

Technical Support to the South African Department of Labour (DOL),  
Labour Centres (LCs) and Sector Education Training Authorities (SETAs)

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# Chemical Industries Sector Education and Training Authority (CHIETA) Qualification and Unit Standard Research

Submitted to:

**CHIETA**

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## Executive Summary

This project was undertaken by the Development Associates Consortium under funding from the United States Agency for International Development (USAID) in support of the Chemical Industries Education and Training Authority (CHIETA). It is an attempt to scope and research the various organising fields that would yield information on registered qualifications and unit standards available. Specific emphasis was placed on those qualifications and unit standards that were registered by National Standards Body (NSB) 06 because of their relevance to the Chemical sector in particular. However, other organising fields were also scoped because of its significance in specific focus areas outside of the manufacturing, engineering and technology fields. Currently, information is dispersed, duplicated, incomplete and inaccessible. The National Learner Records Database (NLRD) and information on the South African Qualifications Authority (SAQA) website is in the process of being reviewed. It was therefore challenging to complete this project with these constraints. The process of research, although tough, yielded very interesting and useful information that would be very relevant and needed by most, if not all, Standards Generating Bodies (SGBs). Many unit standards exist that encompass particular competencies and outcomes that can be deemed generic in a manufacturing, engineering and technology environment. These could be utilised in some cases as they stand whilst in other cases would have to be contextualised. Either way, SGBs need to start examining processes, skills sets and competencies rather than jobs, tasks and machines. It is through engagement with such exercises that SGBs will find it extremely useful in utilising the end product of this research. It will save time, money and resources under conditions where SGB members are truly faced with serious constraints in these areas.

The research delivers as the end product 100 qualifications and 2 642 unit standards and covers the broad spectrum of outcomes within the manufacturing, engineering and technology field but also additional focus areas inclusive of outcomes in the Quality, Business, management/supervision, Safety, Health Environment (SHE) / Occupational Safety and Health (OSH), People skills, Water, Customer service, Effluent, Logistics, Analysis, Science and technology, Supply chain management, Computer applications, Hazardous material handling – transport, storage and use, and Productivity sub disciplines.

These qualifications and unit standards are provided on CD/Rom and sorted according to the following principles:

- An index of all qualification titles that have a possible relevance to the CISGB generation activities;
- An index of all unit standard titles that have a possible relevance to the CISGB generation activities;
- An index of those unit standards that are grouped in accordance with the additional focus areas as requested; and
- An index of those unit standards that embed generic skills and develop the person as a whole.

The Conclusion Section of the report provides further details on how to access the information on the CD.

## **Acknowledgments**

The two (2) specific departments of the South African Qualifications Authority (SAQA) that played a supportive and helpful role in completing this project:

- Directorate: Standard Setting and Development: in particular the Assistant Director for NSB 06, Ms Renate Fester; and
- Division: NLRD: in particular, Ms Yvonne Shapiro.

The Standards Generating Bodies (SGBs) that have assisted through their willingness to provide access to their information:

- SGB for Food Manufacturing: in particular, Ms Elize van Schalkwyk;
- SGB for Plastics Manufacturing: in particular, Mr Chris Vorwerk;
- SGB for Telecommunications: in particular Mr Pieter le Roux; and
- SGB for Welding: in particular Mr Danie van Wyngaardt.

We would also like to acknowledge the Chairperson of NSB 06, Ms Sandy Willard, for assistance and participation in the process.

From the author a special thanks to Mahir Holdstock for on-going review, editing and sourcing.

## **Disclaimer**

Development Associates, Inc. and its subcontractors, Khulisa Management Services and Joint Education Trust (JET) have prepared this report. The findings and opinions expressed in this report are solely those of the authors and do not necessarily represent those of USAID/South Africa, or the South African Department of Labour (DOL). Similarly, any errors or omissions are the responsibility of the authors.

## Key Personnel

### **Ms. Abeeda Holdstock, Curriculum Design Specialist, Joint Education Trust (JET)**

For the past eighteen years, Ms Abeeda Holdstock has been involved in education, training and development. Her rich background has culminated in diverse and extensive knowledge and experience in the organisational development, education, skills development, human resources and quality management disciplines. She held the position of Director of a very successful College during the era of political struggle in South Africa. Since initial discussions of a new education and training framework during 1994, Abeeda has been amongst the instrumental individuals in shaping this new dispensation, serving on several Boards, Counsels and Government structures. In addition, through her leadership of the human resources unit of the CCMA, the National Training and Development Department of a large parastatal, training programme designer for Anglo American and various other positions held, Ms. Holdstock has:

- Initiated, established and managed projects/organisations requiring both strategic and operational foresight from its inception
- Provided a leadership perspective and direction that demonstrates an understanding of the inherent needs of a variety of different stakeholders within a changing socio-political and economic environment; and
- Demonstrated a long-standing commitment for the transformation of education, training and development practices to that which embodies quality learning, open access, and a competent and skilled workforce

Ms. Holdstock currently serves as the Chairperson of the Qualifications and Standards Sub-Committee of NSB 06 and a Management Committee Member of a Chamber Board within one of the SETAs. She is the Managing Director of her own business consulting company that serves many SETAs, SGBs, SAQA and other commercial companies.

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## APPENDICES

Based upon the size and nature of the deliverable in this project, a CD/Rom has been created as an appendix. This CD/Rom contains the following information:

- Qualification List: Title, Level, Credit NLRD No.;
- Unit Standard List: Title, Level, Credit NLRD No.;
- List of unit standards in Focus Areas;
- List of Generic unit standards;
- Electronic Copies of available Qualifications; and
- Electronic Copies of available Unit Standards.

The CD/Rom is available from Development Associates, Inc.

## ACRONYMS

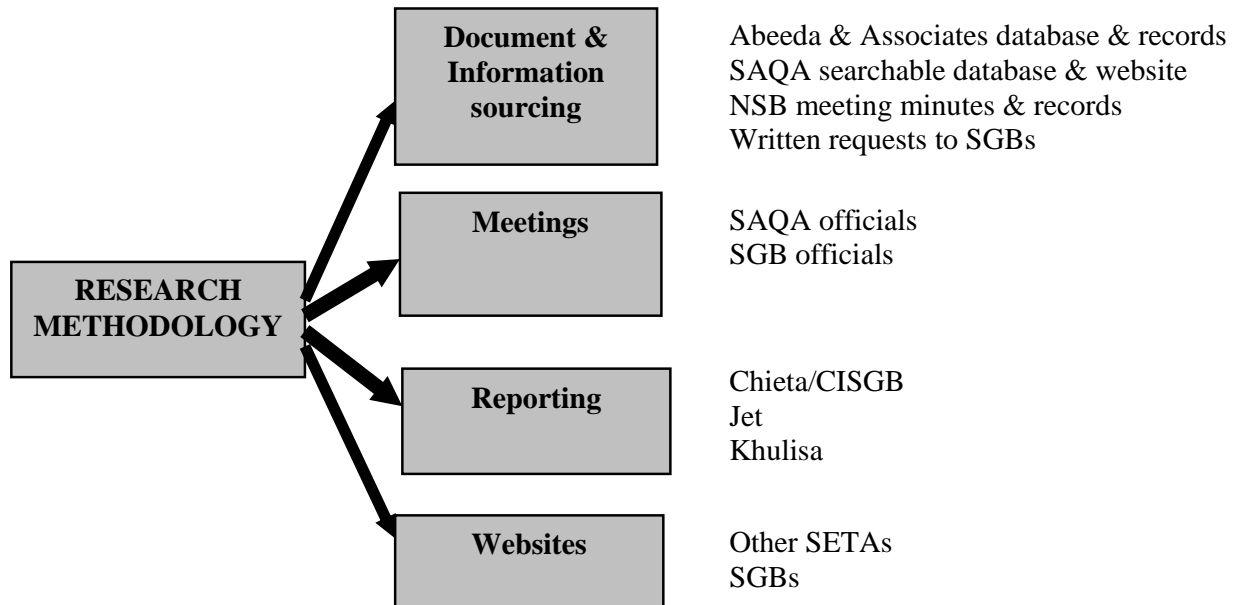
|         |  |
|---------|--|
| CHIETA  | Chemical Industries Education and Training Authority                           |
| CISGB   | Chemical Industries Standards Generating Body                                  |
| JET     | Joint Education Trust  |
| MERSETA | Manufacturing, Engineering and Related Sector Education and Training Authority |
| MQA     | Mining Qualifications Authority  |
| NLRD    | National Learners' Records Database  |
| NQF     | National Qualifications Framework  |
| NSB     | National Standards Body  |
| OSH     | Occupational Safety and Health   |
| SAQA    | South African Qualifications Authority   |
| SETA    | Sector Education and Training Authority  |
| SGB     | Standards Generating Body  |
| SHE     | Safety, Health Environment   |

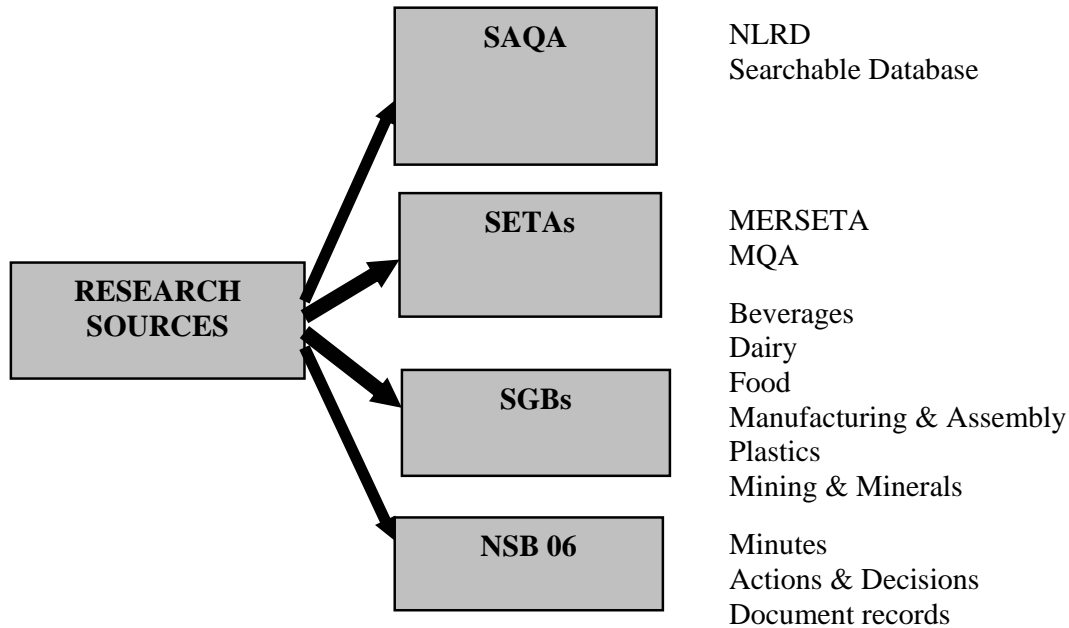
## 1. Background to the Project

The Chemical Industries Education and Training Authority (CHIETA) expressed a need to be aware of what unit standards are available to avoid having to write/re-write generic unit standards. Therefore, the basis of this project was to establish what relevant unit standards are available in support of the qualifications to be developed by the Standards Generating Body for Chemical Industries (CISGB). The research and sourcing activities needed to consider possible relevance to, and suitability for use in, the generation of the National Certificate in Chemical Manufacturing National Qualifications Framework (NQF) Level 3 and the National Certificate in Chemical Manufacturing NQF Level 4 qualifications. Coverage had to include specific skills that could be used in a generic way across these qualifications.

## 2. Details of Activities

The project set-up processes were completed and finalised early on in the project cycle that included the confirmation of communication protocols, processes of working with reference groups, action plans with time frames and accountabilities. The identification, sourcing, research and critical review processes presented many challenges since the information was either not easily accessible or dispersed over a wide range of sources. The methodology and the sources used are illustrated below:





Research, sourcing and reviewing activities included:

- Holding meetings at the SAQA offices with the Assistant Director of NSB 06 to discuss the availability and access to information required from this NSB;
- Using the searchable database;
- Accessing information available from other SETA websites that could possibly house qualifications and unit standards relevant to this project;
- Undertaking a document search since the NLRD is in the process of undergoing a clean up process, the qualifications and unit standards registered by NSB 06 were not accessible. A document search was undertaken which required a complete investigation and review of all NSB 06 minutes and reports available to source the titles of qualifications and unit standards that have been registered over the two terms in office;
- Written requests were submitted to all SGBs that have submitted qualifications and unit standards for registration, to supply electronic versions of these;
- Submitting written requests to the NLRD Manager for information on NLRD numbers where these could not be sourced during the normal processes of research;
- Completing the sourcing of electronic qualifications and unit standards;
- Completing the sourcing of NLRD numbers;
- Utilising records of qualifications and unit standards that was evaluated and critiqued on behalf of SAQA; and
- Holding discussions with the consultant working on writing the qualification and unit standards for the National Certificates in Chemical Manufacturing at NQF Level 3 and 4. This was undertaken with the view to share information and build coherence in the two projects.



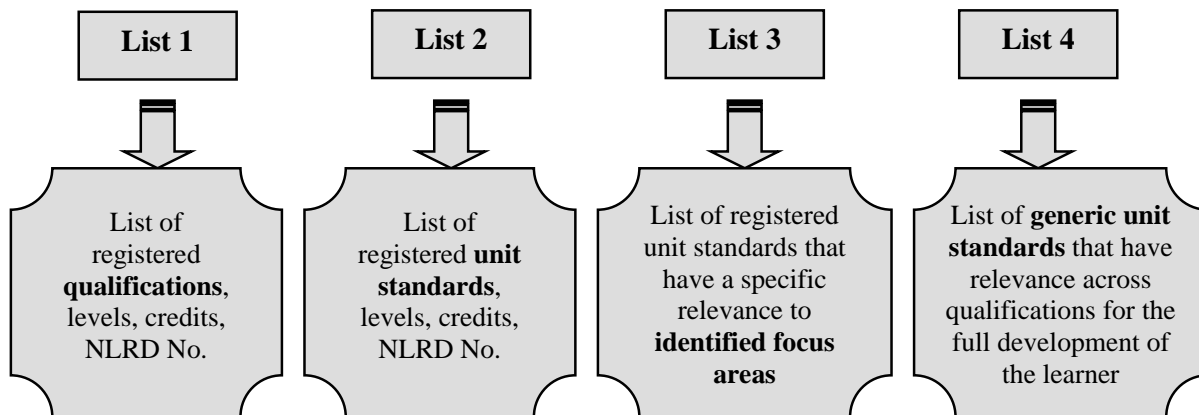
### **3. Objectives, Outputs and Deliverables of each activity**

- Action plan with time-frames;
- Identification of various sources of information – hardcopy, electronic;
- Completed and submitted two (2) monthly reports, nine (9) weekly reports and a final report;
- Produced lists of qualifications and unit standards with the relevant levels, credits and NLRD numbers;
- Sourced most of the information in various forms for both the qualification and unit standard lists;
- Collected electronic versions of some qualifications and unit standards from various sources;
- Sourced a total of 100 qualifications of which 8% have part of the required information (e.g. NLRD Number, Level, Electronic Copy) unavailable; and
- Sourced a total of 2 642 unit standards of which 1 336 electronic copies were available.

### **4. Progress made against planned activities**

- Lack of access to information on registered qualifications and standards was experienced due to the fact that the NLRD is currently going through a re-vamp and clean-up. NSB 06 has been ring-fenced and the clean up of its registered qualifications and standards will be undertaken as a project on its own. This means that no access to this information can be gained through the NLRD or SAQA itself. In order for this project not to be affected by this delay, paper research was undertaken by using all the previous minutes, reports and documents of the NSB 06 meetings over the last two years. In addition meetings were held with various officials of SAQA to discuss the problems in accessing NSB 06 qualifications and unit standards. Through these discussions it was agreed that additional assistance would be received from the NLRD personnel. Written requests to SGBs and other SETAs were submitted for relevant information.
- A vast majority of the unit standards in particular, have either not been assigned NLRD numbers, they have duplicate numbers or if numbers have been assigned, they were not available. SAQA was contacted in this regard and have advised that a request for these numbers needed to be submitted in writing. The request submitted was partially met which still leaves approximately 30% of the unit standards on the list without NLRD numbers. The NLRD clean-up process is due to roll-out over the next two weeks and therefore no further information could be accessed in this regard.
- Serious difficulties have also been caused by the fact that NSB 06 website is closed and cannot be accessed for their relevant registered qualifications and unit standards. Most of the qualifications and unit standards that have been registered do not appear on the website and if they do, there are no electronic versions that can be downloaded. The relevant SGBs were contacted and requested to supply electronic versions of their submissions. The response to this request has been minimal and slow. Alternate avenues were investigated and yielded positive results.
- A CD was developed that provides four (4) lists and supporting documents:

- a) The first list is an index of all **qualification titles** that have a possible relevance to the CISGB generation activities;
  - b) The second list is an index of all **unit standard titles** that have a possible relevance to the CISGB generation activities;
  - c) The third list is an index of those unit standards that are grouped in accordance with the **additional focus areas** as requested; and
  - d) The fourth list provides the unit standards that would assist in the **development of the whole person** and can therefore be used in a generic way across qualifications. These standards were developed by the SGB for Manufacturing and Assembly Processes and have been separated because they are generic enough to be used across various sectors and industries. This list will have no NLRD numbers reflected against any of the unit standards since they were only recommended for registration on 22 and 23 April 2003 and still need to be registered by the Authority.
- These lists are further supported by the electronic copies of all qualifications and unit standards that are available electronically.



## 5. Using the CD

When loading the CD there are five (5) folders and one (1) file. Users should not access the five folders as these contain the programming and coding information to make the index file work with hyperlinks.

Only use the file called "Index.htm". When opening this file the four (4) lists discussed earlier are clearly marked. All standards are arranged in alphabetical order. When clicking on any one of them the user would be able to open the list which would provide the following information:

- Column 1: A number – no relevance to the user; used for internal coding and tracking
- Column 2: Title of qualification or unit standards, these are all registered standards, when they are underlined it means there is a hyperlink which will allow you to click on it and the user will be taken directly to the electronic version of the standard. For the qualification the hyperlink works with the 3<sup>rd</sup> column (format).
- Column 3: Word or pdf icon to reflect in what format in which the document was sourced.
- Column 4: Level of the standard.
- Column 5: Credit value of the standard.
- Column 6: NLRD number assigned to the standard.
- Column 7: SGB that submitted the standard or the skills area with which the standard is associated.

Where any of this information is not reflected it means that this information was not available at the time of writing this report.

The back arrow in the top left-hand corner of the index needs to be used to move between lists.

## 6. Conclusions

The end product of this project reflects a list of 100 registered qualifications and 2 642 unit standards. The initial scope, which included only level 3 and 4 standards, would not have benefited usage for qualifications construction adequately. Several standards in levels below and levels above were found to be useful in the research and could obviously also have been used in the construction of qualifications. The scope therefore was widened to yield more adequate results. These are presented with levels, credits, and NLRD numbers. Where information on the originators has been available, it has also been included. Unit standards in particular have been sourced from other NSBs where appropriate focus areas have been found. These specifically relate to unit standards that would typically be included in the fundamental components of a qualification such as mathematics and communication. The information on the CD has been structured as reflected in Section 4 above. It is important to mention that the third list is grouped in accordance with the focus areas as follows:

|  |                                  |
|--|----------------------------------|
| Quality  | Business, management/supervision |
| SHE / OSH  | People skills                    |
| Water  | Customer service                 |
| Effluent   | Logistics                        |
| Analysis   | Science and technology           |
| Supply chain management                                  | Computer applications            |
| Hazardous material handling – transport, storage and use | Productivity                     |

However, this list does present certain limitations. These limitations relate to the fact that the title of the unit standard is often misleading and suggest that it deals with a focus area when the emphasis is in fact on another aspect of the title. It is therefore important to utilise the full list of unit standards as produced. The CISGB will be working with the consultant to verify that the qualification and unit standards selected are, in fact, value-adding.

## **7. Recommendations**

### **7.1. Within CHIETA/CISGB application**

1. The CISGB/CHIETA are advised to specifically utilise the registered qualifications and unit standards from the following SGBs due to the skills areas, generic competencies and processes embarked that have already been explored by the SGBs:

- Manufacturing and Assembly Processes
- Plastics Manufacturing
- Food Manufacturing

Most of these qualifications and unit standards represent generic competencies within a specific context but could be applicable in a different context, in this case the chemical industries.

2. This resource needs to be kept current and therefore must regularly be up-dated.
3. The expansion of the resource needs to be planned so that it could relate to best practice and continuous improvement needs as well as growth needs within Chemicals Sector.
4. Arrange a meeting with SAQA to share information about this available resource that they could access and assist them in further developing the NLRD.

### **7.2. Beyond CHIETA/CISGB application**

1. The list of available and registered unit standards could be developed into a more user-friendly resource by using it to create and develop a searchable database.
2. This resource needs to be kept current and therefore should be regularly up-dated to address the needs of other users.
3. The expansion of the resource should be planned so that it could relate to best practice and continuous improvement needs as well as growth needs.
4. The CHIETA/CISGB has said that it would be willing to contribute to any processes that would engage in the realisation of these recommendations, should funding become available.
5. This resource should be used or made available for any similar initiatives.
6. Any further developments of this resource must be done in consultation and under the guidance of DoL and SAQA.