



# Report on the Oil and Gas Construction Compliance Audit **2005**

Prepared by the Oil and Gas Commission



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## Executive Summary

Northeastern British Columbia has seen a significant increase in oil and gas activity in recent years. Remaining portions of the province are also seeing the initial start-up of oil, gas and coal-bed gas exploration. This increase has prompted concerns in the ministries and agencies involved about whether the oil and gas industry has maintained compliance with relevant legislation.

In 2000, several agencies entered discussions on this point: BC Environment (now the Ministry of Water, Land and Air Protection, or WLAP); the Oil and Gas Commission (OGC); the Ministry of Forests (MOF); British Columbia Assets and Land Corporation (now Land and Water British Columbia Inc., or LWBC Inc.), and the Federal Department of Fisheries and Oceans (DFO). Following these discussions, a decision was made to conduct annual inter-agency **construction** compliance audits.

These audits normally last approximately 14 days for each phase, occur near the end of the winter drilling season and are intended to provide a “snapshot” of the oil and gas industry’s compliance with federal and provincial legislation. This year an unusually early and warm spring impacted the ability to carry out a full audit. Many rigs had left the area due to deteriorating road conditions. Spring run-off was earlier than expected which required that seismic programs and winter access roads, that rely upon frozen conditions for stream crossings, were also forced to shut down early.

During the 2005 Construction Compliance Audit, teams conducted 135 compliance audit inspections. The teams concentrated on four specific priority target activities:

- Stream crossings, works in and about a stream, snow/ice fills and ice bridges;
- Sewage management and disposal at campsites and drilling rigs;
- Special wastes; and
- Water usage by camps, drilling rigs and seismic crews.

Most operations were found to be in compliance with major requirements:

- |                                  |      |
|----------------------------------|------|
| • Special Waste                  | 100% |
| • Water Usage                    | 94%  |
| • Sewage management and disposal | 86%  |
| • Stream crossings               | 94%  |

Significant improvements from last year were noted for compliance with major requirements for stream crossing activities rising from 80% to 94%. Sewage Management and Disposal dropped from 95% to 86% while Special Waste Management and Water Usage major compliance levels remained constant at 100% and 94% respectively.

The agencies are working with industry to develop a course of action to respond fully to these findings. The program of industry audits will continue in 2005/2006.

## 1.0 Definition of Non-Compliance

It is important to establish a clear distinction between Satisfactory, Minor, Major and Serious Non-compliance.

**Satisfactory:** The inspection element complies with regulatory requirements.

**Minor:** Non-compliance consists of those issues that do not have an immediate or significant impact on the environment or on public health and safety. They may also be dealt with by instructions or through a compliance notice, rather than through formal enforcement actions.

**Major:** Non-compliance issues can have an immediate, significant impact on the environment or on public health and safety and must be dealt with immediately. In order for the Oil and Gas Commission to meet the new provincial strategies and standards, the commission implemented a new non-compliance format for the 2003/2004 audit year. Specifically, this format added a fourth assessment level:

**Serious:** Is the highest level of Non-compliance and is utilized where there has been a Major Non-Compliance combined with a demonstrated disregard for regulations or requirements, or with fraudulent activities.

With this change, the Commission's four categories of inspection results are consistent with those used in Alberta by the Alberta Energy and Utilities Board. **Table A** provides further detail.

**Table A:**

Type #1 – Satisfactory		Type #2 – Minor Non-Compliance		Type #3 – Major Non-Compliance	Type #4 – Serious Non-Compliance
Inspected element complies with regulatory requirements		Inspected element does not comply with regulatory requirements but is not considered an immediate or significant impact on the environment or on public health and safety		Inspected element does not comply with regulatory requirements and is considered an immediate or significant threat to the environment or to public health and safety	Inspected element does not comply with regulatory requirements and is considered an immediate or significant threat to the environment or to public health and safety; there has also been either (a) demonstrated disregard for regulations or requirements, or (b) fraudulent activities
Make observation comments	Identify any risk of non-compliance	Identify trivial non-compliance	Identify minor non-compliance:	Identify major or significant non-compliance:	Identify serious non-compliance
Note good work. -Note any substandard action; clarify standards.	Make comments and flag for future inspection if the practice observed is likely to lead to non-compliance.	-Indicate concerns; indicate no action required if problem is small enough in scope that problem could be evaluated as transitory or insignificance	-Indicate compliance concern; provide detail on form that evaluates problem to have minor severity or impact; -Flag for future inspection; -Problem may need assessment with senior staff for legal action or official warning.	-Provide detail to clarify severity and/or impact on inspection form: <i>forward information to senior staff for further direction.</i>	-Provide detail to clarify severity and/or impact on inspection form, issue Stop Work Order: <i>forward information to senior staff for further direction.</i>

## 2.0 Methodology

This audit focused on **construction** activities related to the oil and gas development. The audit teams were developed by a Steering Committee consisting of senior staff of the Oil and Gas Commission and the Conservation Officer Service of the Ministry of Water, Land and Air Protection.

The audit teams had a diversity of expertise from each Ministry or Agency. Each team had a captain who was responsible for logistics, safety, scheduling and co-ordination with the Steering Committee.

The Oil and Gas Commission has restructured areas of responsibility for inspectors by dividing the province into four regions; North, Central East, Central West and South (Appendix -Map). Audit assignments were organized within regional areas, with the exception of the South region, where no drilling activity was occurring at the time of the audit. Inspectors responsible for a region conducted inspections on locations within their region. Rig locations, sumps and camp locations were identified from the OGC weekly rig list immediately prior to teams going into the field to conduct inspections.

The OGC now has a stream crossing portal on the OGC web page where companies are required to enter data which identifies the location, riparian class and crossing construction type for each stream crossing on a winter access road or seismic program. Crossings for inspections were selected by accessing the information contained in the web site and then selecting those crossings which were identified as classification S1<sup>1</sup>, S2<sup>1</sup> and S3<sup>2</sup>. All S1 and S2 crossings were targeted for inspection to ensure that crossing structures were either of the identified construction type or removed as required. In addition, some of the S3 classified streams were inspected to confirm that the correct classification had been assigned and the correct crossing structure installed. Maps and GPS locations were provided to each team to ensure the most efficient use of helicopter time. In addition to inspecting the identified crossings, the Central East team also inspected a number of crossings on traditional winter access roads which were not required to be identified in the stream crossing portal.

Stream crossings in the North and Central East regions were inspected primarily by helicopter, while those in the Central West region were inspected by quad.

## 3.0 Audit Results

Field activities were carried out in two phases; the first between March 14 and March 18, 2005 and the second between April 6 and April 28, 2005. During the first phase, inspections were conducted on drill rigs, drill rig camps, water usage concerns and general camps. As a result of an unusually early spring, a large number of rigs and camps had left prior to the audit being carried out. The early thaw also made road travel conditions slow and treacherous for staff

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<sup>1</sup> S1 and S2 – Always considered fish bearing watercourses

<sup>2</sup> S3 and S4 = Considered fish bearing streams unless proven otherwise

carrying out inspections, which resulted in a much lower number of inspections compared with previous years.

The second phase of inspections were directed towards determining compliance with *Water Act* requirements related to stream crossing design, stream classification and the removal of crossings prior to spring freshet. This phase of inspections was conducted primarily by helicopter to areas inaccessible by vehicles due to spring break-up.

A total of 135 inspections were completed during the two phases. The audit teams found the major compliance rate to range from a low of 86% for activities related to Sewage Disposal and/or Storage to a high of 100% for Special Waste issues. Minor Compliance ranged from a low of 80% for Special Waste to a high of 90% for Stream Crossings. The audit found 87% compliance with all of the requirements of the legislation pertaining to the targeted activities.

### 3.1 Results of Targeted Activities

**Table B: Compliance Rates of Targeted Activities for 2005**

Type	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Stream Crossings	81	73	3	5	0	5	94%
Sewage Disposal and/or Storage	22	19	0	3	0	3	86%
Special Wastes	15	12	3	0	0	0	100%
Water Usage	17	14	2		1	1	94%
<b>Totals</b>	<b>135</b>	<b>118</b>	<b>8</b>	<b>8</b>	<b>1</b>	<b>9</b>	<b>93%</b>

**Table C: Compliance Rates of Targeted Activities for 2004**

Type	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Stream Crossings	128	92	10	17	9	26	79.7%
Sewage Disposal and/or Storage	80	65	11	3	1	4	95%
Special Wastes	33	30	0	0	0	0	100%
Water Usage	72	60	8	3	1	4	94.4%
<b>Totals</b>	<b>313</b>	<b>247</b>	<b>29</b>	<b>23</b>	<b>11</b>	<b>34</b>	<b>89.1%</b>

**Table D: Compliance Rates of Targeted Activities for 2003**

Type	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
Stream Crossings	160	109	16	35	78
Sewage Disposal and/or Storage	125	85	19	21	83
Special Wastes	37	34	1	2	95
Water	112	104	5	3	97
<b>Totals</b>	<b>434</b>	<b>332</b>	<b>41</b>	<b>61</b>	<b>86</b>

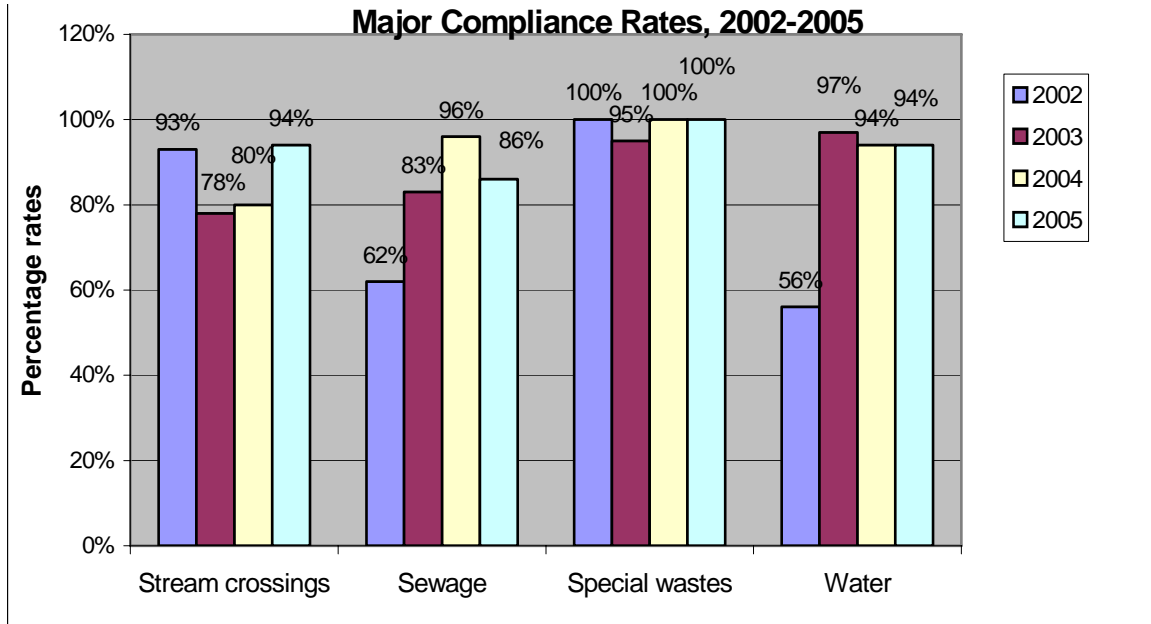
**Table E: Compliance Rates of Targeted Activities for 2002**

Type	Total	Compliance	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
Stream Crossings	43	34	6	3	93
Sewage Disposal and/or Storage	45	7	21	17	62
Special Wastes	4	1	3	0	100
Water	16	4	5	7	56
<b>Totals</b>	<b>186</b>	<b>97</b>	<b>59</b>	<b>30</b>	<b>84</b>



## 3.2 Major Compliance Comparison for Targeted Activities, 2002 to 2005

Diagram 1



There was a significant improvement in Major compliance rates for Stream Crossing activities going from 80% in 2004 to 94% in 2005. Major compliance rates for Water Usage showed no change at 94%. Sewage disposal and management had a significant drop in Major Compliance rates going from 95% in 2004 to 86% in 2005. This was primarily a result of a new disposal system some camps were using which was not adequate for the camp size. This issue was referred to Public Health for their follow-up.

### 3.3 Stream Crossings

**Conclusions:** There has been a 14% over-all increase in the Stream Crossing Major Compliance rate for 2005 compared with 2004. A majority of the Serious Non-compliances occurred as a result of companies being unable to remove crossings due to the early and sudden spring melt and run-off which made access roads too soft to drive equipment on. This was particularly evident in the Central East and Central West Regions.

## 2005

Region	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Central East	19	14	3	2	0	2	74%
Central West	13	10	0	3	0	3	77%
North	49	49	0	0	0	0	100%
<b>Totals</b>	<b>81</b>	<b>73</b>	<b>3</b>	<b>5</b>	<b>0</b>	<b>5</b>	<b>94%</b>

## 2004

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
South	7	5	0	2	0	2	71.4%
Middle	55	32	10	11	2	13	76.4%
North	66	55	0	4	7	11	83.3%
<b>Totals</b>	<b>128</b>	<b>92</b>	<b>10</b>	<b>17</b>	<b>9</b>	<b>26</b>	<b>79.7%</b>

## 2003

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	24	17	2	5	79
Middle	64	33	11	20	69
North	72	59	3	10	86
<b>Totals</b>	<b>160</b>	<b>109</b>	<b>16</b>	<b>35</b>	<b>78%</b>

## 2002

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	11	8	3	0	100
Middle	12	10	2	0	100
North	20	15	2	3	85
<b>Totals</b>	<b>43</b>	<b>33</b>	<b>7</b>	<b>3</b>	<b>93%</b>

## **Actions & Recommendations**

**Government:** A proactive approach to compliance will be maintained in 2005/2006. An advisory letter will be sent to the exploration companies bringing the 2005 audit results to their attentions. Their assistance will again be requested to ensure company activities are conducted in compliance with stream crossing guidelines and best management practices. Companies will also be advised to closely monitor weather forecasts as spring approaches to assist in guiding them as to when crossings should be removed.

The Oil and Gas Commission has implemented a web based Winter Stream Crossing Tracking Module which was used by all companies who make application to construct winter stream crossings. Crossings must conform to the standards found in the Stream Crossing Planning Guide which can be viewed under Publications and Documents – Guidance and Policies on the OGC web site <http://www.ogc.gov.bc.ca/>

The module has been developed to provide Operators and the OGC with a tool to:

1. Record stream crossing installation and removal;
2. Monitor and identify crossings for removal prior to freshet conditions; and
3. Better manage winter crossings in order to achieve compliance and protect fish habitat and water quality.

This module has been used in 2005 to identify audit locations

**Industry:** Industry must continue to take responsibility and be accountable to monitor their activities to ensure operations are in compliance with all applicable approval conditions and regulations. This would include requiring their contractors and construction personnel to be trained and aware of all regulatory requirements.

All of industry must use the Winter Stream Crossing Tracking Module if they are building winter access routes with stream crossings. They will also be required to monitor and report on crossing conditions as spring approaches so that critical crossings can be identified and removed when conditions dictate.

### **3.4 Sewage Disposal**

**Conclusions:** There was a significant decrease in Major compliance with sewage disposal requirements dropping from 95% in 2004 to 86 % in 2005. In past audits, a majority of the non-compliances were related to issues around sumps used for sewage storage at camps. In many instances in this years audit, companies were found to be getting away from using open sumps and were using either closed tanks with the contents being pumped out and disposed of at proper treatment facilities or to on-site treatment facilities. Some of the on site facilities have been untested in severe winter conditions and either did not live up to expectations or were not large enough for the size of the camp. On-site treatment facilities are licenced by the Ministry of Health Services. Improper sewage management can impact worker or public health. Instances where treatment did not meet requirements were referred to the Ministry of Health Services for

their follow-up. Other sewage management concerns involved sumps being dug in permeable fill material and not having a liner installed.

## 2005

Region	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Central East	11	8	0	3	0	3	62.5%
Central West	9	9	0	0	0	0	100%
North	2	2	0	0	0	0	100%
<b>Totals</b>	<b>22</b>	<b>19</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>86%</b>

## 2004

Team	Total	Compliant	Minor Non-Compliant	Major Non-Compliant	Serious Non-Compliant	Combined Major and Serious	% Compliance - Combined Major and Serious
South	10	8	1	1	0	1	90%
Middle	29	20	9	0	0	0	100%
North	41	37	1	2	1	3	92.7%
<b>Totals</b>	<b>80</b>	<b>65</b>	<b>11</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>95%</b>

## 2003

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	23	10	8	5	78
Middle	42	29	4	9	79
North	60	46	7	7	88
<b>Totals</b>	<b>125</b>	<b>85</b>	<b>19</b>	<b>21</b>	<b>83</b>

## 2002

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	9	1	6	2	78
Middle	12	3	5	4	67
North	24	3	10	11	54
<b>Totals</b>	<b>45</b>	<b>7</b>	<b>21</b>	<b>17</b>	<b>62</b>

### Actions & Recommendations

**Government:** A proactive approach to achieving compliance will be maintained in 2005. An advisory letter will be sent to companies bringing the 2005 audit results to their attention. Companies must ensure that activities are conducted in compliance with project approval conditions.

The OGC's Compliance & Enforcement Branch has developed a risk-managed and performance-based audit system to inspect and administer industry sewage disposal. This will enable the OGC to focus resources on non-compliant areas and companies.

An 86% Major compliance rate for sewage management and disposal is a 9% decline compared with last year and is not acceptable. Some of the issues relate to industry trying to use new methods to address sewage discharges, however they are responsible to ensure that the systems installed work in adverse winter conditions and are of a size suitable for camp size.

**Industry:** Industry must continue to take responsibility and be accountable to monitor their activities to ensure operations are in compliance with all applicable approval conditions and regulations. This would include requiring their contractors and construction personnel to be trained and aware of appropriate regulatory requirements. Supervisors must be aware of their responsibility to inspect their camps and drilling rigs for compliance, to take any remedial actions immediately and to inform contractors and construction personnel of regulatory changes.

It is the responsibility of companies who decide to use new technology, such as on site treatment facilities, to ensure that they will meet public health and environmental concerns. Failure to do so may result in a system failure which may mean that the camp which relies on that system will be shut down and the company subject to prosecution.

### 3.5 Well Sites

**Conclusions:** Active, suspended and abandoned well sites were not included in the 2005 audit because of 100% compliance in previous years. During the course of the audit, eight inspections were conducted on wells which were in the process of being drilled. Inspections focussed on sump and special waste concerns. Of the eight well sites in the audit, six were in major compliance with sewage management being the compliance issue. Well sites will remain part of

the OGC's Compliance & Enforcement Branch inspection system to ensure that industry is meeting all applicable approval conditions and regulations.

Due to the early thaw, there were very few active rigs working at the time of the audit. Nearly all rigs locations in operation in the Central East and Central West regions at the time of the audit were inspected.

### 3.6 Special Waste

**Conclusions:** There was a 100% Major compliance rate in 2005. Special wastes encountered during the 2004 audit were invert cuttings and hydrocarbon wastes from drilling operations. All Waste Manifests which were inspected during the audit were found to be completed in accordance with Major requirements.

#### 2005

Region	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Central East	5	3	2	0	0	0	100%
Central West	10	9	1	0	0	0	100%
North	0		0	0	0	0	
<b>Totals</b>	<b>15</b>	<b>12</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100%</b>

#### 2004

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
South	5	5	0	0	0	0	100.0%
Middle	10	10	0	0	0	0	100.0%
North	18	18	0	0	0	3	100.0%
<b>Totals</b>	<b>33</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>100%</b>

#### 2003

Team	Total	Compliance	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	15	12	1	2	87
Middle	16	16	0	0	100%
North	6	6	0	0	100%
<b>Totals</b>	<b>37</b>	<b>34</b>	<b>1</b>	<b>2</b>	<b>95%</b>

## 2002

Team	Total	Compliance	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	3	1	2	0	100.0%
Middle	1	0	1	0	100.0%
North	0	0	0	0	100.0%
<b>Totals</b>	<b>4</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>100.0%</b>

### Actions & Recommendations

**Government:** A proactive approach to achieving compliance will be maintained in 2005. An advisory letter will be sent to companies bringing the 2005 audit results to their attention. Companies must continue to ensure that activities are conducted in compliance with legal requirements.

**Industry:** Industry must continue to be proactive, take responsibility, and be accountable to monitor their activities to ensure operations are in compliance with special waste regulations. This will include requiring contractors and/or drilling personnel to be properly trained. Supervisors must be aware they are responsible to monitor their operations for compliance, take remedial action when non-compliance is detected and inform contractors and construction personnel of regulatory changes.

## 3.7 Water

### Conclusions:

There was a 94% major compliance rate in 2005 which was comparable with last year's Major compliance level. The only Serious deficiency was one incident where a water hauler was found with an improper sized screen on his water intake and was instructed as to the correct size requirements. He was inspected a number of days later and although he had changed his intake screen to a smaller size, it still did not meet requirements. This matter has been referred to Land and Water B.C. Inc for their follow-up.

## 2005

Region	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
Central East	6	4	2	0	0	0	100%
Central West	9	8	0	0	1	1	90%
North	2	2	0	0	0	0	100%
<b>Totals</b>	<b>17</b>	<b>14</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>94%</b>

## 2004

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	Serious Non-Compliance	Combined Major and Serious	% Compliance - Combined Major and Serious
South	9	4	2	2	1	3	66.7%
Middle	24	18	5	1	0	1	95.8%
North	39	38	1	0	0	0	100.0%
<b>Totals</b>	<b>72</b>	<b>60</b>	<b>8</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>94.4%</b>

## 2003

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	22	16	3	3	86
Middle	33	33	0	0	0
North	57	55	2	0	0
<b>Totals</b>	<b>112</b>	<b>104</b>	<b>5</b>	<b>3</b>	<b>97%</b>

## 2002

Team	Total	Compliant	Minor Non-Compliance	Major Non-Compliance	% Major Compliance
South	4	2	2	0	0
Middle	3	0	2	1	67
North	9	2	1	6	33
<b>Totals</b>	<b>16</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>56%</b>

### Actions & Recommendations:

**Government:** A proactive approach to achieving compliance will be maintained in 2006. An advisory letter will be sent to the exploration companies bringing the 2005 audit results to their attentions, again emphasizing screening requirements. Companies must ensure their activities are conducted in compliance with project approval conditions.

Where water users are found to be in non-compliance and a shut down or Compliance Order is issued, the circumstances will be documented and, if related to habitat or fisheries, will be referred to the Conservation Officer Service for enforcement action. If there are no habitat or fisheries concerns, the matter will be forwarded to Land and Water B.C. Inc for their follow-up. Where appropriate, shut down orders or Compliance Orders will be issued by OGC Inspectors. The non-compliance will become part of the company's compliance history and will be used when determining future inspection frequencies.



**Industry:** Industry has to continue to take responsibility and be accountable to monitor their activities to ensure operations are in compliance with all applicable approval conditions and regulations. This would include requiring their contractors, construction and exploration personnel to be trained and aware of all regulatory requirements and of changes to requirements.

Industry must also ensure that the Water Use Permit is valid for the volumes of water actually required for rig servicing, winter road construction, snow fill or ice bridge construction. Industry commonly applies for 11,000 gallons a day, and this volume of water is not adequate for drilling a surface hole. The volume on the permit is a daily maximum, not an average over the lifetime of the permit.

### **3.8 Forestry**

**Conclusions:** Forestry was not included in the 2005 audit data collection and analysis because of 100% compliance rates in earlier years and no complaints. It will remain part of the OGC's Compliance & Enforcement Branch inspection system to ensure that industry is meeting all applicable approval conditions and regulations.

### **3.9 Gravel**

**Conclusions:** Gravel was not included in the 2005 audit data collection and analysis because of 100% compliance rates in earlier years and no complaints. It will remain part of the OGC's Compliance & Enforcement Branch inspection system to ensure that industry is meeting all applicable approval conditions and regulations.

## **4.0 Conclusions**

In 2005 there were 135 inspections conducted, compared with 313 in 2004; 434 in 2003; 186 in 2002; and 549 in 2001. The 2005 sample size is smaller than in previous years' samples but should provide a representative picture of the overall trend in industry's Major compliance levels over time.

Major compliance levels have shown significant over-all improvement compared with when the audit The OGC's target is to maintain 92% Major compliance for exploration and development activities.

## **4.1 Recommendations**

1. Conduct another audit of industry during the 2005/2006 drilling season. The audit in the next drilling season will be the fifth one conducted. It is proposed that an in-depth multi-agency audit be conducted utilizing teams from the Oil and Gas Commission, Ministry of Water Land and Air Protection, Land and Water B.C. Inc., Ministry of Health Services, Forest Service and Department of Fisheries and Oceans. The camp sewage management, water usage and special waste portion of the audit would be conducted over a two week period earlier in the year to coincide with high activity levels in the 'patch'. The second

portion of the audit would also be conducted over a two week period and would concentrate on S3 and S4 classified stream crossings for compliance with the *Fisheries and Water Acts*.

2. Continue to develop and implement those recommendations not yet fully implemented from previous audits.
3. Continue a proactive approach to achieving compliance in 2005/2006. Implement use of another advisory letter to be sent to exploration and development companies bringing the results of the 2005 audit to their attention and requiring their commitment to ensure company activities are conducted in accordance with all relevant legislation and project approval conditions.
4. Continue to highlight the audit findings during the ongoing inspections by OGC staff and urge companies to ensure operations are in compliance by conducting self-inspections.
5. Encourage and assist companies in developing innovative and progressive methods of addressing difficult and challenging public health, safety and environmental issues.
6. Continue to elevate enforcement responses to persistent offenders through actions such as shut downs, compliance orders or prosecution.
7. Continue to develop a risk-managed, performance-based inspection and audit system for the OGC's Compliance & Enforcement Branch, that directs inspections towards areas and activities that have a high potential to impact either human health or safety or the environment, and to ensure effective and efficient use of staff resources.
8. Continue to work with the Canadian Association of Petroleum Producers and the Small Explorers and Producers Association of Canada to educate and promote compliance by members of their organization.

## 5.0 Action Plan for the Oil and Gas Construction Compliance Audit, 2005

Actions From Recommendations:	Actions to Date:	% Complete
<p><b>Review:</b> Conduct another audit of industry during the 2004/2005 winter drilling season.</p>	<p>A multi-agency audit was completed for the 2004/05 winter drilling season. Participants included WLAP and the OGC. 135 inspections were conducted.</p> <p>Planning meeting for a 2005/06 audit to be held in September, 2005. Representatives from the Ministry of Water Land and Air Protection, Land and Water B.C. Inc., Ministry of Health Services, Forest Service and Department of Fisheries and Oceans will be invited to attend and participate.</p>	100%
<p><b>Education:</b> An information letter on the audit results will be prepared by the OGC for industry and will concentrate on the primary target areas of sewage disposal, water, and stream crossings.</p> <p>Continue to highlight the audit findings during the ongoing inspections by OGC staff and urge companies to ensure operations are in compliance by conducting self-inspections.</p>	<p>An information letter will be prepared and posted to the OGC website, focusing on Sewage, Water use and Stream Crossings.</p> <p>Inspectors will be instructed to inform industry representatives of the availability of the audit results on the OGC web site.</p> <p>Post the report on the Oil and Gas Construction Compliance Audit on the OGC web site for industry and public review and comment.</p>	50%
<p><b>Results-based system:</b> Implement a performance and results-based system that emphasizes industry's responsibility for self-inspection and self-auditing and which will encourage industry to achieve high compliance levels.</p> <p>Encourage and assist companies in developing innovative and progressive methods of addressing difficult and challenging public health, safety and environmental issues.</p> <p>Continue to develop a risk-managed, performance-based inspection and audit system for the OGC's Compliance &amp;</p>	<p>Guidebooks are being written to assist industry in moving towards performance and results based compliance.</p> <p>Based on scientific principles and recognizing legal constraints, consider and approve innovative methods of meeting challenges. Work with Ministries and Agencies to identify and promote new methods of addressing challenges.</p> <p>The Oil and Gas Commission continues to undergo internal reviews and develop risk</p>	

<p>Enforcement Branch that directs inspections towards areas and activities that have a high potential to impact either human health or safety or the environment, and to ensure effective and efficient use of staff resources.</p>	<p>matrices which will direct inspections towards high risk activities.</p> <p>Industry to monitor their activities and ensure their operations are in compliance with all applicable approval conditions and regulations and take immediate action when non-compliance is detected. This would include making sure contractors and construction personnel are appropriately trained and aware of all regulatory requirements.</p> <p>Use of the Winter Stream Crossing Tracking Module will be mandatory for all parts of industry who will be constructing winter stream crossings.</p> <p>The OGC has developed an Inspection and Compliance Manual which identifies what inspectors will be looking for when inspecting facilities and what actions will be taken when non-compliances are encountered. Similar manuals are being developed for pipelines and geophysical programs. These will provide clarity to industry and the public as to OGC expectations and actions.</p>	
<p><b><i>Review of Legislation:</i></b></p> <p>The OGC’s Compliance &amp; Enforcement Branch will work with the Ministry of Water, Land and Air Protection to ensure that <i>Environmental Management Act</i> training relevant to the oil and gas industry is provided to OGC inspectional staff.</p>	<p>Oil and gas activities are exempt from the <i>Forest and Range Practices Act</i>. The <i>Forest Practices Code</i> continues to apply. OGC inspectors have received training from Forest Service trainers and will be seeking designation as “officials” under that legislation.</p> <p>The <i>Wildfire Act</i> and regulations have been enacted and apply to the oil and gas industry.</p>	
<p><b><i>Increase in compliance staff:</i></b></p>	<p>The Oil and Gas Commission has completed an internal review that identified improved ways to receive and process applications and to allocate staff time to conducting field inspections of high risk activities.</p>	<p>50%</p>

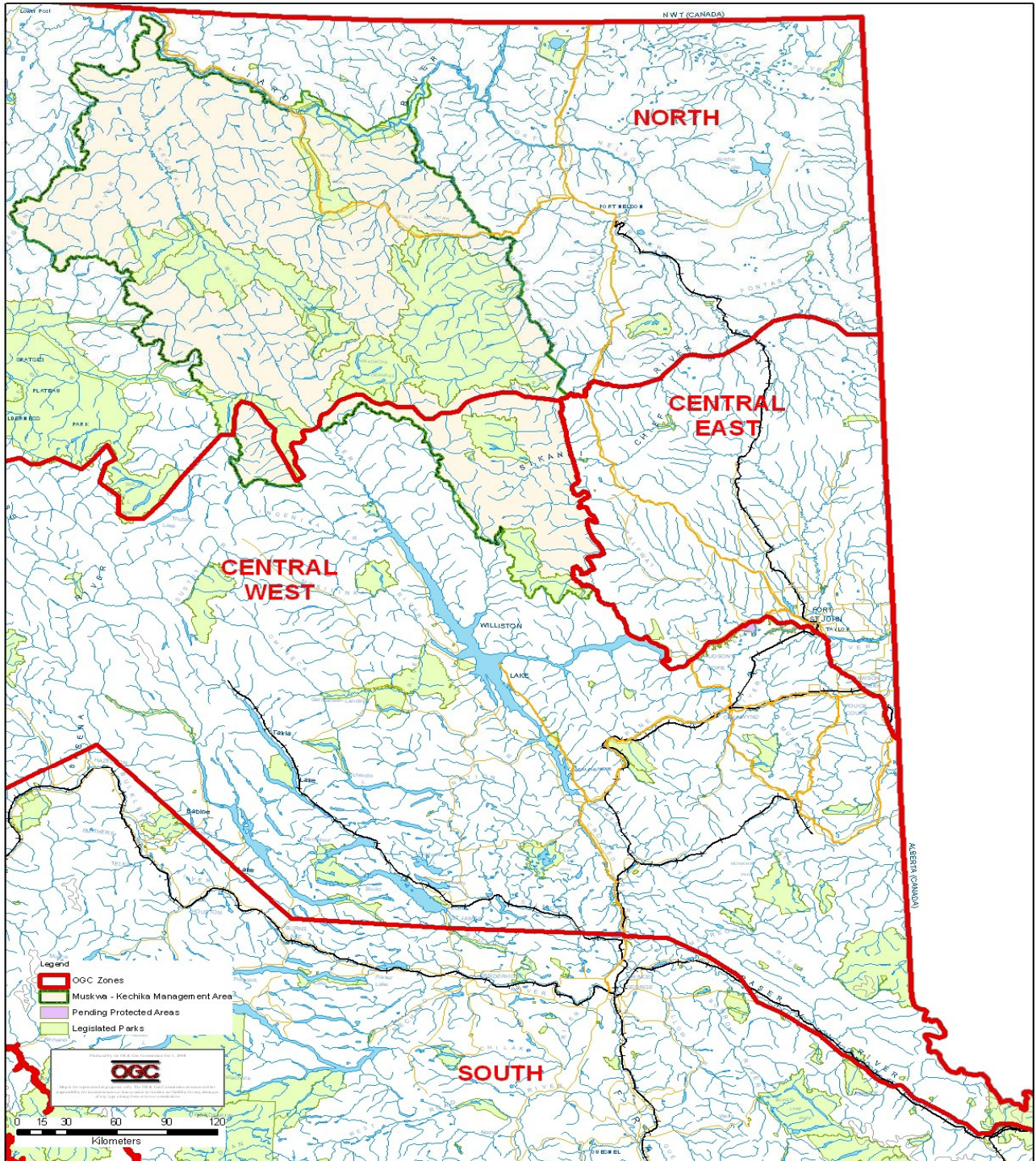
	<p>The OGC has created four Regions with a Regional Manager and four inspectors assigned to each Region to improve our knowledge of operations, facilities &amp; sensitivities.</p> <p>Inspectors have undergone training to qualify them to conduct inspections on all facets of the industry. Previously, inspectors specialized in specific activities. This re-alignment into regions and responsibilities will result in improved efficiency and thus a larger number of inspections without increasing staff numbers. The increase in inspectors is targeted at 75% over 3 years.</p> <p>Acquisition of technology enables inspectors to digitally record inspection results, tracking and report automation, leading to further efficiencies.</p>	
<p><b><i>Review forms and report formats:</i></b></p>	<p>Audit Forms were reviewed and improved. Further improvements will be in place for 2005 audits.</p>	<p>90%</p>

Key contacts for this report are:

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# Appendix A

## Regional Boundary Map



## APPENDIX B

### CENTRAL EAST REGION REPORT

#### Overview

The Central East Region comprises that portion of the province north of the Peace River, south of Prophet River, east of the Muskwa-Kechika Management Area and west of the British Columbia - Alberta border. Some of the older fields in the province are located within this area, although exploration and construction activity continues at a high level. With the exception of the South Region, it is the region with the highest population density.

Inspection sites were all ground-accessible with the exception of stream crossings which were accessed by helicopter. Inspection teams were made up of OGC inspectors and Conservation Officers. Some inspections also included OGC Enforcement Section staff as well as staff from the Project Assessment Branch. A total of 41 inspections were made on rigs, camps and stream crossings. Problems with the sites were as follows

#### **Sewage:**

- sump full
- sewage trench in fill material (permeable soil)
- fence required around sump
- treatment system inadequate for camp size

#### **Creek/river crossings:**

- crossing not removed prior to freshet
- sawdust cover used on crossing approach
- surface flow on ice crossing
- removed material within riparian zone
- approaches not totally removed

#### **Water usage:**

- intake improperly screen size
- water hauler unable to produce water permit

#### **Special waste**

- no generator number on manifests

Generally sites that had non-compliance concerns were immediately dealt with at the site. Concerns expressed to company representatives were addressed immediately with no remedial action taking more than 24 hours to complete. Good construction practices were in evidence throughout the audit. Non-compliances which were contrary to legislation administered by other agencies were referred to those agencies for their follow-up

## APPENDIX C

### CENTRAL WEST REGION REPORT

#### Overview

The Central West Region comprises that portion of the province south of the Peace River to Highway 16 and from that portion of the British Columbia-Alberta border west to the Pacific Ocean north of Prince Rupert. Participants were from the Conservation Officer Service and the Oil and Gas Commission. The Central West Region is primarily wilderness area and includes environmentally and socially sensitive features such as the Muskwa-Kechika Management Area. There is also increased natural gas and coalbed gas exploration occurring within this Region in locations as far west as the Klappan River, north of Stewart. The most populated portion of the Region is in the Dawson Creek, Chetwynd and Tumbler Ridge areas.

A total of 41 inspections were made on rigs, camps and stream crossings. Inspection sites were all ground-accessible by either truck or quad. Problems with the sites were as follows:

#### **Sewage:**

- no issues

#### **Special Waste:**

- no issues

#### **Creek/river crossings:**

- no snowfall crossing installed as required
- non-approved structure installed

#### **Water usage:**

- intake not properly screened
- water from non-approved source

Generally, sites that had non-compliance concerns were immediately dealt with at the site. One water hauler was found to be using an improper intake screen size and was instructed as to the proper mesh size needed to meet requirements. He was checked a few days later and had installed a smaller meshed screen which still did not meet requirements. He was issued a Compliance Order and the matter was referred to Land and Water B.C. Inc.



## **APPENDIX D**

### **NORTH REGION REPORT**

#### **Overview**

North Region comprises that portion of the province north of the Prophet River to the British Columbia –Northwest Territories border and from the B.C. Alberta border west to the B.C.–Alaska border. It is very remote and much of it in the eastern portion is inaccessible except under frozen ground conditions. The western portion is very mountainous and includes environmentally and socially sensitive features such as the northern end of the Muskwa-Kechika Management Area.

A total of 53 inspections were made on rigs, camps and stream crossings. Inspection sites were all ground-accessible with the exception of stream crossings which were accessed by helicopter. No compliance issues were identified

## APPENDIX E

### FISH STREAM CLASSIFICATIONS

Classification	Width
S1 to S4 are fish bearing	
S1	$> 20$ m
S2	$> 5 \leq 20$ m
S3	$1.5 \leq 5$ m
S4	$< 1.5$ m
S5 and S6 (non-fish bearing)	