

24th May 2006

Dr John Tamblyn
Chairman
Australian Energy Market Commission
PO Box H166
Australia Square NSW 1215

Letter sent electronically to: john.tamblyn@aemc.gov.au

Dear John,

Rule change proposal for: Management of Negative Residues in the Snowy Region by reorientation of constraints

This letter sets out a rule change proposal (“Reorientation Proposal”) by Snowy Hydro Limited (“Snowy Hydro”) and NEMMCO to enable the Snowy region to be reoriented to Dederang when there is a binding constraint on the Murray-Tumut line for northward flows. The effect of this proposal is to locate Murray generation in Victoria when there is a constraint on northward flows.

The Snowy region is poorly designed from a market efficiency perspective:

- A large (3,700 MW) block of generation is located within the Snowy region but without any regional customer load. 100% of Snowy Hydro’s generation is therefore subject to inter-regional risk, a unique situation in the NEM;
- A major transmission constraint (the Murray – Tumut constraint) exists in the middle of the Snowy region i.e. the regional boundary does not coincide with the limiting constraints, and is unlikely to be relieved in the medium term. Large generation blocks, at Murray and Tumut, are located on each side of the constraint; and
- The Snow region intersects a transmission loop. Together with the location of the Snowy regional reference node on the side of this loop, this can result in negative settlement residues when there is a constraint on northward flows.

Snowy Hydro believes that the problems resulting from this poor design should be resolved through a change to the regional boundary. This is consistent with NEM policy, and is the most efficient way of responding to the major problems caused by the current regional structure. It is of great importance that any transitional arrangements do not defer changes

to the Snowy regional boundary due to the expected market benefits as detailed in Snowy Hydro's boundary change submissions.

Whether or not there is ultimately going to be a boundary change is of course a matter for the AEMC to deal with in response to submissions that are put before it. Until such time that a boundary change, if any, is implemented there is a continuing need to manage the negative settlement residues between Victoria and Snowy. The Southern Generators have submitted a rule change proposal which would fund these negative settlement residues from positive residues between Snowy and New South Wales. Snowy Hydro believes that the Southern Generators proposal would:

- be significantly less efficient than Snowy Hydro's reorientation proposal; and
- have a material negative financial impact on Victorian customers and Snowy Hydro.

Snowy Hydro's letter of 2 March 2006 provided a description of Snowy Hydro's proposal and a suggested potential rule change. This letter of 24th May 2006 formally proposed a rule change and summarises why Snowy Hydro's rule change proposal is more effective in meeting the NEM objective than either the status quo or the Southern Generators proposal. Attachment 1 provides the proposed rule change. Attachment 2 provides operational data to support Snowy Hydro's assessment of efficiency impacts. Attachments 3 and 4 contain confidential information supporting Snowy Hydro's assessment of the impact of the two proposals now before the AEMC.

The basic principle underlying this formal rule change proposal is to avoid the creation of negative settlement residues by re-orientation of the relevant transmission constraints to Dederang in the Victorian region. This prices Murray generation at the Victorian pool price when northward flows from Victoria to Snowy are constrained by the Murray-Tumut transmission limit, and thereby ensures there is no counter-price power flow between Victoria and Snowy that would give rise to negative settlement residues. Snowy Hydro's proposed rule change, if accepted, would cease to apply on the earlier of 31 July 2007 or the implementation of the first regional boundary review by the AEMC.

NEMMCO has agreed to be formally joined to this request with Snowy Hydro to satisfy the requirements of section 91 (6) of the National Electricity Law and to allow the proposal to be consulted and considered on its merits. NEMMCO may elect to make a separate submission on the proposed derogation to the AEMC during the consultation process.

1 Background

The Southern Generators and NEMMCO submitted a rule change proposal on the management of negative residues in their letter of 27 October 2005.

In a letter of 2 March 2006, Snowy Hydro requested that, in its consideration of the Southern Generators proposal for management of negative settlement residues, the AEMC should also consider the option of reorientation of the constraint to Dederang when there are binding constraints from the Murray to Tumut network nodes.

That letter also outlined Snowy Hydro's view that NEMMCO does not require a Rule change to implement re-orientation for northerly flows, as this approach is currently used

for southerly flows. However, a suggested rule change was attached to the letter for the AEMC's consideration if the AEMC concluded a rule change was required. The AEMC has not confirmed whether or not a rule change proposal is required.

Snowy Hydro is now formally submitting the proposal as a rule change in order to remove any potential procedural impediment to consideration of the proposal by the AEMC. Snowy Hydro requests that this rule change proposal be grouped with the Southern Generators proposal, in accordance with section 93 of the NEL as both proposals respond to the problem of negative settlement residues associated with the current structure of the Snowy region.

Snowy Hydro would be happy to withdraw this rule change proposal if the AEMC informs Snowy Hydro that a rule change is not required, and that the reorientation proposal is available as an option for consideration.

2 Approach to assessment

The existing regional boundary and location of the regional reference node in Snowy result in negative settlement residues between the Victoria and Snowy regions during periods of high demand and high prices in New South Wales and high northward flows.

The current approach (the status quo) is to prevent the emergence of negative settlement residues by clamping i.e. imposing a constraint on northward flows from Victoria to Snowy.

Two alternatives have been proposed which could be implemented this coming summer. Snowy Hydro's proposal is to prevent the emergence of negative settlement residues by reorientation of the Snowy region to Dederang during these periods. The Southern Generators' proposal is to fund the negative settlement residues between Victoria and Snowy by transfer of funds from the positive residues between Snowy and New South Wales. The positive residues will inevitably exceed the negative residues.

Snowy Hydro believes that the AEMC should assess which of these two proposals best meets the NEM objective. The AEMC should also consider the timing of a possible boundary change, and which of these two interim solutions would best provide benefits over the 2006/07 summer in the transition to a boundary change.

3 Assessment criteria

The NEM objective provides high level assessment criteria. More specific criteria may be required to assess the performance of similar but competing proposals. The AEMC's information disclosure statement of 9 May 2006 sets out an analytic framework which assists with the assessment of alternatives. Snowy Hydro also interprets the disclosure statement as indicating that the modelling of the Southern Generators proposal will be compared to the current arrangements and the Snowy Hydro proposed Dederang reorientation proposal.

Snowy Hydro's assessment is based on Snowy Hydro's understanding of the criteria set out in the information disclosure statement. Snowy Hydro asks that the AEMC inform us if an alternative approach to Snowy Hydro's assessment would be better aligned with the AEMC's desired approach.

Snowy Hydro’s understanding of the analytic framework being used by the AEMC is as follows:

- *Regulatory design*: regulatory interventions should be limited to demonstrated market failure, and that any regulatory intervention should be transparent, predictable and address the underlying cause of market failure.
- *Efficiency impacts*: the AEMC will assess whether a proposal increases economic welfare because it reduces costs or results in prices being closer to costs. Snowy Hydro has assessed these separately by considering
 - *Cost*: what impact would the alternative proposals have on the ability to dispatch generation, and what impact might this have on costs on the assumption that all generation were bid at its variable cost, and
 - *Price*: what impact would the proposals have on the extent of competition and price levels, given bidding behaviour as influenced by market design and other arrangements such as financial contracts.
- *Risk*: the AEMC will undertake risk modelling to examine the impact on price volatility and on the value of inter-regional trading.
- *Wealth transfers*: the AEMC will have regard to whether a proposal involves substantial wealth transfers but limited benefits against the NEM objective.

Snowy Hydro’s application of these criteria to the assessment of rule change proposals is discussed further below.

The AEMC will also look at quality, reliability and security of supply. This is not covered below as Snowy Hydro considers that the three options may perform in a similar manner against this criterion.

4 Assessment of the options

4.1 *Regulatory design*

The AEMC has stated that:

“...regulatory interventions should be limited to circumstances of demonstrated market failure and where a case for intervention is made the intervention should be transparent, predictable and where possible address the underlying cause of the market failure”

All three options require intervention by NEMMCO in response to a market design deficiency i.e. the inappropriate Snowy region boundary definition.

The status quo raises concerns about predictability of the speed with which NEMMCO will respond to negative residues between Victoria and Snowy.

The Southern Generators proposal would require action ‘off-market’, through transfer of funds from the Snowy to New South Wales IRSRs to the Victoria to Snowy IRSRs. This

transfer will be codified and published, and should be transparent and predictable. However, it focuses on wealth transfers rather than addressing the underlying market design deficiencies.

Snowy Hydro's reorientation proposal would require action by NEMMCO in real time. However, reorientation is already used for southward flows through the Snowy region and no concerns have been raised about uncertainty or lack of transparency in that context.

Moreover, the proposed reorientation measures provide the economic effects that would reflect the outcomes if a regional boundary change was implemented as separately proposed by Snowy Hydro. By dealing with the underlying regional design deficiency Snowy Hydro's reorientation proposal provides the best transition arrangement to a formal boundary change and in effect provides a trial of the Snowy Hydro regional boundary change proposal.

Snowy Hydro's conclusion is that Snowy Hydro's reorientation proposal is superior to both the Southern Generators proposal and the status quo when judged on the criteria of regulatory design.

4.2 Dispatch efficiency

Snowy Hydro has assessed whether a proposal enables more efficient dispatch and, if so, the materiality of possible cost reductions.

The status quo reduces dispatch options during high demand periods with northerly flows by placing a constraint on Victorian exports. Both the Southern Generators proposal and reorientation proposal would avoid the need to impose this constraint.

Snowy Hydro has assessed the cost reductions which could be achieved by these two proposals if bids were based on marginal cost. A description of possible dispatch impacts on this simplified basis assists with an assessment of likely pricing impacts, discussed in the next section.

The key to understanding the dispatch impacts is the location of generation capacity and transmission limits (refer to Figure 1):

- The key constraint in accessing the NSW market during high demand periods is the constraint north of Tumut. This places a limit of 3,000 MW for flows from the Victoria and Snowy regions into NSW
- Power flows on two transmission paths are summed by NEMDE (the NEM dispatch engine) to give the total Victoria to Snowy power flow – the “cutset”. Northward flows across the cutset are around 1,250 MW to 1,350 MW. The flows are higher (at the 1,350 MW end of the range) if generation at Murray is at low levels, and are reduced (to the 1,250 MW end of the range) if generation at Murray is at high levels. In effect, approximately 100 MW of additional power can flow over the cutset from Murray to Tumut if Murray generation is very low.
- There is 2,150MW of generation available at Tumut. Assuming there is 1,250-1,350 MW of flow across the cutset, the level of generation at Tumut can result in the

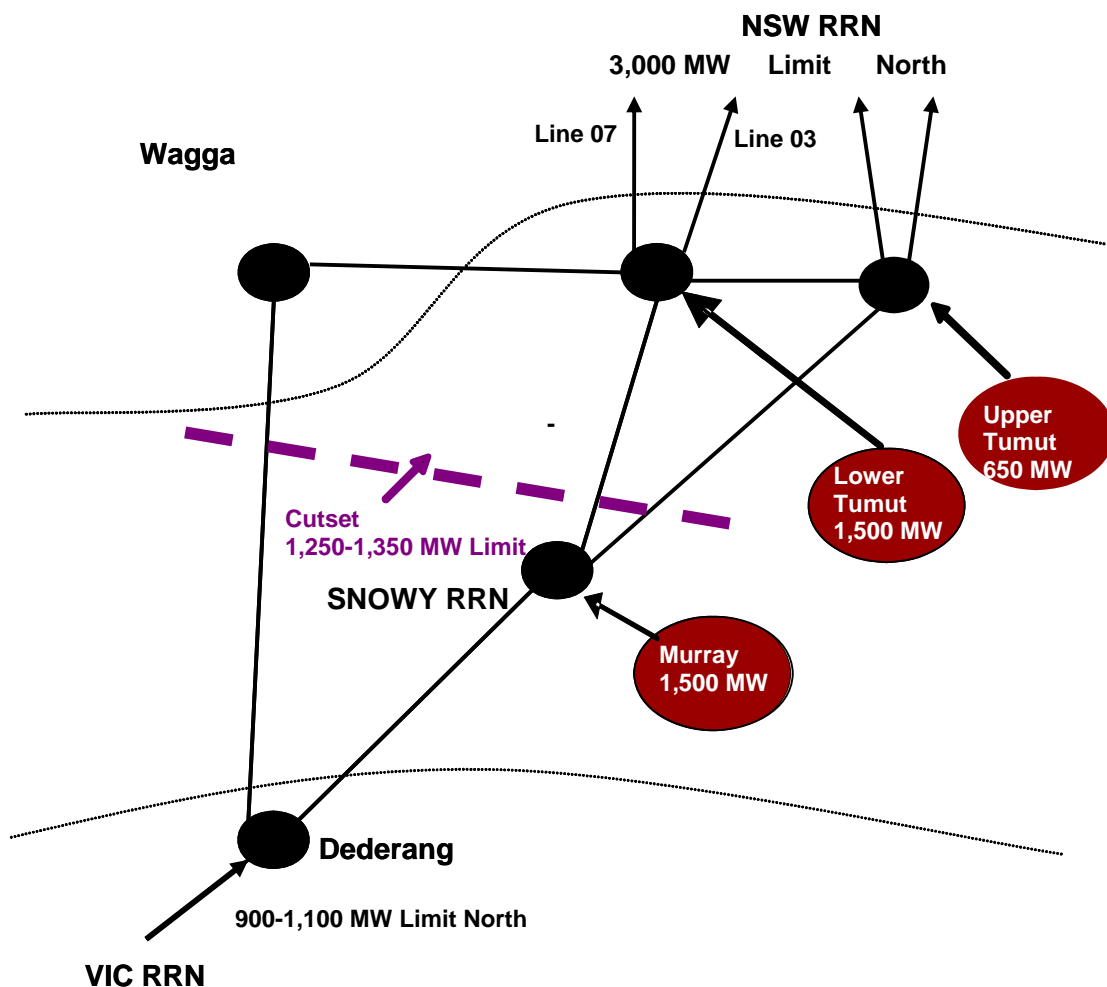
transmission lines north of Tumut being underused; close to fully used; or constrained.

The impact of the two proposals depends on Tumut's bidding behaviour. If Tumut is dispatched to use the available headroom into NSW then it will not be possible to increase flows into NSW. However, if Tumut withholds capacity during high demand periods, then additional flows across the cutset would increase flows into NSW.

There are a wide range of possible bid and dispatch outcomes depending on Snowy Hydro's contract position and other participant bids. These issues are discussed in a confidential attachment (Attachment 3). It is possible to assess the rule change proposals, however, using historical dispatch outcomes relevant to the market design issues under examination.

To illustrate this, Snowy Hydro has analysed actual dispatch outcomes during the summer period between 1 December 2005 and 28 February 2006, on occasions when the price in NSW exceeded \$1,000, the Murray-Tumut line was constrained, and NEMMCO imposed a clamp on Victorian exports. (Details of the analysis is contained in Section 2 of Attachment 2.)

Figure 1: Snowy region generation and transmission, for northward flows



This analysis examines the headroom available on lines 03 (Lower Tumut to Yass) and 07 (Lower Tumut to Canberra). The headroom on these lines was the limiting factor to getting more physical flow into NSW. Secure dispatch requires that either of these lines be capable of carrying the load in the event that the other trips. Snowy Hydro has therefore examined the minimum headroom on either of the lines during those periods.

The average minimum headroom on either the 03 or 07 lines was **58MW**. This low level of headroom shows that Tumut was bid to ensure a high level of dispatch so that these lines were fully loaded, but allowing a “noise” margin for sporadic fluctuations in the power system to avoid constraining the lines from Tumut to NSW and creating a price separation.

Snowy Hydro considers that this data on actual dispatch outcomes and the underlying rationale should form the basis of any modelling of the impacts. It shows that additional flows across the cutset cannot displace generation in NSW. Changes in flow across the cutset will lead to opposite and offsetting changes in generation at Tumut.

The possible impacts on dispatch are the substitution of marginal generation in Victoria for generation at Tumut. Marginal generation at Victoria is likely (but not certain) to be gas-fired. Data to support this is provided in Section 3 of Attachment 2. The opportunity cost of water at Tumut is around the highest black coal marginal cost, as this is the generation against which Tumut competes under the assumed inter-regional power flow conditions.

This suggests that removing the constraint on Victorian exports during these periods will not enable lower cost dispatch. The economic cost of generation at Tumut is likely to be less than the marginal cost of gas-fired generation.

Even if there were different views on the opportunity cost of water, the feasible impact on dispatch costs is very low. NEMMCO imposed a constraint on Victorian exports for 26 hours in 2004, 29 hours in 2005, and 10 hours to date in 2006. The maximum additional flow across the cutset is around 100 MW. Taking a high estimate of hours (the 29 hours from 2005), a very high marginal cost difference between Snowy and Victorian generators of \$100/MWh and a maximum additional flow across the cutset of 100 MW provides the maximum possible impact on dispatch costs. This would yield less than \$0.3M of cost savings over a year.

Snowy Hydro’s conclusion is that there would be no cost reductions in dispatch due to an ability to dispatch lower cost generation without the constraint imposed by NEMMCO under the status quo. The maximum possible level, on alternative assumptions, is immaterial.

4.3 Prices

The AEMC has indicated that it will use game theoretic modelling to examine dispatch, revenue and price outcomes. Snowy Hydro assumes that the AEMC will use this analysis to assess the impact of proposals on demand-weighted average prices, and that in general the AEMC will prefer proposals which result in lower prices in Victoria and New South Wales. Prices in the Snowy region do not directly affect consumers. They can indirectly affect consumers through their impact on competition in Victoria and New South Wales.

Snowy Hydro has undertaken its own analysis, but has not sought to provide a comprehensive alternative view of price impacts based on comparable modelling. Snowy Hydro's purpose is to provide information on the assumptions that should be used in the modelling, and on feasible conclusions.

As discussed above, assumptions on Tumut's bidding strategy affect the possible impacts on dispatch and prices. Section 1 of Attachment 2 shows that Snowy Hydro bids Tumut generation to fill the available transmission head room from Snowy into NSW, without constraining the Snowy to NSW transmission lines. This is the optimum strategy under the status quo and both the rule change proposals. This means that there will be no impact on net flows into NSW or on the NSW price under the Southern Generators proposal or the reorientation proposal.

The two proposals could have different impacts on prices in Victoria and Snowy. The key to this is an understanding of pricing at Murray as described below.

4.3.1 Status quo

Power can flow from Victoria to NSW via two parallel transmission paths. The first path is from Dederang to Tumut via Murray and the Murray-Tumut transmission lines. The second path is from Dederang to Tumut through Wodonga, Jindera and Wagga. Power flows on these two transmission paths are summed by NEMDE (the NEM dispatch engine) to give the total Victoria to Snowy power flow – the “cutset”. NEMDE then attempts to manage power flow between Victoria and Snowy across this cutset.

When the Murray-Tumut line constrains on northward flows, increasing generation at Murray worsens the constraint. If generation at Murray is low, approximately 1350 MW can flow across the cutset from Victoria to Snowy. If generation at Murray is high, only 1250 MW can flow across the cutset from Victoria to Snowy.

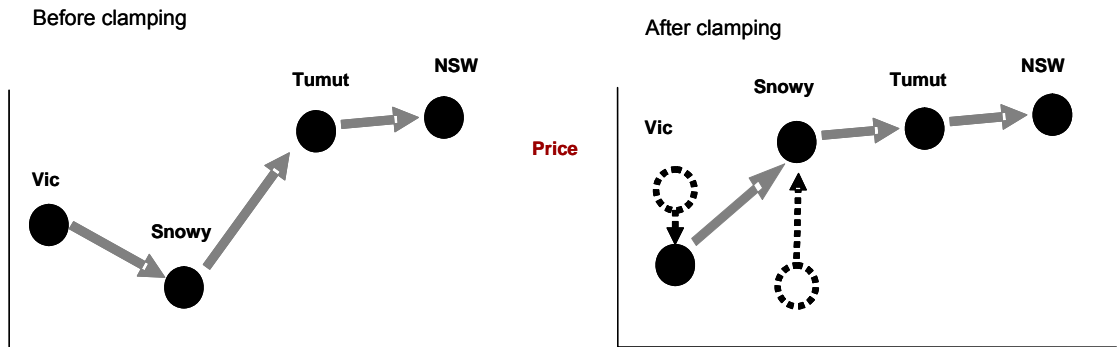
Under high northerly flows and high NSW price scenarios, NEMDE results in moderate prices in Victoria, very low prices in Snowy, and very high prices in NSW. This is because of Murray's contribution to the constraint. Effectively, NEMDE treats Murray generation as if it is reducing the flow available from Snowy/Victoria to compete with high-priced NSW generation.

The result is that power from the higher priced Victorian region flows into the lower priced Snowy region and creates negative settlement residues. This is an inevitable result of the location of Snowy's regional reference node with respect to the constraint.

Under current arrangements, NEMMCO imposes a constraint on flows from Victoria to Snowy when negative settlement residues arise. The imposition of this constraint usually results in a fall in prices in Victoria, a sharp increase in prices in Snowy to a level slightly below New South Wales, and no change in prices in New South Wales. This is illustrated in simplified diagrammatic form in Figure 2 below.

The impact on spot prices in the Snowy region can be very material. For example, on 2 February 2006 following the imposition of the constraint by NEMMCO prices in the Snowy Region increased from zero up to \$7,440 and stayed at that level for over 1.5 hours. These high spot prices in the Snowy region have no direct impact on consumers, as there is no load in Snowy. Their impact, if any, on Snowy Hydro depends on its contract position.

Figure 2: Impact of the status quo on prices



4.3.2 Southern Generators proposal

As described above, NEMDE will inevitably result in very low prices in the Snowy region when the Murray-Tumut line constrains on northward flows, and when prices are low or moderate in Victoria and high in New South Wales.

The current arrangements for managing negative residues under these conditions protect Snowy Hydro against this risk. This is a result of NEMMCO's intervention to limit Victoria to Snowy flows and prevent negative residues. When this occurs, Snowy's price tends to align with Tumut and NSW as shown in Figure 2. The Southern Generators proposal would remove this protection.

Murray can generate 1,500 MW. The Victoria to Snowy transmission limit is 1,100 MW. The Murray to Tumut transmission limit is 1,350 MW. This means that Murray can generate 240 MW without constraining the Murray to Tumut line. If it generates above that level, the line will constrain and prices will drop to very low levels in the Snowy region.

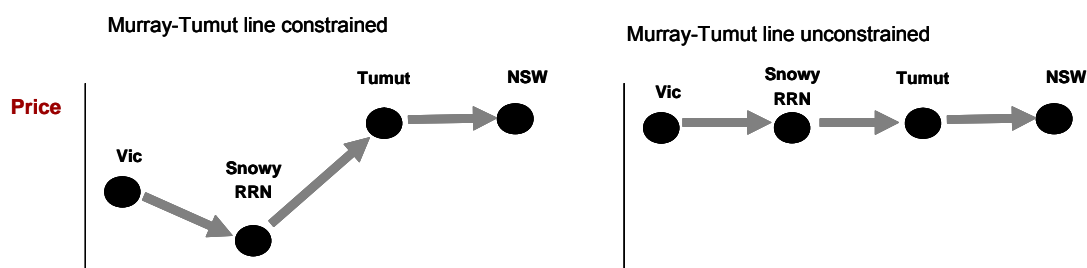
This would leave Snowy Hydro with two possible bidding strategies if the Southern Generators proposal was adopted:

- Snowy could withhold generation at Murray to ensure that the transmission lines between Murray and Tumut remain unconstrained. Murray could only generate 240 MW, and would withhold 1,260 MW of generation. In practice the limit on exports from Victoria to Snowy varies from around 900 MW to 1,100 MW due to the system stability limit. Murray would therefore have to withhold a larger volume to ensure that the Murray to Tumut line does not constrain, given this variability in exports from Victoria. The impact of withholding this large volume of generation would be similar prices across Victoria, Snowy and New South Wales, and dramatically higher prices in Victoria than under the status quo.
- Snowy could bid a higher level of generation at Murray and constrain the Murray to Tumut transmission line. Snowy would receive very low or negative prices for its Murray generation. This would not affect NSW prices, but would put competitive pressure on Victorian generation compared with the first bidding strategy outlined above. Victorian prices would be significantly higher than under the status quo.

However, the magnitude of price increases in Victoria would not be as great as under a scenario where Snowy withholds Murray generation.

The impact of these two bidding strategies is shown in simplified diagrammatic form in Figure 3.

Figure 3: Impact of the Southern Generators proposal



Any change to the incentives for Murray to generate is likely to have very material impacts on both the spot and contract markets due to: the highly leveraged nature of the loop; Murray pricing; and the size of Murray generating capacity. To achieve a variation in flow across the cutset of around 100 MW (which is the increase in the cutset limit resulting from the substitution of Snowy generation by Victorian generation) would require Victoria to Snowy flows to increase by around 1,300 MW and Murray generation to decrease by around 1,200 MW.

Snowy Hydro has demonstrated elsewhere in this submission that there is substitution of Tumut generation by the extra flow across the cutset and that there is no net change in NSW supply. However, if it is assumed that there is an increase in NSW supply by around 100 MW, then in assessing the price impact benefits of the supply into the NSW market, at times of high prices in NSW, examination of the NSW price sensitivity must be made. This price benefit must be then applied to the NSW customer load. However, an off-setting price dis-benefit must equally be considered in Victoria. Potentially up to 1,200 MW of Murray generation may be withdrawn from competition in Victoria and this must be measured against the Victorian price sensitivities at these times of high exports and applied to the Victorian and possibly the South Australian customer load. This later dis-benefit may be much more material.

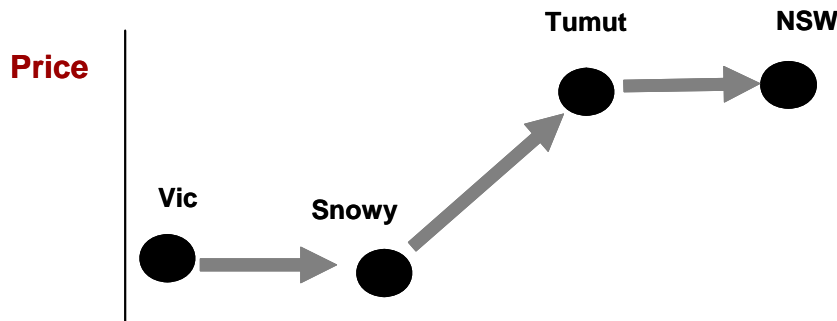
4.3.3 Reorientation Proposal

Under Snowy's reorientation proposal, Snowy would not be exposed to low or negative prices at Murray. As a result, it would compete on substantially equal terms to Victorian generators.

Snowy would have no unique incentive to withhold generation, as withholding would no longer result in a higher price in the Snowy region. Ignoring the effect of contract positions, Snowy – along with all other generators priced against the Victorian regional reference node – would have an incentive to withhold if this led to an increase in the Victorian price. Withholding of this scale is an unlikely outcome, given the level of competition in the region.

This would deliver a higher level of competition and result in lower prices in Victoria than the Southern Generators proposal. This is shown in simplified form in Figure 3.

Figure 3: Impact of the reorientation proposal



The reorientation proposal would effectively locate Murray in Victoria when the Murray-Tumut line was constrained on northward flows. In common with all approaches which adopt regional rather than nodal pricing, this can reduce the incentives for bids to reveal marginal cost, with possible resulting dispatch inefficiencies. It appears unlikely that this would have any material effect, given the limited circumstances and low number of hours under which Murray would be priced in Victoria and compete on the same basis as Victorian generators.

Neither of the rule change proposals would affect the New South Wales price. The Southern Generators proposal is likely to lead to Snowy withholding capacity at Murray, resulting in higher prices in Victoria. The reorientation proposal is likely to lead to a higher level of competition and lower prices in Victoria.

4.4 Risk

The AEMC has indicated that it will consider the impact of rule change proposals on price volatility and on the value of inter-regional trading.

Snowy Hydro considers that risk and volatility are not problems in themselves. Proposals should be assessed by their impact on the efficient risk/return frontier. Proposals that reduce the effectiveness with which risk can be managed will move the efficient frontier inwards, leading to a welfare loss.

Figure 4: Movements in the risk/return frontier

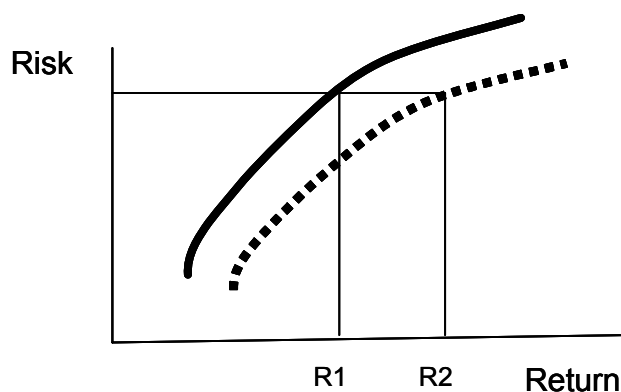


Figure 4 illustrates a risk/return frontier. The solid line illustrates a starting point, with all points along the frontier reflecting an efficient trade-off between risk and return. The dotted line in Figure 4 illustrates an inefficient outcome through an adverse movement of the risk/return frontier. The inward movement of the frontier reflects a reduction in the efficiency of markets for risk. As a result, market participants require a higher return (R2) to bear a given level of risk, compared with their required return under a more efficient market for risk (R1). Overall costs are increased, regardless of the actual level of risk in the market.

The risk most directly affected by these proposals is inter-regional price risk. A change in the level of that risk is not of concern if it can be managed efficiently. The impact of the proposals on the effectiveness of the SRAs is a reasonable proxy for their impact on the efficiency with which this risk can be managed.

Under the status quo, Snowy has a strong ability to manage inter-regional price risk, off-set only by the uncertainty in the way NEMMCO applies clamping to Victoria to Snowy/NSW exports. Victorian participants have a reduced ability to manage inter-regional price risks, as there are little or no settlement residues between Victoria and Snowy when NEMMCO clamps.

Under the Southern Generators proposal, the Victoria-Snowy negative settlement residues would be funded from the Snowy-NSW residues. This would give Victorian generators an improved ability to manage inter-regional price risk. They would be able to generate if this was required to defend contracts position in New South Wales. They would also have improved access to SRA cover for price separation between Victoria and New South Wales.

At present settlement residues between Victoria and Snowy fall to low levels, or zero, when the clamp is imposed. This means that the SRAs are a much less effective instrument for managing the risk of price separation between Victoria and New South Wales.

Under the Southern Generators proposal Victorian generators would obtain some additional ability to hedge inter-regional price risk. If Snowy adopted a strategy of withholding generation at Murray, resulting in the Murray-Tumut line not constraining, prices would be similar between Victoria, Snowy and New South Wales (given the bidding strategy for Tumut outlined above).

If Snowy adopted a strategy of generating heavily at Murray, resulting in the Murray-Tumut line constraining, prices would be lower in the Snowy region than in Victoria. No hedge would be required between Victoria and Snowy. The Snowy to NSW SRAs would provide a partial hedge against price separation into New South Wales. However, they would not fully cover the risk: the Snowy to NSW SRA's would be only partially funded due to transfer of funds from these SRA's to fund the negative residues on the Victoria to Snowy link.

Snowy Hydro would have a much reduced ability to hedge inter-regional price risk. The risk of price separation would be increased compared with the status quo. The effectiveness of Snowy to New South Wales SRAs would be reduced.

Under Snowy's reorientation proposal, there would be no price separation between Victoria and the Snowy region when the reorientation was applied. SRAs between Victoria/Snowy and NSW would be fully funded. This would give the Victorian participants a better ability

to manage inter-regional price risk than either the status quo or the Southern Generators proposal.

The reorientation proposal would perform better than the status quo and the Southern Generators proposal in ensuring efficient management of inter-regional price risks. This reflects that the reorientation proposal directly addresses the underlying regional boundary design deficiency whereas the Southern generators proposal is primarily a wealth transfer mechanism that does not address this deficiency.

4.5 Wealth transfers

The AEMC has indicated that it will consider whether a proposal has significant wealth transfer but limited benefits against the NEM objective. Snowy Hydro assumes this assessment is made by comparing rule change proposals with a continuation of the status quo.

The principal wealth transfer from the Southern Generators' proposal will be from Victorian consumers to Victorian generators, due to the increased prices in Victoria and from a material adverse impact on Snowy Hydro's financial position. Attachments 3 and 4 contain confidential information to inform the AEMC of the impact.

This impact has two components:

- A transitional cost arising from the need for Snowy Hydro to adjust its contract position to the new arrangements in a short period of time, and
- An ongoing cost representing the reduction in the capacity of Snowy Hydro to contract in Victoria.

Snowy Hydro's reorientation proposal would not have a material impact on Snowy's financial position compared with continuation of the status quo, and no transitional impact. It does not involve a wealth transfer from Southern generators to Snowy Hydro, and Victorian customers do benefit from lower prices.

Snowy Hydro will shortly lodge a prospectus in conjunction with its upcoming IPO. The prospectus will contain disclosure on the financial impact of potential rules changes which is consistent with the information set out in the confidential section of this submission.

The Southern Generators proposal would perform poorly against the NEM objective in comparison with the reorientation proposal. It would result in a material transfer of wealth from Victorian consumers to Victorian generators, and from Snowy Hydro to Victorian generators.

4.6 Summary assessment

Table 1 summarises why Snowy Hydro's proposed rule change, as described in this letter, is more effective in meeting the NEM objectives than either the status quo or the Southern Generators proposal.

In addition, Snowy Hydro’s proposed approach to the transitional management of negative settlement residues is consistent with the subsequent introduction of a regional boundary change.

Table 1: Summary of Assessments

Assessment criteria	Status Quo	Southern Generators Proposal	Snowy Hydro Proposal
Regulatory Design	Some unpredictability relating to the speed with which NEMMCO will respond to negative residues between Victoria and Snowy	Requires action ‘off-market’, through transfer of funds from the Snowy1 IRSRs to the Victoria to Snowy IRSRs. Transparent and predictable.	Requires action by NEMMCO in real time. Transparent and predictable
Dispatch Efficiency	Reduces dispatch options during high demand periods with northerly flows by placing a constraint on Victorian exports	Will not enable lower cost dispatch as: - increased flows from Victoria across the cutset will not displace generation in NSW because they will lead to opposite and offsetting changes in generation at Tumut - the economic cost of generation at Tumut is likely to be less than the marginal cost of gas fired generation.	Will not enable increased flows into NSW. Will avoid inefficient substitution when gas-fired generation has a marginal cost above the opportunity cost of water.
–Price Impacts	Clamping usually results in a fall in prices in Victoria, a sharp increase in prices in Snowy to a level slightly below New South Wales, and no change in prices in New South Wales.	No impact on NSW prices Likely to lead to Snowy withholding capacity at Murray, resulting in higher prices in Victoria	No impact on NSW prices Delivers a higher level of competition and results in lower prices in Victoria than the Southern Generators proposal.
Risk	Victorian participants have a reduced ability to manage inter-regional price risks, as there are little or no settlement residues between Victoria and Snowy when NEMMCO clamps Snowy has a strong ability to manage inter-regional price risk, off-set only by the uncertainty in the way NEMMCO applies clamping to Victoria to	Victorian generators would obtain some ability to hedge inter-regional price risk. Snowy to NSW SRA’s would be only partially funded due to transfer of funds from these SRA’s to fund the negative residues on the Victoria to Snowy link. Snowy Hydro would have a much reduced ability to	Victorian participants would have a better ability to manage inter-regional price risk than either the status quo or the Southern Generators proposal SRAs between Victoria, Snowy and NSW would be fully funded.

	Snowy/NSW exports.	hedge inter-regional price risk compared with the status quo.	
Wealth Transfer relative to the status quo	n.a.	Would have a material adverse impact on Victorian consumers and Snowy Hydro	Would no material impact on Snowy Hydro's financial position

5 Conclusions

Snowy Hydro considers that its reorientation proposal has significant advantages over the status quo and the Southern Generators' proposal. It results in greater competition and lower prices in Victoria; improves the efficiency of the market for hedges against inter-regional price separation; and is a transitional measure consistent with the introduction of a subsequent change to the Snowy regional boundary.

Additional quantitative information can be provided to the AEMC on a confidential basis if this would assist the Commission in making its own analytical/empirical assessments.

If there are any issues that you wish to discuss concerning this proposal, please call Roger Whitby on (02) 9278 1888.

In addition to submitting this proposal, Snowy Hydro would appreciate the opportunity to make a presentation to the AEMC to explain further the analysis set out in this letter, and would be grateful if the AEMC could contact Roger Whitby to make arrangements for this.

Yours sincerely,

Terry Charlton
Chief Executive Officer and Managing Director
Snowy Hydro Limited.

Brian Spalding
Chief Operating Officer
NEMMCO (for the purposes of
satisfying S.91 (6) the National
Electricity Law)

Attachment 1: Draft Derogation
Attachment 2: Historical Data and Analysis
Attachment 3: Confidential Attachment #1
Attachment 4: Confidential Attachment #2

Attachment 1: Draft Derogation

Proposed amendments to the Rules are highlighted below.

Part 8 – Network Constraint Formulation

(a) Despite any other provision of the *Rules* to the contrary, including without limitation clauses 3.6.4(a), 3.6.4(a1), 3.6.4(b), 3.7.2(c)(3), 3.7.3(d)(3), 3.8.1(b)(5), 3.8.1(b)(6), 3.13.4(o) and 3.13.8(a)(5), *network* limitations may occur which impact on both *intraregional* and *inter-regional* power flows.

(b) *NEMMCO* must determine and represent *network constraints* in *dispatch* which may result from limitations on both *intra-regional* and *inter-regional* power flows.

(c) If the use of a *network constraint* in *dispatch* developed under clause (b) substantially creates, in *NEMMCO's* reasonable opinion, a significant *inter-regional* power flow from a *region* with a *dispatch price* that is greater than the *dispatch price* of the importing *region* (a 'significant counter price power flow'), *NEMMCO* must, without prejudicing its obligations to maintain *power system security*, use reasonable endeavours to apply an alternative formulation for that *network constraint* for the expected duration of the significant counter price power flow. That alternative form of the *network constraint* must apply for the expected period of the significant counter price power flow if the original formulation of the *network constraint* were used.

(c1) For the avoidance of all doubt, should a significant counter price power flow be forecast for the Snowy to Victoria *interconnector* or the Victoria to Snowy *interconnector* the normal *network constraints* orientated to Murray *network node* will be replaced by *network constraints* orientated to Dederang *network nodes*.

(d) *NEMMCO* must develop and *publish* a procedure for determining when an *interregional* power flow referred to in clause (c) and (c1) is considered to be significant for the purposes of that clause.

(e) This *participant derogation* will cease to apply on:

- (1) 31 July 2007;
- (2) the implementation of the first regional boundary review by the *AEMC*; or
- (3) as otherwise determined by the *AEMC*.

(e1) Clauses (f) to (p) commence on 1 October 2005.

(f) *NEMMCO* must determine and *publish* a list of *network constraints* (the 'Murray/Tumut constraint list') developed pursuant to clause (b) that relate directly to managing power flows in either a northward or southward direction between the *network nodes* to which the following *power stations* are directly connected:

- (1) Lower Tumut;
- (2) Upper Tumut;
- (3) Murray; and
- (4) Guthega.

(g) For the purpose of clauses (f) to (p), constraint “k” in the Murray/Tumut constraint list must be expressed in the following generic form:

$$\alpha_k \times LT + \beta_k \times UT + \delta_k \times MURR + \lambda_k \times GUTH + \gamma_k \times V-Sn + \eta_k \times Sn-NSW \leq RHS_k$$

Where:

LT is the *dispatch* target for MW from Lower Tumut *power station*;
 UT is the *dispatch* target for MW from Upper Tumut *power station*;
 MURR is the *dispatch* target for MW from Murray *power station*;
 GUTH is the *dispatch* target for MW from Guthega *power station*;
 Sn-NSW is the *dispatch* target for MW flow on the Snowy to NSW *interconnector*;
 V-Sn is the *dispatch* target for MW flow on the Victoria to Snowy *interconnector*; and
 RHS includes a line rating term with an effective coefficient of 1.

- (h) (1) Subject to clause (h)(3), if in any *dispatch interval* of a *trading interval* any of the *constraints* in the Murray/Tumut constraint list have bound, then congestion fund payments must be determined for Lower Tumut and Upper Tumut *power stations* pursuant to clauses (i) to (o).
- (2) If in any *trading interval* clause (h)(1) does not apply, then no congestion fund payments need be determined pursuant to clauses (i) to (o) for that *trading interval*.
- (3) If in any *trading interval* an *administered price period* is declared pursuant to clause 3.14.2, in any one of the Victorian, Snowy or NSW *regions*, no congestion fund payments are to be determined for that *trading interval* pursuant to this *participant derogation*.

(i) If congestion fund payments must be determined for Lower Tumut and Upper Tumut *power stations* pursuant to clause (h)(1) then, for each relevant *trading interval*, NEMMCO must determine power flows between Murray and Tumut as either northwards or southwards as follows.

Let:

X be, for each *dispatch interval* in a *trading interval*, the sum of the absolute value of all RHS values of binding *constraints* in the Murray/Tumut constraint list where the *constraint* has bound on flows in the direction from Tumut to Murray; and
 Y be, for each *dispatch interval* in a *trading interval*, the sum of the absolute value of all RHS values of binding *constraints* in the Murray/Tumut constraint list where the *constraint* has bound on flows in the direction from Murray to Tumut.

If:

$X < Y$ then power flows for the *trading interval* between Murray and Tumut must be determined as northwards and congestion fund payments must be determined for Lower Tumut and Upper Tumut *power*

stations pursuant to clause (n); and

$X \geq Y$ then power flows for the *trading interval* between Murray and Tumut must be determined as southwards and congestion fund payments must be determined for Lower Tumut and Upper Tumut power stations pursuant to clause (o).

(j) In any *trading interval* where any of the *constraints* in the Murray/Tumut constraint list have bound for one or more *dispatch intervals*, NEMMCO must perform the following calculation for every *dispatch interval* in the relevant *trading interval*:

$$SP_{dp} = \left[DP_{Snowy} \times TLF_p \right] - \left[\sum_k (CSP_{ak} \times Coeff_{p,k}) \right] \text{ for } p = \text{Lower Tumut and Upper Tumut}$$

Where:

SP_{dp} is the substitute price for each *dispatch interval* for generation from power station “p”;

DP_{Snowy} is the *dispatch price* that applies to the Snowy region for the relevant *dispatch interval*;

TLF_p is the *transmission loss factor* for power station “p”;

CSP_{ak} is the *constraint marginal value* (\$/MWh) as determined by the *dispatch engine* for each *dispatch interval* of relieving binding constraint “k” by a marginal amount; and

$Coeff_{p,k}$ is the coefficient ($\alpha, \beta, \delta, \lambda, \gamma$ or η) assigned to element “p” in constraint “k” from the Murray/Tumut constraint list developed pursuant to clause (g),

and subject to the following:

(1) if the SP_{dp} determined pursuant to this clause is calculated as an amount less than the *market floor price* it must be deemed to be equal to the *market floor price*;

and

(2) if the SP_{dp} determined pursuant to this clause is calculated as an amount greater than $VoLL$, it must be deemed to be equal to $VoLL$.

(k) A substitute price (SP) for each *trading interval* must be determined by NEMMCO for generation from power station “p” as follows:

SP_p is the substitute price being the arithmetic average for a *trading interval* of each relevant *dispatch interval* of SP_{dp} ; and

SP_{dp} is as determined pursuant to clause (j).

(l) NEMMCO must determine for each relevant *trading interval* an *energy value differential* (EVD) as follows:

$$EVD_p = SP_p - (TLF_p \times RRP_{Snowy}) \text{ for } p = \text{Lower Tumut and Upper Tumut}$$

Where:

EVD_p is the per unit *energy value differential* for a *trading interval* for power station “p”;

TLF_p is the *transmission loss factor* for power station “p”;

SP_p is the substitute price determined pursuant to clause (k); and
 RRP_{Snowy} is the *regional reference price* for a *trading interval* that applies to the Snowy *region*.

(m) A CSC allocation factor is determined as follows:

$$\text{CSC allocation factor} = (A - B) / A$$

Where:

A is nominal *transmission* limit between Murray and Tumut which is to be taken as 1350 MW for the purpose of this *participant derogation*; and

B is nominal *interconnector* capacity from the NSW *region* to the Snowy *region* which is to be taken as 800 MW for the purpose of this *participant derogation*.

In clauses (n) and (o), the following conventions apply:

a “trading amount” (TA) is a payment to or from a *Market Participant* or inter-regional settlement residue fund;

if $TA > 0$, then this represents a payment *to* the *Market Participant* or inter-regional settlement residue fund as appropriate;

if $TA < 0$, then this represents a payment *from* the *Market Participant* or inter-regional settlement residue fund as appropriate.

(n) If power flows between Murray and Tumut for a *trading interval* have been determined as northwards pursuant to clause (i), NEMMCO must determine the following amounts:

(1) An *energy* value adjustment determined as follows:

$$EV_{AN} = \sum_p (AGE_p \times EVD_p) \text{ for } p = \text{Lower Tumut and Upper Tumut}$$

Where:

EV_{AN} is the *energy* value adjustment for northward flows between Murray and Tumut that is to be applied to the determination of the trading amount pursuant to this clause (n);

AGE_p is the adjusted gross *energy* for a *trading interval* for *generation* from *power station* “p”; and

EVD_p is the *energy* value differential determined pursuant to clause (l) for *generation* from *power station* “p”;

(2) *Trading amounts* determined as follows:

$$TA_1 = \text{Min} (EV_{AN}, \text{IRSR}_{Sn-NSW})$$

$$TA_2 = -1 \times TA_1$$

Where:

TA_1 is a *trading amount* for Snowy Hydro Limited;

IRSR_{Sn-NSW} is the inter-regional settlement residue allocated to flows **from the Snowy *region* to the NSW *region*** for the relevant *trading interval*; and

TA_2 is a *trading amount* for the inter-regional settlement residue allocated to flows **from the Snowy *region* to the NSW**

region.

(o) If power flows between Murray and Tumut for a *trading interval* have been determined as southwards pursuant to clause (i), NEMMCO must determine the following amounts:

(1) A *trading amount* determined as follows:

$$TA_3 = \sum_p (AGE_p \times EVD_p) \text{ for } p = \text{Lower Tumut and Upper Tumut}$$

Where:

TA₃ is a *trading amount* for Snowy Hydro Limited;

AGE_p is the adjusted gross *energy* for a *trading interval* for *generation* from *power station* “p”; and

EVD_p is the *energy* value differential determined pursuant to clause (l) for *generation* from *power station* “p”;

(2) A *settlements residue trading amount* determined as follows:

$$TA_4 = -1 \times IRSR_{Sn-NSW}$$

Where:

TA₄ is a *trading amount* for the inter-regional settlement residue allocated to flows **from the Snowy *region* to the NSW *region***; and

IRSR_{Sn-NSW} is the inter-regional settlement residue allocated to flows **from the Snowy *region* to the NSW *region*** for the relevant *trading interval*;

(3) A *trading amount* to determined as follows:

$$TA_5 = (IRSR_{NSW-Sn} - TA_3 - TA_4) * \text{CSC allocation factor}$$

Where:

TA₅ is a *trading amount* for Snowy Hydro Limited;

IRSR_{NSW-Sn} is the inter-regional settlement residue allocated to flows **from the NSW *region* to the Snowy *region*** for the relevant *trading interval*; and

CSC allocation factor is the CSC allocation factor determined pursuant to clause (m).

(4) A *settlements residue trading amount* determined as follows:

$$TA_6 = (-1 \times TA_3) - TA_4 - TA_5$$

Where:

TA₆ is a *trading amount* for the inter-regional settlement residue allocated to flows **from the NSW *region* to the Snowy *region***.

(p) NEMMCO must *publish* all *trading amounts* arising from application of this *participant derogation* (if any) using the current settlement cycle.

Attachment 2 – Historical Data and Analysis

1. Utilisation of the Snowy to NSW Interconnector during periods when NEMMCO was clamping

Snowy Hydro's reorientation rule change proposal shows that the rule change proposals will not affect dispatch or pricing in New South Wales as the interconnector is already fully loaded in the relevant periods.

To support this, Snowy Hydro analysed actual dispatch outcomes during the summer period 1 December 2005 to 28 February 2006, on occasions when the price in NSW exceeded \$1,000 /MWh, the Murray-Tumut line was constrained, and NEMMCO imposed a clamp on Victorian exports. Data supporting this analysis is shown in Table 3 of this Attachment.

This period was analysed because it is the latest period that is representative of tight supply/demand balance in the NSW region and therefore high interconnector flows into this region. Prior to this period there were step changes in the inter- and intra-regional transmission limits that make comparison of earlier market outcomes with this most recent period very complex.

The analysis examines the headroom available on lines 03 (Lower Tumut to Yass) and 07 (Lower Tumut to Canberra). The headroom on these lines was the limiting factor for power flows from Snowy into NSW. Secure dispatch requires that either of these lines be capable of carrying the load in the event that the other trips. Snowy Hydro has therefore examined the minimum headroom on either of the lines during those periods.

The analysis found the average most restrictive headroom on either the 03 or 07 lines was only **58MW**. This low level of headroom shows that Tumut was seeking to ensure that the Snowy to NSW interconnector was fully loaded with the smallest practical "noise" margin, averaging 58 MW, to allow for sporadic fluctuations in the power system so as to avoid constraining the lines from Tumut to NSW and creating a price separation.

Accordingly, this analysis demonstrates that additional flows across the Murray-Tumut cutset at times of high NSW price will in practice inevitably be offset by an equal decrease in Tumut generation levels, and hence there will be no additional power flow to NSW.

2. Historical Hours of NEMMCO Intervention on the Vic-Snowy Interconnector

Snowy Hydro's reorientation rule change proposal states that the total number of hours affected by clamping is low. Data for the period January 2002 to May 2006 supporting this position is contained in Table 4 at the back of this attachment, showing the number of hours NEMMCO truncated flows on the Victoria-Snowy interconnector because of negative residues. Based on this analysis, the total number of intervention hours are summarised in Table 1. The hours of intervention shown in the summary table are for both the "positive" and "negative" occasions – so it covers all periods of truncation.

Table 1: NEMMCO Intervention Hours

Year	Intervention Hours
2004	26
2005	29
2006	10

3. Victoria Working Week Day Summer 05/06 Load Duration Curve and Generation Capacity of Victorian Base Load Generators

The following analysis is based on historical data and shows that for exports of 900MW or more from Victoria through the Snowy Region to the NSW Region, gas peaking plant must be dispatched in Victoria.

Figure 1 shows the Victorian demand duration curve for working week days for the summer 05/06 period (1 December 2005 to 28 February 2006). It shows that, over the time periods being considered, demand in Victoria is:

- more than 5,500MW for 100% of the time;
- more than 6,500 MW for more than 50% of the time;
- more than 7,500 MW for around 10% of the time.

Figure 1: Demand Duration Curve

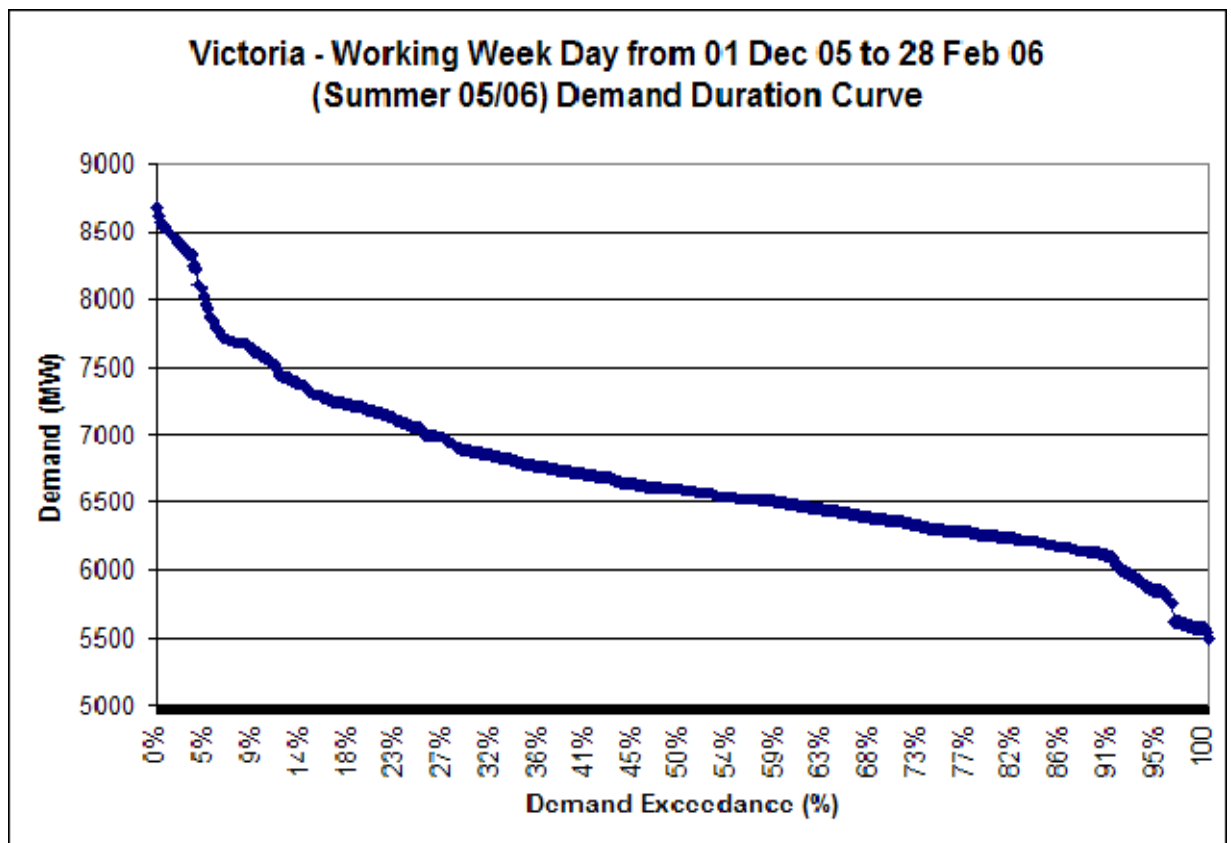


Table 2 shows Victorian base load generation and an assumed export from Victoria to Snowy of 900MW.

Note that it is assumed that the effect of interconnector flows from South Australia and Tasmania into Victoria are neutral, that is, these exports would comprise of gas peakers (SA) or hydro generation (Tasmania) which would be of similar marginal cost to Tumut and Murray generation.

Table 2: Victorian Base Load Generation and Export

Generator	MW Capacity	Type	Unit	Total MW
LOY YANG A	500	Coal	LYA1	2000
	500	Coal	LYA2	
	500	Coal	LYA3	
	500	Coal	LYA4	
LYB	500	Coal	LOYYB1	1000
	500	Coal	LOYYB2	
YALLOURN	360	Coal	YWPS1	1480
	360	Coal	YWPS2	
	380	Coal	YWPS3	
	380	Coal	YWPS4	
HAZELWOOD	200	Coal	HWPS1	1600
	200	Coal	HWPS2	
	200	Coal	HWPS3	
	200	Coal	HWPS4	
	200	Coal	HWPS5	
	200	Coal	HWPS6	
	200	Coal	HWPS7	
	200	Coal	HWPS8	
SECV	150	Coal	APS	150
ENERGY BRIX	90	Coal	MOR1	195
	30	Coal	MOR2	
	75	Coal	MOR3	
Total				6425
Vic to Snowy Interconnector (Export from VIC)				900

Net Baseload Generation to meet Vic Demand

5525

After taking into account the level of export to Snowy/NSW, there is 5,525 MW of net Victorian baseload generation remaining to meet Victoria demand. This is approximately at the 100% demand exceedance level, as shown in Figure 1.

Therefore, if there is 900MW or more of export from Victoria to Snowy/NSW, gas fired peaking plant in Victoria must be dispatched to meet Victorian demand above around 5,500MW.

This analysis demonstrates that in order to achieve high levels of Victorian export at times of high demand and high NSW price (such as the critical summer period) intermediate and peaking generation in Victoria (or South Australia / Tasmania) need to be dispatched. This is likely to have similar marginal or opportunity cost to the displaced Snowy Hydro Murray and Tumut hydro-generation.

Table 3: Utilisation of the Snowy to NSW Interconnector during periods when NEMMCO was clamping

Attachment 2 Table 3: Utilisation of the Snowy to NSW Interconnector during periods when NEMMCO was clamping

SETTLEMENTDAT	H->H-64_B Marginal Value	QLD1 PRICE	NSW1 PRICE	SNOWY1 PRICE_5MIN	VIC1 PRIC	SA1 PRICE_5MIN	TUMUT3 TOTAL CLEARED	TUMUT3-NSW CONSTRAINT	Actual flow	Line	Headroom 03 on 07	Headroom 07 on 03	Most restrictive
7/12/2005 13:55	5209.97	\$ 4,612.27	\$ 4,932.40	\$ 42.00	\$ 37.88	\$ 38.00	931	H>N-64_C_15M	-593.657	MW_CN_07	95.9	64.4	64.4
7/12/2005 14:00	7477.94	\$ 6,601.66	\$ 7,059.89	\$ 42.00	\$ 37.80	\$ 38.00	931	H>N-64_C_15M	-614.004	MW_YN_03	110.3	80.3	80.3
7/12/2005 14:15	5839.74	\$ 4,998.14	\$ 5,522.37	\$ 42.00	\$ 36.00	\$ 36.39	946	H>N-64_C_15M	-608.422	MW_CN_07	110.3	84.9	84.9
7/12/2005 14:20	7794.98	\$ 6,871.22	\$ 7,362.45	\$ 42.00	\$ 32.85	\$ 33.72	946	H>N-64_C_15M	-605.031	MW_YN_03	119.3	90.7	90.7
7/12/2005 14:25	9188.14	\$ 8,100.97	\$ 8,666.24	\$ 42.00	\$ 36.00	\$ 36.75	956	H>N-64_C_15M	-597.358	MW_CN_07	151.6	120.9	120.9
7/12/2005 14:30	9078.53	\$ 7,928.99	\$ 8,560.56	\$ 42.00	\$ 38.12	\$ 38.00	971	H>N-64_C_15M	-607.934	MW_YN_03	132.1	103.1	103.1
7/12/2005 14:35	7899.45	\$ 6,747.50	\$ 7,400.00	\$ -	\$ 37.78	\$ 38.00	971	H>N-64_C_15M	-591.176	MW_CN_07	105.6	76.0	76.0
7/12/2005 14:50	9245.79	\$ 7,902.32	\$ 8,667.32	\$ -	\$ 36.00	\$ 37.15	951	H>N-64_C_15M	-599.595	MW_YN_03	75.3	44.1	44.1
7/12/2005 14:55	9126.01	\$ 7,802.32	\$ 8,560.56	-\$ 0.00	\$ 38.00	\$ 38.00	951	H>N-64_C_15M	-620.747	MW_CN_07	125.8	100.5	100.5
7/12/2005 15:00	7900.63	\$ 6,637.70	\$ 7,400.00	-\$ 0.00	\$ 38.12	\$ 38.00	966	H>N-64_C_15M	-597.273	MW_YN_03	133.9	104.9	104.9
7/12/2005 15:10	9134.73	\$ 7,672.13	\$ 8,560.56	-\$ 0.00	\$ 100.70	\$ 103.89	966	H>N-64_C_15M	-581.333	MW_CN_07	84.6	54.7	54.7
7/12/2005 15:15	113.3	\$ 8,128.07	\$ 9,000.00	\$ 7,440.00	\$ 100.88	\$ 103.55	966	H>N-64_C_15M	-622.924	MW_YN_03	93.7	64.1	64.1
7/12/2005 15:20	9308.26	\$ 7,882.23	\$ 8,719.93	-\$ 0.00	\$ 100.70	\$ 103.41	985.63	H>N-64_C_15M	-613.344	MW_CN_07	130.9	100.6	100.6
7/12/2005 15:35	9251.64	\$ 7,713.02	\$ 8,666.24	-\$ 0.00	\$ 100.70	\$ 103.93	966	H>N-64_C_15M	-616.854	MW_YN_03	97.7	68.1	68.1
7/12/2005 16:20	7535.34	\$ 6,238.64	\$ 7,059.89	-\$ 0.00	\$ 27.87	\$ 30.01	976	H>N-64_C_15M	-607.202	MW_CN_07	111.4	83.7	83.7
7/12/2005 16:25	7483.75	\$ 6,235.98	\$ 7,059.89	-\$ 0.00	\$ 29.01	\$ 30.90	991	H>N-64_C_15M	-590.358	MW_YN_03	108.2	80.2	80.2
7/12/2005 16:30	7683.04	\$ 6,305.20	\$ 7,200.00	-\$ 0.00	\$ 27.87	\$ 30.01	991	H>N-64_C_15M	-585.034	MW_CN_07	86.1	58.2	58.2
7/12/2005 16:40	5350.35	\$ 4,498.14	\$ 5,049.75	-\$ 0.00	\$ 29.71	\$ 31.00	991	H>N-64_C_15M	-614.004	MW_YN_03	92.0	65.0	65.0
7/12/2005 16:45	5929.78	\$ 4,904.37	\$ 5,597.65	-\$ 0.00	\$ 30.02	\$ 31.00	991	H>N-64_C_15M	-604.721	MW_CN_07	76.2	47.4	47.4
7/12/2005 16:50	5927.64	\$ 4,902.04	\$ 5,595.93	-\$ 0.00	\$ 30.90	\$ 31.00	991	H>N-64_C_15M	-629.522	MW_YN_03	115.5	88.6	88.6
23/01/2006 15:35	1186.15	\$ 1,345.09	\$ 1,423.08	\$ 42.00	\$ 276.00	\$ 268.73	1085	H>N-64_C_15M	-617.046	MW_CN_07	111.7	79.3	79.3
2/02/2006 13:00	6480.37	\$ 7,515.82	\$ 7,450.00	\$ -	\$ 272.00	\$ 268.92	960	H>N-64_C_15M	-602.445	MW_YN_03	77.1	35.1	35.1
2/02/2006 13:05	6443.08	\$ 7,512.56	\$ 7,452.13	\$ -	#####	\$ 1,170.43	1010	H>N-64_C_15M	-599.799	MW_CN_07	123.4	85.6	85.6
2/02/2006 13:10	3204.6	\$ 7,463.03	\$ 7,400.00	\$ -	\$ 595.73	\$ 568.22	1010	H>N-64_C_15M	-620.285	MW_YN_03	74.0	38.9	38.9
2/02/2006 13:15	1450.08	\$ 7,302.79	\$ 7,450.65	\$ -	\$ 272.00	\$ 267.55	1010	H>N-64_C_15M	-634.292	MW_CN_07	74.0	38.0	38.0
2/02/2006 13:20	6398.31	\$ 7,185.14	\$ 7,450.76	\$ -	\$ 94.00	\$ 93.41	1010	H>N-64_C_15M	-590.675	MW_YN_03	61.5	25.9	25.9
2/02/2006 13:25	7539.69	\$ 8,419.15	\$ 8,786.89	\$ -	\$ 19.05	\$ 19.73	1057.59	H>N-64_C_15M	-599.799	MW_CN_07	67.2	26.3	26.3
2/02/2006 13:40	7539.69	\$ 8,418.92	\$ 8,845.91	\$ -	\$ 307.21	\$ 299.00	1045.52	H>N-64_C_15M	-626.936	MW_YN_03	145.9	107.9	107.9
								H>N-64_C_15M	-626.889	MW_CN_07			
								H>N-64_C_15M	-626.355	MW_YN_03			
								H>N-64_C_15M	-628.149	MW_CN_07			
								H>N-64_C_15M	-656.335	MW_YN_03			
								H>N-64_C_15M	-653.979	MW_CN_07			
								H>N-64_C_15M	-648.84	MW_YN_03			
								H>N-64_C_15M	-657.681	MW_CN_07			
								H>N-64_C_15M	-595.848	MW_YN_03			
								H>N-64_C_15M	-604.721	MW_CN_07			

2/02/2006 13:45	7539.69	\$ 9,230.22	\$ 9,644.90	\$	-	\$ 96.62	\$	96.00	1082.12	H>N-64_C_15M	-658.024 MW_YS_03	55.6	16.4	16.4
2/02/2006 13:50	7539.69	\$ 8,173.89	\$ 8,783.70	\$	-	\$ 22.60	\$	23.16	1011.11	H>N-64_C_15M	-662.602 MW_CN_07	28.5	-11.0	-11.0
2/02/2006 13:55	7539.69	\$ 8,228.15	\$ 8,784.72	\$	-	\$ 28.24	\$	29.70	1038.95	H>N-64_C_15M	-676.761 MW_YS_03	91.1	53.8	53.8
2/02/2006 14:00	7539.69	\$ 98.91	\$ 8,774.97	\$	-	\$ 22.60	\$	24.41	1090.76	H>N-64_C_15M	-679.849 MW_CN_07	67.8	29.4	29.4
2/02/2006 14:05	7539.69	\$ 9,319.12	\$ 9,650.01	\$	-	\$ 87.00	\$	86.01	1116.92	H>N-64_C_15M	-634.431 MW_YS_03	89.7	52.1	52.1
2/02/2006 14:10	7539.69	\$ 9,133.20	\$ 9,600.00	\$	-	\$ 30.08	\$	31.00	1131.95	H>N-64_C_15M	-637.993 MW_CN_07	75.4	37.1	37.1
2/02/2006 14:15	7539.69	\$ 9,197.51	\$ 9,600.00	\$	-	\$ 25.90	\$	27.97	1150.48	H>N-64_C_15M	-650.001 MW_YS_03	79.5	42.0	42.0
2/02/2006 14:20	7539.69	\$ 9,365.79	\$ 9,644.90	\$	-	\$ 27.95	\$	30.18	1136.13	H>N-64_C_15M	-653.979 MW_CN_07	53.6	16.2	16.2
2/02/2006 14:25	7539.69	\$ 9,267.16	\$ 9,600.00	\$	-	\$ 28.17	\$	30.90	1158.17	H>N-64_C_15M	-642.506 MW_YS_03	78.6	41.6	41.6
2/02/2006 14:30	99.69	\$ 8,660.83	\$ 9,112.46	\$	7,440.00	\$ 27.52	\$	30.18	1108.96	H>N-64_C_15M	-645.396 MW_CN_07	108.9	67.9	67.9
2/02/2006 14:35	25.33	\$ 8,452.32	\$ 8,903.44	\$	7,440.00	\$ 30.25	\$	31.00	960	H>N-64_C_15M	-619.705 MW_YS_03	92.9	56.6	56.6
2/02/2006 14:40	99.69	\$ 8,584.23	\$ 9,108.08	\$	7,440.00	\$ 29.47	\$	31.00	1105.89	H>N-64_C_15M	-631.811 MW_CN_07	111.8	75.9	75.9
2/02/2006 14:45	99.69	\$ 8,582.57	\$ 9,113.52	\$	7,440.00	\$ 33.27	\$	33.23	1091.88	H>N-64_C_15M	-633.85 MW_YS_03	116.2	78.2	78.2
2/02/2006 14:50	7539.69	\$ 4,380.66	\$ 8,781.61	\$	-	\$ 31.51	\$	31.00	1115.94	H>N-64_C_15M	-616.591 MW_YS_03	107.7	68.2	68.2
2/02/2006 14:55	99.69	\$ 9,289.96	\$ 9,794.97	\$	7,440.00	\$ 30.46	\$	30.90	1190.24	H>N-64_C_15M	-623.188 MW_CN_07	79.8	43.1	43.1
2/02/2006 15:00	99.69	\$ 299.84	\$ 9,600.00	\$	7,440.00	\$ 30.70	\$	30.98	1172.28	H>N-64_C_15M	-621.499 MW_YS_03	110.4	73.3	73.3
2/02/2006 15:05	99.69	\$ 9,239.02	\$ 9,600.00	\$	7,440.00	\$ 30.70	\$	31.00	1149.58	H>N-64_C_15M	-625.669 MW_CN_07	51.6	14.2	14.2
2/02/2006 15:10	99.69	\$ 30.85	\$ 9,986.02	\$	7,440.00	\$ 30.56	\$	31.00	1168.8	H>N-64_C_15M	-662.088 MW_YS_03	46.6	11.6	11.6
2/02/2006 15:15	99.69	\$ 30.85	\$ 9,902.77	\$	7,440.00	\$ 30.70	\$	31.00	1161.63	H>N-64_C_15M	-662.602 MW_CN_07	96.1	60.1	60.1
2/02/2006 15:20	99.69	\$ 13.00	\$ 9,644.90	\$	7,440.00	\$ 32.85	\$	32.48	1162.53	H>N-64_C_15M	-631.844 MW_YS_03	103.1	64.8	64.8
2/02/2006 15:25	99.69	\$ 18.67	\$ 9,650.01	\$	7,440.00	\$ 30.70	\$	30.99	1202.02	H>N-64_C_15M	-633.071 MW_CN_07	60.1	25.2	25.2
2/02/2006 15:30	99.69	\$ 98.00	\$ 9,650.01	\$	7,440.00	\$ 30.70	\$	31.00	1154.69	H>N-64_C_15M	-625.511 MW_YS_03	65.8	25.5	25.5
2/02/2006 15:35	99.69	\$ 4,380.66	\$ 9,600.00	\$	7,440.00	\$ 32.85	\$	32.33	1132.17	H>N-64_C_15M	-631.811 MW_CN_07	73.7	35.2	35.2
2/02/2006 15:40	99.69	\$ 98.00	\$ 9,105.86	\$	7,440.00	\$ 31.50	\$	31.00	1111.62	H>N-64_C_15M	-645.937 MW_YS_03	89.0	49.0	49.0
2/02/2006 15:45	7539.69	\$ 8,346.64	\$ 8,722.97	\$	-	\$ 32.85	\$	32.33	1002.97	H>N-64_C_15M	-650.318 MW_CN_07	79.2	42.8	42.8
										H>N-64_C_15M	-634.351 MW_YS_03			
										H>N-64_C_15M	-644.136 MW_CN_07			

Average: 58.2

Table 4: Analysis of Interventions For The Period 1 December 2005 to 28 February 2006

Notes:

In the Table:

“negative residual” refers to when NEMMCO truncates but not sufficiently to unbind the constraint from Murray to Tumut.

“positive residual” refers to when the truncation is sufficient to unbind the Murray-Tumut constraint.

Attachment 2 Table 4: Analysis of Interventions For The Period 1 December 2005 to 28 February 2006

Positive Residuals

SETTLEMENTDATE	V-SN FLOW	V-SN IMPLIM	V-SN EXPLIM	V-SN EXPORTID_5MIN	SNOWY	DATE	SNOWY1 FLOW	SNOWY1 IMPLIM	SNOWY1 EXPLIM	SNOWY1 EXPORTID_5MIN	DateTime	SNOWY1 PRICE_5MIN	VIC1 PRICE_5MIN	NSW1 PRICE_5MIN	Filter for room on M-T lines	
13/10/2004 13:40	650	386.822	650	VH_0650	1	13/10/2004 13:40	3018.72	1183.63	3073.35	H>>H-64_B	13/10/2004 13:40	3668.52	52.5676	4538.93	1	54.63
13/10/2004 14:05	650	178.649	650	VH_0650	1	13/10/2004 14:05	2841.15	1031.08	2939	H>>H-64_B	13/10/2004 14:05	4133.8	2678.46	5000	1	97.85
13/10/2004 14:15	650	176.001	650	VH_0650	1	13/10/2004 14:15	2931.79	1131.82	3030.19	H>>H-64_B	13/10/2004 14:15	4073.86	1016.13	5000	1	98.4
13/10/2004 14:20	650	650.043	650	VH_0650	1	13/10/2004 14:20	2834.49	1124.83	2834.48	H>>H-64_2	13/10/2004 14:20	1100	67.6118	5000	1	1
13/10/2004 14:25	650	649.961	650	VH_0650	1	13/10/2004 14:25	2851.84	1129.07	2851.85	H>>H-64_2	13/10/2004 14:25	1100	67	5000	1	1
13/10/2004 14:30	650	522.667	650	VH_0650	1	13/10/2004 14:30	2815.06	1104.31	2835.56	H>>H-64_1	13/10/2004 14:30	4130.8	67	5000	1	1
13/10/2004 15:20	650	-401.024	650	VH_0650	1	13/10/2004 15:20	3033.99	1009.14	3079.5	H>N-64_H_15M	13/10/2004 15:20	4043.34	53.8716	5000	1	1
14/10/2004 13:20	550	550	550	VH_0550	1	14/10/2004 13:20	1941.85	-301.188	1941.85	H>>H-64_B	14/10/2004 13:20	70.4	55.73	301.089	1	1
14/10/2004 13:25	550	550.03	550	VH_0550	1	14/10/2004 13:25	1936.49	-306.554	1936.48	H>>H-64_B	14/10/2004 13:25	70.4	55.71	301.106	1	1
14/10/2004 13:30	550	549.983	550	VH_0550	1	14/10/2004 13:30	1934.64	-308.394	1934.64	H>>H-64_B	14/10/2004 13:30	70.4	55.71	301.167	1	1
14/10/2004 13:35	550	550.014	550	VH_0550	1	14/10/2004 13:35	1960.87	-282.171	1960.87	H>>H-64_B	14/10/2004 13:35	70.4	55.71	301.169	1	1
14/10/2004 13:40	550	550.003	550	VH_0550	1	14/10/2004 13:40	1980.53	-262.509	1980.53	H>>H-64_B	14/10/2004 13:40	70.4	55.73	303.005	1	1
14/10/2004 13:45	550	549.964	550	VH_0550	1	14/10/2004 13:45	1988.38	-254.651	1988.39	H>>H-64_B	14/10/2004 13:45	70.4	55.73	303.027	1	1
14/10/2004 13:50	550	549.983	550	VH_0550	1	14/10/2004 13:50	1972.65	-270.384	1972.65	H>>H-64_B	14/10/2004 13:50	70.4	55.72	302.967	1	1
14/10/2004 13:55	550	549.997	550	VH_0550	1	14/10/2004 13:55	1936.05	-306.987	1936.05	H>>H-64_B	14/10/2004 13:55	70.4	55.74	110.99	1	1
14/10/2004 14:00	550	550.013	550	VH_0550	1	14/10/2004 14:00	1938.99	-304.051	1938.99	H>>H-64_B	14/10/2004 14:00	70.4	55.74	111.755	1	1
14/10/2004 14:05	550	549.987	550	VH_0550	1	14/10/2004 14:05	1946.82	-296.215	1946.82	H>>H-64_B	14/10/2004 14:05	70.4	55.73	111.816	1	1
14/10/2004 14:10	550	549.976	550	VH_0550	1	14/10/2004 14:10	1958.4	-284.633	1958.41	H>>H-64_B	14/10/2004 14:10	70.4	55.74	112.724	1	1
14/10/2004 14:15	550	549.986	550	VH_0550	1	14/10/2004 14:15	1937.63	-305.405	1937.63	H>>H-64_B	14/10/2004 14:15	70.4	66.99	289.26	1	1
14/10/2004 14:20	548.09	548.09	550	VH_0550	1	14/10/2004 14:20	1937.44	-305.602	1937.44	H>>H-64_B	14/10/2004 14:20	70.4	66.6475	78.8695	1	1
14/10/2004 14:25	550	549.979	550	VH_0550	1	14/10/2004 14:25	1942.54	-300.494	1942.54	H>>H-64_B	14/10/2004 14:25	70.4	66.99	122.712	1	1
14/10/2004 14:30	550	549.984	550	VH_0550	1	14/10/2004 14:30	1931.06	-291.975	1931.06	H>>H-64_B	14/10/2004 14:30	70.4	55.74	286.1	1	1
14/10/2004 14:35	437.705	122.508	550	VH_0550	1	14/10/2004 14:35	1997.95	-128.937	1997.95	H>>H-64_A	14/10/2004 14:35	56.3409	53.7615	269.393	1	1
14/10/2004 14:40	500	499.986	500	VH_0500	1	14/10/2004 14:40	1934.63	-308.405	1934.63	H>>H-64_B	14/10/2004 14:40	70.4	41.2	289.26	1	1
14/10/2004 14:45	500	500.007	500	VH_0500	1	14/10/2004 14:45	1953.09	-289.949	1953.09	H>>H-64_B	14/10/2004 14:45	70.4	55.2	110.909	1	1
14/10/2004 14:50	500	499.982	500	VH_0500	1	14/10/2004 14:50	1879.75	-363.284	1879.75	H>>H-64_B	14/10/2004 14:50	70.4	55.2	78.9908	1	1
14/10/2004 14:55	500	499.987	500	VH_0500	1	14/10/2004 14:55	1826.64	-416.395	1826.64	H>>H-64_B	14/10/2004 14:55	70.4	54.7986	78.4107	1	1
14/10/2004 15:00	500	500.032	500	VH_0500	1	14/10/2004 15:00	1747.7	-495.345	1747.69	H>>H-64_B	14/10/2004 15:00	70.4	54.3186	77.9355	1	1
14/10/2004 15:05	500	500.028	500	VH_0500	1	14/10/2004 15:05	1661.27	-581.774	1661.26	H>>H-64_B	14/10/2004 15:05	70.4	55.2	76.9517	1	1
14/10/2004 15:10	500	500.009	500	VH_0500	1	14/10/2004 15:10	1595.5	-647.54	1595.5	H>>H-64_B	14/10/2004 15:10	70.4	55.2	76.9275	1	1
14/10/2004 15:15	500	435.287	500	VH_0500	1	14/10/2004 15:15	1573.49	-656.114	1586.92	H>>H-64_B	14/10/2004 15:15	70.4	54.3336	76.1618	1	1
14/10/2004 15:20	500	499.972	500	VH_0500	1	14/10/2004 15:20	1626.51	-616.522	1626.52	H>>H-64_B	14/10/2004 15:20	70.4	54.6608	76.9307	1	1
14/10/2004 15:25	500	467.041	500	VH_0500	1	14/10/2004 15:25	1571.93	-664.266	1578.77	H>>H-64_B	14/10/2004 15:25	70.4	41.2	76.1607	1	1
14/10/2004 15:30	500	499.973	500	VH_0500	1	14/10/2004 15:30	1623.54	-619.492	1623.55	H>>H-64_B	14/10/2004 15:30	70.4	41.18	76.9546	1	1
14/10/2004 15:35	500	499.964	500	VH_0500	1	14/10/2004 15:35	1668.14	-574.891	1668.15	H>>H-64_B	14/10/2004 15:35	70.4	38.8069	77.4614	1	1
14/10/2004 15:40	500	499.937	500	VH_0500	1	14/10/2004 15:40	1632.2	-610.837	1632.2	H>>H-64_B	14/10/2004 15:40	70.4	35.0046	76.967	1	1
14/10/2004 15:45	500	54.3805	500	VH_0500	1	14/10/2004 15:45	1502.92	-647.61	1502.92	H>>H-64_B	14/10/2004 15:45	70.22	36.0389	75.5355	1	92.51
14/10/2004 15:50	500	352.805	500	VH_0500	1	14/10/2004 15:50	1438.61	-706.544	1469.17	H>>H-64_B	14/10/2004 15:50	70.22	35.8491	75.0425	1	1
14/10/2004 15:55	500	305.788	500	VH_0500	1	14/10/2004 15:55	1436.29	-672.694	1476.61	H>>H-64_B	14/10/2004 15:55	70.22	36.0389	75.0698	1	1
14/10/2004 16:00	500	161.253	500	VH_0500	1	14/10/2004 16:00	1383.14	-674.144	1453.46	H>>H-64_B	14/10/2004 16:00	70.22	36.0389	75.0594	1	70.32
14/10/2004 16:05	500	444.953	500	VH_0500	1	14/10/2004 16:05	1375.37	-629.779	1386.8	H>>H-64_B	14/10/2004 16:05	67.8739	33.8	72.58	1	1
14/10/2004 16:10	500	496.793	500	VH_0500	1	14/10/2004 16:10	1400.6	-630.674	1401.27	H>>H-64_B	14/10/2004 16:10	49.3311	35.2915	52.7442	1	1
14/10/2004 16:15	500	424.334	500	VH_0500	1	14/10/2004 16:15	1315.61	-628.799	1331.32	H>>H-64_B	14/10/2004 16:15	70.22	35.3795	74.5876	1	1
14/10/2004 16:20	500	500	500	VH_0500	1	14/10/2004 16:20	1317.57	-618.565	1317.57	H>>H-64_B	14/10/2004 16:20	42	33.64	74.2387	1	1
14/10/2004 16:25	500	458.467	500	VH_0500	1	14/10/2004 16:25	1351.34	-619.185	1359.96	H>>H-64_B	14/10/2004 16:25	48.7332	33.68	51.765	1	1
18/11/2004 12:00	100	-120.811	100	VH_0100	1	18/11/2004 12:00	2027.51	-107.635	2073.35	H>>H-64_B	18/11/2004 12:00	270	57.4332	302.854	1	1
18/11/2004 12:05	100	-106.677	100	VH_0100	1	18/11/2004 12:05	2293.28	152.999	2336.19	H>>H-64_B	18/11/2004 12:05	280	45.77	322.615	1	1
18/11/2004 12:10	100	-379.161	100	VH_0100	1	18/11/2004 12:10	2327.1	228.953	2426.57	H>>H-64_B	18/11/2004 12:10	805	45.77	927.332	1	99.47
18/11/2004 12:15	100	-338.78	100	VH_0100	1	18/11/2004 12:15	2467.64	340.897	2558.73	H>>H-64_B	18/11/2004 12:15	805	45.77	939.956	1	91.09
18/11/2004 12:25	150	-34.1957	150	VH_0150	1	18/11/2004 12:25	2630.55	448.181	2668.79	H>>H-64_B	18/11/2004 12:25	805	55.74	959.635	1	1
18/11/2004 12:30	150	-122.946	150	VH_0150	1	18/11/2004 12:30	2694.7	530.755	2751.36	H>>H-64_B	18/11/2004 12:30	805	45.77	959.623	1	56.66
18/11/2004 12:35	150	-50.9707	150	VH_0150	1	18/11/2004 12:35	2708.71	529.823	2750.43	H>>H-64_B	18/11/2004 12:35	805	45.77	966.529	1	1
18/11/2004 12:40	150	149.457	150	VH_0150	1	18/11/2004 12:40	2712.41	491.915	2712.52	H>>H-64_B	18/11/2004 12:40	805	45.77	966.236	1	1
18/11/2004 12:45	150	122.814	150	VH_0150	1	18/11/2004 12:45	2840.85	625.886	2846.49	H>>H-64_B	18/11/2004 12:45	827.305	45.77	1000	1	1
18/11/2004 12:50	150	-190.274	150	VH_0150	1	18/11/2004 12:50	2789.5	639.532	2860.14	H>>H-64_B	18/11/2004 12:50	827.567	45.77	1000	1	70.64
18/11/2004 12:55	150	46.5927	150	VH_0150	1	18/11/2004 12:55	2897	697.859	2918.47	H>>H-64_B	18/11/2004 12:55	805	45.77	979.89	1	1
18/11/2004 13:00	150	-178.852	150	VH_0150	1	18/11/2004 13:00	2674.57	522.23	2742.84	H>>H-64_B	18/11/2004 13:00	805	45.77	959.339	1	68.27
18/11/2004 13:05	150	85.5171	150	VH_0150	1	18/11/2004 13:05	2944.12	736.899	2957.51	H>>H-64_B	18/11/2004 13:05	815.824	45.77	1000	1	1
18/11/2004 13:10	150	-199.406	150	VH												

18/11/2004 15:00	150	-198.876	150 VH_0150	1	18/11/2004 15:00	2442.37	302.663	2514.79 H>>H-64_B	18/11/2004 15:00	805	45.77	939.084	1	72.42
18/11/2004 15:05	150	-195.898	150 VH_0150	1	18/11/2004 15:05	2447.42	315.033	2519.23 H>>H-64_B	18/11/2004 15:05	805	45.77	938.834	1	71.81
18/11/2004 15:10	150	-103.282	150 VH_0150	1	18/11/2004 15:10	2440.83	286.424	2493.41 H>>H-64_B	18/11/2004 15:10	805	45.75	938.923	1	52.58
18/11/2004 15:15	150	148.373	150 VH_0150	1	18/11/2004 15:15	2500.39	287.12	2500.73 H>>H-64_B	18/11/2004 15:15	805	45.75	945.421	1	1
18/11/2004 15:20	150	98.2152	150 VH_0150	1	18/11/2004 15:20	2526.89	322.021	2537.64 H>>H-64_B	18/11/2004 15:20	805	45.75	945.242	1	1
18/11/2004 15:25	150	33.0567	150 VH_0150	1	18/11/2004 15:25	2656.53	460.199	2680.81 H>>H-64_B	18/11/2004 15:25	805	32.7	958.449	1	1
18/11/2004 15:30	150	-193.08	150 VH_0150	1	18/11/2004 15:30	2591.54	442.154	2662.76 H>>H-64_B	18/11/2004 15:30	805	31.5452	951.746	1	71.22
18/11/2004 15:35	150	-73.3049	150 VH_0150	1	18/11/2004 15:35	2537.35	364.192	2583.71 H>>H-64_B	18/11/2004 15:35	805	45.77	945.154	1	1
18/11/2004 15:40	150	50.0165	150 VH_0150	1	18/11/2004 15:40	2492.56	307.629	2513.32 H>>H-64_B	18/11/2004 15:40	805	45.75	945.299	1	1
18/11/2004 15:50	150	55.6043	150 VH_0150	1	18/11/2004 15:50	2514.7	316.248	2534.3 H>>H-64_B	18/11/2004 15:50	805	31.3557	945.498	1	1
18/11/2004 16:00	150	-92.0677	150 VH_0150	1	18/11/2004 16:00	2609.87	439.514	2660.12 H>>H-64_B	18/11/2004 16:00	805	30.9723	951.901	1	50.25
18/11/2004 16:05	150	-150.331	150 VH_0150	1	18/11/2004 16:05	2383.46	233.458	2445.81 H>>H-64_B	18/11/2004 16:05	805	31.3616	932.687	1	62.35
18/11/2004 16:10	150	-0.49451	150 VH_0150	1	18/11/2004 16:10	2407.91	247.368	2439.15 H>>H-64_B	18/11/2004 16:10	296.957	29.5	346.489	1	1
18/11/2004 16:15	150	133.658	150 VH_0150	1	18/11/2004 16:15	2415.81	221.693	2419.2 H>>H-64_B	18/11/2004 16:15	294.546	27.7	343.861	1	1
18/11/2004 16:20	150	6.04878	150 VH_0150	1	18/11/2004 16:20	2355.16	194.079	2385.04 H>>H-64_B	18/11/2004 16:20	280	27.32	324.69	1	1
18/11/2004 16:30	150	135.507	150 VH_0150	1	18/11/2004 16:30	2382.09	187.522	2385.1 H>>H-64_B	18/11/2004 16:30	280	27.32	324.812	1	1
18/11/2004 16:45	100	-113.78	100 VH_0100	1	18/11/2004 16:45	2195.57	79.9754	2239.95 H>>H-64_B	18/11/2004 16:45	280	31.155	320.326	1	1
18/11/2004 16:50	100	-148.06	100 VH_0100	1	18/11/2004 16:50	2095.31	-0.70624	2146.81 H>>H-64_B	18/11/2004 16:50	280	30.7941	316.071	1	51.5
18/11/2004 16:55	100	-45.8668	100 VH_0100	1	18/11/2004 16:55	2097	-33.1004	2127.28 H>>H-64_B	18/11/2004 16:55	270	31.1561	304.834	1	1
18/11/2004 17:00	100	-72.4806	100 VH_0100	1	18/11/2004 17:00	2047.49	-88.8797	2083.3 H>>H-64_B	18/11/2004 17:00	270	30.32	304.933	1	1
19/11/2004 12:20	750	750.026	750 VH_0750	1	19/11/2004 12:20	2132.81	-87.8029	2132.8 H>>H-64_B	19/11/2004 12:20	42	41.8	107.597	1	1
19/11/2004 12:25	750	750.009	750 VH_0750	1	19/11/2004 12:25	2105.48	-115.129	2105.48 H>>H-64_B	19/11/2004 12:25	70.4	41.8	107.876	1	1
19/11/2004 12:45	700	699.962	700 VH_0700	1	19/11/2004 12:45	2087.47	-130.813	2088.18 H>>H-64_B	19/11/2004 12:45	70.4	41.8	107.826	1	1
19/11/2004 12:50	700	700.059	700 VH_0700	1	19/11/2004 12:50	2145.36	-75.2597	2145.35 H>>H-64_B	19/11/2004 12:50	70.4	42.2	108.525	1	1
19/11/2004 12:55	700	699.98	700 VH_0700	1	19/11/2004 12:55	2129.48	-91.1234	2129.48 H>>H-64_B	19/11/2004 12:55	70.4	45.75	108.537	1	1
19/11/2004 13:10	650	650.02	650 VH_0650	1	19/11/2004 13:10	2032.44	-188.172	2032.44 H>>H-64_B	19/11/2004 13:10	70.4	42.2	107.123	1	1
19/11/2004 13:15	650	649.997	650 VH_0650	1	19/11/2004 13:15	2153.01	-67.597	2153.01 H>>H-64_B	19/11/2004 13:15	70.4	41.8	108.548	1	1
19/11/2004 13:20	650	649.967	650 VH_0650	1	19/11/2004 13:20	2229.01	8.40924	2229.02 H>>H-64_B	19/11/2004 13:20	70.4	39.7262	109.281	1	1
19/11/2004 13:25	650	649.966	650 VH_0650	1	19/11/2004 13:25	2225.87	5.26937	2225.88 H>>H-64_B	19/11/2004 13:25	70.4	41.8	109.272	1	1
19/11/2004 13:30	650	649.983	650 VH_0650	1	19/11/2004 13:30	2231.99	11.3859	2231.99 H>>H-64_B	19/11/2004 13:30	70.4	45.75	109.307	1	1
19/11/2004 13:35	650	650.01	650 VH_0650	1	19/11/2004 13:35	2178.17	-42.4396	2178.17 H>>H-64_B	19/11/2004 13:35	70.4	45.75	108.539	1	1
19/11/2004 13:40	650	650.02	650 VH_0650	1	19/11/2004 13:40	2187.06	-33.5516	2187.06 H>>H-64_B	19/11/2004 13:40	70.4	45.77	109.29	1	1
19/11/2004 13:45	650	650.017	650 VH_0650	1	19/11/2004 13:45	2184.32	-36.2911	2184.32 H>>H-64_B	19/11/2004 13:45	70.4	45.77	109.288	1	1
19/11/2004 13:50	650	650.026	650 VH_0650	1	19/11/2004 13:50	2253.83	33.217	2253.82 H>>H-64_B	19/11/2004 13:50	70.4	45.75	109.277	1	1
19/11/2004 13:55	650	650.035	650 VH_0650	1	19/11/2004 13:55	2238.91	18.2952	2238.9 H>>H-64_B	19/11/2004 13:55	70.4	42.2	109.274	1	1
19/11/2004 14:00	650	650	650 VH_0650	1	19/11/2004 14:00	2223.91	3.30241	2223.91 H>>H-64_B	19/11/2004 14:00	70.4	45.0843	109.307	1	1
19/11/2004 14:05	650	649.962	650 VH_0650	1	19/11/2004 14:05	2107.62	-110.999	2107.62 H>>H-64_B	19/11/2004 14:05	70.4	41.8	107.888	1	1
19/11/2004 14:10	650	650.058	650 VH_0650	1	19/11/2004 14:10	2062.33	-158.29	2062.32 H>>H-64_B	19/11/2004 14:10	70.4	40.4406	107.904	1	1
19/11/2004 14:15	650	649.956	650 VH_0650	1	19/11/2004 14:15	2009.32	-211.278	2009.33 H>>H-64_B	19/11/2004 14:15	70.4	38.054	103.652	1	1
19/11/2004 14:20	650	649.951	650 VH_0650	1	19/11/2004 14:20	1995.8	-224.797	1995.81 H>>H-64_B	19/11/2004 14:20	70.4	38.0486	105.015	1	1
19/11/2004 14:25	650	649.982	650 VH_0650	1	19/11/2004 14:25	2003.49	-217.114	2003.49 H>>H-64_B	19/11/2004 14:25	70.4	35.8893	105.015	1	1
19/11/2004 14:30	650	649.99	650 VH_0650	1	19/11/2004 14:30	2011.77	-208.835	2011.77 H>>H-64_B	19/11/2004 14:30	70.4	35.9009	105.893	1	1
19/11/2004 14:35	650	649.964	650 VH_0650	1	19/11/2004 14:35	2018.31	-202.29	2018.32 H>>H-64_B	19/11/2004 14:35	70.4	36.3236	107.164	1	1
19/11/2004 14:40	650	649.994	650 VH_0650	1	19/11/2004 14:40	2001.1	-219.506	2001.1 H>>H-64_B	19/11/2004 14:40	70.4	36.1102	105.297	1	1
30/11/2004 11:40	100	-352.07	100 VH_0100	1	30/11/2004 11:40	2500.35	386.44	2594.2 H>>H-64_B	30/11/2004 11:40	805	144.259	940.707	1	93.85
30/11/2004 11:50	100	-291.285	100 VH_0100	1	30/11/2004 11:50	2551.15	411.771	2632.38 H>>H-64_B	30/11/2004 11:50	805	250.38	940.79	1	81.23
30/11/2004 11:55	100	-205.336	100 VH_0100	1	30/11/2004 11:55	2484.39	331.628	2547.78 H>>H-64_B	30/11/2004 11:55	805	250.38	940.505	1	63.39
30/11/2004 12:00	100	-300.848	100 VH_0100	1	30/11/2004 12:00	2470.95	346.965	2554.16 H>>H-64_B	30/11/2004 12:00	805	250.38	934.121	1	83.21
30/11/2004 12:05	100	-279.999	100 VH_0100	1	30/11/2004 12:05	2564.37	447.702	2663.26 H>>H-64_B	30/11/2004 12:05	805	93	947.051	1	78.89
30/11/2004 12:15	100	-271.327	100 VH_0100	1	30/11/2004 12:15	2710.76	567.238	2787.85 H>>H-64_B	30/11/2004 12:15	805	250.38	960.18	1	77.09
30/11/2004 12:25	100	-247.941	100 VH_0100	1	30/11/2004 12:25	2724.44	576.063	2796.67 H>>H-64_B	30/11/2004 12:25	961.116	238.859	1146.06	1	72.23
30/11/2004 12:30	100	-326.746	100 VH_0100	1	30/11/2004 12:30	2730.84	598.823	2819.43 H>>H-64_B	30/11/2004 12:30	936.829	303.523	1117.13	1	88.59
30/11/2004 12:35	100	-265.927	100 VH_0100	1	30/11/2004 12:35	2709.01	564.367	2784.97 H>>H-64_B	30/11/2004 12:35	4184.36	305.981	4990	1	75.96
30/11/2004 12:40	100	-285.945	100 VH_0100	1	30/11/2004 12:40	2726.69	586.203	2806.81 H>>H-64_B	30/11/2004 12:40	944.212	305.905	1125.86	1	80.12
30/11/2004 12:45	100	-302.307	100 VH_0100	1	30/11/2004 12:45	2717.04	579.949	2800.56 H>>H-64_B	30/11/2004 12:45	952.124	236.108	1135.11	1	83.52
30/11/2004 12:50	100	-238.797	100 VH_0100	1	30/11/2004 12:50	2851.56	701.285	2921.89 H>>H-64_B	30/11/2004 12:50	4005	306.003	1484.03	1	70.33
30/11/2004 13:00	100	-214.921	100 VH_0100	1	30/11/2004 13:00	2789.92	634.688	2855.3 H>>H-64_B	30/11/2004 13:00	4005	3199.42	4809.32	1	65.38
30/11/2004 13:05	100	-363.066	100 VH_0100	1	30/11/2004 13:05	2901.28	776.803	2997.41 H>>H-64_B	30/11/2004 13:05	4005	306.069	4841.82	1	96.13
30/11/2004 13:10	100	-435.174	100 VH_0100	1	30/11/2004 13:10	2896.66	787.152	2949.11 H>N-NIL_H_15M	30/11/2004 13:10	4126.64	307.821	4990	1	52.45
30/11/2004 13:15	100	-385.504	100 VH_0100	1	30/11/2004 13:15	2905.06	785.241	2950.15 H>N-NIL_H_15M	30/11/2004 13:15	4126.47	307.757	4990	1	1
30/11/2004 13:20	100	-262.394	100 VH_0100	1	30/11/2004 13:20	2941.06	795.684	2945.63 H>N-NIL_H_15M	30/11/2004 13:20	4096.83	311.437	4990	1	1
30/11/2004 13:25	150	-30.847	150 VH_0150	1	30/11/2004 13:25	2949.52	766.455	2949.51 H>N-NIL_H_15M	30/11/2004 13:25	4005	315.123	4990	1	1
30/11/2004 13:30	150	-48.6323												

30/11/2004 15:15	150	-57.5262	150 VH_0150	1	30/11/2004 15:15	2886.83	709.304	2929.91 H>>H-64_B	30/11/2004 15:15	5958.94	98.8374	7201.18	1	1
30/11/2004 15:20	150	150.04	150 VH_0150	1	30/11/2004 15:20	2933.88	713.264	2933.87 H>>H-64_B	30/11/2004 15:20	7500	99.2431	9135.97	1	1
30/11/2004 15:25	150	150.016	150 VH_0150	1	30/11/2004 15:25	2985.42	764.809	2985.41 H>N-NIL_H_15M	30/11/2004 15:25	7500	99.2393	9994.75	1	1
30/11/2004 15:30	150	149.991	150 VH_0150	1	30/11/2004 15:30	2990.53	769.924	2990.52 H>N-NIL_H_15M	30/11/2004 15:30	7500	99.2376	10000	1	1
30/11/2004 15:35	150	149.998	150 VH_0150	1	30/11/2004 15:35	3076.25	855.643	2972.48 H>N-NIL_H_15M	30/11/2004 15:35	7500	95.67	10000	1	1
30/11/2004 15:40	150	150.016	150 VH_0150	1	30/11/2004 15:40	3011.85	791.239	2922.48 H>N-NIL_H_15M	30/11/2004 15:40	7500	95.55	9989.56	1	1
30/11/2004 15:45	150	149.982	150 VH_0150	1	30/11/2004 15:45	2949.25	728.646	2949.24 H>N-NIL_H_15M	30/11/2004 15:45	7500	95.55	9901.18	1	1
30/11/2004 15:50	150	41.3872	150 VH_0150	1	30/11/2004 15:50	2890.91	682.85	2903.46 H>>H-64_B	30/11/2004 15:50	4005	95.55	4836.03	1	1
30/11/2004 15:55	150	5.49512	150 VH_0150	1	30/11/2004 15:55	2871.28	680.671	2901.28 H>>H-64_B	30/11/2004 15:55	4735.46	56.5214	5718.72	1	1
30/11/2004 16:00	150	2.05649	150 VH_0150	1	30/11/2004 16:00	2882.51	693.468	2914.08 H>>H-64_B	30/11/2004 16:00	4130.33	56.7133	4990	1	1
30/11/2004 16:05	150	-146.726	150 VH_0150	1	30/11/2004 16:05	2862.11	703.101	2923.71 H>>H-64_B	30/11/2004 16:05	4130.62	50.6	4990	1	61.6
30/11/2004 16:10	150	-38.2183	150 VH_0150	1	30/11/2004 16:10	2784.41	602.876	2823.48 H>>H-64_B	30/11/2004 16:10	4005	53.5736	4805.17	1	1
30/11/2004 16:20	150	-128.965	150 VH_0150	1	30/11/2004 16:20	2854.43	691.734	2912.34 H>>H-64_B	30/11/2004 16:20	4131.69	49.1	4990	1	57.91
30/11/2004 16:25	150	-20.7695	150 VH_0150	1	30/11/2004 16:25	2885.22	700.063	2920.67 H>>H-64_B	30/11/2004 16:25	4130.87	44.15	4990	1	1
30/11/2004 16:30	150	104.697	150 VH_0150	1	30/11/2004 16:30	2871.57	660.367	2880.97 H>>H-64_B	30/11/2004 16:30	4130.5	44.15	4990	1	1
30/11/2004 16:35	150	-17.5561	150 VH_0150	1	30/11/2004 16:35	2892.52	706.696	2927.3 H>>H-64_B	30/11/2004 16:35	4129.95	44.15	4990	1	1
30/11/2004 16:40	150	-141.705	150 VH_0150	1	30/11/2004 16:40	2738.38	578.329	2798.94 H>>H-64_B	30/11/2004 16:40	805	44.15	958.879	1	60.56
30/11/2004 16:50	150	90.7969	150 VH_0150	1	30/11/2004 16:50	2613.63	405.313	2625.92 H>>H-64_B	30/11/2004 16:50	805	43.96	946.503	1	1
30/11/2004 17:05	100	-196.476	100 VH_0100	1	30/11/2004 17:05	2355.61	222.584	2417.16 H>>H-64_B	30/11/2004 17:05	805	40.5	928.089	1	61.55
30/11/2004 17:10	100	-28.7079	100 VH_0100	1	30/11/2004 17:10	2228.95	88.4321	2255.67 H>>H-64_B	30/11/2004 17:10	280	36.9658	318.658	1	1
30/11/2004 17:15	100	0.53354	100 VH_0100	1	30/11/2004 17:15	2187.47	37.2854	2208.12 H>>H-64_B	30/11/2004 17:15	280	35.15	318.814	1	1
30/11/2004 17:20	100	28.2323	100 VH_0100	1	30/11/2004 17:20	2218.93	63.8601	2233.63 H>>H-64_B	30/11/2004 17:20	280	30.6365	318.918	1	1
30/11/2004 17:25	100	-186.208	100 VH_0100	1	30/11/2004 17:25	2225.27	59.671	2246.8 H>>H-64_B	30/11/2004 17:25	280	35.15	318.913	1	1
30/11/2004 17:30	100	-186.208	100 VH_0100	1	30/11/2004 17:30	2256.83	129.17	2316.25 H>>H-64_B	30/11/2004 17:30	280	35.15	318.916	1	59.42
30/11/2004 17:40	100	-101.54	100 VH_0100	1	30/11/2004 17:40	2268.7	129.159	2310.54 H>>H-64_B	30/11/2004 17:40	280	32.7	321.113	1	1
30/11/2004 17:45	100	-192.654	100 VH_0100	1	30/11/2004 17:45	2206.85	95.9115	2267.6 H>>H-64_B	30/11/2004 17:45	280	31.0502	319.095	1	60.75
30/11/2004 17:50	100	-93.4085	100 VH_0100	1	30/11/2004 17:50	2188.03	59.8728	2228.18 H>>H-64_B	30/11/2004 17:50	280	32.7	319.246	1	1
30/11/2004 17:55	100	-176.46	100 VH_0100	1	30/11/2004 17:55	2106.21	1.69303	2163.6 H>>H-64_B	30/11/2004 17:55	280	30.8524	315.064	1	57.39
30/11/2004 18:00	100	-182.365	100 VH_0100	1	30/11/2004 18:00	2032.36	-73.0408	2090.98 H>>H-64_B	30/11/2004 18:00	270	30.6547	301.957	1	58.62
30/11/2004 20:15	750	513.241	750 VH_0750	1	30/11/2004 20:15	1940.21	-231.248	1989.36 H>>H-64_B	30/11/2004 20:15	280	55.72	312.256	1	1
30/11/2004 20:20	750	602.953	750 VH_0750	1	30/11/2004 20:20	1732.85	-457.085	1763.38 H>>H-64_B	30/11/2004 20:20	95.9	55.72	104.883	1	1
30/11/2004 20:25	750	447.059	750 VH_0750	1	30/11/2004 20:25	1696.94	-456.921	1757.75 H>>H-64_B	30/11/2004 20:25	95.9	44.15	104.931	1	60.81
30/11/2004 20:30	750	557.049	750 VH_0750	1	30/11/2004 20:30	1628.17	-529.426	1668.23 H>>H-64_B	30/11/2004 20:30	95.9	40.7579	104.312	1	1
1/12/2004 10:35	100	-293.06	100 VH_0100	1	1/12/2004 10:35	2357.42	218.41	2439.02 H>>H-64_B	1/12/2004 10:35	805	17.3	930.443	1	81.6
1/12/2004 10:40	100	-326.191	100 VH_0100	1	1/12/2004 10:40	2340.7	208.568	2429.18 H>>H-64_B	1/12/2004 10:40	805	29.7	930.337	1	88.48
1/12/2004 10:55	100	-163.07	100 VH_0100	1	1/12/2004 10:55	2370.47	305.72	2426.33 H>>H-64_B	1/12/2004 10:55	805	35.15	930.323	1	55.86
1/12/2004 11:00	100	-66.2652	100 VH_0100	1	1/12/2004 11:00	2411.61	225.516	2446.13 H>>H-64_B	1/12/2004 11:00	805	38.4076	936.326	1	1
1/12/2004 11:05	100	-194.371	100 VH_0100	1	1/12/2004 11:05	2526.76	367.262	2587.87 H>>H-64_B	1/12/2004 11:05	805	32.7	943.241	1	61.11
1/12/2004 11:15	100	-197.607	100 VH_0100	1	1/12/2004 11:15	2533.98	375.154	2595.76 H>>H-64_B	1/12/2004 11:15	805	35.15	943.241	1	61.78
1/12/2004 11:35	200	196.332	200 VH_0200	1	1/12/2004 11:35	2535.87	316.024	2536.63 H>>H-64_B	1/12/2004 11:35	805	44.15	943.231	1	1
1/12/2004 11:45	200	71.661	200 VH_0200	1	1/12/2004 11:45	2744.9	550.935	2771.54 H>>H-64_B	1/12/2004 11:45	805	40.5	962.869	1	1
1/12/2004 11:50	200	61.9646	200 VH_0200	1	1/12/2004 11:50	2660.09	468.138	2688.75 H>>H-64_B	1/12/2004 11:50	805	32.7	955.869	1	1
1/12/2004 12:25	100	-238.952	100 VH_0100	1	1/12/2004 12:25	2186.61	566.367	2786.97 H>>H-64_B	1/12/2004 12:25	828.208	17.35	990	1	70.36
1/12/2004 12:35	100	-250.691	100 VH_0100	1	1/12/2004 12:35	2560.35	412.544	2633.15 H>>H-64_B	1/12/2004 12:35	805	15.8414	949.547	1	72.8
1/12/2004 12:40	100	-127.069	100 VH_0100	1	1/12/2004 12:40	2642.59	469.121	2689.73 H>>H-64_B	1/12/2004 12:40	805	14.6913	956.551	1	1
1/12/2004 12:45	100	-188.365	100 VH_0100	1	1/12/2004 12:45	2591.99	431.245	2651.85 H>>H-64_B	1/12/2004 12:45	805	17.3	950.037	1	59.86
1/12/2004 12:50	100	-63.511	100 VH_0100	1	1/12/2004 12:50	2599.04	412.376	2632.98 H>>H-64_B	1/12/2004 12:50	805	27.7	949.897	1	1
1/12/2004 12:55	100	-114.37	100 VH_0100	1	1/12/2004 12:55	2661.45	485.344	2705.95 H>>H-64_B	1/12/2004 12:55	805	27.7	956.287	1	1
1/12/2004 13:00	100	-223.477	100 VH_0100	1	1/12/2004 13:00	2655.98	502.525	2723.13 H>>H-64_B	1/12/2004 13:00	805	27.7	956.092	1	67.15
1/12/2004 13:05	100	-51.7799	100 VH_0100	1	1/12/2004 13:05	2570.28	381.181	2601.79 H>>H-64_B	1/12/2004 13:05	805	27.7	949.543	1	1
1/12/2004 13:10	100	-31.3933	100 VH_0100	1	1/12/2004 13:10	2684.22	490.889	2711.5 H>>H-64_B	1/12/2004 13:10	805	27.7	956.212	1	1
1/12/2004 13:15	100	-380.121	100 VH_0100	1	1/12/2004 13:15	2746.19	625.253	2845.86 H>>H-64_B	1/12/2004 13:15	827.778	29.53	990	1	99.67
1/12/2004 13:20	100	-202.459	100 VH_0100	1	1/12/2004 13:20	2769.92	612.101	2832.71 H>>H-64_B	1/12/2004 13:20	837.532	27.7	1001.23	1	62.79
1/12/2004 13:25	100	-143.876	100 VH_0100	1	1/12/2004 13:25	2857.72	687.74	2908.35 H>>H-64_B	1/12/2004 13:25	4005	27.7	4855.8	1	50.63
1/12/2004 13:30	100	-137.311	100 VH_0100	1	1/12/2004 13:30	2861.08	689.737	2861.07 H>N-NIL_H_15M	1/12/2004 13:30	4005	27.7	9950.01	1	1
1/12/2004 13:35	100	-122.331	100 VH_0100	1	1/12/2004 13:35	2859.69	685.237	2859.69 H>N-NIL_H_15M	1/12/2004 13:35	4005	27.7	7200	1	1
1/12/2004 13:40	100	99.9713	100 VH_0100	1	1/12/2004 13:40	2852.32	631.718	2852.32 H>N-NIL_H_15M	1/12/2004 13:40	7500	27.7	9850.01	1	1
1/12/2004 13:45	100	99.9476	100 VH_0100	1	1/12/2004 13:45	2860.69	640.093	2860.7 H>>H-64_B	1/12/2004 13:45	7500	29.53	9104.56	1	1
1/12/2004 13:50	100	99.9768	100 VH_0100	1	1/12/2004 13:50	2892.74	672.137	2892.74 H>>H-64_B	1/12/2004 13:50	7500	27.7	9105.04	1	1
1/12/2004 13:55	100	100.02	100 VH_0100	1	1/12/2004 13:55	2915.91	695.298	2915.9 H>N-NIL_H_15M	1/12/2004 13:55	7500	25.3	9950.01	1	1
1/12/2004 14:05	64.33	-537.702	100 VH_0100	1	1/12/2004 14:05	3197.92	1102.29	2702.05 H>N-NIL_H_15M	1/12/2004 14:05	14.7506	14.62	10000	1	1
1/12/2004 14:10	100	99.9726	100 VH_0100	1	1/12/2004 14:10	2953.17	732.568	2660.09 H>N-NIL_H_15M	1/12/2004 14:10	7500	27.7	10000	1	1
1/12/2004 14:15	100	100.004	100 VH_0100	1	1/12/2004 14:15	2833.01	612.402	2833 H>N-NIL_H_15M	1/12/2004 14:15	7500	29.7	9900		

1/12/2004 16:25	100	-8.79451	100	VH_0100	1	1/12/2004 16:25	2071	-80.1777	2093.59	H>>H-64_B	1/12/2004 16:25	280	27.7	315.867	1	1
1/12/2004 16:35	100	-49.9555	100	VH_0100	1	1/12/2004 16:35	2071.96	-75.0517	2103.09	H>>H-64_B	1/12/2004 16:35	280	27.7	316.101	1	1
1/12/2004 16:40	100	-38.6061	100	VH_0100	1	1/12/2004 16:40	2033.4	-104.15	2062.17	H>>H-64_B	1/12/2004 16:40	280	26.9799	314.106	1	1
1/12/2004 16:45	100	13.3017	100	VH_0100	1	1/12/2004 16:45	1849.26	-344.012	1867.26	H>>H-64_B	1/12/2004 16:45	270	27.239	299.098	1	1
1/12/2004 16:50	100	26.3152	100	VH_0100	1	1/12/2004 16:50	221.42	24.1341	2232.72	H>>H-64_B	1/12/2004 16:50	280	27.7	320.778	1	1
1/12/2004 16:55	100	-256.135	100	VH_0100	1	1/12/2004 16:55	2227.9	75.2243	2295.83	H>>H-64_B	1/12/2004 16:55	280	27.7	320.825	1	73.93
1/12/2004 17:00	100	-87.7683	100	VH_0100	1	1/12/2004 17:00	2157.82	-5.96484	2196.8	H>>H-64_B	1/12/2004 17:00	280	27.7	318.949	1	1
1/12/2004 17:05	100	-80.2646	100	VH_0100	1	1/12/2004 17:05	2022.42	-112.994	2061.69	H>>H-64_B	1/12/2004 17:05	280	26.9799	314.781	1	1
1/12/2004 17:10	100	11.3944	100	VH_0100	1	1/12/2004 17:10	1822.42	-379.794	1840.81	H>>H-64_B	1/12/2004 17:10	270	26.9098	299.793	1	1
1/12/2004 17:15	100	98.9117	100	VH_0100	1	1/12/2004 17:15	1653.4	-561.611	1653.63	H>>H-64_B	1/12/2004 17:15	70.35	27.0717	76.6179	1	1
19/12/2004 14:25	650	202.635	650	VH_0650	1	19/12/2004 14:25	1610.18	-517.557	1703.05	H>>H-64_B	19/12/2004 14:25	56.5208	14.69	61.8155	1	92.87
19/12/2004 14:30	700	618.217	700	VH_0700	1	19/12/2004 14:30	1951.24	-234.833	1968.22	H>>H-64_B	19/12/2004 14:30	70.35	14.9371	79.0085	1	1
19/12/2004 14:35	700	312.623	700	VH_0700	1	19/12/2004 14:35	1933.19	-187.606	2013.61	H>>H-64_B	19/12/2004 14:35	94.9118	17.35	106.607	1	80.42
19/12/2004 15:10	700	483.19	700	VH_0700	1	19/12/2004 15:10	1965.08	-181.045	2010.09	H>>H-64_B	19/12/2004 15:10	94.1813	14.79	106.431	1	1
19/12/2004 15:15	750	626.826	750	VH_0750	1	19/12/2004 15:15	2004.05	-165.278	2029.62	H>>H-64_B	19/12/2004 15:15	93.4598	14.79	105.609	1	1
19/12/2004 15:20	750	738.221	750	VH_0750	1	19/12/2004 15:20	2035.77	-173.095	2038.22	H>>H-64_B	19/12/2004 15:20	76.3095	17.6	86.2748	1	1
19/12/2004 16:10	700	516.09	700	VH_0700	1	19/12/2004 16:10	1570.53	-590.41	1608.71	H>>H-64_B	19/12/2004 16:10	64.6806	14.9557	70.35	1	1
19/12/2004 16:15	700	556.719	700	VH_0700	1	19/12/2004 16:15	1595.61	-579.101	1625.35	H>>H-64_B	19/12/2004 16:15	52.9493	17.2	57.979	1	1
19/12/2004 16:20	750	550.487	750	VH_0750	1	19/12/2004 16:20	1603.81	-575.38	1645.23	H>>H-64_B	19/12/2004 16:20	47.1882	25.9059	51.6827	1	1
19/12/2004 16:25	750	623.793	750	VH_0750	1	19/12/2004 16:25	1611.8	-569.365	1638	H>>H-64_B	19/12/2004 16:25	45.6557	25.9078	50.01	1	1
19/12/2004 16:30	750	732.724	750	VH_0750	1	19/12/2004 16:30	1644.92	-568.648	1648.51	H>>H-64_B	19/12/2004 16:30	42.8489	26.2731	46.9416	1	1
14/01/2005 11:45	100	-357.238	100	VH_0100	1	14/01/2005 11:45	2145.96	-198.344	2240.88	H>>H-64_B	14/01/2005 11:45	70.1	30.0804	79.2477	1	94.92
14/01/2005 11:50	100	-160.208	100	VH_0100	1	14/01/2005 11:50	1907.6	-101.971	2051.68	H>>H-64_B	14/01/2005 11:50	55.1954	23.1	61.562	1	54.03
14/01/2005 12:10	200	155.434	200	VH_0200	1	14/01/2005 12:10	2148.23	-7.50787	2157.48	H>>H-64_B	14/01/2005 12:10	70.1	40.9084	79.1774	1	1
14/01/2005 12:15	200	94.1811	200	VH_0200	1	14/01/2005 12:15	2160.41	5.61828	2182.38	H>>H-64_B	14/01/2005 12:15	70.1	41.0003	79.1493	1	1
14/01/2005 12:20	200	142.816	200	VH_0200	1	14/01/2005 12:20	2081.92	-64.4954	2093.79	H>>H-64_B	14/01/2005 12:20	70.1	41.2509	78.603	1	1
14/01/2005 12:30	200	28.6701	200	VH_0200	1	14/01/2005 12:30	2223.12	86.2229	2258.69	H>>H-64_B	14/01/2005 12:30	70.1	40.758	79.6422	1	1
14/01/2005 12:35	200	86.2768	200	VH_0200	1	14/01/2005 12:35	2333.86	172.169	2357.47	H>>H-64_B	14/01/2005 12:35	77.4025	40.2	89.1326	1	1
14/01/2005 12:40	200	109.485	200	VH_0200	1	14/01/2005 12:40	2351.45	162.566	2370.24	H>>H-64_B	14/01/2005 12:40	78.6846	42.12	90.6268	1	1
14/01/2005 12:45	200	81.5817	200	VH_0200	1	14/01/2005 12:45	2338.86	165.979	2363.44	H>>H-64_B	14/01/2005 12:45	99.2722	42.12	114.275	1	1
14/01/2005 12:50	200	68.8994	200	VH_0200	1	14/01/2005 12:50	2359.05	187.672	2386.27	H>>H-64_B	14/01/2005 12:50	116.15	43.5	133.71	1	1
14/01/2005 13:00	200	117.108	200	VH_0200	1	14/01/2005 13:00	2419.49	247.371	2436.7	H>>H-64_B	14/01/2005 13:00	280	43.5	324.545	1	1
14/01/2005 13:05	200	68.3378	200	VH_0200	1	14/01/2005 13:05	2495.51	309.78	2522.84	H>>H-64_B	14/01/2005 13:05	280	43.5	326.717	1	1
14/01/2005 13:10	200	78.3695	200	VH_0200	1	14/01/2005 13:10	2708.23	512.872	2733.48	H>>H-64_B	14/01/2005 13:10	280	42.77	333.414	1	1
14/01/2005 13:15	200	-175.233	200	VH_0200	1	14/01/2005 13:15	2658.04	515.329	2736.94	H>>H-64_B	14/01/2005 13:15	280	43.5	331.195	1	77.9
14/01/2005 13:20	200	12.6073	200	VH_0200	1	14/01/2005 13:20	2715.35	533.644	2754.25	H>>H-64_B	14/01/2005 13:20	280	42.04	333.544	1	1
14/01/2005 13:25	200	84.8207	200	VH_0200	1	14/01/2005 13:25	2698.54	604.822	2722.43	H>>H-64_B	14/01/2005 13:25	280	41.616	331.291	1	1
14/01/2005 13:30	200	39.3787	200	VH_0200	1	14/01/2005 13:30	2814.43	627.167	2847.77	H>>H-64_B	14/01/2005 13:30	280	40.5874	336.017	1	1
14/01/2005 13:40	200	-193.651	200	VH_0200	1	14/01/2005 13:40	2971.62	832.732	2976.39	H>N-NIL_H_15M	14/01/2005 13:40	1105	42.04	1344.72	1	1
14/01/2005 13:45	200	-223.811	200	VH_0200	1	14/01/2005 13:45	2907.03	774.403	2955.63	H>N-NIL_H_15M	14/01/2005 13:45	280	42.77	338.297	1	1
14/01/2005 13:50	200	42.6591	200	VH_0200	1	14/01/2005 13:50	2926.38	738.436	2959.04	H>>H-64_B	14/01/2005 13:50	280	42.04	340.816	1	1
14/01/2005 13:55	200	22.3579	200	VH_0200	1	14/01/2005 13:55	2816.74	633.01	2853.62	H>>H-64_B	14/01/2005 13:55	280	43.5	335.988	1	1
14/01/2005 14:00	200	-38.6908	200	VH_0200	1	14/01/2005 14:00	2652.46	481.403	2702.01	H>>H-64_B	14/01/2005 14:00	70.1	42.77	82.9363	1	1
14/01/2005 14:05	200	146.06	200	VH_0200	1	14/01/2005 14:05	2710.16	500.75	2721.36	H>>H-64_B	14/01/2005 14:05	280	42.77	333.664	1	1
14/01/2005 14:10	200	-209.716	200	VH_0200	1	14/01/2005 14:10	2654.08	518.527	2739.13	H>>H-64_B	14/01/2005 14:10	280	42.77	331.277	1	85.05
14/01/2005 14:15	128.6	-245.967	200	VH_0200	1	14/01/2005 14:15	3017.03	890.996	3017.03	H>>H-64_A	14/01/2005 14:15	20.3424	20.0314	10000	1	1
14/01/2005 14:20	200	108.194	200	VH_0200	1	14/01/2005 14:20	2930.69	729.141	2812.91	H>N-NIL_H_15M	14/01/2005 14:20	280	40.8086	9000	1	1
14/01/2005 14:25	200	64.6476	200	VH_0200	1	14/01/2005 14:25	2887.4	694.891	2887.4	H>N-NIL_H_15M	14/01/2005 14:25	280	42.9	9000	1	1
14/01/2005 14:30	200	104.988	200	VH_0200	1	14/01/2005 14:30	2955.74	754.856	2955.75	H>N-NIL_H_15M	14/01/2005 14:30	280	43.5	9000	1	1
14/01/2005 14:35	200	199.953	200	VH_0200	1	14/01/2005 14:35	2850	629.394	2850	H>>H-64_B	14/01/2005 14:35	7485	43.5	9000	1	1
14/01/2005 14:40	200	80.8976	200	VH_0200	1	14/01/2005 14:40	2850	654.117	2874.73	H>>H-64_B	14/01/2005 14:40	7485	43.5	9000	1	1
14/01/2005 14:45	200	0.21402	200	VH_0200	1	14/01/2005 14:45	2555.99	376.857	2597.46	H>>H-64_B	14/01/2005 14:45	70.1	43.5	82.3677	1	1
14/01/2005 14:55	200	118.012	200	VH_0200	1	14/01/2005 14:55	2886.41	682.823	2903.43	H>>H-64_B	14/01/2005 14:55	46.5529	32.7	56.2809	1	1
14/01/2005 15:00	200	7.46341	200	VH_0200	1	14/01/2005 15:00	2864.6	683.962	2904.57	H>>H-64_B	14/01/2005 15:00	54.0449	40.0942	65.3008	1	1
14/01/2005 15:05	200	-42.1299	200	VH_0200	1	14/01/2005 15:05	2863.33	692.987	2913.59	H>>H-64_B	14/01/2005 15:05	63.0553	29.9	76.1811	1	50.26
14/01/2005 15:10	200	53.4896	200	VH_0200	1	14/01/2005 15:10	2862.37	672.177	2892.78	H>>H-64_B	14/01/2005 15:10	144.453	28.6695	174.596	1	1
14/01/2005 15:15	200	100.771	200	VH_0200	1	14/01/2005 15:15	2890.13	690.122	2910.73	H>>H-64_B	14/01/2005 15:15	1095	29.9	1323.46	1	1
14/01/2005 15:20	200	-14.497	200	VH_0200	1	14/01/2005 15:20	2876.95	700.871	2921.48	H>>H-64_B	14/01/2005 15:20	7448.3	29.9	8999.67	1	1
14/01/2005 15:25	200	-195.445	200	VH_0200	1	14/01/2005 15:25	2846.45	707.935	2928.54	H>>H-64_B	14/01/2005 15:25	1095	37.4	1313.7	1	82.09
14/01/2005 15:30	200	-0.62683	200	VH_0200	1	14/01/2005 15:30	2887.88	708.922	2929.53	H>>H-64_B	14/01/2005 15:30	6860.32	29.9	8288		

8/02/2005 15:25	50	-88.8445	50	VH_0050	1	8/02/2005 15:25	2908.4	716.616	2937.22	H>>H-64_B	8/02/2005 15:25	276	34.7	334.258	1
8/02/2005 15:40	50	-17.0274	50	VH_0050	1	8/02/2005 15:40	2936.07	729.377	2937.98	H>N-NIL_H_15M	8/02/2005 15:40	276	33.8629	336.79	1
8/02/2005 16:55	0	-52.2823	0	VH_0000	1	8/02/2005 16:55	2659.98	450.226	2670.83	H>>H-64_B	8/02/2005 16:55	276	34.7	327.833	1
8/02/2005 17:00	0	-12.5701	0	VH_0000	1	8/02/2005 17:00	2630.15	412.152	2632.76	H>>H-64_B	8/02/2005 17:00	269.129	34.7	319.807	1
8/02/2005 17:05	0	-192.538	0	VH_0000	1	8/02/2005 17:05	2593.87	413.232	2633.84	H>>H-64_B	8/02/2005 17:05	276	33.2	325.748	1
8/02/2005 17:10	50	-2.18598	50	VH_0050	1	8/02/2005 17:10	2632.85	423.076	2643.68	H>>H-64_B	8/02/2005 17:10	90.294	30.7	107.373	1
8/02/2005 18:00	100	71.8707	100	VH_0100	1	8/02/2005 18:00	2639.38	427.468	2645.22	H>>H-64_B	8/02/2005 18:00	42.2	17.3	50.3078	1
3/11/2005 14:15	250	249.992	250	VH_0250	1	3/11/2005 14:15	2056.53	-95.6614	2056.53	H>>H-64_B	3/11/2005 14:15	62	56.27	265.27	1
3/11/2005 14:20	250	250.009	250	VH_0250	1	3/11/2005 14:20	2056.66	-101.759	2056.66	H>>H-64_B	3/11/2005 14:20	62	46.2738	268.44	1
3/11/2005 14:25	250	250.047	250	VH_0250	1	3/11/2005 14:25	2069.93	-76.8336	2069.92	H>>H-64_B	3/11/2005 14:25	62	40.8988	304.673	1
3/11/2005 14:30	250	250.001	250	VH_0250	1	3/11/2005 14:30	2050.19	-117.103	2050.19	H>>H-64_B	3/11/2005 14:30	62	40.9226	268.44	1
3/11/2005 14:35	250	250.04	250	VH_0250	1	3/11/2005 14:35	2078.26	-105.28	2078.25	H>>H-64_B	3/11/2005 14:35	62	40.9121	305.373	1
3/11/2005 14:40	250	249.999	250	VH_0250	1	3/11/2005 14:40	2046.62	-121.151	2046.62	H>>H-64_B	3/11/2005 14:40	62	39.9932	267.39	1
3/11/2005 14:45	250	249.979	250	VH_0250	1	3/11/2005 14:45	2073.35	-92.6323	2073.35	H>>H-64_B	3/11/2005 14:45	62	39.8084	268.44	1
3/11/2005 14:50	250	250.016	250	VH_0250	1	3/11/2005 14:50	2098.92	-82.804	2098.92	H>>H-64_B	3/11/2005 14:50	62	38.1	305.417	1
3/11/2005 14:55	250	250.019	250	VH_0250	1	3/11/2005 14:55	2104.83	-82.4695	2104.83	H>>H-64_B	3/11/2005 14:55	62	38.11	305.442	1
3/11/2005 15:00	250	250.005	250	VH_0250	1	3/11/2005 15:00	2104.22	-91.1859	2104.22	H>>H-64_B	3/11/2005 15:00	62	39.9822	305.267	1
3/11/2005 15:05	250	250.052	250	VH_0250	1	3/11/2005 15:05	2141.71	-37.9465	2141.7	H>>H-64_B	3/11/2005 15:05	62	38.1	833.89	1
3/11/2005 15:10	250	250.049	250	VH_0250	1	3/11/2005 15:10	2111.06	-78.3728	2111.05	H>>H-64_B	3/11/2005 15:10	62	39.8084	307.197	1
3/11/2005 15:15	300	300.001	300	VH_0300	1	3/11/2005 15:15	2150.23	-47.926	2150.23	H>>H-64_B	3/11/2005 15:15	42	40.8047	833.144	1
3/11/2005 15:20	300	299.996	300	VH_0300	1	3/11/2005 15:20	2133.86	-42.2646	2133.86	H>>H-64_B	3/11/2005 15:20	62	40.3871	306.989	1
3/11/2005 15:55	250	250.007	250	VH_0250	1	3/11/2005 15:55	2029.5	-144.305	2029.5	H>>H-64_B	3/11/2005 15:55	62	55.76	101.309	1
9/11/2005 16:00	245.6	0	245.6	VH_0250	1	9/11/2005 16:00	2020.88	-124.974	2034.02	H>>H-64_B	9/11/2005 16:00	57.5562	100.7	63.9533	1
9/11/2005 14:50	0	-34.5823	0	VH_0000	1	9/11/2005 14:50	2651.15	437.722	2658.33	H>>H-64_B	9/11/2005 14:50	7440	100.7	868.87	1
9/11/2005 14:55	0	0.00732	0	VH_0000	1	9/11/2005 14:55	2699.28	478.671	2699.28	H>>H-64_B	9/11/2005 14:55	7440	46.1524	8771.93	1
9/11/2005 15:00	0	-27.0342	0	VH_0000	1	9/11/2005 15:00	2689.16	474.165	2694.77	H>>H-64_B	9/11/2005 15:00	7440	45.031	8693.89	1
9/11/2005 15:20	-31.73	-317.824	0	VH_0000	1	9/11/2005 15:20	2732.11	570.894	2791.5	H>>H-64_B	9/11/2005 15:20	4221.32	4196.95	4964.09	1
9/11/2005 15:25	0	-280.31	0	VH_0000	1	9/11/2005 15:25	2713.29	550.873	2771.48	H>>H-64_B	9/11/2005 15:25	4195.21	728.722	4932.4	59.39
9/11/2005 15:30	-6.74	-273.554	0	VH_0000	1	9/11/2005 15:30	2725.68	560.462	2781.07	H>>H-64_B	9/11/2005 15:30	7366.96	7325.38	8666.24	55.39
9/11/2005 15:35	-8.69	-8.74573	0	VH_0000	1	9/11/2005 15:35	2911.72	691.124	2911.72	N>>N-NIL_28	9/11/2005 15:35	7440	7421.95	9000	1
9/11/2005 15:40	-15.9	-15.8945	0	VH_0000	1	9/11/2005 15:40	2919.27	698.661	2919.27	H>>H-64_B	9/11/2005 15:40	7494.12	7465.92	9000	1
9/11/2005 15:45	-6.06	-6.07988	0	VH_0000	1	9/11/2005 15:45	2898.33	677.727	2898.33	N>>N-NIL_28	9/11/2005 15:45	7440	7423.68	9000	1
9/11/2005 15:50	0	-0.00671	0	VH_0000	1	9/11/2005 15:50	2897.18	676.574	2897.18	H>>H-64_B	9/11/2005 15:50	7440	100.7	9000	1
9/11/2005 15:55	0	-612.57	0	VH_0000	1	9/11/2005 15:55	2726.35	632.909	2726.34	H>>H-64_A	9/11/2005 15:55	42	41.05	10000	1
9/11/2005 16:00	0	0.02805	0	VH_0000	1	9/11/2005 16:00	2909.19	688.577	2909.18	H>>H-64_B	9/11/2005 16:00	7440	26.02	9000	1
9/11/2005 16:05	0	-0.0169	0	VH_0000	1	9/11/2005 16:05	2862.91	642.306	2862.91	H>>H-NIL_28	9/11/2005 16:05	7440	33.248	957.652	1
9/11/2005 16:10	0	-0.01341	0	VH_0000	1	9/11/2005 16:10	2820.54	599.935	2820.54	H>>H-64_B	9/11/2005 16:10	7440	33.5938	8932.86	1
9/11/2005 16:15	0	0.01829	0	VH_0000	1	9/11/2005 16:15	2773.9	553.289	2773.9	H>>H-64_B	9/11/2005 16:15	7440	46.1524	8667.82	1
9/11/2005 16:20	0	-0.00183	0	VH_0000	1	9/11/2005 16:20	2786.39	565.783	2786.39	H>>H-64_B	9/11/2005 16:20	7440	41.3801	8927.15	1
9/11/2005 16:25	50	50.0189	50	VH_0050	1	9/11/2005 16:25	2847.49	626.878	2847.49	H>>H-64_B	9/11/2005 16:25	7440	100.5	8929.53	1
9/11/2005 16:30	100	99.9988	100	VH_0100	1	9/11/2005 16:30	2899.59	678.983	2899.59	H>>H-64_B	9/11/2005 16:30	7440	100.7	8982.49	1
9/11/2005 16:35	88.9	-211.883	100	VH_0100	1	9/11/2005 16:35	2595.28	437.113	2657.72	H>>H-64_B	9/11/2005 16:35	102.598	100.98	119.076	62.44
10/11/2005 16:00	0	0.02988	0	VH_0000	1	10/11/2005 16:00	2515.28	307.75	2515.27	H>>H-64_B	10/11/2005 16:00	7440	14.9657	8746.68	1
10/11/2005 16:15	200	200.07	200	VH_0200	1	10/11/2005 16:15	2415.75	202.316	2415.74	H>>H-64_B	10/11/2005 16:15	33	29.3213	48.3141	1
10/11/2005 16:20	100	99.9921	100	VH_0100	1	10/11/2005 16:20	2466.84	259.26	2466.84	H>>H-64_B	10/11/2005 16:20	42	29.2203	48.6291	1
10/11/2005 16:25	100	99.9482	100	VH_0100	1	10/11/2005 16:25	2522.03	312.271	2522.04	H>>H-64_B	10/11/2005 16:25	42	28.5692	48.9194	1
6/12/2005 13:45	0	-51.1531	0	VH_0000	1	6/12/2005 13:45	2458.71	269.962	2469.33	H>>H-64_B	6/12/2005 13:45	253.075	100.7	291.187	1
6/12/2005 13:50	0	-23.8799	0	VH_0000	1	6/12/2005 13:50	2483.03	277.105	2487.99	H>>H-64_B	6/12/2005 13:50	249.756	104.58	289.649	1
6/12/2005 14:30	0	-185.382	0	VH_0000	1	6/12/2005 14:30	2462.06	303.731	2500.54	H>>H-64_B	6/12/2005 14:30	255.051	100.7	293.905	1
6/12/2005 14:35	0	-73.2049	0	VH_0000	1	6/12/2005 14:35	2459.36	277.978	2474.56	H>>H-64_B	6/12/2005 14:35	256.712	100.7	295.696	1
6/12/2005 15:00	0	83.1348	0	VH_0000	1	6/12/2005 15:00	2469.21	289.287	2486.47	H>>H-64_B	6/12/2005 15:00	267.202	100.7	307.698	1
6/12/2005 15:30	0	-0.43476	0	VH_0000	1	6/12/2005 15:30	2469.53	260.028	2469.62	H>>H-64_B	6/12/2005 15:30	232.21	100.7	267.39	1
6/12/2005 15:35	0	-69.0024	0	VH_0000	1	6/12/2005 15:35	2479.84	287.012	2494.16	H>>H-64_B	6/12/2005 15:35	233.177	100.7	268.44	1
6/12/2005 15:40	0	-22.4073	0	VH_0000	1	6/12/2005 15:40	2479.88	278.295	2484.53	H>>H-64_B	6/12/2005 15:40	231.415	100.7	266.33	1
6/12/2005 16:00	0	-98.7884	0	VH_0000	1	6/12/2005 16:00	2442.53	264.776	2463.04	H>>H-64_B	6/12/2005 16:00	231.522	61	266.33	1
6/12/2005 16:05	0	0.05	0	VH_0000	1	6/12/2005 16:05	2440.73	234.391	2440.72	H>>H-64_B	6/12/2005 16:05	42	40.2136	104.301	1
6/12/2005 16:10	0	0.03841	0	VH_0000	1	6/12/2005 16:10	2404.81	204.942	2404.8	H>>H-64_B	6/12/2005 16:10	42	36.6799	103.617	1
6/12/2005 16:15	0	-0.0261	0	VH_0000	1	6/12/2005 16:15	2373.5	183.506	2373.51	H>>H-64_B	6/12/2005 16:15	42	36	102.81	1
7/12/2005 11:30	250	249.999	250	VH_0250	1	7/12/2005 11:30	2411.62	202.332	2411.62	H>>H-64_B	7/12/2005 11:30	33	31.2028	95.3122	1
7/12/2005 11:35	250	249.956	250	VH_0250	1	7/12/2005 11:35	2528.32	314.525	2528.33	H>>H-64_B	7/12/2005 11:35	33	31.0396	120.693	1
7/12/2005 11:40	250	250.04	250	VH_0250	1	7/12/2005 11:40	2523.54	324.776	2523.53	H>>H-64_B	7/12/2005 11:40	33	30.5565	266.33	1
7/12/2005 12:00	200	200.007	200	VH_0200	1	7/12/2005 12:00	2556.09	353.163	2556.09	H>>H-64_B	7/12/2005 12:00	33	30.1447	300.215	1
7/12/2005 12:05	200	199.974	200	VH_0200	1	7/12/2005 12:05	2556.78	347.147	2556.79	H>>H-64_B	7/12/2005 12:05	33	30.7	315.958	1
7/12/2005 12:10	200	199.98													

7/12/2005 14:40	50	-3.23537	50	VH_0050	1	7/12/2005 14:40	2921.86	712.304	2932.91	H>>H-64_B	7/12/2005 14:40	6156.57	37.4012	7362.45	1	1
7/12/2005 14:45	50	-20.8878	50	VH_0050	1	7/12/2005 14:45	2877.36	671.468	2892.08	H>>H-64_B	7/12/2005 14:45	6190.06	36	7400	1	1
7/12/2005 15:05	50	-65.1146	50	VH_0050	1	7/12/2005 15:05	2896.28	699.57	2920.18	H>>H-64_B	7/12/2005 15:05	7161.11	36	8560.56	1	1
7/12/2005 15:15	50	50.014	50	VH_0050	1	7/12/2005 15:15	2862.37	641.759	2862.37	H>>H-64_B	7/12/2005 15:15	7440	100.88	9000	1	1
7/12/2005 15:25	50	36.9439	50	VH_0050	1	7/12/2005 15:25	2897.72	679.823	2900.43	H>>H-64_B	7/12/2005 15:25	7343.81	100.7	8771.93	1	1
7/12/2005 15:30	50	30.5829	50	VH_0050	1	7/12/2005 15:30	2900.64	684.063	2904.67	H>>H-64_B	7/12/2005 15:30	7340.62	100.7	8771.93	1	1
7/12/2005 15:40	50	9.92927	50	VH_0050	1	7/12/2005 15:40	2916.96	704.671	2925.28	H>>H-64_B	7/12/2005 15:40	7249.97	100.7	8666.24	1	1
7/12/2005 15:45	50	-132.723	50	VH_0050	1	7/12/2005 15:45	2863.46	680.785	2901.39	H>>H-64_B	7/12/2005 15:45	7339.72	100.5	8771.93	1	1
7/12/2005 15:50	50	-52.4268	50	VH_0050	1	7/12/2005 15:50	2868.8	669.456	2890.06	H>>H-64_B	7/12/2005 15:50	7426.51	36	8877.62	1	1
7/12/2005 15:55	50	10.8006	50	VH_0050	1	7/12/2005 15:55	2895.63	683.139	2903.75	H>>H-64_B	7/12/2005 15:55	7330.35	36	8771.93	1	1
7/12/2005 16:00	50	-96.025	50	VH_0050	1	7/12/2005 16:00	2865.61	675.316	2895.92	H>>H-64_B	7/12/2005 16:00	7328.79	36	8771.93	1	1
7/12/2005 16:35	100	72.3683	100	VH_0100	1	7/12/2005 16:35	2930.96	716.089	2936.7	H>>H-64_B	7/12/2005 16:35	4567.62	29.1628	5507.17	1	1
7/12/2005 17:30	150	-174.443	150	VH_0150	1	7/12/2005 17:30	2836.66	683.405	2904.01	H>>H-64_B	7/12/2005 17:30	281.874	14.4029	336.733	1	67.35
7/12/2005 17:35	150	-174.188	150	VH_0150	1	7/12/2005 17:35	2823.08	669.772	2890.38	H>>H-64_B	7/12/2005 17:35	222.01	14.8529	265.27	1	67.3
7/12/2005 17:40	200	28.7848	200	VH_0200	1	7/12/2005 17:40	2865.33	680.266	2900.87	H>>H-64_B	7/12/2005 17:40	137.841	18.35	165.75	1	1
7/12/2005 17:45	200	52.4592	200	VH_0200	1	7/12/2005 17:45	2788.27	598.291	2818.9	H>>H-64_B	7/12/2005 17:45	77.0341	14.7529	91.99	1	1
7/12/2005 17:55	250	185.134	250	VH_0250	1	7/12/2005 17:55	2728.52	521.378	2741.99	H>>H-64_B	7/12/2005 17:55	33.57	18.35	39.8658	1	1
7/12/2005 18:10	250	66.5543	250	VH_0250	1	7/12/2005 18:10	2248.25	76.3969	2286.33	H>>H-64_B	7/12/2005 18:10	33.57	14.28	38.1338	1	1
7/12/2005 19:20	600	599.999	600	VH_0600	1	7/12/2005 19:20	2299.97	-149.977	2299.97	H>>H-64_B	7/12/2005 19:20	33	18.98	103.357	1	1
7/12/2005 19:25	600	599.99	600	VH_0600	1	7/12/2005 19:25	2298.33	-176.429	2298.33	H>>H-64_B	7/12/2005 19:25	33	18.4	48.6839	1	1
7/12/2005 19:30	600	599.998	600	VH_0600	1	7/12/2005 19:30	2289.55	-217.237	2289.55	H>>H-64_B	7/12/2005 19:30	33	29.9416	48.7285	1	1
8/12/2005 13:15	100	100.009	100	VH_0100	1	8/12/2005 13:15	2519.99	300.429	2519.99	H>>H-64_B	8/12/2005 13:15	42	36.851	133.457	1	1
8/12/2005 13:20	100	100.032	100	VH_0100	1	8/12/2005 13:20	2519.06	285.914	2502.05	H>>H-64_B	8/12/2005 13:20	42	36.8525	133.475	1	1
8/12/2005 13:25	100	100.029	100	VH_0100	1	8/12/2005 13:25	2521.4	298.97	2521.39	H>>H-64_B	8/12/2005 13:25	42	37.0428	147.637	1	1
8/12/2005 13:30	100	100.018	100	VH_0100	1	8/12/2005 13:30	2515.6	306.602	2515.6	H>>H-64_B	8/12/2005 13:30	42	36.4727	152.741	1	1
8/12/2005 13:35	100	100.011	100	VH_0100	1	8/12/2005 13:35	2494.86	292.453	2494.86	H>>H-64_B	8/12/2005 13:35	42	35.5805	104.829	1	1
8/12/2005 13:40	100	99.9593	100	VH_0100	1	8/12/2005 13:40	2464.7	256.602	2464.71	H>>H-64_B	8/12/2005 13:40	90	36.6733	106.147	1	1
8/12/2005 13:45	100	100.026	100	VH_0100	1	8/12/2005 13:45	2488.26	270.226	2488.25	H>>H-64_B	8/12/2005 13:45	90	36.867	111.757	1	1
8/12/2005 13:50	100	100.019	100	VH_0100	1	8/12/2005 13:50	2520.64	282.266	2520.64	H>>H-64_B	8/12/2005 13:50	90	37.244	139.684	1	1
8/12/2005 13:55	100	100.005	100	VH_0100	1	8/12/2005 13:55	2513.44	281.351	2513.44	H>>H-64_B	8/12/2005 13:55	90	60.05	265.27	1	1
8/12/2005 14:00	100	100.019	100	VH_0100	1	8/12/2005 14:00	2500.77	286.813	2500.77	H>>H-64_B	8/12/2005 14:00	90	62.5	146.483	1	1
8/12/2005 14:05	100	99.9833	100	VH_0100	1	8/12/2005 14:05	2500.96	295.636	2500.96	H>>H-64_B	8/12/2005 14:05	90	37.9	139.106	1	1
8/12/2005 14:10	150	149.987	150	VH_0150	1	8/12/2005 14:10	2538.96	309.025	2538.96	H>>H-64_B	8/12/2005 14:10	90	62.5	139.684	1	1
8/12/2005 14:15	150	149.964	150	VH_0150	1	8/12/2005 14:15	2518.9	288.679	2518.91	H>>H-64_B	8/12/2005 14:15	90	62.5	208.18	1	1
8/12/2005 14:20	150	150.024	150	VH_0150	1	8/12/2005 14:20	2532.93	314.298	2532.93	H>>H-64_B	8/12/2005 14:20	90	41.8386	315.877	1	1
8/12/2005 14:25	150	150.025	150	VH_0150	1	8/12/2005 14:25	2530.15	319.446	2530.14	H>>H-64_B	8/12/2005 14:25	90	36.8563	268.44	1	1
8/12/2005 14:30	150	149.988	150	VH_0150	1	8/12/2005 14:30	2535.1	327.157	2535.1	H>>H-64_B	8/12/2005 14:30	90	28.3662	263.3	1	1
8/12/2005 14:35	150	150.003	150	VH_0150	1	8/12/2005 14:35	2529.32	301.722	2529.32	H>>H-64_B	8/12/2005 14:35	90	36.8679	157.091	1	1
8/12/2005 14:40	150	150.014	150	VH_0150	1	8/12/2005 14:40	2521.85	291.258	2521.85	H>>H-64_B	8/12/2005 14:40	90	37.0517	156.088	1	1
8/12/2005 14:45	150	150.023	150	VH_0150	1	8/12/2005 14:45	2521.28	291.06	2521.28	H>>H-64_B	8/12/2005 14:45	90	37.0502	265.27	1	1
8/12/2005 14:50	200	199.981	200	VH_0200	1	8/12/2005 14:50	2531.2	304.544	2531.2	H>>H-64_B	8/12/2005 14:50	90	62.5	159.538	1	1
8/12/2005 14:55	200	200.019	200	VH_0200	1	8/12/2005 14:55	2542.71	310.755	2542.71	H>>H-64_B	8/12/2005 14:55	90	87	267.39	1	1
8/12/2005 15:00	250	249.997	250	VH_0250	1	8/12/2005 15:00	2564.09	334.498	2564.09	H>>H-64_B	8/12/2005 15:00	90	87	317.886	1	1
8/12/2005 15:25	250	249.998	250	VH_0250	1	8/12/2005 15:25	2758.79	556.506	2758.79	H>>H-64_B	8/12/2005 15:25	90	87	949.49	1	1
8/12/2005 15:30	250	250.021	250	VH_0250	1	8/12/2005 15:30	2823.59	621.241	2823.59	H>>H-64_B	8/12/2005 15:30	90	87	939.44	1	1
8/12/2005 15:50	250	250.018	250	VH_0250	1	8/12/2005 15:50	2674.61	469.935	2674.61	H>>H-64_B	8/12/2005 15:50	90	87	320.049	1	1
8/12/2005 15:55	250	250.016	250	VH_0250	1	8/12/2005 15:55	2630.51	424.397	2630.51	H>>H-64_B	8/12/2005 15:55	90	87	867.075	1	1
8/12/2005 16:05	250	249.998	250	VH_0250	1	8/12/2005 16:05	2553.41	346.452	2553.41	H>>H-64_B	8/12/2005 16:05	90	87	316.257	1	1
8/12/2005 16:10	300	300.002	300	VH_0300	1	8/12/2005 16:10	2548.1	338.633	2548.1	H>>H-64_B	8/12/2005 16:10	90	62.5	267.39	1	1
8/12/2005 16:15	350	350.015	350	VH_0350	1	8/12/2005 16:15	2542.07	335.873	2542.07	H>>H-64_B	8/12/2005 16:15	90	87	309.986	1	1
8/12/2005 16:20	400	400.022	400	VH_0400	1	8/12/2005 16:20	2547.94	367.049	2547.94	H>>H-64_B	8/12/2005 16:20	90	37.9	316.059	1	1
8/12/2005 16:25	400	399.968	400	VH_0400	1	8/12/2005 16:25	2545.28	343.937	2545.29	H>>H-64_B	8/12/2005 16:25	90	38.6072	136.831	1	1
8/12/2005 16:30	438.06	438.038	450	VH_0450	1	8/12/2005 16:30	2552.65	351.046	2552.65	H>>H-64_B	8/12/2005 16:30	90	85.8955	106.948	1	1
8/12/2005 16:35	500	500.017	500	VH_0500	1	8/12/2005 16:35	2551.28	344.088	2551.28	H>>H-64_B	8/12/2005 16:35	90	63.21	106.911	1	1
8/12/2005 16:40	500	500.036	500	VH_0500	1	8/12/2005 16:40	2498.97	309.704	2498.96	H>>H-64_B	8/12/2005 16:40	90	39.4007	104.998	1	1
8/12/2005 16:45	600	599.986	600	VH_0600	1	8/12/2005 16:45	2466.04	259.04	2466.04	H>>H-64_B	8/12/2005 16:45	90	62.5	104.184	1	1
8/12/2005 16:50	600	599.959	600	VH_0600	1	8/12/2005 16:50	2439.55	233.632	2439.56	H>>H-64_B	8/12/2005 16:50	90	62.5	104.207	1	1
24/12/2005 15:50	1000	1000	1000	VH_1000	1	24/12/2005 15:50	1844.29	-308.809	1844.29	H>>H-NIL_A	24/12/2005 15:50	26.5	17.36	267.39	1	1
24/12/2005 15:55	1000	999.999	1000	VH_1000	1	24/12/2005 15:55	1853.56	-299.538	1853.56	H>>H-NIL_A	24/12/2005 15:55	26.5	17.28	101.249	1	1
24/12/2005 16:00	1000	999.973	1000	VH_1000	1	24/12/2005 16:00	1773.29	-379.803	1773.3	H>>H-NIL_A	24/12/2005 16:00	26.5	19.91	103.61	1	1
24/12/2005 16:05	1000	999.957	1000	VH_1000	1	24/12/2005 16:05	1763.17	-389.92	1763.18	H>>H-NIL_A	24/12/2005 16:05	26.5	16.93	95.325	1	1
24/12/2005 16:10	1000	999.983														

3/01/2006 14:05	400	399.986	400 VH_0400	1	3/01/2006 14:05	2765.67	562.101	2765.67 H>>H-64_B	3/01/2006 14:05	19.5	14.1843	267.372	1
3/01/2006 14:10	400	399.973	400 VH_0400	1	3/01/2006 14:10	2778.72	573.595	2778.73 H>>H-64_B	3/01/2006 14:10	19.5	14.6371	267.39	1
3/01/2006 14:15	500	499.986	500 VH_0500	1	3/01/2006 14:15	2790.03	583.785	2790.03 H>>H-64_B	3/01/2006 14:15	19.5	18.45	266.33	1
3/01/2006 14:20	500	499.981	500 VH_0500	1	3/01/2006 14:20	2595.64	406.949	2595.64 H>>H-64_B	3/01/2006 14:20	19.5	18.45	105.549	1
3/01/2006 14:25	500	500.049	500 VH_0500	1	3/01/2006 14:25	2723.68	520.907	2723.67 H>>H-64_B	3/01/2006 14:25	19.5	18.6	106.916	1
3/01/2006 14:50	400	400.001	400 VH_0400	1	3/01/2006 14:50	2817.62	613.962	2817.62 H>>H-64_B	3/01/2006 14:50	19.5	18.45	269.764	1
3/01/2006 15:00	300	299.995	300 VH_0300	1	3/01/2006 15:00	2807.39	601.468	2807.39 H>>H-64_B	3/01/2006 15:00	19.5	18.25	266.004	1
3/01/2006 15:15	300	300.002	300 VH_0300	1	3/01/2006 15:15	2908.16	693.013	2908.16 H>>H-64_B	3/01/2006 15:15	19.5	18.4	160.694	1
3/01/2006 15:20	300	299.984	300 VH_0300	1	3/01/2006 15:20	2832.15	700.054	2832.15 H>>H-NIL_C_15M	3/01/2006 15:20	19.5	18.6	265.871	1
3/01/2006 15:30	300	299.984	300 VH_0300	1	3/01/2006 15:30	2844.78	630.367	2844.78 H>>H-64_B	3/01/2006 15:30	19.5	18.25	265.959	1
3/01/2006 15:35	300	299.993	300 VH_0300	1	3/01/2006 15:35	2836.8	630.038	2836.8 H>>H-64_B	3/01/2006 15:35	19.5	14.85	266.33	1
3/01/2006 15:40	300	300.011	300 VH_0300	1	3/01/2006 15:40	2826.93	622.025	2826.93 H>>H-64_B	3/01/2006 15:40	19.5	15.26	265.27	1
3/01/2006 15:45	300	299.977	300 VH_0300	1	3/01/2006 15:45	2833.31	627.025	2833.31 H>>H-64_B	3/01/2006 15:45	19.5	18.45	265.661	1
3/01/2006 16:30	0	-0.02397	0 VH_0000	1	3/01/2006 16:30	2244.04	95.2361	2244.04 H>>H-64_B	3/01/2006 16:30	19.5	18.55	47.934	1
3/01/2006 16:35	0	-0.03598	0 VH_0000	1	3/01/2006 16:35	2310.77	147.815	2310.78 H>>H-64_B	3/01/2006 16:35	19.5	14.16	48.2284	1
3/01/2006 16:40	100	99.989	100 VH_0100	1	3/01/2006 16:40	2356.48	155.774	2356.48 H>>H-64_B	3/01/2006 16:40	19.5	18.55	48.5757	1
3/01/2006 16:45	100	100.026	100 VH_0100	1	3/01/2006 16:45	2451.94	254.277	2451.94 H>>H-64_B	3/01/2006 16:45	19.5	14.445	104.318	1
3/01/2006 16:50	100	99.9798	100 VH_0100	1	3/01/2006 16:50	2325.17	152.162	2325.17 H>>H-64_B	3/01/2006 16:50	19.5	14.85	48.2911	1
3/01/2006 17:10	200	199.959	200 VH_0200	1	3/01/2006 17:10	1964.14	-155.378	1964.15 H>>H-64_B	3/01/2006 17:10	19.5	14.26	47.1223	1
3/01/2006 17:15	200	199.988	200 VH_0200	1	3/01/2006 17:15	1862.42	-71.5243	1862.42 H>>H-64_B	3/01/2006 17:15	19.5	8.62386	46.5808	1
3/01/2006 17:20	200	199.991	200 VH_0200	1	3/01/2006 17:20	1729.33	-437.114	1729.33 H>>H-64_B	3/01/2006 17:20	19.5	9.02697	35.977	1
11/01/2006 12:55	0	-293.182	0 VH_0000	1	11/01/2006 12:55	2506.01	385.133	2506.03 H>>H-64_B	11/01/2006 12:55	92.14	29.8293	106.958	1
2/02/2006 14:30	0	0.02618	0 VH_0000	1	2/02/2006 14:30	825.643	303.92	825.643 H>>H-64_B	2/02/2006 14:30	7440	31.5047	911.466	60.02
2/02/2006 14:35	0	-0.04045	0 VH_0000	1	2/02/2006 14:35	2874.43	676.214	2874.44 H>>H-64_B	2/02/2006 14:35	7440	30.2454	8903.44	1
2/02/2006 14:40	0	0.00422	0 VH_0000	1	2/02/2006 14:40	3052.22	839.976	3052.22 H>>H-64_B	2/02/2006 14:40	7440	29.4701	9108.08	1
2/02/2006 14:45	100	100.021	100 VH_0100	1	2/02/2006 14:45	3029.68	823.915	3029.68 H>>H-64_B	2/02/2006 14:45	7440	33.27	9113.52	1
2/02/2006 14:55	0	0.01628	0 VH_0000	1	2/02/2006 14:55	3103.22	897.132	3103.22 H>>H-64_B	2/02/2006 14:55	7440	30.4608	9794.97	1
2/02/2006 15:00	0	0.02397	0 VH_0000	1	2/02/2006 15:00	3112.76	904.869	3112.75 H>N-NIL_C_15M	2/02/2006 15:00	7440	30.7	9600	1
2/02/2006 15:05	0	0.01693	0 VH_0000	1	2/02/2006 15:05	3099.91	895.519	3099.91 H>>H-64_B	2/02/2006 15:05	7440	30.7	9600	1
2/02/2006 15:10	0	-0.04809	0 VH_0000	1	2/02/2006 15:10	3100.79	896.213	3100.79 H>N-NIL_C_15M	2/02/2006 15:10	7440	30.562	9986.02	1
2/02/2006 15:15	50	49.9975	50 VH_0050	1	2/02/2006 15:15	3083.65	876.988	3083.65 H>>H-64_B	2/02/2006 15:15	7440	30.7	9902.77	1
2/02/2006 15:20	50	49.9908	50 VH_0050	1	2/02/2006 15:20	3109.88	902.873	3109.88 H>N-NIL_C_15M	2/02/2006 15:20	7440	32.85	9644.9	1
2/02/2006 15:25	50	49.9981	50 VH_0050	1	2/02/2006 15:25	3099.21	894.476	3099.21 H>>H-64_B	2/02/2006 15:25	7440	30.7	9650.01	1
2/02/2006 15:30	50	50.0227	50 VH_0050	1	2/02/2006 15:30	3094.56	888.733	3094.56 H>N-NIL_C_15M	2/02/2006 15:30	7440	30.7	9650.01	1
2/02/2006 15:35	50	49.9607	50 VH_0050	1	2/02/2006 15:35	3075.07	869.174	3075.08 H>N-NIL_C_15M	2/02/2006 15:35	7440	32.85	9600	1
2/02/2006 15:40	50	49.9599	50 VH_0050	1	2/02/2006 15:40	3021.01	815.75	3021.02 H>>H-64_B	2/02/2006 15:40	7440	31.5047	9105.86	1
2/02/2006 15:50	50	106.495	50 VH_0050	1	2/02/2006 15:50	2945.96	785.904	2978 H>>H-64_B	2/02/2006 15:50	6361.84	31.5705	7641.07	1
2/02/2006 15:55	50	-199.005	50 VH_0050	1	2/02/2006 15:55	2923.91	770.575	2974.89 H>>H-64_B	2/02/2006 15:55	7440	31.8322	8876.41	50.98
2/02/2006 16:00	50	-351.945	50 VH_0050	1	2/02/2006 16:00	2927.61	802.296	3009.9 H>>H-64_B	2/02/2006 16:00	7301.8	32.1578	8771.93	82.29
2/02/2006 16:05	50	-222.072	50 VH_0050	1	2/02/2006 16:05	2906.07	757.047	2961.77 H>>H-64_B	2/02/2006 16:05	89.98	31.3424	107.325	55.7
2/02/2006 16:10	50	49.992	50 VH_0050	1	2/02/2006 16:10	2973.35	754.727	2973.35 H>>H-64_B	2/02/2006 16:10	45.625	30.7096	106.237	1
2/02/2006 16:15	50	-87.5697	50 VH_0050	1	2/02/2006 16:15	2957.51	791.059	2985.68 H>>H-64_B	2/02/2006 16:15	89.98	31.3886	108.175	1
2/02/2006 16:20	50	-176.929	50 VH_0050	1	2/02/2006 16:20	2959.99	801.17	3006.45 H>>H-64_B	2/02/2006 16:20	6157.13	31.8267	7400	1
2/02/2006 16:25	50	-231.569	50 VH_0050	1	2/02/2006 16:25	2935.64	786.17	2993.29 H>>H-64_B	2/02/2006 16:25	7124.77	31.8278	8560.56	57.65
2/02/2006 16:30	50	-103.011	50 VH_0050	1	2/02/2006 16:30	2944.53	771.106	2975.86 H>>H-64_B	2/02/2006 16:30	6200.75	31.3391	7451.78	1
2/02/2006 16:35	100	83.5875	100 VH_0100	1	2/02/2006 16:35	2884.23	681.781	2887.59 H>>H-64_B	2/02/2006 16:35	89.98	31.501	107.478	1
2/02/2006 16:50	100	99.9922	100 VH_0100	1	2/02/2006 16:50	2885.65	687.821	2885.65 H>>H-64_B	2/02/2006 16:50	70.4155	31.6604	106.684	1
2/02/2006 16:55	100	-42.5136	100 VH_0100	1	2/02/2006 16:55	2777.25	603.551	2806.43 H>>H-64_B	2/02/2006 16:55	89.98	87	106.843	1
2/02/2006 17:05	100	99.9594	100 VH_0100	1	2/02/2006 17:05	2657.63	457.902	2657.64 H>>H-64_B	2/02/2006 17:05	89.2314	34.7	105.622	1
2/02/2006 17:25	100	73.0095	100 VH_0100	1	2/02/2006 17:25	2416.14	227.674	2421.67 H>>H-64_B	2/02/2006 17:25	42.16	33.5528	48.6238	1
6/02/2006 17:10	0	-126.3	0 VH_0000	1	6/02/2006 17:10	2039.57	-91.1058	2065.43 H>>H-64_B	6/02/2006 17:10	42.16	28.4463	47.141	1
6/02/2006 17:20	0	-0.01774	0 VH_0000	1	6/02/2006 17:20	1941.41	-218.768	1941.41 H>>H-64_B	6/02/2006 17:20	26.5	26.4036	46.0251	1
6/02/2006 17:25	0	-31.9072	0 VH_0000	1	6/02/2006 17:25	1850.48	-287.669	1857.01 H>>H-64_B	6/02/2006 17:25	42.03	26.8297	46.1937	1
6/02/2006 17:30	0	-103.814	0 VH_0000	1	6/02/2006 17:30	1890.46	-232.659	1911.71 H>>H-64_B	6/02/2006 17:30	42.03	26.8203	46.4662	1
6/02/2006 17:35	0	-240.305	0 VH_0000	1	6/02/2006 17:35	1838.81	-247.485	1888.01 H>>H-64_B	6/02/2006 17:35	42.16	21	46.3343	1
6/02/2006 17:40	0	-115.7	0 VH_0000	1	6/02/2006 17:40	1815.62	-310.085	1839.31 H>>H-64_B	6/02/2006 17:40	27.7474	18.6	30.5016	1
6/02/2006 17:45	0	-68.7093	0 VH_0000	1	6/02/2006 17:45	1728.3	-389.472	1742.37 H>>H-64_B	6/02/2006 17:45	28.7013	14.2	31.166	1
6/02/2006 17:50	0	0.02387	0 VH_0000	1	6/02/2006 17:50	1769.19	-392.871	1769.19 H>>H-64_B	6/02/2006 17:50	26.5	14.26	29.0145	1
6/02/2006 17:55	0	-0.02226	0 VH_0000	1	6/02/2006 17:55	1557.56	-383.691	1557.56 H>>H-64_B	6/02/2006 17:55	26.5	14.26	44.3027	1

Negative Residuals

SETTLEMENTDATE	V-SN FLOW	V-SN IMPLM	V-SN EXPLM	V-SN EXPORTID	5MIN	SNOWY	DATE	SNOWY1 FLOW	SNOWY1 IMPLM	SNOWY1 EXPLM	SNOWY1 EXPORTID	5MIN	DateTime	SNOWY1 PRICE	5MIN	VIC1 PRICE	5MIN	NSW1 PRICE	5MIN	Filter for room on M-T lines
18/11/2004 12:20	200	199.981	200 VH_0200	2609.36	388.756	2609.36	18/11/2004 12:20	2609.36	388.756	2609.36 H>>H-64_B	18/11/2004 12:20	0.04	57.11	922.258	0	1				1
18/11/2004 14:15	200	199.983	200 VH_0200	2520.87	340.538	2520.87	18/11/2004 14:15	2520.87	340.538	2520.87 H>>H-64_B	18/11/2004 14:15	0.04	69.23	915.285	0	1				1
18/11/2004 14:20	200	200.023	200 VH_0200	2637.14	420.742	2637.14	18/11/2004 14:20	2637.14	420.742	2637.14 H>>H-64_B	18/11/2004 14:20	0.04	69.82	927.781	0	1				1
18/11/2004 14:30	200	200.027	200 VH_0200	2605.96	385.347	2605.96	18/11/2004 14:30	2605.96	385.347	2605.96 H>>H-64_B	18/11/2004 14:30	0.04	69.11	921.535	0	1				1

18/11/2004 16:40	150	149.982	150 VH_0150	1	18/11/2004 16:40	2276.14	102.809	2276.14 H>>H-64_B	18/11/2004 16:40	0.04	31.7102	312.426 0	1
30/11/2004 14:05	200	200.026	200 VH_0200	1	30/11/2004 14:05	2919.98	699.367	2919.97 H>>H-64_B	30/11/2004 14:05	0.04	313.28	4990 0	1
30/11/2004 14:10	200	199.97	200 VH_0200	1	30/11/2004 14:10	2946.5	725.899	2946.51 H>>H-64_B	30/11/2004 14:10	0.04	243.193	4990 0	1
30/11/2004 16:15	150	149.982	150 VH_0150	1	30/11/2004 16:15	2892.27	671.666	2892.27 H>>H-64_B	30/11/2004 16:15	0.04	50.01	4772.42 0	1
30/11/2004 16:45	150	149.998	150 VH_0150	1	30/11/2004 16:45	2787.24	566.633	2787.24 H>>H-64_B	30/11/2004 16:45	0.04	37.4307	999 0	1
30/11/2004 16:55	150	149.985	150 VH_0150	1	30/11/2004 16:55	2629.12	408.679	2629.12 H>>H-64_B	30/11/2004 16:55	0.04	36.7553	922.469 0	1
30/11/2004 17:00	150	149.988	150 VH_0150	1	30/11/2004 17:00	2594.15	373.545	2594.15 H>>H-64_B	30/11/2004 17:00	0.04	37.6452	917.156 0	1
1/12/2004 9:50	350	350.005	350 VH_0350	1	1/12/2004 9:50	2415	224.671	2415 H>>H-64_B	1/12/2004 9:50	0.04	44.15	908.265 0	1
1/12/2004 9:55	350	349.964	350 VH_0350	1	1/12/2004 9:55	2438.56	219.857	2438.56 H>>H-64_B	1/12/2004 9:55	0.04	44.15	908.021 0	1
1/12/2004 10:00	350	349.972	350 VH_0350	1	1/12/2004 10:00	2519.51	298.908	2519.52 H>>H-64_B	1/12/2004 10:00	0.04	50.01	913.956 0	1
1/12/2004 10:05	350	349.971	350 VH_0350	1	1/12/2004 10:05	2149.69	-40.632	2149.7 H>>H-64_B	1/12/2004 10:05	0.04	44.15	307.724 0	1
1/12/2004 10:10	200	199.993	200 VH_0200	1	1/12/2004 10:10	2169.66	18.8376	2169.66 H>>H-64_B	1/12/2004 10:10	0.04	4.26	307.756 0	1
1/12/2004 10:15	200	200.051	200 VH_0200	1	1/12/2004 10:15	2230.42	51.4409	2230.41 H>>H-64_B	1/12/2004 10:15	0.04	4.26	309.773 0	1
1/12/2004 10:20	200	200.043	200 VH_0200	1	1/12/2004 10:20	2258.52	58.4574	2258.51 H>>H-64_B	1/12/2004 10:20	0.04	17.3	311.756 0	1
1/12/2004 10:25	200	200.008	200 VH_0200	1	1/12/2004 10:25	2271.05	57.3431	2271.05 H>>H-64_B	1/12/2004 10:25	0.04	44.15	311.522 0	1
1/12/2004 11:20	200	200.01	200 VH_0200	1	1/12/2004 11:20	2560.68	360.07	2560.68 H>>H-64_B	1/12/2004 11:20	0.04	44.15	919.124 0	1
1/12/2004 11:25	200	199.988	200 VH_0200	1	1/12/2004 11:25	2560.28	339.675	2560.28 H>>H-64_B	1/12/2004 11:25	0.04	38.5619	919.001 0	1
1/12/2004 11:30	200	200.006	200 VH_0200	1	1/12/2004 11:30	2597.79	377.181	2597.79 H>>H-64_B	1/12/2004 11:30	0.04	40.5	919.193 0	1
1/12/2004 11:40	200	200.022	200 VH_0200	1	1/12/2004 11:40	2630.92	410.308	2630.92 H>>H-64_B	1/12/2004 11:40	0.07	35.15	924.986 0	1
1/12/2004 11:55	200	199.985	200 VH_0200	1	1/12/2004 11:55	2605.46	384.856	2605.46 H>>H-64_B	1/12/2004 11:55	0.07	30.597	918.998 0	1
1/12/2004 12:00	200	200.016	200 VH_0200	1	1/12/2004 12:00	2640.59	419.979	2640.59 H>>H-64_B	1/12/2004 12:00	0.04	30.6365	925.32 0	1
1/12/2004 12:05	200	199.938	200 VH_0200	1	1/12/2004 12:05	2668.08	447.605	2668.09 H>>H-64_B	1/12/2004 12:05	0.04	17.3	925.255 0	1
1/12/2004 12:10	200	200.02	200 VH_0200	1	1/12/2004 12:10	2725.02	504.408	2725.02 H>>H-64_B	1/12/2004 12:10	0.20846	44.15	931.248 0	1
1/12/2004 12:15	200	200.001	200 VH_0200	1	1/12/2004 12:15	2802.4	581.792	2802.4 H>>H-64_B	1/12/2004 12:15	1.11077	29.7	937.501 0	1
1/12/2004 12:20	200	200.035	200 VH_0200	1	1/12/2004 12:20	2751.52	530.905	2751.51 H>>H-64_B	1/12/2004 12:20	0.65538	30.1	930.885 0	1
1/12/2004 14:25	200	199.945	200 VH_0200	1	1/12/2004 14:25	2866.15	645.554	2866.16 H>>H-64_B	1/12/2004 14:25	0.78231	30.1	8819.99 0	1
1/12/2004 14:30	200	199.973	200 VH_0200	1	1/12/2004 14:30	2853.88	633.278	2853.88 H>N-NIL_H_15M	1/12/2004 14:30	0.20846	30.1	9900 0	1
1/12/2004 15:10	100	99.9872	100 VH_0100	1	1/12/2004 15:10	2875.54	654.935	2875.54 H>N-NIL_H_15M	1/12/2004 15:10	0.57846	36.8197	9900 0	1
1/12/2004 15:30	100	100.044	100 VH_0100	1	1/12/2004 15:30	2908.72	688.103	2849.72 H>N-NIL_H_15M	1/12/2004 15:30	1.40077	32.7	9950.01 0	1
1/12/2004 16:00	100	100.002	100 VH_0100	1	1/12/2004 16:00	2627.36	406.752	2627.36 H>>H-64_B	1/12/2004 16:00	1.36231	27.7	920.641 0	1
1/12/2004 16:15	100	100.002	100 VH_0100	1	1/12/2004 16:15	2113.32	-55.6346	2113.32 H>>H-64_B	1/12/2004 16:15	2.38462	27.7	308.172 0	1
1/12/2004 16:20	100	100.026	100 VH_0100	1	1/12/2004 16:20	2169.05	-19.2329	2169.04 H>>H-64_B	1/12/2004 16:20	1.03846	27.7	308.325 0	1
1/12/2004 16:30	100	99.9817	100 VH_0100	1	1/12/2004 16:30	2096.79	-80.1647	2096.79 H>>H-64_B	1/12/2004 16:30	0.52846	27.7	306.455 0	1
1/12/2004 17:20	94.14	94.1089	100 VH_0100	1	1/12/2004 17:20	1564.43	-656.171	1564.44 H>>H-64_B	1/12/2004 17:20	16.1353	26.9799	75.7935 0	1
1/12/2004 17:25	73.48	73.44	100 VH_0100	1	1/12/2004 17:25	1430.68	-786.88	1430.69 H>>H-64_B	1/12/2004 17:25	16.4573	27.2297	74.8914 0	1
1/12/2004 17:30	17.68	17.7383	100 VH_0100	1	1/12/2004 17:30	1482.1	-726.644	1482.09 H>>H-64_B	1/12/2004 17:30	13.0776	24.7	75.353 0	1
1/12/2004 17:35	89.21	88.235	100 VH_0100	1	1/12/2004 17:35	1368.45	-779.217	1368.44 H>>H-64_B	1/12/2004 17:35	13.564	24.97	74.4532 0	1
1/12/2004 17:40	66.41	66.4439	100 VH_0100	1	1/12/2004 17:40	1355.92	-789.93	1355.91 H>>H-64_B	1/12/2004 17:40	20.0525	25.3	50.0099 0	1
1/12/2004 17:45	24.64	24.6171	100 VH_0100	1	1/12/2004 17:45	1326.68	-799.877	1326.68 H>>H-64_B	1/12/2004 17:45	23.1136	24.7	34.0001 0	1
1/12/2004 17:50	14.01	13.9683	100 VH_0100	1	1/12/2004 17:50	1337.52	-794.124	1337.53 H>>H-64_B	1/12/2004 17:50	22.0821	24.97	39.6302 0	1
1/12/2004 17:55	65.49	65.4994	100 VH_0100	1	1/12/2004 17:55	1230.61	-778.442	1230.61 H>>H-64_B	1/12/2004 17:55	20.0131	25.3	50.01 0	1
1/12/2004 18:00	4.6	4.6061	100 VH_0100	1	1/12/2004 18:00	1288.26	-790.494	1288.26 H>>H-64_B	1/12/2004 18:00	13.9594	17.35	32.516 0	1
14/01/2005 11:40	200	199.967	400 VH_0400	1	14/01/2005 11:40	2157.19	70.6647	2157.2 H>>H-64_B	14/01/2005 11:40	32.0789	38.9663	77.9416 0	1
14/01/2005 12:25	174.64	174.651	200 VH_0200	1	14/01/2005 12:25	2205.02	46.8824	2205.02 H>>H-64_B	14/01/2005 12:25	34.3565	40.7579	78.4283 0	1
14/01/2005 12:55	189.38	189.389	200 VH_0200	1	14/01/2005 12:55	2373.62	188.69	2373.62 H>>H-64_B	14/01/2005 12:55	22.8836	43.5	144.636 0	1
14/01/2005 14:50	198.66	198.634	200 VH_0200	1	14/01/2005 14:50	2614.69	405.567	2614.7 H>>H-64_B	14/01/2005 14:50	35.9532	42.04	81.0702 0	1
14/01/2005 16:15	250	250.01	250 VH_0250	1	14/01/2005 16:15	2944.24	723.63	2944.24 H>>H-64_B	14/01/2005 16:15	0.04	28.26	2633.98 0	1
14/01/2005 16:25	250	250.027	250 VH_0250	1	14/01/2005 16:25	2930.4	709.787	2930.39 H>>H-64_B	14/01/2005 16:25	0.04	30.2946	9000 0	1
14/01/2005 16:30	250	250.031	250 VH_0250	1	14/01/2005 16:30	2964.42	743.806	2964.4 H>N-NIL_H_15M	14/01/2005 16:30	0.04	32.7	9000 0	1
14/01/2005 16:45	250	250.018	250 VH_0250	1	14/01/2005 16:45	2191.02	-36.5932	2191.02 H>>H-64_B	14/01/2005 16:45	14.4977	17.44	78.0379 0	1
14/01/2005 17:00	280.19	280.163	300 VH_0300	1	14/01/2005 17:00	2099.73	-51.3029	2099.74 H>>H-64_B	14/01/2005 17:00	21.4148	30.2828	77.0308 0	1
14/01/2005 17:15	244.8	244.796	300 VH_0300	1	14/01/2005 17:15	1966	-179.707	1966 H>>H-64_B	14/01/2005 17:15	7.53645	14.28	46.6465 0	1
14/01/2005 17:40	288.74	288.769	300 VH_0300	1	14/01/2005 17:40	1772.35	-446.78	1772.34 H>>H-64_B	14/01/2005 17:40	11.8064	17.5	45.8613 0	1
14/01/2005 17:50	240.87	240.881	300 VH_0300	1	14/01/2005 17:50	1631.89	-581.963	1631.89 H>>H-64_B	14/01/2005 17:50	8.11367	14.61	44.7063 0	1
14/01/2005 18:10	297.36	297.315	300 VH_0300	1	14/01/2005 18:10	1518	-702.598	1518.01 H>>H-64_B	14/01/2005 18:10	15.0822	17.5	31.7255 0	1
14/01/2005 18:15	288.55	288.546	300 VH_0300	1	14/01/2005 18:15	1497.04	-723.567	1497.04 H>>H-64_B	14/01/2005 18:15	15.2125	17.6	31.6081 0	1
14/01/2005 18:30	246.98	246.992	300 VH_0300	1	14/01/2005 18:30	1328.57	-781.57	1328.57 H>>H-64_B	14/01/2005 18:30	24.3334	24.7	31.2942 0	1
8/02/2005 13:55	200	200.059	200 VH_0200	1	8/02/2005 13:55	2609.78	424.559	2609.78 H>>H-64_B	8/02/2005 13:55	21.5	36	315.705 0	1
8/02/2005 14:00	150	149.974	150 VH_0150	1	8/02/2005 14:00	2546.83	362.771	2546.84 H>>H-64_B	8/02/2005 14:00	26.5	34.4688	123.346 0	1
8/02/2005 14:05	100	100.009	100 VH_0100	1	8/02/2005 14:05	2539.66	343.075	2539.66 H>>H-64_B	8/02/2005 14:05	26.5	34.7	132.739 0	1
8/02/2005 14:15	100	99.9921	100 VH_0100	1	8/02/2005 14:15	2529.53	308.924	2529.53 H>>H-64_B	8/02/2005 14:15	26.5	36	119.812 0	1
8/02/2005 14:30	100	99.9726	100 VH_0100	1	8/02/2005 14:30	2509.46	302.996	2509.46 H>>H-64_B	8/02/2005 14:30	26.5	36	294.372 0	1
8/02/2005 14:35	100	100.007	100 VH_0100	1	8/02/2005 14:35	2474.09	279.332	2474.09 H>>H-64_B	8/02/2005 14:35	26.5	35.82	309.949 0	1
8/02/2005 14:40	100	100.024	100 VH_0100	1	8/02/2005 14:40	2554	346.567	2554 H>>H-64_B	8/02/2005 14:40	26.5	35.7	314.866 0	1
8/02/2005 14:45	100	99.9512	100 VH_0100	1	8/02/2005 14:45	2539.59	333.888	2539.6 H>>H-64_B					

8/02/2005 16:25	50	49.9823	50 VH_0050	1	8/02/2005 16:25	2923.45	702.846	2923.45 H>>H-64_B	8/02/2005 16:25	0.02	15.03	9000 0	1
8/02/2005 16:30	50	50.025	50 VH_0050	1	8/02/2005 16:30	2856.79	636.177	2856.78 H>>H-64_B	8/02/2005 16:30	0.02	33.2	5225.04 0	1
8/02/2005 16:35	50	49.9957	50 VH_0050	1	8/02/2005 16:35	2845.67	625.063	2845.67 H>>H-64_B	8/02/2005 16:35	0.02	36	5264.03 0	1
8/02/2005 16:40	50	49.9957	50 VH_0050	1	8/02/2005 16:40	2865.24	644.633	2865.24 H>>H-64_B	8/02/2005 16:40	0.02	39.1384	323.398 0	1
8/02/2005 16:45	50	50	50 VH_0050	1	8/02/2005 16:45	2776	555.392	2776 H>>H-64_B	8/02/2005 16:45	0.02	36	320.921 0	1
8/02/2005 16:50	0	0.00854	0 VH_0000	1	8/02/2005 16:50	2744.27	523.661	2744.27 H>>H-64_B	8/02/2005 16:50	0.02	34.7	319.193 0	1
8/02/2005 17:15	100	100.047	100 VH_0100	1	8/02/2005 17:15	2646.63	426.013	2646.62 H>>H-64_B	8/02/2005 17:15	0.02	17.44	104.49 0	1
8/02/2005 17:20	67.46	67.4762	100 VH_0100	1	8/02/2005 17:20	2649.59	428.979	2649.59 H>>H-64_B	8/02/2005 17:20	0.02	18.3689	105.301 0	1
8/02/2005 17:25	62.12	62.1616	100 VH_0100	1	8/02/2005 17:25	2637.55	416.934	2637.54 H>>H-64_B	8/02/2005 17:25	0.02	23.1875	132.952 0	1
8/02/2005 17:30	57.56	57.5732	100 VH_0100	1	8/02/2005 17:30	2629.9	408.19	2629.8 H>>H-64_B	8/02/2005 17:30	9.21115	30.7	133.974 0	1
8/02/2005 17:35	90.88	90.9152	100 VH_0100	1	8/02/2005 17:35	2642.19	421.575	2642.18 H>>H-64_B	8/02/2005 17:35	6.73075	28.0844	130.947 0	1
8/02/2005 17:40	21.24	21.2494	100 VH_0100	1	8/02/2005 17:40	2653.31	432.7	2653.31 H>>H-64_B	8/02/2005 17:40	9.68941	30.7	131.975 0	1
8/02/2005 17:45	70.08	70.053	100 VH_0100	1	8/02/2005 17:45	2696.53	475.928	2696.54 H>>H-64_B	8/02/2005 17:45	12.9019	28.2664	104.254 0	1
8/02/2005 17:50	62.15	62.1677	100 VH_0100	1	8/02/2005 17:50	2664.45	443.839	2664.45 H>>H-64_B	8/02/2005 17:50	15.9613	30.7	104.531 0	1
8/02/2005 17:55	71.53	71.5079	100 VH_0100	1	8/02/2005 17:55	2685.87	465.267	2685.87 H>>H-64_B	8/02/2005 17:55	26.751	30.7	56.0796 0	1
3/11/2005 15:25	350	349.985	350 VH_0350	1	3/11/2005 15:25	2181.12	-33.9533	2181.12 H>>H-64_B	3/11/2005 15:25	42	45.77	102.139 0	1
3/11/2005 15:30	350	350.015	350 VH_0350	1	3/11/2005 15:30	2200.56	-0.65344	2200.56 H>>H-64_B	3/11/2005 15:30	42	55.75	266.33 0	1
3/11/2005 15:35	217.2	217.235	350 VH_0350	1	3/11/2005 15:35	2171.06	-16.616	2171.05 H>>H-64_B	3/11/2005 15:35	62	65.9785	102.655 0	1
3/11/2005 15:40	289.15	289.128	350 VH_0350	1	3/11/2005 15:40	2164.3	-40.918	2164.3 H>>H-64_B	3/11/2005 15:40	62	95.052	266.33 0	1
3/11/2005 15:45	190.29	190.291	250 VH_0250	1	3/11/2005 15:45	2126.09	-60.0982	2126.09 H>>H-64_B	3/11/2005 15:45	62	66.3319	102.591 0	1
3/11/2005 15:50	250	250.024	250 VH_0250	1	3/11/2005 15:50	2105.2	-77.4323	2105.2 H>>H-64_B	3/11/2005 15:50	62	65.72	101.839 0	1
9/11/2005 14:45	0	-0.05671	0 VH_0000	1	9/11/2005 14:45	2686.15	465.564	2686.16 H>>H-64_B	9/11/2005 14:45	62	109.7	8526.58 0	1
10/11/2005 15:30	400	399.985	400 VH_0400	1	10/11/2005 15:30	2475.36	543.755	2475.35 H>>N-NIL_28	10/11/2005 15:30	-0.00003	33.00003	8604.0 0	1
10/11/2005 15:35	400	400.051	400 VH_0400	1	10/11/2005 15:35	2658.11	441.362	2658.11 H>>H-64_B	10/11/2005 15:35	-0.00003	31.0245	8562.35 0	1
10/11/2005 15:40	300	300.011	300 VH_0300	1	10/11/2005 15:40	2679.24	468.049	2679.24 H>>H-64_B	10/11/2005 15:40	-0.00027	26.02	8572.45 0	1
10/11/2005 15:45	200	199.983	200 VH_0200	1	10/11/2005 15:45	2692.41	487.984	2692.4 N>>N-NIL_28	10/11/2005 15:45	-0.00027	18.6	8687.45 0	1
10/11/2005 15:50	100	99.9884	100 VH_0100	1	10/11/2005 15:50	2646.69	442.108	2646.69 N>>N-NIL_28	10/11/2005 15:50	-0.00027	14.7371	8815.2 0	1
10/11/2005 15:55	50	50.0219	50 VH_0050	1	10/11/2005 15:55	2601.1	394.771	2601.1 H>>H-64_B	10/11/2005 15:55	-0.00027	14.28	8519.89 0	1
10/11/2005 16:05	200	200.023	200 VH_0200	1	10/11/2005 16:05	2488.28	267.668	2488.28 H>>H-64_B	10/11/2005 16:05	-0.00027	26.02	8465.67 0	1
10/11/2005 16:10	187.03	187.033	200 VH_0200	1	10/11/2005 16:10	2466.46	249.98	2466.46 H>>H-64_B	10/11/2005 16:10	-0.00027	26.02	147.643 0	1
5/12/2005 12:50	150	149.979	150 VH_0150	1	5/12/2005 12:50	2441.54	240.61	2441.54 H>>H-64_B	5/12/2005 12:50	33	56.4977	290.542 0	1
5/12/2005 12:55	100	99.9774	100 VH_0100	1	5/12/2005 12:55	2451.97	260.583	2451.97 H>>H-64_B	5/12/2005 12:55	33	62.5	282.391 0	1
5/12/2005 13:00	50	50.0189	50 VH_0050	1	5/12/2005 13:00	2429.89	248.321	2429.89 H>>H-64_B	5/12/2005 13:00	42	62.5	282.479 0	1
5/12/2005 13:05	0	0.00976	0 VH_0000	1	5/12/2005 13:05	2451.04	247.581	2451.04 H>>H-64_B	5/12/2005 13:05	42	62.5	268.44 0	1
6/12/2005 13:10	158.11	158.102	200 VH_0200	1	6/12/2005 13:10	2487.72	290.993	2487.72 H>>H-64_B	6/12/2005 13:10	33	72.9732	268.44 0	1
6/12/2005 13:15	88.45	88.4268	100 VH_0100	1	6/12/2005 13:15	2486.8	281.522	2486.8 H>>H-64_B	6/12/2005 13:15	33	73.3414	268.44 0	1
6/12/2005 13:20	0	0.03415	0 VH_0000	1	6/12/2005 13:20	2475.36	270.517	2475.37 H>>H-64_B	6/12/2005 13:20	42	62.6	271 0	1
6/12/2005 13:25	0	0.02317	0 VH_0000	1	6/12/2005 13:25	2447.22	240.755	2447.22 H>>H-64_B	6/12/2005 13:25	42	66.88	283.406 0	1
7/12/2005 11:45	250	249.979	250 VH_0250	1	7/12/2005 11:45	2547.35	332.303	2547.35 H>>H-64_B	7/12/2005 11:45	33	54.961	295.875 0	1
7/12/2005 11:50	250	249.966	250 VH_0250	1	7/12/2005 11:50	2555.55	347.647	2555.56 H>>H-64_B	7/12/2005 11:50	33	54.3897	295.888 0	1
7/12/2005 11:55	250	250.015	250 VH_0250	1	7/12/2005 11:55	2541.56	334.75	2541.56 H>>H-64_B	7/12/2005 11:55	33	53.4825	297.705 0	1
7/12/2005 12:15	200	199.99	200 VH_0200	1	7/12/2005 12:15	2575.42	360.666	2575.42 H>>H-64_B	7/12/2005 12:15	33	36	315.898 0	1
7/12/2005 12:25	200	199.991	200 VH_0200	1	7/12/2005 12:25	2514.34	300.054	2514.34 H>>H-64_B	7/12/2005 12:25	33	36	268.44 0	1
7/12/2005 12:30	200	199.979	200 VH_0200	1	7/12/2005 12:30	2599.46	381.041	2599.46 H>>H-64_B	7/12/2005 12:30	33	36	315.994 0	1
7/12/2005 12:35	200	199.979	200 VH_0200	1	7/12/2005 12:35	2671.88	451.277	2671.88 H>>H-64_B	7/12/2005 12:35	33	36	317.974 0	1
7/12/2005 12:45	150	149.968	150 VH_0150	1	7/12/2005 12:45	2768.63	548.019	2768.63 H>>H-64_B	7/12/2005 12:45	33	36	870.648 0	1
7/12/2005 12:55	150	150.015	150 VH_0150	1	7/12/2005 12:55	2871.56	650.949	2871.56 H>>H-64_B	7/12/2005 12:55	33	37.2046	929.4 0	1
7/12/2005 13:00	150	150.026	150 VH_0150	1	7/12/2005 13:00	2851.98	631.367	2851.97 H>>H-64_B	7/12/2005 13:00	33	36	949.49 0	1
7/12/2005 13:05	150	149.98	150 VH_0150	1	7/12/2005 13:05	2776.16	555.557	2776.16 H>>H-64_B	7/12/2005 13:05	33	36	875.955 0	1
7/12/2005 13:20	100	99.9421	100 VH_0100	1	7/12/2005 13:20	2827.81	607.214	2827.82 H>>H-64_B	7/12/2005 13:20	42	52.8474	876.34 0	1
7/12/2005 13:25	100	100.002	100 VH_0100	1	7/12/2005 13:25	2897.76	677.152	2897.76 H>>H-64_B	7/12/2005 13:25	42	52.3022	919.35 0	1
7/12/2005 13:30	100	99.9921	100 VH_0100	1	7/12/2005 13:30	2887.53	666.924	2887.53 H>>H-64_B	7/12/2005 13:30	42	52.1304	939.44 0	1
7/12/2005 14:35	100	100.002	100 VH_0100	1	7/12/2005 14:35	2900.76	680.152	2900.76 H>>H-64_B	7/12/2005 14:35	0	37.7833	7400 0	1
7/12/2005 14:50	100	100.032	100 VH_0100	1	7/12/2005 14:50	2868.87	648.266	2868.87 H>>H-64_B	7/12/2005 14:50	0	36	8667.32 0	1
7/12/2005 14:55	100	99.9842	100 VH_0100	1	7/12/2005 14:55	2886.06	665.456	2886.06 H>>H-64_B	7/12/2005 14:55	-0.00058	38.0016	8566.56 0	1
7/12/2005 15:00	100	100.009	100 VH_0100	1	7/12/2005 15:00	2922.66	702.051	2922.66 H>>H-64_B	7/12/2005 15:00	-0.00058	38.12	7400 0	1
7/12/2005 15:10	50	50.0232	50 VH_0050	1	7/12/2005 15:10	2893.22	672.608	2893.22 H>>H-64_B	7/12/2005 15:10	-0.00058	100.7	8560.56 0	1
7/12/2005 15:20	50	49.9854	50 VH_0050	1	7/12/2005 15:20	2905.01	684.405	2905.01 H>>H-64_B	7/12/2005 15:20	-0.00058	100.7	8719.93 0	1
7/12/2005 15:35	50	49.9658	50 VH_0050	1	7/12/2005 15:35	2897.36	676.759	2897.37 H>>H-64_B	7/12/2005 15:35	-0.00058	100.7	8666.24 0	1
7/12/2005 16:05	100	100.013	100 VH_0100	1	7/12/2005 16:05	2785.44	564.83	2785.44 H>>H-64_B	7/12/2005 16:05	-0.00058	31.1214	875.054 0	1
7/12/2005 16:10	100	100.002	100 VH_0100	1	7/12/2005 16:10	2877	656.392	2877 H>>H-64_B	7/12/2005 16:10	-0.00058	28.63	880.065 0	1
7/12/2005 16:15	100	100.013	100 VH_0100	1	7/12/2005 16:15	2898.18	677.57	2898.18 H>>H-64_B	7/12/2005 16:15	-0.00058	19.88	939.44 0	1
7/12/2005 16:20	100	100.027	100 VH_0100	1	7/12/2005 16:20	2902.55	681.937	2902.54 H>>H-64_B	7/12/2005 16:20	-0.00058	27.8749	7059.89 0	1
7/12/2005 16:25	100	100.005	100 VH_0100	1	7/12/2005 16:25	2937.71	717.101	2937.71 H>>H-64_B	7/12/2005 16:25	-0.00058	29.0077	7059.69 0	1
7/12/2005 16:30	100	100.031	100 VH_0100	1	7/12/2005 16:30	2917.69	697.076	2917.68 H>>H-64_B	7/12/2005 16:30	-0.00058	27.8722	7200 0	1
7/12/2005 16:40	150</												

7/12/2005 19:15	762.16	762.116	800 VH_0800	1	7/12/2005 19:15	2220.18	-273.239	2220.19 H>>H-64_B	7/12/2005 19:15	26.5	36.8858	102.514	0	1
8/12/2005 13:10	129.73	129.752	150 VH_0150	1	8/12/2005 13:10	2470.51	260.103	2470.51 H>>H-64_B	8/12/2005 13:10	42	50.9336	104.128	0	1
8/12/2005 15:05	250	250.007	250 VH_0250	1	8/12/2005 15:05	2622.07	391.196	2622.07 H>>H-64_B	8/12/2005 15:05	90	91.9271	317.808	0	1
8/12/2005 15:10	250	249.987	250 VH_0250	1	8/12/2005 15:10	2624.2	394.43	2624.2 H>>H-64_B	8/12/2005 15:10	90	100.7	317.882	0	1
8/12/2005 15:15	250	250.062	250 VH_0250	1	8/12/2005 15:15	2617.79	425.955	2617.78 H>>H-64_B	8/12/2005 15:15	90	94	317.565	0	1
8/12/2005 15:20	250	249.984	250 VH_0250	1	8/12/2005 15:20	2652.91	451.358	2652.91 H>>H-64_B	8/12/2005 15:20	90	91.7871	319.963	0	1
8/12/2005 15:35	250	249.97	250 VH_0250	1	8/12/2005 15:35	2810.12	604.823	2810.13 H>>H-64_B	8/12/2005 15:35	90	90.49	929.4	0	1
8/12/2005 15:40	250	250.021	250 VH_0250	1	8/12/2005 15:40	2747.87	542.318	2747.87 H>>H-64_B	8/12/2005 15:40	90	91.9043	872.204	0	1
8/12/2005 15:45	250	249.974	250 VH_0250	1	8/12/2005 15:45	2702.01	496.513	2702.01 H>>H-64_B	8/12/2005 15:45	90	90.7871	321.463	0	1
8/12/2005 16:00	250	250	250 VH_0250	1	8/12/2005 16:00	2601.08	394.907	2601.08 H>>H-64_B	8/12/2005 16:00	90	90.49	318.276	0	1
28/12/2005 15:40	58.61	59.593	100 VH_0100	1	28/12/2005 15:40	2635.88	431.97	2635.88 H>>H-64_B	28/12/2005 15:40	69.1558	100.7	267.39	0	1
28/12/2005 15:55	50	49.9788	50 VH_0050	1	28/12/2005 15:55	2671.09	452.984	2671.09 H>>H-64_B	28/12/2005 15:55	19.5	41.1	318.119	0	1
28/12/2005 16:15	82.07	82.0709	100 VH_0100	1	28/12/2005 16:15	2710.41	498.002	2710.41 H>>H-64_B	28/12/2005 16:15	19.5	70.1364	320.32	0	1
3/01/2006 14:45	400	400.024	400 VH_0400	1	3/01/2006 14:45	2840.09	640.266	2840.09 H>>H-64_B	3/01/2006 14:45	19.5	26.7353	267.997	0	1
3/01/2006 14:55	400	400.01	400 VH_0400	1	3/01/2006 14:55	2819.64	614.633	2819.64 H>>H-64_B	3/01/2006 14:55	19.5	23.6	269.727	0	1
3/01/2006 15:05	300	300.061	300 VH_0300	1	3/01/2006 15:05	2867.54	675.602	2867.53 H>>H-64_B	3/01/2006 15:05	19.5	19.5669	108.272	0	1
3/01/2006 15:10	300	300.013	300 VH_0300	1	3/01/2006 15:10	2848.26	644.133	2848.26 H>>H-64_B	3/01/2006 15:10	19.5	19.88	107.588	0	1
3/01/2006 15:25	300	300.004	300 VH_0300	1	3/01/2006 15:25	2860.61	653.435	2860.6 H>N-NIL_C_15M	3/01/2006 15:25	19.5	21.861	266.33	0	1
3/01/2006 15:50	300	300.015	300 VH_0300	1	3/01/2006 15:50	2801.78	602.044	2801.78 H>>H-64_B	3/01/2006 15:50	19.5	24.7847	107.598	0	1
3/01/2006 15:55	300	300.01	300 VH_0300	1	3/01/2006 15:55	2809.07	605.066	2809.07 H>>H-64_B	3/01/2006 15:55	19.5	23.6	107.541	0	1
3/01/2006 16:00	300	300.01	300 VH_0300	1	3/01/2006 16:00	2820.06	607.595	2820.06 H>>H-64_B	3/01/2006 16:00	19.5	38.12	263.959	0	1
3/01/2006 16:05	262.5	262.495	300 VH_0300	1	3/01/2006 16:05	2501.63	326.832	2501.63 H>>H-64_B	3/01/2006 16:05	19.5	27.4658	72.867	0	1
3/01/2006 16:10	136.8	136.776	300 VH_0300	1	3/01/2006 16:10	2385.4	237.547	2385.4 H>>H-64_B	3/01/2006 16:10	19.5	23.6245	48.53	0	1
3/01/2006 16:15	119.8	119.77	300 VH_0300	1	3/01/2006 16:15	2325.67	155.419	2325.68 H>>H-64_B	3/01/2006 16:15	19.5	23.6269	48.2262	0	1
3/01/2006 16:20	54.09	54.0871	300 VH_0300	1	3/01/2006 16:20	2195.04	47.4297	2195.04 H>>H-64_B	3/01/2006 16:20	19.5	23.8712	47.9258	0	1
3/01/2006 16:25	82.19	82.2183	300 VH_0300	1	3/01/2006 16:25	2273.54	98.5736	2273.54 H>>H-64_B	3/01/2006 16:25	19.5	23.7355	48.2286	0	1
3/01/2006 16:55	100	100.038	100 VH_0100	1	3/01/2006 16:55	2323.83	131.662	2323.82 H>>H-64_B	3/01/2006 16:55	19.5	20.3974	48.3129	0	1
3/01/2006 17:00	185.04	185.017	200 VH_0200	1	3/01/2006 17:00	2246.01	51.6527	2246.01 H>>H-64_B	3/01/2006 17:00	19.5	23.4816	47.993	0	1
3/01/2006 17:05	200	199.983	200 VH_0200	1	3/01/2006 17:05	2153.93	-5.28537	2153.93 H>>H-64_B	3/01/2006 17:05	19.5	20.3974	47.7109	0	1
2/02/2006 13:45	650	650.007	650 VH_0650	1	2/02/2006 13:45	3083.78	885.186	3083.78 H>N-NIL_C_15M	2/02/2006 13:45	0	96.6229	9644.9	0	1
2/02/2006 13:50	650	649.988	650 VH_0650	1	2/02/2006 13:50	3020.45	823.989	3020.45 H>>H-64_B	2/02/2006 13:50	0	22.6	8783.7	0	1
2/02/2006 13:55	500	499.994	500 VH_0500	1	2/02/2006 13:55	3032.02	825.546	3032.02 H>>H-64_B	2/02/2006 13:55	0	28.2405	8784.72	0	1
2/02/2006 14:00	450	450.048	450 VH_0450	1	2/02/2006 14:00	3060.26	859.845	3060.25 H>>H-64_B	2/02/2006 14:00	0	22.6	8774.97	0	1
2/02/2006 14:05	400	400.035	400 VH_0400	1	2/02/2006 14:05	3100.11	893.224	3100.1 H>>H-64_B	2/02/2006 14:05	0	87	9650.01	0	1
2/02/2006 14:10	300	299.994	300 VH_0300	1	2/02/2006 14:10	3085.64	867.002	3085.64 H>>H-64_B	2/02/2006 14:10	0	30.079	9600	0	1
2/02/2006 14:15	200	200.003	200 VH_0200	1	2/02/2006 14:15	3098.44	883.89	3098.44 H>>H-64_B	2/02/2006 14:15	0	25.9	9600	0	1
2/02/2006 14:20	200	200.04	200 VH_0200	1	2/02/2006 14:20	3097.16	892.164	3097.15 H>>H-64_B	2/02/2006 14:20	0	27.9467	9644.9	0	1
2/02/2006 14:25	100	99.9878	100 VH_0100	1	2/02/2006 14:25	3099.61	893.559	3099.61 H>N-NIL_C_15M	2/02/2006 14:25	0	28.1653	9600	0	1
2/02/2006 14:50	100	99.9652	100 VH_0100	1	2/02/2006 14:50	3047.37	841.614	3047.37 H>>H-64_B	2/02/2006 14:50	0	31.5121	8781.61	0	1
2/02/2006 15:45	100	99.9779	100 VH_0100	1	2/02/2006 15:45	2941.85	737.303	2941.85 H>>H-64_B	2/02/2006 15:45	0	32.85	8722.97	0	1
2/02/2006 16:40	44.8	44.7716	100 VH_0100	1	2/02/2006 16:40	2879.41	658.189	2879.41 H>>H-64_B	2/02/2006 16:40	16.159	30.7	104.35	0	1
2/02/2006 16:45	81.29	81.2618	100 VH_0100	1	2/02/2006 16:45	2843.21	631.135	2843.21 H>>H-64_B	2/02/2006 16:45	16.3625	30.7	103.682	0	1
2/02/2006 17:00	84.83	84.8146	100 VH_0100	1	2/02/2006 17:00	2741.43	523.629	2741.43 H>>H-64_B	2/02/2006 17:00	12.4415	34.7	103.311	0	1
2/02/2006 17:10	76.41	76.3961	100 VH_0100	1	2/02/2006 17:10	2464.41	256.07	2464.41 H>>H-64_B	2/02/2006 17:10	30.5486	32.4871	48.062	0	1
2/02/2006 17:15	2.64	2.6495	100 VH_0100	1	2/02/2006 17:15	2248.95	44.1913	2248.95 H>>H-64_B	2/02/2006 17:15	29.1801	31.7319	47.1385	0	1
2/02/2006 17:20	4.78	4.76116	100 VH_0100	1	2/02/2006 17:20	2448.79	240.312	2448.79 H>>H-64_B	2/02/2006 17:20	27.8451	30.7	48.2475	0	1
2/02/2006 17:30	67.75	67.7116	200 VH_0200	1	2/02/2006 17:30	2531.58	321.169	2531.58 H>>H-64_B	2/02/2006 17:30	29.7811	31.8957	48.6035	0	1
2/02/2006 17:35	134.68	134.665	200 VH_0200	1	2/02/2006 17:35	2421.72	223.379	2421.72 H>>H-64_B	2/02/2006 17:35	36.8519	39.0093	58.2993	0	1
2/02/2006 17:40	98.56	98.5589	200 VH_0200	1	2/02/2006 17:40	2426.24	229.336	2426.24 H>>H-64_B	2/02/2006 17:40	19.5	32.9661	100	0	1
2/02/2006 17:45	42.97	42.9405	200 VH_0200	1	2/02/2006 17:45	2349.86	156.794	2349.87 H>>H-64_B	2/02/2006 17:45	19.5	30.6138	85.3461	0	1
2/02/2006 17:50	110.15	110.117	200 VH_0200	1	2/02/2006 17:50	2342.24	143.937	2342.25 H>>H-64_B	2/02/2006 17:50	29.3051	31.5147	48.0655	0	1
2/02/2006 17:55	101.84	101.857	200 VH_0200	1	2/02/2006 17:55	2264.35	58.2079	2264.35 H>>H-64_B	2/02/2006 17:55	28.4143	30.7696	47.5243	0	1
2/02/2006 18:00	46.75	46.7586	200 VH_0200	1	2/02/2006 18:00	2221.83	15.5106	2221.83 H>>H-64_B	2/02/2006 18:00	27.2316	29.9841	47.21	0	1
2/02/2006 18:05	111.65	111.689	200 VH_0200	1	2/02/2006 18:05	1976.25	-190.686	1976.24 H>>H-64_B	2/02/2006 18:05	28.3291	30.7	46.4364	0	1
2/02/2006 18:10	48.61	48.5949	200 VH_0200	1	2/02/2006 18:10	1740	-428.33	1740 H>>H-64_B	2/02/2006 18:10	29.7368	30.175	35.99	0	1
2/02/2006 18:15	80.9	80.8692	200 VH_0200	1	2/02/2006 18:15	1700.59	-479.532	1700.6 H>>H-64_B	2/02/2006 18:15	29.5466	29.8624	35.8498	0	1
2/02/2006 18:20	51.66	51.6719	200 VH_0200	1	2/02/2006 18:20	1624.86	-535.093	1624.86 H>>H-64_B	2/02/2006 18:20	29.2448	29.7779	35.6544	0	1