empty, or partially or completely full. Tanks and bulk storage containers are not included in the definition of 'container'.
Decanting	The process of transferring a hazardous material from one container to another - normally from a larger drum to a smaller container for use on the job.
Flammable liquids	Liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (e.g. paints, varnishes, lacquers, etc., Class 3 flammable liquids are divided into 3 Packing Groups. • PGI & PGII (High / Medium Danger) - liquids with a flash point <23°C e.g. acetone, petrol, toluene. • PGIII (Low Danger) - liquids with a flash point 23°C and 61°C e.g. degreasing oil, mineral turpentine, kerosene, paints and lacquers.
Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022	The Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022 are a set of regulations established in Pakistan to manage the safe handling, manufacturing, storage, and import of hazardous waste and substances across the country. These rules were developed under the Pakistan Environmental Protection Act, 1997, and aim to prevent and minimize the environmental and public health risks associated with hazardous materials.
Hazardous Chemical	A chemical that: • Is classified as a hazardous substance under the Globally Harmonized System of Classification and Labelling of Chemicals, Third Revised Edition (GHS) as amended by schedule 6 of the Work Health and Safety Regulation 2011; or • Has been classified as a Hazardous Substance by the manufacturer or importer.
Hazardous Substance	A substance that has been classified as a Hazardous Substance by the manufacturer or importer.
HAZMAT License	HAZMAT licenses a formal approval granted to entities involved in the handling, storage, manufacturing, transport, or disposal of hazardous materials. This license or NOC ensures that such activities comply with national and provincial environmental laws and regulations, thereby safeguarding public health and the environment.

Label	The information on a container that allows the contents to be clearly identified with sufficient information to safely use the substance.
Manufactured Product	The term 'manufactured product' refers to a mixture of flammable liquid and solid material. The solid material may be a resin, wax, pigment or filler.
NATA	National Association of Testing Authorities
NICNAS	National Industrial Chemical Notification and Assessment Scheme
NOHSC	National Occupational Health and Safety Commission. Note: NOHSC has been replaced by the Australian Safety and Compensation Council (ASCC) however publications still carry the NOHSC title.
Pakistan Hazardous Substance Rules 2024	The Pakistan Hazardous Substances Rules are a set of regulations designed to control and manage the use, handling, storage, transportation, and disposal of hazardous substances across the country. These rules aim to protect public health, worker safety, and the environment from the risks posed by hazardous substances.
Pakistan Environmental Protection Act, 1997	The Pakistan Environmental Protection Act (PEPA) of 1997 is a comprehensive legal framework designed to address environmental protection and management in Pakistan
Package	The complete product of the packing operation, consisting of the packaging and its contents prepared for transport e.g. drum, container etc.
Packaging	A receptacle and any other components or materials necessary for the receptacle to perform its containment function, and (a) in relation to dangerous goods of Class 2, a container having a capacity not exceeding 500 L; and (b) in relation to dangerous goods of any other class, a container having a capacity not exceeding 450 L and having a net mass of not more than 400 kg.
Packing Group (PG)	Dangerous goods hazard groups (of Classes other than 1, 2, 6.2 & 7) as per International Standards / Codes.
PPE	Personal Protective Equipment.
Protected place	• A dwelling, public building within or outside the property boundary. • A factory, workshop, office, store, warehouse, shop, or building outside the property boundary of the installation. • Any storage facility for dangerous goods outside the property boundary of the installation, except for those defined as minor storages.
Reference to International Standards	For this procedure all references will be made to Australian Standards. If there are other International Standards (i.e., BS, ANSI) being referenced to by contractors, a gap analysis against the procedure needs to be completed and approval from RDMC OHS department prior to use is required.
Safety Data Sheet (SDS)	A document provided by the supplier or manufacturer of a chemical, and by specialist service providers, that specifies the hazardous substance, how it must be stored, handled, used and disposed of, precautions that should be taken, and the method of first aid treatment.
Rigger	A competent person trained and authorized to apply slinging techniques, including the selection and inspection of lifting accessories and directing the crane operator in the movement of the load, including when the load is out of view of the operator.

Safe Working Load (SWL)	The maximum load that the crane or lifting equipment may raise, lower, or suspend under service conditions.

5. PROCEDURE

A considerable overlap exists between hazardous chemicals, combustible and flammable liquids and dangerous goods. Combustible and flammable liquids are a 'class' of dangerous goods and hazardous chemicals are also classified as dangerous goods.

Hazardous chemicals are regulated to protect workers from health effects arising from their use in the workplace, while dangerous goods are regulated to protect the public, workers and the environment from harm related to the transport and storage of specified quantities of products that may pose a risk. Also refer to the 6105A0000-0000-JA05-0003 for the management of hydrocarbons.

5.1 Compliance with Legislation, Codes of Practice and International Standards

Balochistan Hazardous Substances Rules 2020 and Pakistan Hazardous Substance Rules 2024 developed under the Balochistan Environmental Protection Act, 2012 and Pakistan Environmental Protection Act, 1997 respectively details the legislative requirements for hazardous substances and dangerous goods in Balochistan.

National Standard reference for managing the safe handling, manufacturing, storage, and import of hazardous waste and substances across the country - Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022 developed under the Pakistan Environmental Protection Act, 1997.

International Standards and Codes of Practices must be used as a reference to ensure that the compliance is met to international standards too. National Standard reference for controlling the use, storage, handling, and disposal of hazardous substances and obtaining license.

5.2 Hazardous Chemicals

5.2.1 Approval for Use

A 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Request Form (Velocity EHS assessment) must be completed where a material is not already approved and forwarded to the OHS Manager (or equivalent) with the SDS before a new material is brought to site. The risk assessment must be completed and approved by the OHS Manager for the use of all hazardous chemicals as shown by Appendix A

If the proposed hazardous material is already approved (listed on the site Velocity EHS Manifest or 6105A0000-0000-JA02-0001 Hazardous Substances and DG Register Template) the material can be used onsite with the required precautions. No hazardous substance is to be ordered or brought on to site without approval.

5.2.2 List of Prescribed Hazardous Substances.

The hazardous substances managed under this procedure are those listed in Schedule I (See Rule 3) of the Hazardous Substances Rules 2-1-2024. This includes all prescribed hazardous

substances and any other synthetically chemical as defined under the schedule. The list will be reviewed regularly to ensure compliance with the latest regulations

5.2.3 Purchasing

All hazardous chemicals must be approved for use on site prior to purchasing using the 6105A0000-0000-JA01-0002 Hazardous Material Approval Request and Risk Assessment Form and appear on the Velocity EHS Manifest or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Good Register Template.

All chemicals delivered to site must be correctly labelled and SDS must be supplied for the substance.

If a product is classified hazardous, a less harmful alternative must be obtained if available. Only minimal quantities of hazardous chemicals must be purchased.

5.2.4 Hazard Identification and Risk Assessment

Hazardous chemicals must be risk assessed at a minimum, in the following circumstances:

- Before being purchased.
- Before being stored.
- Before being used.
- When any circumstances related to their storage or use change.
- When there are changes to an SDS.
- When health monitoring test results indicate an adverse health affect.

The risk assessment process must be conducted consistent with 6105A0000-0000-HA05-0008 Health & Safety Risk Management Procedure and must consider:

- The need for and appropriate location of safety signs.
- The risk of adverse chemical reactions during storage or use of the hazardous chemical.
- Stability of the hazardous chemical.
- Fire or explosion.
- The risk of spill of hazardous chemicals and how such spills are to be contained.
- Protecting hazardous chemical containers or pipelines from damage.

A 6105A0000-0000-JA01-0002 Hazardous Material Approval Request and Risk Assessment Form or equivalent is required for all hazardous chemicals which considers storage, use and handling of hazardous chemicals and considers the safety of workers, the public, adjacent assets and the environment.

The risk assessment should help guide the selection of the type of products purchased and the handling methods and equipment to be used as far as is practicable. The risk assessment must include the specific use of the hazardous substance completed with through the Velocity EHS.

5.2.5 *Register of Hazardous Chemicals and Dangerous Goods*

A 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template or Velocity EHS Manifest must be established and maintained in all sites where hazardous chemicals and dangerous goods are used. The register should be updated as new chemicals are introduced or if the use of a substance is discontinued. The only dangerous goods that do not have to be included in the register are dangerous goods in packages of a size that do not have to be marked under the International Guidelines, and dangerous goods in transit.

The register must list:

- All hazardous chemicals approved for the site.
- The relevant SDS (printed from Velocity EHS) or from the supplier.
- Location of the substance.
- Approval for use.
- Quantity stored at each location.

The register must be readily accessible to any employee at the premises and any other person who is likely to be affected by the dangerous goods on the premises.

Safety information relating to hazardous chemicals and dangerous goods must be available to workers. In most cases, the information can take any form, but in the case of hazardous chemicals and dangerous goods (except Class 1, Class 6.2 and Class 7) the information must be in the form of an SDS. Printed copies should be adequately distributed for reasonable access and update requirements.

Where hazardous chemicals at the workplace exceed the manifest quantities set out in the regulations / best practices, a hazardous chemicals manifest must be maintained, and must be:

- In a place determined in agreement with the primary emergency service organization.
- Available for inspection under the Act / Best Practices.
- Easily accessible to the emergency service organization.

The relevant regulator must be notified where the manifest quantity of hazardous chemicals under the regulation will be exceeded. The notification must:

- Be given immediately after it is known that the hazardous chemical or chemicals have been used or alternatively, at least 14 days before their first use.
- Be given immediately after RDMC knows that there will be a significant change in the risk of using, handling, or storing the hazardous chemical.
- Be given as soon as practicable after the hazardous chemical or chemicals are no longer used, stored, or handled at the workplace and it is not likely that they will be used at the workplace in the future.

5.2.6 *Labelling*

All hazardous chemical containers must be always labelled, and all labels must meet minimum standards including for decanted substances. Mandatory information includes:

- Product name.
- The disclosed identity and proportion of each of ingredient in the chemical.
- Contact details for manufacturer or importer and license number of the licensee in Pakistan.
- Emergency information (at a glance).
- Hazard warning word/dangerous goods class and symbol (e.g. flammable).
- Net contents (volume or weight).
- Date of manufacture and date of expiry, if any;
- A warning statement comprising
  - The word “DANGER!” in red on a contrasting background.
  - A picture of a skull and cross- bones.
  - Pertinent instructions for use, storage and handling and safety precautions relating thereto.
- Basic instructions mentioning immediate steps to be taken in case of any accident or emergency, preferably in local language.
- All packages and containers should be labelled to the extent practicable, including the primary container and any containers used for decanting or mixing. Each package and container are to be checked on arrival to site by the person receiving the goods.
- Labels must be in good condition, legible and must remain in place until the container is disposed of. If a container is not labelled and the product name not known, then the container should be clearly marked ‘Caution Do Not Use – Unknown Substance’.
- Containers holding a substance such as water should be labelled so they can be easily distinguished from containers holding hazardous chemicals and/or dangerous goods.
- Instructions regarding return or disposal of the empty container:
  - Provided that if the hazardous substance has an inner container as well as an outer container, the information shall be printed on both containers.
  - Provided further that if it is impracticable to print the aforesaid information on the container itself due to its size, material or design, the same shall be printed on a label or tag which shall be conspicuously affixed or attached to the container in such manner as to render it difficult to remove. The empty chemical containers / drums may not be used for other purposes.
- Hazardous chemicals must not be stored in any container which:
  - Is not labelled correctly.
  - Is damaged in any way.
  - Inappropriate for the storage of the substance (i.e. drinking vessels).

Note: Food / drink containers or other similar receptacles must not be used to store hazardous chemicals.

Hazardous chemicals contained in systems such as pipes, must be identified by labelling including color coding of pipes to the Australian Standards: AS 1319 – Safety Signs for the Occupational Environment; or AS1345 - Identification of the Contents of Piping, Conducts and Ducts.

NOTE *Where a substance is found in an unmarked container: workers should be consulted in an effort to determine the contents of the container; a suitable label should be attached as soon as possible if the product is positively identified; a risk assessment is required if the contents cannot be readily identified; chemical analysis may be required before it can be disposed of safely.*

5.2.7 Decanting and Use

The decanting and use of a hazardous substance must be in accordance with the SDS.

Chemicals used are to remain in their own containers / packaging or be decanted / transferred into appropriate containers correctly labelled.

If decanting within the store, or elsewhere, it must be done in accordance with any specific SDS instruction. Where specific personal protective equipment is called for, it must be provided and worn.

Where possible, the appropriate devices / structures must be set up to minimize any possibility of accidental spillage.

The appropriate protective equipment must be used when handling and using hazardous chemicals as identified in the SDS.

5.2.8 Disposal of Hazardous Chemicals

Hazardous chemicals must be disposed of in accordance with the relevant SDS and 6105A0000-0000-JA05-0004 Waste Management Procedure. Hazardous materials generated are typically disposed of in the following ways: removed from site by specialist waste disposal contractors; and disposed of on site at the waste management facility.

5.3 Dangerous Goods

Dangerous goods are classified under the National Regulations. These substances represent an acute danger to those who come into contact with them. They are not just hazardous to health, but incorrect storage will create an unacceptable level of risk. Dangerous goods are classified according to their predominant type of risk.

5.3.1 Classification of Dangerous Goods

Dangerous goods have short-term hazards such as being explosive, flammable, reactive, toxic, corrosive and/or damaging to the environment. Dangerous goods have been classified by United Nations criteria; the same classification system is used for storage purposes. Table 5-2 is an example describing the classification of dangerous goods.

Table 5-1: Dangerous Goods and Classes and Divisions

-	Class / Division	-	Class / Division
1	Explosive substances or articles	4.3	Substances which, in contact with water, emit flammable gases
2.1	Flammable Gases	5.1	Oxidizing Substances
2.2	Non-flammable Non-toxic Gases	5.2	Organic Peroxides
2.3	Toxic Gases	6.1	Toxic Substances
2.4	Oxidizing Gases	6.2	Infectious Substances
3	Flammable Liquids	7	Radioactive Material
4.1	Flammable Solids	8	Corrosive substances
4.2	Substances liable to Spontaneous Combustion	9	Miscellaneous Dangerous Substances and Articles

5.3.2 *Licensing and Dangerous Goods Threshold Quantities*

Storing dangerous goods at site have an obligation to store and handle dangerous goods and combustible liquids at an acceptable level of risk. Statutory obligations relating to Dangerous Goods are based on the type and quantity of these chemicals stored. These obligations including licenses generally do not become mandatory for workplaces unless the amount of hazardous material exceeds specified quantities. Australian Standard AS1940 “The storage and handling of flammable and combustible liquids” (refer to Table 5-3) plays a key role in determining whether a license is required or not.

Refer to the National Regulation or International Standards containing the relevant quantities.

Dangerous goods (including hazardous chemicals) should be designed according to the specific circumstances of the dangerous goods storage including the quantity and class of stored chemicals; contractual requirements; legal requirements of Pakistan.

The Department Manager is responsible for organizing the completion and submission of the required information and paperwork to the Balochistan Environmental Protection Agency (EPA) on behalf of RDMC, in accordance with the Balochistan Hazardous Substances Rules 2020. This license is a legal requirement for the use, storage, handling, and disposal of hazardous substances. The application must be submitted and approved before any construction or operational activities commence. Assistance may be sought from the OHS Manager. A copy of the license must be maintained in the site filing system. The license must be renewed in accordance with the procedures and timelines specified in legal regulation.

The 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Storage Form is to be completed by the Department Manager to ensure all of the general requirements of AS 1940 have been satisfactorily addressed.

The 6105A0000-0000-JA01-0001 Flammable and Combustible Liquids Storage Form is to be completed as part of the project start-up requirements and also needs to be reviewed and revised if there are changes to the contract and/or amendments to the Legislation. The inspection needs to be entered into InControl as an inspection and completed forms to be uploaded.

The quantity or amount of dangerous goods must be regularly monitored, and steps taken to limit the quantity of chemicals to the desired levels.

NOTE

The AS 1940 minor storage exemption limits may be different from the quantity thresholds for Dangerous Goods Licenses, it is possible that premises may be regarded as a minor storage workplace for the purposes under State and Territory legislation but still require a license.

Table 5-2: Minor Storage in Store and Workshops AS19402

Location	Flammable		Combustible	Manufactured Products
	PG I or PG II	PG III	C1, C2	
Outdoors, or in a shed or garage, separated from the dwelling or any other building by 1 m space	100 L	250 L	500 L total C1 and C2	250 L
Outdoors, uncovered, or in a shed or garage, separated from the dwelling or any structure or boundary by either 3 m of space or a wall having an FRL of 180/180/180	250 L	250 L	500 L total C1 and C2	250 L
Factories, workshops Inside	250 L; or 1 L per 2 m2 space with no more than 250 L in any 500 m2 area	500 L; or 1 L per 1 m2 with no more than 500 L in any 500 m2 area	2,000 L; or 4 L per 1 m2 space with no more than 2 000 L in any 500 m2	In packages only— 2,000 L
And either— (a) in attached outhouses or sheds if separated by a partition having an FRL of 60/60/60; or	250 L	As immediately above	2,500 L	- -

Location	Flammable		Combustible	Manufactured Products
	PG I or PG II	PG III	C1, C2	
(b) outside, or in a detached shed or outhouse separated from the factory or workshop by at least 1 m	As immediately above	1,400 L in tanks not over 700 L each, or in packages	5,000 L	-
Construction sites	2,500 L	5,000 L	10,000 L	-

5.3.3 *Dangerous Goods Storage*

Where dangerous goods facilities which require authority approval, Health & Safety Department is to be notified.

5.3.3.1 *General Requirements*

The area where dangerous goods are stored should be:

- Well-ventilated and well lit.
- Separated from ignition sources.
- Secured from the public.
- Protected from temperature fluctuations and direct sunlight.
- Shelving/cupboards should be constructed of chemically resistant materials and have a lip at the front of the shelf.
- Secondary containment (e.g. spill trays) are required liquid dangerous goods stored outside of a chemical storage cabinet.
- The premises where hazardous substances are stored or handled must comply with the conditions specified in SCHEDULE IV [See Rule 10] of the Pakistan Hazardous Substances Rules 2024.

5.3.3.2 *Protection from Impact*

Dangerous goods and any structure and plant associated with their storage and handling, are protected against damage from impact with vehicles or mobile plant. The most effective ways to protect containers, their pipework and attachments from this impact is to locate the containers away from trafficable areas or prevent vehicle access. Where vehicle interaction is un-avoidable the use of physical barriers like railings, bollards or stanchions should be considered.

5.3.3.3 *Bunding Requirements*

Bunding is required in order to provide containment in case of leaks or spillages of dangerous goods.

The amount of containment required depends on the packaging group and quantity of dangerous good stored. However, with tank storage the minimum requirement is for the bund to contain the potential loss of the largest tank in the bund. Where tanks are interconnected the bund must contain the combined volume in case of a leak or spill.

Government codes and guidelines also cover in considerable detail the design and location of the bund. This includes clearance between the tank(s) and bund walls, separation between

tanks inside the bund, separation from protected works such as workshops and access to the bund.

Materials used for bund construction will depend on the nature of the dangerous goods stored and on environmental considerations. For example, a compacted earth bund meeting permeability requirements may be sufficient for diesel fuel storage in remote areas where the impact of any spills may be low. If the same storage was near a watercourse, or above ground water, then a concrete bund would be required.

5.3.3.4 Storage and Segregation Requirements

Incompatible dangerous goods require segregation, where Table 5-4 gives segregation of package stores by reference to the Class of the dangerous good. For bulk storage such as tanks, segregation distances. Not all incompatible dangerous goods are of different Classes, for examples acids and alkalis are both Class 8 Corrosives but are incompatible and must be stored separately.

When held in the same storage area, dangerous goods should be segregated from other dangerous goods or chemicals with which they are not compatible.

Useful guidelines for segregation of incompatible dangerous goods are provided in AS/NZS 3833 'The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers.

Site specific procedures should be developed and enforced to ensure the segregation is always maintained. Marking out those parts of the storage area where types of dangerous goods are to be kept is one way of supporting those systems and procedures.

5.3.3.5 Generators, Lighting Towers, Mobile Pumps and other similar Mobile Plant

All generators, lighting towers and mobile pumps etc. with fuel tank capacity of 20 liters or greater (whether purchased outright, or on hire) must be equipped with a spill catchment tray, either as an accessory or built-in (or otherwise suitably bunded) to ensure any leaks are captured and contained. The capacity of the spill tray / bund must be 110% of the fuel tank capacity.

Table 5-3: Application Standards for the Storage of Dangerous Goods

Dangerous Goods Class		Example of Relevant Standard	Note
2.1	Flammable Gas	AS 4332:2004 The storage and handling of gases in cylinders AS 3961:2005 The storage and handling of liquefied natural gas AS/NZS 1596:2008 The storage and handling of LP Gas AS 4839:2001 The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes	1,2
2.2	Non-flammable Non-toxic Gas	AS 4332:2004 The storage and handling of gases in cylinders	1

Dangerous Goods Class		Example of Relevant Standard	Note
2.3	Toxic Gas	AS 4332:2004 The storage and handling of gases in cylinders AS/NZS 2022:2003 Anhydrous ammonia – Storage and handling AS/NZS 2927:2001	1
3	Flammable Liquid	AS1940: Storage and Handling of Flammable Liquids	3
4.1	Flammable Solid	DR AS/NZS 5026 The storage and handling of Class 4 dangerous goods	4
4.2	Spontaneously Combustible	DR AS/NZS 5026 The storage and handling of Class 4 dangerous goods	4
4.3	Dangerous When Wet	DR AS/NZS 5026 The storage and handling of Class 4 dangerous goods	4,5
5.1	Oxidizing Agent	AS4452: The Storage and Handling of Toxic Substances AS 4326:1995 The storage and handling of oxidizing agents	6,7
5.2	Organic Peroxide	AS2714: The Storage and Handling of Hazardous Chemical Materials - Class 5.2 Substances - Organic Peroxides	6,7
6.1	Toxic	AS/NZS 4452:1997 The storage and handling of toxic substances AS/NZS 4081:2001 The storage and handling of liquid and liquefied polyfunctional isocyanates	-
8	Corrosive	AS3780.8: Storage and Handling of Hazardous Chemical Materials Class 8 Substances - Corrosives	8
9	Miscellaneous DG's	AS/NZS 4681:2000 The storage and handling of Class 9 (miscellaneous) dangerous goods and articles	-
-	Mixed Classes	AS 3833:98 The Storage and handling of mixed classes of dangerous goods AS/NZS 2507:1998	9

Notes:

1. *In general, it is good practice to ensure that: any cap provided for use with a cylinder is kept in place on the cylinder at all times when the cylinder is not being filled and not connected for use; the cylinder valve is kept securely closed when not in use, including when empty (unless the cylinder is connected by permanent piping to a consuming device); any removable valve protection cap or valve outlet gas-tight cap or plug is kept in place on the cylinder at all times (unless the cylinder is being filled or connected for use); the cylinder is kept in an upright position and is secured against unintended movement, such as falling over; no attempt is made to lubricate valves or repair leaks — if the valve is not closing properly, immediately remove the cylinder to a safe area outdoors and call the gas supplier.*
2. *Un-odorized LP gas is particularly hazardous due to the absence of any discernable odor. Dimethyl ether (DME) is also commonly used as a propellant. Keep the storage and handling of un-odorized LP gas or DME to a minimum and restrict uses to those for which no less hazardous alternative is available, such as aerosol propellant.*
3. *AS 1940:2004 provides advice on the storage and handling of flammable liquids, including package stores, tank design, pipework and valves, blending and package filling.*
4. *Many Class 4 substances are unstable and highly reactive and are required to be stored separate from everything else.*
5. *Division 4.3 dangerous goods evolve flammable gases on contact with water and may ignite spontaneously. This makes fire- fighting particularly risky and the correct fire-fighting medium must be used — water is unsuitable. Examples are sodium metal, aluminum phosphide, some metal powders and calcium carbide (used to produce acetylene gas).*
6. *Many substances belonging to Class 5.1 and 5.2 are highly reactive, unstable and unpredictable. For this reason, keep Class 5 substances away from combustible material or any other incompatible substance where there is any risk of interaction, e.g. ammonium nitrate must not be kept next to petrol or diesel oil; hydrogen peroxide must not be kept next to sodium hydroxide. Factors to consider when using or storing oxidizing agents include keeping*

oxidizing agents away from combustible or readily oxidizable materials, sulfur and powdered metal; storing so that they cannot come into contact with a source of heat; ensuring any heating equipment cannot heat the goods to within 15°C of their decomposition temperature; the risk of dust explosions; and assessing the need for protection of electrical equipment.

7. *Corrosives may be alkaline or acidic, and these two categories may be incompatible or react dangerously.*
8. *The storage and handling of agricultural and veterinary chemicals provide general advice for the storage of packages applicable to a wide range of situations.*

Table 5-4: Storage and Segregation Requirements for Classes of Dangerous Goods

Dangerous Goods Class	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	8	9
2.1 Flammable Gas	A	E	C	B	B	D	B	D	D	C	B	B
2.2 Non-flammable Non-toxic Gas	E	A	B	E	E	E	E	B	E	B	B	B
2.3 Toxic Gas	C	B	A	C	C	C	C	C	C	B	B	B
3 Flammable Liquid	B	E	C	A	B	D	B	D	D	C	B	B
4.1 Flammable Solid	B	E	C	B	A	D	B	D	D	C	B	B
4.2 Spontaneously Combustible	D	E	C	D	D	A	B	D	D	C	B	B
4.3 Dangerous When Wet	B	E	C	B	B	B	A	D	D	C	D	B
5.1 Oxidizing Agent	D	B	C	D	D	D	D	A	D	F	D	F
5.2 Organic Peroxide	D	E	C	D	D	D	D	D	G	F	D	F
6.1 Toxic	C	B	B	C	C	C	C	F	F	A	B	B
8 Corrosive	B	B	B	B	B	B	D	D	D	B	G	B
9 Miscellaneous DG's	B	B	B	B	B	B	B	F	F	B	B	A

In this table, combustible liquids should be included with Class 3. Letters A–G have the following meaning:

A. Most dangerous goods of the same Class have similar primary hazards and are usually considered to be compatible.
B. With a few exceptions which should be indicated on SDS, goods of these two classes are usually non-reactive with each other. However, in an emergency such as a spill, leak or fire, the presence of the second Class may lead to different hazards or increased risk such that additional control measures are required.
C. While goods of these two classes are usually non-reactive with each other, a fire involving the fire risk goods may lead to the release of large clouds of toxic gases or vapors.
D. Goods of these two classes are likely to interact with each other in such a way as to significantly increased risk. In some cases, interaction may result in fire or evolution of toxic vapors. For those that do not interact, a fire involving one may be violently accelerated by the presence of the other. These classes should not be kept in the same area unless it can be demonstrated that the risks are fully controlled.
E. D, if the Class 2.2 has a Subsidiary Risk 5.1. – B, otherwise.
F. D, if the Class 6.1 or 9 is a fire risk substance. – B, otherwise.
G. D, if one material is a concentrated, strong acid and the other is a concentrated, strong alkali. –A, otherwise.

5.3.4 Storage in Storage Cabinets

The maximum capacity of any cabinet storing hazardous chemicals is 850L. Each cabinet must be marked with:

- The name and address of the manufacturer or importer.
- The maximum storage capacity.
- A Class 3 dangerous goods label with sides of at least 250 mm nominal length.
- A sign bearing the words 'No smoking, No ignition sources within 3m' in lettering at least 50mm high.

All signs and markings identifying the storage of hazardous chemicals must be clearly visible when the cabinet doors are closed.

5.3.5 *Cabinet Location*

Cabinets having a capacity greater than 250L must not be installed in commercial or accommodation buildings.

Cabinets having a capacity greater than 250L must not be placed nearer than 3m to any wall that is common with another room, unless that wall is constructed of concrete or masonry to ceiling height of 3 m above the top of the cabinet (whichever is less) and 3 m to either side of the cabinet. The aggregate capacity of cabinets must not be greater than (i) 850 L per 250m² on a ground floor area, or (ii) 250 L per 250m² on other floors. Each aggregate quantity given above must be separated by at least 10m.

A storage cabinet may be used for outdoor storage, provided that adequate protection against weather, corrosion and traffic damage is provided.

5.3.6 *Dangerous Goods Placarding*

A dangerous goods placard (HAZCHEM placard) is required if the quantities of dangerous goods (other than Class 7) kept in any bulk tank or package store exceed the placarding quantity. The quantities apply to individual package stores and bulk tanks but do not apply to fuel tanks on vehicles or portable equipment. Where placards are required, they must be:

- Placed on or next to each bulk container or storage area.
- Placed at all entrances to buildings if dangerous goods are kept inside.
- Clearly visible from all approaches.
- Clean, in good order and unobstructed.
- Revised if the use of dangerous goods changes.
- Removed if the dangerous goods are removed.

5.3.7 *Labelling*

Packages of dangerous goods for transport need to be labelled in accordance with the International / National requirements. The required information includes the UN Number, proper shipping name and class diamond. It is good practice to include the packaging group as well.

The style and type of label will vary with the specific risks involved, and this is a function of the amount or quantities in each package / container. Labelling requirements are stipulated in the Australian Dangerous Goods Code. Labels can be printed out for any registered substance via the chemical database.

5.3.8 *Risk Management*

Specific risk such as risks associated with underground storage tanks will have to be addressed in detail. Specific advice is contained in AS 1940, other Australian Standards and industry codes such as the Australian Institute for Petroleum's CP 22 'The Removal and Disposal of Underground Petroleum Storage Tanks'.

Different types of risk assessment are required according to the situation. Generally, the more serious the hazard, incident, accident, operation or issue the more formal and team-based the risk assessment should be.

Commonly tools used for the risk assessment and recording process include the Job Safety Analysis (JSA) or Work Instructions - refer to the 6105A0000-0000-HA05-0006 JSA Procedure.

5.4 Training

Instruction, training and information must be provided to any person who may be exposed to a risk relating to hazardous chemicals and dangerous goods. All persons who have designated responsibilities for hazardous chemicals must be adequately trained and be competent.

The Site / Construction Manager must ensure that the up-to-date information and training material is made available to ensure compliance by all persons required to transport, handle, use, decant or dispose of hazardous chemicals.

The level of detail required needs to be determined by a risk assessment. The content of the training may include:

- Labelling requirements and related information.
- SDS requirements and related information.
- The hazards, health risks, routes of exposure and the identified staff exposure to the chemicals.
- The risk assessment process, procedures for working safely, use and maintenance of control measures, use and fit of PPE.
- Instructed as to the hazards and the precautions to be observed.
- Competent to operate all safety equipment, including vehicles, pumps, fire protection equipment and breathing apparatus that is used in conjunction with the keeping or handling of the goods.
- Emergency procedures, spill response, first-aid procedures, incident reporting procedures.

Respirator training in accordance with AS 1715 Selection, Use and Maintenance of Respiratory Protective Devices is required for workers who may use this form of protection. Training is also recommended if other forms of PPE are used.

5.5 Incident Reporting

Given the quantities of chemicals, oils, fuels, lubricants, greases, hydraulic fluids, coolants that RDMC uses annually; environmental incidents involving hydrocarbon or chemical spills remains one of Macmahon's biggest challenges to date. All spills must be cleaned up and reported according to the 6105A0000-0000-HA05-0005 Incident Reporting and Investigation Procedure.

RDMC commits to ensuring minimal impact of our activities on the surrounding environments.

In the event of a major accident involving hazardous substances, immediate notification must be made in accordance with the procedures outlined in SCHEDULE V (See Rule 17) of the Pakistan Hazardous Substances Rules 2024. This includes notifying the appropriate authorities and providing all necessary details as required by the schedule.

5.6 Emergency Preparedness and Response

The emergency response must be in accordance with the 6105A0000-0000-HA12-0006 Emergency Management Plan. If dangerous goods exceed 'minor goods storage', specific requirements regarding dangerous goods may be required such as an Emergency Plan.

An Emergency Plan in relation to hazardous chemicals must be developed and must provide for:

- Fire protection and fighting equipment.
- Emergency equipment.
- Safety equipment.

The risk assessment must include controls which seek to prevent spills (including by preventing damage to hazardous chemical containers), and which provide for appropriate spill control measures when spills occur. Such measures must:

- Provide for the clean-up and disposal of hazardous substance spills or leaks and any effluent created by such spills and leaks.
- Ensure the spill containment system does not bring together chemicals which are incompatible with each other.

The risk assessment must also include a fire control plan which provides for:

- The workplace is provided with fire protection and firefighting equipment that is designed and built for the types of hazardous chemicals at the workplace in the quantities in which they are used, handled, generated or stored at the workplace, and the conditions under which they are used, handled, generated or stored, having regard to: the fire load of the hazardous chemicals; and the fire load from other sources; and the compatibility of the hazardous chemicals with other substances and mixtures at the workplace.
- The fire protection and firefighting equipment to be compatible with firefighting equipment used by the primary emergency services organization.
- The fire protection and firefighting equipment to be properly installed, tested, and maintained.
- Dated records are to be kept of the latest testing results and maintenance until the next test is conducted.

Further, where the manifest quantity is exceeded, a copy of the emergency plan must be provided to local emergency services.

Any emergency response involving dangerous goods or hazardous chemicals must be in accordance with the requirements of the SDS.

Spill response equipment/kits must be maintained in close proximity to hydrocarbon storage and dispensing areas. Further, in the event of a spill/leak the spill response process is to be followed as shown in 6105A0000-0000-JA05-0003 Hydrocarbon Management Procedure - Appendix A.

5.7 Notification Requirements

Workers must be notified in the following circumstances:

- Medical Practitioner who conducts health surveillance to notify the worker of, and provide an explanation of, the results.
- On the resignation of a worker, the employer is to provide a written statement if there has been exposure or likely exposure to a prohibited or notifiable carcinogenic substance.
- Workers to have access to any radiation exposure records when at work and requires employers to provide a copy of that record to a worker if they terminate employment.

5.8 Records

A person granted a license to keep any flammable liquid must, if required by the license to keep the liquids in a package store, keep an accurate written record of any consignment or delivery made from that store of flammable liquids of Class 3, Packing Group I or II, in packaging of 200 liters capacity or greater.

All relevant records including SDS, and information used as part of a risk assessment should be retained in line with the requirements of Government requirements.

Training records, including on-the-job training records, are kept for seven (7) years. Where hazardous chemicals with an SDS are used, the Site / Construction Manager must ensure the following records are maintained for at least seven (7) years:

- Any training program for chemicals used.
- Any record of the specific training received, by each worker, for hazardous chemicals used.
- Any risk assessment or audit that is conducted.

5.9 Auditing

An audit of area hazardous chemicals may be organized by the H&S Lead on a predetermined basis to ensure compliance. In addition, the OHS Manager in conjunction with the Environmental Representative may undertake inspections of the hazardous chemicals storage compounds to ensure that:

- Hazardous chemicals are stored in their designated areas and in correctly labelled containers.
- The maximum amount of the chemicals must not exceed any required licensing requirements or safe storage volumes identified on the SDS.
- Hazardous chemicals are stored, handled, and transported as required by the site license.
- The minimum practical quantity is stored for any hazardous substance.

6. SAFETY AND ENVIRONMENT

Hazardous chemicals need to be stored properly to prevent spills, uncontrolled chemical reactions, and ensure worker safety and unintended impacts to the environment.

Even chemicals that are generally considered to be benign have potential to be hazardous under specific circumstances.

All workers should be aware of the hazards each chemical present that they work with. Safety Data Sheets (SDS) must be made accessible and reviewed by all workers and contractors who are not familiar with the hazards of the chemical being used.

Failure to follow this procedure may have health, safety, and environmental implications if not followed. For example, these may include (but are not limited to):

- Exposure to chemicals causing injury.
- Chemical spills into the environment.
- Chemicals entering the environment such as drains, creeks and waterways, damaging native vegetation and adversely affecting fauna, resulting in fines and damage to corporate reputation.

6.1 Safety Equipment

All equipment used in conjunction with hazardous chemicals must be inspected and maintained in accordance with the manufacturer's instructions and relevant Australian Standards. Procedures need to be written, published and communicated (and maintained on a document control register). For some equipment which requires an established level of competence to operate, the competency requirements must be documented, and an authorization process established.

Workers who use hazardous chemicals must have access to the relevant safety equipment. Such equipment may include:

- Spill kits.
- Personal protective equipment.
- Fire control equipment.
- Eye wash stations.
- Emergency shower stations.

Where an SDS requires the wearing of Personal Protective Equipment (PPE), as part of the safe handling of the substance, it must be provided to all persons and is to be worn in the appropriate manner.

On completion of the task, the PPE is to be removed, washed and stored in the appropriate manner or if required, disposed of in a safe manner.

6.2 Environment (Waste)

Any drum containing waste should be appropriately labelled with the respective Dangerous Goods label. The drum should be kept in a well-ventilated area at least 3m from any ignition sources.

Before the disposal of any chemical substance referral must be made to the SDS for the safe disposal requirements. All hazardous chemicals must always be disposed off-site by licensed contractors.

Chemicals must not be buried, poured into drains or disposed of on-site.

All hazardous waste management activities must be ensured to be compliant with the Balochistan Hazardous Substances Rules 2020, particularly Section 21. This includes the submission, review, and implementation of a Waste Management Plan that ensures the generation, collection, transportation, and disposal of hazardous waste is carried out using state-of-the-art technologies to prevent adverse environmental effects.

In addition, refer to 6105A0000-0000-HA12-0005 RDMC's OHS Management Plan and the 6105A0000-0000-JA05-0004 Waste Management Procedure.

7. ATTACHMENTS, REFERENCES AND RELATED DOCUMENTS

7.1 References and Related Documents

7.1.1 RDMC Documents

Within the procedure.

7.1.2 Reference Standards

AS 102:19950 Control of Undesirable Static Electricity AS 1216-2006 Class labels for dangerous goods

AS 1319:1994 Safety Signs for the Occupational Environment

AS 1345:1995 Identification of the Contents of Piping, Conduits and Ducts.

AS 1894:1997 The Storage and Handling of Non-Flammable Cryogenic and Refrigerated Liquids AS 1940:2004 The Storage and Handling of Flammable and Combustible Liquids

AS 2507:1998 The Storage and Handling of Agricultural and Veterinary Chemicals AS 2658:1988 Liquefied Petroleum (LP) Gas Portable and Mobile Appliances

AS 2714:1993 The Storage and Handling of Hazardous Chemical Materials

AS 2931:1999 Selection and use of emergency procedure guides for the transport of dangerous goods.

AS 3780-2008 The storage and handling of corrosive substances AS 3873:2001 Pressure Equipment - Operation and Maintenance AS 3961:2005 Liquefied Natural Gas - Storage and Handling

AS 4041:1998 Pressure Piping

AS 4289:1995 Oxygen and Acetylene Gas Reticulation Systems AS 4326:1995 The Storage and Handling of Oxidizing Agents AS 4332:2004 The Storage and Handling of Gases in Cylinders AS 5601:2004 Gas Installations

AS HB 76:2004 Dangerous Goods: Initial Emergency Response

AS ISO 16467:2007 Transport packages for dangerous goods - Test methods for IBCs AS/NZS 1336:1997 Recommended Practices for Occupational Eye Protection

AS/NZS 1596:2002 Storage and Handling of LP Gas

AS/NZS 1715:1994 Selection, Use and Maintenance of Respiratory Protective Devices AS/NZS 1940:2004 the storage and handling of flammable and combustible liquids AS/NZS 2161.1:2000

Occupational Protective Gloves - Selection, Use and Maintenance AS/NZS 2430.3.3:2004 Classification of Hazardous Areas.

AS/NZS 2430.3.4:2004 Classification of Hazardous Areas. AS/NZS 2430.3.9:2004 Classification of Hazardous Areas.

AS/NZS 3833:2007 The storage and handling of mixed classes of dangerous goods, in packages and intermediate bulk containers.

AS/NZS 4452:1997 The Storage and Handling of Toxic Substances

AS/NZS 4681:2000 The Storage and Handling of Class 9 Miscellaneous Dangerous Goods and Articles

AS1596: LP Gas - Storage and Handling

AS1940: The Storage and Handling of Flammable and Combustible Liquids AS2030: Gas Cylinders Code

AS2714: The Storage and Handling of Hazardous Chemical Materials - Class 5.2 Substances - Organic Peroxides

AS3780.8: Storage and Handling of Hazardous Chemical Materials Class 8 Substances – Corrosives

DR AS/NZS 5026 The storage and handling of Class 4 dangerous goods

7.1.3 Codes and Lists

NOHSC:10005 List of Designated Hazardous Substances NOHSC:1008 Approved Criteria for Classifying Hazardous Substances

Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (Safe Work Australia 2012)

Australian Code for the Transport of Dangerous Goods by Road and Rail

Managing Risks of Hazardous Chemicals Code of Practice (Safe Work Australia 2012) Labelling of Workplace Hazardous Chemicals Code of Practice (Safe Work Australia 2012)

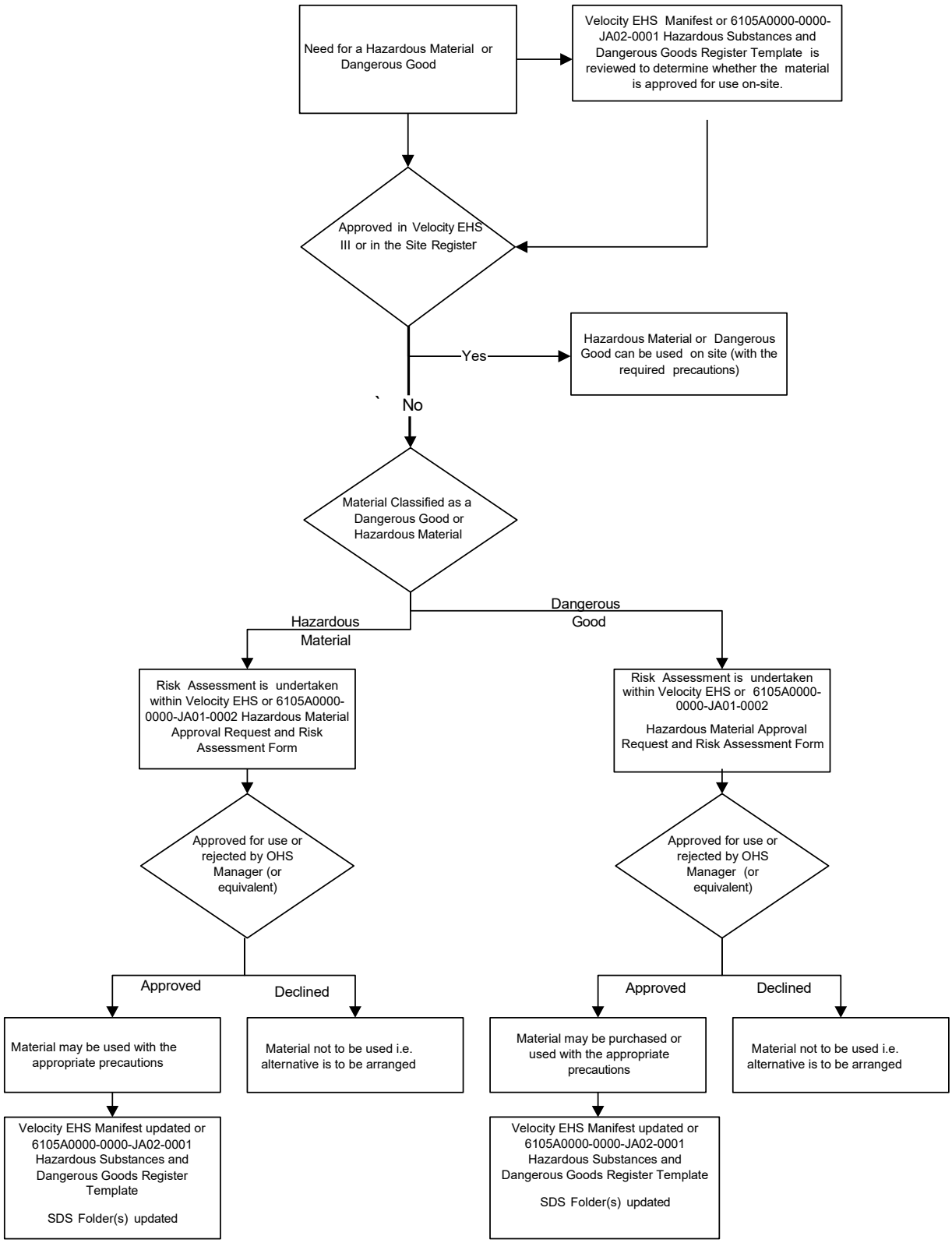
Balochistan Hazardous Substances Rules 2020

Pakistan Hazardous Substance Rules 2024

Handling, Manufacture, Storage, Import of Hazardous Waste and Hazardous Substances Rules, 2022

Pakistan Environmental Protection Act, 1997.

Appendix A
Hazardous Material Assessment and Approval Process


Need for a Hazardous Material or Dangerous Good
Velocity EHS Manifest or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template is reviewed to determine whether the material is approved for use on-site.
Approved in Velocity EHS III or in the Site Register
Yes
Hazardous Material or Dangerous Good can be used on site (with the required precautions)
No
Material Classified as a Dangerous Good or Hazardous Material
Hazardous Material
Dangerous Good
Risk Assessment is undertaken within Velocity EHS or 6105A0000-0000-JA01-0002 Hazardous Material Approval Request and Risk Assessment Form
Risk Assessment is undertaken within Velocity EHS or 6105A0000-0000-JA01-0002
Hazardous Material Approval Request and Risk Assessment Form
Approved for use or rejected by OHS Manager (or equivalent)
Approved for use or rejected by OHS Manager (or equivalent)
Approved
Declined
Approved
Declined
Material may be used with the appropriate precautions
Material not to be used i.e. alternative is to be arranged
Material may be purchased or used with the appropriate precautions
Material not to be used i.e. alternative is to be arranged
Velocity EHS Manifest updated or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template
SDS Folder(s) updated
Velocity EHS Manifest updated or 6105A0000-0000-JA02-0001 Hazardous Substances and Dangerous Goods Register Template
SDS Folder(s) updated