

Supporting IRAM Implementation



Risk assessment of an SEVESO Establishment (results evaluation)



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23 – 24 March 2016 / Sarajevo, Bosnia and Herzegovina

IC1: Knowledge on the establishment

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The "Crop Nutria" Company is producing ammonia nitrate and other chemicals for plant nutrition. You have a good knowledge of the facility and calculated from the amount of dangerous chemicals in use that it is a Seveso establishment. All in all the amount of dangerous substances is more than tenfold of the threshold value for upper tier installations.

Score	Definition
1	-
2	Lower tier establishment with good knowledge of the facility
3	Lower tier establishment without good knowledge of the facility
4	-
5	Upper tier establishment with good knowledge of the facility
6	Upper tier establishment without good knowledge of the facility



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IC2: Dangerous substances

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amount of dangerous chemicals in use that it is a Seveso establishment. All in all the amount of dangerous substances is more than tenfold of the threshold value for upper tier installations.

Score	Definition
1	The sum of all ratios*) - related to Annex 1, column 2, of the Seveso II Directive - is > 1
2	The sum of all ratios*) - related to Annex 1, column 2, of the Seveso II Directive - is > 3
3	The sum of all ratios*) - related to Annex 1, column 2, of the Seveso II Directive - is > 5 or - related to Annex 1, column 3, of the Seveso II Directive - is > 0,75
4	The sum of all ratios*) - related to Annex 1, column 3, of the Seveso II Directive - is > 1
5	The sum of all ratios*) - related to Annex 1, column 3, of the Seveso II Directive - is > 10
6	The sum of all ratios*) - related to Annex 1, column 3, of the Seveso II Directive - is > 100
*) Ratios of the handled amounts (dangerous substances or categories of dangerous substances and mixtures) and limit values of part 1 and 2 of Annex 1	



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IC3: Organisation of damage limitation

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luckily only 300 m away from the facility. Unfortunately there are no trained fire men on the facility but the professional fire brigade from the municipality was able to stop the fire quickly. Because of the very good cooperation between the operator and the

Score	Definition
Lower tier establishments:	
1	Accredited plant fire brigade or professional fire brigade plus staff trained in fire fighting on the facility
2	Professional fire brigade or voluntary fire brigade plus staff trained in fire fighting on the facility
3	Voluntary fire brigade
Upper tier establishments:	
4	Accredited plant fire brigade
5	Professional fire brigade plus staff trained in fire fighting on the facility
6	Professional fire brigade or voluntary fire brigade



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IC4: Neighbourhood Seveso establishments or other facilities or conditions

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fire brigade there were no further injuries. Fortunately there are no other chemical installations in the neighbourhood that could have been affected by the explosion and fire or could cause danger to "Crop Nutria" on the other hand.

Score	Definition
Lower tier establishments:	
1	No domino establishment and no establishment with other facilities in the neighbourhood or conditions that can cause danger
2	Domino establishment with one neighbouring establishment or establishment with one other facility in the neighbourhood or one condition that can cause danger
3	Domino establishment with more than one neighbouring establishment or establishment with more than one other facility in the neighbourhood or more than one condition that can cause danger
Upper tier establishments:	
4	No domino establishment and no establishment with other facilities in the neighbourhood or conditions that can cause danger
5	Domino establishment with one neighbouring establishment or establishment with one other facility in the neighbourhood or one condition that can cause danger
6	Domino establishment with more than one neighbouring establishment or establishment with more than one other facility in the neighbourhood or more than one condition that can cause danger



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IC5: Sensitive objects and conditions in the neighbourhood

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caused no dead but 10 workers had to be brought to the nearby hospital that is luckily only 300 m away from the facility. Unfortunately there are no trained fire men

Score	Definition
Lower tier establishments:	
1	No sensitive objects or conditions at a distance <1000 m (for the substances acrolein, phosgene, hydrogen chloride und chlorine the distance is <1500 m)
2	No sensitive objects or conditions at a distance <200 m
3	Sensitive objects or conditions at a distance <200 m
Upper tier establishments:	
4	No sensitive objects or conditions at a distance <1000 m (for the substances acrolein, phosgene, hydrogen chloride und chlorine the distance is <1500 m)
5	No sensitive objects or conditions at a distance <500 m
6	Sensitive objects or conditions at a distance <500 m



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IC6: Process risks, complexity of installations

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As "Crop Nutria" is an establishment with only three safety relevant installations the facility is kept under surveillance by inspection walks of trained staff. Nevertheless,

Score	Definition
Lower tier establishments:	
1	Little need for installation specific control or surveillance or establishment with only one safety relevant installation
2	Moderate need for installation specific control or surveillance (in case of high automation level only 1 point) or establishment with 2 safety relevant installations
3	Much need for installation specific control or surveillance (in case of high automation level only 2 points) or establishment with more than 2 safety relevant installations
Upper tier establishments:	
4	Little need for installation specific control or surveillance or establishment with less than 4 safety relevant installations
5	Moderate need for installation specific control or surveillance (in case of high automation level only 4 points) or establishment with less than 9 safety relevant installations
6	Much need for installation specific control or surveillance (in case of high automation level only 5 points) or establishment with more than 8 safety relevant installations



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IC7: Detection systems for the prevention of accidents

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As "Crop Nutria" is an establishment with only three safety relevant installations the facility is kept under surveillance by inspection walks of trained staff. Nevertheless,

Score	Definition
Lower tier establishments:	
1	Automated systems or permanent manning or inspection walks of trained staff
2	Inspection walks of guard service
3	Not organized
Upper tier establishments:	
4	Automated systems or permanent manning
5	Inspection walks of trained staff
6	Inspection walks of guard service or not organized



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IC8: Serious complaints, serious accidents and near-misses, incidents and occurrences of non-compliance in the past

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facility is kept under surveillance by inspection walks of trained staff. Nevertheless, three years ago there was an explosion in the ammonia nitrate installation that caused no dead but 10 workers had to be brought to the nearby hospital that is

Score	Definition
Lower tier establishments:	
1	No serious complaints, serious accidents and near-misses, incidents and occurrences of non-compliance in the last five years
2	One serious complaint, serious accident or near-miss, incident or occurrences of non-compliance in the last five years
3	Several serious complaints, serious accidents or near-misses, incidents or occurrences of non-compliance or at least one mayor accident in the last five years
Upper tier establishments:	
4	No serious complaints, serious accidents and near-misses, incidents and occurrences of non-compliance in the last five years
5	One serious complaint, serious accident or near-miss, incident or occurrences of non-compliance in the last five years
6	Several serious complaints, serious accidents or near-misses, incidents or occurrences of non-compliance or at least one mayor accident in the last five years



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OPC1: Control of incidents, near misses and accidents by the operator

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the fire quickly. Because of the very good cooperation between the operator and the fire brigade there were no further injuries. Fortunately there are no other chemical

Score	Definition
-1	Ideal control of incidents, near misses and accidents in the last five years or there were no
0	Control of incidents, near misses and accidents caused official letters, deficits were corrected
+1	Control of incidents, near misses and accidents need a strong guidance by the competent authority



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OPC2: Required records and documents based on the Seveso II Directive

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under EMAS and that not all relevant documents needed for major accident prevention and control were available but you only discovered one relevant breach of

Score	Definition
-1	All records and documents are available and they don't have significant deficits
0	All records and documents are available but they have some significant deficits
+1	Not all records and documents are available; there is a lack of some import documents.



OPC3: Results and assessment of previous inspections

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prevention and control were available but you only discovered one relevant breach of the operator obligations. Besides the remediation of the adverse effects from the

Score	Definition
-1	Up to 5 deficits but no significant breach of operator obligations
0	Up to 10 deficits or one significant breach of operator obligations
+1	More than 10 deficits or more than one significant breach of operator obligations



OPC4: Attitude of the operator

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the case of non-compliance. As you heard after some time that nothing had happened you sent a warning letter to put some pressure on the operator. After that the operator met his obligations.

Score	Definition
-1	Immediate remedial actions (without warning letter)
0	Remedial actions after warning letter
+1	Repeated warning letters necessary or remedial actions only after administrative enforcement



OPC5: Participation of the operator in the EMAS

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As you examined the accident on site you noticed that the facility is not certified under EMAS and that not all relevant documents needed for major accident

Score	Definition
-1	The establishment is certified according to the eco-management and audit scheme (EMAS), pursuant to Regulation (EC) No 1221/2009 of the European Parliament and of the Council
0	The establishment is not certified according to the eco-management and audit scheme (EMAS), pursuant to Regulation (EC) No 1221/2009 of the European Parliament and of the Council



Risk ranking number

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66555544

Did you get this number?
..... then you are the
best !

