



# IATA Guidance on Incident and Crisis Management Planning In the Event of a Shortfall in Aviation Fuel at an Airport







# Guidance on Incident and Crisis Management Planning (ICMP) In the Event of a Shortfall in Aviation Fuel at an Airport

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# IATA Guidance on Incident and Crisis Management Planning (ICMP) In the Event of a Shortfall in Aviation Fuel at an Airport

## Introduction

In the past several years the aviation industry has seen a number of disruptions to airport fuel supplies with significant consequences in terms of inconvenience to passengers, shippers and airlines; airlines have also had to face heavy financial losses as a result of these disruptions.

While the parties affected have in general managed these situations on the basis of usual practice at the time and location of the incident, the recent experience at London Heathrow Airport led to the IATA Commercial Fuel Working Group decision to put in place a globally applicable set of guidelines and a process that would be useful in managing a supply shortfall at any airport location.

This document provides recommendations and guidance to Civil Aviation Administrations, Airports, Airlines, Fuel Suppliers, and Intoplane Service Providers to collectively ensure that the impact of a fuel supply shortfall is minimised, to manage an incident without allowing it to develop into a crisis and to manage the crisis if it does occur.

While most of the recommendations and guidance provided herein are generic some would need to be tailored to suit the specific requirements of the airport and the situation.

While it is recognised that some Airports and Airlines may already have fully developed crisis management plans IATA is also aware that many others do not. If an Airport or the base carrier at the location has such crisis plan the current guidance material should enable such entity to develop a fuel-specific crisis management plan that could be integrated into the main crisis management plan as a subset. At locations where such plan does not exist, the plan developed to deal with a fuel-related crisis could either be considered a standalone plan or could trigger the development of a wider plan taking account of all eventualities that may adversely impact air transport.

IATA has approached incident and crisis management related to aviation fuel as a process that commences with a planning phase and includes training and testing and finally management and recovery.

# 1. Incident and Crisis Management Planning

**Objective:** Develop an Incident and Crisis Management capability (including contingency plans) to mitigate the impact of a shortfall in jet fuel at an airport.

In a crisis/emergency, a smooth working plan must go into action at once without the need for wide consultations and agreements that may cause delay and hence aggravate the situation. To be able to achieve this it is essential that pre-planning be undertaken and that all key stakeholders agree to the plan.

## Key Elements

### 1.1. Lead Planning Authority

A Lead Planning Authority needs to be identified and take responsibility to sponsor development of incident and crisis management planning. The key role of the Lead Planning Authority is to frame the scope and scale of the planning process and lead the initial stages of plan development. Ideally, the Lead Planning Authority should be whichever entity is most responsible for managing an airport's fuel supply. In IATA experience this could be the base carrier, the key fuel supplier(s), the airport or the national government.

### 1.2. Identify key Stakeholders

One of the initial tasks of the Lead Planning Authority is to identify and engage key stakeholders. The key stakeholders and stakeholder groups may vary based on location, the nature of the problem and length of disruption. However, the following must always be included when developing an Incident and Crisis Management Plan related to aviation fuel:

- Airlines operating at the airport (HQ fuel experts & local staff )
- Airline Operators Committee (AOC)
- IATA – Commercial Fuel Services will either participate directly or delegate responsibility to one of its Member airlines.
- Fuel Suppliers at the location
- Fuel Farm and Hydrant Operators
- Intoplane Service Providers
- Airport Management

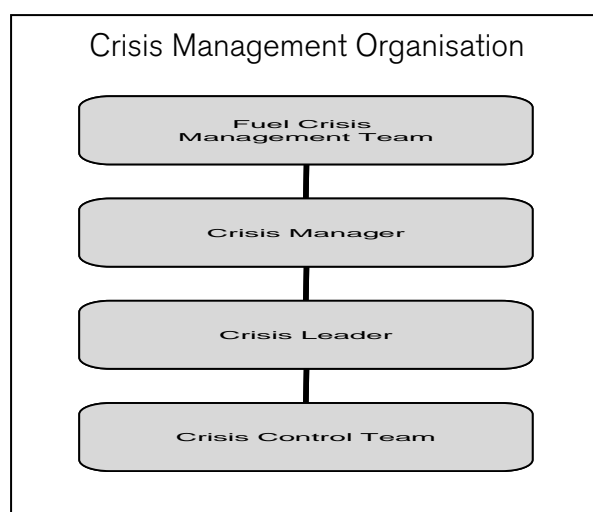
It would also be appropriate to keep the Director General of Civil Aviation and/or the Ministry in Charge of Civil Aviation at the specific location informed regarding the development of such plan and approvals obtained once the plan has been developed, if so required.

### 1.3. Identify Fuel Crisis Management Team

Developing a plan with the participation of representatives of all stakeholders could prove to be a challenging task. However, the Fuel Crisis Management Team should include at least the following:

- A representative of the Airport
- A representative of the Fuel Suppliers
- A representative of the Fuel Farm and Hydrant System
- A representative of the Intoplane Service Providers
- A representative of each of the main base carriers
- A representative of each visiting carrier categories (based on agreed criteria)
- A representative of the AOC
- IATA may be invited and will consider participation directly or delegate the responsibility to one of its Member airlines active at the location.

Although it is important to have a broad representation of stakeholders on the Fuel Crisis Management Team, this must be balanced against the importance of ensuring that the team is effective and efficient. Hence it is appropriate that the team should comprise no more than 10 members.



The ToR for the Fuel Crisis Management Team should include:

- Recommend the allocation policy for the airport
- Recommend what constitutes a crisis – the definition
- Recommend the entry and exit points for the allocation plan
- Recommend the optimum stock level for the airport based on supply level and risks taking account of the conflicting need for stability and equally significant demand for sufficient fuel to avoid techstops/cancellations.

Approval of recommendations and plans developed by or for the Fuel Crisis Management Team MUST be ratified at meetings at which all airlines and other key stakeholders can be present.

#### **1.4. Identify Crisis Manager Including Roles and Responsibilities**

The Crisis Manager must be able to appreciate the fuel supply chain issues and dynamics, airline requirements and airport operational matters and must be selected jointly by the airlines, the airport and the fuel suppliers.

While it is recognised that at most locations the Base Carrier(s) or the Fuel Suppliers would be able to provide a suitable candidate for the position, at airports that have a dedicated Fuel Services Manager such person may be considered for the position of the Crisis Manager.

The following should be included in the Role & Responsibility for the Crisis Manager:

- Be responsible to the Crisis Management Team
- Work with and lead the Crisis Control Team (CCT) during a crisis
- Ensure that Incident and Crisis Management capability exists at the airport
- Ensure that a viable and agreed Incident and Crisis Management plan is in place
- Identify potential risk to aviation fuel availability at the location
- Ensure that a CCT is available when necessary
- Ensure that CCT members are trained and are fully aware of their roles and responsibilities
- Ensure all essential data and information is up to date and is available for use on a 24/7 basis
- Obtain information from the Fuel Suppliers, Fuel Farm and Hydrant System Manager regarding supply and uplift
- Provide information to the airlines on fuel supply and allocations
- Obtain information from airlines regarding schedules, aircraft changes, flight cancellations, techstops, delays, etc.
- Analyse and process data to provide accurate information to the Fuel Suppliers, Fuel Farm and Hydrant Management, Airlines, AOC and IATA
- Be the central point of communications and decision making regarding fuel management during an incident / crisis
- Develop, communicate and oversee enforcement of fuel allocation Policy during an incident / crisis
- Advise individual airlines regarding allocations, over/under lift situations
- Help the Airport Management with drafting relevant NOTAMs and circulars

## 1.5. Identify Crisis Control Team Including Roles & Responsibilities

During a crisis the fuel-related Crisis Control Team (CCT) will report to the Crisis Manager. The role of the CCT must be to assess and manage effectively the actual and likely impact of a supply shortfall.

Key responsibilities of the CCT should include:

- Initial and on-going assessment of the situation by gathering and analysing the following information:
  - Supply and uplift data – in liaison with the Fuel Suppliers, Fuel Farm and Hydrant System Manager, Intoplane Service Providers
  - Supply and allocations - in liaison with airlines
  - Schedules, aircraft changes, flight cancellations, techstops, delays, etc. - from airlines
- Provide analysed and processed information to the Crisis Manager, Fuel Suppliers, Intoplane Service Providers, Fuel Farm and Hydrant Management, Airlines, AOC and IATA
- Assist the Crisis Manager in communications and help in the decision-making process regarding fuel management during an incident / crisis
- Assist the Crisis Manager to develop, communicate and oversee enforcement of fuel allocation policy during an incident / crisis
- Advise the Crisis Manager and individual airlines regarding allocations, over/under lift situations
- Help the Airport Management or other authority with drafting relevant NOTAMs

During the initial stages of an incident/crisis the communication channels would need to be open on a 24/7 basis. Hence the CCT would need to be staffed throughout such period.

Members of the CCT will be predefined as an outcome of the planning process and should be on secondment from the Airport, main base carriers and/or the Fuel Suppliers for the duration of the incident/crisis.

Based on past experience the CCT should comprise at least 4 team members out of which one person is predefined as the Crisis Leader. The team members must possess a mix of expertise, and good analytical and communication skills.

The CCT should be housed in a secure area of the airport but with easy access to the staff of the Fuel Suppliers, Intoplane Service Providers, Fuel Farm Manager, and operational staff of the airlines based at the airport.

The CCT should have all required resources including computers, Internet access, telecommunication, fax machines and printers.

## 1.6. Develop Communications Plan

The success of the ICMP will depend largely on good communication with all the key stakeholders. Hence, sufficient attention should be paid to this aspect of the plan.

Communication **MUST** commence as soon as a decision is taken to develop the plan. All stakeholders should be invited to participate in the selection of the Fuel Crisis Management Team and the Crisis Manager.

Transparent information should be provided to the key stakeholders on a regular basis and they should be consulted at different stages of the planning process.

During a crisis information should be shared among all stakeholders regarding the incident/crisis, action being taken to rectify the situation, improvements made and anticipated results.

Airlines should be informed of the fuel availability, allocations by category of flights and individual airline rations.

Responsibility for communications should rest with the Crisis Manager, who should use all available channels to disseminate information.

IATA Commercial Fuel Services should be informed on a regular basis so that IATA can provide the use of its communications network to reach the airlines at their Head Office Fuel Departments.

## 1.7. Identify Risk to Fuel Availability

A shortfall in aviation fuel at an airport could lead to a potential crisis. Given below are some of the more common causes resulting in the shortfall of available aviation fuel that have been observed in the past few years at various locations:

- supply shortfall
- storage Issues including contamination and damage to tanks
- power supply failure
- industrial action
- unplanned increase in demand

It is essential that a study be conducted at each airport to identify the risks involved and to take action to minimise the risks of occurrences of such disruptions. This study should consider not only the known and likely risks at the location but also review experiences at other locations.

Understanding of the issues will also allow development and implementation of alternative sources of supply to be utilised in the event of a disruption to normal

supply lines and distribution systems. It will also assist in the effective allocation of scarce resources to minimise and mitigate risks as well as provide a strong case for the 'transfer' of certain risks to those best placed to manage them (i.e. security of fuel facilities to government, etc)

Investment decisions on backup systems and increased capacity should be taken only after careful examination of all options and on the basis of a robust business case. All such information should be shared with the stakeholders, particularly the airlines, if the recovery of the cost of such investments is to be charged to the airlines.

## **1.8. Identify Definitions, Triggers and Indicators**

It is imperative that all stakeholders have a common and agreed understanding of what constitutes a fuel-related reportable occurrence, incident and crisis. Definitions should include what are the indicators and who is responsible for monitoring indicators that will provide the earliest possible warning of an occurrence, incident and/or crisis.

All stakeholders must also agree on action to be taken in each instance and to determine what specific events actually trigger action within the ICMP.

## **1.9. Essential Data and Information**

In order to develop a robust ICMP and to effectively implement such plan it is essential to obtain accurate and current data. Given below is a list of the most important information in this regard:

- Airline contact details in an emergency (Local/HQ)
- Airline schedules
- Uplift by carrier by season
- Uplift by carrier by sector length
- Intoplane service provider contact details
- Fuel supplier contact details (Local/HQ)
- Fuel supplier volumes
- Fuel supply lines, sources and volumes/day
- Airport Management Contact details
- List of alternate airports & Contact Details
  - Landing/takeoff and re-fuelling capability
  - Fuel Suppliers

It should be the responsibility of the Crisis Manager to ensure that this data is current and available for use at any given point in time.

## 1.10. Develop Stock Management plans & scenario

The objective of developing a Stock Management Plan is to define a range of stock to

- minimise risk of stocking out the airport and
- prevent a situation when fuel supply into the airport has to be curtailed while allowing the airlines to use maximum available fuel.

The stock level at an airport is affected by the supply as well as by the uplift. In a situation where the supply has been constrained it is essential to ensure that uplift is curtailed to match the supply.

In order to develop a robust Stock Management Plan it is necessary to analyse the risks attached to the existing supply line failures, lead times required to bring supply back to pre-existing levels and possible unplanned increases/decreases in uplift.

It is highly recommended that a full analysis be undertaken of each of these factors when developing the plan.

It is also recommended that minimum, maximum and target stock levels be defined, which will help better manage the situation.

**Minimum Stock Level** - is the stock level at which, if the supply and demand rates were to continue on their current trends for the remainder of the current allocation period, it would be reasonable to expect that the risk of a stockout at the airport would be unacceptably high.

**Maximum Stock Level** - is the stock level at which, if supply and demand rates were to continue on their current trends for the remainder of the current allocation period, it would be reasonable to expect that the risk of the airport needing to restrict incoming supply of aviation fuel would be unacceptably high.

**Target Stock Level** – is the level that should be the focus of the Stock Management Plan and should be maintained by regulating the uplift through the use of the allocation tables.

If the fuel-related incident is due to reduction in Storage Capacity resulting from contamination of tanks or damage or loss of capacity due to any other reason then it will be more appropriate to use just-in-time techniques in addition to rationing techniques for stock management.

### Management Process

In order to avoid reaching critical levels the supply and uplift must be monitored on a daily basis.

The Fuel Suppliers based on their contractual obligations would under normal circumstances, ensure that the total fuel requirement at an airport is available on a regular basis. During a shortfall, the Fuel Suppliers will endeavour to provide maximum possible fuel to the airport.

Hence, the controllable part of the Stock Management Process is the uplift, which should be regulated using the allocation tables.

Through proper planning and obtaining accurate data the short-term supply levels and demand can be forecast to a reasonable degree of accuracy. This will allow the Crisis Manager to provide information on airline-specific allocations with reasonable lead-time for the airlines to respond.

It is recommended, in the case of a crisis impacting over a longer time-frame, that airline-specific allocations be conveyed to the carrier allowing at least two working days for response.

However, if an adjustment is required on an urgent basis due to unplanned reductions in supply or for any other reason then the Fuel Farm Manager will inform the Crisis Manager who in turn will ensure that a NOTAM is issued to that effect.

In such event particularly if it involves a reduction in uplift, then the airlines MUST respond within 24 hours of the NOTAM.

### 1.11. Determine Entry and Exit points

It is vital to determine the level of fuel shortfall, which would trigger the implementation of fuel rationing at an airport. It is equally important to determine the exit point.

Some of the factors to be considered are:

**Percentage of total shortfall at the airport** – Based on the current aircraft fleet it has been identified that a longhaul flight under most conditions could perform a non-stop flight to its destination albeit with a payload restriction if around 92% of its total required fuel is available. Hence, it would be reasonable to consider a shortfall higher than 8% should trigger the implementation of allocations based on the agreed scheme.

At lower levels of fuel shortfall the allocation to carriers should reflect the percentage of fuel supply to the airport.

**A Limited Number of Suppliers having problems** – If a supplier or a few suppliers are faced with difficulties even though the total impact on the airport would be less than 8% it could affect some carriers significantly if the suppliers impacted are their sole suppliers at the location. If the remaining suppliers are unable to fill the gap then the community may wish to consider that such event should trigger the implementation of the allocation scheme.

Exit from the plan should be when the fuel supply is

- restored to normalcy on a consistent basis or
- at a level above the agreed minimum (i.e. 92%) on a consistent basis and the fuel suppliers have real opportunity to rectify the remaining issues or implement new infrastructure/services to ensure full supply of fuel in a short period of time.

In the case of a longer-term crisis consideration could be given to exit the plan at a certain point in time. However, in such event the airlines, the fuel suppliers and all other affected parties **MUST** be given adequate time to prepare for the change.

## 1.12. Develop Allocation Policy and Tables

The fuel suppliers are bound by their contracts with the airlines to supply the agreed quantity of on-specification fuel at the agreed location. Hence, any fuel allocation scheme has to be **VOLUNTARY** and should be seen as a commitment by the participating airlines to help alleviate the negative impact on customers and the airline community as a whole.

Hence, the key objectives of a fuel allocation policy should be to:

- Minimise the disruption to passengers
- Minimise the disruptions to airlines
- Minimise the operational disruptions at the airport
- Minimise the financial exposure equitably to all parties and to minimise the competitive disadvantage to any particular party or group, and
- In the event of minimum fuel availability, enable all aircraft to uplift sufficient fuel to depart from the airport concerned and travel to the nearest available airport.

In order to achieve the above objectives it is necessary to consider the impact of a fuel supply shortfall on different flight categories. The following is a guide on possible impact on flights by sector length.

### Shorthaul

- Cost of tankering
- Cost of delays due to de-icing
- Cost of de-icing
- Payload restrictions resulting in loss of revenue

## Longhaul

- Cost of tankering
- Cost of delays due to de-icing
- Cost of de-icing
- Payload restrictions resulting in loss of revenue
- Cost of techstops –
  - airport charges
  - handling costs
  - de-icing costs
  - crew costs
  - higher cost of fuel
- Cost of flight delays due techstops
- Impact on network – connecting flights being held or cost of missed connections
- Staff/Crew shortages

Consideration must also be given to the impact on network and non-network carriers.

The impact of delays on a network carrier will be significantly higher than it is on a point-to-point carrier.

If the disruption is of a longer-term nature special arrangements may need to be put in place to take account of the impact on the base carriers. The points to be considered include:

- Flights impacted as percentage of total flights of the base carrier
- Non-availability of fuel for tankering at other end (departure airport)
- Take-off weight restrictions at departure airport
- Landing weight restrictions and aircraft rotations
- Higher price of fuel at non-hub locations
- Impact of cancellations by base carrier on airport operations (this could be a critical issue at congested airports with limited parking bays)

Having considered all of the above and given that the allocation scheme requires all airlines to co-operate for it to succeed it is recommended that the allocation scheme be primarily based on sector length. The categories could be agreed as follows:

Shorthaul – flights time up to 2.5 hours  
Mediumhaul – between 2.51 and 6.00 hours  
Longhaul – between 6.01 and 10.00 hours  
Ultra Longhaul – 10.01 hours and above

Maximum effort should be made to ensure that airlines do not have to cancel flights on account of the fuel allocations and that all flights could operate without/minimum techstops. To achieve this objective ultra longhaul flights need to be provided maximum possible fuel and hence the shorthaul flights would need to maximise tankering.

While all attempts should be made to avoid differentiation between visiting and base carriers if

- the allocations are based on sector length with a higher proportion given to the longer flights,
- shortfall in fuel at the airport is significant and long-term,
- a base carrier has a large number of flights in the short- and mediumhaul categories and
- the base carrier requires more fuel than visiting carriers in the same band in view of issues related to financial viability,

then the Fuel Crisis Management Team should address specific requirements of each individual base carrier on a case-by-case basis. Any agreed adjustments must be included in the plan and communicated to all stakeholders.

### **Seasonality of Fuel Uplift**

Another key element in developing allocation schemes is to take account of the seasonal variations of fuel uplift that occur. These variations could be due to traffic patterns and/or climatic conditions.

While these variations could impact the total uplift at an airport the impact on individual airlines could also differ significantly.

Developing different allocation tables for the different seasons, particularly summer and winter, will facilitate maximum use of available supply to meet the requirements of individual airlines as it would allow for smoother stock management.

### **1.13. Define process to deal with exceptional cases**

A good allocation plan will endeavour to allow the use of maximum available fuel by the airlines. Hence there will be very limited margin for special treatment beyond the allocations already provided to individual airlines within the plan.

Therefore exceptional cases should be dealt with extreme care and in an equitable manner.

While it would be good if these extreme situations could be identified and the treatment of each agreed when developing the plans, it could be extremely difficult to anticipate all possible scenarios.

Therefore, the authority to deal with such situations should be vested to a team comprising the Crisis Manager, CCT and the AOC.

In this process any airline requiring additional fuel must address the matter via the Crisis Manager and/or the CCT.

The Crisis Manager/CCT together with the AOC will recommend appropriate action.

Any revision to allocations resulting from such intervention must be shown on the weekly/daily uplift data update with reasons for the change so that all carriers are aware.

Objections by other carriers, if any, should be referred via the Crisis Manager to the CCT for appropriate action.

If further mediation is required, the matter should be raised with the Fuel Crisis Management Team.

#### **1.14. Define Process to Handle Conflict**

There could be several reasons for conflict that could emerge during the application of any rationing scheme. Given that any aviation fuel allocation scheme at an airport is voluntary, it is essential that all parties work together to ensure success.

Therefore it is extremely important to have in place a conflict resolution process that is transparent and acceptable to all.

Aspects that could lead to conflict include:

- Issues related to the grouping of flights
- Overlift by some airlines
- Treatment of new/additional flights
- Disagreement over the period chosen to determine the airline specific allocations (Base Period/Base Week), etc.

In order to provide comfort to all airlines it is essential that the Crisis Manager, on behalf of the CCT, monitor compliance by all airlines.

If a deviation from allocation is noted then the matter must be brought to the attention of the airline and the AOC. It may be appropriate to agree on the amount or percentage of variation upon which action would be initiated, as it may be counterproductive to investigate minor differences.

The Crisis Manager together with the AOC will interview the representatives of the airline responsible for the deviation to understand the causes for non-compliance and agree on remedial action.

If the matter cannot be resolved at such discussions then it should be brought to the attention of the Fuel Crisis Management Team for a decision.

## **2. Training, Training Material and Testing**

To ensure that the plan can be put into action smoothly it is essential that all parties involved are fully aware of their roles, responsibilities and the key triggers and the responses required.

To achieve this level of proficiency it is highly recommended that training is undertaken for all team members that would take part in implementing the plan.

Given that most of the staff allocated to the CCT and probably even the Crisis Manager will be engaged in other duties in normal times, and may not be available to attend to crisis management at all times, it is also recommended to train more than just the required number and to have at least one back-up person for each function.

The training process should include a full understanding of

- i. the Incident and Crisis Management Plan (including contingency plans and management processes)
- ii. fuel allocation tables
- iii. contact details of all stakeholders
- iv. communications requirements

Once the plan has been developed, a simulation should be conducted to rehearse and validate the ICMP and to realistically analyse its impact and shortcomings. A range of shortfall in fuel availability and durations should be used in the simulations to understand the impact on carriers under the different scenario.

## **3. Crisis Management**

The Impacted Fuel Supplier(s) and/or the Fuel Farm Manager are responsible to advise on the nature, likely duration and severity of any fuel disruption affecting the airport.

Upon first knowledge of any potential fuel incident that may impact on supplies to aircraft refuelling at the airport such advice must be provided to the Crisis Manager as soon as information is available but no later than 2 hours following the incident.

The Crisis Manager together with the Impacted Fuel Supplier(s) and/or the Fuel Farm Manager will immediately assess the situation and decide whether to recommend implementation of the Airport Fuel Contingency Plan (the Plan).

## Stage 1

The Crisis Manager will advise the Operations Duty Manager (ODM) of the Airport of a potential fuel incident and the likely impact in terms of reduction of supply based on one or more of the following:

- Absolute fuel restrictions (daily volume)
- Rate of delivery (volume per hour)
- Terminal specific

The Crisis Manager will also advise if the Plan should be put into action.

Upon receipt of the request to implement the Plan, the ODM through the Airport Management will issue a NOTAM using the Aviation Information System (AIS) advising airlines that a fuel supply issue now exists.

A sample NOTAM may be based on the following

**"A fuel shortage now exists/is expected to occur at hh:mm at Airport (terminal):------. All inbound aircraft due to depart from (Terminals) should maximise tankering opportunities, and airlines should ensure all arriving aircraft have sufficient fuel onboard to depart from Airport:-----  
-----.**

**A further notice will be issued as required."**

The ODM will advise the Crisis Manager and the Fuel Farm Manager that **Stage 1** of the Plan has been implemented.

The Crisis Manager will activate the Crisis Control Team (CCT).

The Crisis Manager will ask the Intoplane Service Providers to prepare daily summaries of all airlines fuel uplifts and submit these to the CCT.

The Crisis Manager will inform the AOC and the AOC will call a meeting within 24 hours of the notification at which the Crisis Manager will provide details to the airline representatives.

The Crisis Manager will in parallel inform IATA Commercial Fuel Services of the relevant details so that IATA in turn will be able to inform airlines at their HQ level.

The Crisis Manager will inform all Ground Handling Companies of the situation to allow them to prepare for disruptions.

## Stage 2

Following an assessment of the situation by the Crisis Manager together with the Impacted Fuel Supplier(s) and/or the Fuel Farm Manager, the Crisis Manager will

advise whether the disruption is likely to be prolonged, and if so, recommend moving to **Stage 2** - actual fuel restrictions.

The Crisis Manager with input from Impacted Fuel Supplier(s) and/or the Fuel Farm Manager will inform the CCT of fuel availability in the form of a finite volume and/or a % of normal deliveries, as applicable.

The Crisis Manager will in parallel inform the AOC and IATA Commercial Fuel Services of the relevant details so that the AOC and IATA in turn will be able to inform their Members at the appropriate level.

The Crisis Manager will inform all Ground Handling Companies of the situation to allow them to prepare for disruptions.

The CCT will calculate the individual airline allocation based on the allocation tables and advise individual airlines accordingly. The allocation will be on a daily or weekly basis based on the length of the disruption.

In addition all airlines will be requested to:

- discontinue outbound tankering and
- continue to maximise inbound tankering opportunities.

The Crisis Manager/CCT will issue a notice using the NOTAM and AIS information systems, stating the basis of fuel restrictions, and the time of commencement.

Any airline that requires additional fuel due to unforeseen circumstances **MUST** apply to the CCT for special dispensation.

The CCT will respond to such requests as outlined in the process for dealing with extraordinary situations or as per the conflict resolution process as the case may be.

Airlines will be responsible for managing their allocation within the volumes allocated to them.

The Crisis Manager will ask the Intoplane Service Providers to prepare daily summaries of all airlines fuel uplifts and submit these to the CCT.

CCT will monitor fuel uplift by carrier and compare with allocations.

CCT will inform the individual carriers of any over-/underlift so that the airline could take corrective action.

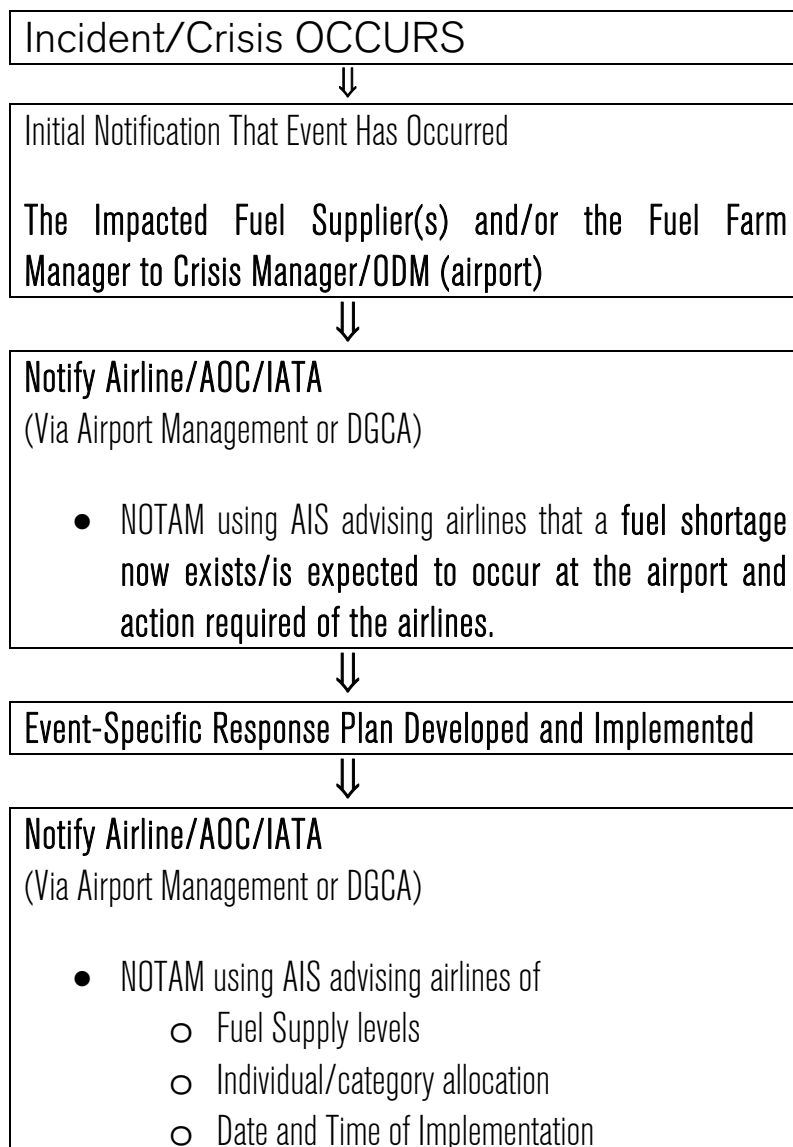
The Crisis Manager together with the AOC will call a meeting with the airlines within 3 days of implementing the Plan to provide an analysis of the situation and a short-term forecast. The meeting will be used also to obtain airline concerns for future planning.

The Crisis Manager will seek regular updates on fuel availability and the action being taken to rectify the situation from the Impacted Fuel Supplier(s) and/or the Fuel Farm Manager.

The Crisis Manager will provide these updates to the Airlines, AOC, IATA, Ground Handlers and other relevant parties.

If the shortfall is deemed to be a long-term issue the Crisis Manager will call a meeting of the Advisory Panel to agree future action.

**Communications flow:**



## 4. Recovery

When the Crisis Manager is confident that the pre-agreed exit point will be reached in a short period of time, such information should be provided to the Fuel Crisis Management Team.

The Fuel Crisis Management Team together with the Crisis Manager should agree a timetable for exit and inform all the key stakeholders.

A NOTAM should be issued to the airlines stating that

**Fuel Supply at Airport (terminal):-----has been/will be restored with effect from hh:mm and airlines are no longer required to tanker-in fuel.**

## 5. Review and Continual Improvement

Once the crisis has been overcome the Crisis Manager and the Fuel Crisis Management Team should undertake a thorough debrief. The purpose of this exercise should be to document the process that worked best and to identify areas that need change and/or improvement.

This is a critical but often neglected component of effective crisis management. It is essential for the on-going improvement of the ICMP to review any incident or crisis to capture lessons learnt and reflect these back into overall planning and procedures. The Review should follow a structured and deliberate process to ensure a broad, complete and open process with observations and recommendations widely communicated to all stakeholders.

Such information should then be shared with all the stakeholders and the Incident and Crisis Management Plan amended accordingly.

IATA Commercial Fuel Services should be informed so that such information could be shared with the entire industry and to help other airport locations.

IATA will amend the current Guidance material to reflect new information as and when appropriate, and issue revised versions of the document.

## **Annex 1 - An Example of an Allocation Table**

### **London Heathrow Allocation Tables - Summer 06**

It was agreed that in view of the significant variance in fuel demand between early and mid-late summer, the summer allocations should be managed as two separate periods in order to provide maximum fuel to the airlines.

The first period was selected as being from 27 March to 4 June 2006 and the base week for this period was agreed to be the week beginning 30 May 2005 (the peak demand week for that period based on historical data).

The second summer period was agreed as being from 5 June to end October 2006. The base week for this period was agreed as the week beginning 5 September 2005.

Actual uplift data for each base week was collated by the CCT for LHR, which was Heathrow Airport Ltd (HAL) Business Recovery Team. The total LHR fuel demand for summer 2006 was determined by HAL using projected traffic growth figures.

Any airline with a material change in operations in summer 2006 as opposed to summer 2005 was encouraged to use the mechanism provided to deal with exceptional cases by contacting HAL. HAL together with the AOC were to determine the necessary adjustments based on the merits of each case.

## Allocation Table London Heathrow Airport Early Summer 2006 (27 March to 4 June 2006)

Available supply (of Base week)	Available supply (millions litres/day)	Ultra Long haul supply	Long/Mid Base supply	Long/Mid Haul Visitor supply	Short haul Base supply	Short haul Visitor supply	Comment
Greater than %							
100%	20.1	100%	100%	100%	100%	100%	
98%	19.7	99%	98%	98%	96%	96%	
96%	19.3	98%	96%	96%	91%	91%	
94%	18.9	97%	94%	94%	87%	87%	
92%	18.5	96%	91%	91%	83%	83%	
90%	18.1	95%	89%	89%	78%	78%	
88%	17.7	94%	87%	87%	74%	74%	
86%	17.2	93%	85%	85%	69%	69%	
84%	16.8	92%	83%	83%	65%	65%	(a) no base carrier differential (b) ultra longhauls fixed at 92% (tech stop relief limit)
82%	16.4	92%	82%	82%	60%	55%	
80%	16.0	92%	80%	80%	55%	50%	
78%	15.6	92%	78%	78%	55%	40%	
76%	15.2	91%	78%	76%	55%	30%	
74%	14.8	88%	76%	72%	55%	30%	
72%	14.4	86%	75%	70%	50%	25%	no longer sustain ultra longhaul/base carrier disruption relief
70%	14.0	85%	73%	67%	45%	15%	
<p>For supply shortfalls below this :</p> <ol style="list-style-type: none"> <li>1 Max tanker all airlines with immediate effect</li> <li>2 Airlines to be prepared to reinstate tech stop &amp; cancellations</li> <li>3 Central Crisis Management Team to meet (IATA fuel Working Group to support CCMT ) to produce contingency measures for supply below this level.</li> </ol>							

**Allocation Table London Heathrow Airport  
Peak Summer 2006 (5 June to end October 2006)**

Available supply (of Base week)	Available supply (millions litres/day)	Ultra Long haul supply	Long/Mid Base supply	Long/Mid Haul Visitor supply	Short haul Base supply	Short haul Visitor supply	Comment
Greater than %							
100%	21.3	100%	100%	100%	100%	100%	
98%	20.8	99%	98%	98%	98%	96%	
96%	20.4	98%	96%	96%	96%	91%	
94%	20.0	97%	94%	94%	94%	87%	
92%	19.6	96%	91%	91%	91%	83%	
90%	19.1	95%	89%	89%	89%	78%	
88%	18.7	94%	87%	87%	87%	74%	
86%	18.3	93%	85%	85%	85%	69%	
84%	17.9	92%	83%	83%	83%	65%	(a) no base carrier differential (b) ultra longhauls fixed at 92% (tech stop relief limit)
82%	17.4	92%	82%	82%	82%	60%	
80%	17.0	92%	80%	80%	80%	55%	
78%	16.6	92%	78%	78%	78%	55%	
76%	16.2	91%	78%	76%	76%	55%	
74%	15.7	88%	76%	72%	72%	55%	
72%	15.3	86%	75%	70%	70%	50%	no longer sustain ultra longhaul/base carrier disruption relief
70%	14.9	85%	73%	67%	67%	45%	
<p>For supply shortfalls below this :</p> <ol style="list-style-type: none"> <li>1 Max tanker all airlines with immediate effect</li> <li>2 Airlines to be prepared to reinstate tech stop &amp; cancellations</li> <li>3 Central Crisis Management Team to meet (IATA fuel Working Group to support CCMT ) to produce contingency measures for supply below this level.</li> </ol>							

## Annex 2 – An example of a Fuel Stock Level Report from the Fuel Farm Operator to the Fuel Crisis Manager

### London Heathrow Airport – HHOpCo to HAL

Day	Date	IN	OUT	Closing Stock	Stock Change	Notes
Sa	10-Dec-05	19.3	20.7	39.5	0	Normal Day
Su	11-Dec-05	17.3	19.8	37.1	-2.5	Fire at Buncefield
Mo	12-Dec-05	15.4	18.1	34.4	-2.7	NOTAM 1 @ 11:32
Tu	13-Dec-05	13.8	15.3	32.9	-1.5	NOTAMs 2 & 3 @ 11:32 & 17:52
We	14-Dec-05	12.5	14.5	30.8	-2	
Th	15-Dec-05	17.2	14.9	33.1	2.3	
Fr	16-Dec-05	15.3	14.7	33.6	0.6	
Sa	17-Dec-05	15.7	15.9	33.5	-0.2	
Su	18-Dec-05	14.7	15.2	33	-0.5	
Mo	19-Dec-05	16.6	13.6	36	3	
Tu	20-Dec-05	14.9	14.3	36.6	0.6	
We	21-Dec-05	16.5	14.5	38.6	2	
Th	22-Dec-05	14.7	15.3	38.2	-0.6	
Fr	23-Dec-05	16.2	14.9	39.7	1.3	
Sa	24-Dec-05	13.3	14	38.9	-0.7	Christmas Eve
Su	25-Dec-05	14	11.8	41.1	2.2	Christmas
Mo	26-Dec-05	13.1	12.9	41.2	0.2	
Tu	27-Dec-05	14.9	14.6	41.2	0.3	
We	28-Dec-05	16.8	15.6	42.5	1.2	
Th	29-Dec-05	14	15.3	41.2	-1.3	
Fr	30-Dec-05	15.6	15	41.8	0.6	
Sa	31-Dec-05	14.9	15.2	41.5	0.3	NY Eve
Su	01-Jan-06	16	14.8	42.6	1.2	NY Day
Mo	02-Jan-06	14.6	15.6	41.5	-1	
Tu	03-Jan-06	12.8	16.3	38	-3.5	Nil train load!
We	04-Jan-06	12.8	15.9	35	-3.1	
Th	05-Jan-06	14.2	16.2	32.8	-2	
Fr	06-Jan-06	14	16.3	30.8	-2.3	
Sa	07-Jan-06	16.7	17.7	29.8	-1	
Su	08-Jan-06	14.8	17.7	26.9	-2.9	
Mo	09-Jan-06	16.6	15.8	27.7	0.8	
Tu	10-Jan-06	14.2	16.4	25.5	-2.2	
We	11-Jan-06	14.7	15	25.3	-0.3	Nil train load!
Th	12-Jan-06	14.6	12.8	23.6	-1.8	
Fr	13-Jan-06	16.3	14.6	25.2	1.7	
Sa	14-Jan-06	14.5	15.7	24	-1.2	
Su	15-Jan-06	15.5	15.7	23.8	-0.2	
Mo	16-Jan-06	16.6	14.3	26	2.3	
Tu	17-Jan-06	14.8	14.2	26.6	0.6	
We	18-Jan-06	14.2	15.6	28.0	1.4	
Th	19-Jan-06					
<p><b>Notes:</b> (1) All volumes are in millions of litres.  (2) In order to provide data as quickly as possible, recent days' figures are provided prior to reconciliation checks being performed and may be subject to minor change on the next working day.</p>						

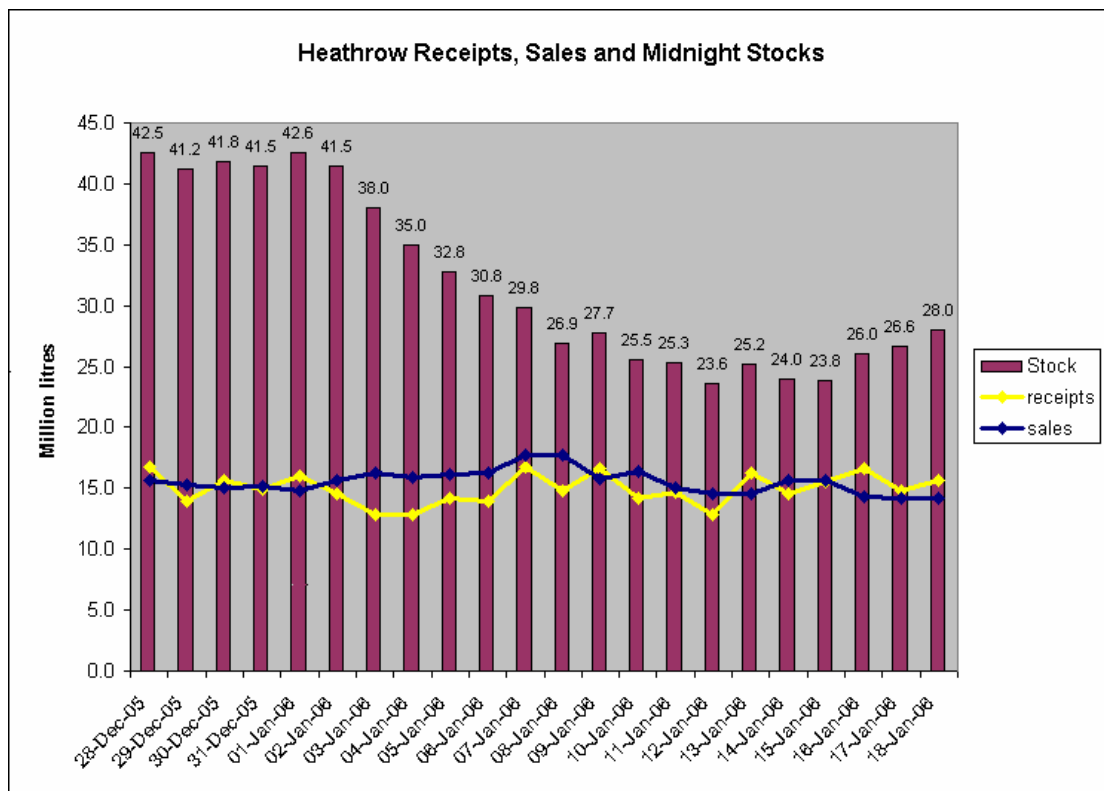
## Annex 3 – An example of a situation update from the Crisis Manager to the Airlines

### Fuel Update No. 02 (19 Jan 06) For Heathrow Airline Station Managers.

#### 1. Introduction

This is the second update on the Heathrow fuel situation which I hope you are finding useful. Your continued adherence to the recommended fuel uplift and tankering has now begun to stabilise stock levels once more although any return to giving fuel tech stop relief can only be given once the first road deliveries come on stream which is still expected to be the first week of February.

#### 2. Latest Position



#### 3. Future improvements to fuel supply

As stated in Update No 1 there are a number of improvements to the fuel supply underway which will improve the overall airport position. As the supply improves as these come on stream we will recycle the benefits in supply directly back to the airlines. These improvements are:-

- a) Creation of a road loading facility at Sandringham Road. This involves some complicated construction issues, changes in road layouts, pipework modifications, as well as adjustment to the airside/landside fence in order to create a safe and efficient operation. This facility will increase daily deliveries by about 1 million litres per day by the end of January/first week of Feb and will enable the alleviation of 50% of current fuel tech stops .(On target)

- b) By Late February, the capacity of the Sandringham Road facility will increase by about a further 1 million litres per day. This should result in the removal of all tech stops, plus a slight adjustment in the % for visiting long haul.(On target)
- c) Work is underway to provide a second daily train delivery, which is hoped to be in service by early March. Although the precise timetable is not confirmed, this will deliver about a further 1 million litres per day.
- d) The two redundant Esso tanks on the site of Terminal 5 Phase 2 are being recommissioned. This will enable the reconnection of the Buncefield supply and bring a further 2.75 million litres per day by end of March. This should allow the removal of the differential between visiting and base carriers and allow for significant improvements in the % for visiting short haul and moderate improvements for base and visiting long haul.

All of the above initiatives are our best estimate of how the coming weeks will pan out and I can assure you that both the oil companies and my own management team are working tirelessly to deliver these improvements fast.

#### **4. Updates on SIS**

A number of airlines have requested daily updates on the current stock levels and therefore it is our intention to publish these daily on SIS.

#### **5. Sharing of data**

All the data relating to fuel uplift is supplied directly to the Airside BRT by the refuelling companies. This data is then entered into a spreadsheet and is tracked by the airside BRT alongside the overall recommended uplift figure as set out in the original NOTAMs and previously communicated directly to each airline. On an ongoing basis we discuss with airlines their fuel uplift rates and in many cases have agreed variations to daily uplift rates set against overall weekly targets, some airlines are sharing their allowances with alliance partners. It has always been our intention to make this process completely transparent and we now have agreement from each of the six oil companies supplying Heathrow that we are able to share this data with the airlines. This information has been kept since the onset of the fuel difficulties and has already been shared with the AOC and will continue to be scrutinised by them; the spreadsheet is also available for Airline Station Management at the Airside BRT who, during office hours (Mon-Fri 0800-1700 local), will be happy to explain the content and how to interpret these results and to respond to any queries.

#### **6. ACL and slots**

Some of you have expressed concern that flight cancellations which have been necessary as a result of the fuel shortage could be taken into account in ongoing slot usage calculations. We have referred this matter to ACL for clarification and is clearly this is an abnormal situation and fuel difficulties should not contribute to these calculations under these circumstances. ACL agree and this is their response:

“Slot allocation and monitoring is undertaken by Airport Coordination Limited (ACL) in accordance with the EU Slot Regulation. ACL has issued a notice to all Heathrow airlines stating that it will consider cancellations made during the current Winter

2005/06 season due to the current fuel situation as 'force-majeure' under Article 10(4) of the EU Slot Regulation when applying the use-it-or-lose-it rule.”

We will continue to talk to ACL as the summer schedule approaches and keep them advised of how fuel restrictions are likely to look moving forward and request further statements should this be necessary.

## **Summary**

Whilst stocks have stabilised this week as a result of removing the fuel tech stop relief the situation remains fragile as any interruption to supply would quickly send us below the 20m ltrs minimum stock holding; ideally I would like to see us return to our more normal 40m ltrs which is 48 hours supply. As many of you know we are meeting again with IATA and airline representatives on Tuesday next week when will again appraise them of the ongoing fuel supply difficulties and discuss any ways of making this better.

Thanks again for the continued community support for the current arrangements, which can only work with your co operation and goodwill.

Please refer any questions on fuel in the first instance to the Airside Business Recovery Team on extn 57582.  
row

**Patrick Harkin on behalf of  
Mick Temple Managing Director HAL**



IATA welcomes your comments and feedback on this publication at:

Commercial Fuel Services  
International Air Transport Association  
33, Route de l' Aéroport  
P.O. Box 416  
1215 Geneva 15 Airport, Switzerland

Tel: + 41 (0) 22 770 28 89

Fax: + 41 (0) 22 770 26 89

Email: [subasinghl@iata.org](mailto:subasinghl@iata.org)

