

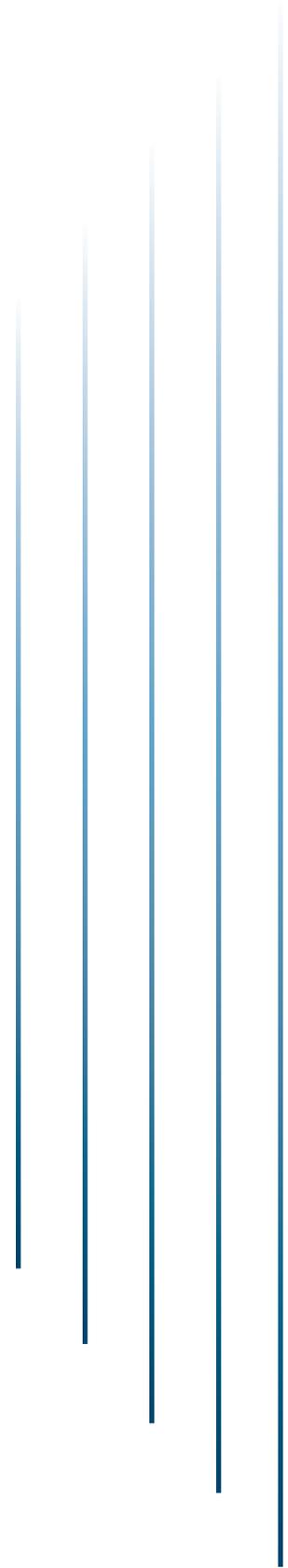


2008/2009

Oil and Gas Commission

Field Inspection Annual Report

November 2009



Role of the British Columbia Oil and Gas Commission

The British Columbia Oil and Gas Commission (Commission) is an independent, single-window regulatory agency with responsibilities for overseeing oil and gas exploration, development, operation, transportation, and site reclamation. Created as a Crown Corporation through the enactment of the *Oil and Gas Commission Act*, the Commission was granted responsibility for administering portions of the following enactments as they apply to the regulation of oil and gas activity or pipelines:

- *Petroleum and Natural Gas Act*
- *Pipeline Act*
- *Forest Act*
- *Forest Practices Code Of B.C. Act*
- *Heritage Conservation Act*
- *Land Act*
- *Environmental Management Act*
- *Water Act*

The Commission also has limited decision-making and enforcement authority under the *Agricultural Land Commission Act* through a Delegation Agreement with the Agricultural Land Commission.

As a Crown Corporation, the Commission's accountabilities extend to affected communities, First Nations, client companies, and their representative associations. Among its more specific objectives are public safety, conservation of petroleum resources, fostering a healthy environment, and ensuring equitable participation in petroleum and natural gas production. The Commission's core roles include:

- Assessing applications for oil and gas activities, and issuing approvals when appropriate;
- Actively consulting with First Nations on applications and operations; and,
- Ensuring industry compliance with legislative, regulatory and permit-specific requirements, in part through inspections and other monitoring and enforcement activities.

The Commission operates out of four locations: Fort St. John, Fort Nelson, Dawson Creek, and Victoria.



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1.0 About the Field Inspection Annual Report

This Field Inspection Annual Report (Report) provides insight into industry compliance within the scope of oil and gas activity in British Columbia. Regulations and requirements have been established surrounding public safety, protection of the environment, accurate product measurement and responsible reservoir management. These mandates are in place to support safe processes and to reinforce best practices in the Province's oil and gas industry. This Report provides a summary of inspections performed, compliance and enforcement actions undertaken by Commission staff, and an overview of reported incidents and complaints received between April 1, 2008 and March 31, 2009.

The Report summarizes and analyzes the Commission's role in regards to:

- Inspections,
- Compliance actions,
- Enforcement actions,
- Incidents, and
- Complaints.

Commission inspectors undertake reviews generated by risk modeling; complaints; incidents; and government agency, First Nations or public requests to ensure that operators are in compliance with all applicable legislation, standards, and approval conditions. The Commission's inspection process and records are discussed in section 3.0 of this Report.

As with other industries, incidents can occur during oil and gas activities that may affect public health and safety and/or the environment. The Commission conducts compliance inspections as a preventative measure, mitigating the possibility of such incidents. A summary of incidents reported and a comparison with previous fiscal year incident totals is provided in section 4.0 of this Report.

Public complaints are a priority of the Commission. The Commission's goal is to respond to every complaint within 24 hours, and emergency situations as soon as possible. Complaints received from the public in relation to oil and gas activities are summarized in section 5.0 of this Report.

If an operator fails to meet requirements or follow Commission direction, the operator may be subject to measures imposed by Commission enforcement officers or their counterparts within other authorities and arms of government. The Commission's enforcement process and a summary of enforcement actions are discussed in section 6.0 of this Report.

2.0 Industry Snapshot

Activity levels for the 2008/09 fiscal year were comparable to activity levels experienced in the previous fiscal year. As shown in Table 1 and Figure 1, activity levels in 2008/09 declined significantly over the peak activity shown in the

2005/2006 fiscal year. However, despite the annual fluctuations in oil and gas activity, the total inventory of oil and gas installations that must be regulated by the Commission continues

Activity Type	2005/2006	2006/2007	2007/2008	2008/2009
Wells Drilled	1465	1049	842	845
Pipeline km Built	2054	1810	1268	1315
Geophysical Exploration Programs	275	186	89	45
Site Inspections Performed	4361	4124	4426	4359

Table 1: Oil and Gas Activity Overview

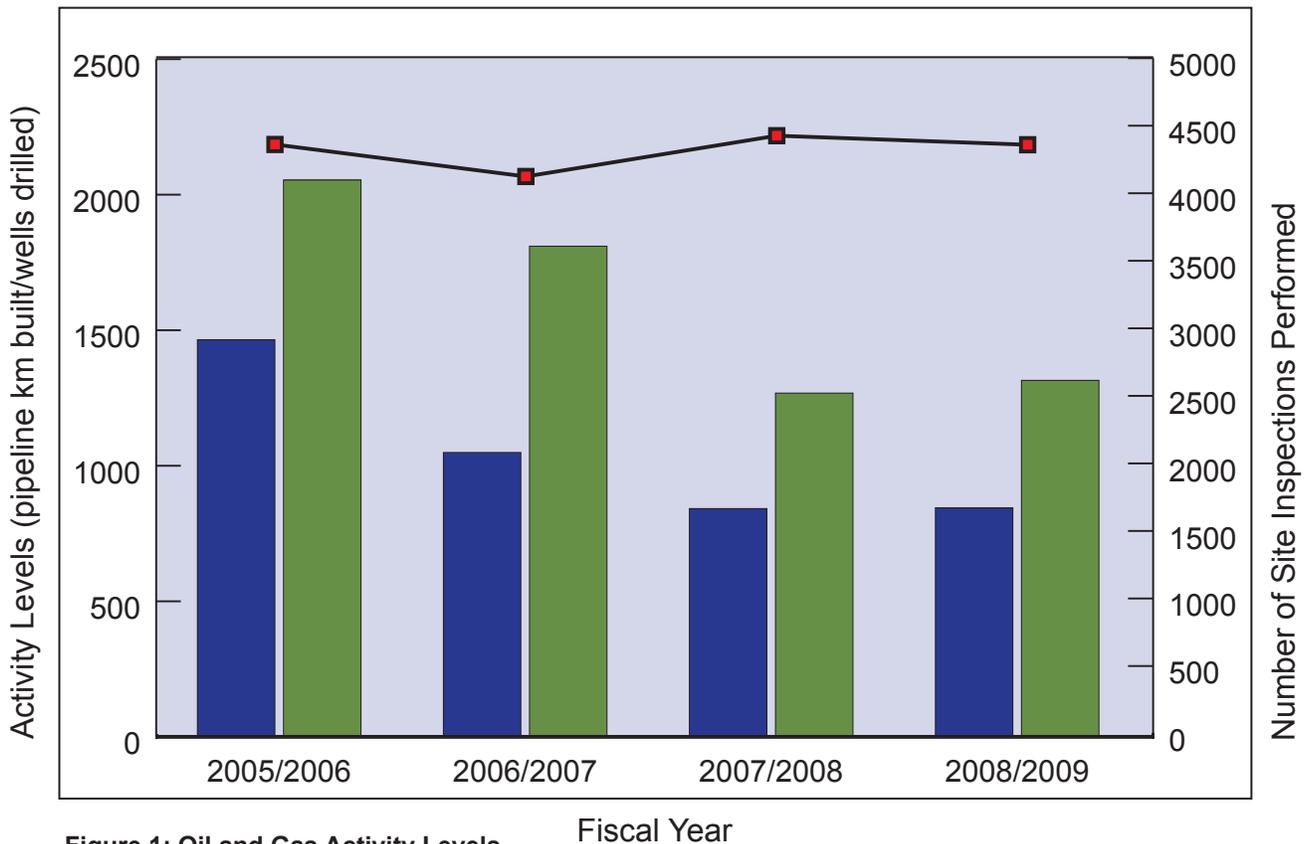
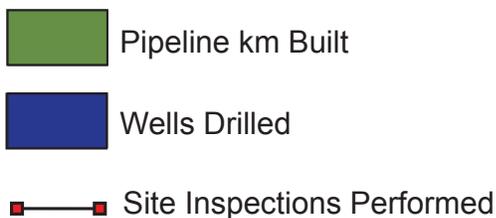


Figure 1: Oil and Gas Activity Levels



to increase. Therefore the Commission’s commitment to inspecting oil and gas activities has remained constant over this time period.

Over the 2008/09 fiscal year, oil and gas operators drilled a total of 845 wells, resulting in an inventory of nearly 21000 wells. Also constructed were 1315 kms of pipeline, increasing the network regulated by the Commission to over 35000 kms.

There were 45 geophysical programs active over the same fiscal year, a significant decline from activity experienced in previous years.

3.0 Inspection Process Overview

The Commission’s 2009/10 – 2011/12 Service Plan is composed of five organizational goals. The first goal states, “The Commission protects the interests of the people of British Columbia” through the following objectives:

- Maintaining public safety and safety of operations;
- Minimizing potential for negative environmental effects from oil and gas activities; and
- Ensuring optimal recovery of oil and gas resources over time.

Improving and ensuring industry compliance is the foundation for achieving this goal and its associated objectives. The Commission’s inspection process ensures oil and gas operators are meeting regulatory requirements and are actively

managing apparent risks. The Commission has also established a Memorandum of Understanding with the former Ministry of Small Business and Revenue (now with Ministry of Finance), ensuring efficient and effective product measurement practices are utilized. Proficient product measurement ensures the Province receives the required revenues and royalties from petroleum and natural gas resource extraction.

Regulatory compliance commences as soon as an application for industrial activity is submitted. Prior to any industrial activity taking place, applications are reviewed to ensure consistency with legislative requirements and to ensure stakeholders concerns have been appropriately considered. During project reviews, modifications to an application may be requested by the Commission based on First Nation consultation, landowner concerns, or technical assessment results.

Once an application is approved and construction activity commences, the Commission's inspection staff monitors regulatory compliance. The Commission utilizes a risk-based inspection model as its primary method of prioritizing and allocating site inspection resources. To ensure the highest risk sites are inspected, annual computer modeling iterations rank sites based upon:

- History of operator compliance – the record of unsatisfactory inspections, incidents and received complaints;
- Site sensitivity – the proximity of the site to residents and sensitive environment; and
- Inherent risk - considers the likelihood of an incident occurring along with the probable consequences if one were to occur.

Site inspections are also triggered through public requests and complaints, as a result of reported incidents, and during the application approval

process. An overview of the inspection process is outlined in Figure 2.

Commission inspectors conduct site inspections and enter their findings into the Commission database. Depending on the severity and situation, deficiencies are communicated to the operator during the inspection or upon the inspector's return to the office. Operators are required to correct any identified deficiencies based upon the correction timeframes outlined in section 3.1 (Table 2) of this Report. If the operator meets correction timeframes, the site is deemed to be in compliance.

Deficiencies identified through field inspections are not subject to formal investigation and due process, therefore, operators are not immediately confirmed to be in non-compliance. The Commission's field inspection process provides the operator an opportunity to work towards compliance. Where the Commission deems the operator is not achieving or not likely to achieve acceptable compliance, the operator is then subject to the more formal enforcement process. In situations where deficiencies are not corrected in the allotted timeframe, Commission inspectors distribute a second inspection report to the operator. If this escalated communication does not correct the deficiency, the inspection file is forwarded to Commission enforcement officers to investigate and potentially employ enforcement actions. Commission enforcement activities are discussed in section 6.0 of this Report.

Site inspection results are incorporated into evolving iterations of the Commission's risk based inspection model. Therefore, sites associated with higher deficiency rates are assigned higher risk values; those sites have a higher probability of being selected for inspection in the subsequent iteration of the risk based inspection model.

3.1 Deficiency Rankings

The Commission uses the terms minor, major and serious to describe deficiencies identified during site inspections and employs deficiency timelines dependent on severity. Once an item is recorded as deficient during a site inspection, it factors into the behavioral risk assessment of the

Commission’s risk based inspection model. If an operator corrects all deficiencies identified at a site within the allotted timeframe, the site is determined to be satisfactory from a compliance perspective. Table 2 provides examples of deficiency rankings and their definitions, used throughout this Report.

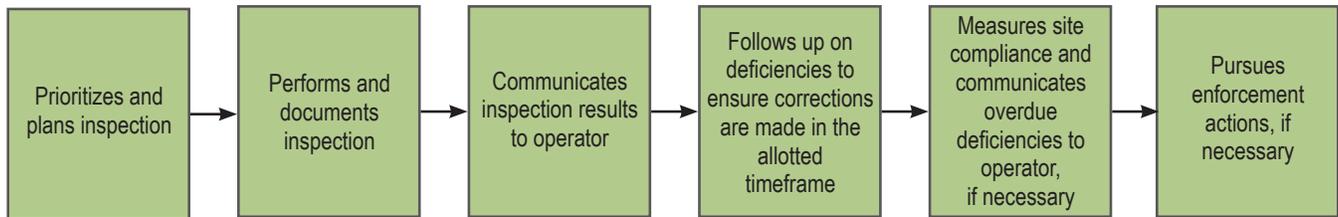


Figure 2: Commission Inspection Process

Ranking	Definition	Correction Time Period
Minor	A regulation or requirement is not met, but results in no direct threat to the public and/or the environment and does not adversely affect oil and gas operations.	There is a 30-day action timeline to rectify the situation. A site with a minor deficiency outstanding at the conclusion of this 30-day period is deemed to be in non-compliance.
	<ul style="list-style-type: none"> • Pipeline signage missing, defaced, or incorrect information displayed • Garbage and debris not stored in a reasonable manner at an oil and gas facility • Metre calibrations not completed at an oil and gas facility 	
Major	A regulation or requirement is not met, having the potential to cause an adverse impact to the public and/or the environment.	There is a 2 week action timeline to rectify the situation. A site with a major deficiency outstanding at the conclusion of this 2 week period is deemed to be in non-compliance.
	<ul style="list-style-type: none"> • Fluid leaking or improperly disposed of • Out of date Emergency Response Plan • Activities not in accordance with approval or licence conditions 	
Serious	A regulation or requirement is not met, causing or having the potential to cause a significant impact to the public and/or the environment.	There is a 24-hour action timeline to rectify the situation. A site with a serious deficiency outstanding at the conclusion of this 24-hour period is deemed to be in non-compliance.
	<ul style="list-style-type: none"> • Equipment located at an insufficient distance from an operating well • Conducting an activity without an approval where an approval is required • Hydrogen sulphide detected on lease and right of way 	

Table 2: Deficiency Rankings

3.2 Site Inspection Statistics

During the 2008/09 fiscal year, Commission inspectors completed a total of 4359 oil and gas operation site inspections. The distribution of these site inspections (and site inspections where deficiencies identified were overdue) are summarized by oil and gas activity categories and deficiency ranking in Table 3. Sites with multiple overdue deficiencies are reported only once in the highest deficiency ranking category.

For the purposes of Table 3, an inspected site is deemed to be in compliance if the inspection finds no deficiencies, or if all identified deficiencies are corrected in the allotted timeframe.

Inspection results summarized in Table 3 are comparable to inspection results reported by the Alberta Energy Resources Conservation Board (ERCB) in 2008. The ERCB reports a compliance record of 76.5% satisfactory site inspections, comparable to the 74.1% (3229/4359) observed in British Columbia by the Commission. The overall percentage of high risk non-compliances for the ERCB was 2.0% in 2008, compared to the 3.4% (148/4359) rate of serious overdue deficiencies reported by the Commission in the 2008/09 fiscal year.

Category	Site Inspections				
	Site Inspections Completed	Compliant Site Inspections	Sites with Serious Deficiencies Overdue	Sites with Major Deficiencies Overdue	Sites with Minor Deficiencies Overdue
Well Sites Under Construction	60	43	1	14	2
Drilling/Service Rigs	87	66	7	13	1
Wells - Active	2011	1389	90	500	32
Wells - Inactive or Suspended	1316	1144	9	132	31
Wells - Post Production	141	115	2	17	7
Pipelines	174	147	4	19	4
Geophysical	19	18	0	1	0
Facilities	361	183	23	152	3
Measurement	33	16	1	16	0
Roads	11	7	3	1	0
Other	146	101	8	34	3
Total	4359	3229	148	899	83

Table 3: Commission Inspection Distribution Statistics

Due to the way deficiency information is collected and summarized in Table 3, the overall rate of industry compliance cannot be inferred from the percentage of sites without deficiencies. That percentage will tend to understate actual compliance rates for the following reasons:

- The risk based process for deploying inspections selects sites with a higher probability of deficiencies (especially higher ranking deficiencies) as compared to a random sample; and
- The deficiency data is summarized at the site level, causing sites with deficiencies to be statistically over-weighted and sites without deficiencies to be statistically under-weighted. A site without deficiencies would have to be compliant on multiple items yet it only counts as one compliant site. Conversely, sites with deficiencies will have multiple compliant items that are given no statistical credit.

3.3 Proactively Managing Towards Compliance

Through regular communication with industry, the Commission is able to maintain dialogue on compliance performance with oil and gas operators.

This feedback provides both the Commission and industry with an overview of site inspection activity, awareness of performance, and a comprehension of oil and gas operator success in managing towards compliance.

Maintaining continued dialogue with operators assists in proactively managing their compliance levels moving forward. Performance levels may be communicated on sites where:

- the site was inspected and no deficiencies were identified;
- the site was inspected and deficiencies identified were scheduled for correction in the allotted time period; or
- the site was inspected and deficiencies identified were corrected.

Compliance rates are noted by comparing the ratio of sites inspected in compliance to the total number of sites inspected. Compliance values were reported in the Commission’s 2008/09 Annual Service Plan Report.

4.0 Incidents

When the Commission receives notification of an incident report, it is communicated to the

Inspection Type	2006/2007	2007/2008	2008/2009
Wells Drilled	1049	842	845
Drilling Rig Inspections	64	50	75
Service Rig Inspections	24	5	12
Kicks Reported	40	33	63
Blowouts Reported	0	1	2

Table 4: Drilling and Service Rig Inspection Activity

appropriate Division in order to perform a root cause analysis. In some cases, the Commission may send out an inspector or engineer to further investigate the site to ensure operator compliance with regulations or Commission requirements. The information gathered is reviewed to ascertain a possible cause, identify any corrective actions, equipment enhancements, or changes to industry best management practices that may need to be implemented to mitigate similar future occurrences.

Depending on the level of incident, the Commission may:

- activate its Emergency Management Plan (EMP);
- dispatch an inspector to the site to aid the operator in dealing with the incident;
- ensure the operator is doing everything necessary to control the incident, protect public health and safety, and the environment; and
- investigate operator compliance with regulations or Commission requirements.

The receipt of any drilling reports from industry are provided to the Commission's Engineering Division. All incident information, investigation and analysis reports are reviewed, providing a cumulative awareness and understanding of drilling operation and equipment needs in specific geological formations. This knowledge enables the Commission to:

- monitor industry to ensure that all necessary safety equipment and processes are in place to protect the health and safety of the public and environment;
- assist in the development of better prevention programs and processes;
- assist in the development of improved equipment requirements; and
- share information extensively.

Like most industries, incidents can occur in the oil and gas industry that may affect public health and safety and/or the environment. The Commission conducts compliance inspections to help mitigate the possibility of incidents occurring in the oil and gas industry. Should an incident occur, the Commission works with the Provincial Emergency Preparedness (PEP) program and other authorities to rectify incidents in a swift and efficient manner.

The severity of an incident or event is measured taking into account the potential for impact to people and/or the environment. Incidents are ranked in one of the three categories summarized in Table 5.

Action plans associated with these incidents are provided in Appendix A. In addition to these action plans, a corporate-level Emergency Response Plan (ERP) must also define appropriate actions, including public protection measures that the licensee takes at each level of emergency. In the event that an operator's ranking of an event is not consistent with the Commission's assessment, the Commission can instruct the operator to reconcile their assessment to match that of the Commission.

Under an agreement between PEP and the Commission, PEP serves as the one reporting contact for all spills and emergencies reported by industry or when the public calls in a complaint. The Commission has established an On-Duty Incident Commander (ODIC) program which ensures an inspector is available at all times to receive calls from PEP or the public when an emergency is reported.

The ODIC confirms the level and seriousness of the emergency or complaint and determines the appropriate level of response by Commission personnel. If the incident is one where public safety is threatened or there is cause for environmental concern, the Commission will enact

Incident Level	Description
Level 1	An emergency in which there is no immediate danger to public or environment as no H ₂ S has been released. The release of other substances is confined to the lease or the operator's property. The emergency has low potential for it to escalate and is handled by operator personnel.
Level 2	An emergency in which there is a <i>potential</i> for risk to the public or environment, as the emergency could extend beyond the operator's property. The control of the hazardous substance is still possible. The emergency may require the involvement of external emergency services, federal, provincial or local agencies.
Level 3	An emergency where there exists an <i>immediate</i> danger to the public or environment. There is an uncontrolled release of hazardous substance and there is extensive involvement of external emergency services, federal and/or provincial agencies. The emergency extends beyond the operator's property.

Table 5: Incident Categorization

its Emergency Management Plan (EMP). EMP personnel are trained in the Incident Command System and ensure that the operator responsible for the emergency is taking all steps necessary to protect public safety and the environment.

4.1 Incident Statistics

Over the 2008/09 fiscal year, 418 incidents were reported to the Commission representing a 5% decrease in incidents reported compared to 2007/08. The distribution of these incidents amongst the various levels, and a comparison to previous years, is provided in Table 6.

Figure 3 categorizes the Level 2 incidents reported during the 2008/09 fiscal year (49 incidents). Level 2 incidents result in investigations performed by Commission inspection staff to determine the cause of the Level 2 incidents. These incidents were caused by factors such as pipeline corrosion, geological conditions, manufacturing defects, human error, and equipment failure (summarized in Table 7).

Summaries of the Level 3 events reported during 2008/09 are provided in Table 8. In all cases, these incidents were confined to the industrial site. No danger was posed to the general public and emergency systems performed as designed.

Incident Level	2006/2007	2007/2008	2008/2009
Level 1	268	349	361
Level 2	32	82	49
Level 3	2	10	8
Total	302	441	418

Table 6: Incident Summary

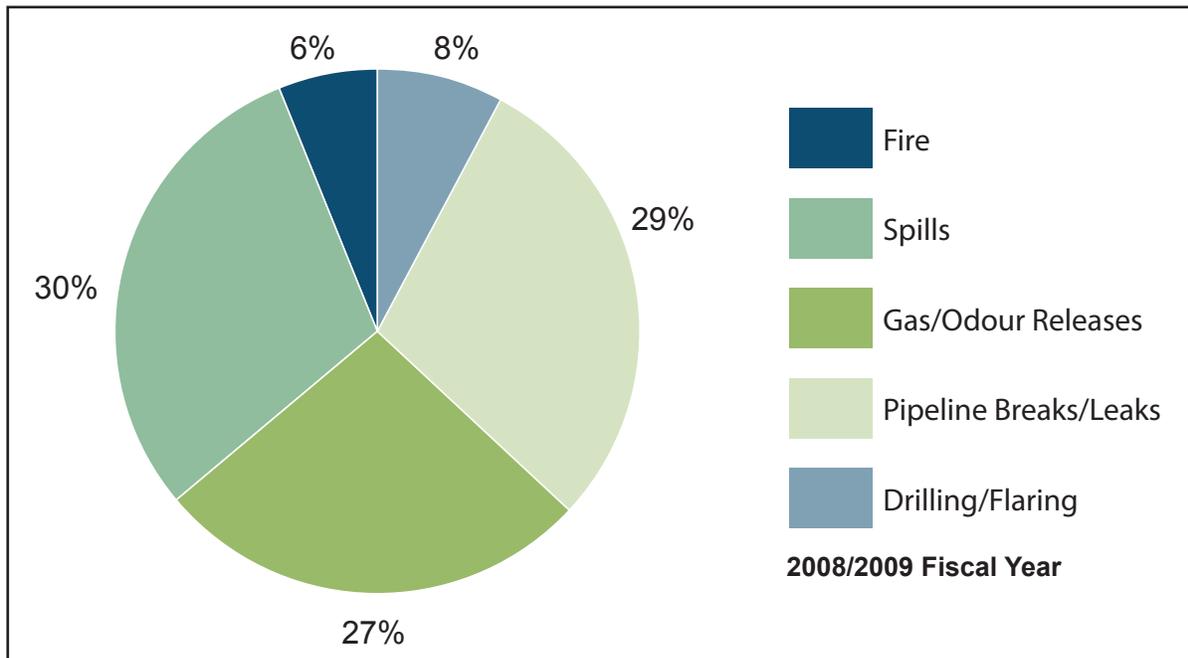


Figure 3: Level 2 Incident Category Breakdown

Level 2 Cause Category	Quantity
Pipeline Corrosion	5
Over Pressurized Equipment	4
Geologic Factors	5
Human Error	11
Equipment Failure	15
Other/Unknown Factors	9
Total	49

Table 7: Causes of Level 2 Incidents

Field	Incident Type	Cause
Cecil Lake	Grass Fire	Ember from flare stack caused a grass fire
Brassey	Fire	Uncontrolled kick resulting in uncontrolled rig fire
Bissette	Pipeline Leak	Explosion caused by pipeline vandalism
Sundown	Gas Release	Uncontrolled sweet gas kick while tripping out during drilling/completion
Swan Lake	Gas Release	Fracking caused sand to destroy choke on wellhead
Buick Creek	Gas Release	Line to fuel gas separator was over-pressurized leading to failure of the check valve and small release of gas
Julienne Creek	Gas Release	Well separated from casing causing blowout of gas and water
Huntington	Gas Release	Crew hit a fitting while working on a line

Table 8: Level 3 Event Summary

5.0 Complaints

The Commission recognizes there will be public concerns associated with industrial development and commits to identifying these areas and to providing information in a proactive way. The Commission's goal is to respond to every complaint and emergency situation as soon as possible. To better understand and respond to concerns, the Commission tracks the number and type of public complaints and responds to each one.

5.1 Complaint Statistics

Over the 2008/09 fiscal year, the Commission received and responded to 190 complaints. Since some complaints recorded more than one concern, the Commission identified 237 issues associated with the 190 complaints. Total complaints and issues received over the past three fiscal years are displayed in Figure 4.

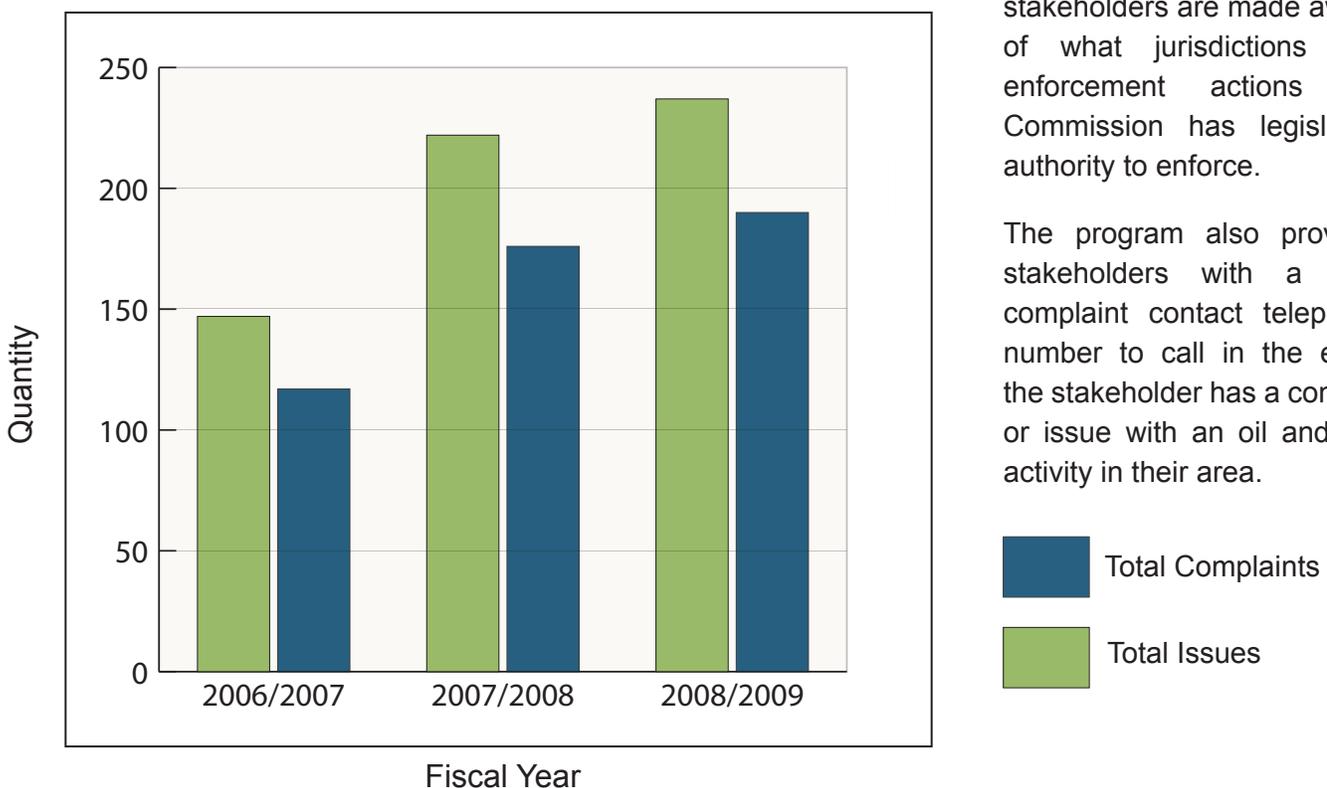
The Commission receives public complaints on a variety of issues. These issues have been categorized into complaints concerning the Agricultural Land Reserve (ALR), odours (H₂S), spills, noise, and land (damage to property, cleanup deficiencies, access issues, dust, and impacts on surrounding activities). Table 9 summarizes the different types of complaints received over the 2008/09 fiscal year and compares these values to past fiscal years.

Figure 4 illustrates an increase in recorded complaints and associated issues over the past three years. This increase may be attributed to increased stakeholder knowledge and awareness achieved through the Commission's Community Awareness Meeting (CAM) program. The program provides local government, stakeholders, First Nations and landowners with a better understanding of the Commission and its role in regulating oil and gas activities and industry in British Columbia.

Through the CAM program, stakeholders are made aware of what jurisdictions and enforcement actions the Commission has legislative authority to enforce.

The program also provides stakeholders with a 24/7 complaint contact telephone number to call in the event the stakeholder has a concern or issue with an oil and gas activity in their area.

Figure 4: Complaint and Compliant Issue Totals



Odour issues were the largest source of public complaints. Figure 5 summarizes complaint issues as a percentage of total issues.

The Commission has embarked on initiatives to address some of the complaint issues identified in Figure 5. In March 2009, the Commission released the British Columbia Noise Control Best Practices Guideline which outlines best practices for permissible sound levels, noise impact assessments, and noise management plans.

Fiscal Year	2006-2007	2007-2008	2008-2009
Total Complaints	117	176	190
Total Issues	147	222	237
Breakdown			
ALR Issues	20	44	51
Odour Issues	51	73	109
Spill Issues	6	17	13
Noise Issues	6	8	12
Land Issues	54	51	28
Other Issues	10	29	24

Table 9: Complaint Summary

The Commission also established the Flaring, Incinerating and Venting Reduction Guideline for British Columbia in 2008 to help achieve reduction targets outlined in the British Columbia Energy Plan and the World Bank led Global Flaring Reduction Partnership “Voluntary Standard” for flaring reduction .

To address land concerns, the Commission released the 2008 Annual Site Restoration Report in July 2009 and participated in British Columbia Forest Practices Board audits concerning oil and gas activities within the ALR and forest and range practices within the Kiskatinaw River watershed near Dawson Creek.

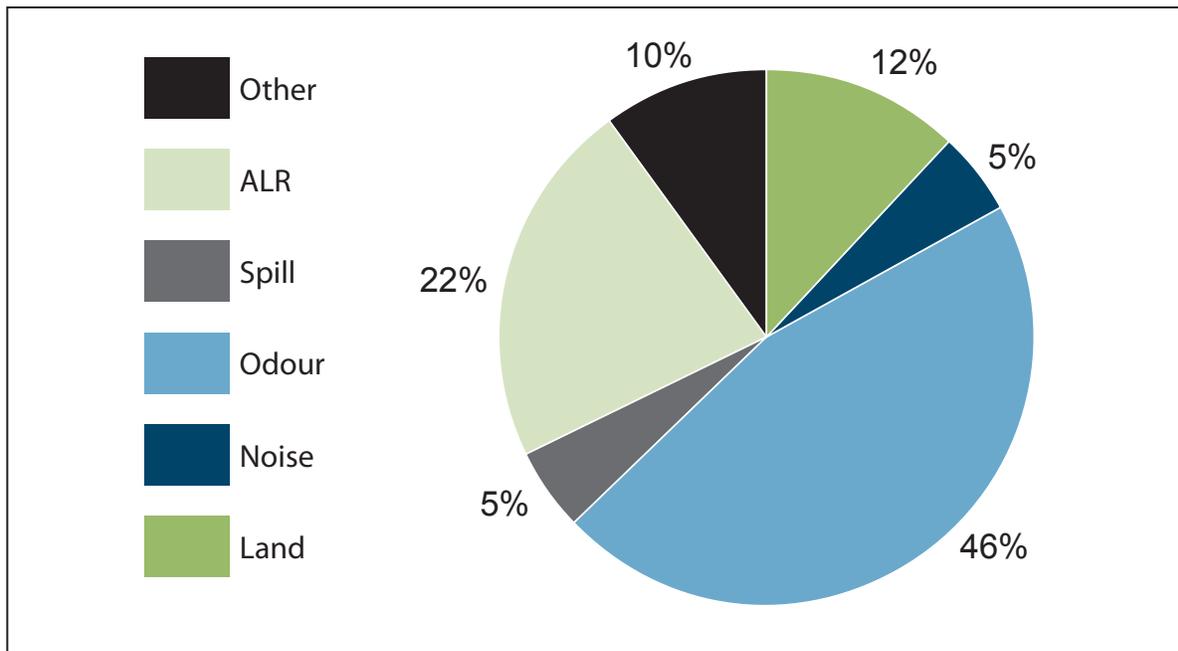


Figure 5: 2008/09 Complaint Issues

6.0 Enforcement Process Overview

The Commission's inspection results show that the vast majority of oil and gas industry operators in British Columbia strive to comply with regulations. However, if an operator fails to meet regulatory requirements, fails to follow Commission direction, or if an occurrence is deemed to be serious enough to warrant immediate enforcement action, the operator may be subject to enforcement measures. All enforcement efforts are administered by Commission officers, however, occasional enforcement files are referred to other enforcement counterparts in government. Enforcement staff works closely with other government agencies including the Ministry of Environment, Ministry of Forests and Range, Ministry of Energy, Mines and Petroleum Resources, Ministry of Agriculture and Lands, Ministry of Finance, the National Energy Board and the Department of Fisheries and Oceans. The Commission has Memorandums of Understanding with many of these agencies. These agreements address aspects of compliance and enforcement including information and data exchange, sharing of expertise, and collaboration on audits, inspections and investigations.

Enforcement measures encompass a wide range of activities covering the entire oil and gas industry, with repercussions designed to escalate depending on the level of non-compliance. For example, an enforcement action may range from imposing a deadline for remediating a problem to prosecution or shut-in by way of a ticket, a charge, or an order. During the 2008/09 fiscal year, the Commission shut in a total of four wells and one facility. A complete list of enforcement actions and type can be found in Appendix B.

Commission enforcement officers are designated as Special Conservation Officers under the *Environmental Management Act* (EMA). This designation also provides the authority to enforce both the EMA and the *Water Act*, and also provides Peace Officer status to the designated officer. Specific authorities granted by the Commissioner provide the authority required by the officer to enforce the remaining legislation outlined on Page 3 of this report. An overview of the enforcement process is outlined in Figure 6.

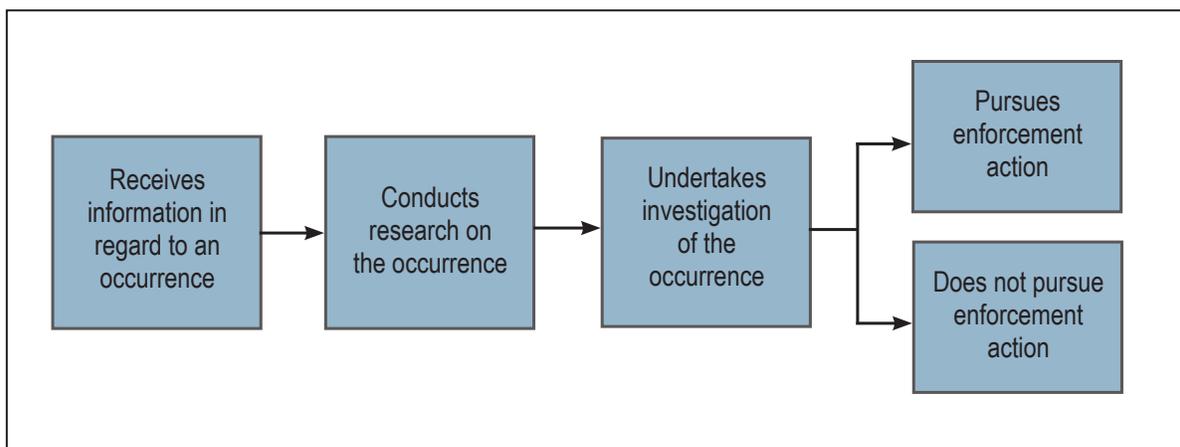


Figure 6: Commission Enforcement Process

Commission enforcement officers are notified of occurrences that may require investigation from a number of sources, including the public, oil and gas operators, Commission staff and other government agencies. Sources of occurrences for the past two fiscal years are summarized in Table 10. The number of occurrences and the number of enforcement case files handled over the 2008/09 fiscal year increased twofold over 2007/08 levels.

When occurrences are received they are categorized by enforcement staff. Figure 7 displays the sources of occurrences for the past two fiscal years. Resulting enforcement actions are summarized in section 6.1 of this Report. Multiple occurrences can be investigated as part of an individual case file, therefore the total number of occurrences exceeds the total number of case files.

Source	Fiscal Year	
	2007/08	2008/09
Public Complaints	11	19
Industry Complaints	0	5
Operator Self Reports	2	16
Commission Staff	40	64
Other Government Agencies	3	11
Total Occurrences	56	115
Total Case Files	55	110

Table 10: Sources of Occurrences

6.1 Enforcement Statistics

The 115 occurrences received by the Commission in 2008/09 resulted in a total of 165 enforcement actions. An overview of these enforcement actions is provided in Table 11. Of the 165 investigations undertaken by the Commission, 30 (18%) resulted in no action (a determination that an alleged non-compliance was unfounded, or an unsolved occurrence). This represents a decrease of 5% over 2007/08 levels.

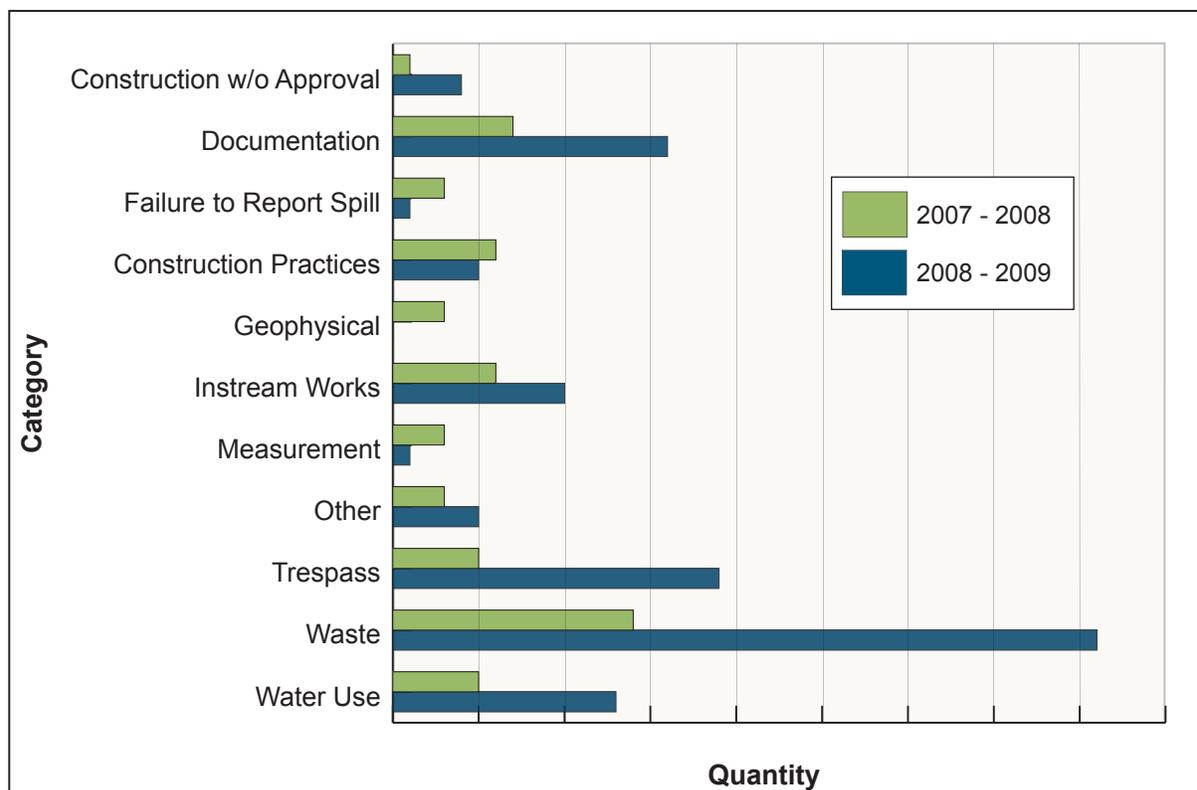


Figure 7: Occurrence Categories

Eleven occurrences were forwarded to other enforcement agencies for investigation, in accordance with established Memorandum of Understanding agreements; 43 of these occurrences resulted in administrative actions such as:

- The submission of a corporate management plan or a root cause analysis that deals with a non-compliance issue;
- The submission of outstanding documents, notifications, or reports; and
- Required donations to academic or environmental organizations.

Official warnings were issued to the oil and gas operator in 22 occurrences, and 26 occurrences led to prosecutions in the form of tickets and convictions. The vast majority of these tickets were issued for violations under the *Water Act* and the EMA.

As outlined in Figure 7, waste and contamination issues are the most frequently investigated

occurrences. These include solid, liquid and gaseous waste related investigations. Trespass investigations include many types of trespass, including those resulting from lease, access, and pipeline construction. Documentary non-compliance includes occurrences such as failing to submit any required regulatory documents related to the oil and gas industry. In regard to water use, due to the increased water demand resulting from shale and tight sand development technologies, the Commission closely monitors industry water use with most non-compliance instances being handled by enforcement staff.

In addition to those other enforcement items listed in Table 11, Commission enforcement officers issued 20 compliance orders resulting in 97 enforcement actions during the 2008/09 fiscal year. A complete list of the enforcement actions resulting from these compliance orders is provided in Appendix B.

Enforcement Action	Fiscal Year	
	2007/08	2008/09
Unfounded or Unsolved Occurrence/s Resulting in No Action	18	30
Referrals to other Enforcement Agencies	11	11
Referral - Charge	2	0
Remedial Work Required	1	9
Administrative Actions	10	43
Administrative Penalties	2	1
Official Warnings Issued	18	22
Prosecution / Tickets Issued	9	26
Compliance Orders Issued	7	20
Charges Pending	0	3
Total	78	165

Table 11: Commission Enforcement Actions

7.0 Regulatory Transition

Commission staff members have been preparing for a regulatory transition to the new *Oil and Gas Activities Act* (OGAA), which was passed in the 2008 legislative session and is expected to be implemented in 2010. This regulatory transition will result in the Commission adopting a more dynamic compliance and enforcement model.

The OGAA compliance and enforcement model will shift towards an enforcement framework, similar to the ERCB Directive 19. This shift will provide a level of consistency between the jurisdictions, but will be expanded to include the Commission's greater regulatory authority.

The compliance and enforcement model will transition from the deficiency rankings of minor, major and serious to high risk and low risk non-compliances. A risk assessment matrix will be utilized to predetermine the level of risk inherent to each regulatory requirement.

The transition to OGAA will ensure transparency in Commission decision making processes, as permit holders can request a review or appeal of a determination made by the Commission.

8.0 Conclusion

This Report details the performance results of both industry and the Commission in regards to compliance achievements within the scope of oil and gas activity in British Columbia.

Using a proactive risk based inspection model, the Commission can continue to target sites with higher probabilities of possible deficiencies, instead of relying on performing inspections in a random fashion. It is due to this focussed and effective method that industry compliance percentages appear diminished. In reality, the majority of operators consistently meet and exceed regulatory requirements.

The Commission is committed to pursuing the safest and most intuitive recovery of resources on all accounts, and throughout all stages of oil and gas activity. Public complaints are a priority of the Commission. The Commission's goal is to respond to every complaint within 24 hours, and emergency situations as soon as possible.

Through collaborative discussions with stakeholders at the earliest stages, the Commission establishes a cumulative, informed base on which to address each application moving forward. This approach is designed to incorporate the interests and safety of the public, industry workers, and the environment.

Field inspections are an extension of this approach to safety throughout the life cycle of applications, permits and oil and gas developments. Concerns are addressed as soon as possible, with findings incorporated into the continually refined iterations of regulations and standards.

With the introduction of OGAA, more cohesive, transparent working relationships can continue to be expected and enhanced. Inspections and enforcement activities will become more consistent between jurisdictions, creating a desirable, educated working environment.

In partnership with industry, the Commission will keep on its course of action in targeting higher compliance rates in the interests of the people of British Columbia

Appendix A: Incident Action Plans

Level 1 Emergency:

An emergency in which there is no immediate danger to public or environment as no H₂S has been released. The release of other substances is confined to the lease or the operator's property. The emergency has low potential for it to escalate and is handled by the operator's personnel. The action plan for mitigating the emergency is as follows:

- alert all well site/facility personnel. Evaluate problem and initiate appropriate remedial action;
- notify operator representative(s) and have unnecessary personnel leave site;
- alert mobile monitoring equipment and be ready for a callout or mobilize monitoring equipment if location is remote;
- advise Commission and local PEP representative;
- in some cases, where there are large numbers of residents, notify or evacuate residents in accordance with site-specific plan; and
- prepare for evacuation in case of escalation of the situation.

Level 2 Emergency:

An emergency in which there is a potential for risk to the public or environment, as the emergency could extend beyond the operator's property.

The control of the hazardous substance is still possible. The emergency may require the involvement of external emergency services, federal, provincial or local agencies. The action

plan for a Level 2 Emergency is as follows:

- ensure all Level 1 actions are taking place;
- initiate evacuation of Emergency Planning Zone (EPZ);
- set up roadblocks to isolate the EPZ;
- discuss issuance of a closure order with the Commission head office in Fort St. John if necessary;
- send out monitoring crew; initiate mobile monitoring;
- send operator representative to reception centre;
- inform senior operator personnel;
- establish communications links to off-site control centre; and
- assemble ignition crew and prepare ignition equipment in case of escalation of the situation.

Level 3 Emergency:

An emergency where there exists an immediate danger to the public or environment. There is an uncontrolled release of hazardous substance and there is extensive involvement of external emergency services, federal and/or provincial agencies. The emergency extends beyond the operator's property. The action plan for a Level 3 Emergency is as follows:

- ensure all level 1 and 2 actions are taking place;
- mobile monitoring equipment in place;
- ignite release if any of the ignition criteria are met;
- advise the Commission and PEP of the state of emergency; and
- expand EPZ as required.

Appendix B: Compliance Order Enforcement Actions

Enforcement Action	2007-2008	2008-2009
Change measurement operations	0	1
Complete / submit well assessment	1	0
Conduct sediment and water sampling (measurement)	1	0
Install emergency shutdown valves	0	2
Install fencing around operations	1	4
Install fuel gas metering	0	1
Install measurement equipment	0	2
Install piping support	0	2
Install signage	0	2
Measure ground water and soil contamination	0	7
Obtain approval for equipment (measurement)	1	0
Provide safe access	0	2
Provide transportation for regulator	1	0
Re-contour and submit report	1	2
Maintain measurement reporting frequency	0	1
Remediate / remove soil contamination	0	7
Remediate stream crossing	0	1
Remove business waste	0	1
Remove contaminated fluid	0	4
Remove temporary bridge	0	1
Repair leaks	0	1
Shut-in facility	1	1
Shut-in pipeline	1	0
Shut-in well	0	4
Submit as-built drawings	1	8
Submit calibration reports (measurement)	1	1
Submit construction start date	1	7
Submit cross-border contributing well locations	0	1
Submit disposal documentation	0	1
Submit disposal well application	0	1
Submit Emergency Response Plan	1	2
Submit gas analysis	0	2
Submit leave to open documentation	0	7
Submit management strategy	2	1
Submit manifests	0	3
Submit measurement management plan	0	1
Submit notice of intent	1	2
Submit pipeline application	1	0
Submit plan to investigate and remediate contamination	0	7
Submit pressure test notice	0	7
Total	16	97