



# Table of Contents

---

1.	908.a: Applicability.....	4
1.1.	Current COGCC Status.....	4
1.2.	Facility Objectives .....	4
2.	908.b.(1), (2) & (3): Contact Information & Legal Site Description .....	4
3.	908.b.(4): Topography, Geology and Hydrology.....	5
3.1.	General Site Description .....	5
3.2.	Adjacent Land Use .....	5
3.3.	Topography .....	5
3.4.	Geology .....	5
3.5.	Hydrology.....	5
3.6.	Average Annual Precipitation and Evaporation Rates .....	6
4.	908.b.(5).A: Site Plan.....	6
5.	908.b.(5).B: Survey Drawings.....	6
6.	908.b.(5).C: Access Control Measures .....	6
7.	908.b.(5).D: Fire Access.....	7
8.	908.b.(5).E: Surface Water Design .....	7
9.	908.b.(6): Waste Profile .....	7
10.	908.b.(7).A: Facility Design and Engineering – Geology .....	7
11.	908.b.(7).B: Facility Design and Engineering – Hydrology .....	8
11.1.	Surface water features.....	8
11.2.	Shallow ground water .....	8
11.3.	Major aquifers.....	8
11.4.	Local water wells.....	8
11.5.	Local floodplains .....	8
11.6.	Shallow ground water quality .....	8
11.7.	Impact potential.....	8
12.	908.b.(7).C: Facility Design and Engineering – Engineering Data .....	9
12.1.	Spill Containment.....	10
13.	908.b.(8): Operating Plan.....	11

14.	908.b.(9).A: Water Wells.....	11
15.	908.b.(9).B: Monitoring Wells.....	11
15.1.	Regional Operational Area Water Quality Monitoring Program .....	11
15.2.	Site Specific Approach to Ground Water Quality Monitoring .....	13
16.	908.b.(10): Surface Water Monitoring.....	13
17.	908.b.(11): Contingency Plan.....	13
17.1.	Site Safety / Evacuation Plan .....	13
17.2.	Chemicals On-site .....	14
17.3.	Spill Prevention, Control and Countermeasure Plan .....	14
17.4.	Emergency Response Plan .....	14
18.	908.d: Financial Assurance.....	14
19.	908.e: Facility Modifications .....	14
20.	908.f: Annual Permit Review .....	15
21.	908.g.(1).A: Preliminary Closure Plan .....	15
22.	908.g.(1).B: Preliminary Closure Cost .....	15
23.	908.g.(2): Final Closure Plan.....	15
24.	908.h: Other Permits and Notifications .....	16

# Tables

---

Table 1: Typical Produced/Flowback Water Quality..... 7  
 Table 4: Encana Water Quality Sampling Locations within 2 Miles of A05 Pit ..... 12  
 Table 5: Laboratory Analytical Results Summary for Sampling of Encana Water Quality Network near A05 Pit..... 12

# Graphs

---

Graph 1: A05 Pit Stage-Storage Curves (ft<sup>3</sup>)..... 10  
 Graph 2: A05 Pit Stage-Storage Curves (bbls)..... 10

# Appendices

---

- Appendix 1: A05 Pit – Form 15
- Appendix 2: A05 Pit – Contributing Wells
- Appendix 3: A05 Pit – Evaporation and Precipitation Data
- Appendix 4: A05 Pit – Stormwater Management Plan
- Appendix 5: A05 Pit – Surface Water and Landowner Map
- Appendix 6: A05 Pit – Spill Prevention, Control and Countermeasure Plan
- Appendix 7: A05 Pit – Pumping SOP & Fugitive Dust Control Plan
- Appendix 8: A05 Pit – Evacuation Plan & Emergency Response Plan
- Appendix 9: A05 Pit – Pit Closure and Reclamation Plan and Cost Estimate

## 1. 908.a: Applicability

### 1.1. Current COGCC Status

The intent of this submittal is to prove compliance with the current standards set by the Colorado Oil & Gas Conservation Commission (COGCC) for a Form 28 permit for the North Parachute CP11A-05 A05 596 pit (A05 pit). The A05 pit is an existing earthen pit built in 2009 that is currently operating under an expired Form 15, Permit Number 414392 (see Appendix 1).

### 1.2. Facility Objectives

The A05 pit is a non-commercial, centralized E&P waste management facility used to store E&P waste for the purposes of recycling, reuse, and disposal of Encana Oil & Gas (USA) Inc. (Encana) operations in the Piceance Basin area of Garfield County, Colorado. The objectives of A05 pit are to:

- Reuse and recycle produced and flowback water within the Piceance Basin.
- Minimize environmental impact by:
  - Maximizing the use of recycled water;
  - Following Best Management Practices (BMPs);
  - Minimizing environmental liability by operating the facility in accordance with all permits; and
  - Minimizing the cost of managing water within the Piceance Basin.

This facility is authorized to receive the following influent:

- Flowback and produced water from Encana operated wells in the South and North Piceance Sub-Business Units (SBUs).

Flowback and produced water from other oil and gas operators may be received by this facility on a case-by-case basis, through a Colorado Oil & Gas Conservation Commission (COGCC) Rule 502.b variance request and approval with a water sharing agreement in place. No third-party influent will be accepted if doing so violates the A05 pit's status as a non-commercial facility.

## 2. 908.b.(1), (2) & (3): Contact Information & Legal Site Description

Encana owns the property on which the A05 pit is located as shown in Appendix 5. The contact information for the operator, who is also the surface owner, is as follows:

Encana Oil & Gas (USA) Inc.  
370 17th St, Suite 1700  
Denver, CO 80202

The legal description of the site is the NE  $\frac{1}{4}$  of the NE  $\frac{1}{4}$  of Section 5, Township 5 South, Range 96 West of the 6th Principal Meridian; coordinates 39.65019 North latitude and -108.18558 West longitude, Garfield County, Colorado.

### **3. 908.b.(4): Topography, Geology and Hydrology**

#### **3.1. General Site Description**

The facility site is approximately 22 road miles (17 straight line miles) northwest of the Town of Parachute, Colorado. The site is located adjacent to the Roan Plateau in the northern Piceance Basin of west Colorado, a major oil and gas production area made up of high plateaus, mesas, ridges and deep valleys. The elevation at the site is approximately 8,400 feet above sea level. The location of the A05 pit is relatively remote.

#### **3.2. Adjacent Land Use**

Land within a two (2) mile radius of the A05 pit is owned by the Bureau of Land Management, Encana, and Reuben & Stephanie Oldland (see Appendix 5). Adjacent land usage includes natural gas exploration and production, livestock grazing and wildlife habitat. The surrounding land uses are not adversely impacted by operation of the facility due to the remote location and some of the existing surrounding uses also being used for Oil & Gas purposes.

#### **3.3. Topography**

The A05 pit site is located on an undeveloped southwest trending ridge adjacent to a two-track unimproved road at an approximate elevation of 8,400 feet above sea level (see Appendix 5). Divide Road is located immediately south of the site. Existing vegetation includes sage, scrub oak and other natural brush and grasses.

#### **3.4. Geology**

The Piceance Basin is a complex of numerous anticlines and synclines. The asymmetrical, arc-shaped basin is 100-miles long by 50-miles wide, is oriented northwest-southeast, and is deepest on the east edge. It is bounded structurally on the northeast by the Axial Uplift, on the east by the White River Uplift/Grand Hogback and the Elk Mountains, on the south by the Uncompahgre Uplift and on the east by the Douglas Creek Arch.

Exposed in the site area is tertiary age sedimentary rocks including the slopes and ledges of light brown and gray siltstone and sandstone and slopes of siltstone and claystone of the Uinta Formation. The surficial deposits included alluvium and residuum of the erosional surface of the Uinta Formation which included clay, silt, sand and gravel.

#### **3.5. Hydrology**

Existing cover conditions within the major basin are primarily undeveloped. The development within the basin almost completely consists of dirt/gravel roads, pipeline right-of-way, and well pads. The predominant drainage pattern is characterized by overland flow sloping to the southwest.

Grades range from relatively flat on top of the mesas and within the floor of the valleys to vertical and near vertical on some of the canyon walls. Natural channels and other natural features collect and

concentrate surface runoff. Occasionally roads cross the slope also concentrating and diverting runoff. Flow from the site drains to the East Fork of Stewart Gulch and ultimately to Piceance Creek.

The existing site currently contains some improvements. These improvements include an earthen pit, dirt/gravel roads, associated shoulders and ditches, and pipeline right-of-way. Vegetation exists on the unimproved portions of the site.

### **3.6. Average Annual Precipitation and Evaporation Rates**

The average annual precipitation in the area is approximately 11.61 inches based on the Western Regional Climate Center records for Rifle, Colorado (Station #057031) (see Appendix 3). The average annual evaporation in the area is approximately 57.45 inches based on data from the Western Regional Climate Center evaporation pan data for Montrose, CO (see Appendix 3).

## **4. 908.b.(5).A: Site Plan**

An overall site plan for the existing facility is provided in Appendix 1, Drawing Number 100-CE-301.

## **5. 908.b.(5).B: Survey Drawings**

Engineering drawings with the A05 pit design information and relevant survey information are included in Appendix 1.

## **6. 908.b.(5).C: Access Control Measures**

The A05 Pit is located in a remote area of a large parcel of privately owned land, as shown in Appendix 5, within Encana's active North Parachute Mountain drilling area. The A05 site is on a ridge top, with moderately steep grades falling away from the facility on the East, North and West sides. The South perimeter is bounded by Divide Road, which is the only road access to the site.

Access to the site by members of the public is restricted by a 24-hour per day manned gate near Encana's Middle Fork Compressor Station & Water Facility, located approximately six (6) miles from the A05 at the end of County Road 215 and an additional gate at the top of the "Exxon Road", approximately two (2) miles from the A05 pit.

Wildlife and domestic animal access to the A05 pit is controlled through the following measures:

- Mesh or other coverings on all equipment openings, where applicable.
- Wildlife netting around and covering the entire pit
- No pets are allowed on-site.

No agricultural operations take place on Encana-owned property.

The activities at the site comply with Encana’s Wildlife Protection Policies, as outlined in the Migratory Bird Treaty Act and Other Wildlife Protection Requirements document. Inspection and maintenance of these control measures is conducted bi-monthly.

### 7. 908.b.(5).D: Fire Access

There is a fire access road with a minimum width of ten (10) feet around the pit area, which can be seen in the site photos at the end of the Spill Prevention, Countermeasure & Control Plan (SPCC) (Appendix 6).

### 8. 908.b.(5).E: Surface Water Design

The engineering drawings for the A05 pit are located in Appendix 1. Additional stormwater information is provided in the Stormwater Management Plan (Appendix 4) and the SPCC plan (Appendix 6).

### 9. 908.b.(6): Waste Profile

The only process stream entering and exiting the A05 pit is produced/ flowback water. The A05 pit is used intermittently to balance water throughout Encana’s North Parachute Mountain field. Based on historic operations in this area, the average throughput is roughly 30,000 barrels per month. Typical characteristics for produced/ flowback water in the North Parachute Mountain area are provided in Table 1.

**Table 1: Typical Produced/Flowback Water Quality**

Component	Typical Range (mg/l)	Average Value (mg/l)
TPH-GRO (C6-C10)	1-580	150
TPH (C10-C28)	10-440	170
Methanol	2-112	75
Total Suspended Solids (TSS)	17-670	135
BTEX	5-100	35

### 10. 908.b.(7).A: Facility Design and Engineering – Geology

Facility design and engineering data is located in Appendix 1. This pit was constructed by Conoco-Philips and was acquired by Encana. A geotechnical report for this site was not provided to Encana during the acquisition. However, based on Encana’s extensive construction activities in this area we expect the site geology to consist of topsoil over approximately one (1) foot of silty sand with hard to very hard sandstone bedrock between one (1) and five (5) feet below all existing grades.

Based on the nature of these subsurface materials, a seismic Site Class C should be used for any future facilities at this site (2006 IBC). The site is located in a seismic area with a mapped maximum short

period ( $S_2$ ) and 1-second period ( $S_1$ ) ground motion, respectively, of 0.28g and 0.068g. The site coefficients,  $F_a$  and  $F_v$ , for the same periods are 1.2 and 1.7, respectively.

There are no known geologic hazards at this site.

## **11. 908.b.(7).B: Facility Design and Engineering – Hydrology**

### **11.1. Surface water features**

Local surface water features within two (2) miles are shown in Appendix 5. The site drains to the East Fork of Stewart Gulch, which in turn discharges to Piceance Creek.

### **11.2. Shallow ground water**

There are no recognized alluvial aquifers under the A05 site. The closest alluvial aquifers are within the West, Middle and East Fork valleys and canyon floors.

No ground water was encountered during construction of the pit (see Appendix 1, Form 15).

### **11.3. Major aquifers**

The major aquifers underlying the proposed site are the Upper and Lower Piceance Aquifers (Colorado Groundwater Atlas – Colorado Geological Survey – 2005) which are part of the Parachute Creek Member of the Green River Formation.

### **11.4. Local water wells**

There are zero (0) permitted water wells located within one (1) mile of the site boundary (see Appendix 5).

### **11.5. Local floodplains**

The site is not located within a 100-year floodplain. The nearest floodplain is that of the Colorado River, which is greater than 10 (ten) miles away.

### **11.6. Shallow ground water quality**

There is no shallow groundwater at the site (see Section 11.2).

### **11.7. Impact potential**

Potential impacts include increased runoff and degraded stormwater water quality due to development. Stormwater runoff quality has been addressed through the construction of run-on diversion ditches, a stabilized pad entrance, gravel surfacing, perimeter containment berms, pad drainage diversion ditches, a stormwater detention pond, rip rap outfall, cut and fill slope surface roughening and vegetation, among others specified within Encana's Stormwater Management Plan (SWMP), found in Appendix 4.

The current Spill Prevention, Control and Countermeasure (SPCC) Plan (Appendix 6) demonstrates that the A05 pit design includes two (2) feet of freeboard. The SPCC plan also discusses some of the above listed controls and other measures taken to mitigate the potential impacts from a potential spill event.

The SPCC Plan is amended annually per EPA rules. Potential impacts to underground formations are mitigated through the use of dual pond liners.

## 12. 908.b.(7).C: Facility Design and Engineering – Engineering Data

This facility stores and transfers produced / flowback water from natural gas exploration and production operations. Drawings of the A05 Pit site are located in Appendix 1. There are two (2), 250 bbl water tanks on the site which are used for production operations.

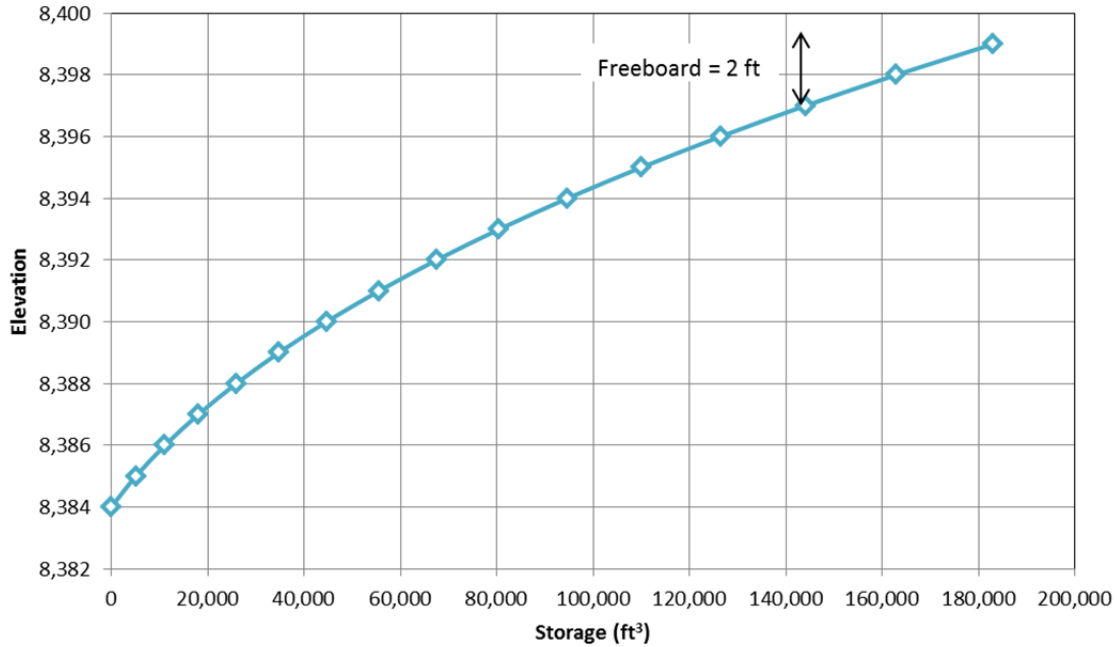
The A05 Pit is filled by pipelines in the North Parachute Mountain portion of Encana’s North Piceance field. A truck load-out is permanently located at the site to expedite the removal of produced water. Currently, produced water entering the site is untreated although it has been separated at a well pad facility or a central delivery point (CDP). In the future, the pit will be partially filled with treated water from Divide Road Water Facility and partially filled with untreated produced water, depending upon the water balance in the field.

Storage volume details for the A05 Pit are shown below. Details of the pond liners, dimensions and leak detection system are included in the approved Form 15 for the A05 Pit (Appendix 1.)

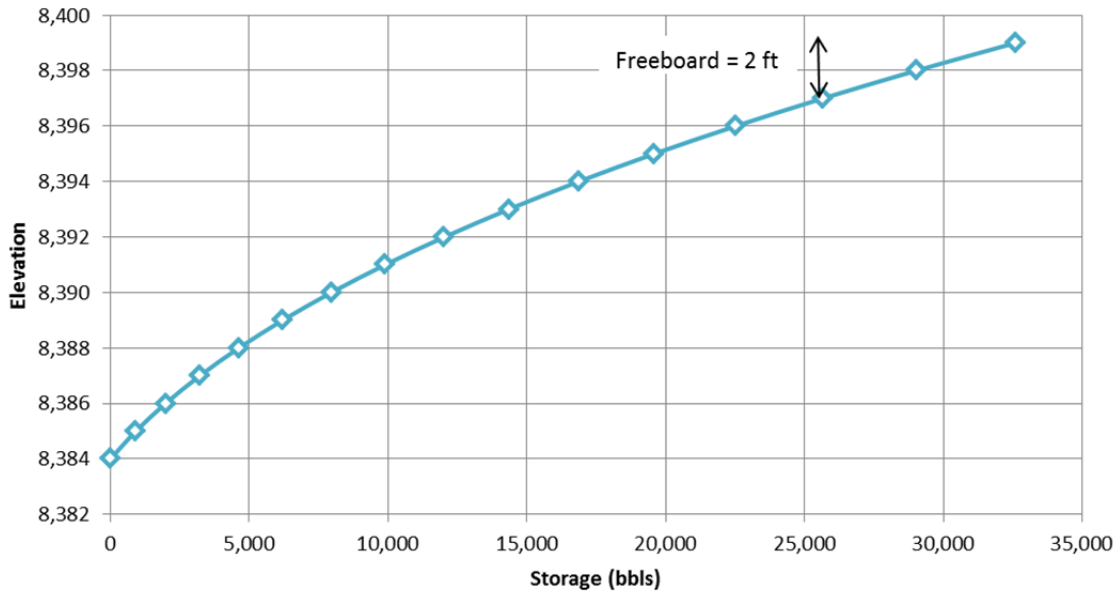
**Table 2: A05 Pit Stage-Storage Data**

Elevation (ft)	Area (ft <sup>2</sup> )	Depth (ft)	Incremental Vol. (ft <sup>3</sup> )	Accumulated Vol. (ft <sup>3</sup> )	Accumulated Vol. (bbl)
8,384	3,855	0	0	0	0
8,385	4,704	1	5,128	5,128	913
8,386	5,580	1	6,018	11,146	1,985
8,387	6,484	1	6,936	18,082	3,220
8,388	7,416	1	7,882	25,965	4,624
8,389	8,376	1	8,856	34,821	6,201
8,390	9,364	1	9,858	44,679	7,957
8,391	10,380	1	10,888	55,567	9,896
8,392	11,423	1	11,945	67,512	12,023
8,393	12,495	1	13,030	80,542	14,344
8,394	13,594	1	14,143	94,685	16,863
8,395	14,721	1	15,284	109,969	19,585
8,396	15,876	1	16,453	126,422	22,515
8,397	17,058	1	17,650	144,072	25,659
8,398	18,269	1	18,874	162,946	29,020
8,399	19,507	1	20,126	183,072	32,604

**Graph 1: A05 Pit Stage-Storage Curves (ft<sup>3</sup>)**



**Graph 2: A05 Pit Stage-Storage Curves (bbls)**



### 12.1. Spill Containment

The A05 Pit provides below grade storage for produced water. A spill from the A05 Pit is not possible. Secondary containment is provided for the truck load-out facility at the A05 Pit site and also for the two (2), 250 bbl produced water tanks.

### **13. 908.b.(8): Operating Plan**

Standard Operating Procedures (SOP) for pumping into and out of the A05 Pit and controlling fugitive dust around the site are in place (see Appendix 7).

### **14. 908.b.(9).A: Water Wells**

See Section 11.4.

### **15. 908.b.(9).B: Monitoring Wells**

#### **15.1. Regional Operational Area Water Quality Monitoring Program**

Encana's North Parachute Ranch (NPR) water quality monitoring program began in the fall of 2004 and expanded onto North Parachute Mountain (NPM), where the A05 Pit is located, in 2005. The ongoing program is designed to complement our spill prevention program by tracking surface and ground water quality throughout Encana's North Parachute area. The collected water quality data is designed to identify changes in water quality not visible through general field observations.

Currently, three springs and two creeks are sampled to characterize and monitor shallow ground water and alluvial ground water quality on the North Parachute Mountain, as shown in Table 2. Two additional springs and one stream are within two (2) miles of the A05 Pit (as shown in Appendix 5) on private land and would be added to the sampling program upon approval of the Form 28, with landowner consent.

**Table 2: Encana Water Quality Sampling Locations within 2 Miles of A05 Pit**

Sample Location	Feature	Status	Sample Date
ENPR3SP	Stream	Sampled	08/13/2014
ENPR4SP	Spring	Sampled	08/13/2014
ENPR5SP	Stream	Sampled	08/13/2014
ENPR22ST	Spring	Sampled	05/24/2014
ENPR4ST	Water Well	Sampled	08/13/2014
Bragy Spring*	Spring	never sampled	never sampled
Crouch Spring*	Stream	never sampled	never sampled
East Fork Stream*	Spring	never sampled	never sampled

\* To be added upon Form 28 approval. These springs are within 2 miles of the A05 and down gradient of the facility.

**Table 3: Laboratory Analytical Results Summary for Sampling of Encana Water Quality Network near A05 Pit**

		ENPR3SP	ENPR4SP	ENPR5SP	ENPR22ST	ENPR4ST
Parameter	Units	8/13/14	8/13/14	8/13/14	5/24/14	8/13/14
Alkalinity	mg/l	310	380	320	260	260
Alkalinity, Bicarbonate	mg/l	310	380	320	250	240
Alkalinity, Carbonate	mg/l	BDL	BDL	BDL	BDL	BDL
Ammonia	mg/l	BDL	BDL	BDL	BDL	BDL
Arsenic, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Barium, Dissolved	mg/l	0.1	0.07	0.12	0.06	0.093
Benzene	mg/l	BDL	BDL	BDL	BDL	BDL
Bromide	mg/l	BDL	BDL	1.3	BDL	BDL
Cadmium, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Calcium, Dissolved	mg/l	80	76	100	46	52
Chloride	mg/l	3.9	6.1	220	9.9	5.4
Chromium, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Copper, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Ethane	mg/l	BDL	BDL	BDL	BDL	BDL
Ethylbenzene	mg/l	BDL	BDL	BDL	BDL	BDL
Ethylene	mg/l	BDL	BDL	BDL	BDL	BDL
Fluoride	mg/l	BDL	0.13	0.11	0.12	0.17
Iron, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Lead, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Magnesium, Dissolved	mg/l	43	61	77	30	34
Manganese, Dissolved	mg/l	BDL	BDL	BDL	0.016	BDL
Methane	mg/l	BDL	BDL	BDL	BDL	BDL
MTBE	mg/l	BDL	BDL	BDL	BDL	BDL
Nitrate	mg/l	0.24	BDL	BDL	BDL	BDL

		ENPR3SP	ENPR4SP	ENPR5SP	ENPR22ST	ENPR4ST
Parameter	Units	8/13/14	8/13/14	8/13/14	5/24/14	8/13/14
Nitrite	mg/l	BDL	BDL	BDL	BDL	BDL
pH	SU	8.1	8.1	8.1	7.9	8.4
Potassium, Dissolved	mg/l	BDL	BDL	1.5	0.84	BDL
Propane	mg/l	BDL	BDL	BDL	BDL	BDL
Selenium, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Silver, Dissolved	mg/l	BDL	BDL	BDL	BDL	BDL
Sodium, Dissolved	mg/l	81	96	130	50	58
Specific Conductivity	µMHOS/cm	890	1000	1500	670	630
Sulfate	mg/l	150	170	120	80	69
Sulfide	mg/l	BDL	BDL	BDL	BDL	BDL
TDS	mg/l	580	650	1200	400	390
Toluene	mg/l	BDL	BDL	BDL	BDL	BDL
Xylenes	mg/l	BDL	BDL	BDL	BDL	BDL

## 15.2. Site Specific Approach to Ground Water Quality Monitoring

The A05 Pit is located atop the plateau in the vicinity of existing Encana facilities and well pads. The Uinta and Green River Formations which outcrop along the Divide Road ridge line show competent bedrock at shallow depths below the topsoil horizon. Previous assessment activities and remediation/monitoring well installations along the Divide Road ridge line have never exhibited the presence of ground water.

Based upon the previous construction activities in the area, the lack of ground water present during construction, and previous excavation work exposing the local lithology and competent bedrock formation, there is no shallow ground water or shallow ground water aquifers at the location to monitor. Therefore, no ground water monitoring wells or sampling is proposed at this time.

## 16. 908.b.(10): Surface Water Monitoring

See Section 15 above.

## 17. 908.b.(11): Contingency Plan

### 17.1. Site Safety / Evacuation Plan

A site specific safety and evacuation plan has been prepared for the facility (see Appendix 8). This plan includes directions to the site, emergency contact information, and designated muster points.

## 17.2. Chemicals On-site

There are no chemicals on-site associated with the operations of the A05 Pit.

## 17.3. Spill Prevention, Control and Countermeasure Plan

A spill prevention plan is in place for the North Parachute Mountain area in accordance with EPA regulations. The latest version of the plan (updated in April 2013) is included in Appendix 6. The A05 pit is constructed below grade and two (2) feet of freeboard is maintained in it at all times.

## 17.4. Emergency Response Plan

Encana requires that Emergency Preparedness and Emergency Response Plans (ERP) be in place in the specific regions of the company. These plans are kept current and are supported by training and resources to ensure decisive and effective incident response. Encana's Emergency Response Plan, including notification and activation requirements is included in Appendix 8.

Encana's ERP facilitates a coordinated response by Encana's personnel to any emergency situation related to seismic/exploration, construction, drilling, completion, workovers, operations, remediation, reclamation and support services. It will describe the procedures which will be implemented, in whole or in part, if an emergency situation occurs during any phase of Encana operations including, but not limited to, the following types of incidents:

- Serious injury or fatality
- Vehicle related incident
- Major property or equipment damage
- Fire or explosion
- Spill, hazardous materials release, or product release
- Security threat or suspicious activity
- Natural occurrence

## 18. 908.d: Financial Assurance

Financial assurance, as required by Rule 904 and 907.d, will be submitted to the COGCC once Encana receives approval of the closure cost estimate.

## 19. 908.e: Facility Modifications

Any future major modifications to the facility design, operations plan, permit data or permit conditions will be submitted to the COGCC for prior approval under a Form 4 Sundry notice and in accordance with Rule 908.e.

Any minor modifications to the facility design, operations plan, permit data or permit conditions (from entities other than the COGCC) will be included in the annual report submitted to the COGCC per Rule 908.f.

## 20. 908.f: Annual Permit Review

An annual A05 Pit report will be submitted to the COGCC which will include:

- Volume of water entering and exiting the facility
- Source water well additions
- Injection well additions
- Surface and/or groundwater sampling results
- Any facility modifications, per Rule 908.e.

## 21. 908.g.(1).A: Preliminary Closure Plan

The A05 pit is expected to operate for twenty (20) years or greater. However, the facility could be closed earlier due to the continuously changing natural gas market conditions.

At closure, the following tasks will be undertaken at the A05 pit:

- Removal of the following items:
  - Industrial waste (bottom solids)
  - Equipment including pipelines, etc.
  - Drainage controls
  - Other industrial components, as required by COGCC regulations at the time of closure
- Native soil sampling and analysis for Table 910-1 constituents
- Comparison of closure samples with baseline samples to determine if naturally occurring background concentrations have been exceeded.
- Completion of remediation activities required by soil sampling results
- Site restoration to pre-facility conditions, including recontouring and revegetating the site, redistribution of topsoil and reseeded.
- Site monitoring to verify that seventy (70) percent of the preexisting vegetation is achieved.
- Final reclamation in accordance with COGCC regulations at the time of closure.

Additional details regarding the revegetation plan are located in Appendix 9.

## 22. 908.g.(1).B: Preliminary Closure Cost

The Closure and Reclamation Plan for the A05 pit is included in Appendix 9. A cost estimate of \$303,000 is included for closing and reclaiming the A05 Pit.

## 23. 908.g.(2): Final Closure Plan

A detailed Site Investigation and Remediation Workplan (Form 27) will be submitted to the COGCC for approval a minimum of sixty (60) days prior to closure of the A05 site.



## **24. 908.h: Other Permits and Notifications**

The A05 Pit is exempt from CDPHE regulations per CDPHE Air Quality Control Commission Regulation 3, which states that any pit that contains less than 1% by volume of oil is exempt from permitting requirements. Encana pulls samples from the A05 Pit annually to ensure that the pit remains in compliance with Regulation 3.

Encana acquired this pit from Conoco-Philips in 2009. At that time, the pit was used to support a single well pad and therefore did not require a Special Use Permit (SUP) from Garfield County. Encana is currently applying for a SUP to support this Form 28 application. An approved SUP will be provided to the COGCC upon receipt by Encana.