EXPLANATORY NOTES, ASSUMPTIONS AND BASIS OF TARGETS FOR MOU 2013-14

The parameters, targets and respective weightage against each parameter proposed in the draft MoU 2013-14 were discussed in the MoU negotiation meeting held with the Task Force at New Delhi on 18.02.2013. Following details furnished as part of explanatory notes, assumptions and basis of targets for MoU 2013-14 are based on decisions taken in the stated meeting with the Task Force.

1.0 Financial Parameters as per guidelines given by MOP&NG:

Sl	Item	Assumption	Adjustment to be allowed at the time of evaluation
1.	Crude oil cost and product prices.	Weighted average price for the period October 2011 to September 2012.	Adjustment will be carried out for any difference between the assumed crude and product prices and the actual prices.
2.	Gross Sales.	Average prices for the period October 2011 to September 2012.	Adjustment will be allowed to be carried out for any variations in selling prices.
3.	Exchange rate and foreign exchange rate variation.	Rs. 52 per USD.	Adjustment would be allowed for difference between assumption and actual exchange rate variation.
4.	Inventory gains / losses	Nil	Adjustment would be allowed for the price variation between the actual opening and closing stock of finished goods as per audited accounts, after taking into account price variation already factored in the MOU targets, if any. The price variation would be the difference in the average opening and closing rate considered in valuation of finished goods (for all finished goods together) and multiplying the same with the quantity of opening stock or closing stock of finished goods, whichever is less. (Methodology as per MOP&NG OM No. G-38011/48/2009-Fin.I dated 06/09/2012.

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Sl	Item	Assumption	Adjustment to be allowed at the time of evaluation
5.	Taxes and duties.	At prevailing rates.	Adjustment would be allowed for any difference between assumption and actual.
6.	Policy decisions of Government.	Existing framework.	Adjustment would be allowed for any changes in policy decisions which have a bearing on profitability of the Company.

Prices, Rates, Taxes and Duties: The prices, rates, taxes and duties considered in calculating MoU 2013-14 financial targets are stated as **"Annexure on MoU 2013-14 Prices".**

2.0 **Crude Throughput:** The 'Excellent' and 'Very Good' targets have been set at 2600 TMT and 2550 TMT respectively, with 50 TMT reduction at each lower level. Weightage against this parameter has been set at 6.0.

The targets for 2013-14 have been set at lower levels compared to those in MoU 2012-13 considering availability of crude from North East and the fact that NRL is not supported by infrastructure to bring in crude from other sources including imports.

3.0 **Distillate Yield:** Distillate Yield is calculated by the following formula:

$$\text{Distillate Yield as \% of crude} = \frac{\text{(Total distillates produced - Distillate produced from Natural Gas)}}{\text{(Crude + MS Blend components + Intermediate stocks depletion/build)}}$$

For MoU 2013-14, 'Excellent' and 'Very Good' targets have been set at 90.00% and 89.60% respectively, with 0.40% reduction at each lower level. Weightage against this parameter has been set at 5.0.

The above targets for 2013-14 are marginally lower compared to those in MoU 2012-13 (Excellent: 90.65%, Very Good: 90.35%) considering planned commissioning of NRL's Naphtha Splitter Unit and the Wax Project during course of the year 2013-14.

4.0 **Specific Energy Consumption:** The 'Excellent' and 'Very Good' targets have been set at 63 MBN and 64 MBN respectively, with 1.0 MBN increase at each lower level. Weightage for this parameter has been set at 4.0.

The targets in MoU 2013-14 are stiffer compared to those in MoU 2012-13 which are 68 MBN at 'Excellent' and 69 MBN at 'Very Good' levels.

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5.0 Production of Euro-III/IV Motor Spirit: 'Excellent' and 'Very Good' targets have been set at 250 TMT and 240 TMT respectively, with 10 TMT increase for each lower level. Weightage has been set at 5.0.

The targets in MoU 2013-14 are higher compared to those in MoU 2012-13 which are 240 TMT at 'Excellent' and 233 TMT at 'Very Good' levels.

Although capacity of NRL's MS Plant is 185 TMT per annum, Motor Spirit being a value added product, NRL has been producing higher quantities through the process of Naphtha blending and production during 2012-13 is expected to be higher than the MoU 'Excellent' target. With planned commissioning of the Assam Gas Cracker in 2013-14, NRL envisages supplying 40 TMT of petrochemical grade Naphtha as feed-stock to this plant. Thus, NRL's MS production in 2013-14 is envisaged to be lower compared to anticipated production in 2012-13.

In the event NRL is not required to supply the 40 TMT Naphtha to the Assam Gas Cracker, the actual MS production quantity during 2013-14 would be notionally reduced by the supply-shortfall quantity for the purpose of evaluating this particular parameter. In other words, if the total MS production for 2013-14 is 250 TMT and NRL supplies only 5 TMT of Naphtha to the Gas Cracker, a quantity of 215 TMT [250-(40-5)] shall be considered as MS production for the purpose of MoU evaluation.

6.0 Sale of CPC: The 'Excellent' target for sale of CPC as percentage of production is set at 100% and the 'Very Good' target at 90% of production. Weightage against this parameter has been set at 1.0.

7.0 Transportation of products through the NSPL: This is a new parameter for MoU 2013-14. The Numaligarh-Siliguri Product Pipeline (NSPL) is being used for transportation of White Oil products from Numaligarh to NRL's marketing terminal at Siliguri. In MoU 2013-14, the 'Excellent' and 'Very Good' targets have been set at 1.47 MMT and 1.40 MMT respectively for transportation of products through the NSPL, with 5% reduction at each lower level. Weightage against this parameter has been set at 1.0.

8.0 Mechanical Completion of the Wax Project: Currently, Wax project is the only Plan project under implementation at NRL. The project was approved in June 2010 and is scheduled for mechanical completion by end-December 2013. In MoU 2013-14, the 'Excellent' and 'Very Good' targets have been set as 15th Dec'13 and 31st Dec'13 respectively. Weightage against this parameter has been set at 2.0.

9.0 Commercial Production at Wax Plant: This is a new parameter in MoU 2013-14. The 'Excellent' and 'Very Good' targets have been set as 15th Mar'14 and 31st Mar'14 respectively. Weightage against this parameter has been set at 2.0.

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10.0 Actual expenditure on Plan projects as % of approved Annual Plan outlay for 2013-14: This is a new parameter incorporated in MoU 2013-14. The 'Excellent' and 'Very Good' targets have been set at 100% and 90% respectively. Weightage against this parameter has been set at 1.0.

11.0 Environment: Following two parameters on environment have been incorporated in MoU 2013-14:

(i) Implementation of Flare Gas Recovery System: Recovery of hydrocarbon going to flare and utilisation of the recovered gas as fuel in refinery process is an energy saving scheme besides being an environmental protection initiative. Keeping this in view, a flare gas recovery system is planned to be implemented at the refinery. The system will require a flare gas recovery skid to be installed near the flare area and the skid has to be integrated with the existing refinery process systems. Achieving 10% physical progress against this project has been adopted as the performance indicator. The 'Excellent' and 'Very Good' target dates have been set as 31st Jan'14 and 15th Feb'14 respectively. Weightage against this parameter has been set at 0.5.

(ii) Installation of double roof seals: In order to contain vapour loss from floating roof tanks in the refinery and adjacent marketing terminal, installation of double seals in five tanks have been planned during 2013-14. The 'Excellent' and 'Very Good' target dates have been set as 15th Jan'14 and 31st Jan'14 respectively. Weightage against this parameter has been set at 0.5.

12.0 Safety: Under Safety, the following six parameters have been incorporated in MoU 2013-14:

(i) Number of LTA per million man-hours worked: Loss Time Accident (LTA) is defined as a work place accident which causes any bodily injury by reason of which the person injured is prevented from working for a period of 48 hours or more immediately following the accident. Period of absence for such reportable accident is based on Factories Act. Million man-hours is calculated based on actual working hours of the employees which also includes overtime hours.

The target has been set considering the frequency rate of Lost Time Accidents (LTA) to employees of the Company while discharging their duties within the refinery location. The frequency is calculated as follows:

$$\text{Frequency} = \frac{\text{No. of LTA hours} \times 1{,}000{,}000}{\text{Total Man-hour worked}}$$

The estimated total man-hours in Numaligarh Refinery during one year is 20,90,355. Considering one LTA hour during the year, the frequency works out to 0.48 (1/2.09).

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Hence 0.48 has been set as the 'Very Good' target in MoU 2013-14 and 'zero' as the 'Excellent' target. Weightage against this parameter has been set at 1.0.

(ii) **Conducting Mock Drills:** Periodically, mock drills are required to be conducted in order to check adequacy of the safety and disaster management plans. Necessary corrective actions are taken based on such drills. As per Oil Industry Safety Directorate (OISD) guidelines and Manufacture, Storage and Impact of Hazardous Chemicals (MSIHC) rules, NRL has to conduct Offsite Disaster Mock Drills at least once every year, Onsite Disaster Mock Drills once every six months, Major Fire Mock Drills once every three months and Minor Fire Mock Drills once every month. The total number of such drills thus works out to 19. With above in consideration, the 'Very Good' target for conducting mock drills covering offsite, onsite, major and minor fires has been set at 19. The 'Excellent' target has been set at 20. Weightage against this parameter has been set at 1.0.

(iii) **Safety training to employees, CISF/Security Staff and POL drivers:** Targets against this parameter are set at 840 mandays in 'Very Good' and 882 mandays in 'Excellent' category. Weightage against this parameter has been set at 1.0.

(iv) **Safety training to workers engaged by contractors:** Targets against this parameter are set at 95% of total workers engaged by contractors during 2013-14 in 'Very Good' and 100% in 'Excellent' category. Weightage against this parameter has been set at 1.0.

(v) **Awareness camps in neighborhood of refinery:** NRL has been able to sustain excellence in fire and safety management through extensive training to all sections of people working in the refinery. Apart from regular safety training, awareness campaigns are organized periodically to sensitise neighbouring public on various aspects related to safety. In MoU 2013-14, the 'Very Good' and 'Excellent' targets against this parameter have been set at 7 camps and 8 camps respectively. Weightage against this parameter has been set at 0.5.

(vi) **Awareness programmes in refinery and adjacent marketing terminal:** In order to increase awareness on safety amongst workers in various units of the refinery and adjacent marketing terminal, it is planned to organize 10 programmes during 2013-14. With above in consideration, the 'Very Good' and 'Excellent' targets against this parameter are set at 10 and 12 programmes respectively. Weightage against this parameter has been set at 0.5.

Total weight against the safety parameters sum up to 5.0 which as stated above, includes 1.0 each for first four parameters and 0.5 each for the fifth and sixth parameter.

13.0 Human Resource Management (HRM)

The six HRM parameters as detailed below have been incorporated in MoU 2013-14:

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Parameter	Unit	Wt	Excl.	VG	Good	Fair	Poor
1. Training to employees imparted during the year (excluding training on fire & safety).	Mandays	0.5	1329	1266	1203	1143	1086
2. Developing critical mass of leaders through a system of developmental training.	No. of Training Programmes	0.5	6	5	4	3	2
3. Training on Project Management.	Mandays	1.0	20	18	16	14	12
4. Training on Risk Management.	Mandays	1.0	20	18	16	14	12
5. Competency Mapping for executives in Job Group-E as on 1st April, 2013.	%	0.5	90%	85%	80%	75%	70%
6. Number of suggestions generated per employee per year.	Nos. per employee	0.5	0.11	0.10	0.09	0.08	0.07
Total Weight:		4.0					

14.0 Research & Development

Details of the R&D parameters incorporated in MoU 2013-14 are as follows:

(i) **Total R&D Expenditure as % of PAT:** Achievement of R&D expenditure as 'greater than 0.50%' of Profit-After-Tax of 2012-13, has been set as the 'Excellent' target. The 'Very Good' target has been set at 0.50%. Weightage against this parameter has been set at 2.5.

(ii) **Implementation of R&D Project-1:** Basic Engineering and Design Package (BEDP) of an R&D project incorporated in MoU 2012-13 is currently being prepared. Against this initiative, appointment of the project-management-consultant (PMC) has been incorporated as a parameter in MoU 2013-14. Appointment of the PMC by 1st Feb'14 has been set as the 'Excellent' target and the 'Very Good' target has been set as 15th Feb'14. Weightage against this parameter has been set at 1.0.

(iii) **Implementation of R&D Project-2:** This project has been selected as Comprehensive mathematical modelling of Crude and Vacuum Distillation Units for yield and product quality optimisation. There is scope for optimisation of yield and product quality by tweaking process parameters etc. Mathematical model of the unit can help in simulation of actual operations w.r.t. changed process conditions. After development,

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the model has to be validated through laboratory tests representing actual operating conditions. The date of development of the Model has been adopted as the performance indicator. Development of the model by 15th Jan'14 has been set as the 'Excellent' target and the 'Very Good' target has been set as 31st Jan'14. Weightage against this parameter has been set at 1.0.

(iv) Implementation of R&D Project-3: This project has been selected as Reduction in slop generation from Delayed Coker Unit (DCU) upto 50% through field experiments on reprocessing of DCU slop within the unit.

Slop generation from DCU is an integral process in the unit's operation and generated slop needs to be reprocessed mostly in the Crude Distillation Unit (CDU). This requires preparation of slop which often creates upsets in CDU operation and product quality. Thus, minimizing net slop from DCU is a priority area and a suitable process with necessary hardware modification is required to achieve this objective. The date of completion of this R&D project has been adopted as the performance indicator. Completion of this project by 1st Feb'14 has been set as the 'Excellent' target and the 'Very Good' target has been set as 15th Feb'14. Weightage against this parameter has been set at 0.5.

15.0 Corporate Social Responsibility & Sustainability

Based on DPE's guidelines, NRL had incorporated the following parameters and targets on CSR and Sustainability with a total weight of 8.0:

Parameter	Unit	Wt	Excl.	VG	Good	Fair	Poor
1. No. of Workshops / Seminars / Trainings organised to sensitise employees on various aspects of CSR and Sustainability initiatives.	Nos.	0.50	**5**	**4**	**3**	**2**	**1**
2. Presence of top executives in DGM level and above in such Programmes.	Yes/ No	0.25	**Yes**	N/A	N/A	N/A	**No**
3. Total employees covered through the above programmes.	Nos.	0.25	**50**	**40**	**30**	**20**	**10**
4. **Reduction in carbon footprint:** Providing 20 KW solar power at DPS, Numaligarh to reduce consumption of power from conventional sources.	Yes/ No	2.00	**Yes**	N/A	N/A	N/A	**No**
5. Formulation of a Corporate Communications Strategy involving engagement of employees and people living in villages surrounding the refinery.	Yes/ No	0.25	**Yes**	N/A	N/A	N/A	**No**

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Parameter	Unit	Wt	Excl.	VG	Good	Fair	Poor
6. No. of employees participating in Community Development activities during the year.	Nos.	0.25	5	4	3	2	1
7. No. of meetings held during the year between employees and Village Development Committee.	Nos.	0.25	4	3	2	1	-
8. Establishment of a feed-back channel to access effectiveness of the Company's CSR and Sustainable activities.	Yes/ No	0.25	Yes	N/A	N/A	N/A	No
9. Publication of Annual Report on CSR and Sustainability.	Yes/ No	0.50	Yes	N/A	N/A	N/A	No
10. Updation of Company's web site for information on CSR and Sustainability on quarterly basis.	Yes/ No	0.50	Yes	N/A	N/A	N/A	No
11. No. of beneficiaries from CSR Project "Niramoy" implemented in collaboration with VK NRL Hospital.	Nos.	1.00	7200	6840	6498	6173	5864
12. No. of beneficiaries from CSR Project "Surya Jyoti" for installing solar power in seven schools in neighbourhood of the refinery.	Nos.	1.00	1000	950	903	857	815
13. Expenditure on CSR and Sustainability activities vis-à-vis annual budget allocation.	%	0.50	95	90	85	80	75
14. Existence of the two tier organisation structure for CSR and Sustainability activities.	Yes/ No	0.25	Yes	N/A	N/A	N/A	No
15. No. of meetings held during the year by the two committee.	Nos.	0.25	5	4	3	2	1
Total Weight:		**8.0**					

Task Force decided to grant exemption regarding a CSR project in backward district as NRL needs to do such CSR extensively in its own project area (Numaligarh) so as be more acceptable to the locals.

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16.0 Foot note to MoU 2013-14

A. Non-compliance of Corporate Governance will also be penalized by way of negative marking and the MoU Score will be increased in the following manner in accordance with DPE OM 18(8)/2005-GM dated 22nd June, 2011.

Sl.	Annual Score	Grading	Penalty Marks	Difference in Score From 'Excellent' Grade
01	85% and above	Excellent	0	0.00
02	75%-84%	Very Good	0	0.00
03	60%-74%	Good	0.5	0.02
04	50%-59%	Fair	0.5	0.02
05	Below 50%	Poor	1.0	0.04

If NRL fails to submit the Self Evaluation Report in the format enclosed with the OM, its Grading will be treated as poor and score will be inflated accordingly.

B. NRL has to give a Certificate regarding Implementation of Guidelines issued by DPE as per OM No. DPE/14(38)/10-Fin dated 28th June, 2011 and also a certificate from its auditors / Chartered Accountants in practice. Non-compliance of DPE Guidelines determined on the basis of certificate submitted will be penalized upto 1 mark at the discretion of Task Force at the time of MoU Evaluation. (In other words, the MoU Ratings can be increased by 0.04).

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