

F. No.11-1(9)/2011-WDRA

Dated the 13.06.2012

CIRCULAR No. 1/2012

To,

As per list enclosed.

Dear Sir/Madam,

In consultation with the Department of Agriculture and Cooperation, Govt. of India, National Horticulture Board (NHB), National Horticulture Mission (NHM) and other stakeholders, the Warehousing Development and Regulatory Authority (WDRA), a statutory body, setup by the Govt. of India as per the provisions of the Warehousing (Development and Regulation) Act,2007 (Act No.37 of 2007) has decided to introduce negotiable warehouse receipt system in cold storage warehouses for the major horticulture produce so that the farmers producing horticulture crops may also avail the benefit of loan from the banks against the deposit of their produce in the registered warehouses(cold storages). This will help in commercialization, effective post-harvest management and integrated development of agriculture including horticulture in the country. The WDRA has notified 26 horticulture commodities for the issuance of NWRs by the registered warehouses (cold storages). The list of such commodities is given in annexure – I.

The WDRA in consultation with NHB has finalised the checklist for accreditation of warehouses (cold storage). The checklist contains the basic requirements for cold storage warehouses for scientific storage of horticulture produce in cold storage warehouses. A copy of the checklist is enclosed as annexure - II. The Authority has also approved 5 Govt. organisations as accreditation agencies for the cold storage warehouses. The list of these accreditation agencies is given in annexure – III.

The fee for registration/renewal of registration warehouses (cold storages) and accreditation charges of warehouses (cold storages) are given in annexure – IV. The application forms for accreditation and registration of warehouses (cold storages) are given in annexure – V & VI respectively.

All the warehouses (cold storages) which intend to issue negotiable warehouses receipts against the deposit of notified horticulture commodities in their warehouses (cold storages) may send their applications in prescribed form with necessary fee for registration of their cold storages. Prior to their registration they may get the accreditation certificate from the approved accreditation agency by applying them in the prescribed form with necessary accreditation charges.

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The application form, check list, list of the commodities brochure of guidelines and other details are also available on WDRA's website i.e. www.wdra.nic.in

Yours faithfully,

(Karnail Singh)
Member, WDRA
Tel: - 011- 26536215

Enc: As above

Distribution:

1. Additional Secretary (Sh. A. K. Thakur), Department of Agriculture and Cooperation, Krishi Bhawan, New Delhi.
2. Joint Secretary (Storage) (Sh. Girish Shanker), Department of Food and PD, Krishi Bhawan, New Delhi- 110001.
3. Joint Secretary and Mission Director (Sh. Sanjeev Chopra, IAS), NHM, Department of Agriculture and Cooperation, Krishi Bhawan, New Delhi.
4. Joint Secretary (Marketing) and Agriculture Marketing Advisor (DMI), Department of Agriculture and Cooperation, Krishi Bhawan, New Delhi.
5. Managing Director (Sh. Bijay Kumar, IAS), National Horticulture Board (NHB), Ministry of Agriculture, Govt. of India, 85, Institutional Area, Sector- 18, Gurgaon-122015. (Haryana)
6. Joint Secretary, Ministry of Food Processing Industries, Panchsheel Bhawan, August Kranti Marg, New Delhi.
7. Chairman, APEDA, NCUI Building, 3, Siri Institutional Area, August Kranti Marg, New Delhi.
8. Sh. B. B. Pattanaik, MD, CWC, Corporate Office, New Delhi.
9. Principal Secretary Agriculture/Secretary Agriculture (Incharge of Horticulture), All the State Govts.
10. MD, NCDC, 4, Sri Institutional Area, August Kranti Marg, Hauz Khas, New Delhi-110016
11. Sh. Sanjay Agarwal, CMD, Devbhumi, Cold Chain Pvt. Ltd, 17/18, Azad Pur, New Sabji Mandi, Delhi – 110033.
12. All the Owners/Managers of cold storages (Financed/Upgraded as per NHB guidelines).
13. M/s Adani Agri-fresh Ltd, "Adani House", Plot No. 83, Sector 32, Institutional Area, Gurgaon-122001.
14. All accreditation agencies of (Cold Storages) registered with the WDRA.
15. Sh. Amit Sahay, Additional Commissioner (Horticulture), Department of Agriculture and Cooperation, Krishi Bhawan, New Delhi.

Copy to:

- (i) Chairman, WDRA.
- (ii) Member, WDRA.
- (iii) JS, WDRA.
- (iv) Director (Tech.)/Director (A&F) Under Secretary, WDRA.
- (v) CC&TA, WDRA

Annexure – I

Warehousing Development and Regulatory Authority

The notified list of horticulture commodities for storing in the warehouses (**cold storages**) is as follows:

1. Table Potatoes (with or without CIPC application)
2. Seed Potatoes
3. Processing (Potatoes with CIPC application)
4. Apples in CA storage
5. Carrots
6. Nagpur Mandarin
7. Khasi/Darjeeling/NE Oranges
8. Kinnow
9. Sweet Lime
10. Lemon
11. Pomegranate
12. Grapes
13. Almond
14. Raisins
15. Onion (Fresh or dehydrated)
16. Garlic (Fresh or dehydrated)
17. Ginger (Fresh or dehydrated)
18. Dries edible mushrooms
19. Red Chillies
20. Coriander (dry)
21. Cinnamon
22. Turmeric
23. Tamarind
24. Date Palm
25. Frozen Processed Food item of horticulture Origin including those frozen in IQF or Blast Freezing.
26. Seeds & bulbs

Qualitative specifications/standards for above commodities will be of Agmark. However, in case, Agmark standards do not exist, for those commodities quality standards laid down by the Central/State Governments/Government bodies shall be applicable.

Check list to be filled up by the examiners of the accreditation agency Name and complete postal address of Warehouse (cold storage)

Sl. No.	Parameters	Comments/Findings of Examiners
1.	<p>About the Applicant and Application in Form 1-</p> <p>a. If the application is accompanied by prescribed application fee?</p> <p>b. Whether the applicant is proprietor of warehouse (cold storage)?</p> <p>c. In case of joint owners whether all the joint owners have signed the application/ authorised one of them for this purpose in writing?</p> <p>d. In case the warehouse (cold storage) belongs to a company, then</p> <p>i. If the company has mandate, as per its constitution, to run business of warehouse (cold storage)?</p> <p>ii. If the application is supported by attested copy of duly passed resolution of the Board of Management of the applicant Company to apply for accreditation indicating the particulars of person who is authorised to make application on its behalf?</p> <p>iii. If the particulars of authorised person matches with the particulars of applicant?</p> <p>iv. If the application has been accompanied with attested copy of such resolution as mentioned in (ii) above?</p> <p>e. If the photograph of the applicant is duly affixed with self-attestation by proprietor/attestation by CEO of applicant company?</p> <p>f. In case of renewal, what are the particulars of last valid certificate of accreditation?</p>	
2	<p>About the Description of Cold Storage Warehouse-</p> <p>a. Whether a registered architect has certified the civil structure of cold storage to be as per provisions of BIS code and local building by-laws and as per building plan duly approved by competent authority</p> <p>b. Whether any engineering firm having expertise in refrigeration engineering has certified that the cold storage has been commissioned as per enclosed data sheet at Part-6</p>	

	c. If industrial license, if applicable, is during its validity period?	
	d. If cold storage licence, if applicable, is during its validity period?	
	e. If pollution-control licence, if applicable, is during its validity period?	
	f. If fire safety certificate, if applicable, is during its validity period?	
	g. If approval / NOC from local planning Authority, if applicable, is during validity period?	
3	Identity of Warehouseman and capacity to Discharge Liability-	
	a. If warehouse (cold storage) is owned by warehouseman or it is on lease?	
	b. If attested copy of documents of acquisition deed (purchase / lease) has been furnished?	
	c. If attested copy of record of right on land shows the title of warehouseman on land and warehouse (cold storage)?	
	d. Whether CA certificate or Banker's certificate shows adequate net worth of warehouse (cold storage)?	
	e. If a copy of latest income tax return of proprietor / company owning the cold storage has been provided or not?	
4	Goods to be Stored, Storage Conditions and Insurance Cover	
	a. Whether the warehouse (cold storage) offers prescribed critical storage conditions for goods to be stored?	
	b. Whether quality grading system adopted commensurate with AGMARK, CODEX or any other standard?	
	c. Whether the arrangement for quality grading adequate? Whether testing facilities of goods to be stored in the warehouse (cold storage), in form of a small laboratory, are available? If so, give details of major tests which can be carried out.	
	d. List of laboratories for chemical analysis of the samples (wherever necessary) with whom the warehouse (cold storage) has tied up.	
	e. Whether the criterion adopted for pricing fair and rational?	
	f. Whether norm for determining shelf-life of produce to be stored fair and rational?	
	g. Whether the warehouse (cold storage) has its own weigh-bridge? If so, the details with capacity and date of last calibration.	
	h. No. of beam balances, platform balances with their details.	
	i. Whether the weights/platform balance used in the warehouse (cold storage) are timely calibrated and duly stamped by concerned weights & measures Department.	

	j. Whether the PLC readings for past period support claim that critical storage conditions are generally achieved in warehouse (cold storage)?	
	k. Whether automatic data logger for power-pack operation in place?	
	l. Whether electricity consumption is within acceptable limits of design consumption levels?	
	m. Whether the fire alarm and refrigerant leakage alarm systems functional?	
	n. In case of renewal of accreditation, whether the surveillance data supportive of proper system management?	
	o. Whether the warehouses (cold storages) as well as the goods stored in the warehouse(s) (cold storages) are insured for fire, flood, theft, burglary, misappropriation, riots, strikes or terrorism? Whether insurance cover provided adequate and fair? If so, the name of the insurance company and risks covered.	
	p. List of banks operating within approachable distance from the warehouse (cold storage). Any tie up of the warehouse (cold storage) with any of these banks.	
5	Managerial Competence, Man Power and Security Arrangement	
	a. If the warehouses (cold storage) has a full-time manager who is well conversant with provisions of WDRA 2007 and Management of warehouses (cold storage) for perishable food items?	
	b. If the warehouses (cold storage) has engaged a full time or part time project engineer who is registered with a recognised professional organisation ?	
	c. If the warehouse (cold storage) has a full time supervisor who can monitor functioning of cold storage through PLC and who is conversant with stacking, packaging and cold storage management?	
	d. Whether sufficient office equipment, viz. telephone, computers, photocopiers, fax and furniture (table, chairs, almirah, etc.) are available in the office(s) of the warehouse (cold storage)?	
	e. If the warehouses (cold storage) has adequate number of functional staff for carrying out functions like quality grading, weighing, sampling, account keeping, record management and security arrangement?	
	f. If the Operating Manual Followed by the (cold storage) self-explanatory and elaborate and displayed at relevant places?	
	g. If the manual for dealing with fire hazard, leakage of refrigerant self explanatory and displayed at relevant places?	
	h. If the warehouses (cold storage) has security men's cabin and proper lighting in the campus?	
	i. If the warehouses (cold storage) fully protected by compound wall / barbed wall fencing?	

	j. If gate pass system in warehouses cold storage followed properly?	
6	Storage Worthiness of Cold Storage Warehouse-	
	a. In case the (cold storage) has been set up under Government scheme of NHB / NCCD / SHM / APEDA/ MoFPI etc. and as per technical standards prescribed by DAC then, <ul style="list-style-type: none"> i. Whether the copies of basic data sheet enclosed is the one approved by concerned agency ii. Whether Joint Inspection Report issued by the Joint Inspection Team deputed by concerned scheme implementing has certified that the project has been found to be commissioned as per prescribed technical standards? 	
	b. In case the warehouses (cold storage) has not been set up under any government scheme of NHB ./ NHM/ APEDA/ MOFPI or has not been setup following implementation protocols prescribed under approved Technical Standards then, <ul style="list-style-type: none"> i. whether the basic data sheet being submitted by applicant is accompanied by a certificate from a chartered graduate mechanical / refrigeration engineering firm that- <i>“the heat load calculation has been done as per procedure laid out by ASHRAE Fundamentals and Refrigeration Handbook with safety factor of 5% to 10% on estimated load and that the design is energy efficient, takes in to account safety of work men and goods stored and environmental concern.”</i> ii. <i>Whether the</i> refrigeration contracting agency has issued a certificate of satisfactory commissioning of the cooling system in conformance to the performance indicators as per prescribed standards. iii. The refrigeration contracting agency has provide “as built drawings”, including cold store layout, P&I and electrical drawing and an operation & maintenance manual along with a list of essential spare parts. 	
	c. If energy-efficiency devices, automated controls and fire & refrigerant leakage alarms have been put in place and are functional?	
	d. If operation of warehouses (cold storage) can be effectively controlled and monitored by PLC?	
	e. If energy consumption level is within 10-20% of design level?	
	f. Whether stacking, packaging and handling system is as per design and prescribed guidelines	
	g. Whether fire-fighting arrangements are there in the warehouse (cold storage)? If so, details of arrangements including number and type of fire extinguishers, sand buckets, etc. to be given.	

	h. Name of the nearest Fire Brigade Station and distance. Whether telephone numbers of nearest Fire Station are displayed at different prominent places in the warehouse or not?	
	i. Name and Address of Annual Maintenance Contract Agency	
	j. If copies of following operating Manuals maintained in warehouse and used for assigning job charts and training purposes- i. A copy of Operating Manual for Warehouse Receipt System- ii. A copy of Operation Manual for Plant & Machineries including Annual –Maintenance- iii. A copy of Safety Manual Against Hazards of Fire/ Refrigerant Leakage- iv. A copy of Operation Manual for Hazards Covered by Insurance Policy for Insurance Claims-	

Overall Recommendation -

- Case recommended for accreditation
- Case not recommended for accreditation

Date-

Place-

Signature of Authorised Person

Name, Designation and
Seal of Accreditation
Agency

Annexure – III

List of accreditation agencies approved by the WDRA for accreditation of warehouses (cold storages).

Sl. No.	Name of the Accreditation Agency approved by the WDRA
1.	National Institute of Agricultural Marketing (NIAM), Kota Road, Bambala, Near Sanganer, Jaipur – 303906, Fax: 0141-2770595
2.	Directorate of Marketing and Inspection, Ministry of Agriculture, Department of Agriculture & Cooperation, A Block, CGO Complex, Faridabad, Haryana
3.	National Cooperative Development Corporation (NCDC), 4, Sri Institutional Area, Auguts Kranti Marg, Hauz Khas, New Delhi-110016
4.	National Productivity Council (NPC), Utpadakta Bhavan, 5-6 Institutional Area, Lodhi Road, New Delhi-110003
5.	The Rail India Technical and Engineering Services (RITES), RITES Ltd., RITES BHAWAN, Sector-29, Gurgaon-122 001.

Warehousing Development and Regulatory Authority

1. Registration/renewal of registration of warehouses (cold storages): - For the registration/renewal of registration of warehouses (cold storages), the following fee structure is prescribed which is same as applicable for dry warehouses:

- (i) State Capital cities Rs.2.50 per MT
- (ii) District Headquarters Rs.1.50 per MT
- (iii) For rural and other areas Re.1.00 per MT

Subject to a minimum amount of Rs.7,500 for each warehouse (cold storage). The registration shall be for a maximum period of three years and the same may be specified in the registration certificate.

2. Security Deposit.- For the warehouses (cold storages), the following security deposit is prescribed which is same as applicable for dry warehouses:

- (i) State Capital cities Rs.2.50 per MT
- (ii) District Headquarters Rs.1.50 per MT
- (iii) For rural and other areas Re.1.00 per MT

Subject to a minimum amount of Rs.7500 for each warehouse (cold storage).

3. The accreditation charges of warehouses (cold storages) are as follows:

Capacity of the Warehouse (cold storage)	Accreditation Fee for the 1 st year	Accreditation Fee for the third year (for the inspection- cum - renewal of warehouse (cold storage)
Upto 10,000 MTs	Rs.7500 + Service Tax for one visit	Rs.7500+ Service Tax for one visit
More than 10,000 MTs	Rs.10,500 + Service Tax for one visit	Rs.10,500 + Service Tax for one visit

Form -1

Application form for Accreditation of Warehouse (Cold Storage)

(See clauses– 2 (1 iv), 3(2) and 12 of Warehousing Development and Regulatory Authority (Warehouse Accreditation) Regulation, 2011

To,
The Officer In-Charge,
Cold Storage Warehouse Accreditation Agency
.....
.....



Subject- Application for accreditation of warehouse(cold storage)

Dear Sir,

I, Mr./ Mrs./ Ms., age....., son of / daughter of / wife of....., Resident of village-.....taluka....., district..... State..... hereby apply for accreditation of / renewal of accreditation of warehouse(cold storage) named as....., situated at survey No.....village / town.....district....., State..... The particulars of the said cold storage warehouse are enclosed herewith as Section 1 to Section 5.

I /we hereby, declare that: (pl. strike out words or phrases mentioned below in italics which are not applicable)

- a. I am / we are proprietors of the warehouse(cold storage); or, I am duly authorised representative of the applicant company* to make this application for accreditation / renewal of accreditation of the above mentioned warehouse(cold storage),
b. I am aware that the accreditation is as per provisions of the Warehousing (Development and Regulation) Act 2007 and rules framed thereunder. I, hereby, undertake to abide by all terms & conditions of accreditations / renewal of accreditation.
c. All applicable laws and statutory requirements in relation to the warehouse(cold storage) for which the application is being submitted, are complied with.
d. I / we hereby, solemnly declare that all information herein furnished are true to best of my / our knowledge and that in case it is proved to be untrue / false, I /we undertake to indemnify person or persons concerned in this business against any loss arising out of such false or untrue information and cancellation of accreditation.

Enclosures:

- 1.1 Demand Draft for the amount of application fee or proof of payment of prescribed application fee through electronic transfer of money towards application fee
1.2 In case a company is applicant, then attested Copy of Registration certificate of company
1.3 In case a Company* is applicant, then attested copy of Memorandum of Association and Articles of Association / Rules & Regulations
1.4 when a company* is applicant, then attested copy of resolution of Company for making application on its behalf for accreditation or its renewal under provisions of WDRA 2007 and Rules & Regulations made there under, indicating the full particulars of the person who is authorised to make application for accreditation
1.5 Original copy of authority to the person to make application as applicant on behalf of a company* for accreditation or its renewal under provisions of WDRA, 2007 which need to be signed by CEO of the company* if the applicant himself is not the CEO of the applicant company*.
1.6 In case of application of renewal of accreditation, attested copy of valid accreditation be enclosed.

Place-

Yours sincerely,

Date-

Signature of Applicant

Name of Applicant-
Profession.....
PAN NO. / Voter ID No. / UID No.....
Pohone- No.....Cell No.....

*Company hereinafter referred to includes any legal person such as cooperative society, registered firm etc.

Section- 1

Description of Warehouse (Cold Storage)

(Ref. section. 2 (s) of the Warehouse Development and Regulation) Act, 2007)

1. Name of Warehouse (Cold Storage)
2. Postal Address of Warehouse (Cold Storage).....
.....
.....
3. Location of Warehouse(Cold Storage)-
 - a. Survey No.....
 - b. Revenue Village / Town City.....
 - c. Tahsil.....
 - d. District.....
 - e. State.....
 - f. PIN Code.....
 - g. At Site Phone No.-.....Fax No.....e-mail ID
4. Particulars of Industrial License/DIC registration (as is applicable) -
 - a. Issuing Authority-
 - b. Period of Validity- from.....to.....
5. Particulars of warehouse (cold storage) License (If applicable under local laws)-
 - a. Issuing Authority-
 - b. Period of Validity- from.....to.....
6. No Objection Certificate from Pollution Control Board (if applicable under local laws)-
 - a. Issuing Authority-
 - b. Period of Validity- from.....to.....
7. Fire safety Certificate (if applicable under local laws)
 - a. Issuing Authority-
 - b. Period of Validity- from.....to.....
8. Particulars of NOC/ approval by local planning authority for warehouse (cold storage)
9. If the warehouse (cold storage) has been set up as per scientific design? If yes then tick the applicable option.
 - a. In accordance with technical standards prescribed by Department of Agriculture & Cooperation and under Govt. scheme. If so, particulars of scheme and letter of intent/in principle approval issued be quoted.....or,
 - b. In accordance with any other national or internationally recognised standard design practice based on heat load calculation keeping in view critical storage conditions of goods to be stored, energy efficiency, environmental concern, safety of work men and goods, automation in control etc. ,then the design methodology followed must be quoted

Date-.....

Signature of Applicant

Place-.....

(Name of Applicant)

Section-3

Goods to be Stored, Storage Conditions and Insurance Cover

{Ref. Clause 3 of the Warehousing Development and Regulatory Authority (Warehouse Accreditation) Regulation, 2011}

1. List of Produce / Goods to be Stored-

- a.
- b.
- c.
- d.
- e.

2. Quality Grading System- example: trade standards/Agmark/NHB/ISO etc.

3. System of Price Assessment for Produce offered for Storages-

4. Critical Storage Conditions offered by Warehouse Keeper-

a. Pl put tick mark against the Type of Cold Storage applicable and indicate critical storage conditions offered for each type of goods to be stored (Pl. attach additional sheet if no. of goods are large)-

i. Storage for Horticulture Produce not requiring Pre-Cooling-

- A. if conforms to NHB CS Type-1- Y / N
- B. Pull Down - Pull-down rate....., RH-.....%, CO₂ level-.....
- C. Holding – Temperature Humidity..... CO₂ level.....

ii. Storage for Horticulture Produce requiring Pre-Cooling-

- ~~A.~~ If conforms to NHB CS Type-2- Y or N
- ~~B.~~ Pre-cooling:- hydro-coolers / forced air pre-cooling/ vacuum pre-cooling - batch size and rate of pre-cooling-
- ~~C.~~ Pull down- (1) Pull-down rate-....., (2) RH-.....%, (3) CO₂ level-
- ~~D.~~ Holding- Temperature Humidity..... CO₂ level.....

iii. CA Storage-

- ~~A.~~ If conforms to NHB CS Type-3-
- ~~B.~~ Pre-cooling:- hydro-coolers / forced air pre-cooling/ vacuum pre-cooling batch size and rate of pre-cooling or,
- ~~C.~~ Pull down- (1) Pull-down rate-....., (2) RH-.....%, (3) CO₂ level-
- ~~D.~~ Holding- Temperature RH (%)....., N₂ level....., O₂ level....., CO₂ level.....

b. Frozen Storage-

i. Chilling or IQF with frozen storage (Chilling / IQF rate and holding temperature range)-

ii. Blast freezing (Cooling rate and holding temperature range)-

5. Enclosures-

- a. Attested Copy of Insurance Policy against Fire/ Floods/ Theft / Burglary/ Riot etc-
- b. Details of Insurance Cover made available for Goods Stored
- c. Attested Copy of System Performance Data sheet generated by data logger for Past 1 year
- d. Attested Copy of Surveillance Report, if any (for renewal of certificate of accreditation)

Date-

Signature of Applicant

Place-.....

Section- 4

Managerial Competence

{ref. S. 4 of warehousing (Development and Regulation) Act, 2007 and clause 3 of The Warehousing Development and Regulatory Authority (Warehouse Accreditation) Regulation, 2011}

1. Particulars of Managerial Man-power and Job Chart

S. No.	Designation Assigned*	Function/ Job Chart*	Minimum Educational Qualification	Training Details	Details of Job Experience	Remarks
1						
2						
3						
4						
5						
6						

* These are by way of example and one or more function may be clubbed keeping in view work load

2. Particulars of Operating Personnel-their Job Chart

S. No.	Designation Assigned*	Function/ Job Chart*	Minimum Educational Qualification	Training Details	Details of Job Experience	Remarks
1						
2						
3						
4						
5						
6						
7						
8						

*Designation as given by management of warehouse (cold storage) may be indicated such as manager, supervisor, operator, mechanic, helper, grader, weigher, plumber, electrician, record keeper, computer operator, security officer etc; one or more function may be clubbed keeping in view work load.

3. Put tick mark against following manuals if maintained at warehouse (cold storage) -

- a. Operating Manual of Warehouse Receipt System--
- b. Operation Manual for Plant & Machineries including Annual Maintenance--
- c. Safety Manual Against Hazards of Fire/ Refrigerant Leakage --
- d. Operation Manual for Hazards Covered by Insurance Policies --

Date-.....

Signature of Applicant

Place-.....

Section- 5

Storage Worthiness of Warehouse (cold storage)

{refer. section. 4 of the Warehousing (Development and Regulation) Act, 2007 and clause 3 of the Warehousing Development and Regulatory Authority (Warehouse Accreditation) Regulations, 2011}

Note- For cold storages set up in accordance with technical standards prescribed by DAC in this regard and which case implementation protocol has been followed under Government schemes of NHM / HMNEHA/ NHB / APEDA / MOFPI etc., applicant may submit a copy of basic data sheet in prescribed format, duly approved by such scheme implementing agency at the time of issue of letter of intent/ in principle approval to the project proposal and also a copy of Joint Inspection Report prepared before release of subsidy under the scheme as evidence for storage worthiness of cold storage. Applications for cold storages not covered by this provision must submit basic data sheet in following format for latest position prior to date of application.

Model Basic Data Sheet

(Ref. Section 2 of relevant Technical Standards of NHB as is applicable)

A. Identification

Name of the warehouse (cold storage)			
Location of warehouse (cold storage)	Area / Village		Town
	District		State
Name of Promoter Company / Owner			
Type of company (Proprietorship / Partnership / Pvt. Ltd / Ltd)			
Postal address of Promoter			
	Tel / Fax	Mob. No	E-mail
Present activity in brief			
Name of CEO / MD			
Name of Manager / Contact Person			Phone / Mobile No

B. Basic Cold Store Design Considerations

i) Commodity Storage Requirements

Type of Commodities/Produce		
Ideal / Recommended Storage Conditions – Temperature (DB in °C) – Humidity RH (%) Range – Air Circulation (CMH/MT of Produce) – Ventilation (Air Changes/Day) – CO ₂ Range (PPM) – Produce Cooling Rate (°C/day) – Freezing Point °C – Others		
Cold Chamber Dry bulb (DB in °C)		
Cold Chamber RH (%)		
Max Storage period (months)		
Max product temp (°C) – at the time of loading		
Daily loading rate (MT/day) – in each cold chamber		
Loading Period (months)		
Pull down rate (°C / day)		
Unloading Period (months)		
Daily unloading rate (MT/day) – from each cold chamber		
Ante Room Conditions (T °C & RH %)		
Sorting & Grading Area (T °C & RH %)		
Special Provisions – CIPC treatment for Process Potatoes		
Special Provisions – MA / Ethylene Control / Fumigation/ Fresh Air etc		

ii) Fresh Air / Ventilation System

Brief Description of CO ₂ Extraction / Ventilation System	
CO ₂ Concentration Control Range (PPM)	
Monitoring & Control Instrument – Type – Accuracy	
Ventilation Capacity (Max Air Changes/Day)	
Design Considerations for Energy Recovery and Preventing Wetting of Produce	

iii) Cold Store Chamber Sizing and Capacity

1. No. of chambers:
2. Type : Mezzanine/ Palletized
3. Max Height of Building

Details	CS Chamber 1	CS Chamber- 2	CS Chamber- 3	CS Chamber- 4
Total Capacity of Each Cold Store Chamber (MT)				
Internal Chamber Dimensions L x B x H (m)				
No. of mezzanine floors X Height (m) per floor				
Size &Weight of Bags or Boxes being stored				
Total number of Bags/Boxes / crates stored in each Cold Store Chamber				

iv) Ante Room & Process Areas

Details	Length (m)	Width (m)	Height (m)
Ante Room			
Sorting & Grading Area			
Loading / Unloading dock			

v) Machine Room & Utility Areas

Details	Length (m)	Width (m)	Height (m)
Machine Room			
Office Area			
Toilets & Changing rooms			
Any other			

vi) Building & Construction Details

- **Type of construction** : Civil/ Pre-engineered Building

Type of External walls of cold chambers	
Type of Internal / Partition walls	
Type of Roof / Ceiling	
Type of Internal structure / Racks	
Type of mezzanine grating	
Types of Lighting fixtures in cold Chambers	
Types of Lighting fixtures in Process & Other Areas	

vii) Insulation and Vapor Barrier

- **Type of Insulation** : Insulating Sheets / Metal Skin Composite panels

Type of Insulation	Wall		Ceiling / Roof	Floor
	External	Internal		
Type of material EPS / Metal Skin PUF Composite Panels / XPS/ PUR, Others				
Relevant IS Code				
Density (kg/m ³)				
Thermal Conductivity at +10°C k value (W/m.K)				
Thermal diffusivity m ² /h				
Water vapour transmission rate, ng/Pa.sm, Max.				
Water absorption after 24h immersion, percentage by mass.				
Relevant IS Code of Practice for Thermal Insulation of Cold Store				
Total Insulation Thickness (mm)				
No. of layers & Thickness / layer (mm)				
Type of vapor barrier & thickness (microns)				
Type of Bituminous/Sticking Compound				
Type of Cladding / Covering/External Finish				
Locking/Fixing & Sealing System in case of Metal Skin Composite Panels				
Any other info				

viii) Cold Store Doors & Air Curtains

Type of Insulation	Details
No. of Insulated doors	
Type hinged / sliding	
Insulation Material EPS / PUF / Others	
Thickness of Insulation (mm)	
Type of cladding	
Size of door opening	
Provision of Strip curtains – nos. & overlap %	
Air curtains, if any	
Others	

ix) Material Handling

- **Proposed Practice** : Manual / Semi Automated /Automated

Procedure	Brief Description
Material Handling Procedures & Equipments	
Cap of Electric Elevator Rating of motor (kW)	

Any other device	
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x) Grading, Sorting Washing & Packing Line (optional)

– **Proposed Practice** : Manual / Semi Automated /Automated

Procedure	Brief Description
Process Line	
Total Connected Load (kW)	

Please attach a Plan & Layout of the proposed Cold Store unit in accordance to the Statutory Building By-Laws and BIS Building Codes & Standards duly approved by a Registered Architect and Structural Engineer. The drawings should detail out insulation type, thickness, and fixing methodology in sectional details.

C. Heat Load Calculation of Cooling System – Summary

Ambient Conditions	Summer	Monsoon	Winter
Dry Bulb Temperature (°C)			
Wet Bulb Temperature (°C)			

Refrigeration Load	During Loading (kW)	During Pull Down (kW)	During Holding (kW)
Transmission Load			
Product Load			
Internal Load	Lighting load		
	Occupancy load		
Infiltration Load			
Ventilation/ Fresh Air Load			
Equipment Load - Fan motors etc.			
Total Load (kW/24 hrs)			

Compressor Operation Hours/Day	Loading Period		
	Pull Down Period		
	Holding period		
Multipliers	Safety Factor		
	Defrost Period		
Total Refrigeration Load	Peak Period	Holding Period	Lean Period
Total Load (KW)			

Please attach detailed heat load calculation sheets of the proposed cold store unit in accordance to the prescribed Technical Standards and Guidelines duly approved by a Qualified Engineer.

D. Cooling System Design & Equipment Selection

i) Cooling System Configuration

Type of Refrigerant	Ammonia /Freon /Others
Type of System	Direct Exp / Gravity Feed / Overfeed
Type of compressor	Reciprocating / Screw / Scroll / Others
Type of capacity control	Automatic In steps / Step less
Type of condenser	Atmospheric / Evaporative / Shell & Tube / Plate Heat Exchanger / Other
Cooling Towers (if applicable)	FRP Induced Draft / Others
Type of cooling coil	Ceiling suspended / Floor Mounted / Others
Type of defrosting	Air / Water / Electric / Hot gas
Humidification System & Control (Brief Description)	

ii) Compressor Detail

Compressor Make & Model	Nos.	Comp. RPM	Operating Parameters Evap. SST. / Cond. Temp (°C)	Refrigeration Capacity (KW)	Motor Rating. (KW)	Total Electric Power. (BkW)	Remarks Working /Standby

iii) Condenser Details

Condenser Make & Model	Nos.	Operating Parameters Cond.Temp.(SDT)/ in/out water temp(°C) &flow (lps)	Condenser Capacity (kW)	Electric Fan /Pump Motor Rating (kW)	Total Electric Power (BkW)	Remarks Working /Standby

iv) Cooling Tower Details (if applicable)

Cooling Tower Make & Model	Nos.	Operating Parameters DB & WB Temp, in/out water temp(°C)	Cooling Tower Capacity(KW)	Fan & Pump Capacity (CMH/LPS) & Motor (kW)	Total Electric Power (BkW)	Remarks Working /Standby

v) Air Cooling Units (ACU)

ACU Make & Model	Nos.	Operating Parameters Evap. (SST) & TD* (°C)	Cooling Capacity (kW)	Air Flow (CMH) & Face Velocity (M/S)	Material of Coil Tubes & Fins	Fin pitch (mm)	Total Fan Electric Power (BKW)

(*) TD – Temperature difference between Evap. (SST) °C & Return Air (at coil inlet).

Please attach Detailed Technical Data Sheets of each equipment namely Compressors, Condensers, Cooling Towers, Air Cooling Units giving General Layout, Dimensions, Material of Construction, Rated Capacity, Operating Parameters and COP (please note that the Air Cooling Unit data sheet should include heat transfer area, fin spacing, no. of rows, air flow, face velocity, fan static, air throw, Fan Motor BKW/KW, fin spacing, etc) duly Certified by the respective equipment manufacturers with reference to the Relevant Codes & Standards.

E. Electrical Instillation

Total Connected load (kW)	
Estimated power requirement at Peak Load Period (BkW)	
Estimated power requirement at Holding Load Period (BkW)	
Estimated power requirement at Lean Load Period (BkW)	

Capacity of Transformer (KVA) (proposed)	
Size of Capacitor for power factor correction & their operation	
Make & Capacity of standby D.G. Set (KVA)	

F. Safety Provisions

Details of Fire Fighting equipment	Dry	
	Water based	
Handling Refrigerants & Leaks	Leak Detection	
	Handling measures	
Safety devices – LP/HP cut-outs, safety valves, shut off valves etc.		
Details of Emergency alarm system & push button system in cold chambers		
Emergency lighting in Cold chambers & other areas		
Lightening arrestors		
Any other safety provisions		

G. Codes & Standards Followed

Building Design & Structure	
Construction Materials	
Thermal Insulation & Application	
Refrigeration Equipment & Systems	
Electrical & Mechanical Systems	
Food Safety	
Others	

H. Energy Saving Equipment & Measures

Details of Energy Saving devices	Brief Description and Savings
Light Fixtures CFL/LED	
Natural Lighting for general areas	
VFD for fans / compressors	
Refrigerant Controls and Automation	
Air Purger	
Power Factor Controller	
Energy recovery heat-exchanger for Ventilation System	
Renewable/ Solar Energy e.g. PV lighting	
PLC Control, & Data Acquisition	
Any other features e.g. water recycling, rain water harvesting ...	

I. Operation & Maintenance

Description	Nos. / Details
Proposed staff for Operation & Maintenance	
Proposed Annual Maintenance Contracts (if any)	
Training & Preventive Maintenance procedures	
Sanitation & Hygiene practice	

Pollution Control	
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J. Estimated Performance Parameters of Proposed Cold Store

Parameters	Peak Period	Holding Period	Lean Period
Coefficient Of Performance (COP) Of the Cold Store Unit			
Power Consumption (KWH/Day)			
Total Electricity Cost (Rs/Day)			
Electricity Cost towards Storage (Rs/MT /Day)			

K. Other Information

Enclosures-

- i. Applicant must submit for record "as built drawings", including cold store layout, P&I and electrical drawing and an operation & maintenance manual along with a list of essential spare parts supplied to him by the refrigeration contracting agency.
- ii. He should also submit a copy of the certificate of satisfactory commissioning of the cooling system in conformance to the performance indicators as per prescribed standards as issued by the refrigeration contracting agency to him.

Place

Date

Signature and
Name of Warehouseman with seal

Place

Date

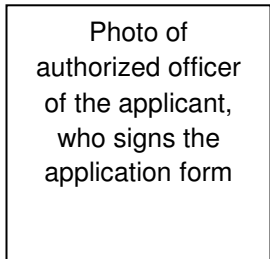
Signature and
Name of Project Engineer with seal

FORM A1

(See clauses– 3 & 13 of Warehousing (Development and Regulation) Registration of Warehousing Rules, 2010)

Application for the Registration/Renewal of Registration of Warehouse (cold storage)

To
 The Warehousing Development and Regulatory Authority
 “Warehousing Bhawan”
 5th Floor, 4/1, Siri Institutional Area,
 August Kranti Marg,
 Hauz Khas, New Delhi-110016.



Dear Sir /Madam,

I/We(name).....
in.....designation.....(Name of the organization) having registered office atTelephone No.....and E-mail..... request for grant of registration/renewal of registration* for carrying on the business of warehouse (cold storage) atfromto..... for storage of following horticulture commodities/goods :-

- 1.....
- 2.....
- 3.....

(Enclose list of horticulture commodities/goods to this Application)

1. Detailed description of warehouse (cold storage) for which registration is applied.
 Name of warehouse (cold storage)..... Location of warehouse (cold storage).....Village/ Taluka.....District..... State.....Telephone No..... E-mail

2. (i)Details of technical staff

Name and designation	Educational qualifications	Details of experience

- (ii) Capacity and area of warehouse (cold storage)
 - (iii) Equipment and other facilities in the field of warehousing (cold storage)available are:
 (a)
 - (b)
 - (c)
- (Please enclose a list.)

3. Existing or Previous Registration Number and a copy of the existing/earlier certificate of registration enclosed.**

DECLARATION:

1. I/We declare to be authorized representatives of the organization to apply for registration of Warehouse.

2. I/We hereby solemnly declare that all applicable laws and statutory requirements in relation to the warehouse (cold storage) for which the application is being submitted, are complied with.
3. I/We agree to abide by the terms and conditions of the registration.
4. I/We declare that the warehouse (cold storage) specified above is suitable for carrying on the business of warehouse (cold storage) and that it is in good condition and having all the requirements.
5. I/We hereby solemnly declare that all information herein given is true to the best of my /our knowledge and that in case it proves to be untrue, I/We undertake to indemnify person or persons concerned in this business against any loss arising out of such false or untrue information and cancellation of registration.

Signature (s).....
 Name in full.....
 Address.....

Attested documents to be enclosed along with the Application:

1. Board Resolution / Power of attorney authorizing the applicant to apply on behalf of the organization.
2. Proof of identity.
3. Title deeds or Lease agreement or franchise agreement with its validity.
4. Registration fees in the form and manner as prescribed.
5. Certificate of Compliance from Accreditation agency with detailed report of the Accreditation agency.
6. Security deposit in the form and manner as prescribed.
7. Statements of financial credibility
8. NOC from local authorities for operating the warehouse (cold storage).
9. Layout plan of the warehouse (cold storage).

*Strike off whichever not applicable.
 ** Strike off if not applicable.